

In the Matter of

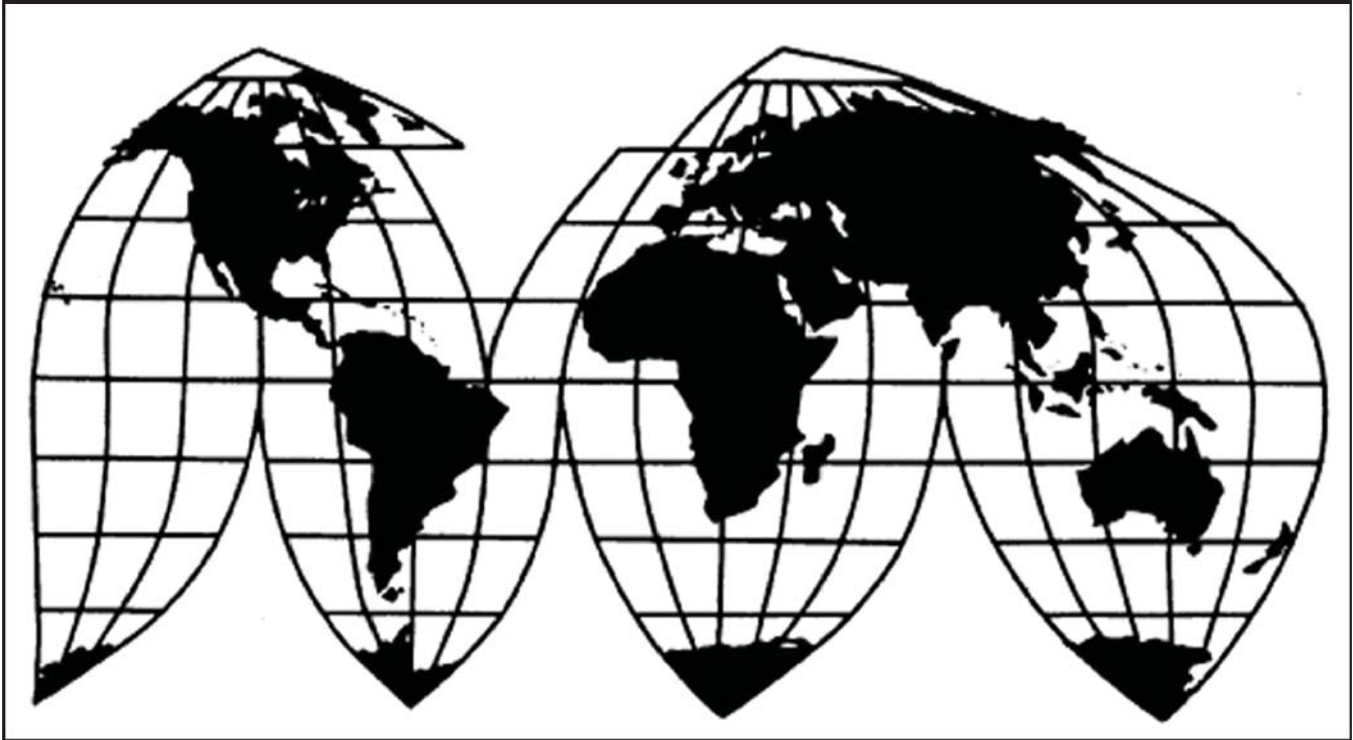
**Certain Reduced Ignition Proclivity
Cigarette Paper Wrappers and Products
Containing Same**

Investigation No. 337-TA-756

Publication 4399

July 2013

U.S. International Trade Commission



Washington, DC 20436

U.S. International Trade Commission

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U.S. International Trade Commission

Washington, DC 20436
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In the Matter of

**Certain Reduced Ignition Proclivity
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Containing Same**

Investigation No. 337-TA-756



**UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.**

In the Matter of

**CERTAIN REDUCED IGNITION
PROCLIVITY CIGARETTE PAPER
WRAPPERS AND PRODUCTS
CONTAINING SAME**

Investigation No. 337-TA-756

**TERMINATION OF INVESTIGATION
WITH FINAL DETERMINATION OF NO VIOLATION**

AGENCY: U.S. International Trade Commission.

ACTION: Notice.

SUMMARY: Notice is hereby given that the U.S. International Trade Commission has determined to terminate the above-captioned investigation with a final determination of no violation of section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337 ("section 337").

FOR FURTHER INFORMATION CONTACT: James A. Worth, Office of the General Counsel, U.S. International Trade Commission, 500 E Street, S.W., Washington, D.C. 20436, telephone (202) 205-3065. Copies of non-confidential documents filed in connection with this investigation are or will be available for inspection during official business hours (8:45 a.m. to 5:15 p.m.) in the Office of the Secretary, U.S. International Trade Commission, 500 E Street, S.W., Washington, D.C. 20436, telephone (202) 205-2000. General information concerning the Commission may also be obtained by accessing its Internet server (<http://www.usitc.gov>). The public record for this investigation may be viewed on the Commission's electronic docket (EDIS) at <http://edis.usitc.gov>. Hearing-impaired persons are advised that information on this matter can be obtained by contacting the Commission's TDD terminal on (202) 205-1810.

SUPPLEMENTARY INFORMATION: The Commission instituted this investigation on January 27, 2011, based on a complaint filed by Schweitzer-Mauduit International, Inc. ("Schweitzer") of Alpharetta, Georgia. 76 *Fed. Reg.* 4935 (January 27, 2011). The complaint alleged violations of Section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337, in the sale for importation, importation, or sale after importation of certain reduced ignition proclivity cigarette paper wrappers and products containing same by reason of infringement of certain claims of U.S. Patent Nos. 5,878,753 ("the '753 patent") and 6,725,867 ("the '867 patent"). The Commission's notice of investigation named Astra Tobacco Corporation of Chapel Hill, North Carolina; delfortgroup AG of Traun, Austria; LIptec GmbH of Neidenfels, Germany; and Julius Glatz GmbH of Neidenfels, Germany as respondents.

On April 15, 2011, the Commission issued notice of its determination not to review an ID (Order No. 5) granting Schweitzer's motion to amend the complaint and notice of investigation to add seven more respondents: Dr. Franz Feurstein GmbH of Traun, Austria; Papierfabrik Wattens GmbH & Co. KG of Wattens, Austria; Dosal Tobacco Corp. of Miami, Florida; Farmer's Tobacco Co. of Cynthia, Kentucky; KneX Worldwide, LLC of Charlotte, North Carolina; S&M Brands, Inc. of Keysville, Virginia; Tantus Tobacco LLC of Russell Springs, Kentucky.

On December 1, 2011, the Commission determined not to review an ID (Order No. 30) of the administrative law judge terminating Respondents delfortgroup AG, Dr. Franz Feurstein GmbH, Papierfabrik Wattens GmbH & Co. KG, Astra Tobacco Corp., Dosal Tobacco Corp., Farmer's Tobacco Co., S&M Brands, Inc., and Tantus Tobacco LLC (collectively, the "Delfort Respondents") from the investigation. Respondents Julius Glatz GmbH, LIPTec GmbH, and KneX Worldwide LLC (collectively, "Glatz") remain in the investigation.

An evidentiary hearing was held from October 31, 2011, to November 8, 2011. On February 1, 2012, the presiding administrative law judge issued a final initial determination finding no violation of section 337 in the above-identified investigation. Specifically, the ALJ found that there was no violation with respect to either the '753 patent or the '867 patent by Glatz. The ALJ also issued a recommended determination on remedy, the public interest, and bonding.

Schweitzer filed a petition for review of the final ID. Glatz filed a contingent petition for review. Each of the parties filed a response to the petition and contingent petition for review.

On April 2, 2012, the Commission issued notice of its determination to review the final ID in part, and to solicit briefing on certain issues including on remedy, the public interest, and bonding. With respect to the '753 patent, the Commission determined to review the construction of the term "gradually" in the asserted claims and the issues of direct and indirect infringement, obviousness, definiteness, utility, and the technical prong of the domestic industry requirement in the ID. With respect to the '867 patent, the Commission determined to review the construction of the term "film forming composition" in the asserted claims and the issues of direct and indirect infringement, priority date, statutory bar under 35 U.S.C. § 102(b), anticipation, obviousness, written description, enablement, and the technical prong of the domestic industry requirement in the ID.

Having reviewed the final ID, the submissions on review, and the record, the Commission has determined to terminate the investigation with a final determination of no violation of section 337.

This action is taken under the authority of section 337 of the Tariff Act of 1930, as amended (19 U.S.C. § 1337), and under sections 210.42 - .46, .51(a) of the Commission's Rules of Practice and Procedure (19 C.F.R. §§ 210.42 - .46, .51(a)).

By order of the Commission.

A handwritten signature in black ink, appearing to read 'Lisa R. Barton', enclosed within a large, loopy oval flourish.

Lisa R. Barton
Acting Secretary to the Commission

Issued: June 5, 2012

**CERTAIN REDUCED IGNITION PROCLIVITY
CIGARETTE PAPER WRAPPERS AND PRODUCTS
CONTAINING SAME**

Inv. No. 337-TA-756

PUBLIC CERTIFICATE OF SERVICE

I, Lisa R. Barton, hereby certify that the attached **NOTICE** has been served by hand upon, the Commission Investigative Attorney, Lisa A. Murray, Esq. and the following parties as indicated on June 5, 2012.



Lisa R. Barton, Acting Secretary
U.S. International Trade Commission
500 E Street, SW, Room 112
Washington, DC 20436

**On Behalf of Complainants Schweitzer-Mauduit International,
Inc.:**

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() Via Hand Delivery
() Via Overnight Delivery
(x) Via First Class Mail
() Other: _____

**On Behalf of Respondents Julius Glatz Julius Glatz GmbH,
LIPtec GmbH and Knex Worldwide LLC:**

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(x) Via First Class Mail
() Other: _____

PUBLIC VERSION

**UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.**

In the Matter of

**CERTAIN REDUCED IGNITION PROCLIVITY
CIGARETTE PAPER WRAPPERS AND
PRODUCTS CONTAINING SAME**

Inv. No. 337-TA-756

COMMISSION OPINION

In this investigation, the Commission has found no violation of section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337 ("section 337"). This opinion sets forth the reasons for the Commission's determination.

I. BACKGROUND

A. Procedural History

The Commission instituted this investigation on January 27, 2011, based on a complaint filed by Schweitzer-Mauduit International, Inc. of Alpharetta, Georgia ("Schweitzer"). 76 *Fed. Reg.* 4935 (January 27, 2011). The complaint alleged violations of Section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337, in the sale for importation, importation, or sale after importation of certain reduced ignition proclivity cigarette paper wrappers and products containing same by reason of infringement of certain claims of U.S. Patent Nos. 5,878,753 ("the '753 patent") and 6,725,867 ("the '867 patent"). The Commission's notice of investigation named Astra Tobacco Corporation of Chapel Hill, North Carolina; delfortgroup AG of Traun, Austria; LIptec GmbH of Neidenfels, Germany; and Julius Glatz GmbH of Neidenfels, Germany as respondents.

On April 15, 2011, the Commission issued notice of its determination not to review an initial determination ("ID") (Order No. 5) granting Schweitzer's motion to

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amend the complaint and notice of investigation to add seven more respondents: Dr. Franz Feurstein GmbH of Traun, Austria; Papierfabrik Wattens GmbH & Co. KG of Wattens, Austria; Dosal Tobacco Corp. of Miami, Florida; Farmer's Tobacco Co. of Cynthia, Kentucky; KneX Worldwide, LLC of Charlotte, North Carolina; S&M Brands, Inc. of Keysville, Virginia; and Tantus Tobacco LLC of Russell Springs, Kentucky.

On December 1, 2011, the Commission determined not to review an ID (Order No. 30) terminating respondents delfortgroup AG, Dr. Franz Feurstein GmbH, Papierfabrik Wattens GmbH & Co. KG, Astra Tobacco Corp., Dosal Tobacco Corp., Farmer's Tobacco Co., S&M Brands, Inc., and Tantus Tobacco LLC (collectively, the "Delfort Respondents") from the investigation. Respondents Julius Glatz GmbH, LIptec GmbH, and KneX Worldwide LLC (collectively, "Glatz") remained in the investigation.

On October 24, 2011, the ALJ issued an ID (Order No. 24) granting complainant's motion for summary determination with respect to the economic prong of the domestic industry requirement. The Commission determined to review the order and upon review affirmed the ID with respect to 19 U.S.C. §§ 1337(a)(3)(A) and (B). Notice (November 23, 2011).

An evidentiary hearing was held from October 31, 2011 to November 8, 2011. On February 1, 2012, the presiding administrative law judge issued a final ID finding no violation of section 337 by Glatz with respect to either the '753 patent or the '867 patent. As discussed herein, the ALJ found that there was no infringement of the asserted claims of the '753 patent and that there is no domestic industry with respect to the '753 patent, but that the asserted claims of the '753 patent are valid. The ALJ found infringement of the asserted claims of the '867 patent and that the domestic industry requirement is

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satisfied, but found a statutory bar as to the asserted claims of the '867 patent and that these claims are also invalid by reason of obviousness. The ALJ also issued a recommended determination on remedy, the public interest, and bonding.

Schweitzer filed a petition for review of the final ID. Glatz filed a contingent petition for review. Each of the parties filed a response to the petition and contingent petition for review.

Schweitzer petitioned for review of the ID as follows. With respect to the '753 patent, Schweitzer petitioned for review of the following findings in the ID: construction of the terms "film forming composition," "gradually," and "ramp-shaped profile"; the accused products do not satisfy the "gradually" limitation; there is no contributory or induced infringement; the tested products are not representative of the untested Glatz products; and there is no domestic industry. With respect to the '867 patent, Schweitzer petitioned for review of the following findings in the ID: construction of "film forming composition"; the '867 patent is not entitled to an earlier priority date; PaperSelect and Merit Cigarettes form a statutory bar to the asserted claims of the '867 patent; and PaperSelect in combination with Peterson renders the asserted claims of the '867 patent obvious.

Glatz petitioned for review of the ID as follows. With respect to the '753 patent, Glatz petitioned for review of the following findings in the ID: construction of "film forming composition," "gradually," "discrete areas of reduced permeability," "discrete areas," and "reduced permeability areas"; the asserted claims of the '753 patent are not invalid for obviousness; the asserted claims of the '753 patent are not invalid for failure to satisfy the utility requirement of 35 U.S.C. § 101; and the asserted claims of the '753

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patent are not invalid for indefiniteness. With respect to the '867 patent, Glatz petitioned for review of the following findings in the ID: construction of "applying" and "film forming composition"; Glatz infringes the asserted claims of the '867 patent (based on Glatz's argument that the construction of "applying" should be revised); the asserted claims of the '867 patent are not anticipated by Allen, Baldwin, Peterson, and Hammersmith; certain claims of the '867 patent are not obvious over the combination of Allen, Hampl '775, and Hampl '403, the combination of Hammersmith, Hampl '775, and Hampl '403, or the combination of prior art teaching certain base paper permeability ranges, including Allen, Baldwin, Peterson, and Hammersmith; the asserted claims of the '867 patent satisfy the written description and enablement requirements of 35 U.S.C. § 112; Schweitzer satisfies the domestic industry requirement with respect to the '867 patent.

On April 2, 2012, the Commission issued notice of its determination to review the final ID in part, and to solicit briefing on certain issues and on remedy, the public interest, and bonding. With respect to the '753 patent, the Commission determined to review the construction of the term "gradually" in the asserted claims and the issues of direct and indirect infringement, obviousness, definiteness, utility, and the technical prong of the domestic industry requirement. With respect to the '867 patent, the Commission determined to review the construction of the term "film forming composition" in the asserted claims and the issues of direct and indirect infringement, priority date, statutory bar under 35 U.S.C. § 102(b), anticipation, obviousness, written description, enablement, and the technical prong of the domestic industry requirement.

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On April 16, 2012, each of the parties filed a submission in response to the Commission's notice of review, and on April 23, 2012, each of the parties filed a reply submission.

B. The Asserted Patents

The '753 patent, entitled¹ "Smoking Article Wrapper for Controlling Ignition Proclivity of a Smoking Article Without Affecting Smoking Characteristics," assigned to Schweitzer, was issued on March 9, 1999 based on application number 08/815,434² filed on March 11, 1997 by Richard M. Peterson and Joseph S. Kucherovsky. The '753 patent is directed to cigarette paper with bands having reduced permeability to air that are positioned around the circumference of the cigarette in order to cause the cigarette to self-extinguish. Claims 1-6, 12-18, and 24-25 are at issue in this investigation.

The '867 patent, entitled³ "Process for Producing Smoking Articles With Reduced Ignition Proclivity Characteristics and Products Made According to Same," assigned to Schweitzer, was issued on April 27, 2004 based on application number 10/054,744⁴ that was filed on November 13, 2001 by Richard M. Peterson, Joseph S. Kucherovsky, and Thomas A. Kraker. The '867 patent is directed to a method of applying bands to cigarette paper. Claims 36, 43, and 45 are at issue in this investigation.

C. Characteristics of Cigarette Paper

Paper is generally made from wood pulp or flax. Tr. at 16. The wood or flax is broken down into a fibrous slurry which is deposited in sheets, and then dried through dripping, vacuuming, and the application of pressure by rollers. *Id.* Paper has pores

¹ JX-1.

² JX-3.

³ JX-2.

⁴ JX-4.

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which are important to its properties. Cigarette paper manufacturers include salts and other additives which affect the pore size, the burn rate, the ash quality, and other properties of the paper they make.

Permeability is a measure of the bulk flow of air across the cigarette paper when a pressure gradient is applied. Tr. at 23. A pressure gradient is applied, for example, when a person puffs on a cigarette, drawing air in. *Id.* Thus, permeability is used to describe the movement of air when a person is puffing on a cigarette. Permeability is measured in Coresta units which are equivalent to milliliters of air per minute per square centimeter of area. Tr. at 24. The permeability of the paper increases with the fourth power of pore size. Tr. at 1983.

Diffusivity is a measure of the diffusion of molecules through the paper absent a pressure gradient. *Id.* at 24-25. There is no pressure gradient when the cigarette is not being puffed. Tr. at 25. A cigarette is not being puffed, for example, when it is being held, when it is sitting in an ashtray, or as relevant to this investigation, when it is dropped on fabric that could ignite. At the time of the '867 patent, diffusivity was primarily measured indirectly by immersing cigarette paper in an electrolyte solution and measuring the resistance of current flow through the paper. A high resistance would indicate a low diffusivity, measured as Burn Mode Index or BMI. Tr. at 26.⁵ The diffusivity of paper increases with the square of the pore size. Tr. at 1983. There is a dispute among the parties as to whether diffusivity (measured in BMI units) can be calculated from permeability (measured in Corestas).

⁵ A few years ago, a more direct method of measuring diffusion was developed. *See* Tr. at 25.

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The cigarette paper of the '753 patent uses bands (treated areas) of low permeability on high permeability paper. These bands are applied as a low permeability film on the high permeability paper.⁶ The asserted distinct aspect of the invention of the '753 patent is the "gradual" edges to the bands which are intended to provide a smooth transition from high permeability to low permeability so that the person smoking does not notice a change in taste from the areas with regular paper to the banded areas.

The '867 patent teaches a process of treating paper such that the treated areas of the paper have both a low permeability and a low diffusivity. The '753 patent is prior art to the '867 patent.

D. The Parties

1. The Complainant

Schweitzer-Mauduit International, Inc. is a Delaware corporation having its principal place of business in Alpharetta, Georgia. ID at 3. Schweitzer is the largest producer of reduced ignition proclivity paper in the world, and its share of the U.S. market is eighty percent. Order No. 24 at 10.

2. The Respondents

Julius Glatz GmbH (Neidenfels, Germany) produces paper for the manufacture of cigarettes. ID at 3. LIPtec (Neidenfels, Germany) is a wholly-owned subsidiary of Julius Glatz GmbH that converts Julius Glatz GmbH base paper into low ignition proclivity paper by applying bands that reduce the permeability of the paper where the bands lie.

⁶ This investigation involves, *inter alia*, a dispute as to the claim construction of the term "film forming composition." The parties dispute whether the film is applied only from a solution or from a slurry as well. The parties also dispute whether the film can be any kind of covering, including a paper-like cellulose, or whether it must have a certain coherent molecular structure.

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Id. LIPtec sells the paper for use in the manufacture of reduced ignition proclivity cigarettes, including paper sold for importation in the United States. *Id.* KneX (Charlotte, North Carolina) “purchases and sells paper for use in the manufacture of reduced ignition proclivity cigarettes, including paper imported into the United States.” *Id.* at 3-4. Personal jurisdiction, subject matter jurisdiction, and importation are uncontested. *Id.* at 8-9.

E. The Products at Issue

Schweitzer accuses the following Glatz low ignition proclivity (“LIP”)⁷ papers of infringing the asserted claims of the ‘753 patent:

Cigla 45 MVM 0,5 MC LI	Cigla 75 MVM 0,6 CA LI
Cigla 60 MV 0,75 MC LI	Cigla 75 MVM 0,6A LI
Cigla 72 MV 0,9 MC LI	Cigla 100 MV 1,0 KC LI
Cigla 75 MV 1,0 MC LI	Cigla 120 MV 1,0 KC LI
Cigla 75 MVM 1,0 MC LI	Cigla 144 MVM 1,2 KC LI

Id. at 8. Schweitzer accuses the following Glatz LIP papers of infringing the asserted claims of the ‘867 patent:

Cigla 60 MV 0,75 MC LI	Cigla 75 MVM 0,6 CA LI
Cigla 72 MV 0,9 MC LI	Cigla 75 MVM 0,6A LI
Cigla 75 MV 1,0 MC LI	Cigla 100 MV 1,0 KC LI
Cigla 75 MVM 1,0 MC LI	Cigla 120 MV 1,0 KC LI

Id. at 8.

II. DISCUSSION

A. The ‘753 Patent

Claims 1-6, 12-18, and 24-25 of the ‘753 patent are at issue in this investigation. Of these, claims 1 and 12 are independent claims. The claims at issue are as follows:

⁷ LIP is also known as reduced ignition proclivity (“RIP”), as in the caption of this investigation.

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1. A smoking article comprising a tobacco column, and a wrapper surrounding said tobacco column, said smoking article having a first end, a second end, and a longitudinal axis extending from said first end to said second end, said wrapper comprising discrete areas of reduced permeability for improving ignition proclivity characteristics of said smoking article, said discrete areas of reduced permeability comprising areas treated with a film forming composition, said discrete areas being in the shape of bands spaced along said longitudinal axis, said reduced permeability areas defining a gradually decreasing permeability profiled in the longitudinal direction such that permeability reduction in said reduced permeability areas gradually increases from a minimum zero permeability reduction to a maximum permeability reduction.
2. The smoking article as in claim 1, further comprising an area of sustained maximum permeability reduction following said gradually decreasing permeability profile.
3. The smoking article as in claim 2, wherein said discrete areas of reduced permeability comprise a substantially ramp-shaped profile.
4. The smoking article as in claim 1, wherein said discrete areas of reduced permeability further comprise a gradually increasing permeability profile following said gradually decreasing permeability profile.
5. The smoking article as in claim 4, further comprising an area of sustained maximum permeability reduction between said gradually increasing and gradually decreasing permeability profiles.
6. The smoking article as in claim 5, wherein said discrete areas of reduced permeability comprise a substantially ramp-shaped profile with increasing and decreasing ramp sections.
12. A smoking article wrapper having discrete areas of reduced permeability for improving ignition proclivity control of a smoking article, said discrete areas comprising areas treated with a film forming composition, said discrete areas being in the shape of horizontal bands spaced apart in a longitudinal direction, said reduced permeability areas defining at least one gradually changing permeability profile in the longitudinal direction such that permeability in said changing permeability area gradually changes from zero permeability reduction to a maximum permeability reduction.
13. The smoking article wrapper as in claim 12, wherein said changing permeability profile comprises a gradually decreasing permeability profile in said longitudinal direction such that permeability reduction in said

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reduced permeability areas increases from zero permeability reduction to a maximum permeability reduction.

14. The smoking article wrapper as in claim 13, further comprising an area of sustained maximum permeability reduction following said gradually decreasing permeability profile.

15. The smoking article wrapper as in claim 13, wherein said discrete areas of reduced permeability further comprise a gradually increasing permeability profile following said gradually decreasing permeability profile in said longitudinal direction of said wrapper.

16. The smoking article wrapper as in claim 15, further comprising an area of sustained maximum permeability reduction between said gradually increasing and gradually decreasing permeability profiles.

17. The smoking article wrapper as in claim 16, wherein said discrete areas of reduced permeability comprise a substantially ramp-shaped profile with increasing and decreasing ramp sections.

18. The smoking article wrapper as in claim 12, wherein said discrete areas of reduced permeability have a substantially ramp-shaped profile.

24. The smoking article as in claim 1, wherein said bands are continuous around the circumference of the smoking article.

25. The smoking article wrapper as in claim 12, wherein said bands extend the entire width of said wrapper.

'753 patent, col. 11, line 60 – col. 12, line 24, col. 12, line 40 – col. 13, line 9, col. 14, lines 11-14.

1. Claim Construction

There were essentially four claim terms at issue before the ALJ: (a) “film forming composition”; (b) “discrete areas” and “reduced permeability areas”; (c) “gradually”; and (d) “ramp-shaped profile.”

a. “film forming composition” (all asserted claims)

The ALJ construed “film forming composition” to mean “any composition that, when dried, forms a film on the surface to which it is applied.” ID at 36-37. The ALJ

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considered the term “film” to be obtainable from solutions and fibrous slurries. *Id.* The Commission determined not to review the ID with respect to the construction of “film forming composition” in the ‘753 patent. *See 77 Fed. Reg.* 20844 (Apr. 6, 2012). That portion of the ID thus became the final determination of the Commission. 5 U.S.C. § 557(b); 19 C.F.R. § 210.42(h)(2).

b. “discrete areas,” “reduced permeability areas” (all asserted claims)

The ALJ construed “discrete areas” and “reduced permeability areas” according to their plain and ordinary meaning. ID at 42. The Commission determined not to review the ALJ’s construction of these terms. *See 77 Fed. Reg.* 20844 (Apr. 6, 2012).

***c. “gradually”(all asserted claims)
(Claim Construction and Definiteness)***

i. The Law of Claim Construction

Claim terms are interpreted as they would be understood by a person of ordinary skill in the art in the context of the intrinsic evidence, consisting of the claims, the specification, and the prosecution history, if in evidence. Extrinsic evidence of the meaning of the claim to a person of ordinary skill in the art may also be considered although it is of secondary importance. *See, e.g., Phillips v. AWH Corp.*, 415 F.3d 1303, 1316-17 (Fed. Cir. 2005) (*en banc*) (citations omitted).

ii. The Parties’ Arguments as to Claim Construction

The ALJ construed the term “gradually” to mean “incrementally.” ID at 44. The Commission determined to review the ALJ’s claim construction. The ALJ found that the term “gradually” is sufficiently definite such that the claims are not invalid for indefiniteness under 35 U.S.C. § 112. *See* ID at 260.

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The parties dispute the meaning of the claim term “gradually.” Schweitzer argues that the term “gradually” means “not all at once.” *See* Complainant Schweitzer-Mauduit International Inc.’s Petition for Review (“Schweitzer Pet.”) at 24. Glatz argues that the term “gradually” is indefinite under any construction because one cannot distinguish between articles that infringe and articles that do not. *See* Glatz Respondents’ Contingent Petition for Review (“Glatz Pet.”) at 51-53. The IA argues that the plain and ordinary meaning should be applied.

Analysis

We affirm the ALJ’s construction of “gradually” as “incrementally” with the clarification that, in the context of the claims, “gradually” means an increase or decrease in permeability that occurs in small steps or degrees and that is not abrupt or sudden. The specification teaches that “The reduced permeability areas define a gradually changing permeability profile. For example, the profile may gradually decrease in a burning direction of the smoking article such that a change in permeability in the reduced permeability areas increases from a zero permeability reduction to a maximum permeability reduction in the burning direction of the smoking article.” col. 2, line 66 – col. 3, line 4. The patent further teaches that “The smoking article may also include a gradually increasing permeability profile following the gradually decreasing permeability profile in the burning direction of the smoking article with an area of sustained maximum permeability reduction between the gradually decreasing and gradually increasing permeability profiles. For example, the discrete areas may take on a ramped-up and ramped-down profile.” col. 3, lines 7-14. Figures 5, 6A, and 6B illustrate gradually increasing profiles.

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The Commission finds Schweitzer's argument that "gradually" means "not all at once" to be an overly broad construction of "gradually." Schweitzer's expert, Mr. Honeycutt, testified that "gradual" means anything less than 90 degrees and that 89 degrees is gradual. Tr. at 2043:20-2044. The plain meaning of "gradual" does not support complainant's view that this term encompasses an increase or decrease of 89 degrees. Schweitzer also suggests that one would know if the slope is gradual if there are one or more intermediate points between the maximum and minimum permeabilities. Complainant Schweitzer-Mauduit International Inc.'s Response to the Notice of Commission Determination to Partially Review the Final Initial Determination of the Administrative Law Judge ("Schweitzer Submission") at 9. Glatz counters that the number of intermediate points depends on the space between permeability measurements. Glatz Respondents' Reply to Schweitzer-Mauduit and OUII's Responses to the Commission's Notice ("Glatz Reply Submission") at 4. Neither party, however, points to intrinsic evidence to support its views regarding a certain number of intermediate points as a cut-off and we find none in the claims, specification, or prosecution history. We therefore affirm the ALJ's construction of "gradually" as "incrementally" with the clarification that it refers to a change that occurs in small steps or degrees and that is not abrupt or sudden.

iii. The Law of Definiteness

The Patent Act provides: "The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention." 35 U.S.C. § 112 ¶2. The Federal Circuit has explained that to distinctly or definitely claim an invention, claims must be sufficiently

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definite “to permit a potential competitor to determine whether or not he is infringing” and to permit a court to determine whether “novelty and invention are genuine.” *Exxon Research and Eng’g. Co. v. United States*, 265 F.3d 1371, 1375 (Fed. Cir. 2001).

The Court has explained that:

We have not insisted that claims be plain on their face in order to avoid condemnation for indefiniteness; rather, what we have asked is that the claims be amenable to construction, however difficult that task may be. If a claim is insolubly ambiguous, and no narrowing construction can properly be adopted, we have held the claim indefinite. If the meaning of the claim is discernible, even though the task may be formidable and the conclusion may be one over which reasonable persons will disagree, we have held the claim sufficiently clear to avoid invalidity on indefiniteness grounds.

Id. To be definite, a patent claim must have meaning to a person of ordinary skill in the art and must be able to put the public on notice, so that a person of ordinary skill in the art can, if necessary, test an accused article and distinguish infringing conduct from noninfringing conduct. *Honeywell Int’l, Inc. v. Int’l Trade Comm’n*, 341 F.3d 1332, 1338 (Fed. Cir. 2003); *see also Union Carbide Co. v. Binney & Smith Co.*, 317 U.S. 228, 233 (1942).

iv. The Parties’ Arguments as to Definiteness

Schweitzer states that a person of ordinary skill in the art can discern whether a permeability profile is gradually changing to ascertain whether a change was gradual. Further, Schweitzer contends that a person of ordinary skill in the art would know how to test the permeability. Schweitzer Submission at 7 (citing Tr. at 758:20-759:3 (Fritzsching); 406:3-409:13 (Rogers)). Glatz’s expert, Dr. McCarty, stated that the patent does not explain what small steps would be. Tr. at 1362-63.

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Analysis

We affirm the ALJ's finding that a person of ordinary skill in the art can ascertain whether a permeability change is gradual or abrupt, based on the specification and figures in the specification, *i.e.*, Figures 4, 5, 6A, and 6B. ID at 256-60. This finding is also supported by the testimony of Glatz's expert, Dr. Fritzsching. *See* Tr. at 758. As discussed above, a gradual change is, in accordance with the patent claims and specification, one that occurs in small steps or degrees and that is not abrupt or sudden. Glatz has failed to establish by clear and convincing evidence that the claim term "gradually" is insolubly ambiguous, and therefore indefinite. *See Exxon Research and Eng'g Co.*, 265 F.3d at 1375. We find that the term "gradually" is sufficiently clear to a person of ordinary skill in the art and is not indefinite under 35 U.S.C. § 112.

d. "ramp-shaped profile" (claims 3, 6, 17, 18)

The ALJ construed the "ramp-shaped profile" in claim 3 to define the physical shape of the bands and not their permeability characteristics. ID at 105-06.

Schweitzer argues that the ALJ's construction is contrary to the express language of the claims, and improperly limits the claims to the physical ramp shown in Figures 5 and 6. Schweitzer Pet. at 27-28. Schweitzer states that the physical profile of the paper varies by how much the band soaks into the paper. *Id.* at 28.

Glatz responds that the '753 patent never illustrates any actual permeability profile or gives permeability data for band edges, but does present drawings and explanations of the physical ramp shapes of its bands. Glatz Respondents' Response to Complainant Schweitzer-Mauduit International Inc.'s Petition for Review ("Glatz Resp.")

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at 25-26 (citing Figures 4, 5, 6A, 6B); col. 11, lines 3-18; col. 11, lines 26-35; col. 3, line 52 – col. 4, line 3).

The IA argues that the ALJ's construction of "ramp-shaped profile" is correct because the specification does not contain a description of how to test for permeability. Consolidated Response of the Office of Unfair Import Investigations to Complainant Schweitzer-Mauduit International Inc.'s Petition for Review and to the Glatz Respondents' Contingent Petition for Review ("IA Resp.") at 22.

Analysis

We affirm the ALJ's construction of "ramp-shaped profile." ID at 105-06. Claim 3 recites: "The smoking article of claim 2, wherein said discrete areas of reduced permeability comprise a substantially ramp-shaped profile." Col. 12, lines 11-13. The term "substantially ramp-shaped profile" directly modifies the term "discrete areas" because "of reduced permeability" is a prepositional phrase which acts grammatically as a parenthetical. The fact that one claim limitation requires the discrete areas to have reduced permeability does not alter the fact that this additional claim limitation requires the discrete areas to have a ramp-shaped profile. This construction of the claim language is consistent with the specification, which does not teach the use of any permeability curve, but which does illustrate and discuss the physical shape of its bands. *See* Figures 4, 5, 6A, and 6B, and corresponding text, col. 11, lines 3-18; col. 11, lines 26-35.

2. Infringement

a. The Law of Infringement

Determining infringement is a two-step process which consists of determining the scope of the asserted claim (claim construction) and then comparing the accused

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product or process to the claim as construed. *Cordis Corp. v. Boston Scientific Corp.*, 658 F.3d 1347, 1354 (Fed. Cir. 2011).

An accused device literally infringes a patent claim if it contains every limitation recited in the claim. *See, e.g., Litton Sys., Inc. v. Honeywell, Inc.*, 140 F.3d 1449, 1454 (Fed. Cir. 1998). The burden of proof is on the complainant to show infringement by a preponderance of the evidence. *Technology Licensing Corp. v. Videotek, Inc.*, 545 F.3d 1316, 1326 (Fed. Cir. 2008).

There are two types of indirect infringement, induced and contributory.

Section 271(b) of Title 35 of the United States Code addresses induced infringement. Induced infringement occurs when a person or entity encourages, aids, or abets another to directly infringe a patent claim. The Supreme Court has recently held that induced infringement occurs only when the accused party has a culpable *mens rea* or mental state. This *mens rea* is “knowing” that its actions will lead to direct infringement, or willful blindness with respect thereto. *Global-Tech Appliances, Inc. v. SEB S.A.*, 131 S. Ct. 2060 (2011).

Section 271(c) of Title 35 of the United States Code addresses contributory infringement. Contributory infringement occurs when a person or entity “offers to sell or sells within the United States or imports into the United States a component of a patented machine, manufacture, combination, or composition, or a material or apparatus for use in practicing a patented process, constituting a material part of the invention, knowing the same to be especially made or especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.” 35 U.S.C. § 271(c).

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b. Tested and Untested Products

The parties contest whether the ID's infringement findings as to the products tested by Schweitzer also extend to other Glatz products that were not tested. Schweitzer only tested two of the accused products, Cigla 75 MV 1,0 MC LI and Cigla 75 MVM 0,6 CA LI. ID at 58. Schweitzer argued that the products were representative of all accused products because [[

]] ID at 59. Glatz admits that the tested products are representative of 75 MVM 1,0 MC LI and 75 MVM 0,6 CA LI but states that they are not representative of its other, untested products. ID at 58. The ALJ held that the evidence was insufficient to demonstrate that the tested products are representative of the untested products. ID at 59.

The Commission solicited briefing on whether Glatz made any statements as to the representativeness of the tested products and whether there were any interrogatories, requests for production, or motions to compel made by Schweitzer with respect to the untested products. *77 Fed. Reg.* 20844 (Apr. 6, 2012).

Schweitzer argues that Glatz's contention that the samples Glatz provided were not representative was made for the first time in a footnote to the post-hearing brief and is therefore waived. Schweitzer Submission at 46-47.

Glatz argues that there was no agreement that the samples would be representative of products other than the specific types supplied. Glatz argues that its Supplemental Responses to Schweitzer's Interrogatories 3, 4, 8, and 17, not in evidence, indicated that the samples it provided were representative in a qualified manner, if at all, allowing for Schweitzer to request further samples. Glatz Respondents' Response to Notice of

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Commission Determination to Partially Review the Final Initial Determination of the Administrative Law Judge (“Glatz Submission”) at 26.

Analysis

Schweitzer had the burden of proving that the samples it tested were representative, and Schweitzer failed to put on the record any stipulation or any evidence that the products it tested were representative of other accused products. Schweitzer has therefore failed to meet its burden to affirmatively establish that the products tested were representative of other products, except to the extent admitted by Glatz, *i.e.*, that the tested products are representative of 75 MVM 1,0 MC LI and 75 MVM 0,6 CA LI. That Glatz’s expert described [[

]] cannot substitute for the required evidence or for testing of the accused products. Schweitzer did not provide evidence that [[

]] that Schweitzer argues are relevant to its infringement claims. The interrogatory responses relied on by Glatz were not argued to the administrative law judge and were not part of the record considered by the presiding administrative law judge and we do not rely on them for our conclusion. The Commission therefore affirms the ID’s finding that the evidence adduced by Schweitzer was insufficient to demonstrate that the tested products are representative of Glatz’s untested products other than 75 MVM 1,0 MC LI and 75 MVM 0,6 CA LI, the products conceded to be identical by Glatz. ID at 58-59.

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c. Direct Infringement (Claims 12-18, 25)

The accused products imported and sold by respondents are cigarette papers. Only asserted claims 12-18 and 25 are directed to cigarette papers and thus direct infringement by respondents can only be made with respect to these claims. This section analyzes direct infringement with respect to the disputed limitations of claims 12-18 and 25. The other claim limitations were demonstrably met or were not contested, and no petitions for review were filed with respect thereto.

i. "film forming composition"

The parties do not dispute that if "film forming composition" is construed to include solutions and fibrous slurries, as it has been construed by the Commission with respect to the '753 patent, the accused products meet the "film forming composition" limitation of the claims.

ii. "discrete areas," "reduced permeability areas"

The issue of whether the "discrete areas" or "reduced permeability areas" limitations are satisfied turns on whether Dr. Rogers, Schweitzer's expert, and Mr. Codwise, his assistant, reliably drew lines to delineate the treated areas (*i.e.*, the "discrete areas" or "reduced permeability areas") from the untreated areas of the accused papers in the tested products. The Commission finds that because Dr. Rogers' testing methodology was unreliable, complainant has failed to establish by a preponderance of the evidence that the "discrete areas" and "reduced permeability areas" claim limitations are met. Dr. Rogers' methodology is discussed below with respect to the "gradually" limitation.

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iii. "gradually"

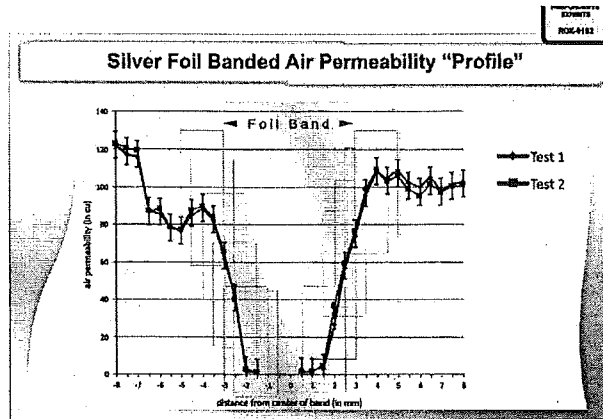
Schweitzer's expert, Dr. Rogers, tested certain accused products with the help of his assistant, Mr. Codwise. To delineate the treated areas, Mr. Codwise first ran a highlighter on the edge of the accused papers in the area where the bands had been printed. Tr. at 376:5-377:6; 406:3-409:13; CX-282; RX-256C at 13. The purple ink of the highlighter soaked through the untreated portions of the paper but did not penetrate the bands, which remained white. RX-256 at 13; Tr. 407, 1450. Mr. Codwise identified the edges of the bands based upon the absorption of highlighter and marked a line to indicate the edges of the bands. Tr. at 407:1-409:13; CX-282. Dr. Rogers then proceeded to measure the permeability of the accused paper with a 2 x 15 mm measuring head. Tr. at 504:3-505:16. He began his measurements outside the area that had been marked as the treated area. Dr. Rogers and Mr. Codwise took measurements of 2 mm portions of the paper, moving the measuring head 0.5 mm at a time. Each measurement was thus of a portion of paper which overlapped 1.5 mm with the previously measured portion of paper. The bands were approximately 6 or 7 mm wide. CX-324C; *see also* CX-425 at 77. These measurements provided data for determining permeability profiles of the papers, which were eventually represented in graphical form.

In a separate measurement, Dr. Rogers sprayed iodine on certain accused Glatz paper and photographed the resulting pattern. Tr. at 868; CX-0424 at 240. Starch forms a blue product on treatment with iodine. *See id.*

Schweitzer argues that the permeability profiles of the accused products demonstrate a gradual reduction in permeability. Glatz argues that the permeability profiles of the accused products do not prove that the accused products have a gradual

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reduction in permeability because, Glatz argues, Dr. Rogers' testing methodology is flawed. Specifically, Glatz argues that the testing methodology cannot distinguish between an abrupt reduction in permeability and a gradual reduction. To demonstrate the methodological flaws, Glatz submitted evidence of its own testing, using Dr. Rogers' testing methodology, of paper covered with metallic bands instead of coated with starch or cellulose bands. Glatz argues that its test shows that using Dr. Rogers' method of testing on paper with metallic bands (which have an abrupt reduction in permeability at the junction of the untreated paper and the metallic band) yields the same permeability profile as paper with printed bands, which Schweitzer contends meet the "gradual" claim limitation.



(RDX-162.000001.)⁸

The reason for this, Glatz explains, is that, as it moves over the paper into the treated area, the head of the testing device is so large (2mm) that it overlaps banded and unbanded areas, thus producing an averaged reading of the banded and unbanded regions,

⁸ RDX-162 was admitted as substantive evidence. Tr. at 2172.

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yielding a permeability curve that appears gradual even when the transition is abrupt. Glatz thus argues that the testing method employed by Schweitzer cannot distinguish between gradual and abrupt edges.

Schweitzer maintains that the permeability profiles of the accused products contain certain intermediate measurements that were taken entirely within the banded region, and which do not represent a measurement of overlapping banded and unbanded regions. Schweitzer identifies these measurements as circled points on certain figures, such as CX-424 at 221. Schweitzer Submission at 18. Glatz counters that the original exhibits as admitted into the record did not contain circled points, that Schweitzer did not make this argument before the presiding ALJ at the evidentiary hearing, and that Schweitzer's methodology for differentiating the banded region from the unbanded region (for determining whether the measurements are entirely within the banded region) is flawed.

As to its delineation of the banded and unbanded areas, Schweitzer explains that it distinguished the banded from the unbanded regions by running a purple highlighter over the paper, marking a line to separate regions which absorbed the purple highlighter from those which did not. Schweitzer Submission at 22. Schweitzer states that the untreated areas soaked up the highlighter. *Id.* Glatz argues that this methodology is not reliable, that Schweitzer did not provide error bars (error analysis) to indicate the margin of error of any of its measurements,⁹ and that the lines were drawn in the wrong location because the permeability profiles are not centered within the vertical lines. Glatz Submission at 17; Reply at 14.

⁹ The horizontal bars on Dr. Rogers's plots indicate the width of the measuring head rather than the error in position or error in permeability measurement. Tr. at 443:6-14.

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Analysis

The ALJ found several problems with Schweitzer's testing methodology and results including that (1) Dr. Roger's measurement charts and his testimony based thereon are not adequate for the purpose of establishing infringement by a preponderance of the evidence; (2) Dr. Rogers (and his assistant) did not scientifically determine the boundaries of the low ignition proclivity bands and admittedly illustrated the charts visually rather than chemically and precisely; (3) Dr. Rogers based his conclusion about the existence of a gradual change in permeability on inferences he drew from the data that was recorded on the charts by those who performed the measurements; (4) Dr. Rogers did not validate the inferences he derived from the data shown in the charts by any kind of reliability verification procedure so as to account for possibility of anomalies and variables related to physical properties of the base paper as well as possible inconsistencies in the precision with which each measurement was performed and other influencing factors unrelated to the shape of the low ignition proclivity bands; (5) Dr. Fleming was able to demonstrate how data similar to that upon which Dr. Rogers relied was also obtainable using paper samples having metallic bands that are virtually impermeable and therefore present abruptly changing permeability profiles; (6) Dr. Roger's contention that iodine samples demonstrate ragged and jagged edges is not supported by the evidence; (7) Dr. Fritzsching stated that [[

]] (8) Dr. Rogers acknowledged that the vertical lines representing the boundaries of the bands shown in his charts were not scientifically constructed and instead were subjectively determined; (9) the measurement

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in Dr. Roger's chart for the bands was seven millimeters whereas Glatz's manufacturing specifications for the paper samples was [[

]] and (10) the method employed in obtaining the measurements was itself imprecise given that it was a visual and manual process, yet no allowance for error was made. ID at 95-97 (citing Tr. at 701-02, 720-21, 729 (Rogers); Tr. at 1399-1400, 1412-13 (Fleming); RX-382C at 72 Q94; Tr. at 729, 597-98 (Rogers)). The ALJ found that it would be improper to draw the inference argued for by Schweitzer given these variables and the imprecision of the information available. *Id.* The Commission affirms the ALJ's findings regarding the unreliability of Schweitzer's testing methodology, supplemented by the following discussion. See ID at 94-98. Thus, we find that using this testing method Schweitzer has not met this burden of proof that the accused papers contain the elements "permeability reduction in said reduced permeability areas gradually increases from a minimum zero permeability reduction to a maximum permeability reduction" or "changing permeability area gradually [that] changes from zero permeability reduction to a maximum permeability reduction." See '753 patent, col. 12, lines 4-7 and 48-50. In particular there is no reliable evidence that the change is "gradual" and not abrupt or sudden.

First and foremost, as the ALJ found, Glatz's metallic band tests show that Schweitzer's testing method (*i.e.*, the testing of Mr. Codwise and Dr. Rogers) yields the same permeability profile for both gradual and abrupt edges because the measuring head overlaps the banded and unbanded regions. See RDX-162; Tr. 1405-10. Thus, this testing method does not provide reliable evidence of the change from minimum to maximum permeability reduction is "gradual" and not abrupt or sudden.

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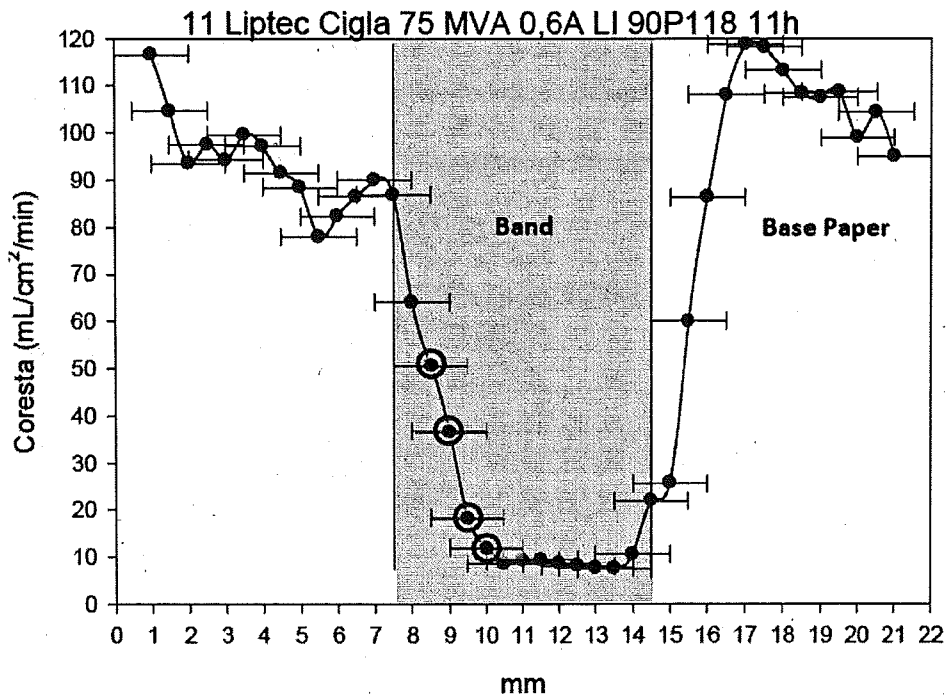
Schweitzer argues there are points entirely within the banded region which show a gradual reduction in permeability according to Schweitzer's claim construction of "gradual," *i.e.*, the reduction in permeability does not occur all at once. As an initial matter, we address Glatz's argument that Schweitzer's reliance on specific circled points occurred after the trial. The exhibits containing these (and other) points were in evidence and Schweitzer's expert provided testimony at trial focused specifically on such data points. Tr. 734:8-18 (Rogers) ("When you have points entirely within the visible band, and you know they are in the band and you see the permeability increasing, then certainly those points cannot be explained by any of the type of abrupt edge arguments that were being put before me.") We therefore conclude that Schweitzer may rely on these circled points to make its argument on review.¹⁰

However, the Commission finds that Schweitzer's test methodology, due to its flaws, does not reliably measure permeability profiles even where the areas of measurement fall entirely within the banded region. Due to the lack of precision in Dr. Rogers' testing methodology the Commission does not find reliable probative evidence to support Schweitzer's argument that there are points entirely within the banded region which show the gradual reduction in permeability required by the claim elements at issue. Moreover, the claims require gradual changes between minimum and maximum permeability reduction; measurements wholly within the bands cannot show such a gradual change, as the change begins at the edge of the band.

¹⁰ Schweitzer's argument that certain points were entirely within the banded region was largely made after the close of the evidentiary hearing. Glatz's argument that the boundaries of the banded region were misdrawn, as can be seen from the off-center position of the permeability curve, was also largely made after the close of the evidentiary hearing, in response to Schweitzer's argument.

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We also considered Schweitzer's methodology for drawing a line between the banded and unbanded regions, and thus discerning one region from another. According to Dr. Rogers, the unbanded regions absorbed the highlighter but the banded regions did not, RX-256 at 13; Tr. 407, 1450, and the lines were drawn before the permeability measurements were made.



CX-424 at 245 (Rogers Plot for Glatz 33 gsm LIP paper) (with circles added by Schweitzer in its Submission at 30)

However, we agree with the ALJ's assessment of the problems in this methodology. In particular, Dr. Rogers testified that he expected an error in the delineation of the boundary between the banded and unbanded regions. For example, Dr. Rogers testified that he expected the actual boundaries of the banded region to be 0.5 mm wider than the lines he drew. Tr. 720-721. However, as Glatz argues, Dr. Rogers failed

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to use error bars for his measurements of permeability.¹¹ Moreover, as Glatz also argues, “noise” or random fluctuation in the measurement of permeability introduces error which must be taken into account. Glatz Submission at 17-18. However, Dr. Rogers did not do so.

In sum, we agree with the ALJ that Dr. Roger’s methodology is too imprecise to justify a finding of infringement.¹² We note in particular the results of Glatz’s test using metallic bands, the overlap in measurements between banded and unbanded portions, the lack of error analysis, and the possible uncertainty in the boundaries drawn between banded and unbanded regions. Tr. 719-720, 724.¹³ Moreover, Dr. Fleming’s (Glatz’s expert) measurements do not show any gradually changing permeability for the accused products, [[[REDACTED]]] RDX-133 at 1-2. We also take into account the testimony of Dr. Fritzsching, Glatz’s expert, that the accused Glatz bands are [[[REDACTED]]] See ID at 97 (citing RX-382C at 72, Q94).

¹¹ In this connection, Glatz raises a *Daubert* challenge to Dr. Roger’s methodology. Glatz Submission at 18 n.11 (citing *Daubert v. Merrell Dow Pharm. Inc.*, 509 U.S. 579, 594 (1993)). Schweitzer responds that Glatz’s challenge is simply based on Glatz’s assertion that Dr. Rogers should have used error bars to show error in measurement of permeability or position. Any *Daubert* challenge should have been raised before the administrative law judge at the evidentiary hearing. Glatz did object to Dr. Roger’s methodology at the hearing, but it did not cast its objection in terms of the *Daubert* factors. The Commission declines to consider Glatz’s *Daubert* challenge in as much as this argument was raised for the first time on review.

¹² None of the parties argue that the iodine testing is an independent basis for finding infringement.

¹³ Glatz does not provide evidence other than observation in support of its argument that the permeability curves are off center with respect to the vertical lines, in arguing that the lines are misdrawn and the measurements are not entirely within the bands. However, Dr. Rogers conceded that he did not determine the exact position of the boundaries, and the vertical lines were the result of a judgment call by him. See Tr. at 719-720, 729:11-730:2.

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Therefore, we conclude that Schweitzer has not shown by a preponderance of the evidence that the accused products meet the “gradually” limitation.

iv. “ramp-shaped profile”

The ALJ found that the evidence of record does not support a finding that the accused products have ramp-shaped bands. ID at 106. Based on the evidence of record, we agree with the ALJ’s finding.

Schweitzer’s arguments with respect to infringement appear to be based only on its argument that the ALJ erred in construing the claim term. See Schweitzer Pet. at 64. Because we agree with the ALJ’s claim construction, *i.e.*, that “ramp-shaped profile” refers to the physical characteristic or shape of the bands, we find that Schweitzer has not proven that the accused products have bands with a “ramp-shaped profile.” Schweitzer appears to have based its infringement case for the term “ramp-shaped profile” on the permeability measurements rather than on the physical shape of the bands. *See* Schweitzer Pet. at 64; Tr. at 511-516, 524-32, 672-80, 736. Because Schweitzer has not proven that the accused products have a “ramp-shaped profile,” as construed, Schweitzer has not proven that this limitation of claims 3, 6, 17, or 18 is met by the accused products.

Conclusion as to Direct Infringement

Because Schweitzer has not proven that the “gradually” limitation is met, there is no literal infringement of any of the asserted claims. Further, Schweitzer has also not proven that the “ramp shaped” limitation is met by claims 3, 6, 17, and 18. Infringement under the doctrine of equivalents was not argued in the petitions for review. *See* Commission rule 210.43, 19 C.F.R. §§ 210.43(b)(1), (2). Therefore, the Commission affirms the ALJ’s finding that there is no direct infringement of claims 12-18.

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d. Indirect Infringement (Claims 1-6, 24)

Claims 1-6 and 24 cover smoking articles made with cigarette wrappers having bands with gradually reducing permeability from minimum permeability reduction to maximum permeability reduction. The ALJ held that there was no infringement, direct or indirect, of asserted claims 1-6 and 24 of the '753 patent because there was no proof of smoking articles having cigarette wrappers with gradually reducing permeability as required by the claims for the same reasons described above with respect to the "gradually" limitation. ID at 65-110. As to both induced and contributory infringement, he based his conclusion on his determination that none of the asserted claims were directly infringed. As to induced infringement, he further found that Schweitzer had failed to show the required *mens rea*.

On review, Schweitzer argues that Glatz contributorily infringes and induces infringement of claims 1-6 and 24 of the '753 patent.

Glatz does not contest indirect infringement if direct infringement is found, except that it contests the ALJ's finding regarding the *mens rea* requirement for induced infringement.

Analysis

The Commission affirms the ALJ's finding of no direct infringement of claims 1-6 and 24 based on the lack of a "gradually" reducing permeability of the cigarette paper for the claimed smoking article, as discussed *supra*. Because there is no direct infringement of the asserted claims of the '753 patent, there is no indirect infringement.

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3. *Invalidity*

On review, Glatz asserts that the claims of the '753 patent are invalid for lack of utility under 35 U.S.C. § 101 and for obviousness under 35 U.S.C. § 103.

a. *Utility*

i. *The Law of Utility*

The Patent Act provides: "Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title." 35 U.S.C. § 101. The utility requirement, based on the statutory requirement of a "useful" invention is a requirement that the claimed invention have a substantial and specific use. *Brenner v. Manson*, 383 U.S. 519, 534-35 (1966).

Another aspect of utility is that the claimed invention be operative.

ii. *The Parties' Arguments*

The ALJ found that the evidence does not support the conclusion that the asserted claims of the '753 patent are invalid under 35 U.S.C. § 101. ID at 256. The ALJ observed that the '753 patent states that it is "a principle object of the present invention to provide a smoking article having improved ignition proclivity characteristics." *Id.* (citing '753 patent, col. 2, lines 42-44). The ALJ found that the undisputed evidence is that the invention accomplishes at least this objective. *Id.* (citing Tr. at 1948).

Glatz argues on review that the asserted claims of the '753 patent lack utility under 35 U.S.C. § 101 because the claimed invention is not useful. Glatz Pet. at 49. Specifically, Glatz argues that the claimed paper does not accomplish the purpose set forth in the specification, *i.e.*, that the gradual nature of the reduction in permeability of

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each band would prevent a smoker from discerning a noticeable change in taste. *Id.* at 50. Glatz and the IA maintain that the gradual reduction in permeability is irrelevant because the area encompassed by the burning coal is so large relative to the size of the bands that it always straddles banded and unbanded regions. *See* Glatz Pet. at 50; Brief of the Office of Unfair Import Investigations on the Issues Under Review and on Remedy, the Public Interest, and Bonding (“IA Submission”) at 11. In this connection, Glatz and the IA argue that the bands are so small that the smoker will always encounter an average permeability and the resulting taste regardless of whether the paper uses the gradual reduction in permeability taught by the patent. Glatz Pet. at 50; IA Pet. at 10.

Schweitzer responds that these arguments are factually inaccurate and based on the wrong legal standard. Complainant Schweitzer-Mauduit International Inc.’s Response to Glatz’s Contingent Petition for Review (“Schweitzer Resp.”) at 59. Schweitzer states that Glatz has not offered any evidence of lack of usefulness. *Id.* at 60. Schweitzer argues that the problem of discernible changes in taste and smoke delivery were real. *Id.* at 61 (citing Tr. at 1948:12-1950:12; 2045:9-12; RX-42C at 4). Further, Schweitzer argues that an invention does not need to meet every stated objective to satisfy the utility requirement. *Id.* (citing *Raytheon Co. v. Roper Corp.*, 724 F.2d 951, 958 (Fed. Cir. 1983)).

Analysis

We affirm the ALJ’s finding of utility, based on the ignition characteristics of the paper. ID at 256 (citing col. 2, lines 42-44) (“[i]t is a principle object of the present invention to provide a smoking article having improved ignition proclivity characteristics.”)

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Moreover, Glatz has not proven lack of utility even based on a more specific definition of utility. The patentee has asserted a specific utility (that the smoker will not notice the transition between banded regions and unbanded regions, or as the ALJ stated, that there are improved ignition proclivity characteristics). Further, to the extent that Glatz's argument is that the claimed invention is inoperative, the standard for inoperability is whether "the claimed device [is] totally incapable of achieving a useful result." *Brooktree Corp. v. Advanced Micro Devices, Inc.*, 977 F.2d 1555, 1571, 24 USPQ2d 1401, 1412 (Fed. Cir. 1992). Glatz has not proven by clear and convincing evidence that the claimed invention is inoperative under this standard.

b. Obviousness

i. The Law of Obviousness

A patent may be found invalid for obviousness.¹ The Supreme Court explained that one ascertains whether an invention would have been obvious to a person of ordinary skill in the art by examining the scope and content of the prior art, differences between the prior art and the claims at issue, and the level of ordinary skill in the pertinent art, keeping in mind such secondary considerations as commercial success, long felt but unsolved needs, and failure of others. *Graham v. John Deere*, 383 U.S. 1, 17 (1966). A

¹ The Patent Statute provides that an invention may be unpatentable for obviousness as follows:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

35 U.S.C. § 103(a).

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prima facie case of obviousness may be shown where all of the claimed elements occur in the prior art, and there is a showing that it would have been “obvious” to combine them to arrive at the claimed invention. Prior to *KSR Int’l Co. v. Teleflex, Inc.*, 550 U.S. 398 (2007) (“*KSR*”), the Federal Circuit required a teaching, suggestion, or motivation to combine the elements found in the prior art. Under the Supreme Court’s teaching in *KSR*, a teaching, suggestion, or motivation to combine elements need not come from a prior art reference, but may come from “market demand, rather than scientific literature.” *KSR*, 127 S. Ct. at 1741.

ii. *The Parties’ Arguments*

The ALJ analyzed whether the asserted claims of the ‘753 patent were obvious in light of certain prior art references, *i.e.*, Allen, Baldwin, and Baker, in light of Houck or “common sense.” *See* ID at 215. U.S. Patent No. 5,474,095,¹⁴ issued to Allen on December 12, 1995 and describes cigarette wrapping paper with cross-sectional bands used to control the static burn rate. *See* ID at 190-91. U.S. Patent No. 5,417,228, issued to Baldwin on May 23, 1995 and teaches bands applied to cigarette paper using cellulosic compositions. *See* ID at 193-195. U.S. Patent No. 4,077,414, issued to Baker on March 7, 1978 and teaches bands applied to cigarette paper using gelatinous compositions. *See* ID at 196-98. U.S. Patent No. 3,911,932, issued to Houck on Oct. 14, 1975 and teaches a “cigarette with a relatively level smoke delivery profile” achieved by arranging zones of differing permeability in the desired order. *See* ID at 198-200. The ALJ notes Glatz’s argument that “common sense” would lead one skilled in the art to make band edges less

¹⁴ RX-443.

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sharp so that the change in taste and smoke delivery to the smoker occurs over a gradual period and is less discernible to the smoker. *See* ID at 103.

The ALJ found that the asserted claims of the '753 patent were not obvious over the asserted prior art. Specifically, the ALJ found that Allen, Baldwin, and Baker do not disclose a gradually changing permeability profile under his claim construction. ID at 215. The ALJ found that Houck teaches the use of gradually changing permeability but that Houck does not teach the use of bands. The ALJ found that a person of ordinary skill in the art would not have found it obvious as a matter of common sense to combine Houck with Allen, Baldwin, and Baker to arrive at the invention of the asserted claims of the '753 patent. ID at 216. With respect to secondary considerations, the ALJ found that Schweitzer had failed to establish a nexus between commercial success and the patented invention. *Id.*

Glatz argues on review that the ALJ erred in his finding that "Houck addresses a different objective . . . leveling the yield of total particulate matter (TPM)." Glatz Pet. at 40. Glatz argues that TPM directly determines taste, and therefore Houck addresses the same problem as the '753 patent, which addresses taste. *Id.* Glatz also argues that the ALJ erred in "seemingly accepting" Schweitzer's argument that Houck teaches the exact opposite of a gradually decreasing permeability profile called for by independent claims 1 and 12 of the '753 patent. Glatz argues that Schweitzer amended the claims during prosecution from referring to "the burning direction" to "in the longitudinal direction," and therefore argues that the claims are no longer the opposite of Houck because Houck captures the profiles of Figures 6A and 6B of the '753 patent. Glatz further asserts that the ALJ erred in adopting Schweitzer's argument that Houck is distinguishable because it

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uses burn-promoting additives, arguing that all cigarettes contain burn-promoting additives. *Id.* at 42.

As to common sense, Glatz argues that it is highly unlikely that prior art bands had perfect 90 degree edges because there is no such thing as a square puddle. *Id.* at 42. Further, Glatz argues that Mr. Honeycutt, Schweitzer's expert, conceded that gradual bands were a common sense solution to bands with edges that were abrupt. *Id.*

Schweitzer responds that a banded design could not be combined with Houck because Houck adds a permeability reducing compound at the lighting end of the cigarette and using bands with unbanded areas in between would further increase already high deliveries of particulate matter at the latter stages of the cigarette. Schweitzer Resp. at 51 (citing Tr. at 1262:24-1263:21; 1931:17-1932:4).

Schweitzer further responds that common sense would not necessarily lead a person of ordinary skill in the art to use gradually changing permeability profiles. Schweitzer states that Mr. Honeycutt testified that a person of ordinary skill in the art would investigate many possible designs, but would have preferred a non-banded design as a solution to the inconsistent smoke deliveries and taste known to have plagued banded designs. Schweitzer Resp. at 49 (citing Tr. at 1903:20-1905:17; 1915:5-23).

Analysis

The Commission affirms the ALJ's finding of nonobviousness. We find that it would not have been obvious to combine Allen, Baldwin, and Baker with Houck to arrive at the invention of the asserted claims of the '753 patent because Houck teaches a gradually (as we have defined the term) decreasing porosity or permeability down the length of the cigarette from the smoking end to an intermediate location, U.S. Patent No.

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3,911,932,¹⁵ Abstract; col. 1, line 63 – col. 2, line 7; col. 5, line 51 – col. 6, line 8, whereas the asserted claims of the '753 patent call for the use of bands in a repeating pattern. Each band, as part of the asserted claims and as depicted in Figure 6A (or Figure 5) of the '753 patent, might resemble Houck in that the porosity changes, *see* at Tr. 1081, but the use of bands in a repeating pattern is distinct from Houck.

We agree with the ALJ that a person of ordinary skill in the art would not have combined the bands of Allen, Baldwin, and Baker with Houck. The '753 patent teaches low porosity bands on top of high porosity paper, varying the porosity locally within each band but maintaining the porosity of the base paper across the length of the cigarette. Tr. at 1258, 1262. Houck used a fundamentally different invention, varying the porosity across the length of the cigarette. Glatz has not demonstrated that a person of ordinary skill in the art would have combined Houck with the bands of Allen, Baldwin, and Baker to vary the porosity locally rather than across the length of the entire cigarette. Nor has Glatz demonstrated that common sense would so suggest. Taken in context, Mr. Honeycutt's testimony explains that a person of ordinary skill in the art would have preferred an unbanded design when dealing with the problem of inconsistent smoke delivery. Tr. at 1915:5-23; *see also* 1903:20-1905:17. Therefore, we affirm the ALJ's finding that the asserted claims of the '753 patent are not invalid for obviousness over the asserted prior art.

4. Domestic Industry

Under the statute, a violation of section 337 may be found if a domestic industry exists with respect to the asserted patent. 19 U.S.C. § 1337(a)(2). The Commission has

¹⁵ RX-427.

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interpreted this to mean that a complainant may demonstrate a domestic industry by showing that one of its products satisfies the limitations of one of the claims of the patent.

E.g., Certain Microsphere Adhesives, Inv. 337-TA-366, USITC Pub. No. 2949, Comm'n

Op. at 7-16 (Jan. 1996). Section 337(a)(2) provides:

(2) Subparagraphs (B), (C), (D), and (E) of paragraph (1) [concerning violations of section 337] apply only if an industry in the United States, with respect to the articles protected by the patent, copyright, trademark, mask work, or design concerned, exists or is in the process of being established.

Section 337(a)(3) provides:

(3) [A]n industry in the United States shall be considered to exist if there is in the United States, with respect to articles protected by the patent . . . concerned –

- (A) significant investment in plant and equipment;
- (B) significant employment of labor or capital; or
- (C) substantial investment in its exploitation, including engineering, research and development, or licensing.

The Commission has divided the domestic industry requirement into an economic prong (which requires certain investments) and a technical prong (which requires that these investments relate to the article protected by intellectual property). Section 337(a)(2), (a)(3); *see, e.g., Certain Variable Speed Wind Turbines and Components Thereof*, Inv. No. 337-TA-376 (“*Wind Turbines I*”), USITC Pub. 3003 (Nov. 1996), Comm'n Op. at 14-17.

By noticed dated November 23, 2011, the Commission found the economic prong of the domestic industry requirement was met with respect to both asserted patents. As to the technical prong, the issue for the '753 patent depends on whether the disputed claim limitations of claim 12 are found in the domestic articles.

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a. "film forming composition"

There is no dispute that if "film forming composition" is construed to include solutions and fibrous slurries, as it has been construed by the Commission with respect to asserted claims of the '753 patent, the products offered to satisfy the domestic industry requirement meet the "film forming composition" limitation. Accordingly, the Commission affirms the ALJ's finding that this claim limitation is met in the domestic articles. *See* ID at 280.

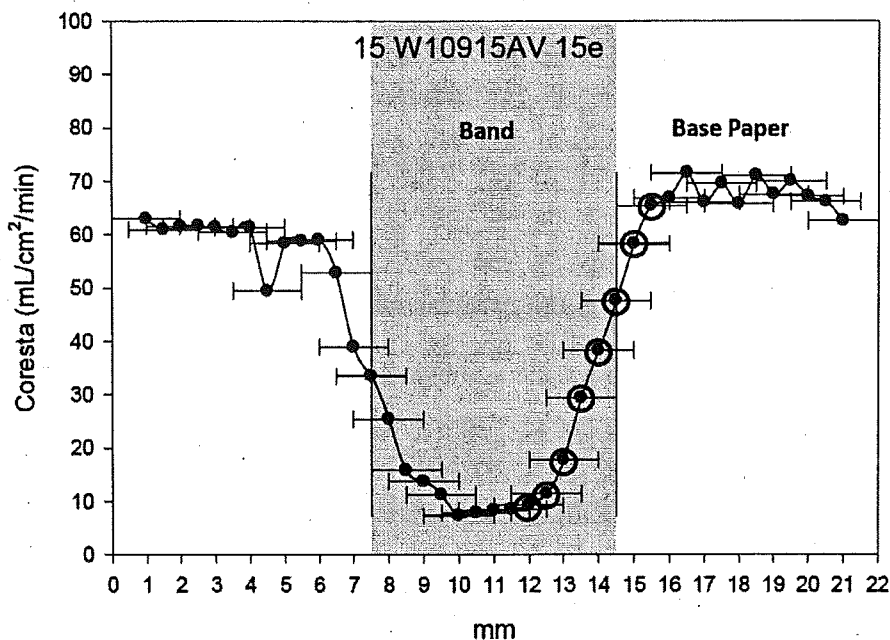
b. "gradually"

The ALJ held that Schweitzer failed to meet the technical prong of the domestic industry requirement based in part on its failure to demonstrate that the domestic industry articles meet the "gradually" limitation of claim 12. ID at 280. Schweitzer used the same methodology to assess whether the domestic articles met the disputed limitations as it did for the accused products. Many of the same arguments concerning the methodology used to test the accused products were made with respect to the products offered to satisfy the domestic industry requirement. On review, Schweitzer argues that the ALJ erred in holding that the "gradually" claim limitation is not met in the domestic articles based on its argument that measurements made by its expert, Dr. Rogers, and the measurements made by Glatz's expert, Dr. Fleming, both support its contention that Schweitzer's paper exhibits a gradual reduction in permeability as required by the claim language. Schweitzer Submission at 12-18 (citing CX-425 at 260; Tr. 1506:11-1507:3; RDX-133 at 14; CX-425 at 77).

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Analysis

Dr. Roger's plot, CX-425 at 260, showing the permeability profile for SWM LIP paper 12817RJ, and CX-425 at 77, showing the permeability profile for SWM LIP paper W10915AV, is argued to indicate a gradual reduction in permeability according to Schweitzer's claim construction of "gradual," *i.e.*, that the permeability does not decrease all at once:

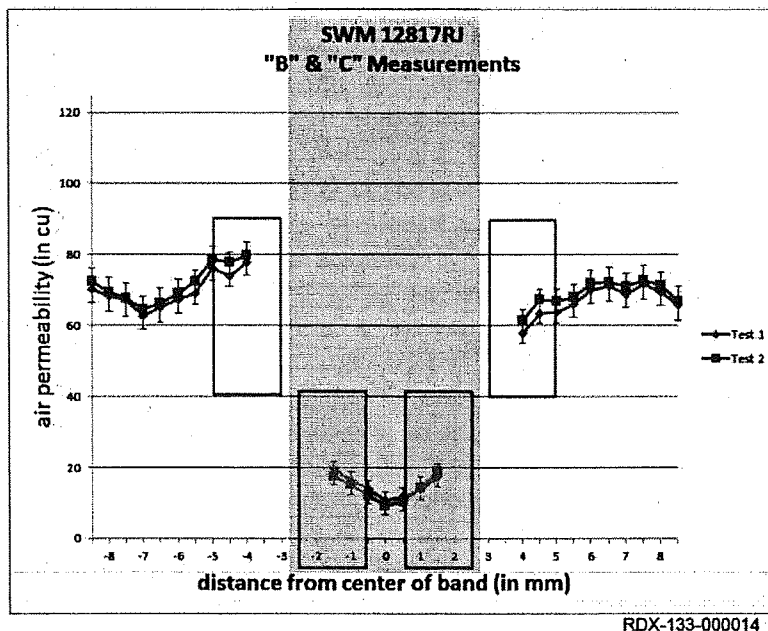


CX-425 at 77 (Rogers Plot for SWM LIP paper W10915AV) (with circles added by Schweitzer in its Submission at 16)

As noted above, Dr. Roger's methodology is too flawed to be relied on to demonstrate infringement. These same flaws are present with respect to Dr. Rogers' analysis of the domestic articles. Moreover, the evidence does not support Schweitzer's argument that Dr. Fleming's test demonstrates the gradual reduction in permeability required by the claims. As shown graphically below, in contrast to Dr. Rogers, Dr.

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Fleming did include bars in his data plots which show the error in permeability measurements. However, Dr. Fleming only measured points that were clearly outside and clearly inside the banded portion.



Claim 12 requires that “permeability in said changing permeability area gradually changes from zero permeability reduction to a maximum permeability reduction.” At best, Dr. Fleming’s measurements show a gradual change well within in the area of maximum reduction, *i.e.*, in the middle section of the graph, from near the maximum reduction to the maximum reduction. Thus, Dr. Fleming’s test results do not and cannot show whether changes from the area of zero permeability reduction to the area of maximum permeability reduction are gradual as required by the claims.

Because Schweitzer’s product has not been shown to satisfy the “gradually” limitation of claim 12, the Commission affirms that ALJ’s finding that Schweitzer has not demonstrated that its product satisfies the technical prong of the domestic industry requirement.

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B. The '867 Patent

Claims 36, 43, and 45 are at issue in this investigation. Of these, claim 36 is an independent claim. The claims at issue are as follows:

36. A process for producing a paper wrapper having reduced ignition proclivity characteristics when incorporated into a smoking article comprising the following steps: providing a paper wrapper comprised of a paper web, said paper web having a relatively high permeability, the permeability of the paper web being from about 60 Coresta to about 110 Coresta; applying a film-forming composition, to said paper wrapper at particular locations, said film-forming composition forming treated discrete areas on said wrapper, said discrete areas separated by untreated areas, said treated discrete areas having a permeability within a predetermined range sufficient to reduce ignition proclivity, said permeability being less than about 20 Coresta within the treated areas, said treated areas having a Burn Mode Index of less than about 8 cm.sup.-1, said treated areas reducing ignition proclivity by reducing oxygen to a smoldering coal of the cigarette as the coal burns and advances into said treated areas.

43. The process of claim 36, wherein said film-forming composition comprises a pectin composition, a silicate composition, a polyvinyl alcohol composition, a starch composition, or a cellulose derivative composition.

45. A process for producing a smoking article comprising the step of surrounding a tobacco column with the paper wrapper defined in claim 36.

'867 patent, col. 4, lines 34-53, col. 13, lines 3-6, 11-13.

1. Claim Construction

The construction of four claim terms were disputed: "applying," "relatively high permeability, the permeability of the paper web being from about 60 Coresta to about 110 Coresta," "film forming composition," and "burn mode index."

a. "applying" (all asserted claims)

The Commission determined not to review the ALJ's construction of "applying."

See 77 Fed. Reg. 20844 (Apr. 6, 2012). The ALJ construed "applying" in accordance

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with its plain and ordinary meaning and to include both single and multiple layers. ID at 54.

b. “a relatively high permeability, the permeability of the paper web being from about 60 Coresta to about 110 Coresta” (all asserted claims)

The ALJ construed “a relatively high permeability, the permeability of the paper web being from about 60 Coresta to about 110 Coresta” to mean “The permeability of the paper web being from about 60 ml/min/cm² to about 110 ml/min/cm².” ID at 54. The Commission determined not to review the ALJ’s construction of this term. *See 77 Fed. Reg. 20844 (Apr. 6, 2012).*

c. “film forming composition” (all asserted claims)

The question presented on review is whether the term “film forming composition” should be given the same construction in the ‘867 patent as in the ‘753 patent. The Commission did not review the ALJ’s construction of the term “film forming composition” as it is recited in the asserted claims of the ‘753 patent. *See 77 Fed. Reg. 20844 (Apr. 6, 2012).* The ALJ construed “film forming composition” in the ‘753 patent to encompass compositions formed from both solutions and fibrous slurries. The ALJ gave the same construction to “film forming composition” in the two patents because the parties “are in agreement that it means the same thing in the case of each of the patents.” ID at 54.

In the Commission’s review notice, it requested that the parties brief whether the Commission is bound by the stipulation of the parties that the term has the same meaning in both patents. Specifically, the Commission noted that the Federal Circuit has explained that tribunals are obligated to arrive at the proper construction and are not limited to the claim constructions proposed by parties. *77 Fed. Reg. 20844 (Apr. 6, 2012)*

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(citing *Exxon Chemical Patents v. Lubrizol Corp.*, 64 F.3d 1553, 1555 (“In the exercise of that duty, the trial judge has an independent obligation to determine the meaning of the claims, notwithstanding the views asserted by the adversary parties.”))

In their written submissions in response to the Commission’s notice of review and request for briefing, the parties agreed that the Commission is not bound by the stipulation by the parties as to claim construction. Schweitzer Submission at 33; Glatz Submission at 36; IA Submission at 18. The IA remarked that *Lubrizol* did not involve a stipulation, but rather was a case in which the Court arrived at a different claim construction than that proposed by any of the parties. IA Submission at 18.

With respect to the relevant claim language, there is a sentence in the specification of the ‘753 patent which does not appear in the specification of the ‘867 patent: “Fibrous slurries applied from an aqueous solution are also effective.” ‘753 patent, col. 4, lines 59-60. The parties disagree as to whether this sentence from the specification of the ‘753 patent regarding the use of fibrous slurries is incorporated by reference into the specification of the ‘867 patent.

Glatz argues that the ‘867 patent incorporates the ‘753 patent by reference. Glatz Submission at 37-38 (citing *Telemac Cellular Corp. v. Topp Telecom, Inc.*, 247 F.3d 1329 (Fed. Cir. 2001); *Advanced Display Sys. Inc v. Kent State Univ.*, 212 F.3d 1272, 1282 (Fed. Cir. 2000); *Cook Biotech Inc. v. Acell, Inc.*, 460 F.3d 1365, 1375-78 (Fed. Cir. 2006); *AquaTex Indus., Inc. v. Techniche Sol’ns*, 419 F.3d 1374, 1381 (Fed. Cir. 2005)). The specification of the ‘867 patent states “U.S. Patent No. 5,878,753 to Peterson which is incorporated herein by reference, for example, describes a smoking article wrapper being treated with a film-forming aqueous solution to reduce permeability.” ‘867 patent,

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col. 1, lines 40-41. Glatz further argues that even if the '753 patent is not incorporated by reference, it is intrinsic evidence because it is cited in the '867 patent. Glatz Submission at 38-39 (citing *V-Formation, Inc. v. Benetton Group SpA*, 401 F.3d 1307, 1311 (Fed. Cir. 2005)). As to extrinsic evidence, Glatz argues that each expert gave the same construction for the '753 and '867 patents, although they disagreed as to what that construction was.

Schweitzer responds that, elsewhere in its written submission, Glatz argues that “merely incorporating an earlier patent by reference does not convert the invention of the incorporated patent into the invention of the host patent.” Complainant Schweitzer-Mauduit International Inc.’s Reply to the Responses of Glatz and the Staff of the Notice of Commission Determination to Partially Review the Final Initial Determination of the Administrative Law Judge (“Schweitzer Reply Submission”) at 16 (citing Glatz Submission at 48 (citing *Modine Mfg. Co. v. ITC*, 75 F.3d 1545, 1553 (Fed. Cir. 1996))). Schweitzer argues that the '867 patent incorporates the use of a “film forming aqueous solution to reduce permeability,” '867 patent, col. 1, lines 40-43, not the use of fibrous slurries. Schweitzer Reply Submission at 18. Schweitzer notes that the Court in *Cook* considered the context of the incorporation. *Id.*

The IA asserts that the '867 patent incorporates the '753 patent without designating any portion of the '753 patent, and therefore incorporates the entire patent. Reply Brief of the Office of Unfair Import Investigations on the Issues Under Review and on Remedy, the Public Interest, and Bonding (“IA Reply Submission”) at 24 (citing *Harari v. Lee*, 656 F.3d 1331, 1335-36 (Fed. Cir. 2011)).

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Glatz argues that the fact that the '753 and '867 patents teach the use of particulate fillers that can be added to solutions indicates that suspensions may be used in addition to solutions. Glatz Reply Submission at 42. Glatz points out that the asserted claims of the '753 and '867 patents use the term "film forming composition" rather than "film forming solution." Glatz Reply Submission at 25. Glatz further argues that a fibrous slurry can be used to deposit a layer, or film, as demonstrated by electron microscopy. Glatz Submission at 45 (citing RX-396; RX-387). Glatz argues that the terms "film former" and "molecular coherency," used by Schweitzer's expert, Mr. Honeycutt, to describe the properties of the film forming composition and resultant film, do not appear in the '753 or '867 patents. Glatz Reply Submission at 20-21.

Schweitzer argues that it is significant that the '867 patent does not contain the sentence of the '753 patent that fibrous slurries can be used, and that this distinction between solutions and slurries is made in the prior art. Schweitzer Submission at 36-38. Schweitzer argues that interpreting "film forming composition" as a suspension would read the words "film forming" out of the claim and would thus be contrary to Federal Circuit precedent. Schweitzer Submission at 35 (citing *Apple Computer, Inc. v. Articulate Sys., Inc.*, 234 F.3d 14, 25 (Fed. Cir. 2000); *Strattec Sec. Corp. v. General Auto. Specialty Co., Inc.*, 126 F.3d 1411, 1417 (Fed. Cir. 1997); *Texas Instruments Inc. v. ITC*, 988 F.2d 1165, 1171 (Fed. Cir. 1993); *BBA Nonwovens Simpsonville, Inc. v. Superior Nonwovens, LLC*, 303 F.3d 1332, 1344 (Fed. Cir. 2002)).

The IA argues that the '753 and '867 patents do not require "film formers." IA Reply Submission at 21. The IA explains that requiring the use of "film formers" is circular and vague. *Id.* Nevertheless, the IA asserts that the term "film forming

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composition” is broader than “film forming solutions” and includes fibrous slurries. IA Reply Submission at 25.

Analysis

As an initial matter, we agree with the parties that the Commission is not bound by the stipulation. *See Exxon Chemical Patents v. Lubrizol Corp.*, 64 F.3d 1553, 1555 (Fed. Cir. 1995) (“In the exercise of that duty, the trial judge has an independent obligation to determine the meaning of the claims, notwithstanding the views asserted by the adversary parties.”).

However, based on our independent analysis, we find, based on the intrinsic evidence of the ‘867 patent, including the claims and specification, and the ‘753 patent expressly incorporated therein, that the term “film forming composition” has the same meaning in the asserted claims of the ‘867 patent as in the ‘753 patent. *Telemac Cellular Corp. v. Topp Telecom, Inc.*, 247 F.3d 1329 (Fed. Cir. 2001); *Advanced Display Sys. Inc. v. Kent State Univ.*, 212 F.3d 1272, 1282 (Fed. Cir. 2000); *Cook Biotech Inc. v. Acell, Inc.*, 460 F.3d 1365, 1375-78 (Fed. Cir. 2006); *AquaTex Indus., Inc. v. Techniche Sol’ns*, 419 F.3d 1374, 1381 (Fed. Cir. 2005); *V-Formation, Inc. v. Benetton Group SpA*, 401 F.3d 1307, 1311 (Fed. Cir. 2005). As to Schweitzer’s argument that one must consider the context of the incorporation, we note that the asserted claims of the ‘867 patent use the term “film forming composition” rather than “film forming solution.” The terms “film-forming solutions” and “film-forming aqueous solution” are used in the ‘867 patent at col. 1, lines 33-34 and line 43, but the asserted claims use the broader term “film forming composition,” which is not limited to solutions.

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Thus, consistent with the parties' stipulation, we find that "film forming composition" has the same meaning in the asserted claims of the '867 patent as those of the '753 patent, *i.e.*, that both aqueous solutions and fibrous slurries qualify as long as they result in the deposition of a film layer.

d. "burn mode index" (all asserted claims)

The Commission determined not to review the ALJ's construction of "burn mode index." 77 *Fed. Reg.* 20844 (Apr. 6, 2012). The ALJ construed "burn mode index" to mean "The ratio of intrinsic resistivity of the electrolyte solution (in ohm-cm) to the product of the electrical resistance of the paper (in ohms) and the area of paper in contact with both electrodes (cm²)." ID at 55.

2. Infringement

a. Tested and Untested Products

The discussion of tested and untested products provided with respect to the '753 patent also applies to the '867 patent.

b. Direct Infringement (Claims 36 and 43)

Complainant alleges that the imported articles are made by the process of claims 36 and 43. Only certain limitations are disputed.

i. "film forming composition"

The ALJ followed the stipulation of the parties that "film forming composition" had the same meaning in the claims of the '753 patent and the '867 patent, and construed "film forming composition" to mean any composition that dries as a film. ID at 36-37, 54. The ALJ found that the accused products directly infringe claim 36 and claim 43 of the '867 patent, *i.e.*, were made by the claimed processes.

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Glatz argues that it does not infringe any of the asserted claims of the '867 patent under Schweitzer's proposed construction because it has not been proven that Glatz uses

[[

]] Glatz Resp. at 63.

Schweitzer argues that the accused products satisfy the "film forming composition" limitation of the '867 patent for the same reason it argued that the accused products satisfy the "film forming composition" limitation under its proposed construction of the term in the '753 patent. Schweitzer Resp. at 64. Schweitzer points to the testimony of its expert in chemistry, Dr. Rogers, who testified that when starch is mixed with water, the starch polymers are solvated to a certain degree, and when the water dries off, the polymers interact with one another, bonding together and forming a film. Schweitzer Pet. at 61 (citing Tr. at 496:2-497:13). The IA did not make any arguments as to whether the accused products satisfy the "film forming composition" limitation.

Analysis

The Commission has construed "film forming composition" to include both solutions and fibrous slurries. As to Glatz's argument regarding whether [[

]] neither is required

under our claim construction. Glatz does not contest whether the accused products satisfy the "film forming composition" limitation under the Commission's claim construction. *See* Glatz Pet. at 63. Therefore, the accused products satisfy the "film forming composition" limitation.

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ii. "applying"

The ALJ construed "applying" to encompass both single and double layers, and found that the accused products satisfy the "applying" limitation. ID at 116. Glatz only disputes that its products satisfy the "applying" limitation [[

]] Glatz Pet. at 62. Because the Commission determined not to review the ALJ's construction of "applying," the Commission finds that the accused products satisfy the "applying" limitation.

iii. "burn mode index"

The ALJ found that the accused products satisfied all limitations of claim 36 of the '867 patent, which includes "burn mode index." See ID at 116. Glatz does not dispute that the accused products satisfy the "burn mode index" limitation. Therefore, the Commission affirms the ALJ's finding that the accused products satisfy the "burn mode index" limitation.

Conclusion as to Direct Infringement of Claim 36

Having examined the disputed claim limitations based on the evidence in the record, the Commission affirms the ALJ's conclusion that the accused products directly infringe claim 36 of the '867 patent.

iv. Claim 43

Claim 43 recites:

43. The process of claim 36, wherein said film-forming composition comprises a pectin composition, a silicate composition, a polyvinyl alcohol composition, a starch composition, or a cellulose derivative composition.

col. 13, lines 3-6.

The ALJ found that Glatz infringes claim 43 of the '867 patent. ID at 117.

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Glatz only contested infringement of claim 43 for the reasons it contested infringement of claim 36. ID at 117; *see also* Glatz Pet. at 62-63.

Because the Commission finds that Glatz infringes claim 36 of the '867 patent, the Commission affirms the ALJ's conclusion that Glatz infringes claim 43 as well.

c. Indirect Infringement (Claim 45)

Schweitzer alleges that Glatz indirectly infringes claim 45 of the '867 patent. Claim 45 is a process for making a smoking article (using a paper wrapper).

The ALJ found indirect infringement. ID at 121-22. He noted Schweitzer's argument that Glatz sells paper to cigarette manufacturers in the United States, and that Glatz aids and abets their direct infringement of claim 45 by providing documentation to customers seeking to achieve compliance with FDA requirements on cigarette fire safety. ID at 119.

Schweitzer argues that Glatz induces infringement of claim 45 of the '867 patent for the same reasons that Glatz induces infringement of the asserted claims of the '753 patent. Schweitzer Reply Submission at 64. Schweitzer argues that Glatz has not presented evidence in response. *Id.* at 65.

The Glatz Respondents do not contest contributory infringement of claim 45 of the '867 patent if direct infringement of claim 36 is shown. See ID at 122. Glatz argues that the ALJ applied the wrong culpability standard for inducement, that the correct legal standard is "knew or should have known," and that this standard was not met. Glatz Pet. at 63-64. Glatz argues that at most there was evidence that Glatz had knowledge of the asserted patents and knowledge that its wrappers were used to make smoking articles. *Id.*

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at 64. Glatz argues that such knowledge by itself does not give rise to active inducement liability. *Id.* (citing, *inter alia*, *Global-Tech*, 131 S. Ct. at 2068).

The IA did not comment on the issue of induced infringement.

Analysis

We find indirect infringement of claim 45 because Glatz does not contest contributory infringement if, as the Commission has found, there is direct infringement.

3. Invalidity

a. Anticipation under 35 U.S.C. § 102(a)

i. The Law of Anticipation

A patent is presumed to be valid. 35 U.S.C. § 282. The burden of proof of showing invalidity is on the challenger and must be met by clear and convincing evidence. *Microsoft Corp. v. i4i Ltd. Partnership*, 131 S.Ct. 2238, 2242 (2011). As relevant to this investigation, the Patent Act provides:

A person shall be entitled to a patent unless—

...)

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent

35 U.S.C. § 102(a). “Anticipation requires a showing that each limitation of a claim is found in a single reference, either expressly or inherently.” *Atofina v. Great Lakes Chem. Corp.*, 441 F.3d 991, 999 (Fed. Cir. 2006). The relevant prior art is that prior to the date of invention.

ii. Allen (Claims 36 and 45)

The ALJ found that Allen does not anticipate the asserted claims of the ‘867 patent because it fails to disclose the use of high permeability base papers in a low

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ignition proclivity product in the range of 60-110 Coresta, a requirement of the asserted claims. ID at 172.

Glatz argues that Allen teaches base sheet permeabilities in the range of 25-60 Coresta (*i.e.*, an end-point of Allen is also an end-point of the claimed range). Glatz Pet. at 71.

Schweitzer responds that Allen's range of 25-60 Coresta does not anticipate the '867 patent's range of 60 -100 Coresta and that even a slight overlap in the range would not anticipate. Schweitzer Resp. at 75-76. Schweitzer points to the *Atofina* case where the Court held that a prior art disclosure of a temperature range of 100 to 500 degrees Celsius with a preferred range of 150 to 350 degrees did not anticipate a claimed range of 330 to 450 degrees. Schweitzer Resp. at 76 (citing *Atofina v. Great Lakes Chem. Corp.*, 441 F.3d 991, 999-1000 (Fed. Cir. 2006)). Glatz argues that *Atofina* has been qualified by the subsequent case of *ClearValue, Inc. v. Pearl River Polymers, Inc.*, 668 F.3d 1340 (Fed. Cir. 2012). The *ClearValue* Court indicated that there was a criticality component to *Atofina*. In *ClearValue*, the Court distinguished *Atofina*, stating that in *Atofina* the claimed range was critical and was therefore not anticipated by the prior art range. *ClearValue*, 668 F.3d at 1345.¹⁶

Schweitzer further argues that Allen does not disclose the claimed band Burn Mode Index ("BMI") for the same reason that the Peterson and Hammersmith references

¹⁶ There is conflicting testimony as to the "criticality" of the claimed base paper permeability range of 60-110 Coresta. Schweitzer's expert, Mr. Honeycutt, stated that there is nothing "magical" or "critical" about the claimed range. Tr. 2102; *see also* Tr. at 1272 (discussing burn rate control and puff count). However, the higher permeability base paper (above 60 Coresta) is necessary for low tar cigarettes. Tr. at 1004.

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(to be discussed) do not, *i.e.*, that a low permeability in Allen does not necessarily mean the claimed BMI range was present in Allen. *Id.*

Analysis

We agree with the ALJ that Allen, with a base sheet permeability range of 25-60 Coresta, does not anticipate independent claim 36 (or dependent claim 45), which calls for a base sheet permeability range of 60-100 Coresta. *See Atofina*, 441 F.3d at 999-1000. In *Atofina*, Great Lakes argued that a Japanese prior art publication anticipated the claims at issue in U.S. Patent No. 5,900,514 (“the ‘514 patent”) because the temperature range taught in the prior art was 100 to 500°C while the ‘514 patent claimed a range of 330 to 450°C. *Id.* at 999. The Court held that the prior art temperature range was a broad genus, and explained that it did not anticipate the narrower range of the patent at issue because a genus cannot anticipate a species. *Id.* The Court also held that the preferred range of the prior art, 150 to 350 °C, while slightly overlapping the claimed range was not anticipatory. In that case, the Court further held that the disclosure of an oxygen to methylene chloride ratio of 0.001 to 1.0 percent in a different Japanese prior art publication did not anticipate the claimed range of 0.1 to 5.0 percent because there was a slight overlap but no reasonable fact finder could determine that this overlap described the entire claimed range with sufficient specificity to anticipate the claimed limitation, especially given the difference in magnitude of the lower endpoint. *Id.* at 1000.

Based on the evidence of record, the permeability range disclosed in Allen which is a genus and which only overlaps an endpoint of the claimed range, does not anticipate the claimed permeability range, and we therefore affirm the ALJ’s conclusion that Allen does not anticipate the asserted claims of the ‘867 patent. *Atofina*, 441 F.3d at 1000. We

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note that overlap only at an endpoint is different than the overlapping ranges in *ClearValue*. See 668 F.3d at 1345.

Further, Allen does not disclose the claimed band Burn Mode Index. We find that there is not a guaranteed relationship between permeability and BMI which would allow us to conclude that there is inherent anticipation of the BMI range of the asserted claims. See Peterson *infra*.

iii. Baldwin (Claims 36 and 45)

The ALJ found that the evidence does not clearly and convincingly establish that Baldwin anticipates the '867 patent because the range of permeability of paper disclosed in Baldwin is a broad genus in relation to the range of the permeability in the asserted claims of the '867 patent. ID at 177 (citing *Atofina*, 441 F.3d at 999-1000).

Glatz argues that Baldwin teaches a base paper permeability range of 2 to 150 Coresta units with a preferred range from about 20 to about 60 Coresta units.

With respect to the band permeability, Glatz argues that the bands would necessarily or inherently have a permeability of less than 20 Coresta and that Schweitzer has conceded as much with respect to the Peterson '753 patent and the '867 patent. Glatz Pet. at 72.

Schweitzer responds that Baldwin's broad disclosure of 2 to 150 Coresta for its base paper does not anticipate the asserted claims of the '867 patent, and that Baldwin's preferred range of 20 to 60 Coresta does not anticipate for the same reason that Allen does not. Schweitzer Resp. at 76-77 (citing *Atofina*, 441 F.3d at 999-1000). Further, Schweitzer argues that there is no reason to believe that Baldwin's bands necessarily had a permeability below 20 Coresta because Dr. McCarty conceded that Baldwin is

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generally directed to burn rate control rather than reduced ignition proclivity. Schweitzer Resp. at 77 (citing Tr. at 1336:18-22, 1337:16-20; 1321:8-21).

Analysis

We agree with the ALJ that the teaching in Baldwin of a preferred range of 20-60 Coresta does not anticipate claim 36, which utilizes a base sheet permeability range of 60-100 Coresta, because there is minimal overlap. See *Atofina*, 441 F.3d at 999-1000. We are guided by the principle in *Atofina* that a broad genus may not specify each of the constituent points for purposes of anticipating a claimed range. We find that the genus of 2 to 150 Coresta for base paper in Baldwin is so large with respect to the claimed range of 60-110 Coresta that Baldwin does not anticipate the claimed range. Therefore, Baldwin does not anticipate any of the asserted claims of the '867 patent.

Further, Baldwin neither expressly discloses nor inherently discloses a permeability below 20 Coresta as required by the asserted claims of the '867 patent. Dr. McCarty conceded that Baldwin is generally directed to burn rate control rather than reduced ignition proclivity, that a permeability of less than 20 Coresta is not disclosed in Baldwin, and that experimentation would be required after reading Baldwin to arrive at a permeability of less than 20 Coresta. See Tr. at 1321; 1336-1337. Accordingly, the Commission affirms the ALJ's conclusion that Baldwin does not anticipate claims 36 and 45 of the '867 patent.

iv. Peterson (the '753 Patent) (Claims 36, 43, and 45)

The ALJ found that Peterson does not anticipate the asserted claims of the '867 patent because it does not expressly or inherently disclose the permeability range, in

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terms of Coresta, of the base paper or LIP bands or the Burn Mode Index specified in claim 36, upon which claims 43 and 45 depend. ID at 181.

Glatz argues that the ALJ erred in not properly crediting the '753 patent teaching that the base paper wrapper "may include any manner of commercially available cigarette wrapper . . . [or] any other manner of paper web." Glatz Pet. at 73 (citing '753 patent, col. 5, lines 23-27). Glatz asserts that the ALJ further erred in not finding that the bands in Peterson inherently have a Burn Mode Index of less than 8. Peterson teaches an LIP band permeability of less than 6 Coresta and generally within the range of 2 to 6 Coresta. Glatz Pet. at 74 (citing '753 patent, col. 3, lines 31-39). Glatz argues that a band with permeability in the range of 2 to 6 Coresta will necessarily have diffusivity with a BMI of less than 8 because there is a necessary relationship between permeability and diffusivity. See Glatz Pet. at 75-76. Glatz argues that Schweitzer produced no counterexamples, that the '867 disclosure and prior art (Hampl '775, Durocher, and Hampl '403) teach that BMI and Coresta are simply alternative ways of measuring low ignition proclivity characteristics, and that the bands block the pores in paper through which air usually passes causing both values to be low. Glatz Pet. at 76 (citing the '867 patent, col. 6, lines 43-48; JX-10; RX-434; RX-459; Tr. 2080:8-16; 2077:19-2078:12).

Schweitzer counters that the specific examples in Peterson all have a base sheet permeability well below the claimed range of the '867 patent. Schweitzer Resp. at 78. As to the relationship between permeability (which is measured in Corestas) and diffusivity (which is measured in Burn Mode Index), Schweitzer argues that Dr. McCarty, Glatz's expert, conceded that diffusivity is different than permeability and has different dynamics. *Id.* at 73 (citing Tr. at 1286:23-1287:7). Schweitzer asserts that Dr.

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McCarty conceded that BMI is a better predictor of reduced ignition proclivity, and points to Mr. Honeycutt's testimony that, even if permeability is held constant, BMI varies with type of coating, filler shape, filler size, perforations, pinholes, fiber refining, machine refining, machine draws, machine speeds, and machine vacuums. Schweitzer Resp. at 73-74 (citing Tr. at 1287-9-13 (McCarty), 1981:20-1983:3 (Honeycutt), 12939-1294:25; 1301:4-9 (McCarty)).

Analysis

Glatz essentially argues that the BMI limitation of the '867 patent is inherently disclosed in the Peterson '753 patent, because a low permeability equates with a low BMI. We disagree. While permeability may, in certain examples, show a correlation with diffusivity, the standard for inherent anticipation is that there must be a necessary relationship. *Atlas Powder Co. v. Ireco Inc.*, 190 F.3d 1342, 1347 (Fed. Cir. 1999).

We agree with the ALJ that Peterson '753 does not teach bands having a Burn Mode Index of less than 8cm-1. Glatz argues that a band having a permeability of 2 to 6 Coresta will necessarily have a BMI of less than 8cm-1. Glatz asserts that Schweitzer has provided no counterexamples. Glatz Pet. at 75-76. However, this argument is an attempt to improperly shift the burden of production and the burden of proof to Schweitzer. Diffusivity (measured in BMI) varies with the square of pore size, whereas permeability varies with the fourth power of pore size. Tr. at 1983. Mr. Honeycutt testified that when the permeability of a paper wrapper is less than or equal to 6 Coresta, he would expect a BMI of less than 8cm-1, Tr. at 2077:19-2078:12. However, Mr. Honeycutt testified that there is no exact relationship between permeability and diffusivity. He stated that, even if permeability is held constant, BMI varies with type of coating, filler shape, filler size,

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perforations, pinholes, fiber refining, machine refining, machine draws, machine speeds, and machine vacuums. Tr. at 1981:20-1983:3 (Honeycutt). Other experts testified that diffusivity is more important than permeability in determining low ignition proclivity characteristics and that pin holes can cause a difference between permeability and diffusivity. Tr. at 1287:9-13, 1293:9-1294:25 (McCarty); 722:21-24 (Rogers). The evidence offered by Glatz does not show that a permeability of less than 6 Coresta in Peterson '753 would necessarily result in a BMI of less than 8cm-1. Thus, the Commission affirms the ALJ's conclusion that Peterson does not inherently disclose the BMI limitation of Peterson. Thus there is no inherent anticipation.

v. Hammersmith (Claims 36, 43, and 45)

The ALJ found that there is not clear and convincing evidence that Hammersmith satisfies the Burn Mode Index element crediting Mr. Honeycutt's testimony that Burn Mode Index (diffusivity) cannot be predicted based on the Coresta values (permeability) over Dr. McCarty's testimony that it can be predicted. ID at 185 (Tr. at 2006-07). The ALJ found that Hammersmith was prior art to the '867 patent. See ID at 184. In analyzing whether Hammersmith anticipates the asserted claims of the '867 patent, we also examine whether Hammersmith is prior art to the '867 patent.

As with Peterson, Glatz argues that a band with a permeability lower than 6 Coresta would have a BMI lower than 8, regardless of the general relationship between permeability and diffusivity. Glatz Pet. at 77-78. Specifically, Glatz points to testimony by Schweitzer's own expert, Mr. Honeycutt, who agreed that he would expect the BMI to be below 8 for a film forming composition of 6 or lower Corestas. *Id.* (quoting Tr. at 2077:19-2078:12).

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Schweitzer counters that even if one might “expect” the band BMI to be below 8cm-1, that does not establish or clearly and convincingly prove that the BMI would necessarily be below 8cm-1. Schweitzer Resp. at 79. Schweitzer further argues that Hammersmith is not prior art to the ‘867 patent because the ‘867 patent is entitled to an invention date before the January 15, 2001 filing date of Hammersmith. *Id.* at 79-80. Specifically, Schweitzer argues that it had made a product covered by claim 36 as early as September 20, 2000, that it had conducted testing of BMI of that product in September 2001, [[]] Schweitzer Pet. at 69-71 (citing CX-1004 at Q/A 68-78, 90, 142-47, 291-92, 297-300 (Kraker); CX-734C; CX-742 at 35).

Analysis

Glatz alleges that Hammersmith qualifies as prior art under 35 U.S.C. § 102(e) based on its filing date of January 15, 2001. We first analyze whether Schweitzer can establish that the ‘867 patent is entitled to a priority date prior to its filing date of November 13, 2001. Under the doctrine of *In re Stempel*, a patent on a claimed genus (or “generic claim”) may antedate a reference if the patentee shows “priority with respect to so much of the claimed invention as the reference happens to show.” 241 F.2d 755, 759 (CCPA 1957); *see also* CHISUM ON PATENTS § 3.08[1]. In this case, Hammersmith discloses a single application. Tr. at 1146. Schweitzer has not established an invention date of the asserted claims of the ‘867 patent prior to the filing of Hammersmith because it has not shown that the single pass process was performed before January 15, 2001. Schweitzer itself does not argue that the ‘867 inventors [[]] *See* Schweitzer Pet. at 71. Further, the evidence shows that [[

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] JX-56 at 238-239; RX-38 at 2; CX-720; RX-53; RX-66;
CX-920 at 1-6; RX-377; RX-602; RX-69; RX-70; CX-776 [[

]]. Therefore, Hammersmith is prior art under then-35
U.S.C. § 102(e)¹⁷ with respect to claims 36, 43, and 45 of the '867 patent.

Glatz has not established by clear and convincing evidence that a band of a
Coresta of 6 would necessarily have a BMI of less than 8cm-1. Mr. Honeycutt conceded
that he would expect a BMI of less than 8cm-1, but inherent anticipation requires that a
BMI of 8cm-1 would necessarily be present. Permeability is related to the fourth power
of the pore size but diffusivity is related to the square of the pore size. Tr. 1983. Mr.
Honeycutt also testified that, even when permeability is constant, BMI may vary with the
type of coating, filler shape, filler size, perforations, pinholes, fiber refining, machine
refining, machine draws, machine speeds, and machine vacuums. Tr. at 1981:20-1983:18
(Honeycutt); *see also* Tr. at 1287:9-13 (McCarty). Therefore, the Commission affirms the
ALJ's conclusion that Hammersmith does not anticipate the asserted claims of the '867
patent, inherently or otherwise.

***b. Statutory Bar Under 102(b) --
PaperSelect Paper and Merit Cigarettes (Claims 36 and 45)***

i. The Law of Statutory Bar

The Patent Act provides:

A person shall be entitled to a patent unless—

...

(b) the invention was patented or described in a printed publication in this
or a foreign country or in public use or on sale in this country, more than

¹⁷ 35 U.S.C. § 102(e) no longer exists in its present form but still applies to the patent
claims at issue. P.L. 112-29 §§ (3)(b)(1), (3)(n)(1) (Sept. 16, 2011).

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one year prior to the date of the application for patent in the United States.

...

35 U.S.C. § 102(b). Thus, a statutory bar applies when the public use or sale of the invention occurs more than one year before the effective filing date of the application for the patent in the United States. The Supreme Court has interpreted 35 U.S.C. § 102(b) as follows (as it relates to the on-sale part of the bar):

the on-sale bar applies when two conditions are satisfied before the critical date. First, the product must be the subject of a commercial offer for sale. An inventor can both understand and control the timing of the first commercial marketing of his invention.

* * *

Second, the invention must be ready for patenting. That condition may be satisfied in at least two ways: by proof of reduction to practice before the critical date; or by proof that prior to the critical date the inventor had prepared drawings or other descriptions of the invention that were sufficiently specific to enable a person skilled in the art to practice the invention.

Pfaff v. Wells Electronics, Inc., 525 U.S. 55, 67-68 (1998). The on sale bar is analyzed claim by claim, so that some claims may be invalidated while others are not. *Allen Engineering Corp. v. Bartell Industries, Inc.*, 299 F.3d 1336, 1353 (Fed. Cir. 2002).

ii. *The Parties' Arguments*

For purposes of the statutory bar analysis, the ALJ concluded that the effective U.S. filing date of the '867 patent is November 13, 2001. ID at 156; 137. The ALJ found that the sale of PaperSelect wrappers and the Merit Light and Ultra Light cigarettes precede this date by more than one year and form a statutory bar to the asserted claims of the '867 patent under 35 U.S.C. § 102(b). *Id.* at 156-161. The ALJ found that the PaperSelect wrappers of the Merit Light and Ultra Light cigarettes included permeabilities of 60 and 85 Coresta, and band permeabilities of about 9 Coresta, thus

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falling within the scope of claim 36. ID at 158. Phillip Morris test marketed and sold these cigarettes to consumers. *See* ID at 157-58.

Schweitzer argues that (a) there was no evidence supporting that the Merit cigarettes tested were sold in the United States before the critical date;¹⁸ (b) there is not clear and convincing evidence that Schweitzer commercially sold PaperSelect wrappers to Philip Morris; (c) there is not clear and convincing evidence that Philip Morris commercially sold Merit cigarettes prior to the critical date; (d) PaperSelect wrappers do not have a film forming composition; (e) PaperSelect sales were for experimental use; and (f) dependent claim 43 is not subject to an on sale bar. Schweitzer Pet. at 74-85.

Glatz responds that the manufacturing codes on the packs of Merit cigarettes prove they were manufactured on September 6 and 17, 2000; PaperSelect sales were for commercial purposes and not experimental use, citing *Delaware Valley Floral Group, Inc. v. Shaw Rose Nets, LLC*, 597 F.3d 1374 (Fed. Cir. 2010); and that PaperSelect meets the limitations of the asserted claims of the '867 patent, including a film forming composition and paper web. Glatz Resp. at 77-88.

Analysis

A statutory bar under 35 U.S.C. § 102(b) occurs when the relevant act occurs more than one year before the effective date of filing of the application for the patent in the United States. *Pfaff v. Wells Electronics, Inc.*, 525 U.S. 55, 67-68 (1998). The on

¹⁸ Schweitzer argues that the patentee is entitled to an earlier “priority” date (apparently, invention date) because of an earlier conception and reduction to practice. However, those arguments more properly relate to anticipation than to statutory bar. The only question here for purposes of statutory bar is whether the patentee is entitled to the date of the filing of the U.S. provisional application for its effective U.S. filing date. We agree with the ALJ, ID at 135, that the patentee is not because the provisional application, No. 60/248,061, does not teach BMI.

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sale bar is analyzed claim by claim, so that some claims may be invalidated while others are not. *Allen Engineering Corp. v. Bartell Industries, Inc.*, 299 F.3d 1336, 1353 (Fed. Cir. 2002). Claims 36 and 43 are process claims. See *Metallizing Engineering Co. v. Kenyon Bearing & Auto Parts Co.*, 153 F.2d 516, 519 (2d Cir. 1946) (product of process claim may create statutory bar if all elements of the product of the claimed process are present); see also *Grasselli Chemical Co. v. National Aniline & Chemical Co.*, 26 F.2d 305 (2d Cir. 1928).

We find that the PaperSelect paper is prior art under 35 U.S.C. § 102(b) because it was sold to Phillip Morris. Schweitzer commercially sold wrappers to Phillip Morris prior to the critical date. ID at 156-61 (and citations therein); JX-59C at 7-10; RX-270C, RX-271C, RX-280C, RX-283C. Schweitzer does not assert the existence of a confidentiality agreement with Phillip Morris. Nor does Schweitzer assert that it retained control over the paper.

Schweitzer attempts to remove the PaperSelect paper from the reach of 35 U.S.C. § 102(b) by arguing that the use by Phillip Morris falls into the experimental use exception to public use. Schweitzer Pet. at 77 (citing *Del. Valley Floral Group, Inc. v. Shaw Rose Nets, LLC*, 597 F.3d 1374, 1379 (Fed. Cir. 2010)). However, it is undisputed that the purpose of the Phillip Morris use was for market testing of cigarettes made with the PaperSelect paper. Phillip Morris was not experimenting with how to make paper, but merely determining whether its cigarettes made with these wrappers would sell. Therefore, Schweitzer has not shown experimental use to remove the use from on sale bar. *LaBounty Mfg. v. United States Int'l Trade Comm'n*, 958 F.2d 1066, 1071 (Fed. Cir. 1992) (“A use or sale is experimental for purposes of section 102(b) if it represents a

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bona fide effort to perfect the invention or to ascertain whether it will answer its intended purpose...If any commercial exploitation does occur, it must be merely incidental to the primary purpose of the experimentation to perfect the invention.”)

However, we find that the Merit cigarettes may not be relied on because Glatz did not establish the actual dates of the market testing of the cigarettes. Glatz merely provided the dates by which the testing was expected to occur. RX-580 at 4; RX-592 at 1; RX-586 at 1; RX-468; RX-469. Glatz argues that the date of sale of Merit cigarettes can be inferred from the date of manufacture of the Merit cigarettes. Glatz states that Schweitzer argues that sale of cigarettes to consumers might be five to six weeks after manufacture, but this is attorney argument on the part of both Glatz and Schweitzer, and does not establish the date of sale of Merit cigarettes to consumers more than one year prior to the effective filing date of the application for the '867 patent. We therefore find that the PaperSelect paper but not the Merit cigarettes is prior art under 35 U.S.C. § 102(b).

Because we agree with the ALJ as to the construction of “film forming composition,” we find that the PaperSelect wrappers create an on sale bar to claim 36 of the '867 patent. Specifically, the PaperSelect wrappers in question used cellulosic bands, *i.e.*, from a fibrous slurry, forming a band consisting of a fibrous network on the base paper. Tr. at 882-83. The “film forming composition” limitation is thus satisfied by the PaperSelect wrappers which were “on sale” before the critical date. Therefore, claim 36 of the '867 patent is invalid by reason of an “on sale” bar.

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Claim 43

The ALJ did not analyze the on sale bar of claim 43 of the '867 patent separately from his analysis of claims 36 and 45. The ALJ found claim 43 to be subject to an on sale bar under 35 U.S.C. § 102(b) because of the sale of PaperSelect paper. *See* ID at 156, 161.

Schweitzer argues that Glatz did not even assert that claim 43 is anticipated¹⁹ by PaperSelect. Schweitzer Pet. at 85. Schweitzer argues that the composition of the bands of PaperSelect paper was different than the composition of the chemicals claimed in claim 43. *Id.* at 86

Glatz responds that the cellulose derivative composition of claim 43 is anticipated by the cellulose of PaperSelect. Glatz further responds that the chemicals recited in claim 43, *i.e.*, pectinate, silicate, polyvinyl alcohol, starch, or cellulose derivative compositions, were well known in the art, and therefore claim 43 would be obvious in light of the combination of PaperSelect and the prior art, even if it is not anticipated by PaperSelect. Glatz Resp. at 88.

Analysis

Claim 43, which recites, *inter alia*, a cellulose derivative compound, is not barred by PaperSelect, which used cellulose bands rather than cellulose derivatives. *See* Tr. at 882; 1212. We will discuss obviousness *infra*.

Claim 45

Because we find that Glatz cannot rely on the sale of the Merit and Ultra cigarettes, we do not find an on sale bar to claim 45, which is directed to cigarettes.

¹⁹ The parties use the term “anticipation” although we understand them to refer to on sale bar under 35 U.S.C. § 102(b).

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c. Obviousness

i. Allen in combination with Hampl '775 or Hampl '403; Baldwin in combination with Durocher; Peterson in combination with Hampl '775 or Hampl '403 (Claims 36, 43, and 45)

The ALJ treated these prior art combinations separately, but Glatz groups them together in its petition for review. We set forth the combinations and analyze the parties' arguments as follows.

The ALJ found that Allen in combination with U.S. Patent No. 4,739,775 ("Hampl '775")²⁰ or U.S. Patent No. 6,568,403 ("Hampl '403"),²¹ Baldwin²² in combination with Durocher,²³ and Peterson in combination with Hampl '775 or Hampl '403 do not render the asserted claims of the '867 patent obvious because none of the references teach the base sheet permeability ranges of the asserted claims of the '867 patent. ID at 227, 232, 235. Specifically, independent claim 36 recites a base paper permeability range of 60-110 Coresta. As already discussed, Baldwin discloses the use of cigarette wrappers with base paper permeabilities of 2 to 150 Coresta, col. 4, lines 61-62, but teaches that 20 to 60 is preferred. col. 5, lines 1-3.

The Parties' Arguments

Glatz argues that the ALJ erred in not finding obviousness in view of Allen in combination with Hampl '775 or Hampl '403; Baldwin in combination with Durocher; or Peterson in combination with Hampl '775 or Hampl '403. Glatz argues that (1) Mr. Honeycutt testified that the permeability range is not critical, citing Tr. 2100:23-2102:22; (2) the claimed 60-110 Coresta range is fully embraced by the prior art, *i.e.*, Allen (25-

²⁰ JX-10.

²¹ RX-459.

²² U.S. Patent No. 5,417,228 (RX-442).

²³ U.S. Patent No. 4,615,345 (RX-434).

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60), Baldwin (2-150 or 20-60), Peterson (any commercial paper), Hammersmith (20-200)²⁴; (3) Federal Circuit authority finding *prima facie* obviousness with overlapping ranges; and (4) the PaperSelect cigarettes with a range of 60-85. Glatz Pet. at 80-100 (citing *In re Harris*, 409 F.3d 1339, 1341 (Fed. Cir. 2005); *Ormco Corp. v. Align Tech., Inc.*, 463 F.3d 1299, 1311 (Fed. Cir. 2006)).

Schweitzer argues that there was teaching away from high permeability paper because there was an industry preference for low permeability paper. Schweitzer Resp. at 81 (citing Tr. at 1947:18-1948:3; 1968:1-5; 1968:20-24; 1969:16-20; 1995:5-7; 1995:23-1996:3; 1998:7-13; 2002:21-22; 2003:1-23; 2008:15-23; 2010:1-10; 1016:17-22; 2020:8-21). Schweitzer further explained that the use of high permeability base paper increases the disparity between untreated and treated areas, exacerbating negative taste and smoke delivery problems. Schweitzer Resp. at 82 (citing Tr. 1971:18-1972:2; '753 patent, col. 2, lines 22-37).

Analysis

We agree with the ALJ that these prior art references did not teach the specific range of 60-110 Coresta, and that Baldwin's range was much broader than the claimed range. *See* ID at 227, 232, 235. While the existence of overlapping ranges or values make a presumptive case of obviousness, the prior art taught away from using high permeability base paper with low permeability bands (except for Peterson '753 which we address below) because it would increase the taste difference between the banded and

²⁴ Glatz argued that Hampl '403 discloses high permeability base paper, Glatz's Post-Hearing Brief at 152 and n.59, but Schweitzer argued that Hampl '403 is not prior art. Schweitzer's Post-Hearing Reply Brief at 107. We find that Hampl '403 is prior art under then-35 U.S.C. § 102(e) based on its earlier filing date. Glatz did not argue that Hampl '403 disclosed any specific value for permeability. *See* Glatz's Post-Hearing Brief at 151-67.

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non-banded areas. Tr. 1971:18-1972:2; '753 patent, col. 2, lines 22-37. Therefore, we affirm the ALJ's conclusion that these prior art references do not render the '867 patent invalid for obviousness.

ii. Hammersmith in combination with Hampl '775 or Hampl '403(Claims 36, 43, and 45)

The ALJ found that Hammersmith, Hampl '775, and Hampl '403 do not render the asserted claims of the '867 patent obvious because the references do not teach the use of bands with a low BMI. See ID at 241; 185.

Glatz argues that the ALJ erred because Hampl '775 discloses that low band BMI values, significantly below 8, provide a "reliable self-extinction or at least a reduction in the ignition proclivity in the banded zone." Glatz Pet. at 82 (citing JX-10, col. 5, lines 24-35).

Schweitzer responds that there is no inherent anticipation or obviousness because the combination does not render obvious the claimed band BMI. Schweitzer Resp. at 91 (citing Tr. 2006:16-2007:2). Schweitzer argues that Hampl '403 teaches the advantages of a BMI as high as 15cm-1. Schweitzer Resp. at 88. Schweitzer further asserts that Hammersmith is not prior art. *Id.* at 91.

Analysis

We have found Hammersmith to be prior art to the asserted claims of the '867 patent under then-35 U.S.C. § 102(e). *See, supra*, at II.B.3.a.v.

There is a *prima facie* case of obviousness in view of Hammersmith in combination with Hampl '775. Because these references are directed to low ignition proclivity cigarettes using banded paper, there would be a motivation to combine them. Hampl '775 supplies the low BMI bands which Hammersmith lacks. As to secondary

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considerations, the ALJ found no unexpected results, no evidence that sales records were a direct result of the characteristics of the products, insufficient evidence of copying, and no evidence of a relationship between licensing and the invention of the '867 patent. ID at 250-51. We agree. Because of the FDA approval process and state laws on cigarette fire safety, there is no evidence that sales or licensing were caused by consumer preference for the taste or burning properties of the cigarettes beyond the laws which limit sales to fire safe cigarettes. In addition, high permeability cigarettes were known and used for low tar cigarettes. Tr. at 1004:8-1006:18; 1017:1-1018:25 (McCarty). Moreover, there is no evidence of copying by anyone. Therefore, the asserted claims of the '867 patent are invalid by reason of obviousness in view of Hammersmith and Hampl '775.

iii. PaperSelect in combination with Peterson '753 (Claims 36, 43, and 45)

Schweitzer argues that PaperSelect entered the market after the inventors had conceived and begun reducing to practice the invention of the '867 patent. Schweitzer Resp. at 85. However, PaperSelect is prior art for purposes of obviousness because it is a reference for purposes of the on sale bar analysis under 102(b). *E.g., In re Smith*, 458 F.2d 1389, 1395 (C.C.P.A. 1972); CHISUM ON PATENTS § 5.03[3][f][iii]. We will therefore consider the combination of PaperSelect wrappers with Peterson.

The ALJ found that Peterson does not teach the claimed permeability range of the base paper but that the PaperSelect wrappers contained base paper within the claimed range, and found that these references would render the asserted claims of the '867 patent obvious for the reasons advanced by Glatz. ID at 239. In this connection, Glatz argued to the ALJ that the benefits of a "film forming composition" were well known in the art

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and that it “would have been a matter of routine experimentation” to combine the film forming composition with the PaperSelect paper. ID at 236.

Schweitzer argues that suitability for one purpose does not mean suitability for another purpose. Schweitzer Pet. at 87. Schweitzer points to a statement by Dr. McCarty that it was advantageous for Philip Morris to use cellulose for bands so that they could make a statement to the public that they were using cellulose. *Id.* at 87-88 (citing Tr. at 1341:20-1343:6). Schweitzer argues that there was therefore a teaching away from the use of a film forming solution. *Id.*

Glatz responds that the ‘753 patent specification teaches the use of fibrous slurries which would include cellulose. Glatz Resp. at 89 (citing ‘753 patent, col. 4, lines 41-65). Glatz further points to the testimony of Mr. Honeycutt that Brown & Wilkinson Tobacco Corp. was experimenting with the use of sodium alginate bands before filing the ‘867 patent, and the testimony of Dr. McCarty that Ecusta Paper was experimenting with the use of starch. *Id.* at 90 (citing Tr. 1908:3-18; 1013:15-1016:25).

Analysis as to Claim 36

We have found the PaperSelect paper to create a statutory bar to claim 36. Even in the absence of a statutory bar, we agree with the ALJ that the asserted claims of the ‘867 patent are invalid for obviousness over PaperSelect wrappers, which were on sale, in view of Peterson ‘753. The PaperSelect wrappers employ a “film forming composition,” as construed with respect to the ‘867 patent. Moreover, even under Schweitzer’s claim construction which we do not adopt, the disclosure of Peterson ‘753 discusses aqueous solutions. ‘753 patent, col. 4, lines 44-48. It would have been obvious for a person of ordinary skill in the art to combine the printed bands of the PaperSelect wrappers with the

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compositions disclosed in Peterson '753, given the teaching of Peterson '753, which is directed to the creation of low ignition proclivity cigarettes with printed bands made from either aqueous solutions or fibrous slurries. With respect to secondary considerations, as stated with Hammersmith and Hampl '775, there are no unexpected results and no evidence linking sales or licenses to the properties of the cigarettes above and beyond the laws requiring the sale of fire safe cigarettes. We therefore find that claim 36 of the '867 patent is invalid for obviousness over PaperSelect wrappers in view of Peterson '753.

Additional Considerations as to Claim 43

The ALJ found that claim 43 was obvious in light of combination of PaperSelect with Peterson '753 because he found that PaperSelect itself created a statutory bar and because the '753 patent teaches the use of cellulose derivative compositions. ID at 237, 239.

Schweitzer argues that the film forming compositions of claim 43 are not interchangeable with the film cellulosic bands of PaperSelect. Schweitzer Pet. at 86. Schweitzer argues Allen, Baldwin, and Hampl(1) all teach the benefits of cellulosic bands and teach away from using a film forming composition that is different from the paper wrapper on which it is applied. Schweitzer Pet. at 87.

Glatz argues that the chemicals recited in claim 43, *i.e.*, pectinate, silicate, polyvinyl alcohol, starch, or cellulose derivative compositions, were well known in the art, and therefore claim 43 would be obvious in light of the combination of PaperSelect and the prior art, even if it is not anticipated by PaperSelect. Glatz Resp. at 88.

We agree with the ALJ's finding that claim 43 is obvious in light of the combination of PaperSelect paper and the '753 patent. *See* ID at 239, 251. It would have

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been obvious to a person of ordinary skill in the art to combine prior art using cellulose derivatives with prior art using cellulose bands, especially because the '753 patent discusses both fibrous slurries and solutions as being acceptable. '753 patent, col. 4, lines 51-65. As discussed *supra*, the secondary considerations of nonobviousness do not establish unexpected results or success apart from the state law requirements to use fire-safe cigarettes.

Additional Considerations as to Claim 45

We agree with the ALJ's finding that claim 45 is invalid for obviousness because the '753 patent teaches the combination of treated cigarette paper with a smoking substrate to make a smoking article, *e.g.*, Figure 2 and col. 3, lines 56-58, and therefore it would have been obvious to employ the cigarette paper of PaperSelect paper with smoking substrate to make the smoking article of claim 45. *See* ID at 239, 251.

4. Written Description

a. The Law of Written Description

The written description requirement of 35 U.S.C. § 112 is satisfied if the patent disclosure conveys with reasonable clarity to those skilled in the art that the inventor was in possession of the claimed invention at the time of filing of the application which gave rise to the issued patent. *Purdue Pharma L.P. v. Faulding Inc.*, 230 F.3d 1320, 1323 (Fed. Cir. 2000); *see also Ariad Pharmaceuticals, Inc. v. Eli Lilly & Co.*, 598 F.3d 1336 (Fed. Cir. 2010) (*en banc*) ("the description must 'clearly allow persons of ordinary skill in the art to recognize that [the inventor] invented what is claimed.'").

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b. The Parties' Arguments

The ALJ held that “applying” encompasses both single and multiple applications. The Commission determined not to review this claim construction. We note that unasserted dependent claim 37 is directed to multiple applications, but that the patentee has chosen to assert independent claim 36 against the accused products, [[

]]

The ALJ found that the asserted claims of the ‘867 patent were not invalid for failure to satisfy the written description requirement. *See* ID at 265. The ALJ found that a person of ordinary skill in the art could, reading the patent, understand that variables, including the weight of the base paper, and the nature of composition of materials being applied, will affect the result and determine the weight percentage of a given layer to be applied. ID at 265. The ALJ continued that “there is no reason to conclude that a desired result cannot be achieved other than by application of some multiple of layers....” ID at 265.

Schweitzer argues that the ‘867 patent teaches a “single application step.” Schweizer Submission at 40 (citing col. 7, lines 45-48, and col. 8, lines 52-56).

Glatz responds that the “single application step” discussed at col. 7, lines 45-48 and col. 8, lines 52-56 is part of a multi-layer process and that Schweitzer has taken these citations out of context, *i.e.*, these parts of the patent have nothing to do with single layer application. Glatz argues that “possession” requires a description of the invention in the specification itself. Glatz Submission at 46 (citing *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (*en banc*)). Glatz asserts that the invention of the ‘867 patent involves the application of multiple layers to prevent wrinkling or cockling of

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the paper. *Id.* at 47-48. Glatz argues that the '867 patent only describes a single application as a step in a multiple application process. *Id.* at 48. Glatz further argues that the '867 patent's incorporation by reference of the '753 patent does not incorporate any single application process. *Id.* at 48-49.

Schweitzer argues that the single application has not been taken out of context in the '867 patent and serves to confirm the incorporation by reference of the '753 patent. Schweitzer Reply. at 24.

The IA argues that the patentee was in possession of a single application because the '867 patent incorporates the '753 patent and because a multi-step application can only work if none of the layers cause wrinkling or cockling. IA Resp. at 14.

Analysis

In our view, the asserted claims of the '867 patent are not invalid for failure to satisfy the written description requirement. As to Glatz's argument that the specification does not disclose the use of a single application, we disagree. The patent teaches that "For most applications, the film will contain at least two layers, and particularly from about three to about eight layers." Col. 3, lines 19-21. The patentee is therefore teaching that multiple layers are not required. The patent then proceeds to describes how layers can be successively added. The first layer may be the heavy layer, col. 2, lines 54-55, and there is no requirement that additional layers are added. Thus, we find that the patentee was in possession of the claimed invention at the time of filing.

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5. Enablement

a. *The Law of Enablement*

To satisfy the enablement requirement of 35 U.S.C. § 112, the specification must teach those of ordinary skill in the art how to practice the claimed invention without undue experimentation. *See, e.g., In re Vaeck*, 947 F.2d 488, 495 (Fed. Cir. 1991). In the words of the statute, “The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same. . . .” 35 U.S.C. § 112. A claim is invalid if it is not enabled.

b. *The Parties’ Arguments*

With respect to enablement, the ALJ held that the asserted claims of the ‘867 patent are not invalid under the “second paragraph” of 35 U.S.C. § 112. ID at 268. We understand the ALJ to be referring to the first paragraph of § 112.

Schweitzer argues that the ‘867 patent teaches that the composition of any single application can range from 1% to about 20% by weight, that one could apply a single layer without undue experimentation, and that claim 36 has no requirement of being free from wrinkling or other distortion. Schweitzer Submission at 42.

Glatz argues that the ‘867 patent specifically taught the use of multiple layers to overcome the problem in the prior art, citing col. 1, lines 58-63, and that Mr. Kraker, witness for Schweitzer and one of the inventors of the ‘867 patent, testified that as of the filing date of the provisional application Schweitzer had never produced a wrapper with the targeted base and band permeabilities using a single application. Glatz Submission at

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50-51 (citing JX-056C.54 (Kraker Dep. At 238:2-239:19); RX-38C; CX-720C; RX-066C; RX-053C; CX-920C; RX-602C; RX-377C; CX-776C; RX-070C).

Analysis

Glatz argues that the patent does not teach a person of ordinary skill how to apply one layer in such a manner as to prevent wrinkling and cockling. However, “wrinkling and cockling” is not part of the claimed invention, and in any case, Glatz does not provide proof that this is the case. Indeed, the patent teaches how to apply a heavy layer first, and even if a practitioner is going to apply successive layers, the first layer would be applied in such a manner so that the paper does not wrinkle. *See* col. 8, lines 28-38. We find that Glatz has not proven that a person of ordinary skill in the art would not have been able to apply a single layer. The Commission thus finds that claim 36 and its asserted dependent claims are enabled by the disclosure and are therefore not invalid for failure to satisfy the enablement requirement of 35 U.S.C. § 112.

6. Domestic Industry

Schweitzer argued that it satisfied the technical prong of the domestic industry requirement with products that practice claim 1 of the ‘867 patent.²⁵ The ALJ held that Schweitzer’s alginate papers satisfy the technical prong of the domestic industry requirement. ID at 282.

Glatz argues that if Schweitzer’s proposed construction of “film forming composition” for the asserted claims of the ‘867 patent is adopted, then Schweitzer has not shown sufficient evidence of a domestic industry under this limitation. Glatz Pet. at

²⁵ Although claim 1 was not asserted, a complainant may rely on any claim of an asserted patent to satisfy the technical prong of the domestic industry requirement. *Certain Microsphere Adhesives*, Inv. 337-TA-366, USITC Pub. No. 2949, Comm’n Op. at 7-16 (Jan. 1996).

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94. Glatz does not contest the presence of a domestic industry with respect to the '867 patent under Glatz's construction. *See id.*

Schweitzer responds that Dr. Rogers did not rely on the mere presence of starch and/or alginate, but relied on iodine testing, FTIR testing, the testimony of Francois Mongeon, product information, and Dr. Rogers's own expertise in chemistry to conclude that Schweitzer's products have a film forming composition under any of the claim constructions. Schweitzer Resp. at 66, 46-47 (citing. Tr. at 421:22-424:25; 454:1-465:13.

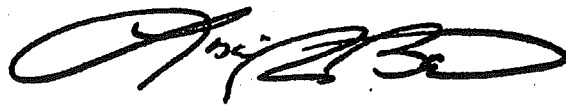
Analysis

We agree with the ALJ that Schweitzer's alginate papers satisfy the technical prong of the domestic industry requirement based on our construction of "film forming composition," which encompasses both solutions and fibrous slurries.

III. CONCLUSION

The Commission finds no violation of section 337. The Commission hereby adopts the findings of the ALJ not inconsistent with its determination.

By order of the Commission.



Lisa R. Barton
Acting Secretary to the Commission

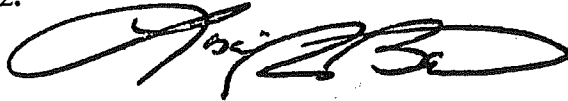
Issued: **JUL 13 2012**

**CERTAIN REDUCED IGNITION PROCLIVITY
CIGARETTE PAPER WRAPPERS AND PRODUCTS
CONTAINING SAME**

Inv. No. 337-TA-756

PUBLIC CERTIFICATE OF SERVICE

I, Lisa R. Barton, hereby certify that the attached **COMMISSION OPINION** has been served by hand upon, the Commission Investigative Attorney, Lisa A. Murray, Esq. and the following parties as indicated on July 16, 2012.



Lisa R. Barton, Acting Secretary
U.S. International Trade Commission
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UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.

In the Matter of

**CERTAIN REDUCED IGNITION
PROCLIVITY CIGARETTE PAPER
WRAPPERS AND PRODUCTS
CONTAINING SAME**

Investigation No. 337-TA-756

**NOTICE OF COMMISSION DETERMINATION TO PARTIALLY REVIEW THE
FINAL INITIAL DETERMINATION OF THE ADMINISTRATIVE LAW JUDGE**

AGENCY: U.S. International Trade Commission.

ACTION: Notice.

SUMMARY: Notice is hereby given that the U.S. International Trade Commission has determined to partially review the final initial determination (“ID”) of the presiding administrative law judge (“ALJ”) in the above-captioned investigation under section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337 (“section 337”). The ALJ found no violation of section 337.

FOR FURTHER INFORMATION CONTACT: James A. Worth, Office of the General Counsel, U.S. International Trade Commission, 500 E Street, S.W., Washington, D.C. 20436, telephone (202) 205-3065. Copies of non-confidential documents filed in connection with this investigation are or will be available for inspection during official business hours (8:45 a.m. to 5:15 p.m.) in the Office of the Secretary, U.S. International Trade Commission, 500 E Street, S.W., Washington, D.C. 20436, telephone (202) 205-2000. General information concerning the Commission may also be obtained by accessing its Internet server (<http://www.usitc.gov>). The public record for this investigation may be viewed on the Commission's electronic docket (EDIS) at <http://edis.usitc.gov>. Hearing-impaired persons are advised that information on this matter can be obtained by contacting the Commission’s TDD terminal on (202) 205-1810.

SUPPLEMENTARY INFORMATION: The Commission instituted this investigation on January 27, 2011, based on a complaint filed by Schweitzer-Mauduit International, Inc. (“Schweitzer”) of Alpharetta, Georgia. 76 *Fed. Reg.* 4935 (January 27, 2011). The complaint alleges violations of Section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337, in the sale for importation, importation, or sale after importation of certain reduced ignition proclivity cigarette paper wrappers and products containing same by reason of infringement of certain claims of U.S. Patent Nos. 5,878,753 (“the ‘753 patent”) and 6,725,867 (“the ‘867 patent”). The Commission’s notice of investigation named Astra Tobacco Corporation of Chapel Hill, North

Carolina; delfortgroup AG of Traun, Austria; LIPtec GmbH of Neidenfels, Germany; and Julius Glatz GmbH of Neidenfels, Germany as respondents.

On April 15, 2011, the Commission issued notice of its determination not to review an ID (Order No. 5) granting Schweitzer's motion to amend the complaint and notice of investigation to add seven more respondents: Dr. Franz Feurstein GmbH of Traun, Austria; Papierfabrik Wattens GmbH & Co. KG of Wattens, Austria; Dosal Tobacco Corp. of Miami, Florida; Farmer's Tobacco Co. of Cynthia, Kentucky; KneX Worldwide, LLC of Charlotte, North Carolina; S&M Brands, Inc. of Keysville, Virginia; Tantus Tobacco LLC of Russell Springs, Kentucky.

On December 1, 2011, the Commission determined not to review an ID (Order No. 30) of the administrative law judge terminating Respondents delfortgroup AG, Dr. Franz Feurstein GmbH, Papierfabrik Wattens GmbH & Co. KG, Astra Tobacco Corp., Dosal Tobacco Corp., Farmer's Tobacco Co., S&M Brands, Inc., and Tantus Tobacco LLC (collectively, the "Delfort Respondents") from the investigation. Respondents Julius Glatz GmbH, LIPtec GmbH, and KneX Worldwide LLC (collectively, "Glatz") remain in the investigation.

An evidentiary hearing was held from October 31, 2011, to November 8, 2011. On February 1, 2012, the presiding administrative law judge issued a final initial determination finding no violation of section 337 in the above-identified investigation. Specifically, the ALJ found that there was no violation with respect to either the '753 patent or the '867 patent by Glatz. The ALJ also issued a recommended determination on remedy, the public interest, and bonding.

Schweitzer filed a petition for review of the final ID. Glatz filed a contingent petition for review. Each of the parties filed a response to the petitions for review.

Having examined the final ID, the petitions for review, the responses thereto, and the relevant portions of the record in this investigation, the Commission has determined to review the final ID as follows. With respect to the '753 patent, the Commission has determined to review the construction of the term "gradually" in the asserted claims and the issues of direct and indirect infringement, obviousness, definiteness, utility, and the technical prong of the domestic industry requirement in the ID. With respect to the '867 patent, the Commission has determined to review the construction of the term "film forming composition" in the asserted claims and the issues of direct and indirect infringement, priority date, statutory bar under 35 U.S.C. § 102(b), anticipation, obviousness, written description, enablement, and the technical prong of the domestic industry requirement in the ID.

The parties are requested to brief their positions on only the following questions, with reference to the applicable law and the evidentiary record:

- (1) In the asserted claims of the '753 patent, the ALJ defined the term "gradually" to mean "incrementally."

- (a) Does the term “incrementally” carry a connotation of a change that occurs in discrete increments, such as in a staircase, that is unnecessarily limiting? In your answer, please address the reference to a “ramp-like profile” in dependent claim 3 and assume that the Commission concurs with the ALJ’s determination that “ramp-like profile” refers to the physical shape of the claimed bands.
 - (b) Assuming that the term “incrementally” is unnecessarily limiting, would the term “gradually” be construed to mean an increase or decrease in permeability that occurs in small steps or degrees and that is not abrupt or sudden?
 - (c) How would a person of ordinary skill in the art distinguish between an increase or decrease that is in small steps or degrees from one that is abrupt or sudden? If such a person would be unable to make such a distinction, are the asserted claims indefinite as insufficient “to permit a potential competitor to determine whether or not he is infringing”? *Exxon Research and Eng’g Co. v. United States*, 265 F.3d 1371, 1375 (Fed. Cir. 2001). What slopes would be considered gradual? For example, is a slope of 89 degrees considered gradual rather than abrupt? Please respond with citations to the record.
 - (d) Address how, if at all, adoption of the claim construction indicated in (b) above would affect the ALJ’s analysis of infringement, validity, and the domestic industry.
- (2) As to the ‘753 patent, what is the significance of points that fall entirely within the treated area?
 - (3) Is the iodine test an independent basis for establishing infringement of the asserted claims of the ‘753 patent and for satisfying the technical prong of the domestic industry requirement with respect to the ‘753 patent?
 - (4) The Commission has determined not to review the ALJ’s construction of the term “film forming composition” as it appears in the asserted claims of the ‘753 patent. Is the Commission bound by the parties’ stipulation that the term should be construed in the same way in the ‘867 patent? *See Exxon Chemical Patents v. Lubrizol Corp.*, 64 F.3d 1553, 1555 (Fed. Cir. 1995) (“In the exercise of that duty, the trial judge has an independent obligation to determine the meaning of the claims, notwithstanding the views asserted by the adversary parties.”).
 - (5) Assume for purposes of argument that the Commission is not bound by the stipulation, and note that the specification of the ‘753 patent but not the ‘867 patent contains the sentence “Fibrous slurries applied from an aqueous solution

are also effective.” ‘753 patent at col. 4, ll.59-60. Does that distinction warrant a different outcome in construing “film forming composition” in the ‘867 patent?

- (6) If “applying” in claim 36 of the ‘867 patent is construed to refer to both single applications and multiple applications, is claim 36 invalid for failure to satisfy the written description or enablement requirements of 35 U.S.C. § 112?
- (7) Did Schweitzer request samples of all accused products? On provision of the samples, were representations made by Glatz as to the representativeness of the samples provided? Did Schweitzer make further attempts to obtain samples of the other accused products? Please respond with a discussion of any relevant interrogatories, requests for production, motions practice (including motions to compel), and any pretrial conferences (excluding any settlement or mediation conferences).

In connection with the final disposition of this investigation, the Commission may issue (1) an order that could result in the exclusion of the subject articles from entry into the United States, and/or (2) cease and desist orders that could result in respondents being required to cease and desist from engaging in unfair acts in the importation and sale of such articles. Accordingly, the Commission is interested in receiving written submissions that address the form of remedy, if any, that should be ordered. If a party seeks exclusion of an article from entry into the United States for purposes other than entry for consumption, the party should so indicate and provide information establishing that activities involving other types of entry either are adversely affecting it or are likely to do so. For background information, see the Commission Opinion, *In the Matter of Certain Devices for Connecting Computers via Telephone Lines*, Inv. No. 337-TA-360.

If the Commission contemplates some form of remedy, it must consider the effects of that remedy upon the public interest. The factors the Commission will consider include the effect that an exclusion order and/or cease and desist orders would have on (1) the public health and welfare, (2) competitive conditions in the U.S. economy, (3) U.S. production of articles that are like or directly competitive with those that are subject to investigation, and (4) U.S. consumers. The Commission is therefore interested in receiving written submissions that address the aforementioned public interest factors in the context of this investigation.

If the Commission orders some form of remedy, the U.S. Trade Representative, as delegated by the President, has 60 days to approve or disapprove the Commission’s action. See Presidential Memorandum of July 21, 2005, 70 *Fed. Reg.* 43251 (July 26, 2005). During this period, the subject articles would be entitled to enter the United States under bond, in an amount determined by the Commission and prescribed by the Secretary of the Treasury. The Commission is therefore interested in receiving submissions concerning the amount of the bond that should be imposed if a remedy is ordered.

WRITTEN SUBMISSIONS: The parties to the investigation are requested to file written submissions on the issues under review. The submissions should be concise and thoroughly

referenced to the record in this investigation, including references to exhibits and testimony. Additionally, the parties to the investigation, interested government agencies, and any other interested persons are encouraged to file written submissions on the issues of remedy, the public interest, and bonding. Such submissions should address the ALJ's recommended determination on remedy and bonding. Complainant and the Commission investigative attorney are also requested to submit proposed remedial orders for the Commission's consideration. Complainant is requested to supply the expiration dates of the patents at issue and the HTSUS numbers under which the accused products are imported. The written submissions and proposed remedial orders must be filed no later than the close of business on April 16, 2012. Written submissions should be no longer than 60 pages. Reply submissions must be filed no later than the close of business on April 23, 2012, and should be no longer than 30 pages. No further submissions will be permitted unless otherwise ordered by the Commission.

Persons filing written submissions must do so in accordance with Commission rule 210.4(f), 19 C.F.R. § 210.4(f), which requires electronic filing. The original document and eight true copies thereof must also be filed on or before the deadlines stated above with the Office of the Secretary. Any person desiring to submit a document (or portion thereof) to the Commission in confidence must request confidential treatment unless the information has already been granted such treatment during the proceedings. All such requests should be directed to the Secretary of the Commission and must include a full statement of the reasons why the Commission should grant such treatment. See 19 C.F.R. § 201.6. Documents for which confidential treatment is granted by the Commission will be treated accordingly. All nonconfidential written submissions will be available for public inspection at the Office of the Secretary and on EDIS.

This action is taken under the authority of section 337 of the Tariff Act of 1930, as amended (19 U.S.C. § 1337), and under sections 210.42 - 210.46, 210.50(a) of the Commission's Rules of Practice and Procedure (19 C.F.R. §§ 210.42 - 210.46, 210.50(a)).

By order of the Commission.

A handwritten signature in black ink, appearing to read "J. R. Holbein", written in a cursive style.

James R. Holbein
Secretary to the Commission

Issued: April 2, 2012

**CERTAIN REDUCED IGNITION PROCLIVITY
CIGARETTE PAPER WRAPPERS AND PRODUCTS
CONTAINING SAME**

Inv. No. 337-TA-756

PUBLIC CERTIFICATE OF SERVICE

I, James R. Holbein, hereby certify that the attached **NOTICE** has been served by hand upon, the Commission Investigative Attorney, Lisa A. Murray, Esq. and the following parties as indicated on April 2, 2012.



James R. Holbein, Secretary
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() Other: _____

PUBLIC VERSION

UNITED STATES INTERNATIONAL TRADE COMMISSION

Washington, D.C.

In the Matter of

**CERTAIN REDUCED IGNITION PROCLIVITY
CIGARETTE PAPER WRAPPERS AND
PRODUCTS CONTAINING SAME**

Inv. No. 337-TA-756

**INITIAL DETERMINATION ON VIOLATION OF SECTION 337 AND
RECOMMENDED DETERMINATION ON REMEDY AND BOND**

Administrative Law Judge E. James Gildea

(February 1, 2012)

Appearances:

For the Complainant Schweitzer-Mauduit International, Inc.:

Doris Johnson Hines, Esq.; Christine E. Lehman, Esq.; Anthony D. Del Monaco, Esq.; Mai-Trang D. Dang, Esq.; and Justin A. Hendrix, Esq. of Finnegan, Henderson, Farabow, Garrett & Dunner LLP of Washington D.C.

Michael J. McCabe, II, Esq. of Finnegan, Henderson, Farabow, Garrett & Dunner LLP of Atlanta, Georgia

Adam J. Sibley, Esq. of Finnegan, Henderson, Farabow, Garrett & Dunner LLP of Reston, Virginia

For the Respondents Julius Glatz GmbH, LIPtec GmbH, and KneX Worldwide LLC:

Rudolf E. Hutz, Esq.; Jeffrey L. Eichen, Esq.; M. Curt Lambert, Esq.; Chad S.C. Stover, Esq.; and Claudia Schultze, Esq. of Connolly Bove Lodge & Hutz LLP of Wilmington, Delaware

For the Commission Investigative Staff:

Lynn I. Levine, Esq., Director; David Lloyd, Esq., Supervisory Attorney; and Lisa Murray, Esq., Investigative Attorney, of the Office of Unfair Import Investigations, U.S. International Trade Commission, of Washington, D.C.

PUBLIC VERSION

Pursuant to the Notice of Investigation, 76 Fed. Reg. 4935-36 (January 27, 2011), this is the Initial Determination of the Investigation in the Matter of Certain Reduced Ignition Proclivity Cigarette Paper Wrappers and Products Containing Same, United States International Trade Commission Investigation No. 337-TA-756. *See* 19 C.F.R. § 210.42(a).

With respect to Respondents Julius Glatz GmbH, LIPtec GmbH, and KneX Worldwide LLC, it is held that no violation of Section 337 of the Tariff Act of 1930, as amended (19 U.S.C. § 1337), has occurred in the importation into the United States, the sale for importation, or the sale within the United States after importation, of certain reduced ignition proclivity cigarette paper wrappers by reason of infringement of one or more of claims 1–6, 10–18, and 22–25 of United States Patent No. 5,878,753.

With respect to Respondents Julius Glatz GmbH, LIPtec GmbH, and KneX Worldwide LLC, it is held that no violation of Section 337 of the Tariff Act of 1930, as amended (19 U.S.C. § 1337), has occurred in the importation into the United States, the sale for importation, or the sale within the United States after importation, of certain reduced ignition proclivity cigarette paper wrappers by reason of infringement of one or more of claims 36, 43, and 45 of United States Patent No. 6,725,867.

It is further held that a domestic industry does not exist that practices U.S. Patent No. 5,878,753 and a domestic industry exists that practices U.S. Patent No. 6,725,867.

With respect to the public interest, it is held that enforcement of a remedy in this Investigation does raise public interest issues, which are likely to be temporary and modest and do not overcome the strong interest in protecting Complainant Schweitzer-Mauduit International, Inc.'s rights with respect to U.S. Patent No. 5,878,753 and 6,725,867.

PUBLIC VERSION

The following abbreviations may be used in this Initial Determination:

JX	Joint exhibit
CX	Complainant's exhibit
CDX	Complainant's demonstrative exhibit
CPX	Complainant's physical exhibit
CFF	Complainant's proposed high priority finding of fact
CORFF	Complainant's objections to Respondents' proposed high priority finding of fact
COSFF	Complainant's objections to Staff's proposed high priority finding of fact
CBr.	Complainant's initial post-hearing brief
CRBr.	Complainant's reply post-hearing brief
DPHBr.	Delfort Respondents' pre-hearing brief
RX	Respondents' exhibit
RDX	Respondents' demonstrative exhibit
RPX	Respondents' physical exhibit
RFF	Respondents' proposed high priority finding of fact
ROCF	Respondents' objections to Complainant's proposed high priority finding of fact
ROSFF	Respondents' objections to Staff's proposed high priority finding of fact
RBr.	Respondents' initial post-hearing brief
RRBr.	Respondents' reply post-hearing brief
SFF	Staff's proposed high priority findings of fact
SOCFF	Staff's objections to Complainant's proposed high priority finding of fact
SORFF	Staff's objections to Respondents' proposed high priority finding of fact
SBr.	Staff's initial post-hearing brief
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I. BACKGROUND.

A. Institution and Procedural History of this Investigation.

By publication of a Notice of Investigation in the *Federal Register* on January 27, 2011, pursuant to subsection (b) of Section 337 of the Tariff Act of 1930, as amended, the Commission instituted Investigation No. 337-TA-756 with respect to U.S. Patent No. 5,878,753 (“the ‘753 patent”) and U.S. Patent No. 6,725,867 (“the ‘867 patent”) to determine the following:

whether there is a violation of subsection (a)(1)(B) of section 337 in the importation into the United States, the sale for importation, or the sale within the United States after importation of certain reduced ignition proclivity cigarette paper wrappers and products containing same that infringe one or more of claims 36, 43, and 45 of the ‘867 patent and claims 1–6, 10–18, and 22–25 of the ‘753 patent, and whether an industry in the United States exists as required by subsection (a)(2) of section 337[.]

76 Fed. Reg. 4935 (2011). The Commission further ordered that the Administrative Law Judge make findings on the public interest as follows:

Pursuant to Commission Rule 210.50(b)(1), 19 C.F.R. § 210.50(b)(1), the presiding administrative law judge shall take evidence or other information and hear arguments from the parties and other interested persons with respect to the public interest in this investigation, as appropriate, and provide the Commission with findings of fact on this issue[.]

Id.

Schweitzer-Mauduit International, Inc. is named in the Notice of Investigation as the Complainant. *Id.* The Respondents named in the Notice of Investigation are Astra Tobacco Corporation of Chapel Hill, North Carolina; delfortgroup AG of Traun, Austria; LIPTec GmbH of Neidenfels, Germany, and Julius Glatz GmbH of Neidenfels, Germany. *Id.* The Commission Investigative Staff of the Commission’s Office of Unfair Import Investigations is also a party in this Investigation. *Id.*

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On March 22, 2011, the Administrative Law Judge issued an initial determination granting Complainant's motion to amend the Complaint and Notice of Investigation to add Dosal Tobacco Corp. of Miami, Florida; Farmer's Tobacco Co. of Cynthia, Kentucky; S&M Brands, Inc. of Keysville, Virginia; Tantus Tobacco, LLC of Russell Springs, Kentucky; KneX Worldwide, LLC of Charlotte, North Carolina; Dr. Franz Feurstein GmbH of Traun, Austria; and Papierfabrik Wattens GmbH & Co. KG of Wattens, Austria as Respondents to the Investigation. (*See* Order No. 5.) The Commission determined not to review the order. (*See* Notice of Commission Decision Not to Review an Initial Determination Granting Complainant's Motion to Amend the Complaint and Notice of the Investigation (April 15, 2011).)

On October 24, 2011, the Administrative Law Judge issued an initial determination granting Complainant's motion for summary determination with respect to economic domestic industry. (*See* Order No. 24.) The Commission determined to review the order and upon review affirmed the initial determination with respect to 19 U.S.C. § 1337(a)(3)(A) and (B). (*See* Notice of Commission Decision to Review an Initial Determination Granting Complainant's Motion for Summary Determination with Respect to the Economic Prong of the Domestic Industry Requirement and on Review to Take No Position with Respect to Section 337(a)(3)(C) (November 23, 2011).)

On November 1, 2011, the Administrative Law Judge issued an initial determination granting a joint motion to terminate Respondents delfortgroup AG, Dr. Franz Feurstein GmbH, Papierfabrik Wattens GmbH & Co. KG, Astra Tobacco Corp., Dosal Tobacco Corp., Farmer's Tobacco Co., S&M Brands, Inc., and Tantus Tobacco LLC from the Investigation. (*See* Order No. 30.) The Commission determined not to review the order. (*See* Notice of Commission

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Decision Not to Review an Initial Determination Granting a Motion to Terminate the Delfort Respondents from the Investigation (December 1, 2011).)

The evidentiary hearing on the question of violation of Section 337 began on October 31, 2011, and ended on November 8, 2011. Complainant, Respondents Julius Glatz GmbH, LIPtec GmbH, and KneXWorldwide LLC (collectively, “Glatz” or “Respondents”), and Staff were represented by counsel at the hearing.

B. The Parties.

1. Complainant Schweitzer-Mauduit International, Inc.

Schweitzer-Mauduit International, Inc. (“SWM”) is a Delaware corporation having its principal place of business in Alpharetta, Georgia. (CBr. at 3.)

2. Respondents Julius Glatz GmbH, LIPtec GmbH, and KneX Worldwide LLC

Julius Glatz GmbH is a German company having its principal place of business in Niedenfels, Germany. (*See* Julius Glatz GmbH, LIPtec, and KneX Ans. to Am. Compl. (“Answer”) at 6.) Julius Glatz GmbH produces paper for the manufacture of cigarettes. (*Id.*)

LIPtec GmbH (“LIPtec”) is a German company having its principal place of business in Niedenfels, Germany. (RBr. at 2.) LIPtec is a wholly-owned subsidiary of Julius Glatz GmbH that converts Julius Glatz GmbH base paper into low(er) ignition proclivity (“LIP”) paper by applying bands that reduce the permeability of the paper where the bands lie. (CBr. at 16.) LIPtec “produces, markets and sells paper for use in the manufacture of reduced ignition proclivity cigarettes, including paper sold for importation in the United States.” (*Id.* at ¶ 28.)

KneX Worldwide LLC (“KneX”) is a North Carolina company having its principal place of business in Charlotte, North Carolina. (RBr. at 3.) KneX “purchases and sells paper for use

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in the manufacture of reduced ignition proclivity cigarettes, including paper imported into the United States.” (*Id.*)

3. Respondents delfortgroup AG, Dr. Franz Feurstein GmbH, Papierfabrik Wattens GmbH & Co. KG, Astra Tobacco Corp., Dosal Tobacco Corp., Farmer’s Tobacco Co., S&M Brands, Inc., and Tantus Tobacco LLC

Respondents delfortgroup AG, Dr. Franz Feurstein GmbH, Papierfabrik Wattens GmbH & Co. KG, Astra Tobacco Corp., Dosal Tobacco Corp., Farmer’s Tobacco Co., S&M Brands, Inc., and Tantus Tobacco LLC (collectively, the “Delfort Respondents”) have been terminated from the Investigation. (*See* Order No. 30 (Initial Determination Granting Motion to Terminate Delfort Respondents from the Investigation¹).

C. Overview of the Technology.

At issue are cigarette wrappers used to make lower ignition propensity² (“LIP”) cigarettes and products containing those wrappers. 76 Fed. Reg. 4935-6 (2011). “LIP cigarettes are designed to increase the likelihood of the cigarette’s self-extinguishing if left or dropped on a substrate, such as upholstery, carpet, or bedding. Fires started by unattended or dropped cigarettes are a cause of numerous fire deaths in the United States.” (JX-67 at 1.)

D. The Patents at Issue.

U.S. Patent No. 5,878,753.

This Investigation concerns the ‘753 patent, entitled “Smoking Article Wrapper for Controlling Ignition Proclivity of a Smoking Article Without Affecting Smoking

¹ The Commission, on December 1, 2011, determined not to review that Initial Determination.

² “The terms ‘ignition propensity’ and ‘ignition proclivity’ are used interchangeably by those in the industry. As explained in the patents-in-suit, “[i]gnition proclivity’ is a measure of the tendency of the smoking article or cigarette to ignite a flammable substrate if the burning cigarette is dropped or otherwise left on a flammable substrate.” (JX-67 at 2.)

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Characteristics," which resulted from Application No. 815,434 filed on March 11, 1997. (*See* JX-1 at 1.) The '753 patent issued on March 9, 1999. (*Id.*) The '753 patent names Richard Peterson and Joseph Kucherovsky as the inventors and was assigned to SWM. (*Id.*)

The '753 patent discloses a smoking article wrapper with discrete areas of reduced permeability for improving ignition proclivity characteristics of a smoking article. (*Id.* at 2, Abstract.)

The '753 patent has fifteen asserted claims, two of which are independent. These claims read as follows:

1. A smoking article comprising a tobacco column, and a wrapper surrounding said tobacco column, said smoking article having a first end, a second end, and a longitudinal axis extending from said first end to said second end, said wrapper comprising discrete areas of reduced permeability for improving ignition proclivity characteristics of said smoking article, said discrete areas of reduced permeability comprising areas treated with a film forming composition, said discrete areas being in the shape of bands spaced along said longitudinal axis, said reduced permeability areas defining a gradually decreasing permeability profiled in the longitudinal direction such that permeability reduction in said reduced permeability areas gradually increases from a minimum zero permeability reduction to a maximum permeability reduction.
2. The smoking article as in claim 1, further comprising an area of sustained maximum permeability reduction following said gradually decreasing permeability profile.
3. The smoking article as in claim 2, wherein said discrete areas of reduced permeability comprise a substantially ramp-shaped profile.
4. The smoking article as in claim 1, wherein said discrete areas of reduced permeability further comprise a gradually increasing permeability profile following said gradually decreasing permeability profile.
5. The smoking article as in claim 4, further comprising an area of sustained maximum permeability reduction between said gradually increasing and gradually decreasing permeability profiles.
6. The smoking article as in claim 5, wherein said discrete areas of reduced permeability comprise a substantially ramp-shaped profile with increasing and decreasing ramp sections.

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12. A smoking article wrapper having discrete areas of reduced permeability for improving ignition proclivity control of a smoking article, said discrete areas comprising areas treated with a film forming composition, said discrete areas being in the shape of horizontal bands spaced apart in a longitudinal direction, said reduced permeability areas defining at least one gradually changing permeability profile in the longitudinal direction such that permeability in said changing permeability area gradually changes from zero permeability reduction to a maximum permeability reduction.

13. The smoking article wrapper as in claim 12, wherein said changing permeability profile comprises a gradually decreasing permeability profile in said longitudinal direction such that permeability reduction in said reduced permeability areas increases from zero permeability reduction to maximum permeability reduction.

14. The smoking article wrapper as in claim 13, further comprising an area of sustained maximum permeability reduction following said gradually decreasing permeability profile.

15. The smoking article wrapper as in claim 13, wherein said discrete areas of reduced permeability further comprise a gradually increasing permeability profile following said gradually decreasing permeability profile in said longitudinal direction of said wrapper.

16. The smoking article wrapper as in claim 15, further comprising an area of sustained maximum permeability reduction between said gradually increasing and gradually decreasing permeability profiles.

17. The smoking article wrapper as in claim 16, wherein said discrete areas of reduced permeability have a substantially ramp-shaped profile.

18. The smoking article wrapper as in claim 12, wherein said discrete areas of reduced permeability have a substantially ramp-shaped profile.

24. The smoking article as in claim 1, wherein said bands are continuous around the circumference of the smoking article.

25. The smoking article wrapper as in claim 12, wherein said bands extend the entire width of said wrapper.

(*Id.* at 11:60-14:14.)

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U.S. Patent No. 6,725,867.

This Investigation concerns the '867 patent, entitled "Process for Producing Smoking Articles With Reduced Ignition Proclivity Characteristics and Products Made According to Same," which resulted from Application No. 10/054,744 filed on November 13, 2001. (See JX-2 at 1.) The '867 patent issued on April 27, 2004. (*Id.*) The '867 patent names Richard Peterson, Joseph Kucherovsky, and Thomas Kraker as the inventors and was assigned to SWM. (*Id.*)

The '867 patent discloses a process for reducing the permeability of a paper wrapper used in the construction of a smoking article. (*Id.* at 1, Abstract.)

The '867 patent has three asserted claims, one of which is independent. These claims read as follows:

36. A process for producing a paper wrapper having reduced ignition proclivity characteristics when incorporated into a smoking article comprising the following steps:

providing a paper wrapper comprised of a paper web, said paper web having a relatively high permeability, the permeability of the paper web being from about 60 Coresta to about 110 Coresta;

applying a film-forming composition, to said paper wrapper at particular locations, said film-forming composition forming treated discrete areas on said wrapper, said discrete areas separated by untreated areas, said treated discrete areas having a permeability within a predetermined range sufficient to reduce ignition proclivity, said permeability being less than about 20 Coresta within the treated areas, said treated areas having a Burn Mode Index of less than about 8cm^{-1} , said treated areas reducing ignition proclivity by reducing oxygen to a smoldering coal of the cigarette as the coal burns and advances into said treated areas.

43. The process of claim **36**, wherein the paper web has a permeability of greater than about 80 Coresta and wherein the treated discrete areas have a permeability of less than about 6 Coresta.

45. A process for producing a smoking article comprising the step of surrounding a tobacco column with the paper wrapper defined in claim **36**.

(JX-2 at 12:34-13:13.)

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E. The Products at Issue.

The products at issue in this Investigation are LIP papers used as wrappers in the manufacture of cigarettes. (CBr. at 16.) SWM accuses the Glatz Respondents of importing and selling the products accused in this Investigation. Specifically, SWM accuses the following Glatz LIP papers of infringing the asserted claims of the '753 patent:

Cigla 45 MVM 0,5 MC LI	Cigla 75 MVM 0,6 CA LI
Cigla 60 MV 0,75 MC LI	Cigla 75 MVM 0,6A LI
Cigla 72 MV 0,9 MC LI	Cigla 100 MV 1,0 KC LI
Cigla 75 MV 1,0 MC LI	Cigla 120 MV 1,0 KC LI
Cigla 75 MVM 1,0 MC LI	Cigla 144 MVM 1,2 KC LI

(the "Accused '753 Products") (*Id.*) SWM accuses the following Glatz LIP papers of infringing the asserted claims of the '867 patent:

Cigla 60 MV 0,75 MC LI	Cigla 75 MVM 0,6 CA LI
Cigla 72 MV 0,9 MC LI	Cigla 75 MVM 0,6A LI
Cigla 75 MV 1,0 MC LI	Cigla 100 MV 1,0 KC LI
Cigla 75 MVM 1,0 MC LI	Cigla 120 MV 1,0 KC LI

(the "Accused '867 Products") (*Id.*)

The Accused '753 Products and the Accused '867 Products may be collectively referred to herein as the "Accused Products."

II. JURISDICTION AND IMPORTATION.

In order to have the power to decide a case, a court or agency must have both subject matter jurisdiction and jurisdiction over either the parties or the property involved. *See Certain Steel Rod Treating Apparatus and Components Thereof*, Inv. No. 337-TA-97, Commission Memorandum Opinion, 215 U.S.P.Q. 229, 231 (U.S.I.T.C., 1981). For the reasons discussed below, the Administrative Law Judge finds the Commission has jurisdiction over this Investigation.

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Glatz, LIPtec, and KneX have responded to the Amended Complaint and Notice of Investigation and have fully participated in the Investigation by, among other things, participating in discovery, participating in the evidentiary hearing, and filing pre-hearing and post-hearing briefs. Accordingly, the Administrative Law Judge finds that Respondents Glatz, LIPtec, and KneX have submitted to the personal jurisdiction of the Commission and that the Commission has in rem jurisdiction over the Accused Products. *Certain Cloisonné Jewelry*, Inv. No. 337-TA-195, Initial Determination at 40-43 (U.S.I.T.C., March, 1985) (unreviewed).

Section 337 declares to be unlawful “[t]he importation into the United States, the sale for importation, or the sale within the United States after importation by the owner, importer, or consignee, of articles” that infringe a valid and enforceable United States patent if an industry relating to the articles protected by the patent exists or is in the process of being established in the United States. *See* 19 U.S.C. §§ 1337(a)(1)(B)(i) and (a)(2). Pursuant to Section 337, the Commission shall investigate alleged violations of the Section and hear and decide actions involving those alleged violations.

With respect to the asserted patents, it is undisputed that the importation or sale requirement of Section 337 establishing subject matter jurisdiction as to Glatz, LIPtec, and KneX has been met. (JX-66 at 2.) Accordingly, the Administrative Law Judge finds that Glatz, LIPtec, and KneX sell for importation, import, or sell after importation into the United States, articles that are accused in this Investigation.

III. CLAIM CONSTRUCTION.

A. Applicable Law

The Investigation concerns two utility patents. *See* 76 Fed. Reg. 4935 (2011).

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Any finding of infringement requires a two-step analysis. First, the asserted patent claims must be construed as a matter of law to determine their proper scope.³ Second, a factual determination must be made whether the properly construed claims read on the accused devices. *See Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 976 (Fed. Cir. 1995) (*en banc*), *aff'd*, 517 U.S. 370 (1996).

Claim construction begins with the language of the claims themselves. Claims should be given their ordinary and customary meaning as understood by a person of ordinary skill in the art, viewing the claim terms in the context of the entire patent. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-13 (Fed. Cir. 2005). In some cases, the ordinary meaning of claim language is readily apparent and claim construction will involve little more than “the application of the widely accepted meaning of commonly understood words.” *Id.* at 1314. In other cases, claim terms have a specialized meaning and it is necessary to determine what a person of ordinary skill in the art would have understood disputed claim language to mean by analyzing “the words of the claims themselves, the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, as well as the meaning of technical terms, and the state of the art.” *Id.* (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1116 (Fed. Cir. 2004)).

The claims themselves provide substantial guidance as to the meaning of disputed claim language. *Id.* at 1314. “[T]he context in which a term is used in the asserted claim can be highly instructive.” *Id.* Likewise, other claims of the patent at issue, regardless of whether they have

³ Only claim terms in controversy need to be construed, and then only to the extent necessary to resolve the controversy. *Vanderlande Indus. Nederland BV v. Int’l Trade Comm.*, 366 F.3d 1311, 1323 (Fed. Cir. 2004); *Vivid Tech., Inc. v. American Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999).

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been asserted against respondents, may show the scope and meaning of disputed claim language.

Id.

With respect to claim preambles, a preamble may limit a claimed invention if it (i) recites essential structure or steps, or (ii) is “necessary to give life, meaning, and vitality” to the claim. *Eaton Corp. v. Rockwell Int’l Corp.*, 323 F.3d 1332, 1339 (Fed. Cir. 2003) (citations omitted). The Federal Circuit has explained that a “claim preamble has the import that the claim as a whole suggests for it. In other words, when the claim drafter chooses to use both the preamble and the body to define the subject matter of the claimed invention, the invention so defined, and not some other, is the one the patent protects.” *Id.* (quoting *Bell Communications Research, Inc. v. Vitalink Communications Corp.*, 55 F.3d 615, 620 (Fed. Cir. 1995)). When used in a patent preamble, the term “comprising” is well understood to mean “including but not limited to,” and thus, the claim is open-ended. *CIAS, Inc. v. Alliance Gaming Corp.*, 504 F.3d 1356, 1360 (Fed. Cir. 2007). The patent term “comprising” permits the inclusion of other unrecited steps, elements, or materials in addition to those elements or components specified in the claims. *Id.*

In cases where the meaning of a disputed claim term in the context of the patent’s claims remains uncertain, the specification is the “single best guide to the meaning of a disputed term.” *Phillips*, 415 F.3d at 1321. Moreover, “[t]he construction that stays true to the claim language and most naturally aligns with the patent’s description of the invention will be, in the end, the correct construction.” *Id.* at 1316. As a general rule, however, the particular examples or embodiments discussed in the specification are not to be read into the claims as limitations. *Id.* at 1323.

The prosecution history may also explain the meaning of claim language, although “it often lacks the clarity of the specification and thus is less useful for claim construction

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purposes.” *Id.* at 1317. The prosecution history consists of the complete record of the patent examination proceedings before the U.S. Patent and Trademark Office, including cited prior art. *Id.* It may reveal “how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be.” *Id.*

If the intrinsic evidence is insufficient to establish the clear meaning of a claim, a court may resort⁴ to an examination of the extrinsic evidence. *Zodiac Pool Care, Inc. v. Hoffinger Industries, Inc.*, 206 F.3d 1408, 1414 (Fed. Cir. 2000). Extrinsic evidence may shed light on the relevant art, and consists of all evidence external to the patent and the prosecution history, “including expert and inventor testimony, dictionaries, and learned treatises.” *Phillips*, 415 F.3d at 1317. In evaluating expert testimony, a court should disregard any expert testimony that is conclusory or “clearly at odds with the claim construction mandated by the claims themselves, the written description, and the prosecution history, in other words, with the written record of the patent.” *Id.* at 1318. Furthermore, expert testimony is only of assistance if, with respect to the disputed claim language, it identifies what the accepted meaning in the field would be to one skilled in the art. *Symantec Corp. v. Computer Associates International, Inc.*, 522 F.3d 1279, 1290-91 (Fed. Cir. 2008). Testimony that recites how each expert would construe the term should be accorded little or no weight. *Id.* Extrinsic evidence is inherently “less reliable” than intrinsic evidence, and “is unlikely to result in a reliable interpretation of patent claim scope unless considered in the context of the intrinsic evidence.” *Phillips*, 415 F.3d at 1318-19.

⁴ “In those cases where the public record unambiguously describes the scope of the patented invention, reliance on any extrinsic evidence is improper.” *Vitronics Corp. v. Conceptoronic, Inc.*, 90 F.3d 1576, 1583 (Fed. Cir. 1996).

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B. '753 Patent

1. Level of Skill in the Art

Claims should be given their ordinary and customary meaning as understood by a person of ordinary skill in the relevant art. *Phillips*, 415 F.3d at 1312-13. The relevant art for the '753 patent is the art of designing and manufacturing cigarette paper. SWM's experts have concluded that during the period from 1997 through 2001, a person of ordinary skill in the art of cigarette design and manufacture would have possessed at least a bachelor's degree in paper chemistry or engineering or a related degree program and three to five years' experience in the field. (Tr. at 1861-62 (Honeycutt).)

Respondents propose that a person of ordinary skill in the relevant art of the asserted patents would hold at least one post-secondary degree and would have completed at least one course of study in a technical field related to paper, packaging, printing, and/or cigarette manufacture, such as paper or pulp science, physics, chemistry, engineering, or a related field. (RBr. at 30 (citing Tr. at 1020-22 (McCarthy)).)

Staff, in line with SWM, proposes that a person of ordinary skill would have been a person with a bachelor's degree in paper chemistry or engineering or a related degree program and who also possessed three to five years' experience in the field. (SBr. at 27.)

The Administrative Law Judge concludes that the differences in the proposed definitions of the parties is not substantial or outcome determinative and accepts the one proposed by SWM and Staff. Therefore, the Administrative Law Judge finds that the disputed claim terms in this Investigation are to be construed in accordance with this definition of a person of ordinary skill.

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2. Claims 1 and 12—"film forming composition"

SWM proposes that this term be given its ordinary meaning, which is "a composition that forms a film." (CBr. at 25-26.) Glatz proposes that the term be construed to mean "any composition that forms a layer or coating that reduces the permeability of the paper in the areas to which the composition has been applied." (RBr. at 37.) Staff proposes the following definition: "any composition that, when dried, forms a film on the surface to which it is applied." (SBr. at 30.)

According to SWM, the language of the asserted claims supports its construction because claim 1 of the '753 patent recites a smoking article that includes a wrapper and a wrapper includes discrete areas that are treated with a film forming composition. (CBr. at 26 (citing JX-1 at 11:60-67).) Likewise, SWM argues that claim 12 of the '753 patent recites a wrapper with discrete areas treated with a film forming composition. (*Id.* (citing JX-1 at 12:40-44).) SWM says that also supportive of its construction is the language of claim 36 in the related '867 patent, which recites providing a paper wrapper and applying a film forming composition to the wrapper at particular locations (*id.* (citing JX-2 at 12:34-41)), and claim 1 of the '867 patent which recites applying multiple layers of a film forming composition (*id.* at 26-27 (citing JX-2 at 10:43-47)). Thus, argues SWM, the claim language distinguishes between film forming composition and the paper wrapper to which the composition is applied, and that distinction should be maintained in construing the term "film forming composition." (*Id.* at 27.) SWM criticizes Glatz's proposed construction because the words "any material" could mean the same material that forms the wrapper itself, and this is opposed by the claims of the two patents which distinguish between the wrapper and the film forming composition. (*Id.*)

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SWM says the intrinsic record of the '753 patent makes it clear that "the film forming solution may comprise any type of solution which, when dried, forms a film..." and SWM argues that neither the '753 nor the '867 patent describes fibrous slurries as forming films. (*Id.* (citing JX-1 at 3:18-19).) On the contrary, argues SWM, the two patents distinguish between film forming compositions and fibrous slurries, which do not form films. (*Id.* (citing Tr. at 1865-66, 1870-73 (Honeycutt)).) In particular, according to SWM, the specification of the '753 patent distinguishes film forming compositions, such as alginates and pectin, from fibrous slurries, such as microcrystalline cellulose, cellulon bacterial cellulose, and wood pulp fibers. (*Id.* (citing Tr. at 1865-66 (Honeycutt); JX-1 at 1:37-38, 4:51-65).) Also, contends SWM, the '867 patent specifically distinguishes film forming compositions from materials that merely coat the base paper web in identifying film forming compositions as a subset of possible applications. (*Id.* (citing Tr. at 1870-73 (Honeycutt); JX-2 at 7:31-39).)

SWM contends that the fact that the inventors distinguished film forming compositions from other types and claimed only the use of film forming ones demonstrates that they did not intend to claim any and all coatings that could be used to coat the base paper to reduce permeability, as Glatz proposes. (*Id.* at 27-28 (citing Tr. at 1865 (Honeycutt)).) SWM says that neither the '753 nor the '867 patent identifies fibrous slurries as film forming compositions and, instead, the '867 patent specification only identifies as film forming compositions those compositions that were known in the art to form a film. (*Id.* at 28 (referencing JX-2 at 2:39-43, 5:38-52).) SWM argues that the '867 specification refers to cellulose derivatives that have been chemically modified to enable film formation and not to cellulose in identifying film forming compositions. (*Id.* at 28.) Therefore, according to SWM, the specifications of both the '753 and '867 patents demonstrate that the claim term "film forming composition" expressly distinguishes

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compositions that form films from fibrous slurries or other material that does not form a film. (*Id.* (citing *Phillips*, 415 F.3d at 1315 for the proposition that the specification is always highly relevant in claim construction analyses).)

SWM also argues that the prosecution history of the '753 patent demonstrates that a film forming composition is not just any coating and is distinct from coatings that only involve additional cellulose. (*Id.* (citing Tr. at 1866-70 (Honeycutt)).) According to SWM, the claims of the original application did not include any limitations regarding the kind of material for reducing permeability. (*Id.* at 29.) However, that application was rejected by the examiner in light of prior art disclosed in United States Patent No. 4,739,775 to Hampl ("Hampl '775") (JX-10), which teaches the use of cellulosic bands that are perpendicular to the longitudinal axis of the wrapper where the wrapper construction has one band or in the alternative the bands are applied in a plurality of selected zones with width and spacing selected to achieve the desired degree of ignition proclivity and free burn time. (*Id.*) SWM notes that the examiner concluded that it would have been obvious to a person of ordinary skill to arrange the bands in the desired position and sequence so that the permeability areas change from zero permeability reduction to a maximum reduction so that the cigarette would extinguish itself if left unattended for a period of time. (*Id.*) SWM says the claims were thereafter amended to clarify that the areas of reduced permeability are created from a film forming composition. (*Id.* (citing JX-3 at 850-52 (prosecution history of the '753 patent))).) SWM argues that the prosecution history and the fact that the amended claims of the '753 patent were allowed over Hampl '775 are compelling evidence that the film forming composition in the claims excludes cellulose or the addition of more paper to a paper web. (*Id.*)

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SWM also argues that the intrinsic evidence demonstrates that Glatz's construction is overly broad—the first part of it mentioning that a film forming composition is any composition that forms a layer or coating, whereas the asserted claims recite a film forming composition rather than just any composition that forms a layer or coating. (*Id.* at 30.) Furthermore, argues SWM, the claimed film forming composition should not be construed to have the additional functional component of reducing the permeability of the paper, as proposed by Glatz, as this would be redundant because each of the asserted claims separately requires a reduction in permeability. (*Id.*) SWM says the prior art supports its proposed construction because it shows the distinction between cellulose, which SWM says does not form a film, and chemically modified cellulose derivatives which do. (*Id.* at 30-31) SWM points to United States Patent No. 5,417,228 to Baldwin *et al.* (“the Baldwin patent” or “Baldwin”) (RX-442) which, according to SWM, distinguishes cellulose slurries that form “fibrous mats” and cellulose derivatives that are soluble and form films. (*Id.* at 31 (citing RX-442 at 4:22-27).) SWM says that *Baldwin* clearly distinguishes between fibrous slurries and film formers, noting Baldwin's mention of using chemically modified cellulose instead of cellulosic suspensions or slurries. (*Id.* at 31.) SWM says that support for its construction can also be found in United States Patent No. 5,474,095 to Allen *et al.* (“the Allen patent” or “Allen”) (RX-443) which describes carboxymethyl cellulose, a derivative, as film forming derivative but does not describe slurries of “refined hardwood,” Cellulon,” or “experimental expanded fiber” as film forming compositions. (*Id.* (referencing RX-443 at 5:9-15 (describing sodium carboxymethyl as film former), 3:31-32 (describing cellulose as “additional material”)).) Thus, argues SWM, the prior art illustrates that a person of ordinary skill would have understood that a film forming composition does not mean everything, as Glatz contends. (*Id.* at 32.) SWM argues that the evidence demonstrates that those of skill in

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the art understood the physical and chemical properties that distinguish film formers from cellulose and other compositions that do not form films. (*Id.* (citing Tr. at 1862-77, 1894 (Honeycutt)).) SWM argues that a person of skill in the art would not consider chemically unmodified cellulose to be a film forming composition. (*Id.* (citing RX-442; RX-443).) According to SWM, it was well known that “[d]ue to its polarity and molecular weight, cellulose is not soluble in any solvent” and that “[c]ellulose can be used as a film former for the preparation of coating material only after a suitable chemical modification of its structure.” (*Id.* (citing CX-664 at 14 (an excerpt from a British book entitled *Wood Coatings, Theory and Practice*, First edition-2009)).) SWM says that highly processed or refined cellulose such as microcrystalline cellulose was known to have the same unsubstituted chemical structure as cellulose and to not form a film. (*Id.* at 32-33 (citing RX-442, Examples 1-9).) SWM says that celluloses that are produced by bacterial fermentation of glucose, such as cellulon, were known to have the same unsubstituted chemical structure as cellulose and to not form a film. (*Id.* at 33 (citing RX-442, Examples 1-9).)

SWM says that film forming compositions like those described in the ‘753 and ‘867 patents, in contrast to cellulosic compositions, contain film formers that can form films when dried, as opposed to fibrous mats or other non-film forming coatings. (*Id.* at 33.) Therefore, according to SWM, the evidence shows that the claim term “film forming composition” in the asserted claims of the ‘753 and ‘867 patents should be given its ordinary meaning—a composition that forms film; and not all coatings, such as fibrous slurries of cellulose, are film forming compositions. (*Id.*) SWM says no one skilled in the art would consider depositing more paper (cellulose fibers) onto a paper wrapper itself composed of cellulose fibers to be the application of a film forming composition. (*Id.*)

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Glatz says that neither the '753 nor the '867 patent nor either of their prosecution histories provides an express definition of "film forming composition." (RBr. at 31.) Glatz argues that a person of ordinary skill in the art would understand that the term "film-forming composition" is used in the same way and with the same meaning in both patents and consequently the construction of that term should be the same for both patents, a point on which the parties agree. (*Id.*)

Glatz says its construction closely follows the language of the patent claims and specification, which is "any composition that forms a layer or coating that reduces the permeability of the paper in the areas to which the composition has been applied." (*Id.*) Glatz argues that its construction is supported by the unambiguous wording of the '753 patent and that resort to extrinsic evidence is unnecessary and improper, especially to vary the patent's clear meaning. (*Id.*) Glatz argues that the Background of the Invention section of the specification refers to modifying cigarette wrapping paper to reduce the ignition proclivity characteristics of cigarettes made with the wrapper. (*Id.*) Glatz argues further that the '753 patent concedes that "[p]rior references describe the application of fibrous slurries and/or film-forming solutions to reduce permeability and control burn rate," when applied "in discrete bands around the circumference of the cigarette." (*Id.* (citing the '753 patent (JX-1) at 1:37-43).) Glatz points out the term to be construed uses the phrase "film forming composition" and that the word "composition" differs from "solution," "slurry," and "dispersion." (*Id.* at n. 6.) According to Glatz, "composition" is a very broad term that means any combination of ingredients or elements. (*Id.*)

Glatz says that the objective of the '753 patent is to improve ignition proclivity without adversely affecting smoke delivery or taste and this is achieved by a unique shape or profile of

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the bands which provide a “gradually” changing permeability profile. (*Id.* at 31-32.) Glatz says the invention has to do with the shape of the bands and the permeability profile of the applied permeability-reducing material, and not to any change in the nature, characteristics, functions or identity of the “film-forming composition,” all of which were previously well known in the prior art. (*Id.* at 32 (citing Tr. at 983-984 (McCarty)).) Glatz says that the discrete areas of reduced permeability in the ‘753 patent “may comprise areas treated with a film-forming solution” which can be either aqueous or not. (*Id.* (citing JX-1 at 3:15-29).) Glatz quotes various phrases from the specification, such as “forms a film which reduces permeability” (JX-1 at 3:19-20), “forms a layer on the surface of the wrapper” (*id.* at 6:54-56), “form a coherent and smooth surface coating” (*id.* at 6:59-60), “form a surface film” (*id.* at 7:1-2), and “leaving a film...on the paper” (*id.* at 7:17-18) to characterize the “films” deposited by the permeability-reducing materials. (RBr. at 32.) Glatz contends that the terms “film,” “layer,” and “coating” are used interchangeably to describe what is deposited in the treated areas. (*Id.* (citing Tr. at 2097-98 (Honeycutt), 1027-28 (McCarty)).)

Glatz argues that the ‘753 patent also provides illustrative examples of film-forming compositions, which include microcrystalline cellulose, cellulon bacterial cellulose and highly refined wood pulp fibers. (*Id.* (citing JX-1 at 4:58-62).) Glatz cites other disclosures in the specification that it believes are supportive of its claim construction: JX-1 at 3:18-20, 3:23-24, 4:44-47, 4:52-54, 4:53-65, 6:23-24, 6:24-28, 6:43-48, 6:49-62, 7:9-19, 10:17-23, 11:53-54, and 10:36-39. (*Id.* at 33-34.) Glatz notes that these disclosures are specifically incorporated by reference into the ‘867 patent, which describes “a smoking article wrapper being treated with a film-forming aqueous solution.” (*Id.* at 34 (citing JX-2, Abstract).) Glatz says the ‘867 patent mentions that invention is “an improved method of applying a film-forming solution to a paper

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wrapper.” (*Id.* at 34 (citing JX-2 at 1:55-63).) Glatz argues that this improvement is not a change in the “film-forming composition,” but, rather, in how the permeability-reducing material is applied. (*Id.* (citing Tr. at 992 (McCarty)).) Glatz says that nothing in the ‘867 patent suggests that the applied film-forming compositions are any different from those used previously for the same purpose, specifically as taught in the prior art ‘753 patent, as well as in still earlier patents. (*Id.*) According to Glatz, the treated areas of the wrapping paper simply have decreased permeability within a predetermined range sufficient to reduce ignition proclivity and are not said to be any different from the treated areas mentioned in the prior art. (*Id.* at 34-35 (citing JX-2 at 2:13-17).)

Glatz says that the ‘867 patent discloses that “any suitable material that will provide the desired burn characteristics” can be used as the permeability-reducing material. (*Id.* at 35 (citing JX-2 at 2:37-39).) Glatz notes that the ‘867 patent provides specific examples of film-forming compositions and they overlap with the examples of useful film-forming compositions described in the ‘753 patent, such as alginate, pectin, polyvinyl alcohol, carboxymethyl cellulose, ethyl cellulose, and other cellulose derivative solutions. (*Id.* (citing JX-2 at 2:39-45; JX-1 at 4:57-65).) Glatz says that the ‘867 patent uses interchangeable phrases such as “multiple layers of the film-forming composition” (JX-2 at 2:8-9, 2:66-67), “multi-layered film” (*id.* at 3:9-10, 3:16), “film will contain at least two layers” (*id.* at 3:30), “durable surface coating” (*id.* at 7:7), “ensuring that the coating remains intact” (*id.* at 7:25-27), and “forming a film at the surface” (*id.* at 10:26-27) to characterize what is deposited on the base paper in the treated areas. (RBr. at 35.)

Staff, like SWM, believes that the term “film forming composition” should be given its ordinary meaning, but disagrees with SWM as far as what the ordinary meaning is. (SBr. at 31.) Staff finds SWM’s interpretation to be far more complex than what the words themselves

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suggest. (*Id.*) Staff notes that SWM's rebuttal expert, Mr. Honeycutt, concludes that the defining aspect of the term is its ability to dissolve in a solvent rather than simply forming a slurry or suspension, supporting that conclusion by referring to *Wood Coating: Theory & Practice*, Ch. 3 (2009). (*Id.* at 31-32.) Staff says that Mr. Honeycutt gratuitously testified that there is a distinction between film-forming solutions and fibrous slurries and that the claim term "film forming composition" is limited to film-forming solutions only. (*Id.* at 32.) Staff points out that while Mr. Honeycutt expressed the opinion that cellulose does not dissolve in a solvent, and therefore is not a film-forming composition, he acknowledged that every example of a film-forming composition described in the '753 and '867 patents includes an inorganic material dispersed therein, thus being insoluble. (*Id.* (citing Tr. at 1880-81 (Honeycutt)).)

Staff is of the view that the intrinsic evidence does not justify Mr. Honeycutt's opinions on this subject, noting that the specification merely characterizes the claimed composition as one that "forms a film which reduces permeability" and "form[s] a coherent and smooth surface coating[.]" (*Id.* (citing JX-1 at 3:19-20, 6:59-60.) Staff points out that the specification does not claim that only a fully-dissolved solution can achieve this objective, but, on the contrary, provides several examples of film-forming materials, some of which dissolve, such as alginate, and others which do not, such as wood pulp fibers. (*Id.* at 32-33.) Therefore, Staff concludes that the intrinsic evidence is supportive of the fact that any composition of materials which, when dried, forms a "coherent and smooth surface coating" is "film forming" under the disclosures of the '753 patent. (*Id.* at 33.) In particular, Staff notes that one of the preferred embodiments in the '753 specification is a suspension rather than a solution:

[a] non-reactive inorganic particulate filler...added to the solution...The solution with filler is more effective in reducing permeability of the paper web in treated areas 18. Applicants believe that the inorganic filler 22 forms a layer on the

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surface of wrapper 14 with the ethyl cellulose acting as a binder or 'glue' for the filler particles.

(*Id.* (citing JX-1 at 6:49-56).) Staff points out that what this describes is a layer that results from a mixture that includes particulates, which constitutes a suspension or slurry. (*Id.*) Staff further points to the fact that the description in the specification also says, “[a]ny filler material which can be homogeneously disbursed⁵ in the non-aqueous solution to form a surface film with the cellulosic polymer without affecting the texture or appearance of the wrapper may be used.” (*Id.* (citing JX-1 at 6:66-7:3).) Staff reasons that, given what is expressed in the specification, SWM’s proposed interpretation of the “ordinary meaning” of a “film forming composition” effectively excludes one of the preferred embodiments of the invention and, therefore, cannot be correct. (*Id.* (citing *SciMed Life Sys. v. Advanced Cardiovascular Sys.*, 242 F.3d 1337, 1344 (Fed. Cir. 2001)).)

Staff notes that, while the patent frequently mentions “film-forming solutions,” in addition to “compositions,” it is clear from the context in which the words appear that a more general meaning than the one proposed by Mr. Honeycutt is intended, as for example, the following passage:

It should be understood by those skilled in the art that any manner of film-forming solutions are within the scope and spirit of the invention. For example, the prior art describes the application of fibrous slurries and/or any manner of film-forming solutions to cigarette papers to reduce permeability and control the burn rate of the cigarette. Aqueous solutions which have been found effective include

⁵ It is noted that although the patent uses the word “disbursed” which means to pay out or expend (*Webster’s New World Dictionary*, 4th Ed. 2008), it is apparent from the context in which the word appears that what was intended is the word “dispersed” which means to break up and scatter in all directions. (*Id.*) For instance, the specification says that “[a]ny filler material which can be homogeneously disbursed ... may be used.” (JX-1 at 6:66-7:3.) The phrase “homogeneously disbursed” is nonsensical, whereas “homogenously dispersed” is not. Although none of the parties has addressed this point, the Administrative Law Judge concludes that the word “dispersed” is the operable word, and not “disbursed.”

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alginate, pectin, carboxymethyl-cellulose, and polyvinyl alcohol. Fibrous slurries applied from an aqueous solution are also effective. These include microcrystalline cellulose, cellulon bacterial cellulose, and highly refined wood pulp fibers. Also, natural polymers soluble in nonaqueous solvent are also effective. Any and all such solutions are within the scope and spirit of the presently claimed invention.

(*Id.* at 34 (quoting from JX-1 at 4:41-65).) Staff quotes hearing testimony of Mr. Honeycutt concerning this paragraph, inclusive of the following—

Q. This paragraph ends after those three sentences that we have just looked at, it sends [sic, “ends”] “any and all such solutions are within the scope and spirit of the presently claimed invention.”

In light of that sentence, is it still your opinion that the examples in the first and third sentences are included while the second sentence is excluded?

A. My understanding when I reviewed the prosecution history for this was that those claims—it is not a claim—but that language is kind of rejected and, therefore, the claims were specific to film formers.

(*Id.* at 34-36 (citing Tr. at 2139 (Honeycutt)).) Staff says such testimony shows how difficult it is to interpret the quoted language of the specification in any manner other than as a list of various film-forming solutions that can be used to reduce permeability, all of which, including fibrous slurries, are within the scope of the claim language. (*Id.*) Staff argues that each of the categories mentioned in the cited paragraph—aqueous solutions, fibrous slurries applied from an aqueous solution, and natural polymers soluble in non-aqueous solvents—is described as “effective” as well as “within the scope and spirit of the invention.” (*Id.* at 37.) Staff emphasizes the fact that fibrous slurries containing cellulose or wood pulp are specifically included within the scope of the invention (*id.*) and says that any expert testimony that reads one of these specifically listed embodiments out of the claim is at odds with the intrinsic evidence and cannot be considered. (*Id.* (citing *Network Commerce, Inc. v. Microsoft Corp.*, 422 F.3d 1353, 1361 (Fed. Cir. 2005)).) Staff says that conclusory, unsupported assertions by experts regarding the definition of a claim term are not useful. (*Id.* (citing *Phillips*, 415 F.3d at 1318).)

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In conclusion, Staff disputes SWM's contention that its interpretation of "film forming composition" is consistent with the ordinary meaning of that term. (*Id.*)

SWM in response argues that Glatz and Staff mischaracterize the '753 and '867 patent specifications and consciously disregard the prosecution history of the '753 patent, which SWM says demonstrates that a film forming composition is not just any coating or layer and is distinct from a coating or layer of additional cellulose. (CRBr. at 2 (citing Tr. at 1866-70 (Honeycutt)).) SWM argues that neither Glatz nor Staff addressed the prosecution history of the '753 patent and says that the original application claims of the patent did not include any limitation on the kind of material that could be used to reduce permeability of the paper web. (*Id.* at 2-3.) SWM asserts that the original application claims were amended to recite film forming compositions and that this amendment was made to specifically distinguish prior art, the *Hampl* '775 patent (JX-10), which discloses cellulosic bands. (*Id.* at 3 (citing JX-3 at 835, 850-52).) According to SWM, the prosecution history, including the patent office's approval of the amended claims over *Hampl* '775, is compelling evidence that the film forming composition in the claims excludes cellulose (i.e., adding more paper to the paper web), a recognition during the prosecution of the difference between cellulose bands of the prior art and the claimed film forming compositions that should not be ignored in the claim construction process. (*Id.*)

The Administrative Law Judge disagrees. Yes, the prosecution history does reflect that the patent examiner rejected claims 1, 2, 4, and 14 as unpatentable under 35 U.S.C. 103(a) by reason of *Hampl* '775. (JX-3 at 835.) As his reason for rejection, the examiner said:

As to claims 1 and 14 *Hampl* Jr. (775) teaches the use of cellulosic bands which are perpendicular to a longitudinal axis of the wrapper. According to the preferred [sic] embodiment the wrapper construction has one band or in the alternative the bands are applied in a plurality of the selected zones with width and spacing selected to achieve the desired degree of ignition proclimity [sic] and free burn time respectively. See figures 1-4 and column 2 lines 38-53 of *Hampl*, Jr. (775).

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It would have been obvious for one of ordinary skill in the art to arrange the bands in the desired position and sequence such that the permeability area changes from zero permeability reduction to a maximum reduction such that the cigarette would extinguish if left unattended for a period of time.

(*Id.*) In response to the examiner's objections, application claim 1 of the '753 patent was amended by the insertion of the following phrases or words:

1. "said smoking article having a first end, a second end, and a longitudinal axis extending from said first end to said second end,"
2. "said discrete areas of reduced permeability comprising areas treated with a film forming composition, said discrete areas being in the shape of bands spaced along said longitudinal axis,"
3. "the longitudinal direction"
4. "gradually"

and by the extraction of the following phrases:

1. "a burning direction of said smoking article"
2. "in said burning direction"

(JX-3 at 852-853.) Most of these amendments concern structure of the bands—orientation, placement, and gradation—and not the composition of the material used to make them.

Although the words "a film forming composition" were added, that fact itself is not sufficient to show that this was done for the purpose of distinguishing Hampl '775 because Hampl '775 discloses a "cellulosic band material" in its preferred embodiments. (JX-4 at 2:38-53.)

"Cellulosic" means "of, relating to, or made from cellulose." (*Merriam-Webster's Collegiate Dictionary*, 11th Ed. 2009.⁶) The Administrative Law Judge finds that there is nothing about the term "cellulosic band material" included in Hampl '775 that explicitly or implicitly rules out a "film," as SWM and Mr. Honeycutt employ that word. Therefore, the purpose for the amendment is not clearly attributable to Hampl '775.

⁶ The word and its definition date from 1881, according to the dictionary cite.

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This finding is supported by the fact that the patent examiner also rejected claims 1 through 27 of the '753 patent application under 35 U.S.C. ¶ 112, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. (JX-3 at 835.) As to this point, the examiner said, "There is no claimed *structure or material* which would reduce permeability for improving ignition proclimity [sic] control of the smoking article thus rendering the claim indefinite. Where does the permeability reduction occur?" (*Id.* (emphasis added).) It appears more likely—or at least, as likely—that the addition of the phrase "film forming composition" was intended to overcome the examiner's objection in regard to 35 U.S.C. ¶ 112, rather than to limit the scope of the claim to overcome the Hampl '775 reference. Although the Interview Summary prepared by the examiner, included in the prosecution history, includes the following comment, "and claim 1 to include bands made from a film forming material for improved ignition proclivity characteristics" (JX-3 at 850), that does not prove, at least to a preponderant degree, that an unambiguous disclaimer as to claim scope occurred. *Omega Engineering, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1324-25 (Fed. Cir. 2003). SWM, as the complainant, bears the burden of proof, but the evidence it points to by way of the prosecution history does not overcome the arguments of Glatz and Staff and the intrinsic evidence they point to. In the Remarks section of the Amendment to the application, the applicants stated: "It is believed that the claims as now amended satisfy all of the requirements of 35 U.S.C. ¶ 112 and are patentably distinct over the prior art of record[]" and "[i]n particular, as also discussed during the interview, neither *Hampl, Jr. '775* nor *Musillo* disclose or suggest wrappers having discrete areas of permeability that define a gradually changing permeability profile." (JX-3 at 856.) A person of ordinary skill in the art could understand that these statements reveal that it was the "gradually changing permeability profile" of the bands, not the

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composition of the material used to make them, that was relied on by the applicants for the purpose of overcoming Hampl '775 et al. and satisfying 35 U.S.C. ¶ 103(a). Debatable inferences drawn from the prosecution history, which SWM and Mr. Honeycutt place reliance on, do not prevail against categorical statements in the specification. *See Phillips* 415 F.3d at 1317 (Fed. Cir. 2005) (“[B]ecause the prosecution history represents an ongoing negotiation between the PTO and the applicant, rather than the final product of that negotiation, it often lacks the clarity of the specification and thus is less useful for claim construction purposes.”) Such is the case here.

SWM also responsively argues that Glatz’s construction is erroneous because not all materials that coat or form a layer on cigarette paper form films or are film forming compositions, and says that this fact is confirmed in the patent specifications, the prosecution history, and the common knowledge of the skilled artisan as reflected in prior patents and publications. (CRBr. at 3.) SWM argues that the asserted claims are all limited to compositions that form films and not to just any coating or layer that reduces permeability, as Glatz and Staff contend. (*Id.*) This is an extension of SWM’s arguments anchored on Mr. Honeycutt’s conclusions that the language of the specification is “kind of rejected” by the prosecution history (Tr. at 2139 (Honeycutt)), that the Administrative Law Judge has already found wanting. Mr. Honeycutt did not articulate clearly and precisely how the prosecution history, in his expert opinion, nullifies what is clearly and unambiguously stated in the specification of the ‘753 patent, at column 4, lines 41-65, which bears repeating here:

It should, however, be understood that the present invention relating to the uniquely shaped bands or areas of reduced permeability is not limited in any way to the non-aqueous solution discussed herein. The present invention relates to a unique shape or pattern for the discreted areas which can be formed with any manner of film-forming solutions, including non-aqueous and aqueous solutions. The discussion herein related to non-aqueous solutions is provided for means of

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explanation of the invention, and as an illustration of a preferred embodiment of a particularly useful solution. It should be understood by those skilled in the art that any manner of film-forming solutions are within the scope and spirit of the invention. For example, the prior art describes the application of fibrous slurries and/or any manner of film-forming solutions to cigarette papers to reduce permeability and control the burn rate of the cigarette. Aqueous solutions which have been found effective include alginate, pectin, carboxymethyl-cellulose, and poly-vinyl alcohol. Fibrous slurries applied from an aqueous solution are also effective. These include microcrystalline cellulose, cellulon bacterial cellulose, and highly refined wood pulp fibers. Also, natural polymers soluble in non-aqueous solvents are also effective. Any and all such solutions are within the scope and spirit of the presently claimed invention.

(JX-1 at 4:41-65.) The first sentence states unambiguously that the invention is not limited in any way to the non-aqueous solution discussed. The second sentence states that the invention can be formed with “any manner of film-forming solutions,” the fourth sentence repeats that statement, the fifth sentence states what the inventors intend to be covered by the scope of their invention—“fibrous slurries and/or any manner of film-forming solutions”—and succeeding sentences mention, by way of examples, aqueous solutions, including alginate, pectin, carboxymethyl-cellulose, and polyvinyl alcohol and, once again, fibrous slurries, as well as microcrystalline cellulose, cellulon bacterial cellulose, and highly refined wood pulp fibers. Finally, the last sentence states, with crystal clarity: “Any and all such solutions are within the scope and spirit of the presently claimed invention.” SWM and Mr. Honeycutt’s argument that the prosecution history countermands, undermines, or “kind of reject[s]” this language, or any portion of it, betrays what the inventors said, not only in the specification, but during the prosecution history.

SWM argues that the ‘753 specification and the section just quoted repeatedly distinguishes film forming solutions from fibrous slurries. (CRBr. at 5.) Not quite: When the specification says “any manner of film-forming solutions” and “[a]ny and all such solutions are within the scope and spirit of the presently claimed invention” these are encompassing, not

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exclusionary, phrases. When the specification says that the present invention relating to uniquely shaped bands or areas of reduced permeability “is not limited in any way” to the non-aqueous solution described therein, and says that “[f]ibrous slurries applied *from* an aqueous solution are also effective[,]” it strains logic and syntax to maintain that “fibrous slurries” and “solutions” are being described disjunctively. It is oxymoronic to maintain that fibrous slurry *applied from* a solution—whether the solution be aqueous or non-aqueous—means that the combination is either not a solution or that the fibrous portion is not slurry. Either the composite from which the fibrous slurry is applied is a solution or else it is a slurry; it cannot be both at the same time. It is apparent that the ‘753 inventors did not make the distinction between solutions and slurries that SWM and Mr. Honeycutt argue for in this Investigation.

As for SWM’s and Mr. Honeycutt’s reliance on the book *Wood Coatings: Theory and Practice*, the justification for that reliance has not been shown. In the first place, the book relates to coatings for wood based on the European Standard EN 917-1 (1996). The subject matter of the book is unrelated to cigarette wrappers. The mere fact that paper web used in making cigarette paper wrappers is made of wood pulp is not reason for concluding that wood itself involves the same principles or technical considerations. All Mr. Honeycutt was able to say in support of the book’s authority as support for his opinion is that the book talks about wood and cigarette paper can be considered wood. (Tr. at 1879 (Honeycutt).) Secondly, the credentials of the authors of this book are not disclosed, so that there is no way of telling whether they are scientists or simply writers who performed some research on their own or else relied on persons unknown for the information. Neither SWM nor Mr. Honeycutt provided a basis as to why anything mentioned by the authors of this book is authoritative or credible, other than the fact that the book was published. This is not a justifiable basis for an expert opining on technology

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involved in this case to rely on statements in this book (*see Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993); Fed. R. Evid. 703), and the fact Mr. Honeycutt does so, simply because paper is made from wood, says more about the caliber of his judgment than it does about the extent of the authors' authority or credibility. Thirdly, the book was published in 2009 (CX-664 at 2) after the patents in dispute were issued, and there is no explanation offered by either SWM or Mr. Honeycutt as to why this post hoc publication evidences the understanding of a person of skill in the art related to manufacturing LIP paper at the time the asserted patents were filed.

SWM rejects Glatz's argument that the term "film forming composition," as opposed to "film forming solution," refutes SWM's claim construction proposal. (*Id.* at 4.) SWM argues that use of the word "composition" in the term does not demonstrate that fibrous slurries, or other compositions that do not form films, fall within the meaning of film forming compositions and says that the word "composition" as it appears in the claims accounts for the possible presence of non-reactive materials within the applied film forming composition that do not go into solution. (*Id.*) This argument, however, largely ignores or understates what is spoken in the '753 specification. For example, the specification states:

Paper web 14 defines an outer circumferential surface 16 when wrapped around tobacco column 12. Discrete areas 18 of outer circumferential surface 16 are treated with a non-aqueous solution. This solution includes a solvent soluble cellulosic polymer material dissolved in a non-aqueous solvent. The solution also includes a particulate inorganic non-reactive filler disbursed or suspended in the solution...

(JX-1 at 5:29-36.) The cellulosic polymer dissolves, but the particulate inorganic non-reactive filler does not; it is dispersed or suspended in the solution. This is repeated throughout the specification: *see*, for example, JX-1 at 6:23-28, 6:67-7:3; and 7:10-16. This poses problems with SWM's construction and the arguments that undergird it. If the word "solution," as it is

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used in the specification, excludes slurry or slurries, as opined by Mr. Honeycutt, what is meant by the phrase “[t]he solution [as opposed to composition] also includes a particulate inorganic non-reactive filler [dispersed] or suspended in the solution”? The word slurry is defined as “a watery mixture of insoluble matter (as mud, lime, or plaster of paris”⁷) or as “[a] thin mixture of a liquid, especially water, and any of several finely divided substances, such as cement, plaster of Paris, or clay particles,”⁸ or as “a thin watery mixture of a fine, insoluble material, as clay, cement, soil, etc.”⁹ Given the fact that the specification repeatedly states that “solution” includes particulate inorganic non-reactive filler dispersed or suspended in the solution, and in two of its examples includes clay (“Anhydrous China clay”—*see* JX-1 at 7:48-67, Examples 1 and 2), this would constitute a slurry. However, SWM and Mr. Honeycutt deny that “solution” as used in the patents can be a slurry, even though they do not explain what the word “slurry” means to the person of ordinary skill in the art.

SWM and Mr. Honeycutt say that the ‘753 inventors distinguished film forming compositions from other compositions and claimed only the use of the former, as indicated by the patent at column 1, lines 36 to 38. (CRBr. at 6-7 (citing Tr. at 1865 (Honeycutt)).) The cited portion states: “Prior references describe the application of fibrous slurries and/or film-forming solution to cigarette paper to reduce permeability and control burn rate.” (JX-1 at 1:36-40.) This passage does not support SWM’s argument that the inventors did not intend to claim any and all coatings or layers that could be applied to base paper to reduce permeability but only claimed what SWM and Mr. Honeycutt claim to be “film forming compositions.” The phrase “fibrous slurries and/or film-forming solution” is, by virtue of the virgule between the word “and” and the

⁷ *Merriam-Webster’s Collegiate Dictionary*, 11th Ed. 2009.

⁸ *The American Heritage Dictionary of the English Language*, 5th Ed. 2011.

⁹ *Webster’s New World Dictionary*, 4th Ed. 2008.

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word “or,” both conjunctive and disjunctive, grammatically speaking, but does not, in the context of the specification as a whole, validate SWM’s argument. For example, the specification elsewhere states: “The solution may also comprise a particulate non-reactive filler material to enhance or improve the film forming ability of the solution.” (JX-1 at 3:26-29.) A “solution” that “comprises a particulate non-reactive filler material,” such as clay, for example, is consistent with a slurry, or a suspension, or a dispersion, and this fact stands in opposition to SWM’s argument at pages 6 and 7 of its reply brief. The specification also states, “Fibrous slurries applied from an aqueous solution are also effective. These include...wood pulp fibers.” SWM and Mr. Honeycutt’s assertion that the prosecution history of the ‘753 patent, with respect to the addition of the phrase “film forming composition,” thereby distinguishes the ‘753 patent’s teaching from Hampl ‘775 because the added term does not include cellulosic bands as claimed by Hampl ‘775 nullifies or dismisses certain language of the specification based on an inflated, and unsubstantiated, interpretation of the prosecution history.

SWM argues that, consistent with the ‘753 patent and prior art patents and publications, the list of possible film forming compositions in the ‘867 patent excludes cellulose, microcrystalline cellulose, and cellulon bacterial cellulose described in the ‘753 patent as fibrous slurries and refers only to chemically modified cellulose derivatives as possible film forming materials. (CRBr. at 7 (citing JX-2 at 2:37-45, 5:40-52).) This assertion is found to be unwarranted. The first portion of the ‘867 patent cited by SWM reads as follows:

The film-forming composition can be made from any suitable material that will provide the desired burn characteristics. Examples of film-forming composition that can be used include alginate solutions, pectin solutions, silicate solutions, starch solutions, carboxymethyl cellulose solutions, and mixtures thereof. If desired, the film-forming composition can include a filler, such as chalk, clay, a metal oxide, calcium carbonate, or mixtures thereof.

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(JX-2 at 2:37-45.) In the first place, the cited specification lists “[e]xamples” of film-forming compositions, and is not restrictive, as SWM implies. Secondly, the last sentence of the cited specification says that the film-forming composition can include fillers such as clay and chalk, which are particulate non-reactive filler material, according to the ‘753 patent, which is incorporated by reference in the ‘867 patent. (JX-2 at 1:40-43.) The other portion of the ‘867 specification cited by SWM, column 5, lines 40 to 52, only identifies “[s]ome aqueous compositions” that may be used to make the lower ignition proclivity bands, but does not exclude the materials that SWM claims it does.

SWM says that Glatz’s discussion regarding its and Philip Morris’s occasional descriptions of cellulosic slurries as forming films is irrelevant. (CRBr. at 7.) SWM argues that this is extrinsic evidence and cannot be used to alter the clear meaning of film forming composition as distinct from a fibrous slurry as reflected in the patent specification and prosecution history. (*Id.*) The argument, however, overlooks the fact that it is SWM and its expert witness Mr. Honeycutt who have taken the position that the ordinary meaning of “film forming composition” to a person of skill in the art excludes slurries, a contention that they support, at least in part, by extrinsic evidence including the book entitled *Wood Coatings: Theory and Practice*. Additionally, their own argument, with respect to what the intrinsic evidence discloses in that regard, is not only unsupported, but is opposed by the broad language of the patents with respect to what film forming compositions can be composed of: “It should, however, be understood that the present invention relating to the uniquely shaped bands or areas of reduced permeability is not limited in any way to the non-aqueous solution discussed herein.” (See JX-1 at 4:41-44.) If SWM’s contention that a solution discussed in the patents is limited to compositions that are not slurries, the just-quoted sentence says otherwise, and the last sentence

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of the same paragraph states: “Any and all such solutions are within the scope and spirit of the presently claimed invention.” (*Id.* at 4:63-65.) The antecedent objects of that last sentence include slurries, some of which include highly refined wood pulp fibers. (*Id.* at 4:59-62.)

SWM argues that Glatz and Staff mischaracterize Mr. Honeycutt’s testimony in saying that Mr. Honeycutt contends that a “film forming composition” can only be a solution, and SWM says that, instead, he said that the film forming component of the applied composition needs to be in solution, not that the film forming composition could not contain un-dissolved particles. (CRBr. at 9.) This statement fails to take into account the totality of Mr. Honeycutt’s testimony. He testified that a “film” is a thin layer that is “coherent at the molecular level.” (Tr. at 1863. (Honeycutt).) When he was asked what that meant, he said: “It just means that the molecules cling together. That’s the meaning of the word cohere. And on a scientific basis, it really—the word could be cohesion, which means to cling together as opposed to adhesion, which means to add here [sic, “adhere”] or stick to something else.” (*Id.*) He was then posed this question by counsel: “We have heard testimony over the past week regarding film-forming compositions and slurries of fibers. In your view, is there a difference between a film-forming composition and a slurry of fibers? He responded: “Yes. A slurry of fibers is never a film-forming composition. And the patents-in-suit, as well as the prior art that we have been talking about, are very clear in this distinction.” (*Id.* at 1863-64.) He was then asked: “And what exactly is the difference between film and what’s created by applying fibers?” To this he answered: “Well, a slurry of fibers, of cellulose fibers, since cellulose is insoluble in any solvent, is just going to form a fibrous mat, where the fibers lay on top of each other, if you will, where a true film at the molecular level, the molecules would form a network, an interconnected network.” (*Id.* at 1864.) Mr. Honeycutt failed to explain how it is that “[f]ibrous slurries applied from an aqueous

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solution” can be “within the scope and the spirit of the presently claimed invention” as specifically stated in the ‘753 patent, at column 4, lines 59 through 65, and at the same time not be a “film forming composition.” SWM and Mr. Honeycutt, instead of adhering to what is spoken in the specification, actually ignore what is clearly set forth therein. The specification unambiguously states: “It should, however, be understood that the present invention relating to uniquely shaped bands or areas of reduced permeability is not limited in any way to the non-aqueous solution discussed herein. The present invention relates to a unique shape or pattern for the discreted areas which can be formed with any manner of film-forming solutions, including non-aqueous and aqueous solutions.” (JX-1 at 4:41-47.) This explicitly says the invention is the uniquely shaped bands and not the manner of the compositions used to make them. SWM and Mr. Honeycutt turn this statement in the specification on its head and say the opposite.

Therefore, the Administrative Law Judge finds that SWM’s proposed interpretation of what the term “film forming composition” means, according to the opinion of Mr. Honeycutt, is infirm. The Administrative Law also finds Glatz’s proposed construction to be infirm because it includes redundant language requiring that the composition reduce permeability, a limitation that is clearly stated in other language of the claim: “said wrapper comprising discrete areas of reduced permeability...said discrete areas of reduced permeability comprising areas treated with a film forming composition[.]” (JX-1 at 11:63-67.) Essentially, the term “film forming composition” is what Staff proposes: “Any composition that, when dried, forms a film on the surface to which it is applied.” (SBr. at 30.) The specification states:

The inventive method for producing the smoking article wrapper having improved ignition proclivity control characteristics includes applying a non-aqueous solution of a film forming cellulosic polymer and non-aqueous solvent with an inorganic particulate filler material suspended in the solution to a smoking article paper in discrete treated areas **18**, such as bands **24** as described above. The

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treated areas are then dried so that essentially all of the non-aqueous solvent is removed leaving a film of the cellulosic material on the paper in treated areas.

(JX-1 at 7:9-15.) The film is the residue remaining on the paper after the solvent is removed. Of course, the material that is applied reduces permeability, but that pronouncement occurs elsewhere in the claim, and in the context in which the term “film forming composition” appears, is not necessary or germane to an understanding of the “film” aspect of the phrase; rather, it is the fact that, after the drying process, there remains on the paper wrapper a residual of the composition, denominated by the inventors as a “film,” that has been applied to discrete areas of the paper wrapper. Staff’s construction fully captures the substance of the term as it appears in the context of the claim, and, therefore, the Administrative Law Judge adopts Staff’s proposed construction: “any composition that, when dried, forms a film on the surface to which it is applied.”

3. All Claims of the ‘753 Patent—“discrete areas” and “reduced permeability areas”

SWM says the term “discrete areas” recited in the ‘753 patent should be given its ordinary meaning, which is synonymous with “treated areas.” (CBr. at 36.) SWM says that the inventors amended the claims during the course of the prosecution of their patent application in accordance with this construction. (*Id.* (citing JX-3 at 852-853 (the ‘753 patent prosecution history)).) Glatz proposes that “discrete areas” and “reduced permeability areas” where they appear in the ‘753 patent be construed to mean “an area or areas that have been treated to reduce permeability.” (RBr. at 41.) Staff believes both of these terms should be accorded their ordinary meaning. SBr. at 30.

SWM says that Glatz’s proposed construction for both the term “discrete areas” and the term “reduced permeability areas” is essentially the same as the ordinary meaning of both and

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SWM suggests that the dispute, as far as these two terms are concerned, has to do with the way they should be applied, and not how they are construed. (CBr. at 36.) Specifically, argues SWM, Glatz contends that the bands cannot have invisible portions, whereas this contention is contradicted by the specification, which states that the treated areas can be invisible. (*Id.* (citing JX-1 at 5:39-49).)

Glatz says the dispute regarding these terms is essentially whether the “area” being referred to by these terms is restricted to the portion of the base paper on which the film-forming composition is applied, or whether it includes some undetermined fuzzy portion of base paper located outside the visible bands, as asserted by Dr. Robin Rogers, one of SWM’s experts. (RBr. at 40-41 (citing Tr. at 618-619 (Rogers)).) Glatz argues that the “ordinary meaning” of the two terms, as suggested by SWM, does not square with Dr. Rogers’s testimony about invisible areas of the base paper being part of the gradually-changing permeability profile. (*Id.* at 41.) Glatz argues that its proposed construction is consistent with the intrinsic evidence and addresses the question as to what the “area” means by restricting the term to only the banded areas and does not include undefined, indeterminate, and invisible portions of the cigarette wrapper that are outside the banded regions. (*Id.*) Glatz says the ‘753 specification makes it clear that the gradual change in air permeability, whether it is increasing or decreasing, occurs only in the treated area. (*Id.* (citing JX-1 at 9:52-10:26).) Glatz argues that the entire concept of the ‘753 patent is a gradual change in the permeability of the band as the burning coal advances from the untreated base paper, through the treated area, and forward to another untreated area, so the smoker will not notice any change in taste or other characteristics of the smoke in comparison to the same paper with bands that are similar in all respects except that they have sharp changes in permeability. Glatz argues that it is the treated areas, not the untreated ones, that define the

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gradually changing profile characteristic mentioned in the patent. (*Id.* (citing JX-1 at Abstract, 2:63-66, 3:30-34, 5:50-56, 6:23-24, 6:59-61, 10:5-25, 10:58-67, 11:3-5, 11:12-15).) Glatz says the '753 figures also refer to the treated areas only as possessing the required "gradually changing" profile feature. (*Id.* at 41-42 (citing JX-1 at Figs. 4-6B).) Glatz says that, when referring to these figures, the specification consistently describes the permeability profile as being entirely within the treated areas and says Figure 4 is described as "particularly illustrating the ramp-shaped profiles of the treated areas." (*Id.*) Glatz says that Figures 6A and B are described as "alternate cross-sectional views of the ramp-shaped treated areas formed on the smoking article wrapper." (*Id.* at 42.) Continuing this line of argument, Glatz says that in Figure 3 the paper surface has "discrete treated areas **18** defined thereon for reducing the permeability of wrapper **14**" (*id.* (citing JX-1 at 9:58-60)), and says that in the embodiments illustrated the treated areas include "a gradually decreasing permeability profile **30**," an "area **38** of sustained maximum reduction," and possibly "an area **40** of gradually increasing permeability following areas **30** and **38**." (*Id.* (citing JX-1 at 10:5-7, 23-25, 58-61).) Glatz argues that the treated areas exclude areas outside the band. (*Id.* (citing JX-1 at 10:1-2 ("Treated areas **18** are separated or spaced apart by untreated areas **28**" and at 10:45-47—"The width of bands **24** and space between bands **28** can vary accordingly.")))

Glatz says that the '753 specification, drawings, and claim language, as well as the entire concept of the invention, are consistent with only the treated areas displaying the required gradually changing permeability profile and that the intrinsic evidence does not admit of any other construction, especially not the indeterminate and undefined suggestion by SWM's expert, Dr. Rogers, that areas of the base paper that he could not see and describe or delimit should be included as part of the reduced permeability areas. (*Id.* (citing Tr. at 618-622 (Rogers)).) Glatz

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also says that, if necessary, there is persuasive extrinsic evidence from one of the inventors, Richard Peterson, who testified that the discrete areas of reduced permeability are areas that have been treated with a film-forming composition. (*Id.* (citing Tr. at 1581-82 (Peterson)).)

As for SWM's proposed construction, Glatz argues that by opposing Glatz's proposed construction, SWM must necessarily believe that the claim terms "discrete areas" and "reduced permeability areas" somehow encompass more than the areas actually treated with the film-forming composition and therefore its proposal that the "ordinary meaning" apply is errant. (*Id.* at 43.) Calling attention to testimony of Dr. Rogers, Glatz argues that he espouses that "discrete/reduced permeability areas" include invisible regions located outside of the bands and are somewhere on or even inside the base paper, possibly due to the film-forming composition being absorbed into the paper and migrating in the longitudinal direction away from the bands. (*Id.*) Glatz argues that there is no mention of any "invisible band" theory anywhere in the '753 patent that lends credence to such a proposal. (*Id.*)

Staff says that no construction of the subject terms is necessary, and Staff does not believe Glatz's construction to be any more illuminating than a plain reading of the terms—an area in which permeability has been reduced. (SBr. at 37.) Staff says that no party has disputed the point that the "discrete areas" described in the '753 patent are the portions of the cigarette wrapper treated with a film-forming composition and, therefore, there is no reason to construe them. (*Id.* at 38, referencing JX-1 at 12:42-45.) Staff argues that Glatz's contention that all changes in permeability reduction must occur within the treated bands, and not outside it, is not material because under any construction the terms "discrete areas" and "reduced permeability areas" would still refer to specific areas of reduced permeability that correspond to the treated areas of the cigarette wrapper, at least within the degree of precision possible when applying a

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liquid or semi-liquid to a damp and porous surface, and says that no additional clarity is gained by adopting Glatz's proposed construction.

The Administrative Law Judge concludes that in light of the patent as a whole the terms "discrete areas" and "reduced permeability areas" are clear and precise in themselves and do not need clarification. The specification says the following:

To achieve the objects and in accordance with the purposes of the invention, as embodied and broadly described herein, a smoking article is provided comprising a tobacco column and a wrapper surrounding the tobacco column. The wrapper comprises discrete areas of reduced permeability for improving ignition proclivity characteristics of the smoking article. The discrete areas of reduced permeability may be defined as cross-directional bands surrounding the smoking article. The reduced permeability areas define a gradually changing permeability profile.

(JX-1 at 2:57-66.) Elsewhere the specification states: "The discrete areas of reduced permeability may comprise areas treated with a film forming solution to reduce permeability of the smoking article wrapper in the treated areas." (*Id.* at 3:15-17.) The specification also says: "The discrete treated areas, especially in the embodiment wherein the areas comprise ramp-shaped bands, should have a width which ensures that the smoking article will self-extinguish once the burning coal of the smoking article advances into the treated areas. The width of the treated area is, thus, a function of the permeability reduction of the treated area." (*Id.* at 3:30-34.) These descriptions are consistent with the ordinary meaning of both "discrete areas" and "areas of reduced permeability" that are mentioned in the claims, and there is no appreciable lexicological reason put forth by Glatz demonstrating ambiguity or susceptibility to misapprehension associated with these terms. The fact that they might be misapplied in some manner in the course of making an infringement analysis, simply demonstrates that the English language is in certain respects protean and the words that contribute to it are seldom, if ever, ironclad. To the degree any words can be considered clear and precise, the terms in question are

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that. Therefore, the Administrative Law Judge concludes that these terms should be understood and applied according to their plain and ordinary meaning in each case.

4. All Asserted Claims—“gradually”

The parties’ post-hearing briefs address this term differently; some do it in context, such as Glatz’s “gradually changing permeability profile” (RBr. at 44 *et seq.*) and Staff’s “gradually increasing [/decreasing/changing] permeability profile (SBr. at 39 *et seq.*), whereas SWM focuses on the word “gradually” itself (CBr. at 34 *et seq.*). Since the pivotal aspect of the competing construction proposals is the word “gradually,” construction of that term suffices for resolving the issue of claim construction in the context of the asserted claims.

SWM proposes that the term “gradually” means that “the increase, decrease, or change in permeability does not occur all at once.” (CBr. at 34 (citing Tr. at 1883-84 (Honeycutt)).) SWM says that the ‘753 patent specification expressly defines “gradually” that way. (*Id.* (citing JX-1 at 10:5-11, 2:65-3:4, 3:13-14, 10:14-25).) Glatz says that if the root word “gradual” has any meaning at all, it must be in the context of whether a particular permeability profile has an effect on smoke delivery and taste, as compared to the effect of a non-gradual or “abrupt” profile on the same cigarette. Glatz therefore proposes the following construction: “the increase, decrease or change in permeability occurs in small steps or degrees such that there are minimal discernible changes in smoke delivery and taste as compared to the same treated paper having an abrupt increase, decrease or change in permeability.” (RBr. at 46-47.) Staff proposes that the ordinary meaning of the word by itself is operative and believes that the difference between the private parties’ definitions is merely a matter of scale. (SBr. at 40.)

The word “gradually” in general means something that does not happen all at once, as SWM’s proposed construction denotes; however, it also imparts the idea of steps or gradations,

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as proposed by Glatz. The specification says that the prior art pertaining to reduced ignition proclivity paper has significant drawbacks because noticeable change in the smoking characteristics of the cigarette is detected as the cigarette coal burns into the treated bands. (JX-1 at 2:26-29.) The specification says that what is needed in order to overcome this disadvantage is a paper that remains effective in reducing ignition propensity or proclivity while at the same time minimizing the chance of discernible changes in smoke delivery and taste to a smoker. (*Id.* at 2:34-37.) According to the specification, the invention does this by providing reduced permeability areas that “define” a gradually changing permeability profile, such as by gradually decreasing the profile of the reduced permeability areas in the burning direction of the cigarette (from the lit end to the opposite end) going from a zero level in reduction of permeability to a maximum level. (*Id.* at 2:66-3:4.) The specification also says that the areas of decreased permeability may include areas of sustained maximum reduction in permeability and may also have, posteriorly, areas of decreasing reduction in permeability. (*Id.* at 3:7-14.) Thus, the essence of the invention, insofar as it proposes to accomplish improvement in smoking experience over the prior art, is effectuating changes in permeability incrementally. The ramp-like profiles in Figures 5 through 6 illustrate this. (*Id.*)

Therefore, the Administrative Law Judge finds that SWM’s proposed construction is too broad because the phrase “does not occur all at once” does not capture the fact that the inventors, by their comments as cited in the specification and the figures that accompany them, intended something more precise. On the other hand, Glatz’s construction goes too far and incorporates outcomes that can subjectively vary from one person to another. Although Staff may be correct in stating that the disputed term can be readily understood according to its ordinary meaning, the chasm between the opposing constructions of the private parties suggests otherwise. In light of

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the contending constructions proposed by the private parties, the Administrative Law Judge concludes that it is appropriate to employ another word to add further clarity to what the term “gradually” would mean to a person of skill in the context of what is set forth in the patent. Therefore, the Administrative Law Judge concludes that the word “gradually” as it appears in the asserted claims means “incrementally.”

C. ‘867 Patent

1. Level of Skill in the Art

The parties agree that the level of skill of a person of ordinary skill in the art is the same for both of the asserted patents. (Tr. at 1861-62 (Honeycutt); RBr. at 99; SBr. at 68.) For the reasons previously given regarding the ‘753 patent (*see* III.B.1), the Administrative Law Judge concludes that a person of ordinary skill in the relevant art of the ‘867 patent would have been someone with a bachelor’s degree in paper chemistry or engineering, or a related degree program, who also possessed three to five years’ experience in the field.

2. Claim 36—“*applying*”

SWM says the term “applying” as it appears in claim 36 of the ‘867 patent should be given its ordinary meaning. (CBr. at 94.) Glatz argues that the term “applying” should be construed to mean “applying multiple layers of a film-forming composition.” (RBr. at 110.) Staff, like SWM, says the term can be understood according to its ordinary meaning. (SBr. at 69.)

Glatz argues that the ‘867 patent (JX-2) clearly identifies the basic problem that the claimed invention purports to solve and does this by applying multiple layers of film-forming composition. (RBr. at 99-100.) Glatz points to the “Background of the Invention” where it is

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said there is a need “for an improved method of applying a film-forming solution to a paper wrapper in discrete areas for decreasing the permeability of the wrapper without causing non-uniform dimensional changes in the wrapper or otherwise adversely affecting the appearance of the wrapper.” (*Id.* at 100 (citing JX-2 at 1:58-63).) Glatz argues that non-uniform dimensional changes, known as cockling or wrinkling, were well-known problems in the application of liquids, especially water, to thin cigarette paper. (*Id.* (citing Tr. at 993-994 (McCarty)).) Glatz says that the specification specifically identifies the inventors’ solution to this problem as the application of multiple layers of film-forming composition in multiple steps. (*Id.* (citing JX-2 at Abstract, 2:8-12, 3:16-22, 4:31-36, 6:61-65, 7:52-58, 7:59-67, 10:15-22).) These citations from the ‘867 specification describe either multiple layers of film-forming composition or multiple steps in applying the composition.

Glatz argues that the ‘867 specification never describes the application of a single layer in a single application or explains how wrinkling and cockling problems are solvable with a single layer or single application. (*Id.* (citing Tr. at 1032 (McCarty)).) Glatz says that throughout the patent, in the Abstract, in the Summary of the Invention, in the Detailed Description, in the Figures, and in the Examples, the inventors consistently limit the invention to the application of multiple layers of film-forming composition. (*Id.* at 101-102.) Glatz argues that the term “applying,” in light of the consistent statements about multiple layers throughout the patent, can only be construed to mean applying *multiple* layers of film-forming composition. (*Id.* at 102.) According to Glatz, the Federal Circuit requires a determination of meaning that a person of ordinary skill in the art would attribute to claim terms “after reading the entire patent.” (*Id.* (citing *Phillips*, 415 F.3d at 1321)).) Glatz argues that when the inventors describe something as “the invention,” as is the case with the ‘867 patent, “[t]he public is entitled to take the patentee

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at his word.” (*Id.* at 103 (citing *Honeywell Int’l, Inc. v. ITT Indus., Inc.*, 452 F.3d 1212, 1318 (Fed. Cir. 2006); *Scimed*, 242 F.3d at 1343).) Glatz argues that the ‘867 patent inventors’ statements are not simply descriptions of preferred embodiments; they are unequivocal statements that the invention requires multiple layers. (*Id.*)

Glatz says its proposed construction, with the inclusion of multiple layers, is the only reading consistent with the inventors’ unambiguous description of what was their invention. Glatz argues that the inventors’ repeated use of the phrase “present invention” to describe the application of multiple layers makes clear “that the invention does not include” applying a single layer of film-forming composition and “that feature is deemed to be outside the reach of the claims of the patent even though the language of the claims, read without reference to the specification might be considered broad enough to encompass the feature in question.” (*Id.* at 103-104 (citing *Phillips* 415 F.3d at 1341).) Glatz says that the Federal Circuit recently reiterated and explained that “a statement in a specification that describes the invention as a whole can support a limiting construction of a claim term[]” and “[t]hat is especially true where...other statements and illustrations in the patent are consistent with the limiting description.” (*Id.* at 104 (citing *Am. Piledriving Equip., Inc. v. Geoquip, Inc.*, 637 F.3d 1324, 1334 (Fed. Cir. 2011)).)

Glatz argues that the construction it proposes is necessary because the inventors relied on the application of multiple layers as their solution to the only problem identified with the prior art. (*Id.* (citing JX-2 at Abstract:11-13, 7:52-55, 4:21-36).) According to Glatz, the specification disclaimed prior art wrappers that applied only a single layer of film-forming composition and made clear that multiple layers are crucial to achieving the claimed benefits of the invention. (*Id.* (citing *Scimed*, 242 F.3d at 1343; *CVI/Beta Ventures, Inc. v. Tura LP*, 112 F.3d 1146, 1160 (Fed.

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Cir. 1997)).) Glatz says the Federal Circuit has repeatedly held that where all examples described in a patent have common characteristics this is strong evidence that the invention is limited to those characteristics. (*Id.* at 105.) According to Glatz, every part of the '867 patent from the Abstract to the Background of the Invention to the Summary and Detailed Descriptions of the Invention and the drawings and examples is strictly limited to the deposit of multiple layers on the base paper. (*Id.* (citing Tr. at 1032 (McCarty)).)

Glatz says that the doctrine of claim differentiation, which is being advanced by SWM with respect to construction of claim 36, as distinguished from claim 37,¹⁰ does not apply under the facts of this case. (*Id.* at 105.) According to Glatz, the difference between claim 36 and claim 37 with respect to layers of film-forming composition merely creates a presumption that is rebutted by the inventors' clear and unambiguous pronouncements that the invention requires multiple layers. (*Id.*) Glatz relies on Federal Circuit precedent that says claim differentiation is not a hard and fast rule and can be overcome by a contrary construction dictated by the written description. (*Id.* at 106 (citing *Retractable Technologies, Inc. v. Becton, Dickinson and Co.*, 653 F.3d 1296, 1305 (Fed. Cir. 2011)).) The Administrative Law Judge finds that case presents somewhat the reverse situation to the one in this Investigation. There the specification indicated that the claimed "body" constituted one piece, while the claims themselves left open the possibility that the recited "body" may encompass more than one piece. (*Id.*) The court said:

In this case, while the claims leave open the possibility that the recited "body" may encompass a syringe body of more than one piece, the specifications tell us otherwise. They expressly recite that "the invention" has a body constructed as a single structure, expressly distinguish the invention from the prior art based on this feature, and only disclose embodiments that are expressly limited to having a body that is a single piece. Thus, a construction of "body" that limits the term to a one-piece body is required to tether the claims to what the specifications

¹⁰ Claim 37 reads as follows: "The process of claim 36, wherein the film-forming composition is applied in multiple layers to form the treated discrete areas." (JX-2 at 12:53-55.)

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indicate the inventor actually invented. Accordingly, the district court erred when it construed “body” as encompassing bodies composed of multiple pieces.

(*Id.*)

Staff says that while the word “applying” should be given its ordinary meaning, Glatz is correct with respect to the claim as a whole because the only patentable distinction between the ‘867 patent and the earlier ‘753 patent, which is incorporated by reference in the ‘867 patent, is that the latter patent “describes a process for minimizing distortion of the base paper caused by applying a wet film-forming composition that introduces the additional step of applying the composition in multiple layers and allowing each layer to dry before the next layer is applied.” (SBr. at 70 (citing JX-2 at Abstract, 7:55-67, 8:4-8, 8:27-67).) Therefore, says Staff, claim 36 must be limited in scope to “multi-pass” processes (that produce multiple layers), such as those described, as preferred embodiments in the ‘867 specification, despite the lack of an express reference to multiple layers in that claim itself. (*Id.*) Staff says that, while it is improper to import limitations from the specification into the claims, analysis of claim language should not be done in a vacuum: the specification remains the single best guide to the meaning of a disputed term. (*Id.* (citing *Phillips*, 415 F.3d at 1315).) Staff argues that, even though the claims are not necessarily restricted in scope to what is shown in a preferred embodiment, neither are the specifics of the preferred embodiment irrelevant to the correct meaning of claim limitations. (*Id.* at 70-71 (citing *Phonometrics, Inc. v. Northern Telecom, Inc.* 133 F.3d 1459, 1466 (Fed. Cir. 1998)).)

Staff says that in this case, unless claim 36 is limited to the multi-pass processes disclosed in the preferred embodiments, it will necessarily be invalid as anticipated by the ‘753 prior art that is incorporated by reference into the ‘867 patent because if claim 36 read on a single-pass process, it would add nothing to the invention already disclosed in the ‘753 patent.

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(*Id.* at 71.) Therefore, Staff concludes that claim 36 should be interpreted so as to preserve its validity by limiting it to multi-pass processes only. (*Id.*)

SWM opposes Glatz's proposed construction on the grounds that it is inconsistent with the specification and the claim language and wrongly imports a functional limitation of one disclosed embodiment into the asserted claims. (CRBr. at 71.) SWM says the specification expressly supports the application of a single layer. (*Id.*; CBr. at 96-97.) SWM says that claim 36 does not recite the application of multiple layers, but other independent claims, as well as dependent claim 37, do. (CBr. at 96 (citing JX-2 at 12:53-55).) SWM argues that reading "multiple layers" into claim 36 would render dependent claim 37 superfluous by reason of the doctrine of claim differentiation. (*Id.* (citing *Phillips*, 415 F.3d at 1314-15).)

SWM argues that a person of skill would understand from the specification that application of multiple layers is not required but is merely an option. (*Id.*) SWM says that the patent teaches that the total amount of film forming composition applied should be up to 20 percent by weight of the total, particularly for wrappers of 60 Coresta and higher, as in claim 36, and also discloses that in a single pass the amount can be up to 20 percent of the composition. (*Id.* at 96-97 (citing JX-2 at 7:45-48, 8:52-65; Tr. at 2028-29 (Honeycutt)).) SWM pursues this argument in further detail in its reply brief, there arguing that because the specification expressly describes application of the entirety of the needed film forming composition in a "single application step," Glatz's reliance on cases limiting the scope of the claims to only what is described is not supported. (CRBr. at 72.) SWM says the '867 patent further contemplates the application of a single layer of a film forming composition in other percentages. (CBr. at 97 (citing JX-2 at 10:31-32, 3:16-22).) SWM says that the specification states "at least two layers" are applied "most" of the time, not all of the time. (*Id.* (citing JX-2 at 3:16-22).) SWM says that

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in *Kora Tech. Inc. v. Stamps.com Inc.*, 582 F.3d 1341, 1347-48, the court made it clear that unless statements in the specification involve the patentee acting as his own lexicographer or clearly disavowing claim scope, they will not limit the patentee's broader claims. (*Id.* at 97-98.) SWM says the goal of the multi-layer processes claimed in other independent claims of the patent, to reduce non-uniform dimensional changes, is immaterial to the construction of "applying" in claim 36, which does not expressly recite multiple layers and contains no limitations regarding minimization of non-uniform dimensional changes. Therefore, SWM maintains, it would be improper to read a requirement for application of multiple layers into claim 36. (*Id.*)

SWM argues that Glatz's references to various statements in the specification that include the words "this invention" and "the present invention" in connection with multiple layers of film-forming composition should not be considered dispositive, because the specification does not uniformly refer to the invention as being so limited. (CRBr. at 73-74.) SWM argues that Glatz's reliance on *Honeywell*, 452 F.3d 1312 and *Scimed*, 242 F.3d 1337 is inappropriate because the holdings in those cases do not apply given that "the present invention" statements in the patent are not uniform in limiting the invention to application of multiple layers of film-forming composition. (*Id.*)

SWM says Staff's analysis is incorrect because the '867 patent is unique by reason of the fact that it includes numerous other features apart from what the '753 patent discloses, including using high porosity base paper, providing a range for reduced permeability bands, and disclosing a burn mode index range. (CBr. at 98.) Furthermore, argues SWM, the '867 patent incorporates by reference the '753 patent, which expressly discloses application of the film forming composition in a single pass. (*Id.* (citing JX-2 at 1:40-43; JX-1 at 7:27-28, 34-36).) Thus, argues

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SWM, one of ordinary skill in the art would know that the film forming composition can be applied in a single step. (*Id.*)

The Administrative Law Judge concludes that the term “applying” should be construed according to its ordinary meaning, which is not limited or restricted by number of applications. In *Phillips*, 415 F.3d at 1312 the court said: “It is a ‘bedrock principle’ of patent law that ‘the claims of a patent define the invention to which the patentee is entitled the right to exclude.’” In this regard the court also quoted the following statement from one of its earlier decisions: “if we once begin to include elements not mentioned in the claim, in order to limit such claim..., we should never know where to stop.” (*Id.*) Applying those precepts to the case at hand, there is no reason to construe the word “applying,” as it appears in claim 36, to mean “multiple layers” since the plain and ordinary language of the claim itself does not impart such a limitation. *Phillips* also says that “[d]ifferences among claims can also be a useful guide in understanding the meaning of particular claim terms” and “the presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in questions is not present in the independent claim.” (*Id.* at 1314-15.) In that regard, it is noted that claim 1 of the ‘867 patent uses the phrase “applying multiple layers of a film-forming composition” (JX-2 at 10:47), whereas claim 36 uses the phrase “applying film-forming composition” (JX-2 at 12:41). Presumably, the inclusion of the words “multiple layers” in claim 1 was intentional and the omission of those words in claim 36 was, likewise, intentional, and not a lapse or an oversight by the inventors. This conclusion is solidified by the fact that dependent claim 37 expressly adds the words “multiple layers” to the process disclosed in claim 36 and constitutes the only distinction with that claim. It would violate the reasoning of, and instructions in, *Phillips* to

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ignore these facts and to conclude that the specification, insofar as it may appear to be either broader or narrower than one or more of the claims, has primacy over those claims.

As for Glatz's and Staff's arguments that the invention of the '867 patent is the process of applying multiple layers, as opposed to single layers shown in the prior art, and therefore is essential to all of the '867 patent's claims, their arguments do not give adequate attention to aspects of the invention that address technology other than the beneficial application of multiple layers. *See, e.g., Absolute Software, Inc. v. Stealth Signal, Inc.*, 659 F.3d 1121, 1136-37 (Fed. Cir. 2011). The Abstract states, in part: "The paper wrapper is treated with a film-forming composition that forms treated discrete areas on the wrapper. The treated discrete areas have a permeability within a predetermined range sufficient to reduce the ignition proclivity properties of a smoking article made with the wrapper." (JX-2 at Abstract.) This is a technical disclosure that is separate and distinct from the invention of applying multiple layers. Elsewhere, the specification goes into detail about the percentages, by weight relative to Coresta units, of film-forming composition to the paper wrapper to which it is applied and certain parameters of the Burn Mode Index for establishing ignition proclivity properties. (*See* JX-2 at 6:28-56.)

Although Glatz and Staff argue as though the application of multiple layers were the one and only aspect of the invention of the '867 patent, that is not demonstrated by the evidence. It is true that the '867 patentees placed much emphasis on the application of multiple layers, in contrast to prior art single layer applications, and did so for the stated purpose of avoiding problems with wrinkling and cockling of the paper wrapper, saying "a need exists for an improved method of applying a film-forming solution to a paper wrapper in discrete areas for decreasing the permeability of the wrapper without causing non-uniform dimensional changes in the wrapper, or otherwise adversely affecting the appearance of the wrapper." (JX-2 at 1:58-63.)

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However, there is no evidence that this problem had not, or could not, be addressed or overcome by the application of a single layer of film-forming composition in an appropriate measure. Claim 36 does not address the wrinkling and cockling problem associated with single layer applications, but it is not necessary that all aspects of the invention be addressed in every claim. “[E]ach claim need not include every feature of an invention” and there is a “presumption that each claim in a patent has a different scope.” *AllVoice Computing PLC v. Nuance Communications, Inc.*, 504 F. 3d 1236, 1248 (Fed. Cir. 2007).

The Administrative Law Judge rejects Staff’s argument that “[u]nless the patent is understood to claim a ‘multi-pass’ process as an alternative to and an improvement over a single-pass process, then there would be no reason for the specification to focus exclusively on the benefits of applying multiple layers in what would otherwise be a process identical to other admitted prior art, and thus invalid.” (SBr. at 70.) The Federal Circuit has stated, “While we have acknowledged the maxim that claims should be construed to preserve their validity, we have not applied that principle broadly, and we have certainly not endorsed a regime in which validity analysis is a regular component of claim construction.” *Phillips*, 415 F.3d at 1327. The court also said, “[W]e have limited the maxim to cases in which ‘the court concludes, after applying all the available tools of claim construction, that the claim is still ambiguous.’” (*Id.*) With respect to the asserted claims in which the term “applying” is in dispute, there are no ambiguities attributable to the term itself, and, therefore, there is no excuse, or justification, for adding any adjuncts as proposed by Glatz and Staff.

For these reasons, the Administrative Law Judge concludes that the term “applying,” as it appears in claim 36 of the ‘867 patent should be construed in accordance with its plain and ordinary meaning and therefore can include either single or multiple layers.

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3. Claim 36—“a relatively high permeability, the permeability of the paper web being from about 60 Coresta to about 110 Coresta”

SWM proposes that this term means that the permeability of the paper web is from about 60 ml/min/cm² to about 110 ml/min/cm². (CBr. at 99.) SWM says the specification teaches that units of Coresta are in ml/min/cm² (milliliters per square centimeter per minute). (*Id.* (citing JX-2 at 6:36-39).) SWM says that a person of ordinary skill would understand that the phrase “about 60 Coresta” includes an average permeability value within 10 percent of 60 Coresta. (*Id.*) Glatz did not include a discussion of this term in its post-hearing briefs and therefore is deemed to have waived this issue under Ground Rule 10.1. Staff agrees with SWM’s proposed construction. (SBr. at 68, 71.)

The Administrative Law Judge concludes that the subject term means: “The permeability of the paper web being from about 60 ml/min/cm² to about 110 ml/min/cm².”

4. Claims 36 and 43—“film forming composition”

Although the parties have disputed the meaning of the term “film forming composition,” as it is involved in the two asserted patents in this Investigation, they are in agreement that it means the same thing in the case of each of the patents. (*See* CBr. at 103; RBr. at 112, n.33; SBr. at 72.) Therefore, for the reasons given above in reference to construing the subject term in connection with the ‘753 patent (Section III.B.2), the Administrative Law Judge adopts the construction proposed by Staff for this term: “Any composition that, when dried, forms a film on the surface to which it is applied.”

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5. Claim 36—“burn mode index”

Both SWM and Glatz propose the following construction for this term: “The ratio of the intrinsic resistivity of the electrolyte solution (in ohm-cm) to the product of the electrical resistance of the paper (in ohms) and the area of paper in contact with both electrodes (cm²).” (CBr. at 103; SBr. at 73; JX-67 at ¶ 26.) Although Staff proposes somewhat different language, Staff concedes that the difference between the two constructions is minor and does not affect the outcome of any disputed issue in this Investigation. (SBr. at 73.) Therefore, the Administrative Law Judge adopts the construction as proposed by the private parties.

IV. INFRINGEMENT DETERMINATION

A. Applicable Law

1. Direct Infringement.

“Determination of infringement is a two-step process which consists of determining the scope of the asserted claim (claim construction) and then comparing the accused product . . . to the claim as construed.” *Certain Sucralose, Sweeteners Containing Sucralose, and Related Intermediate Compounds Thereof*, Inv. No. 337-TA-604, Comm’n Op. at 36 (U.S.I.T.C., April 28, 2009) (citing *Litton Sys., Inc. v. Honeywell, Inc.*, 140 F.3d 1449, 1454 (Fed. Cir. 1998) (“*Litton*”). An accused device literally infringes a patent claim if it contains each limitation recited in the claim exactly. *Litton*, 140 F.3d at 1454. Each patent claim element or limitation is considered material and essential. *London v. Carson Pirie Scott & Co.*, 946 F.2d 1534, 1538 (Fed. Cir. 1991). In a Section 337 investigation, the complainant bears the burden of proving infringement of the asserted patent claims by a preponderance of the evidence. *Enercon GmbH v. Int’l Trade Comm’n*, 151 F.3d 1376, 1384 (Fed. Cir. 1998).

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If the accused product does not literally infringe the patent claim, infringement might be found under the doctrine of equivalents. “The doctrine of equivalents prohibits one from avoiding infringement liability by making only insubstantial changes and substitutions which, though adding nothing, would be enough to take the copied matter outside the claim, and hence outside the reach of law.” *Siemens Medical Solutions USA, Inc. v. Saint-Gobain Ceramics & Plastics, Inc.*, 637 F.3d 1269,1279 (Fed. Cir. 2011) (quoting *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 607 (1950)) (internal quotations omitted). The Supreme Court has described the essential inquiry of the doctrine of equivalents analysis in terms of whether the accused product or process contains elements “identical or equivalent to each claimed element of the patented invention.” *Warner-Jenkinson Co., Inc. v. Hilton Davis Chemical Co.*, 520 U.S. 17, 40 (1997). Under the doctrine of equivalents, infringement may be found if, under a preponderance of the evidence, the element at issue of the accused product or process performs substantially the same function in substantially the same way to obtain substantially the same result as an element of the asserted patent claim. *Siemens*, 2011 WL 651790 at *5-8. “The proper time for evaluating equivalency is at the time of infringement, not at the time the patent was issued.” *Id.* at *9 (citations and quotations omitted).

2. Indirect Infringement.

Induced Infringement.

“Whoever actively induces infringement of a patent shall be liable as an infringer.” 35 U.S.C. § 271(b). A patentee asserting a claim of inducement must show (i) that there has been direct infringement and (ii) that the alleged infringer “knowingly induced infringement and possessed specific intent to encourage another’s infringement.” *Minnesota Mining & Mfg. Co. v. Chemque, Inc.*, 303 F.3d 1294, 1304-05 (Fed. Cir. 2002). The specific intent requirement for

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inducement necessitates a showing that the alleged infringer was aware of the patent, induced direct infringement, and that he knew or should have known¹¹ that his actions would induce actual direct infringement. *DSU Medical Corp. v. JMS Co., Ltd.*, 471 F.3d 1293, 1305 (Fed. Cir. 2006) (en banc in relevant part). The intent to induce infringement may be proven with circumstantial or direct evidence and may be inferred from all the circumstances. *Id.* at 1306; *Broadcom Corp. v. Qualcomm Inc.*, 543 F.3d 683, 699 (Fed. Cir. 2008).

Contributory Infringement.

35 U.S.C. § 271(c) sets forth the rules for contributory infringement:

Whoever offers to sell or sells within the United States or imports into the United States a component of a patented machine, manufacture, combination, or composition, or a material or apparatus for use in practicing a patented process, constituting a material part of the invention, knowing the same to be especially made or especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use, shall be liable as a contributory infringer.

35 U.S.C. § 271(c). Specifically with respect to Section 337 investigations, the Federal Circuit has held that “to prevail on contributory infringement in a Section 337 case, the complainant must show inter alia: (1) there is an act of direct infringement in violation of Section 337; (2) the accused device has no substantial non-infringing uses; and (3) the accused infringer imported, sold for importation, or sold after importation within the United States, the accused components that contributed to another's direct infringement.” *Spansion, Inc. v. International Trade Comm’n*, 629 F.3d 1331, 1353 (Fed. Cir. 2010).

¹¹ The Supreme Court has found, for example, that “a willful blindness to the patent and infringing activity would suffice.” See *Certain Inkjet Ink Cartridges with Printheads and Components Thereof*, Inv. No. 337-TA-723, Comm’n Op. at 13 (U.S.I.T.C., Dec. 1, 2011) (citing *Global-Tech Appliances, Inc. v. SEB S.A.*, 131 S.Ct. 2060, 2068 (2011) and finding induced infringement based on activity that had occurred after the complaint in the investigation had been filed) (“*Inkjet Ink Cartridges*”).

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B. Analysis of the Accused Products with Respect to the '753 patent.

1. Direct Infringement.

As a preliminary matter with respect to all asserted claims of both the '753 patent and the '867 patent, Glatz argues that SWM has presented evidence of testing for only two of the Accused Products, identified as Cigla 75 MV 1,0 MC LI and Cigla 75 MVM 0,6 CA LI. (RBr. at 51, n. 14, citing Tr. at 476 (Rogers); RRB. at 25-26.) Glatz, however, concedes that two of the Accused Products that were not tested by Dr. Rogers are identical to one or the other of the Accused Products that were tested, those being 75 MVM 1,0 MC LI and 75 MVM 0,6 CA LI. (RRBr. at 26.¹²) Glatz contends that a finding of infringement cannot be reached with respect to the six Accused Products that were not tested or shown to be identical to the two Accused Products that were tested because there must be sufficient evidence to demonstrate that each Accused Product is itself infringing. (*Id.* (citing *Orenshteyn v. Citrix Systems, Inc.*, 341 Fed. Appx. 621, 623-624 (Fed. Cir. 2009)).) Therefore, argues Glatz, the following six products (collectively, the "Untested Products") have not been shown to infringe any asserted claim of either asserted patent.

Cigla 45 MVM 0,5 MC LI
Cigla 60 MV 0,75 MC LI
Cigla 42 MV 0,9 MC LI

Cigla 100 MV 1,0 KC LI
Cigla 120 MV 1,0 KC LI
Cigla 144 MVM 1,2 KC LI

(*Id.*)

SWM responds that even though Dr. Rogers tested the only two bobbin samples that Glatz provided SWM, there is documentary evidence on other products and testimony of Glatz's

¹² Although the Glatz's brief omits the "75" prefix for the two products that are identical to the two that were tested by Dr. Rogers, it is apparent that the two identified products are the ones referred to by Glatz by comparing the identification numbers with the list of the ten Accused Products with the list that Glatz says were neither tested nor shown to be identical to products that were tested.

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own employees { }. (CRBr. at 30.) Thus, SWM argues, { } products are representative of all of the other Accused Products and conclusions for the two tested products should apply to all Accused Products. (*Id.*) SWM says that the 75 MV 1,0 MC LI and 75 MVM 1,0 MC LI are identical to one another, but labeled differently, (*id.* at 31 (citing JX -41C at 66 (Fritzching))) and, similarly 75 MVM 0,6A LI and 75 MVM 0,6 CA LI have the same internal article number and Glatz uses the names interchangeably. (*Id.* (citing CX-248C at 6, 9; CX-322C at 1, 3; CX-561 at 8).) SWM says that {

} (*Id.* (citing CX-382C at Q/A 118 (Fritzching)).¹³) For these reasons, SWM contends that the two tested products are representative of all the Accused Products and therefore the evidence refutes Glatz's assertion.

Glatz denies direct infringement on three grounds: (1) Its products do not include gradually changing permeability profiles (CBr. at 51-54); (2) they do not include film forming compositions under SWM's proposed construction of that term (*id.* at 55-58); and (3) they do not have substantially shaped permeability profiles (*id.* at 58-59).

The Administrative Law Judge concludes that the evidence is not sufficient to demonstrate that the six Untested Products infringe either of the two asserted patents in this case. SWM's assertion that the two tested products are representative of all of the Accused Products is not supported by the evidence. Even assuming that {

}, that fact alone is not sufficient to show infringement. The fact that these products are separately identified as Accused Products coupled with the lack of evidence showing that they are identical to either of the two tested products leaves a gap in the evidence that does not

¹³ This exhibit is not included in the trial record.

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permit a reasonable inference that they have the same Coresta values, the same Burn Mode Index, or the same permeability profile, or include all of the other limitations set forth in each of the asserted patents. Therefore, the Administrative concludes that the six Untested Products identified above have not been shown to infringe either the '753 or the '867 patent.

With respect to the other Accused Products, and to the extent that SWM believes that the evidence shows that the two tested Accused Products are representative of all of the remaining Accused Products, the following discussion applies.¹⁴

a. Claim 12

SWM alleges that the Accused Products directly infringe claim 12 of the '753 patent.

(CBr. at 60-62.) Claim 12 recites as follows:

12. A smoking article wrapper having discrete areas of reduced permeability for improving ignition proclivity control of a smoking article, said discrete areas comprising areas treated with a film forming composition, said discrete areas being in the shape of horizontal bands spaced apart in a longitudinal direction, said reduced permeability areas defining at least one gradually changing permeability profile in the longitudinal direction such that permeability in said changing permeability area gradually changes from zero permeability reduction to a maximum permeability reduction.

(JX-1 at 12:40-50.) According to SWM, Glatz's LIP papers are used to make cigarettes, which are smoking articles, such as Signal and Skydancer brand cigarettes and cigarettes made by Belcorp. (CBr. at 60 (citing Tr. at 517-518 (Rogers); Glatz's Response to Amended Complaint at ¶¶ 28, 49, 103; JX-43C at 33-34 (Makepeace).) SWM says that the evidence shows that all of Glatz's LIP papers have discrete areas of reduced permeability for improving ignition proclivity control of a smoking article and that bands on Glatz's LIP papers have areas treated with { }, which are film formers in a film forming composition. (*Id.*)

¹⁴ The same holds true for the '867 patent and need not be repeated there.

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SWM says that Glatz/LIPtec applies bands to its cigarette paper to improve ignition proclivity characteristics of cigarettes. (*Id.* at 61 (citing Tr. at 518-521 (Rogers)).) SWM asserts that Glatz LIP papers have horizontal bands spaced along the longitudinal axis of the paper and says that the same evidence that shows infringement of like elements of claim 1, discussed in Section IV.B.2.a., also shows infringement of claim 12. (*Id.*) SWM says the evidence with respect to claim 1 likewise shows that the reduced permeability areas in Glatz's LIP papers have at least one gradually changing permeability profile in the longitudinal direction such that permeability in the changing permeability area gradually changes from zero permeability reduction to a maximum permeability reduction as specified in claim 12. (*Id.* (citing Tr. at 522-524 (Rogers); CX-424 at 220-223, 243-246).)

The Administrative Law Judge concludes that the evidence is not sufficient to show that any of the Accused '753 Products infringe claim 12 and does so for all of the reasons discussed below in Section IV.B.2 in finding that those products do not infringe claim 1. Claim 1 of the '753 patent relates to a smoking article that includes a wrapper, while claim 12 relates to the wrapper for a smoking article. Insofar as both claims involve wrappers for smoking articles, the issues for both claims are similar. For that reason the detailed discussion provided below with respect to claim 1 is applicable with respect to the issue of whether the Accused '753 Products infringe claim 12 and therefore that discussion is adopted here as well.

b. Claims 13-14

Claims 13 and 14 recite as follows:

13. The smoking article as in claim 12, wherein said changing permeability profile comprises a gradually decreasing permeability profile in said longitudinal direction such that permeability reduction in said reduced permeability areas increases from zero permeability reduction to a maximum permeability reduction.

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14. The smoking article wrapper as in claim 13, further comprising an area of sustained maximum permeability reduction following said gradually decreasing permeability profile.

(JX-1 at 12:51-56.)

SWM says that the evidence shows that Glatz's LIP papers have changing permeability profiles gradually decreasing in the longitudinal direction such that permeability reduction in the reduced permeability areas increases from zero permeability reduction to a maximum permeability reduction (claim 13), further comprising an area of sustained maximum permeability reduction following the gradually decreasing permeability profile (claim 14). (CBr. at 62 (citing Tr. at 524-526 (Rogers); CX-424 at 220-223, 243-246).) SWM argues that the evidence shows that Glatz's LIP papers infringe claims 1 and 2 (see discussion in Section IV.B.2. below).

Glatz generally disputes that the evidence establishes that its Accused Products meet or satisfy the limitation for gradually changing permeability profile in claims 13-17, and 18 and gives as its reasons the same arguments given by Glatz in connection with claims 1, 2-6, and 24 discussed in detail in Section IV.B.2. below. (RBr. at 61.)

The Administrative Law Judge concludes that the Accused Products do not infringe either claim 13 or claim 14 of the '753 patent and reaches this conclusion for the same reasons discussed in connection with the infringement analyses of claims 1 and 2, included in Section IV.B.2. below. Whereas claims 1 and 2 are directed to an entire smoking article, including the wrapper, claims 13 and 14, which depend from claim 12, are directed to the wrapper component of the smoking article. The issues and evidence with respect to these several claims are the same for purposes of determining whether the Accused Products are infringing.

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c. Claims 15-17

These three claims recite as follows:

15. The smoking article wrapper as in claim 13, wherein said discrete areas of reduced permeability further comprise a gradually increasing permeability profile following said gradually decreasing permeability profile in said longitudinal direction of said wrapper.

16. The smoking article wrapper as in claim 15, further comprising an area of sustained maximum permeability reduction between said gradually increasing and gradually permeability profiles.

17. The smoking article wrapper as in claim 16, wherein said discrete areas of reduced permeability comprise a substantially ramp-shaped profile with increasing and decreasing ramp sections.

(JX-1 at 12:61-13:6.)

SWM says that Glatz's LIP papers have discrete areas of reduced permeability with a gradually increasing permeability profile following a gradually decreasing permeability profile in the longitudinal direction of the wrapper (claim 15), an area of sustained maximum permeability reduction between the gradually increasing and gradually decreasing permeability profiles (claim 16), and discrete areas of reduced permeability having a substantially ramp-shaped profile with increasing and decreasing ramp sections (claim 17). (CBr. at 62-63.)

Once again, Glatz denies direct infringement on three grounds: (1) Its products do not include gradually changing permeability profiles (CBr. at 51-54); (2) they do not include film forming compositions under SWM's proposed construction of that term (*id.* at 55-58); and (3) they do not have substantially shaped permeability profiles (*id.* at 58-59).

The Administrative Law Judge concludes that the Accused '753 Products do not infringe any of claims 15, 16, or 17 of the '753 patent and reaches this conclusion for the same reasons discussed in in connection with the infringement analyses of claims 1, 2, and 3 included in Sections IV.B.2. below.

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d. Claim 18

Claim 18 recites as follows: “The smoking article wrapper as in claim 12, wherein said discrete areas of reduced permeability have a substantially ramp-shaped profile.” (JX-1 at 13:7-9.)

SWM alleges that Glatz’s LIP papers have discrete areas of reduced permeability having a substantially ramp-shaped profile. (CBr. at 64 (citing Tr. at 530-531 (Rogers); CX-424 at 220-223).) SWM says that evidence showing that Glatz’s papers infringe claim 1 (*see* Section IV.B.2. below) likewise demonstrates that the Accused Products infringe claim 18. (*Id.*) Glatz generally denies that any of its Accused Products satisfies any of the claims of the ‘753 patent for several reasons, including the fact that they do not include gradually changing permeability profiles and the fact that they do not have substantially ramp-shaped profiles. (RBr. at 62-63.)

The Administrative Law Judge concludes that the evidence does not demonstrate that any of the Accused ‘753 Products infringes claim 18 and does so for the reasons discussed in Section IV.B.2. below. The evidence does not show that the Accused ‘753 Products have LIP bands with gradually changing permeability profiles or that they have discrete areas of reduced permeability with ramp-shaped profiles.

e. Claim 25

Claim 25 reads as follows: “The smoking article wrapper as in claim 12, wherein said bands extend the entire width of said wrapper.” (JX-1 at 14:13-14.)

SWM alleges that the evidence shows that Glatz’s LIP papers have bands that extend the entire length of the wrapper (CBr. at 64 (citing Tr. at 531-532 (Rogers))) and this fact in conjunction with evidence showing that Glatz’s LIP papers infringe claim 24 (*see* Section IV.B. 2. below) also shows that the same papers infringe claim 25. (*Id.*)

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Here again, Glatz denies direct infringement on three grounds: (1) Its products do not include gradually changing permeability profiles (CBr. at 51-54); (2) they do not include film forming compositions under SWM's proposed construction of that term (*id.* at 55-58); and (3) they do not have substantially shaped permeability profiles (*id.* at 58-59).

The Administrative Law Judge concludes that the evidence does show that the LIP bands included in the Accused '753 Products extend the entire width of the paper and thus meet that limitation of claim 25; however, the Accused '753 Products do not infringe claim 25 because they do not infringe claim 12, for the reasons discussed above in connection with that claim. The evidence is not sufficient to demonstrate that the LIP bands in Glatz's products meet the gradually changing permeability profile required in claim 12 for the same reasons discussed below in Section IV.B.2. regarding claim 1.

2. Indirect Infringement.

a. Claim 1

Claim 1 of the '753 patent reads as follows:

1. A smoking article comprising a tobacco column, and a wrapper surrounding said tobacco column, said smoking article having a first end, a second end, and a longitudinal axis extending from said first end to said second end, said wrapper comprising discrete areas of reduced permeability for improving ignition proclivity characteristics of said smoking article, said discrete areas of reduced permeability comprising areas treated with a film forming composition, said discrete areas being in the shape of bands spaced along said longitudinal axis, said reduced permeability areas defining a gradually decreasing permeability profiled in the longitudinal direction such that permeability reduction in said reduced permeability areas gradually increases from a minimum zero permeability reduction to a maximum permeability reduction.

(JX-1 at 11:60-12:7.)

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SWM argues that the evidence shows that Glatz's { } LIP papers indirectly infringe claims 1-6 and 24 of the '753 patent. SWM says that these two grades of paper are representative of the other Glatz LIP papers that have been identified as products accused of infringing the '753 patent. (CBr. at 37 (citing JX-43C at 31-33 (Makepeace); Glatz's Response to Amended Complaint at ¶ 49).) SWM says it is undisputed that Glatz's LIP papers are used in the manufacture of smoking articles, including cigarettes, such as Signal and Skydancer brands and smoking articles made by Belcorp. (*Id.* at 38 (citing Glatz's Response to Amended Complaint at ¶¶ 28, 49, 103; JX-43C at 33-34 (Makepeace)).) SWM says it is undisputed that cigarettes made by United States manufacturers using Glatz LIP papers include a tobacco column and a wrapper surrounding it, and that these cigarettes have a first end, a second end, and a longitudinal axis extending from the first end to the second. (*Id.*)

SWM says it is undisputed that Glatz's LIP papers have discrete areas of reduced permeability in the shape of bands for improving ignition proclivity. (*Id.* at 39 (citing Tr. at 1448 (Fleming)).) SWM contends that the evidence shows that Glatz treats the discrete areas of reduced permeability { }, which SWM says is film-forming. (*Id.* (citing Tr. at 485-488, 496-497 (Rogers)).) SWM maintains that Glatz offered no expert testimony to rebut Dr. Rogers's testimony on this point. (*Id.*) SWM says that results of tests performed by Dr. Rogers and Glatz's own documents show that Glatz LIP papers have discrete areas of reduced permeability for reducing ignition proclivity characteristics of cigarettes. (*Id.* (citing Tr. at 481-485 (Rogers); JX-42C at 13-15 (Engelking)).) SWM argues that this evidence demonstrates that Glatz LIP papers meet the "discrete areas" term under its ordinary meaning and also under Glatz's proposed construction. (*Id.*) SWM says that Glatz

¹⁵ Grams per square meter.

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documents show that these discrete areas of reduced permeability reduce ignition proclivity because cigarettes made with Glatz's LIP papers are able to pass the ASTM test. (*Id.* (citing Tr. at 484-485 (Rogers)).)

SWM says it is undisputed that Glatz's LIP papers have discrete areas of reduced permeability and it is only the boundaries of these discrete areas that are in dispute. (*Id.* at 40.) According to SWM, the full width of the bands is most accurately determined by analyzing the permeability profile measurements, and because the edges of Glatz's bands are irregular and some of the composition soaks into the paper, the permeability measurements can more accurately reveal the boundaries of the treated areas than visual inspection. (*Id.* (citing Tr. at 584-588, 715, 720, 729 (Rogers)).) SWM says that Dr. Rogers, a qualified expert in chemistry, tested Glatz's { } and found that the bands in each contain starch, which is a film-forming composition because when mixed with water its polymers are solvated to a certain degree, and when the water dries the polymers begin interacting with one another, bonding and forming a film. (*Id.* (citing Tr. at 485-487, 496-497 (Rogers)).) SWM argues that Glatz technical documents, such as a Material Safety Data Sheet, show that { } . (*Id.* (citing CX-305C at 9).) SWM says that one of Glatz's own witness, Thomas Fritzsching, confirmed in June 2011 that this Material Safety Data Sheet corresponds to the { } . (*Id.* at 40-41 (citing JX-41C at 75-76 (Fritzsching)).) SWM says that in August 2011, after fact discovery had closed, Glatz complained { } in the 2004 Material Safety Data Sheet and { } in a revised edition of that data sheet and provided Glatz with a letter stating that the product was not { } (*Id.* at 41 (citing RX-346 at 6).) SWM says that {

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} . (*Id.* (citing Tr. at 773 (Fritzching)).)

SWM contends that a technical article produced by Glatz confirms that {

} . (*Id.*

(citing Tr. at 778 (Fritzching); RX-348 at 5).) SWM says the article {

} (*Id.* (citing RX-348 at 6).) SWM says that {

} . (*Id.*) According to SWM, {

} (*Id.* at 42 (citing RX-348 at 5).) Therefore, concludes SWM, there is no doubt that Glatz's starch is a film forming composition. (*Id.* at 42.)

SWM argues that {

} . (*Id.* (citing

Tr. at 774-775 (Fritzching); JX-41C at 77 (Fritzching); and JX-42C at 30-32 (Engelking)).)

SWM says that Glatz {

} . (*Id.*) Therefore, argues SWM, the claim term

“film forming composition” is satisfied by Glatz's LIP papers under the ordinary meaning of the term because Glatz's composition, { }, forms a film when it is applied to cigarette paper. And for the same reasons, argues SWM, they satisfy the term under

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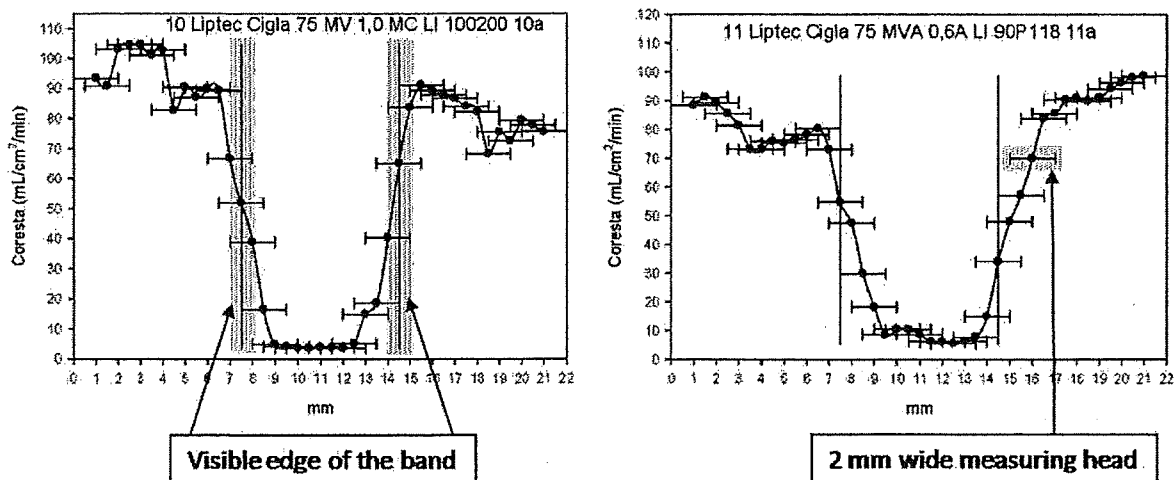
Staff's proposed construction because Glatz applies a medium (starch) to its paper that, when dried forms a film on the surface to which it is applied. (*Id.* at 42-43.) Further, according to SWM, Glatz's LIP papers meet the "film forming composition" limitation under Glatz's proposed construction because Glatz applies a composition to the paper that forms a layer or coating that reduces the permeability of the paper in areas to which the composition has been applied. (*Id.* (citing JX-42C at 13-15, 79-80 (Engelking)).)

SWM says it is undisputed that the discrete areas of reduced permeability of Glatz's LIP papers are in the shape of bands spaced along the longitudinal axis of the paper. (*Id.* at 43 (citing Tr. at 498-502 (Rogers) and JX-42C at 81-82 (Engelking)).) And SWM says that the reduced permeability areas of Glatz's LIP papers have a gradually decreasing permeability profile in the longitudinal direction such that permeability reduction in the reduced permeability areas gradually increases from a minimum of zero reduction to a maximum amount. (*Id.* (citing Tr. at 502-509 (Rogers)).) SWM argues that the term "gradually" is satisfied under all of the proposed constructions and in light of all of the evidence at the hearing, including that pertaining to Glatz's manufacturing process, Dr. Rogers's testing, and Dr. Fleming's testing, Glatz's bands have gradually changing permeability profiles. (*Id.*)

SWM says that Glatz applies its band material {
}. (*Id.* at 44 (citing Tr. at 758-759 (Fritzching), 40-41
(technology tutorial)).) According to SWM, the effect of this application is {
} and SWM argues that the
bands on the Glatz { } papers that were treated with iodine demonstrate a gradually thinning
amount of band material. (*Id.*) SWM says that Dr. Rogers, in order to determine whether a

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gradually changing permeability profile existed, measured the permeability of the Glatz LIP papers with a rectangularly shaped—2 millimeters by 15 millimeters—measuring head, taking overlapping measurements by moving the measuring head in half millimeter increments. (*Id.* (citing Tr. at 504-505 (Rogers)).) SWM notes that Dr. Rogers marked the visible edge of the band after tracing the edge of the paper with a highlighter and then tracked the location of the measuring head in relation to the band edge as the measuring head traversed the length of the paper. (*Id.* at 44-45 (citing Tr. at 505-506 (Rogers)).) According to SWM, the ten plots made by Dr. Rogers from his examination of the 27 gsm and 33 gsm papers demonstrate a gradually changing profile. (*Id.* at 45 (citing CX-424 at 220-223, 243-246).) Referring to the first of the plots for each of these papers (identified as 10 Liptec Cigla 75 MV 1.0 MC LI 100200 10e and 11 Liptec Cigla 75 MVA 0.68 LI 90P118 11e) SWM argues that the vertical lines identify the edges of the visible band and the horizontal lines identify the width of the 2 millimeter by 15 millimeter measuring head and its position with respect to the band, as shown below.



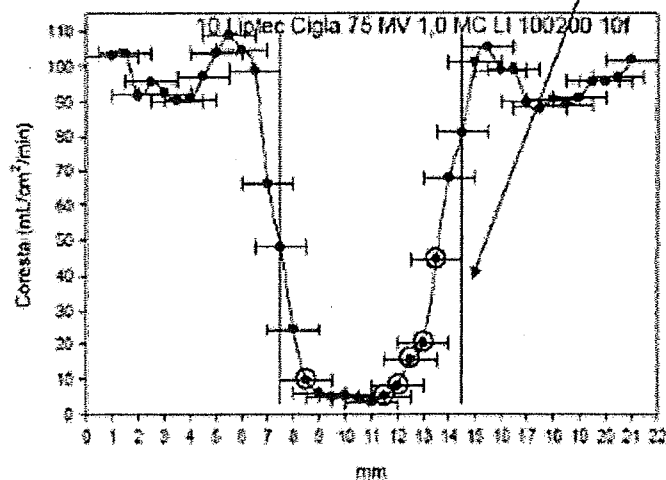
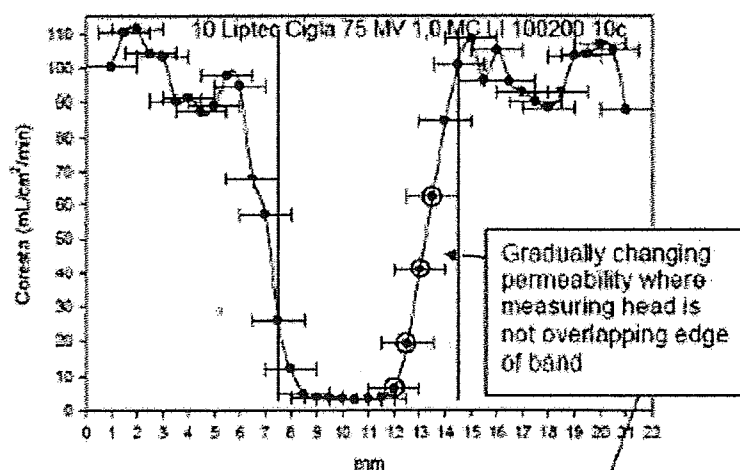
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SWM says that, based on Dr. Rogers's review of data he compiled, he concluded that the Glatz LIP papers satisfy claim 1 in respect to the term "gradually" under SWM's proposed construction because the change in permeability from the base paper to the band does not occur all at once, even after accounting for overlaps in the measurement process. (*Id.* (citing Tr. at 508-509 (Rogers)).) SWM says that Dr. Rogers, for many of the same reasons he gave as to why the Glatz papers satisfied the term "gradually" under SWM's proposed construction, concluded that the papers also satisfied the term under the ordinary meaning of the word as proposed by Staff. (*Id.*)

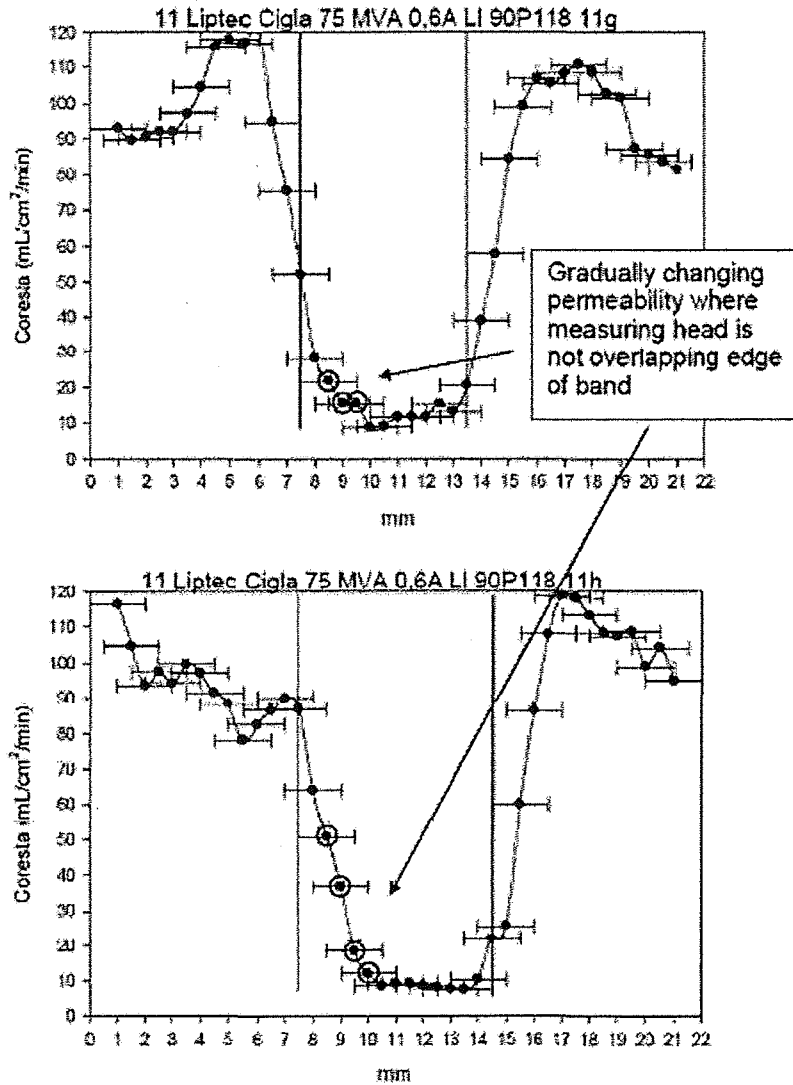
In response to Glatz's criticism of Dr. Rogers's data as being inconclusive because a true sharp-edged band would also show apparent gradually changing permeability owing to the fact that the measuring head is measuring an average permeability over an aperture measuring 2 millimeters by 15 millimeters and, therefore, includes the base paper as well as the banded area, SWM points to testimony of Glatz's expert Dr. Fleming who said that after accounting for positioning error, he was "virtually 100 percent certain you will get 4 points" with his hypothetical sharp-edged band. (*Id.* at 45-46 (citing Tr. at 1489 (Fleming)).) According to SWM, even under Dr. Fleming's theory, if more than four points of intermediate reading exist, there is a gradually changing profile. (*Id.* at 46.) SWM argues that a careful review of Dr. Rogers's permeability plots and an understanding of Glatz's LIP-making process shows that the results cannot be explained away by Glatz's abrupt-profile theory. This is because Glatz's contention in this respect is based on the assumption that the bands of its products have a sharp edge, whereas the evidence of jagged and irregular edges in the iodine-stained sample shows that Glatz is wrong. (*Id.*) Further, according to SWM, there are multiple data points on Dr. Rogers's plots showing gradually changing permeability where the measuring head is fully on the visible

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band and there are multiple plots showing greater than four points of gradually changing permeability, thus confirming that Glatz's LIP papers do not have sharp-edged bands with abruptly changing profiles. (*Id.*) For example, argues SWM, there are multiple data points in Dr. Rogers's plots that show a gradually changing permeability where the measuring head did not overlap the edge of the bands. (*Id.* (citing Tr. at 614-615, 734-735 (Rogers)).) SWM, by way of example, and illustration, refers to the following graphs prepared by Dr. Rogers.

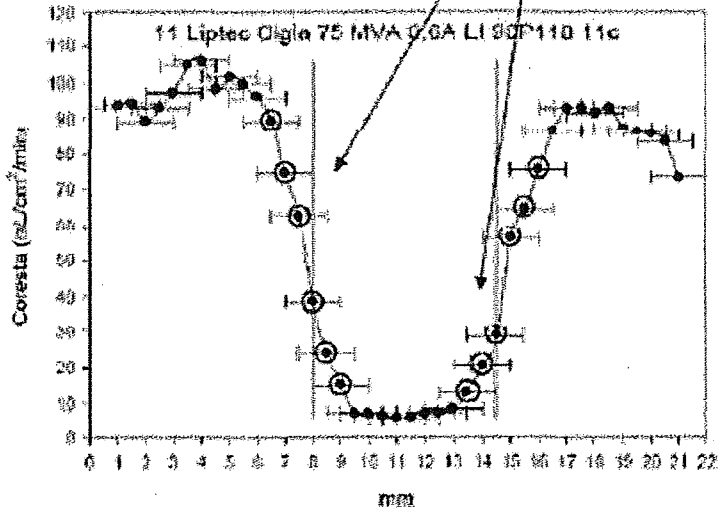
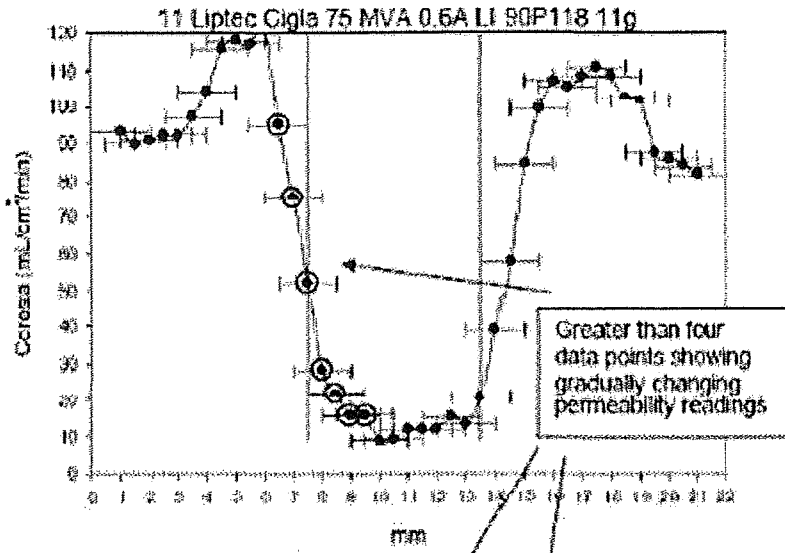


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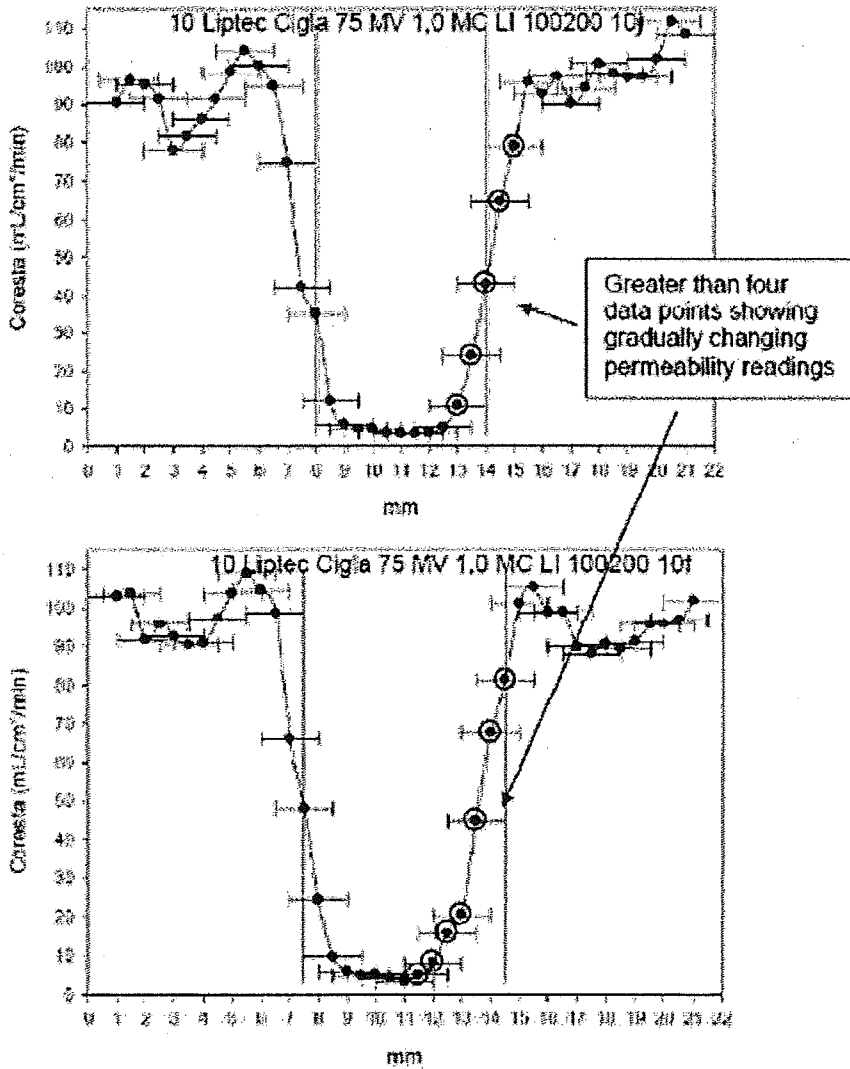


According to SWM, these graphs establish that a gradually changing permeability profile exists, which cannot be explained away by Glatz's theories. (*Id.* at 48-49.) The measuring head was fully within the band, yet the permeability changed in a gradual way. (*Id.*) SWM argues that there are multiple graphs prepared by Dr. Rogers where more than four data points show permeability readings somewhere between the permeability of the base paper and that of the bands, and points to the graphs below.

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SWM says that, with respect to these graphs, Dr. Rogers's data demonstrates that a gradually changing permeability exists in Glatz's LIP papers, which cannot be explained away by Glatz's theories, and there is no way that five to seven readings taken at half millimeter intervals can show a gradually changing permeability profile if the bands have abrupt sharp edges. (*Id.* at 50.)

SWM says that if the bands have sharp edges there should be only three, or at the most four, intermediate readings, as conceded by Glatz's own expert. (*Id.* at 50-51.)

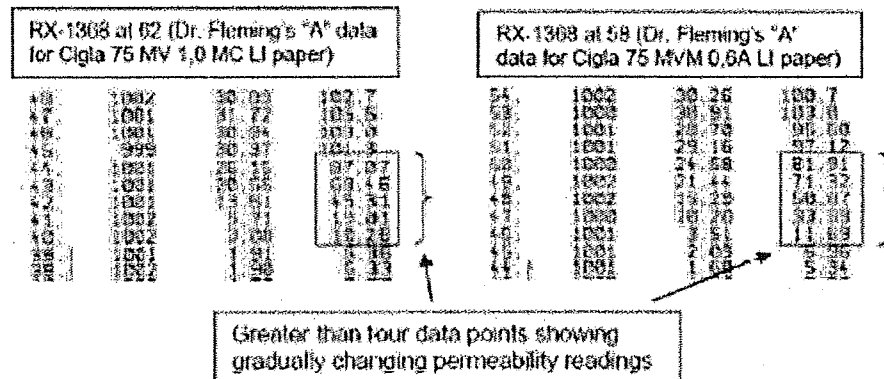
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SWM says that Dr. Rogers's readings cannot be accused of error because the calibration of the Borgwaldt A10 instrument used to record the measurements was checked daily and the plotted readings are accurate. (*Id.* at 50.) SWM argues that the readings cannot be dismissed as positional error and says it is not disputed that a small amount of variation exists when moving the measuring head in half-millimeter increments. (*Id.*) SWM says that one of its technicians, Mr. Codwise, testified that the deviation in moving the measurement head in half-millimeter increments was "[n]ever anymore than 0.2 millimeters, but usually it was right on." (*Id.* (citing CX-705C at Q/A 50).) Because the technicians used a ruler to check each movement of the paper, small errors would not accumulate into large errors. (*Id.*) So SWM argues Dr. Rogers's test data is reliable to within a 0.2 millimeter positioning error. (*Id.*)

SWM argues that Dr. Fleming took similar permeability measurements as Dr. Rogers did, which Dr. Fleming labeled the "A" measurements. SWM says that for these measurements Dr. Fleming began measuring permeability in the base paper and advanced the paper through a Borgwaldt machine in half-millimeter increments, fully traversing the band. (*Id.* at 51.) SWM argues that Dr. Fleming did not present plots at the hearing showing those "A" measurements, for if he had, it would have been evident that his own testing data was inconsistent with Glatz's abrupt-profile theory, and would confirm a gradual permeability profile. (*Id.*) In particular, argues SWM, if the bands on Glatz's LIP paper had abrupt, sharp edges, Dr. Fleming's data should show either three or four readings somewhere between maximum and minimum permeability. (*Id.*) Dr. Fleming's data for both the { } papers show five points of intermediate permeability, thus confirming to SWM that Glatz's LIP papers have a gradually changing permeability profile, not an abrupt one. (*Id.*) SWM includes the following

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table of raw data from Dr. Fleming's "A" measurements, and says that it shows a gradual change over several points.

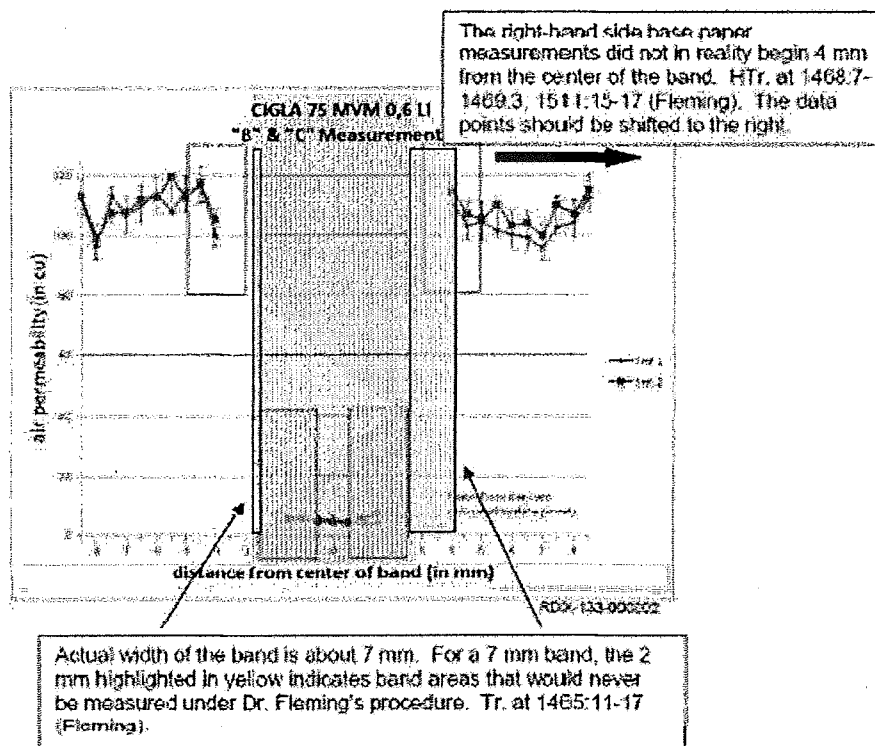


SWM argues that because each of the five designated data points in the chart was taken a half-millimeter apart from the adjoining one, the data cannot simply be explained away by Glatz's abrupt-profile theory, and on the contrary, prove the existence of a gradually changing permeability profile. (*Id.* at 52.)

SWM argues that Dr. Fleming's "B" and "C" plots, which he testified show that Glatz's LIP papers do not have gradually changing profiles, are meaningless because they purposely omitted measuring anywhere near the edges of the bands, which is exactly where the gradual change occurs. (*Id.*) According to SWM, Dr. Fleming took selective measurements in a small area only five millimeters wide somewhere in the middle of seven millimeters' wide bands. (*Id.* (citing Tr. at 1454-55 (Fleming); JX-42C at 36-37 (Engelking)).) SWM argues that, according to Glatz's internal specifications, the bands could have been as wide as seven and a half millimeters (*id.* (citing CX-322C at 1, 3)) and when Dr. Fleming began his "B" measurements he moved the measuring head upwards of a half a millimeter from the left edge of the band (*id.* at 52-53 (citing Tr. at 1453 (Fleming))), and therefore, of the two millimeter distance of the bands where Dr.

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Fleming did not measure permeability, there was approximately a half millimeter on the left side of the bands and about one and a half millimeters on the right side. (*Id.* at 53.) Referring to the demonstrative exhibit depicted below, SWM argues that while Dr. Fleming’s demonstratives implied that the band was only slightly wider than his five millimeter measuring area, it was actually much wider. (*Id.*) By limiting his measuring area, Dr. Fleming purposefully avoided areas of gradually changing permeability, according to SWM, and in fact measured the area of “sustained maximum permeability reduction” contemplated by the patent. (*Id.* at 53-54.) Therefore his measurements are meaningless because they avoid areas of common interest. (*Id.*)



Also, according to SWM, when Dr. Fleming took his “C” measurements of the base paper, he moved the measuring heads upwards of a half millimeter away from the edge of the band and used a different band than he used for taking the “B” measurements. (*Id.* at 54 (citing Tr. at

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1453, 1465-66 (Fleming)).) According to SWM, Dr. Fleming went to “great pains” to ensure that he stayed away from the overlap or transition region and in the process ensured that he would not see the gradually changing permeability of the Glatz LIP papers. Then he “stitched” all of the data together to show a plot that appears on its face to be consistent with Glatz’s abrupt-profile theory, which SWM argues is merely a selective compilation of data that proves nothing. (*Id.* (citing Tr. at 1466-67 (Fleming)).)

SWM argues that even under Glatz’s proposed construction of the term “gradually,” Glatz’s accused LIP papers still satisfy that element of claim 1 because the permeability of these papers changes in small steps or degrees as the paper changes from its base composition to base paper that is overlaid with a film-forming composition. (*Id.* (citing Tr. at 509-510 (Rogers)).) According to SWM, Glatz’s internal documents reveal that it was able to achieve the goal of creating a cigarette that has smoking characteristics similar to those of a conventional non-LIP cigarette, an objective of a gradually changing profile. (*Id.* (citing Tr. at 510-511 (Rogers); CX-307C at 1).) SWM says that Mr. Fritzching confirmed this (Tr. at 792 (Fritzching)) and therefore Glatz’s LIP paper must have minimal discernible changes in smoke delivery and taste as compared to treated paper that has an abrupt increase, decrease, or change in permeability. (*Id.* at 55.) SWM says that Glatz’s LIP papers also meet the term “gradually” under Staff’s construction because the permeability of these papers does not occur all at once and abruptly. (*Id.*)

In light of the foregoing arguments respecting claim 1 of the ‘753 patent, SWM says that Glatz engages in acts that induce cigarette makers using Glatz’s banded LIP papers to directly infringe this claim. (*Id.*) SWM argues that inducement occurs under 35 U.S.C. ¶ 271(b) when someone actively and knowingly aids and abets another’s direct infringement. (*Id.* (citing *C.R.*

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Bard, Inc. v. Advanced Cardiovascular Systems, Inc., 911 F.2d 670, 675 (Fed. Cir. 1990)).)

SWM says that the knowledge requirement means that the alleged infringer knew or should have known that its actions would induce actual infringement and had knowledge of the patent. (*Id.* at 55-56 (citing *DSU*, 471 F.3d at 1304).) SWM contends that Glatz's conduct fulfills this requirement because Julius Glatz GmbH/LIPtec sells LIP paper intended to be used in an infringing manner to KneX which imports the paper into the United States and sells the paper to cigarette makers for making cigarettes such as Signal and Skydancer made by Belcorp. (*Id.* at 56 (citing Glatz's Response to Amended Complaint at ¶¶ 28, 49, 103; JX-43C at 20 (Fritzching)).)

SWM says that the manufacture and sale of these cigarettes in the United States constitute a direct infringement of claim 1. (*Id.*) According to SWM, Glatz/LIPtec documents show that its LIP paper is intended for the purpose of making "a cigarette [go] out on a defined porous support in order to reduce fire risk." (*Id.* (citing CX-270 at 2).) SWM argues that Julius Glatz GmbH { } (*Id.*

(citing JX-40C at 22-23 (Epailly)).) SWM says that Glatz gets feedback from U.S. cigarette makers regarding LIP paper and provides support to those manufacturers in order to help them use its LIP paper to make cigarettes. (*Id.* (citing JX-40C at 41-42 (Epailly); JX-41C at 18-21 (Fritzching)).) Additionally, argues SWM, Glatz provides documentation to customers regarding its LIP paper for use in showing FDA compliance. (*Id.* (citing JX-43C at 27-28 (Makepeace)).) SWM argues that Glatz was aware of the '753 patent as early as 2004 and KneX was aware of the patent at least as early as December 2010 when this Investigation was initiated. (*Id.* (citing Tr. at 754 (Fritzching)).)

Glatz says that SWM has presented no credible evidence that any of the Accused Products satisfies SWM's own definition of "film-forming composition." (RRBr. at 26.)

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According to Glatz, there is no dispute that {

}. (*Id.*) Glatz says that it has established {

} (*Id.* (citing RX-382C at 73-75 (Fritzching Stmt. Q97-Q115); Tr. at 763-764 (Fritzching).) Glatz argues that SWM's expert Dr. Rogers did not testify at the hearing, and accordingly has not demonstrated, that he performed any testing to establish {
}, as expressed by its expert Mr. Honeycutt, that a "film-former" for a "film-forming composition" must be soluble and also coherent at the molecular level. (*Id.*) Glatz argues that determining whether a particular composition is soluble is among the easiest and most obvious scientific tests to perform and {

} (*Id.*) Glatz argues that either Dr. Rogers did not test { } or else he did and found results that were favorable to Glatz and not SWM, in either of which cases the result is that SWM has failed to carry its burden of proof, assuming that SWM's construction of "film-forming composition" is adopted. (*Id.*) Likewise, according to Glatz, the evidence offered by SWM does not demonstrate that {

}, a fact that could easily have been established, if that were the case, by using a scanning electron microscope to examine the deposited coating on Glatz's accused LIP paper at extremely high magnification. (*Id.* at 28-29 (citing Tr. at 662-664 (Rogers), 1569-70 (Peterson), 848-49, 871, 887 (Kremer)).) Glatz argues that SWM and Dr. Rogers's omission to determine by scientific testing whether such characteristics were present {

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} and in the Glatz LIP papers that utilized it is fatal to SWM's obligation to prove by a preponderance of evidence that Glatz's products met this element of claim 1. (*Id.* at 29.)

Further, according to Glatz, SWM's contention { } film-forming composition and its reliance on this fact alone to argue that the Accused '753 Products meet this element of the '753 patent is also deficient because SWM's testing of the Accused Products { }. (*Id.* at 29-30.) Glatz argues that Dr. Rogers had no trouble, when given a sample of paper that included bands { }, determining the presence of that substance. In contrast, when he performed the same test on the two Accused Products, using a FTIR spectrometer¹⁶ for the purpose of measuring the amount of reflected light at various frequencies to determine the presence of different substances present in the material examined, he failed to detect { }. (*Id.* at 30 (citing Tr. at 400-403, 485-487, 499-502, 507, 520-521, 544-546, 552-553 (Rogers); CX-424 at 235-236).) Glatz argues that Dr. Rogers's failure to detect { } is consistent with the testimony of Mr. Fritzching, who explained that { }.

(*Id.* (citing Tr. at 400-403, 485-487, 499-502, 507, 520-521, 544-546, 552-553 (Rogers)).)

There is no evidence, argues Glatz, that any of the Accused Products imported into the United States {

}.

(*Id.* at 30-31.) Absent such proof, argues Glatz, SWM cannot rely on {

} to establish infringement. (*Id.* at 31.) Furthermore, according to Glatz, SWM has not presented any evidence that { } or that it forms films that

¹⁶ A technique known as Fourier Transform Infrared Spectroscopy.

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are coherent at the molecular level as is required under SWM's definition of "film-forming composition." (*Id.*) Both the lack of testing by Dr. Rogers for solubility and the lack of scanning microscopic analyses for the presence of constituent elements doom SWM's case regardless of { } in its products imported or sold for importation into the United States argues Glatz. (*Id.*)

Glatz says that SWM has presented no credible evidence as to how any of the Accused Products meets either party's construction of "gradually changing permeability profile." (*Id.*) Glatz argues that Dr. Rogers set about conducting his analysis regarding whether the Accused Products satisfied this term by locating the air-permeability-measurement orifice entirely on the base paper itself, measuring permeability there, and then moving the paper with respect to the orifice one-half a millimeter toward the banded portion where he again measured air permeability. He repeated that process, each time in half-millimeter increments, with the orifice making measurements from the base paper on one side of a band across the band to the base paper on the opposite side of the band. (*Id.* at 32 (citing Tr. at 504-506 (Rogers)).) In this manner, argues Glatz, Dr. Rogers constructed a series of charts showing a simple, yet consistent, shape, starting with high permeability measurements in the base paper and proceeding from there in a descending manner as the orifice of the device included measurements of permeability values in the banded area, followed by succession of measurements in ascending values as the orifice of the device progressively departed the banded area and returned to the base paper itself. (*Id.*) Glatz argues that Dr. Rogers testified that the only information he needed to reach his conclusion that there was a gradually changing permeability profile was to look at the measurement data he recorded by this procedure, as plotted on charts he constructed, which showed high permeability measurements, followed by a series of descending measurement

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values succeeded by a series of ascending measurement values, leading him to conclude that the data thus recorded equated to a gradually changing profile. (*Id.*) Glatz says that Dr. Rogers was unable to offer any other details than this about how he reached the conclusion that the Glatz products he examined demonstrated gradually changing permeability profiles. He never objectively measured the exact width of the bands on the paper, but inserted vertical lines on his charts showing band widths based on his estimation as to where the bands began and ended, rather than objective measurements. (*Id.* at 32-33 (citing Tr. at 701-702, 720, 729 (Rogers)).) According to Glatz the procedure that was employed by Dr. Rogers when he performed his analysis was itself a consequence of the fact that he initially had believed that the precise boundaries of the LIP bands were not critical measurements. He said that there are invisible portions of these bands, which he did not attempt to identify on his charts. (*Id.* at 33.) Instead, argues Glatz, Dr. Rogers simply concluded that the downward sloping and upward sloping contours of the measurement data he recorded were sufficient to demonstrate gradually changing permeability profiles in each of the samples he made measurements of. (*Id.*) Glatz notes that each time that Dr. Rogers was asked to explain the empirical bases for his opinions about the existence of gradually changing permeability profiles in the accused LIP papers, he responded that by looking at “all of the data” he was able to arrive at that conclusion and either could not or would not provide any other information or explanation. (*Id.* at 33-34 (citing Tr. at 440, 442-443, 446, 592, 609-610, 612-613, 621-622, 630-631, 637, 639-640, 687-688, 690 (Rogers)).) Glatz says that there is a significant flaw in the method Dr. Rogers used for measuring permeability profiles of the Glatz accused papers: It will yield a similar result if the LIP bands do not have gradually changing permeability profiles but, instead, have abruptly changing permeability profiles. (*Id.* at 34.) Glatz argues that Dr. Fleming explained why a paper sample

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having a banded area with an abruptly changing permeability profile, when subjected to the method in which Dr. Rogers performed his permeability profile measurements, will inaccurately appear to demonstrate a gradually changing permeability profile. (*Id.* at 34-35.) Dr. Fleming testified that Dr. Rogers used a small measuring head (one with a small orifice) and used it contrary to the way it was intended to be used—he started his measurements outside the banded area, instead of positioning the orifice in the center of the banded area, and in the process obtained some measurements that included combinations of both base paper and LIP bands, at least three and as many as four such measurements, based on the size of the orifice that was used. (*Id.* at 35 (citing Tr. at 1399-1400, 1412-13 (Fleming)).) Dr. Fleming testified that the orifice of the measuring device that Dr. Rogers used, which was 2 millimeters wide and 15 millimeters long, is significant because the device can only measure the overall, or average, permeability of the area that the orifice encompasses, regardless of the degree to which permeability may actually vary the area encompassed. (*Id.*) As the width of the orifice first approaches, then crosses, a boundary line between the base paper and a banded area that has less permeability than the base paper itself, each movement of the paper with respect to the orifice, or aperture, of the measuring device will involve a greater or lesser area of base paper. Likewise, banded material will result in the measuring device seeming to record a gradually decreasing, or increasing on the opposite side of the band, change of permeability, but this is not a result of an actual change in the permeability of the banded material itself. Instead, it is an artifact of the method adopted by Dr. Rogers to record measurements at certain points within the paper samples, either inside or outside the bands or else overlapping between the two. (*Id.* at 35-36.) Glatz argues that Dr. Fleming explained that it would be expected, using the device used by Dr. Richards to record his measurements, that there would be about six data points for each downward and upward sloping

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segment shown in the charts, and that while it is impossible to account for every variation in result in a particular paper sample studied, typically it is due to the fact that the boundary between a banded area and the base paper is not perfectly aligned with the orifice. In such a case, using a 2 millimeter wide orifice and taking measurements at half-millimeter intervals longitudinally, there will be about six points of measurement in an area extending from the apex of the high permeability of the base paper, continuing to the nadir of the low permeability of the banded material, and six more points of measurements covering the area from there back to the apex of the high permeability of the base paper on the opposite side of the banded area. (*Id.* at 36.) Thus, argues Glatz, according to Dr. Fleming, there will perforce occur either six descending or six ascending data points between maximum and minimum permeability measurements even if the banded area in juxtaposition with the base paper has an abruptly changing profile. (*Id.* at 36-37 (citing Tr. at 1490, 1520-21 (Fleming)).) Glatz says that Dr. Rogers's charts clearly demonstrate that there is almost always six data points on either the downward sloping side or on the upward sloping side of each of the banded papers he examined. (*Id.* at 37.)

In the face of this evidence, argues Glatz, SWM has adopted a new argument in its post-hearing brief: that iodine testing performed by Dr. Rogers on the Accused Products shows purple strips with irregular, ragged edges, and therefore the LIP bands on these papers are irregularly shaped and have gradually changing profiles. (*Id.* (referring to CBr. at 44-46).) {

} Glatz argues that spraying iodine on the bands explains the smearing allegedly observed by Dr. Rogers and notes that Dr. Rogers did not testify at the

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hearing that iodine testing shows the Glatz LIP bands have irregular or ragged edges or have edges with varying thicknesses. (*Id.* at 37-38.)

Glatz also complains that SWM, in its post-hearing brief, has proposed a second new argument: that there is a gradually changing permeability profile observable where the measuring orifice does not overlap the boundary between the paper and the LIP band. This is based on information buried in Dr. Rogers's charts, because in a few of them, there can allegedly be observed changes in permeability that appear to be occurring in areas where the measurement orifice is not overlapping the boundary between the base paper and the LIP band. (*Id.* at 38 (citing CBr. at 46-48).) To this argument, Glatz responds that at the hearing Dr. Rogers testified that he simply used his "judgment" to locate the two boundaries between the base paper and LIP bands on each of his charts. The vertical lines depicted on his charts are not objective, observed measurements of where each of the LIP bands is actually located on each of the paper samples; instead, the vertical lines merely correspond to Dr. Rogers's subjective judgment regarding where the border occurs. Therefore the lines on each of the charts are not reliable for purposes of demonstrating that some change in permeability actually occurs while the orifice of the measurement device was entirely within the banded area. (*Id.* at 39.) Furthermore, according to Glatz, Dr. Rogers used { } for 16 of the 20 paper samples he measured, yet according to the manufacturing specifications, { }. (*Id.*) Therefore, argues Glatz, this discrepancy in band widths raises the likelihood that the vertical lines factored into Dr. Rogers's charts are not as accurate as he believed them to be. (*Id.*) Glatz says that Mr. Codwise, who supervised the process by which the measurements used by Dr. Rogers to form his opinion were obtained, acknowledged that the horizontal positions of each of the air permeability

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measurements could have been off by 0.2 millimeters, plus or minus. (*Id.* (citing Tr. at 388-390 (Codwise)).) Glatz contends that it matters greatly if the vertical lines or data points shown on Dr. Rogers's charts are errant by 0.2, 0.5, or even 1 millimeter because this is the same range of horizontal distance that SWM is currently using to substantiate its contention that the accused LIP papers possess gradually changing permeability profiles. (*Id.*)

According to Glatz, in the case of a succession of any three data points shown on Dr. Rogers's charts there is, at best, a distance of 0.5 millimeters between any proximate two of them, which means that all three of the data points were measured by the orifice of the measuring device traveling a maximum distance of one millimeter. (*Id.* at 39-40.) Glatz argues that all of SWM's measurements were performed by combination of manual and visual positioning of the paper, and this procedure allowed for a positioning error in the range of ± 0.2 millimeters. (*Id.* at 40.) Glatz says that, allowing for random variation, this procedure gives rise to the possibility that any three successive data points are the result of the orifice of the measuring device traversing, relative to the paper being studied, a distance from as little as 0.6 millimeters to as much as 1.4 millimeters. Glatz says that, in order to minimize errors caused by random variations when performing measurements this way, most scientists would have replicated the process enough times so as to allow for a computation of the coefficient of variation or a range of error regarding the data obtained. However, Dr. Rogers did not do this, and therefore, the reliability of his measurements has been compromised by the presence of an undetermined error factor inherent in his method and all of SWM's arguments based on his measurements are undermined as a result. (*Id.*) Glatz argues that, in the face of the inherent error factor in the placement of the data on the horizontal axis of Dr. Rogers's charts and the inherent uncertainty in the location of the vertical boundary lines of the bands, owing to Dr. Rogers's subjective

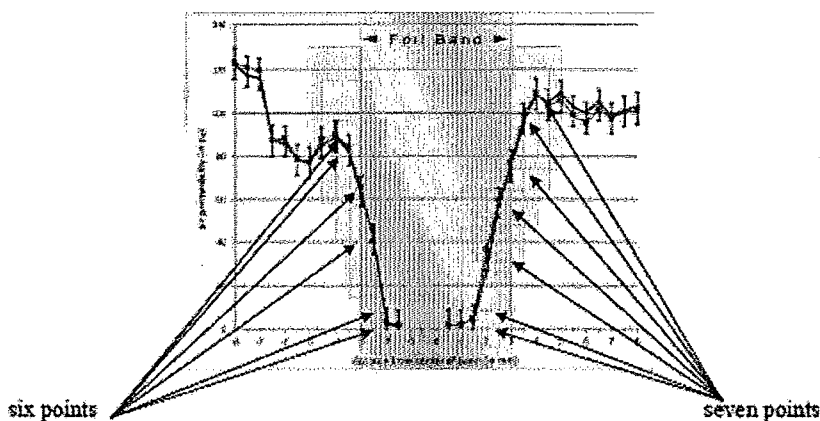
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judgment in placing them on his charts, SWM cannot conclude with a reasonable degree of confidence that some of the data points shown on his charts are the results of measurements taken when the orifice of the measuring device did not include both base paper and banded material. (*Id.*) Glatz suggests that Dr. Rogers did not design his test procedure in order to ascertain what SWM now claims is disclosed in his charts, for if he had, he would have designed the procedure in such a way as to produce objective and verifiably precise boundaries between the base paper and the banded material, as is intimated by the vertical lines shown in his charts. (*Id.*) Instead, argues Glatz, Dr. Rogers acknowledged that the vertical lines depicted in his charts were added to the charts based on his subjective, non-verifiable judgment about where the lines should appear. (*Id.* at 40-41 (citing Tr. at 729 (Rogers)).)

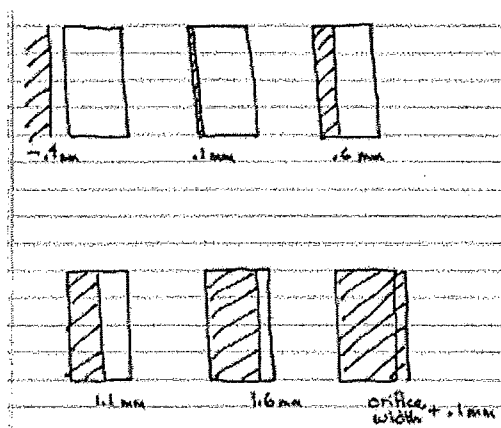
Glatz also says that SWM has presented a third new argument in its post-hearing brief, which is that there is a gradually changing profile observable in the Accused Products because some of the charts created by Dr. Rogers show a change in permeability over more than four data points in a row. (*Id.* at 41 (citing CBr. at 49-52).) Glatz notes that SWM argues that it is physically impossible for there to be an abrupt change in permeability profile reflected in five or more data points in a row and that a change in permeability extending over that many successive data points can only indicate a change that is gradual. Glatz says SWM is wrong, as evidenced by test measurements conducted by Dr. Fleming. (*Id.*) Glatz says that Dr. Fleming measured a paper sample using a piece of metallic foil—which indisputably represents an abrupt change in permeability relative to the base paper—to represent the material in the banded area. (*Id.*) In measuring the abrupt change in permeability between the base paper and metallic foil, Dr. Fleming noted that there were six or seven successive descending and ascending data points

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extending to or from either side of the band of metallic foil, as is shown in RDX-162 and depicted below.



Glatz argues that there is no gradually changing permeability profile present in this paper sample, which is why the sample was created. It shows that, even with a paper having an abrupt division in air permeability, Dr. Rogers's measurement method nevertheless produces what falsely appears to be only a gradual change in air permeability. (*Id.* at 41-42 (citing Tr. at 1405-08 (Fleming)).) Glatz says that Dr. Fleming explained the seeming paradox underlying the data reflected RDX-162, using the drawing shown below for illustration.



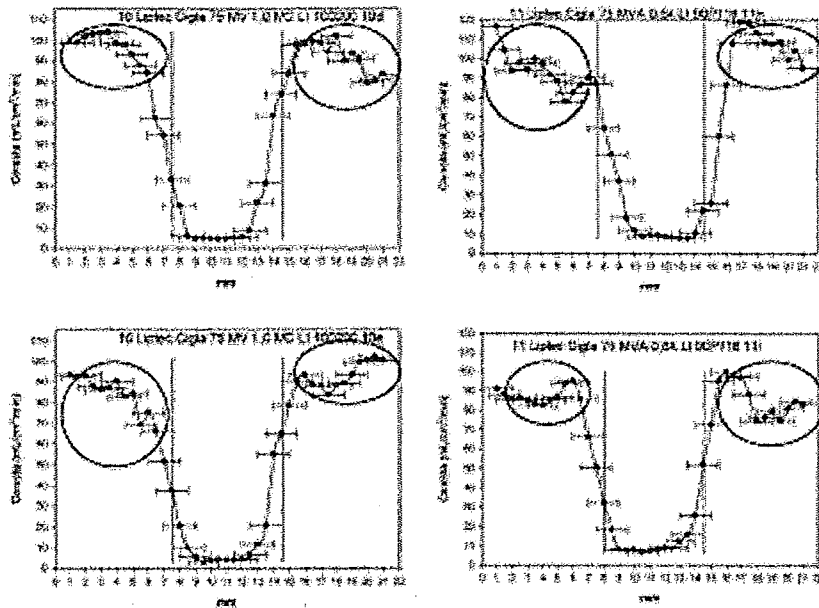
(*Id.* at 42 (citing Tr. at 1521-23 (Fleming); RDX-225).) The six rectangles shown in the illustration represent the orifice of the measuring device as it is positioned over the sample paper,

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although not drawn to scale. (*Id.*) The six rectangles are either blank (indicating that the orifice is positioned over base paper only), partially blank and partially hatched (indicating that the orifice is positioned over a combination of base paper and banded material), or entirely hatched (indicating the orifice is positioned over banded material only). (*Id.*) Because of the geometry and mechanics involved in trying to align the edge of the bands with the edge of the orifice, in virtually all instances the edge of the orifice will not exactly line up with the edge of the banded portion of the paper sample and there will be present between 0.01 millimeters and 0.49 millimeters of deviation between the two. (*Id.* (citing Tr. at 1438-39, 149, 1513-14, 1517-19 (Fleming); RX-1395).) However, these drawings illustrate the point of the discussion regarding the area, and the composition thereof, that is being measured in the sequence of positioning the paper with its banded areas within the orifice of the measuring device.

Glatz also says that natural variation in air permeability and unavoidable inconsistencies in the base paper, as well as instrument error and possible presence of decorative lines embossed on the paper, called “mollet vergé,” can appear, by virtue of measurements obtained by the device used by Dr. Rogers, in the form of seven data points in a row on his charts. (*Id.* at 43 (referring to CX-424 at 221, 245, depicted below, with encirclements designating the particularized data points).)

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Glatz argues that, in order for there to occur seven data points in a row, rather than six, there only needs to be one more data measurement in the base paper that varies by some small amount from the preceding measurement and in a direction suggestive of a trending change. For example, on the “downhill” side of the chart there could be one measurement obtained from the base paper before a banded area appears within the confines of the orifice which, purely through random variation, happens to be larger than the measurement taken immediately after. (*Id.*) Glatz argues that the extra, or seventh measurement, may appear to be part of a “trend” or “slope” in air permeability in a certain area of the material encompassed by a series of measurements obtained, but is instead nothing more than a random variation in the consistency of the paper or an inherent error in the air permeability measuring equipment or part of a mollet verge line. (*Id.* at 43-44.) Glatz says that natural variations or differences in a series of measurements would typically be accounted for, explained and eliminated by taking several measurements and then computing an average value, plus an error range or coefficient of variation. (*Id.* at 44.) Glatz contends that it

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would not make sense to allow SWM to base its proof for the existence of gradually changing permeability profiles, as far as the Accused Products are concerned, on what may only be random variations and natural fluctuations of air permeability reflected in the measurements obtained by Dr. Rogers which he failed to take into account or factor into his conclusions. (*Id.*)

Glatz contends that if the term “gradually” were construed in accordance with its proposed claim construction, the evidence produced by SWM would be insufficient. (*Id.* at 45.) According to Glatz, SWM has not attempted to perform the requisite comparison to show that Glatz’s LIP papers in fact satisfy Glatz’s proposed construction. (*Id.*) Glatz argues that SWM did not attempt to manufacture any LIP papers similar to the Accused Products, but with abruptly changing permeability profiles, and did not conduct any smoke yield or taste comparisons of any cigarettes made from the Accused Products. (*Id.*) Instead, argues Glatz, SWM merely asserts that if Glatz were successful in manufacturing LIP cigarette paper that is indistinguishable from conventional, non-banded cigarette paper, then by definition, the Accused Products must also meet Glatz’s definition of “gradually.” (*Id.* at 46.) Glatz says that such reasoning presupposes the very thing that SWM has to prove in order to establish infringement, which is whether there is some discernible difference in taste and smoke delivery between any of the Accused Products and what the patent recognizes as prior art, namely, banded LIP cigarette papers with abruptly changing permeability profiles. (*Id.*)

Staff takes the position that none of the Accused Products, either directly or indirectly, infringes any of the asserted claims of the ‘753 patent. (SBr. at 47; SRBr. at 9.) Staff says that while the Accused Products satisfy most of the limitations of the asserted claims (SBr. at 47-53), SWM has not shown that these products have the appropriate type of “gradually [changing] permeability profile” in which the changes in permeability are gradual enough for any effects on

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taste and smoke delivery to be imperceptible to a smoker. (SRBr. at 10.) In Staff's view, SWM has established that the Accused Products have some sort of gradually changing permeability profiles, because every profile will reflect the gradual change caused when the tested zone (or burning coal) progresses from an untreated to a treated area, gradually passing into the area of maximum permeability reduction. (*Id.*) Staff says the evidence fails to show that the Accused Products minimize the chance of discernible changes in smoke delivery and taste as perceived by the smoker. (SBr. at 50.) Staff also argues that Glatz's accused LIP products have not been shown to infringe claim 1 of the '753 patent for all of the reasons discussed in Part III.B.2 of its opening brief, which discusses construction of the disputed claim terms but does not do so in relation to the Accused Products (unless one can infer from the tenor of that discussion that Glatz's Accused Products fail to satisfy the limitations as they exist in light of Staff's proposed constructions).

The Administrative Law Judge concludes that the evidence does not establish that any of the Accused '753 Products infringe claim 1 of the '753 patent. Inasmuch as the Administrative Law Judge has adopted the construction of the term "film-forming composition" proposed by Staff, the Administrative Law Judge concludes that the Accused '753 Products do satisfy that element of claim 1. "Film" is defined as "[a]n extremely thin, continuous sheet of a substance, which may or may not be in contact with a substrate." (Tr. at 857 (Kremer); RX-478 at 2.) The specification of the '753 patent states that "[t]he film forming solution may comprise any type of solution which, when dried, forms a film which reduces permeability of the smoking article wrapper to a level necessary for reducing ignition proclivity[.]" (JX-1 at 3:18-22.) Dr. Rogers's examination of these papers, or their identical counterparts and his testimony based thereon are sufficient to demonstrate that they have LIP bands made of a composition that forms a film on

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the paper. (Tr. at 545-47 (Rogers).) Glatz's arguments to the contrary are based on the claim construction proposed by SWM, by way of Mr. Honeycutt, which has been rejected in favor of the construction proposed by Staff.

The Administrative Law Judge concludes, however, that the evidence does not establish that any of the Accused '753 Products satisfy the element of claim 1 that discloses gradual changes in permeability. SWM relies on the testimony of Dr. Rogers and the measurement studies that were performed on the Accused '753 Products he reviewed. Claim 1 requires "discrete areas of reduced permeability comprising areas treated with a film forming composition, said discrete areas being in the form of bands" and "said reduced permeability areas defining a gradually decreasing permeability profiled in the longitudinal direction such that permeability reduction in said reduced permeability areas gradually increases from a minimum zero permeability reduction to a maximum permeability reduction." (JX-1 at 11:66-12:7.) Dr. Rogers's measurement charts and his testimony based thereon are not adequate for the purpose of establishing infringement by a preponderance of evidence. Dr. Rogers did not scientifically determine the boundaries of the LIP bands and admittedly illustrated the bands in his charts visually rather than chemically and precisely. (Tr. at 701-702, 720, 729 (Rogers).) Dr. Rogers based his conclusion about the existence of a gradual change in permeability on inferences he drew from the data that was recorded on the charts by those who performed the measurements. But as Glatz points out, Dr. Rogers did not validate the inferences he derived from the data shown in the charts by any kind of reliability verification procedure so as to account for possibility of anomalies and variables related to physical properties of the base paper, as well as possible inconsistencies in the precision with which each of the measurements was performed and other influencing factors unrelated to the shape or composition of the LIP bands. Given the

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fact that Dr. Fleming was able to demonstrate how data similar to that which Dr. Rogers relied was also obtainable using paper samples with metallic bands that are virtually impermeable, and therefore present abruptly changing permeability profiles, the Administrative Law Judge finds that something additional is necessary in order to establish that Dr. Rogers's conclusions regarding whether the Accused '753 Products include gradually changing permeability profiles, as disclosed in claim 1 of the '753 patent, are accurate and reliable. (*See* Tr. at 1399-1400, 1412-13 (Fleming).)

The Administrative Law Judge further concludes that SWM's contention that Dr. Rogers's iodine samples demonstrate ragged and jagged edges in the Glatz LIP bands, which allegedly lends credence to Dr. Roger's conclusions that the bands have gradually changing permeability profiles, is not supported by the evidence. That assertion is contradicted by Mr. Fritzching who stated that Glatz's manufacturing process { } to apply the LIP bands provides { }. (RX-382C at 72, Q94.) According to Dr. Rogers, the iodine testing he performed involved spraying an iodine solution onto the paper, wetting the paper in the process, and Glatz points out that any observed irregularity in the edges of the strips that are apparent as a result is just as likely due to the spraying process and smearing when the paper samples were placed onto a color scanner. (*See* RRB. at 37-38.) The evidence in this respect is not sufficient to establish that the Glatz papers have irregularly shaped bands, or even if they do, that such irregularity demonstrates or confirms that those bands exhibit gradually changing permeability profiles.

As regards SWM's argument that some of Dr. Rogers's measurement charts demonstrate the existence of gradually changing permeability profiles when the measuring orifice was confined to the LIP banded area, that argument is undermined by Dr. Rogers's acknowledgement

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that the vertical lines representing the boundaries of the bands shown in his charts were not scientifically constructed and instead were subjectively determined. (Tr. at 729, 597-598 (Rogers).) Consequently, the boundaries depicted in the charts cannot be considered reliable for purposes of confirming SWM's argument, and coupled with this shortcoming is the fact that the dimensions of the bands according to Dr. Rogers's measurement charts is seven millimeters, whereas Glatz's manufacturing specifications for the paper samples was {

} . It would be improper to draw the inference argued for by SWM given these variables and the imprecision of the information available. The method employed in obtaining the measurements was itself imprecise, given that it was a visual and manual process, yet no allowance for error was made for this either.

Ultimately, the measurement charts and the manner in which they were developed are scientifically insufficient for reaching the conclusion that the gradually changing permeability limitation of claim 1 has been shown by a preponderance of the evidence to be present in the Accused Products. No matter which of the several explanations offered by SWM for its assertion that the Glatz LIP papers accused in this Investigation infringe, in the end they all depend on the reliability of the measurements relied on by Dr. Rogers and the conclusions he drew from them. What Dr. Rogers did was infer where the physical boundaries of the Glatz LIP bands were by reason of where the data appeared on the charts (Tr. at 720-721 (Rogers)) and this is too imprecise a method to justify a finding, contrary to Mr. Fritzching's statement, that the Glatz bands are sharp edged. The burden of proof lies with the complainant, but SWM's evidence is compromised, and thereby undermined, by the subjectivity and conjecture upon which it is based. For these reasons, the Administrative Law Judge concludes that SWM has not

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demonstrated by a preponderance of the evidence that the Accused '753 Products infringe claim 1 of the '753 patent.

SWM also alleges that Glatz/LIPtec contributorily infringes claim 1 under 35 U.S.C. § 271(c) because it sells LIP paper to KneX, which imports the paper into the United States and sells it to cigarette makers. (CBr. at 57 (citing Glatz's Response to Amended Complaint at ¶¶ 28, 49, 103).) SWM argues that this LIP cigarette paper is a material part of claim 1, because, without the paper, there could be no cigarette. (*Id.*) According to SWM, Glatz does not dispute that its LIP paper has no substantial non-infringing use besides its use for making cigarettes. (*Id.* (citing Glatz's Response to SWM's Statement of Facts in Support of Motion for Summary Determination).) Finally, SWM says Glatz has known about its infringement of the '753 patent and specially made the accused LIP paper for the purpose of being used in cigarettes.

The Administrative Law Judge concludes that Glatz has not committed contributory infringement of claim 1 of the '753 patent. Because there is no actual infringement, for the reasons already mentioned, there can be no contributory infringement either. *Fujitsu Ltd. v. Netgear, Inc.*, 620 F.3d 1321, 1326 (Fed. Cir. 2010). While the evidence establishes that Glatz made and sold for importation into the United States LIP paper for use by domestic cigarette manufactures to make cigarettes, it does not support the conclusion that said accused paper infringes claim 1 of the '753 patent.

b. Claim 2

Claim 2 recites as follows:

2. The smoking article as in claim 1, further comprising an area of sustained maximum permeability reduction following said gradually decreasing permeability profile.

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(JX-1 at 12:8-10.) Claim 2 depends from claim 1, and consequently, for the same reasons given in regards to the issue of infringement under claim 1, the Administrative Law Judge concludes that there is not a preponderance of evidence that the Accused Products indirectly infringe claim 2 of the '753 patent. Insofar as the additional limitation, "[t]he smoking article as in claim 1, further comprising an area of sustained maximum permeability reduction following said gradually decreasing permeability profile[,]" SWM argues that the evidence shows that Glatz's LIP papers satisfy this limitation. (CBr. at 57-58 (citing Tr. at 511-513 (Rogers); CX-424 at 220-223, 243-246).) Glatz responds that the evidence as required is not sufficient to show that its Accused Products meet the gradually increasing or decreasing permeability profiles requisite for claim 1 and also fail to satisfy the "film forming composition" limitation of claim 1. (RBr. at 61-62.) Staff concludes that the evidence is sufficient to demonstrate that the Glatz Accused Products satisfy the additional limitation of claim 2, but because they do not meet the limitations of claim 1, do not infringe claim 2.

The Administrative Law Judge concludes that the evidence is not sufficient to show that the Accused '753 Products meet the additional limitation of claim 2. The supporting evidence consists of Dr. Rogers's testimony that is based on the permeability measurement studies that were performed. He testified that he concluded that the Glatz Accused Products infringe claim 2 because the measurement data he studied showed an area of sustained maximum permeability reduction in the center of each of the marked banded regions coming after the gradually decreasing permeability profile. (Tr. at 511-512 (Rogers).) For the same reasons given for finding SWM's evidence lacking with respect to the gradually changing permeability profile limitation of claim 1, the Administrative Law Judge concludes that the measurement analysis performed under the supervision of Dr. Rogers, and the data produced thereby and relied upon

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by him for his pertinent conclusions has not been demonstrated to be scientifically reliable. Simply to conclude, as Dr. Rogers does, that there is an area of sustained permeability reduction in the center of each of the marked bands shown in the measurement charts he relied on, when the boundaries of the bands have not been objectively demarcated and without explaining what he means by sustained and how the data support his conclusion, given the questionable reliability of the limited data in light of other unaccounted variables that could have affected the data, does not constitute sufficient proof that the Accused '753 Products practice the additional element of claim 2.

c. Claim 3

Claim 3 recites, "The smoking article as in claim 2, wherein said discrete areas of reduced permeability comprise a substantially ramped-shaped profile." (JX-1 at 12:10-12.) Claim 3 indirectly depends from claim 1 and specifies as an additional limitation that the area of reduced permeability comprises a substantially ramp-shaped profile. SWM maintains that, as in the cases of claims 1 and 2, Glatz's Accused Products indirectly infringe claim 3 as well. (CBr. at 57-58 (citing Tr. at 512; CX-424 at 220-223, 243, 246).)

Glatz responds that the claim does not refer to the band's permeability as having a substantially ramp-shaped profile but to whether the band itself has this physical shape. (RRBr. at 46.) According to Glatz, the '753 patent's specification makes it clear what is meant by a band with a substantially ramp-shaped profile by reason of Figures 4 and 5 of the patent, shown below.

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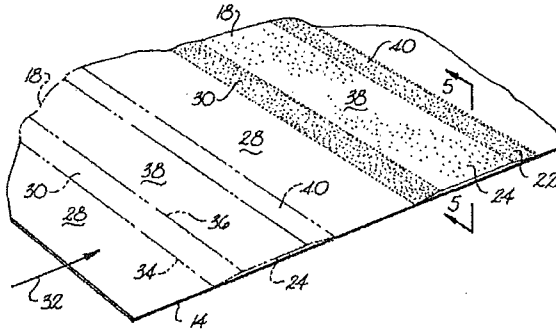


Fig. 4

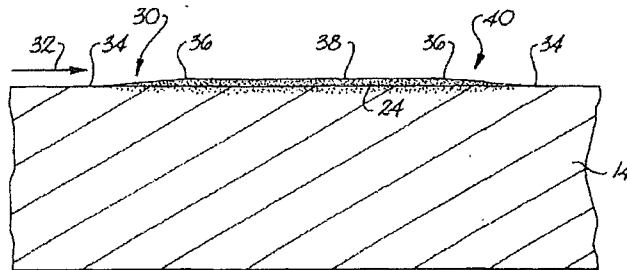


Fig. 5

Glatz argues that the patent describes this substantially ramp-shaped profile at column 11, lines 3-18 and at lines 26-35 of that same column gives a specific example of a paper printed with the claimed "ramp pattern." (*Id.* at 47.) According to Glatz, the ramp pattern that is described in the '753 patent does not refer to the air permeability profile but, rather, to the physical shape of the LIP band and to the area of changing thickness of the band, from its edge of minimum or zero thickness to the portion of maximum thickness. (*Id.* at 47-48.) This, argues Glatz, constitutes the substantially ramp-shaped profile that is disclosed in claim 3, as well as in claims 6, 17, and 18. (*Id.* at 48.)

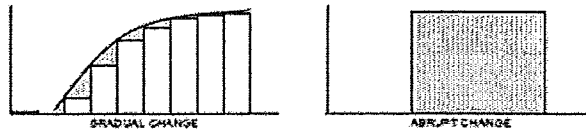
Glatz contends that SWM has never conducted any testing to determine whether there is any variation in the thickness of the Accused Products' LIP bands and says that no data was

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provided by SWM concerning any profilometry testing. (*Id.*) Therefore, according to Glatz, since SWM has the burden of proof of proving infringement of every element by a preponderance of the evidence, its failure to present any evidence to meet this claim element necessitates a finding of no infringement. (*Id.*) Glatz protests that SWM has attempted to recast the claim limitation of a substantially ramp-shaped profile by modifying the phrase so as to connote a gradually changing permeability profile, saying that there is no support for reading the claim that way. (*Id.*) According to Glatz, the '753 patent specifically states that the "ramp pattern" bands described in the patent and in Figures 4, 5, and 6 thereof can be "engraved on a gravure roll" for printing onto the cigarette paper. Therefore, the ramp pattern is not something that simply can be deduced through air permeability measurements but is, instead, an ascertainable physical feature, which SWM has failed to establish with respect to the Accused Products. (*Id.* at 48-49.)

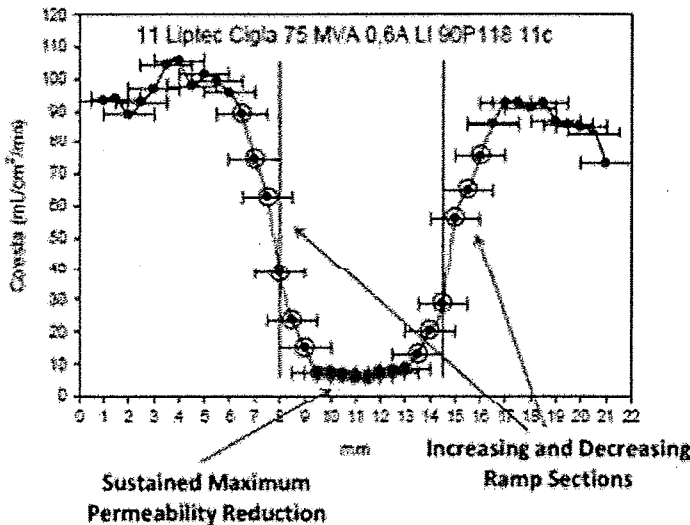
SWM argues that Glatz's position with respect to the physical aspect of the substantially ramp-shaped permeability profile represents a new non-infringement position that Glatz has waived by failing to raise it earlier. (CRBr. at 34.) SWM says this argument is inconsistent with the language of the claims and improperly attempts to limit the claims to the preferred embodiment. (*Id.*) According to SWM, dependent claim 3 adds the limitation that the permeability profile is ramp-shaped, but SWM argues that the embodiment in Figure 5 is not the only physical shape that could do so. SWM contends that the Federal Circuit has warned against limiting claims to a preferred embodiment. (*Id.* at 35 (citing *Phillips*, 415 F.3d at 1323).) SWM argues that the ramp-shaped profile recited in claim 3 refers to a smooth, rather than a step-wise, change in permeability, as exemplified below.

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SDX-05: Gradual Change (Continuous Curve or Series of Steps) vs. Abrupt Change

SWM says that the Glatz LIP papers equate to a ramp-shaped profile because multiple points of intermediate permeability give a smoothly transitioning, or ramp-shaped, permeability profile, with the gradually thinning amounts of film forming composition near the edges of the bands possibly causing this smoothly transitioning profile. SWM argues that because the underlying base paper may absorb the film forming composition differently in various areas and because Glatz's slit nozzle is in contact with the paper and presses the composition into the base sheet, the bands may not necessarily have a ramp-shaped physical profile. Nevertheless, the Glatz LIP bands have a ramp-shaped permeability profile. (*Id.* at 36 (citing CX-424 at 243 depicted below).)



The Administrative Law Judge concludes that the evidence is not sufficient to show that the Accused '753 Products meet the additional limitation of claim 3. Claim 3 recites the

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following: "The smoking article as in claim 2, wherein said discrete areas of reduced permeability comprise a substantially ramp-shaped profile." (JX-1 at 12:10-12.) Figures 5, 6A, and 6B depict the ramp-shaped profile, either on both sides of the band or else on one side or the other, as indicated below.

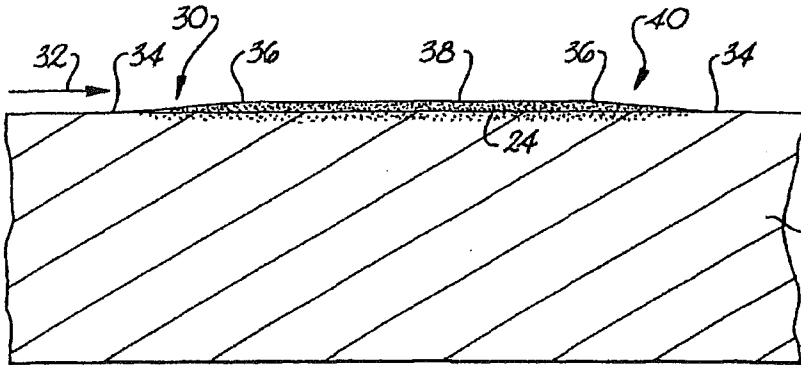


Figure 5

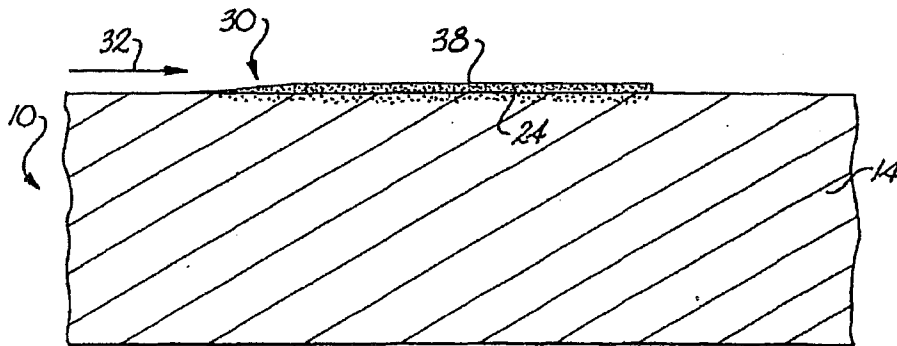


Figure 6A

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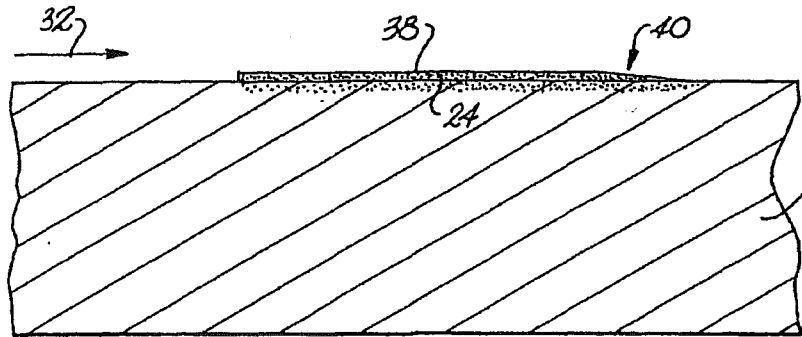


Figure 6B

The specification, in the section entitled Brief Description Of The Drawings, states that Figure 5 is a cross-sectional view of the wrapper shown in Figure 4 taken along the lines indicated and Figures 6a and 6b are alternate cross-sectional views of the ramp-shaped treated areas of the smoking wrapper. (JX-1 at 3:65-4:3.) The illustrations shown in these figures are physical features, and this is confirmed by the language of the specification that references the drawings.

At column 11, beginning at line 3, the specification states:

The area of changing permeability 30, 40 can have a relatively smooth or flat profile, such as is shown in the drawings, wherein bands 24 have a ramp-up and/or ramp-down profile. Applicants have found that this type of profile can be applied directly to wrappers 14 by direct commercial printing techniques, such as gravure or flexographic printing. The treated areas can be applied in a multiple pass or single pass operation depending on the amount of solution applied and viscosity of solution.

In an alternative embodiment not particularly illustrated in the figures, the areas of increasing and decreasing permeability 30, 40 can comprise a step-up and/or step-down having a successively decreasing width. This type of band could be applied in a multiple pass gravure or flexographic printing operation.

(JX-1 at 11:3-18.) This language is describing the physical shape of the bands and not the characteristics of permeability. It says that the "areas" of changing permeability can have a relatively smooth or flat profile, such as a ramp, or can comprise a step up or down profile formed by layers having successively decreasing width. Successive layers

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of decreasing width, as opposed to layers that ramp up or down, are physical characteristics describing the banded areas, as minutely depicted in Figures 5, 6a, and 6b, showing cross-sectional views of the banded areas atop the base paper. Claim 1 claims, in part, a smoking article “comprising discrete areas of reduced permeability for improving ignition proclivity characteristics of said smoking article, said discrete areas of reduced permeability comprising areas treated with a film forming composition, said discrete areas being in the shape of bands spaced along said longitudinal axis [of the smoking article]... .” (JX-1 at 11:66-12:2.) In stating that the discrete areas are in the shape of bands, claim 1 is describing a physical characteristic. Similarly, when claim 3 recites a “ramp-shaped profile,” it is describing an additional physical characteristic of the bands that is not recited in claim 1.

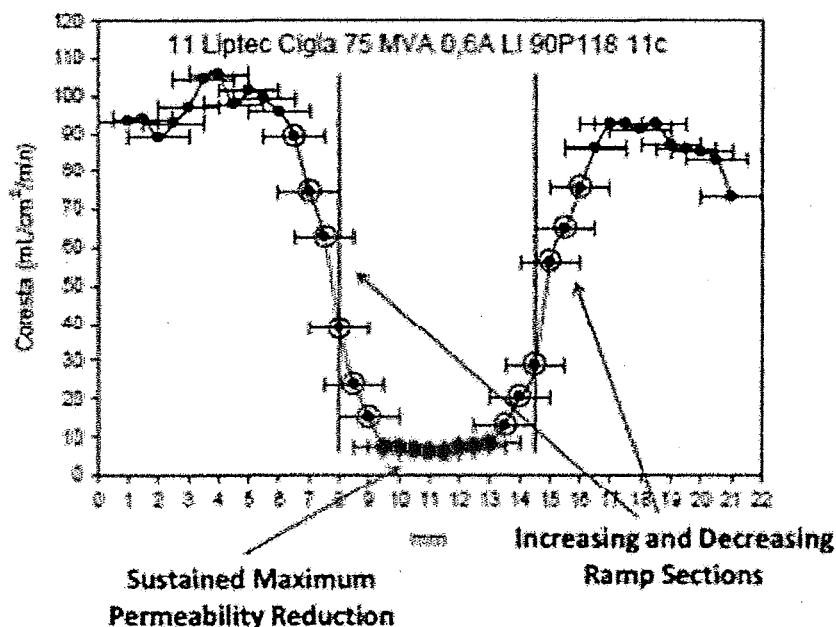
The evidence of record does not support the conclusion that the Accused ‘753 Products have LIP bands that are ramp-shaped and therefore for this additional reason the Administrative Law Judge finds that SWM has not shown that the Accused Products indirectly infringe claim 3 of the ‘753 patent.

d. Claim 4

Claim 4 recites, “The smoking article as in claim 1, wherein said discrete areas of reduced permeability further comprise a gradually increasing permeability profile following said decreasing permeability profile.” (JX-1 at 12:13-16.) SWM argues that Glatz’s accused LIP papers have discrete areas of reduced permeability with a gradually increasing permeability profile following a gradually decreasing permeability profile. (CBr. at 58 (citing Tr. at 513-516 (Rogers); CX-220-223, 243-246).) SWM says that the evidence it has cited in support of its allegation of infringement of claim 1 also

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shows that the Glatz Accused Products infringe claim 4. (*Id.* at 59.) SWM argues that even though some of the gradually changing permeability measurements upon which Dr. Rogers based his infringement conclusions appear outside of what has been marked as the visible banded areas, this is because the edges of the bands are irregular or jagged and because the film forming composition spread in some of the papers further than the area identified as the visible portion of the band. (*Id.* (citing Tr. at 584-586, 588, 715, 717, 720, 729, 731 (Rogers)).) SWM says the reduced permeability measurements are still within the discrete areas of reduced permeability because they are areas treated with the film forming composition and are outside the boundaries marked during a visual inspection. (*Id.* (citing Tr. at 715, 717, 720 (Rogers)).) According to SWM, the outer edge of the discrete areas of reduced permeability is best determined by the data rather than visual inspection for determining where the bands lie. (*Id.* (citing Tr. at 720, 729 (Rogers), 1485 (Fleming)).) In making this argument, SWM refers to CX-424 at 243, reproduced below.



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Glatz's response to SWM's allegation is a general one, which is that there is no credible evidence that any of its Accused Products have gradually changing permeability profiles. (CBr. at 31-43.)

The Administrative Law Judge concludes on the basis of the reasons given in finding that the evidence was not sufficient to demonstrate that the Accused '753 Products infringe claim 1 that it likewise is not sufficient to demonstrate that they infringe claim 4, which calls for a gradually increasing permeability profile followed by a gradually decreasing permeability profile. The evidence relied on by SWM is no more probative with respect to claim 4 than it is with respect to claim 1.

e. Claim 5

Claim 5 recites as follows: "The smoking article as in claim 4, further comprising an area of sustained maximum permeability reduction between said gradually increasing and gradually decreasing permeability profiles." (JX-1 at 12:17-20.) In support of this allegation, SWM relies on the same argument it gave in support of its allegation of the infringement of claim 4. (CBr. at 58-60.) Glatz challenges the efficacy of SWM's evidence based on the method used by Dr. Rogers in reaching his conclusions with respect to whether the Accused Products practice the limitations of any of the asserted claims insofar as they involve gradual increasing and decreasing profiles. In that respect, the Administrative Law Judge finds that what has been said in regard to finding noninfringement with respect to the previously discussed claims of the '753 patent also applies to claim 5. As for the additional limitation of claim 5 "comprising an area of sustained maximum permeability reduction," the same reasoning applies here as was given above with respect to claim 2. It is not simply a

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question of the reliability of the methods and means by which Dr. Rogers arrived at his conclusion of infringement, but also whether he adequately explained the criteria by which he arrived at the conclusion that there is an area of sustained maximum permeability reduction and how his rationale in that respect coincides with the language of the claim. The Administrative Law Judge finds that the evidence relied on by SWM is simply too equivocal and subjectively determined to support a finding of infringement here.

f. Claim 6

Claim 6 of the '753 patent reads as follows: "The smoking article as in claim 5, wherein said discrete areas of reduced permeability comprise a substantially ramp-shaped profile with increasing and decreasing ramp sections." (JX-1 at 12:21-24.) SWM employs the same argument for claims 4 through 6 (CBr. at 58-60) and the Administrative Law Judge concludes, for the same reasons given for finding that the Accused '753 Products do not infringe claims 1 through 5 that those products similarly do not infringe claim 6. Claim 6 depends from claim 5 and it, in turn, depends from claim 4, which depends from claim 1. The fact that claim 6 combines features of one or more of the preceding claims does not change the fact that those features as they appear in claim 6, for which the evidence already was found wanting, likewise are not supported by the same evidence.

g. Claim 24

Claim 24 reads as follows: "The smoking article as in claim 1, wherein said bands are continuous around the circumference of the smoking article." (JX-1 at 14:11-13.) SWM alleges that Glatz's LIP papers have continuous bands around the

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circumference of the cigarettes. (CBr. at 60 (citing Tr. at 516 (Rogers); JX-42C at 15, 81-82 (Engelking); CX-270 at 6).) According to SWM, this evidence, together with the evidence it has cited elsewhere in its opening brief for inducement and contributory infringement, shows that Glatz indirectly infringes claim 24. (*Id.*)

Glatz opposes SWM on the grounds that the evidence does not demonstrate that its LIP papers have gradually changing permeability profiles or that they meet SWM's film-forming requirement. (RBr. at 59-63.)

The Administrative Law Judge concludes, based on the evidence cited by SWM mentioned above, that the Glatz LIP papers have continuous bands and therefore satisfy that element of claim 24. However, for the reasons discussed above in connection with claim 1, the Administrative Law Judge finds that there is not a preponderance of evidence showing that Glatz's LIP papers satisfy the gradually changing permeability profile element of claim 1, which is also a limitation of dependent claim 24, and for that reason do not infringe claim 24.

C. Analysis of the Accused Products with Respect to the '867 patent.

1. Direct Infringement.

a. Claim 36

SWM asserts that Glatz's { } papers directly infringe independent claim 36 and dependent claim 43 of the '867 patent. According to SWM, Glatz provided no expert testimony to rebut this allegation. (CBr. at 104 (citing Tr. at 1447-48 (Fleming)).) SWM says that { } are representative of other Glatz LIP papers SWM has identified as infringing the '867 patent and says that KneX buys, imports into the United States, and sells after importation those Glatz LIP papers. (*Id.* (citing JX-43C at 31-33 (Makepeace)).)

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Claim 36 of the '867 patent reads as follows:

36. A process for producing a paper wrapper having reduced ignition proclivity characteristics when incorporated into a smoking article comprising the following steps:

providing a paper wrapper comprised of a paper web, said paper web having a relatively high permeability, the permeability of the paper web being from about 60 Coresta to about 110 Coresta;

applying a film-forming composition, to said paper wrapper at particular locations, said film-forming composition forming treated discrete areas on said wrapper, said discrete areas separated by untreated areas, said treated discrete areas having a permeability within a predetermined range sufficient to reduce ignition proclivity, said permeability being less than about 20 Coresta within the treated areas, said treated areas having a Burn Mode Index of less than about 8 cm⁻¹, said treated areas reducing ignition proclivity by reducing oxygen to a smoldering coal of the cigarette as the coal burns and advances into said treated areas.

(JX-2 at 12:34-52.)

SWM argues that the Glatz LIP papers are made by a process that produces a paper wrapper having reduced ignition proclivity characteristics when incorporated into a smoking article. (CBr. at 104 (citing Tr. at 532-534, 539 (Rogers)).) SWM says that Glatz {

} (Id. at

104-105.) SWM says that {

} (Id. at 104 (citing JX-41C at 27-32, 35-

36 (Fritzching); JX-42C at 103-106 (Engelking)). {

} (Id. (citing

JX-42C at 103-106 (Engelking)).)

SWM says there is no dispute that cigarettes made with Glatz wrappers are smoking articles, such as Signal and Skydancer cigarette brands, as well as cigarettes made by Belcorp.

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(*Id.* (referencing Glatz's Response to Amended Complaint at ¶¶ 28, 49, 103; JX-43C at 33-34; CX-254C at 1).) SWM also says that one of Glatz's own test reports shows that cigarettes made with Glatz's LIP paper have reduced ignition proclivity characteristics. (*Id.* at 105 (citing Tr. at 533-534 (Rogers); CX-325C at 1).) According to SWM, Glatz has admitted that LIPtec sells paper for use in the manufacture of reduced ignition proclivity cigarettes for importation into the United States and that KneX itself imports Glatz LIP paper into the United States. (*Id.* (referencing Glatz's Response to Amended Complaint at ¶¶ 28, 49).)

SWM argues that the evidence shows that Glatz's accused LIP papers comprise base paper webs with permeability within the range of about 60 to 110 Coresta. (*Id.* (citing Tr. at 539-540 (Rogers)).) In particular, says SWM, Glatz's { } have permeabilities of about 75 Coresta. (*Id.*) SWM says, by way of example, that internal product specifications for Glatz's { } show that they both have a target permeability of 75 Coresta. (*Id.* at 105-106 (citing Tr. at 541-542 (Rogers)).) SWM says that Glatz/LIPtec's corporate representative, Mr. Fritzching, testified that, { }.

(*Id.* at 106 (citing JX-41C at 63-66, 71-72 (Fritzching)).) Also, according to SWM, KneX's corporate representative testified that all of its customers currently purchase 75 Coresta LIP paper. (*Id.* (citing JX-43C at 30 (Makepeace)).)

SWM says that Dr. Rogers tested the permeability of the { } that they meet the Coresta limitations of claim 36, measuring around 88 Coresta { } and 80 { }. (*Id.* (citing Tr. at 540-541 (Rogers); CX-425 at 277).)

According to SWM, although the other Accused Products have differing base paper

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permeabilities, all of them have permeabilities that are within the range of about 60 to 110 Coresta. (*Id.* (citing Tr. at 476-477, 542 (Rogers)).)

SWM argues that the evidence also shows that Glatz's LIP papers satisfy claim 36 with respect to applying a film-forming composition under SWM's proposed construction of the term "applying" and under all parties' proposed construction of the terms "film-forming composition" and "discrete areas." (*Id.* at 107 (citing Tr. at 543-545 (Rogers)).) SWM says that LIPtec

{

} in the course of converting the base paper to a LIP product. (*Id.* (citing Tr. at JX-41C at 27-32, 35-36 (Fritzching); CX-566C at 12, 16).) SWM concedes that, {

}.
(*Id.*)

SWM says that { } is a "film-forming composition" under all of the parties' proposed constructions for that term. (*Id.* (citing Tr. at 544-545 (Rogers)).) SWM argues that the evidence shows that the material Glatz/LIPtec applies to its paper to form bands includes {

} (*Id.* (citing Tr. at 496-497

(Rogers); JX-41C at 77 (Fritzching); CX-305C at 8-9; CX-424 at 236, 239-240, 258-259, 262-

263; CX 566C at 16; RX-348 at 5-6).) According to SWM, the evidence shows that Glatz

applies a film forming composition in the shape of bands to create treated discrete areas

separated by untreated areas. (*Id.* at 108 (citing Tr. at 545-547 (Rogers)).) For example, argues

SWM, Dr. Rogers tested { } and found that in both instances their treated

areas were separated from the untreated areas and spaced along the longitudinal axis of the

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paper. (*Id.* (citing CX-424 at 239, 262).) Therefore, according to SWM, the evidence it cites shows the limitation of claim 36 pertaining to the application of a film forming composition to paper wrapper at particular locations separate from untreated areas. (*Id.*)

SWM says the evidence shows that the LIP bands of Glatz's papers have permeability values, less than 60 Coresta, that are sufficient to reduce ignition proclivity. (*Id.* (citing Tr. at 547-550 (Rogers)).) In particular, argues SWM, the internal product specifications {
}. (*Id.* (citing Tr. at 548-549 (Rogers); CX-319C at 1 and 3; CX-322C at 1 and 3).) SWM says that {

}. (*Id.* at 108-109 (citing JX-41C at 63-66, 71-72 (Fritzching)).) SWM says that Dr. Rogers tested the permeability of the treated discrete areas of {
} and the results of his tests show an average band permeability of 6.34 Coresta {
} and 10.04 Coresta {
}. (*Id.* at 109 (citing Tr. at 549-550 (Rogers); CX-425 at 277).) SWM says that a {

}. (*Id.* (citing CX-325C at 1).)

SWM argues that the evidence shows that Glatz's LIP papers have a burn index of less than about 8 cm^{-1} . (*Id.* (citing Tr. at 549-550 (Rogers)).) SWM says that, in terms of the definition proposed by SWM and Glatz, "the ratio of the intrinsic resistivity of the electrolyte solution (ohm-cm) to the product of the electrical resistance of the paper (ohm) and the area of paper in contact with both electrodes (cm^2)" in the Glatz LIP papers "is less than about 8 cm^{-1} ." (*Id.* (citing Tr. at 401-402, 529-550 (Rogers); RX-481 at 7).) SWM says that Dr. Rogers's test results show that {
} paper had an average BMI (Burn Mode Index) of 0.8 cm^{-1} {

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}. (*Id.* (citing CX-424 at 237, 260; CX-425 at 277).) According to SWM, Glatz does not dispute this. (*Id.* (referencing Glatz's Response to SWM's Statement of Facts in Support of Motion for Summary Determination No. 80 (Mot. Dkt. 756-016)).) SWM points out that although Staff proposed a slightly different construction of the phrase "burn mode index of less than about 8 cm^{-1} ," Staff acknowledged that the minor difference produced by this proposed construction does not affect the outcome of any disputed issue in this Investigation. (*Id.* (citing Staff PHBr. at 80).) Therefore, argues SWM, the evidence shows the Accused Products meet the element of claim 36 pertaining to permeability being less than about 20 Coresta and the Burn Mode Index being less than about 8 cm^{-1} . (*Id.* at 110.)

SWM argues that it is undisputed that the bands of Glatz's LIP papers are treated areas that reduce ignition proclivity by decreasing the amount of oxygen available to the smoldering coal of the cigarette as the tobacco burns and the resulting coal advances into the bands. (*Id.* (citing Tr. at 550-552 (Rogers); JX-42C at 13-15, 82-83 (Engelking); CX-270C at 7).)

Glatz, as a preliminary matter with respect to all of the asserted claims of the '867 patent, argues in its post-hearing reply brief that the evidence provided by and relied upon by SWM only relates to four of the Accused Products and does not relate to the Untested Products. (*See* RBr. at 51, n. 14; RRBr. at 74.) As found *supra*, the Administrative Law Judge agrees with Glatz that SWM has failed to show that the four tested Accused Products are representative of the Untested Products, and thus, the Untested Products identified above have not been shown to infringe the asserted claims of the '867 patent. *See* Section IV.B.2.

Glatz further responds that, under SWM's proposed construction of the term "film forming composition," infringement has not been proven because the evidence does not show that these papers include "film formers" or that they form a film that is "coherent on the

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molecular level.” (RBr. at 111-112.) Glatz further argues that all of the intrinsic evidence establishes that the claim term “applying” means “applying multiple layers of a film-forming composition,” and {

}. Therefore, the Accused Products do not infringe under that definition. (*Id.* (citing Tr. at 543-547 (Rogers)).)

Staff takes the position that the evidence shows that Glatz’s Accused Products do not infringe claim 36 (or claims 43 and 45 either) for the sole reason {

}. (SBr. at 73.)

The Administrative Law Judge concludes that the evidence pointed to by SWM, identified above, is sufficient to show that the Accused ‘867 Products satisfy all of the elements of claim 36 of the ‘867 patent, consistent with the construction of the relevant disputed claim terms set forth above. For the reasons discussed above (*see* Sections III.C.2. and 4.), the term “applying” is not restricted to multiple layers, and that the term “film-forming composition” does not require a “film former” and does not have to be coherent at the molecular level. Therefore, the Administrative Law Judge concludes that the Accused ‘867 Products¹⁷ infringe claim 36 of the ‘867 patent.

b. Claim 43

Claim 43 of the ‘867 patent recites as follows:

43. The process of claim 36, wherein said film-forming composition comprises a pectin composition, a silicate composition, a polyvinyl alcohol composition, a starch composition, or a cellulose derivative composition.

(JX-2 at 13:3-6.) According to SWM, Glatz’s LIP papers are made using a film forming composition that includes starch and Glatz applies this film forming composition to base paper

¹⁷ As noted above at the start of Section IV, the Untested Products are excluded from the Accused ‘867 Products found to infringe the ‘867 patent.

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for the purpose of converting the base paper to LIP paper. (*Id.* (citing Tr. at 552-553 (Rogers)).)

SWM says that Glatz's documents describe {

} (*Id.* (citing CX-566 C at 16; RX-347C at

1).) SWM says that Dr. Rogers tested { } to determine the

composition of the band materials and found that they included starch. (*Id.* (citing Tr. at 553

(Rogers); CX-424 at 239, 262).) SWM says that Glatz's research and development manager, Mr.

Fritzching, confirmed that Glatz/LIPtec uses a starch composition. (*Id.* (citing Tr. at 774, 759-

761, 770 and 778 (Fritzching)).)

Glatz denies that its Accused Products infringe this claim for the same reasons it denies that those products infringe claim 36, but does not separately deny that its LIP material includes a starch composition. (RBr. at 111-112.) Staff only denies that the Accused Products infringe this claim by virtue of Staff's conclusion that independent claim 36, from which claim 43 depends, { } (SBr. at 73.)

The Administrative Law Judge concludes that the evidence cited by SWM, noted above, is sufficient to show that the Accused '867 Products satisfy all of the elements of claim 43. The Administrative Law Judge concludes that SWM has shown by a preponderance of the evidence that the Accused '867 Products¹⁸ infringe claim 43 of the '867 patent.

¹⁸ As noted above at the start of Section IV, the Untested Products are excluded from the Accused '867 Products found to infringe the '867 patent.

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2. Indirect Infringement.

a. Claim 45

i. Inducement

SWM says that Glatz induces infringement of claim 45 in violation of 35 U.S.C. § 271(b). (CBr. at 111.) Claim 45 of the '867 patent reads as follows:

45. A process for producing a smoking article comprising the step of surrounding a tobacco column with the paper wrapper defined in claim 36.

(JX-2 at 13:11-13.) SWM alleges that Glatz indirectly infringes claim 45 because Glatz provides LIP paper to cigarette makers in the United States who purchase that paper from Glatz for the purpose of making cigarettes by, among other things, surrounding a tobacco column with the Glatz LIP paper. (CBr. at 111 (citing JX-41C at 20 (Fritzching)).) SWM says that these cigarettes include, by way of example, Signal and Skydancer brand cigarettes and cigarettes made by Belcorp. (*Id.* (referencing Glatz's Response to Amended Complaint at ¶¶ 28, 49, 103; JX-43C at 33-34 (Makepeace); CX-245C at 1).) According to SWM, the manufacture and sale of these cigarettes in the United States directly infringe claim 45. (*Id.*)

SWM argues that under 35 U.S.C. § 271(b), Glatz by knowingly aiding and abetting cigarette makers to use Glatz's banded LIP papers to produce smoking articles induces them to directly infringe claim 45. (*Id.* (citing *C.R. Bard*, 911 F.2d at 675).) SWM argues that the knowledge requirement means that the alleged infringer knew or should have known its actions would induce actual infringement, and knew of the existence of the patent. (*Id.* (citing *DSU*, 471 F.3d at 1304).)

SWM says that Glatz and LIPtec documents show that their LIP paper is for the intended purpose of making a cigarette go out on a defined porous support in order to reduce fire risk. (*Id.* (citing CX-270 at 2).) According to SWM, {

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}, Glatz gets feedback from U.S. cigarette manufacturers about its LIP paper, and Glatz provides support to those manufacturers to help them use the LIP paper to make cigarettes. (*Id.* (citing JX-40C at 41 (Epailly); JX-41C at 18 (Fritzching)).) Additionally, argues SWM, Glatz provides documentation to customers regarding the LIP paper for use in seeking to achieve compliance with Food and Drug Administration requirements regarding cigarette fire safety. (*Id.* at 112 (citing JX-43C at 27-28 (Makepeace)).) SWM argues that Glatz/LIPtech was aware of the '867 patent as early as 2004. (*Id.* (citing Tr. at 754 (Fritzching)).) Also, according to SWM, KneX was aware of the '867 patent at least as early as December 2010, when SWM initiated this Investigation, and the Glatz Respondents continued their actions constituting inducements to infringe since then. (*Id.*)

Glatz says that the parties have stipulated that the term "film forming composition" carries the same construction for both patents and the same reasons argued by Glatz as to why the Accused Products do not infringe the '753 patent apply as well to the '867 patent. In respect to this portion of Glatz's argument, the Administrative Law Judge concludes that the evidence is sufficient to demonstrate that the Accused '867 Products¹⁹ do meet this limitation of claim 45 based on the claim construction of the term "film-forming composition" adopted in this Investigation and the reasons given with respect thereto (in Section IV.B.2.a.) above in concluding that this element was met with respect to the applicable asserted claims of the '753 patent.

Glatz additionally argues that the evidence is not sufficient to show that any of the Accused Products satisfies the "applying" term of claim 36 from which claim 45 depends, according to Glatz's proposed construction. (*Id.* at 75.) Glatz's proposed construction has been

¹⁹ As noted above at the start of Section IV, the Untested Products are excluded from the Accused '867 Products found to infringe the '867 patent.

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rejected as noted above (*see* Section III.C.2. and 4.) and for the same reasons given above with respect to claim 36 (*see* Section IV.C.1.a.), the Administrative Law Judge concludes that the “applying” limitation of claim 45 is satisfied by the Accused ‘867 Products.²⁰

Glatz further argues that SWM has presented no credible evidence of inducement of infringement of claim 45 because SWM has not offered evidence of specific intent required under 35 U.S.C. § 271 (b). (*Id.* at 76.) Glatz argues that SWM failed to present any evidence that the Glatz Respondents knew or should have known that the sale of the Accused Products would induce actual, direct infringement of the ‘867 patent. (*Id.*) Glatz argues that while Mr. Fritzching acknowledged that he had read the ‘867 patent as early as 2004, merely knowing that a patent exists is not enough to prove specific intent. (*Id.* (citing Tr. at 754 (Fritzching)).) According to Glatz, SWM relies solely on supposition to establish the allegation that Glatz knew or should have known that the sale of the Accused Products would result in a direct infringement of the patent. (*Id.*) Glatz argues that there is very substantial doubt as to whether any of the Accused Products would meet the elements of the patent claims and whether the asserted patent claims are valid, and given these significant problems, there is little doubt that the Glatz Respondents would not have reasonably foreseen any substantial risk of infringement from selling the Accused Products, even with knowledge of the ‘867 patent’s existence. (*Id.* 76-77.)

SWM argues that if direct infringement of claim 45 is found, the evidence also shows that the Glatz Respondents induce that infringement. (CRBr. at 79-80.) According to SWM, the evidence shows that Glatz knew about the ‘867 patent as early as 2004. (*Id.* at 80 (citing Tr. at 754 (Fritzching)).) SWM says the evidence shows that Glatz sells LIP paper to cigarette manufacturers expressly to be used to make cigarettes and Glatz helps those manufacturers in

²⁰ As noted above at the start of Section IV, the Untested Products are excluded from the Accused ‘867 Products found to infringe the ‘867 patent.

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their use of that paper. (*Id.*) SWM argues that, under Glatz’s proposed claim constructions, Glatz does not dispute that it uses a film forming composition but only disputes that it satisfies the “applying” limitation { }. (*Id.*) SWM says that if Glatz did not know it was inducing direct infringement of the ‘867 patent, it surely should have known and therefore Glatz’s subjective belief of non-infringement is not credible. (*Id.*) SWM argues that if Glatz did not have reason to believe it induced infringement of the ‘867 patent when it first began importing LIP cigarette paper, that belief was dispelled when the ‘867 patent was asserted against Glatz in litigation brought in the State of South Carolina in early 2010. (*Id.* (citing Complaint at ¶ 95).) SWM says that Glatz did not change its product since that time and has continued to sell and provide assistance to cigarette manufacturers. (*Id.*)

Staff submits that although the Glatz Accused Products read on every other element of claim 36, they do not infringe the asserted claim because {

}.
}

(SRBr. at 27-28.)

The Administrative Law Judge concludes that the word “applying” as it appears in claim 36 of the ‘867 patent does not necessitate, demand, or require multiple layers, for reasons already discussed above in Section III on claim construction, and consequently finds that the evidence is sufficient to establish that Glatz and LIPtec, in combination, manufacture paper wrappers in accordance with the process set forth in claim 36 and conforming to the limitations therein described. The Administrative Law Judge further concludes that Glatz’s LIP papers were made for use in the manufacture of smoking articles, that the evidence cited by SWM is sufficient to show that Glatz induced cigarette manufactures to produce smoking articles in accordance with claim 45, and during the relevant period involved in this Investigation, Glatz was aware of the

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'836 patent. *See Inkjet Ink Cartridges*, Inv. No. 337-TA-723, Comm'n Op. at 13. Therefore, the Administrative Law Judge concludes that the evidence is sufficient to show that the Glatz Respondents indirectly infringe claim 45 of the '867 patent.

ii. Contributory Infringement

SWM says that the evidence shows that Glatz contributorily infringes claim 45 under 35 U.S.C. § 271 (c). (CBr. at 112.) SWM says the evidence shows that Glatz/LIPtec sells LIP paper intended to be used in an infringing manner to KneX, which imports that paper into the United States and sells it to cigarette makers. (*Id.* (citing Glatz's Response to Amended Complaint at ¶¶ 28, 49, 103).) SWM argues that LIP paper is a material part of claim 45 because, without it there can be no cigarette. (*Id.*) SWM says that Glatz does not dispute that LIP paper has no substantial non-infringing use and is only intended for making cigarettes. (*Id.* (citing Glatz's Response to SWM's Statement of Facts in Support of Motion for Summary Determination, No. 100 (Mot. Docket 756-016)).) SWM contends that the Glatz Respondents have known about their infringement of the '867 patent and have continued to make their LIP paper for the purpose of being used in the manufacture of cigarettes. (*Id.* at 112-113.)

Glatz's response to SWM's contentions involving contributory infringement is the same as its argument in opposition to SWM's other infringement allegations respecting the asserted claims of the '867 patent. (RBr. at 112-114.) Staff concludes that {

}, there is no direct infringement of claim 36 and hence no contributory infringement of claim 45. (SRBr. at 27-28.)

The Administrative Law Judge, {

}, concludes that the evidence cited by SWM is sufficient to

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demonstrate that the Accused '867²¹ Products are made for the purpose of being used by cigarette makers to produce smoking articles in accordance with claim 45, and therefore, and for the reasons set forth by SWM, Glatz's actions constitute contributory infringement of claim 45 of the '867 patent.

V. VALIDITY

A. Background

One cannot be held liable for practicing an invalid patent claim. *See Pandrol USA, LP v. AirBoss Railway Prods., Inc.*, 320 F.3d 1354, 1365 (Fed. Cir. 2003). However, patent claims are presumed valid. 35 U.S.C. § 282. A respondent that has raised patent invalidity as an affirmative defense must overcome the presumption by "clear and convincing" evidence of invalidity. *Checkpoint Systems, Inc. v. United States Int'l Trade Comm'n*, 54 F.3d 756, 761 (Fed. Cir. 1995). Further, as stated by the Federal Circuit in *Ultra-Tex Surfaces, Inc. v. Hill Bros. Chem. Co.*:

when a party alleges that a claim is invalid based on *the very same references* that were before the examiner when the claim was allowed, that party assumes the following additional burden:

When no prior art other than that which was considered by the PTO examiner is relied on by the attacker, he has the added burden of overcoming the deference that is due to a qualified government agency presumed to have properly done its job, which includes one or more examiners who are assumed to have some expertise in interpreting the references and to be familiar from their work with the level of skill in the art and whose duty it is to issue only valid patents.

Ultra-Tex Surfaces, Inc. v. Hill Bros. Chem. Co., 204 F.3d 1360, 1367 (Fed. Cir. 2000)

(emphasis added) (*quoting American Hoist & Derrick Co. v. Sowa & Sons, Inc.*, 725 F.2d 1350, 1359 (Fed. Cir. 1984) "*American Hoist*").

²¹ As noted above at the start of Section IV, the Untested Products are excluded from the Accused '867 Products found to infringe the '867 patent.

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B. Anticipation.

A determination that a patent is invalid as being anticipated under 35 U.S.C. § 102 requires a finding, based upon clear and convincing evidence, that each and every limitation is found either expressly or inherently in a single prior art reference. *See Celeritas Techs. Inc. v. Rockwell Int'l Corp.*, 150 F.3d 1354, 1361 (Fed. Cir. 1998). Anticipation is a question of fact, including whether a limitation, or element, is inherent in the prior art. *In re Gleave*, 560 F.3d 1331, 1334-35 (Fed. Cir. 2009). The limitations must be arranged or combined the same way as in the claimed invention, although an identity of terminology is not required. *Id.* at 1334 (“the reference need not satisfy an *ipsissimis verbis* test”); MPEP § 2131.

In addition, the prior art reference’s disclosure must enable one of ordinary skill in the art to practice the claimed invention “without undue experimentation.”²² *Gleave*, 560 F.3d at 1334-35. A prior art reference that allegedly anticipates the claims of a patent is presumed enabled; however, a patentee may present evidence of nonenablement to overcome this presumption. *Impax Labs., Inc. v. Aventis Pharmaceuticals Inc.*, 468 F.3d 1366, 1382 (Fed. Cir. 2006). “[W]hether a prior art reference is enabling is a question of law based upon underlying factual findings.” *Gleave*, 560 F.3d at 1335.

Priority of Invention.

If a respondent comes forward with clear and convincing evidence of a prior invention that is alleged to invalidate an asserted patent, a complainant may seek to rebut this evidence by establishing an earlier priority date. *See, e.g., Dow Chemical Co. v. Astro-Valcour, Inc.*, 267 F.3d 1334, 1339 (Fed. Cir. 2001) (explaining burdens of proof and production when validity of patent challenged under Section 102(g) in context of summary judgment). Under 35 U.S.C. §

²² This is not to be confused with the standards for enablement to support issuance of a patent claim under 35 U.S.C. § 112. *Gleave*, 560 F.3d at 1334.

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102(g)(2), priority of invention “goes to the first party to reduce an invention to practice, unless the other party can show that it was the first to conceive the invention and that it exercised reasonable diligence in later reducing that invention to practice. *Price v. Symsek*, 988 F.2d 1187, 1190 (Fed. Cir. 1993). “Conception is the touchstone of inventorship, the completion of the mental part of invention.” *Burroughs Wellcome Co. v. Barr Laboratories, Inc.*, 40 F.3d 1223, 1227-28 (Fed. Cir. 1994). It is the mental formation of a definite and permanent idea of the complete and operative invention as it is to be applied in practice. *Hybritech Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1376 (Fed. Cir. 1986).

“Conception is complete only when the idea is so clearly defined in the inventor’s mind that only ordinary skill would be necessary to reduce the invention to practice, without extensive research or experimentation.” *Burroughs*, 40 F.3d at 1227-28. “A conception must encompass all of the claimed invention.” *Singh v. Brake*, 317 F.3d 1334, 1340 (Fed. Cir. 2003). “Because it is a mental act, courts require corroborating evidence of a contemporaneous disclosure that would enable one skilled in the art to make the invention.” (*Id.*) The inventor “must provide independent corroborating evidence in addition to his own statements and documents.” *Hahn v. Wong*, 892 F.2d 1028, 1032 (Fed. Cir. 1989). “[B]ecause of the danger in post-hoc rationales by an inventor claiming priority, the court requires objective evidence to corroborate an inventor’s testimony concerning his understanding of the invention.” *Invitrogen Corp. v. Clontech Labs., Inc.*, 429 F.3d 1052, 1065 (Fed. Cir. 2005). The burden of proof on respondent after a complainant comes forward with corroborated evidence of conception and diligent reduction to practice remains that of clear and convincing evidence. *Technology Licensing Corp. v. Videotek, Inc.*, 545 F.3d 1316, 1327-29 (Fed. Cir. 2008).

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1. '867 patent.

a) Priority Date

SWM contends that the invention of claim 36 of the '867 patent was conceived by at least { } and, after substantial effort, reduced to practice by at least { }. (CBr. at 12.) SWM argues that efforts to reduce the invention of claim 36 to practice included laboratory work in { } where SWM added bands of { } (*Id.* (citing CX-1004C at Q/A 40 (Kraker); CX-991C at 1-2).) SWM says that although that effort was unsuccessful in reducing band permeability to { }, SWM continued to work toward its goal of developing a process for producing wrappers as recited in claim 36. (*Id.* at 12-13.) In particular, argues SWM, it began planning {

} (*Id.* (citing CX-1004C at Q/A 45-53 (Kraker); CX-796C at 2).)

SWM says that it successfully reduced the invention of claim 36 to practice in { } (*Id.* at 13 (citing CX-734C; CFF-V-29).) SWM says that by { }, it applied { } to base papers with a measured permeability of { } in bands and recognized that the produced papers would have reduced ignition proclivity characteristics and were suitable for making cigarettes. (*Id.* (citing CX-1004C at Q/A 68-78 (Kraker); CX-74C; CFF-V-29).) SWM says that, based on the results of the trial, it was confident that with better equipment it could produce bands having even lower permeability. (*Id.* (citing CX-1004C at Q/A 77 (Kraker)).) Immediately after that, says SWM, Dr. Peterson and Mr. Kraker, two of the three inventors listed on the '867 patent, summarized their results from

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the { }, Mr.

Kraker tested the papers produced in the { } and determined that the { }.

(Kraker); CX-742C at 35: CFF-V-29.) Then on November 13, 2000, SWM filed U.S.

Provisional Patent Application No. 60/248,061. (*Id.*)

SWM says that after the { } it diligently continued to improve its process and to develop methods for the commercial production of its reduced ignition proclivity print-banded papers, continuing through the filing of the nonprovisional application on November 13, 2001.

(*Id.*) In particular, according to SWM, it conducted numerous trials at {

}.

(*Id.* at 13-14 (citing CX-1004C at Q/A 95-132 (Kraker); CX-798C; CX-766C; CX-816C; CX-845C; CX-898C; CX-822C; CX-803C; CX-891C; CX-890C; CFF-V-30).) SWM argues that the work

included the production of wrappers like those described in claim 36, using {

}.

(*Id.* at 14 (citing CX-1004C at Q/A 133-134, 143-147 (Kraker); CX-878C; CFF-V-30).) SWM says the work also

included immediate drying between applications of film forming composition by at least as early

as { }.

(*Id.* (citing CX-766C at 1).) SWM says it continued to develop a commercial process at multiple facilities throughout

the period of { }, including at {

}.

(*Id.* (citing CX-1004C at Q/A 158-159 (Kraker)).) SWM says that each of these

processes met the limitations of claim 36. (*Id.* (citing CX-1004C at Q/A 164-179 (Kraker); CX-

928C; CX-886C; CX-884C; CX-883C; CFF-V-30).) SWM says that throughout this period, SWM supplied its customers with wrappers produced using the process of claim 36 in order to

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evaluate the characteristics of these products, including their LIP performance. (*Id.* (citing CX-1004C at Q/A 183-189, 202-203 (Kraker); CX-1007C at Q/A 19-21 (Thompson); CX-779C; CX-786C; CX-967C; CX-782C; CX-895C; CX-780C; CFF-V-30).) SWM says that in { }, it began its own NIST and smoke testing on cigarettes made from wrappers produced using the process disclosed in claim 36 of the '867 patent. (*Id.* (citing CX-1004C at Q/A 306-317; CX-814C; CX-847C; CX-882C; CFF-V-30).) SWM says that when conducting these tests, it also tested the Burn Mode Index of the paper wrappers and that the wrappers made by the process in claim 36 all had a Burn Mode Index of less than 8 cm^{-1} . (*Id.* (citing CX-1004C at Q/A 311-312; CFF-V-30).)

Glatz responds that SWM's assertion that it reduced claim 36 of the '867 patent to practice by { } is suspect and is inconsistent with the contemporaneous documents created by SWM's employees. (RRBr. at 94-95.) Glatz argues that there is insufficient evidence to establish that SWM's inventors had conceived of or reduced to practice claim 36 of the '867 patent by { } but, rather, the evidence shows just the opposite: that (1) the inventors did not create a LIP paper in { } that included all of the limitations of claim 36; (2) the inventors did not create a LIP paper in { } using a single-layer application process; (3) the inventors cannot show that the sample they did create in { } somehow reveals they were in possession of the single-layer application process; and (4) in any event, SWM did not present any evidence to corroborate the inventor's claimed reduction to practice. (*Id.* at 97.)

Glatz says that, as an initial matter, SWM relies entirely on the unsubstantiated testimony of one inventor, Thomas Kraker, to establish the date of { } as the invention date of claim 36 and only cites to his testimony and documents prepared by him to show that he had

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conceived or reduced to practice the elements of that claim by that date. (*Id.* at 97-98.) Glatz contends that there are no other witnesses and no other documents besides those written by Mr. Kraker to corroborate his testimony. (*Id.* at 98.) Glatz argues that the patentee has the burden of establishing a date of invention under 35 U.S.C. § 102(e) [sic] that is earlier than the prior art reference and this burden can only be met with evidence that is corroborated by independent sources, apart from the inventor who has every reason to embellish his recollection in these circumstances. (*Id.*) Glatz says that SWM's failure to offer any corroborating evidence from independent sources is fatal to its attempt to establish an earlier filing date. (*Id.*)

Glatz argues that, besides failing to produce corroborating evidence, SWM also missed one of the basic elements of its claimed invention—the requirement that the LIP bands exhibit a Burn Mode Index, or BMI, of less than 8 cm^{-1} . (*Id.*) Glatz says that while there are references dated { } to BMI testing in Mr. Kraker's notebook, it is not established, or corroborated, by independent witnesses that these BMI measurements were somehow related to the samples apparently created in { }. (*Id.*) Moreover, argues Glatz, the laboratory notebook entries simply refer to BMI testing in general and make no mention at all of any requirement that the LIP bands must meet a threshold of "BMI less than 8 cm^{-1} ." (*Id.*) Glatz argues that it should be clear from a review of all of the relevant documents, not just those selected by SWM, that from { } the inventors actually had no idea how to apply { } in order to form LIP paper without cockles, wrinkles and holes. (*Id.*)

Glatz argues that the '867 patent's inventors started their research in {

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} Instead, argues Glatz,

} Thus, argues Glatz,

the concept for using {

} in order create LIP bands did not originate with Mr. Kraker or SWM but was the

{ } . (*Id.* at 100.)

Glatz says that Mr. Kraker immediately took

} . (*Id.* (citing RX-62C at 1).) Glatz

argues that, even in this initial meeting, SWM made it clear that {

} . (*Id.* (citing RX-62C at 1-2).) Glatz says that other SWM documents written

around the time of these events confirm that the idea for using high permeability base paper to

make LIP paper { } and that the resulting

development work by SWM { } was simply in response to {

} . (*Id.*) Glatz says that in { }, Mr. Kraker reported to

others at SWM that {

} , at which time Mr. Kraker

mentioned that { } was aware that these low porosity papers will lead to increased values of

tar and carbon monoxide delivery. He expressed an interest in pursuing print-banded technology

because of the greater flexibility in cigarette design the technology would provide and,

specifically, {

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}. (*Id.* at 100-101 (citing RX-516C at 2).) Glatz reports that there is no mention whatsoever that the idea for a high permeability LIP paper originated with Mr. Kraker or anyone else at SWM and contemporaneous documents make the source of this idea quite clear: the idea come from {

}. (*Id.* at 101.)

Glatz argues that in order to create the LIP paper sample requested by { }, SWM { } followed a plan that was broken into two parts. (*Id.*) In the { } Glatz says that SWM { } were to start with base papers of { }, and from each of these trials determine {

}. (*Id.*) At this stage, the base paper would not be printed with { }, as attempting to print LIP bands would introduce another area of complication to the experiment. (*Id.*) Instead, argues Glatz, for the initial stage, SWM { } simply printed, {

}. (*Id.*) For each of the samples run in the initial phase, the paper was to be { } in order to reach the targeted permeability level of around { }. (*Id.* (citing CX-911C at 1-2).)

Glatz says that in the second phase of the development process, called { } SWM { } used the information developed in the first phase to guide the manufacturing of samples at the specific request of customers such as { }. (*Id.* (citing CX-911C at 1-2).) Glatz says that in a memorandum around the time in question, Mr. Kraker described the research plan { } as including {

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} needed to reduce the permeability below { }—with an option to change to a {

}. (*Id.* at 102 (citing RX-37C at 1).)

Glatz argues that this is the exact plan that SWM { } followed when they started their trials { }. (*Id.*)

According to Glatz, Richard Peterson, an SWM consultant who supervised the initial trials, described the results of this trial two days later thusly: {

}. (*Id.* (citing RX-38C at 1).) Glatz says that the initial pilot study was not even successful in applying {

} because running this paper through {

}. (*Id.*

(citing RX-38C at 4).)

Glatz argues that it is very clear from SWM's own documents that, in the initial trials in { }, SWM { } used {

} to create low permeability regions of less than 20 Coresta on high permeability, 60 Coresta and greater, base papers. (*Id.*) Glatz says that SWM { } did not even attempt, much less succeed, to create { } and, indeed, the documents created at the time show that SWM { } were concerned only with how to use { } to achieve the targeted band permeability. (*Id.*)

Glatz says that even after the initial trials in { }, SWM { } continued to investigate only { } as the sole method for applying LIP bands to high permeability papers. (*Id.* at 103.) Glatz argues that if there were any

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techniques for creating such bands { }, there is no evidence whatsoever showing that SWM { } knew how to do it or appreciated its significance in connection with the claimed invention. (*Id.*) Glatz argues that confirmation of this is the provisional patent application recited in the '867 patent, filed November 14, 2000 by Peterson and Kucherovsky, describing {

} without mention of any method of applying LIP bands to base paper { }.
(*Id.*)

Glatz says that after the initial phase of testing in { } and filing the provisional application in November 2000, the inventors conducted extensive additional trials on high permeability base papers in { } and at every one of those trials for every paper sample tested the inventors were only successful in using { } on high permeability base paper, that is, paper measuring 60 Coresta or better. (*Id.*) For example, argues Glatz, during the trials on { }, SWM { } applied { }.
(*Id.* (citing CX-720C).) Glatz says this team applied the {

}.
(*Id.*) Glatz says that {

}.
(*Id.* at 103-104.) Likewise, according to Glatz, in {

} SWM again applied bands of {

}.
(*Id.* at 104.) {

}, which was not within the range of the '867 patent, {

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} . (*Id.* (citing CX-920; RX-78C).)

Glatz says that by { } no one had been successful in creating a low permeability band of less than 20 Coresta on a high permeability base paper of 60 Coresta { } . (*Id.*) The documents, argues Glatz, do not provide any teaching as to how one might create LIP bands of less than 20 Coresta {

} . (*Id.*) Glatz argues that additional documents created by SWM at the time of these trials confirm that the inventors had no idea in { } or afterwards how to create low permeability LIP bands of 20 Coresta on high permeability base paper of 60 Coresta or greater { } .

(*Id.* at 104-105 (citing RX-66C; RX-53C; RX-527C; RX-602C; RX-377C; CX-849C; RX-606C; RX-227C; RX-69C; RX-1080C; CX-776C; RX-70C; CX-1002C; CX-820C; RX-77C).) Thus, says Glatz, there is no evidence to support SWM's assertion that its inventors had "reduced to practice" claim 36 of the '867 patent in { } and all of the documentary evidence produced by SWM indicates that the inventors either had not conceived or had not reduced to practice all of the elements of claim 36 and actually had no idea how to apply low permeability LIP bands to high permeability base paper other than through multiple applications of band material to base paper, which is the exact "species" taught in Hammersmith. (*Id.* at 105.)

Staff argues that, in its view, the effective priority date for the asserted claims of the '867 patent is the filing date for the nonprovisional application, November 13, 2001. (SBr. at 78-79; SRBr. at 29-30.) Staff recognizes that the '867 patent relies for priority on provisional application No. 60/248,061 filed on November 13, 2000, but Staff says that for any material in the issued patent that did not appear in the provisional application, the effective priority date is

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the filing date of the nonprovisional application, which was November 13, 2001. (*Id.*) Staff argues that the evidence shows that there is material in asserted claims 36, 43, and 45 that is not supported by the provisional application and that, in particular, the provisional application makes no mention of a Burn Mode Index, whereas the issued '867 patent contains a lengthy discussion of the topic. (*Id.*) Moreover, argues Staff, a Burn Mode Index of less than 0.8 cm^{-1} is recited as a limitation in asserted claim 36 from which the remaining asserted claims depend. (*Id.*) For these reasons, Staff says that the effective priority date for the asserted claims of the '867 patent is November 13, 2001. (*Id.*)

In proving priority, a party must show conception of the invention by evidencing possession of every feature or limitation of the claimed invention. *Slip Track Systems, Inc. et al. v. Metal-Lite, Inc.*, 304 F.3d 1256, 1262-63 (Fed. Cir. 2002) (citing *Kridl v. McCormick*, 105 F.3d 1446, 1446 (Fed. Cir. 1997)). Proof of conception turns on the inventor's ability to describe the invention with particularity, and the idea must be sufficiently formed so that only skill would be necessary to reduce the invention to practice, without extensive research or experimentation. *Id.* at 1263 (citing *Burroughs*, 40 F.3d at 1228). "Inventor testimony alone is insufficient to prove conception; some form of corroboration must be shown." *Id.*

Although the provisional application is not included in the file history, JX-4, for some unknown reason, and is not cited by exhibit and page numbers by any of the parties, it is a public document of the Patent and Trademark Office. As argued by Staff, it does not include any reference to or discussion of Burn Mode Index.²³ For this reason, the Administrative Law Judge concludes the provisional application is insufficient to show that the asserted claims of the '867

²³ Even absent this public document, SWM's argument regarding priority date of the provisional application would fail because it lacks evidence of what information is actually contained in the provisional application and SWM bears the burden of proof.

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patent are entitled to a priority date earlier than its November 13, 2001 filing date. “Claims deserve the provisional application's earlier filing date so long as that application contains adequate written description under 35 U.S.C. § 112. *Trading Techs. Intl. Inc. v. eSpeed Inc.*, 595 F.3d 1340, 1350 (Fed. Cir. 2010). Consistent with 35 U.S.C. § 112 ¶ 1, the written description of the provisional application must enable one of ordinary skill in the art to practice the invention claimed in the non-provisional application.” *Star Scientific, Inc. v. R.J. Reynolds Tobacco Co.*, 655 F.3d 1364, 1371 (Fed. Cir. 2011) (citing *New Railhead Mfg., L.L.C. v. Vermeer Mfg. Co.*, 298 F.3d 1290, 1294 (Fed. Cir. 2002)). Absent a description, or even mention, of Burn Mode Index, the Administrative Law Judge finds that the written description of the provisional application does not enable one of ordinary skill in the art to practice the invention claimed in independent claim 36 or in the dependent claims 43 and 45 of the ‘867 patent.

The Administrative Law Judge finds that the evidence does not establish that the ‘867 patent inventors had conceived of a process for how to apply a single layer of film forming composition in accordance with claim 36 prior to the nonprovisional filing date of the patent. The evidence reflects that SWM, responding to the demands of { }, sought different ways to produce a paper wrapper that would satisfy { } but had not achieved success in producing LIP paper in accordance with the limitations of claim 36 of the ‘867 patent by means of applying a single layer of film forming composition. The evidence does not establish that the inventors formulated their conception of the Burn Mode Index prior to the November 13, 2001 date they filed their nonprovisional application. While SWM argues that claim 36 does not require that a single application of film forming composition satisfy any aesthetic considerations, it does require particular features, such as a Burn Mode Index of less than 8 cm^{-1} , which the evidence does not establish to have been formulated in { }, let alone prior to

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November 13, 2001. Furthermore, the Administrative Law Judge finds that, even though this is not a requirement²⁴ for provisional applications, the fact that the provisional application only lists Mr. Peterson and Mr. Kucherovsky as inventors calls into question SWM's claim that Mr. Kraker conceived the invention in the '867 patent in { } before the provisional application was filed in November 2000. (*See* 37 C.F.R. § 1.51 (c)(ii), 1.41(a)(2).)

Based on the foregoing, the Administrative Law Judge finds that the asserted claims of the '867 patent are not entitled to a priority date earlier than the nonprovisional application filing date of November 13, 2001.

b) Anticipation under 35 U.S.C. § 102—Statutory Bar Sales to Philip Morris

“A person shall be entitled to a patent unless . . . the invention was . . . on sale in this country[] more than one year prior to the date of the application for patent in the United States[.]” 35 U.S.C. § 102. The Supreme Court has interpreted this statutory provision as follows:

the on-sale bar applies when two conditions are satisfied before the critical date. First, the product must be the subject of a commercial offer for sale. An inventor can both understand and control the timing of the first commercial marketing of his invention.

* * *

Second, the invention must be ready for patenting. That condition may be satisfied in at least two ways: by proof of reduction to practice before the critical date; or by proof that prior to the critical date the inventor had prepared drawings or other descriptions of the invention that were sufficiently specific to enable a person skilled in the art to practice the invention.

²⁴ *New Railhead Mfg., L.L.C. v. Vermeer Mfg. Co.*, 298 F.3d 1290, 1294 (Fed. Cir. 2002).

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Pfaff v. Wells Electronics, Inc., 525 U.S. 55, 67-68 (1998). The on sale bar is analyzed claim by claim, so that some claims may be invalidated while others are not. *Allen Engineering Corp. v. Bartell Industries, Inc.*, 299 F.3d 1336, 1353 (Fed. Cir. 2002).

Glatz contends that the asserted claims of the '867 patent are invalid under 35 U.S.C. § 102. (CBr. at 115 *et seq.*) Glatz asserts that, beginning in October 1999 and continuing through the present, SWM has sold banded LIP cigarette papers under the brand name PaperSelect to Philip Morris for use in cigarettes, and Glatz says that these two companies entered into an agreement in 1992 to co-develop and supply LIP cigarette wrappers made by a process invented and patented by Philip Morris using what was named a "Moving Orifice Device" (MOD). (RBr. at 116 (citing RX-274 (Joint Development); RX-276C ("Development of MOD Banded Paper" Presentation)).) Glatz says that Philip Morris and SWM developed a commercial process for making PaperSelect banded cigarette paper wrappers having integral bands with air permeability less than the base paper to which the bands were applied. (*Id.*) Glatz says that Philip Morris invented the technology {

} (*Id.* (citing RX-289C).) Glatz points out that Philip Morris received several patents on the MOD process and wrappers made by this process. (*Id.* (citing Tr. at 1174-76 (McCarty); RX-279; RX-443).)

Glatz argues that as their project progressed and it became clear that governmental regulation would soon require low ignition proclivity cigarettes, SWM and Philip Morris entered into agreements for SWM to supply Philip Morris with PaperSelect MOD banded cigarette wrappers. (*Id.* at 117 (citing RX-290C; RX-291C; RX-292C; RX-293).) Glatz says the process used by SWM to make PaperSelect wrappers under license from Philip Morris involved the use of a MOD chamber to apply bands of a mixture of extensively refined flax cellulose, chalk, and

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water to a moving paper web for making conventional cigarette paper. (*Id.* at 117 (citing JX-59C at 17-24, 54-84 (Steidel Depo); RX-275; RX-279; RX-496C; RX-49; RX-275C).) Glatz says that extensively refined flax cellulose was used for the bands because “band permeability testing showed that permeability decreased with higher degree of fiber refining.” (*Id.* (citing RX-579 at 3).)

Glatz says that MOD banded LIP cigarette wrappers sold by SWM to Philip Morris were used to make Philip Morris’s Merit brand cigarettes, including Merit Light and Merit Ultra Light brands. (*Id.* (citing JX-59C at 110-111 (Steidel Depo)).) Glatz says that Philip Morris {

} (*Id.* (citing JX-59C at 37, 75, 93).) According to Glatz, Philip Morris’s specifications for PaperSelect wrappers using {
}, as did SWM’s process for making the wrappers. (*Id.* (citing JX-59C at 137).)

Glatz says that Philip Morris began test marketing Merit Light and Ultra Light cigarettes made with PaperSelect in the United States early in the year 2000, more than a year before the earliest effective filing date of the ‘867 patent, which is November 13, 2001. (*Id.* at 118 (citing Tr. at 1149-50 (McCarty), 2054-55 (Honeycutt); RX-468; RX-469; RX-580; RX-592).)

According to Glatz, cigarette companies and cigarette paper companies almost immediately obtained samples of these cigarettes and analyzed them to confirm in 2000 that, as advertised, they did possess reduced low ignition propensity characteristics and employed high permeability base papers with lower permeability bands to reduce ignition proclivity. (*Id.*)

Glatz says that Mr. Honeycutt, one of SWM’s experts who testified at the hearing, conceded that when PaperSelect and Merit cigarettes were first test marketed, in February 2000,

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and then nationally marketed in the middle of that year, the band BMI was below 8 cm^{-1} , band permeability was below 20 Coresta, and the base paper had a Coresta permeability between about 60 and 110, which fall within the limits of the asserted '867 claims. (*Id.* at 118-119.)

According to Glatz, both Mr. Honeycutt and Dr. McCarty testified that cigarette companies were closely attentive to the introduction of Merit cigarettes and PaperSelect. (*Id.* at 119-120 (citing Tr. at 2054-55, 2057, 2059-63 (Honeycutt), 1149-54 (McCarty)).) Glatz says that both SWM's MOD banded LIP cigarette wrapping papers (PaperSelect) and Philip Morris's Merit Light and Merit Ultra Light cigarettes made with those wrappers were offered for sale and sold more than one year before the effective filing date of the application that led to the '867 patent, November 13, 2001²⁵. (*Id.*)

Glatz says that Philip Morris used the PaperSelect wrappers { } to make Merit cigarettes for sale to United States customers. (*Id.* at 121-122 (citing Tr. at 1149-50 (McCarty), 2054-61, 2099-2100 (Honeycutt); RX-282; RX-468; RX-469; RX-592; JX-59C (Steidel) (*see* RFF 38)).) According to Glatz, Philip Morris began test marketing Merit cigarettes early in the year 2000 and began nationwide distribution in the United States in July of that year. (*Id.*)

Glatz contends that SWM's documents and the testimony of Bruce Steidel establish that the target permeabilities of PaperSelect wrappers first sold in { }, within the range of about 60 to about 110 Coresta of the asserted claims of the '867 patent. (*Id.* (citing RFF 40).) According to Glatz, the permeability of the bands on these papers

²⁵ Glatz also argues that although the '867 patent references a provisional application filed on November 13, 2000, that provisional application does not support any of the asserted claims, as for example, it does not describe any BMI values, which is a limitation in all of the asserted claims of the '867 patent. (*Id.* at 121, n. 40.) The Administrative Law Judge found *supra* that the provisional application does not enable claims 36, 43, or 45 of the '867 patent.

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was typically around { }, the maximum prescribed in the '867 patent. (*Id.* (citing JX-59C at 8-39²⁶.) Glatz says that the band permeability of the PaperSelect wrappers sold to Philip Morris { } within the “less than about 20 Coresta” limitation of every asserted claim of the '867 patent. (*Id.*) Glatz points out that Mr. Steidel testified that Philip Morris’s specifications and the process for making PaperSelect wrappers { }. (*Id.* (citing JX-59C at 27-37²⁷.) Glatz argues that it was { } . (*Id.* (citing JX-59C²⁸.)

Glatz says that Professor Samuel Schabel of the University of Darmstadt, testifying as one of Glatz’s experts about air permeability and BMI testing he had conducted on the September 2000 base papers and the bands of Merit Light and Ultra Light cigarettes, determined that the Merit Light base paper measured 82.26 Coresta and its bands, 12.79 Coresta, while the band BMI was 3.18. (*Id.*) Additionally, according to Glatz, the Merit Ultra Light base paper measured by Professor Schabel was 84.19 Coresta, the bands were 6.79 Coresta, and the band BMI was 2.1. These measurements were not disputed by Mr. Honeycutt. (*Id.* (citing Tr. at 2061-62 (Honeycutt)).) These undisputed measurements of Professor Schabel, argues Glatz, established air permeabilities and BMI values for the PaperSelect/Merit cigarettes within the ranges set forth in the asserted claims of the '867 patent. (*Id.* at 122-123 (citing Tr. at 815-817, 825-826 (Schabel); RDX-93; RDX-96; RFF 40).) Glatz argues that Professor Schabel’s results are consistent with the internal specifications and certifications from Philip Morris and SWM for PaperSelect wrappers and Merit cigarettes made from those wrappers in the year 2000. (*Id.* at

²⁶ Steidel Depo at 21, 73, 84, 131-132, and 142-143

²⁷ Steidel Depo at 96-97, 137

²⁸ Steidel Depo at 37, 75-76, 93

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123 (citing JX-59C at 8, 26-27, 36-37²⁹; RX-270C; RX-271C; RX-275C at 29-31, 44-45; RX-280C).) Glatz says the results of Professor Schabel's testing measurements were consistent with tests of the same Merit Light cigarettes performed by Mr. Fritzching in the year 2004. (*Id.* (citing Tr. at 818-819 (Schabel); RX-349C).)

Glatz says that Tom Kremer, another of its experts, discussed microscopic examinations he made on PaperSelect wrappers that had been removed from the September 2000 Merit Light and Ultra Light cigarettes, using an optical and scanning microscope, in an effort to determine whether a film was present on the base paper, and he concluded that there was. (*Id.* (citing Tr. at 849-850, 854-855, 871-878 (Kremer); RDX-101-117; RX-384-400).) According to Glatz, neither Mr. Honeycutt nor any other witness on behalf of SWM conducted any similar examination or made use of any photomicrographs to compare the microscopic structure of a highly refined cellulose layer and a film formed by what Mr. Honeycutt called a film-forming composition. (*Id.* (citing Tr. at 2068-69 (Honeycutt)).) Glatz says that Mr. Honeycutt does not disagree with the conclusions arrived at by Mr. Kremer, based on his microscopic examinations, but only disputes the definition of the word "film" as "an extremely thin, continuous sheet of a substance which may or may not been in contact with a substrate" that Mr. Kremer relied on in reaching his conclusions, based on a chemical dictionary he cited. (*Id.* (citing Tr. at 2069-70 (Honeycutt)).) However, argues Glatz, Mr. Honeycutt conceded that if Mr. Kremer's definition of film is correct, then his photomicrographs show the presence of a thin film on the top of the base paper of the PaperSelect wrapper. (*Id.* (citing Tr. at 2070 (Honeycutt)).) Glatz says that Mr. Honeycutt admitted that Mr. Kremer's photomicrographs show the following: 1) a coating, layer, or film of small fibers on the PaperSelect base paper; 2) the coating, layer, or film being

²⁹ Steidel Depo at 19, 93, 95, 132-136

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composed of material that is different from the base paper; and 3) a transition existing between the thin coating, layer, or film and the base paper. (*Id.* (citing Tr. at 2070-71 (Honeycutt)).)

Glatz says that Mr. Honeycutt also admitted that a fibrous slurry of cellulose can form a layer or coating on paper and believes that there is a coating or layer of fibers and other material on the banded regions of PaperSelect. (*Id.* (citing Tr. at 2065, 2096-2098 (Honeycutt)).)

Glatz says that PaperSelect and Merit cigarettes, available by way of test marketing in February 2000 and which became broadly available when they went into national distribution in the middle of that same year, had bands with a Burn Mode Index that was below 8 cm^{-1} , were also below 20 Coresta in permeability, and were made with base paper that was between about 60 and 110 Coresta in permeability. (*Id.* (citing Tr. at 2099-2100 (Honeycutt)).)

Glatz maintains that PaperSelect wrappers and Merit cigarettes made with them anticipate claims 36 and 45 of the '867 patent. (*Id.* at 125.) According to Glatz, SWM's PaperSelect cigarette wrapping papers used to make Merit Light and Merit Ultra Light cigarettes that were sold before November 13, 2000 anticipate every one of the claim elements or limitations in asserted claims 36 and 45. (*Id.*) With regard to claim 36, Glatz says that it requires a paper wrapper including a paper web with a relatively high permeability of about 60 to 110 Coresta, a film forming composition which is applied to the paper web in discrete areas or bands having an air permeability "within a predetermined range sufficient to reduce ignition proclivity by reducing the amount of oxygen that reaches the smoldering coal of the cigarette as it burns and advances into the treated areas. (*Id.* (referencing RDX-92).) According to Glatz, each of these elements is present in SWM's PaperSelect cigarette wrappers and in Philip Morris's Merit Light and Merit Ultra Light cigarettes made with those wrappers, assuming that claim 36 is not limited to {

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}. (*Id.* at 126.) Glatz concedes that, if the asserted claims of the '867 patent are limited to the use of { }, as Glatz believes they should be, the claims would not be met because { }.³⁰ (*Id.*)

Glatz says that SWM's process of making PaperSelect wrappers, the properties of those papers, and the results of tests of cigarettes incorporating those papers have been sufficiently outlined in its brief, and says that the evidence introduced at the hearing establishes that SWM's and Philip Morris's target and actual air permeabilities for the base paper of PaperSelect cigarette wrapping papers sold more than a year before the earliest effective priority date of the '867 patent were 60 and 85 Coresta. The actual measured permeabilities of sold paper wrappers were close to the targeted values. (*Id.*) Glatz argues that Mr. Steidel's testimony and exhibits establish that the Coresta values of the bands or treated areas of the PaperSelect cigarette wrapping papers were targeted to be { } as the absolute maximum. (*Id.* (citing JX-59C at 8-39³¹)). Glatz says that Professor Schabel's examinations demonstrate that the air permeability of the base paper for PaperSelect wrappers that were used to make Merit cigarettes was 82.2 Coresta for the Merit Light cigarettes and 84.4 for the Merit Ultra Light cigarettes, while the air permeability of the bands was measured at 12.8 for the Merit Light cigarettes and 6.8 for the Merit Ultra Light cigarettes. (*Id.* at 127 (citing Tr. at 1207, 1210-11 (McCarty))). Glatz also notes that Professor Schabel measured the Burn Mode Index value of the bands for each of the Merit cigarettes that he examined and found a value of 3.2 for the Merit Light cigarettes and 2.1 for the Merit Ultra Light cigarettes, which are within the less than 8 cm⁻¹ required by the '867 claims. (*Id.*)

³⁰ In that event, Glatz maintains that the claims would still be invalid as having been obvious, an argument made elsewhere in its brief.

³¹ Steidel Depo at 21-22, 73, 84, 131-132, 142-143

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Glatz says that the evidence also shows that SWM's PaperSelect cigarette wrapping paper used in the Merit cigarettes in the year 2000 was formed by applying a "film forming composition" to the base paper at particular locations. (*Id.*) Glatz says the examination results obtained by Professor Schabel and the intent behind SWM's and Philip Morris's development of Merit cigarettes employing PaperSelect wrappers shows that the permeability-reducing composition applied to form bands on the Merit Light and Ultra Light cigarette wrapping papers is a composition that "reduces the permeability of the paper in the areas to which the composition has been applied" and therefore meets this element of the claims under Glatz's proposed construction of "film forming composition." (*Id.*)

Additionally, according to Glatz, Mr. Kremer concluded from his examination of the PaperSelect cigarette wrapping paper used to make the subject Merit cigarettes, that bands constituting a film had been applied to the base paper. (*Id.* at 127-128.) Citing Mr. Kremer, Glatz asserts that this film was in the form of a thin and continuous coating, or layer, on top of the base paper and was easily identified by microscopic examination in the treated areas defined as bands, while present also were untreated areas outside the bands. (*Id.* at 128.) Thus, argues Glatz, this composition that forms the bands in the wrappers of the subject paper constitutes a film under Glatz's proposed construction of the term "film forming composition." (*Id.*)

Glatz says that if SWM's interpretation of the ordinary meaning of film forming composition is adopted, the substitution of a "film forming composition," as defined by SWM, in place of fibrous slurry as used to make PaperSelect, would have been obvious to one skilled in the art. This is especially so because the prior art '753 patent specifically teaches that such fibrous slurries are interchangeable with alginates, pectin, carboxymethyl cellulose and polyvinyl alcohols. (*Id.* (citing JX-1 at 4:41-65).) According to Glatz, the prior art is replete with other

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examples of fibrous slurries and other permeability-reducing materials such as alginates, starches, and carboxymethyl cellulose for creating banded LIP paper wrappers that reduced ignition proclivity of cigarettes made with these materials. (*Id.* (citing RX-442; RX-443; RX-429; JX-1).) Thus, says Glatz, the prior art evidences that there was an awareness that any such permeability-reducing materials would be useful to form bands on LIP paper wrappers, and the substitution of any one of them for another would have been obvious. (*Id.*)

Glatz concludes this aspect of its argument by saying that Merit Light and Ultra Light cigarettes made with SWM's PaperSelect wrappers exhibit the reduced ignition proclivity characteristics required by the asserted '867 claims, a fact that Glatz says was conceded by Mr. Honeycutt. (*Id.* at 128-129 (citing Tr. at 2057-58 (Honeycutt)).) Glatz argues that as the burning coal of the cigarette reaches each of the low permeability bands, oxygen supply through the paper and to the coal is substantially reduced, causing the burning to slow considerably or else extinguish altogether. Glatz points to Philip Morris's product brochure, which provides the following description of the subject Merit cigarette:

Merit with PaperSelect features ultra-thin paper rings that work like speed bumps, causing the cigarette to burn slower when the lit end crosses over them. It may even put itself out when resting in an ashtray. Cigarettes made with this paper were evaluated under a laboratory test method designed by the National Institute of Standards and Technology to measure the likelihood that cigarettes will ignite the three test fabrics specified in this test method. Under this test method, these cigarettes produced fewer ignitions of the three test fabrics as compared to the same cigarettes made without the special paper.

(*Id.* at 129 (quoting RX-350).) Glatz says that Philip Morris itself conducted a mock-up and extinction ignition proclivity test according to what was set forth by National Institute of Standards and Technology and found that the cigarettes significantly reduced ignition propensity as compared to non-banded versions of the same cigarettes. (*Id.* (citing RX-581 at 12-17).)

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Staff sides with Glatz and concludes that there is clear and convincing evidence, sufficient to overcome the presumption of validity under 35 U.S.C. § 282, that the asserted claims of the '867 patent are invalid under the on-sale bar of 35 U.S.C. § 102 (b). (SBr. at 77.) Staff says that the evidence establishes that SWM sold branded LIP paper wrappers to Philip Morris which in turn sold cigarettes made with those wrappers more than one year before the effective priority date for the asserted claims of the '867 patent. (*Id.*) Staff says the evidence also demonstrates that these LIP papers and cigarettes made from them fully anticipated the invention claimed in asserted claims 36, 43, and 45 of the '867 patent, barring their patentability. (*Id.* at 77-78.)³²

Staff says the evidence shows that SWM and Philip Morris initially entered into an agreement in 1992 for co-developing and supplying banded LIP cigarette wrappers made by a Philip Morris method known as the "Moving Orifice Device" or MOD process which resulted in the development of a commercial process to make "PaperSelect" banded cigarette paper wrappers that reduced ignition proclivity by means of integral cellulosic bands that were less permeable than the base paper to which the bands are applied. (*Id.* at 79.) Staff says that this led to sales of Philip Morris cigarettes containing SWM's PaperSelect more than a year before the effective priority date of the '867 patent. (*Id.*)

Staff says that beginning in {

}. (*Id.* at 80 (citing RX-290C).) Staff says that SWM initially sold its

³² Staff also argues that the effective filing date for the asserted claims of the '867 patent is the filing date of the nonprovisional application and not the filing date of the provisional application because there is material in the asserted claims not addressed in the provisional application. (*Id.* at 78-79 (citing JX-2; JX-4).) The Administrative Law Judge found *supra* that the asserted claims are not entitled to the provisional application filing date.

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PaperSelect MOD banded LIP cigarette wrappers to Philip Morris for use in its Merit Light and Merit Ultra Light cigarette brands, and in later years, the number of its brands using the MOD banded wrappers expanded to where today all Philip Morris cigarette brands sold in the United States are made with MOD LIP wrappers purchased from SWM. (*Id.* (citing RX-513).)

Staff argues that the record in this Investigation shows that both SWM's PaperSelect wrappers and Philip Morris's Light and Merit Ultra Light cigarettes made with those wrappers were offered for sale more than a year before November 13, 2001. (*Id.*) Staff says that SWM offered for sale and sold PaperSelect wrappers to Philip Morris by no later than {

}. (*Id.* (citing RX-288C; RX-289C; RX-291C; RX-292C; RX-293C (various written agreements between Philip Morris and SWM)).) Staff says that Philip Morris was selling Merit brand cigarettes made with SWM PaperSelect wrappers to United States consumers by no later than { }. (*Id.* (citing RX-270C; RX-280C (Philip Morris sales-related records).) Staff also cites RX-282 and JX-59C at 87-88, 152-156 (Seidel Depo) as additional evidence in support of its contention that PaperSelect and Merit brand cigarettes were on sale more than a year before November 13, 2001. (*Id.* at 81.) Staff argues that sales dates for the Merit brand cigarettes have been confirmed by manufacturing codes printed on packages of Merit Light and Merit Ultra Light cigarettes. (*Id.* (citing RPX-7; RX510).)

Staff contends that PaperSelect MOD wrappers and Merit cigarettes read on every element of asserted claims 36, 43, and 45 of the '867 patent. According to Staff, claim 36 requires that the paper wrapper include the following: 1) base paper with a "relatively high permeability" of "from about 60 Coresta to about 110 Coresta"; 2) a film-forming composition applied in discrete areas; 3) an air permeability within the treated areas that is "less than about 20 Coresta" that registers a Burn Mode Index of "less than about 8 cm^{-1} thereby reducing the

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amount of oxygen that reaches the smoldering coal of a cigarette and consequently its ignition proclivity. (*Id.* (citing JX-2 at 12:34-52, 13:3-6).)

SWM counters that there were no prior sales under 35 U.S.C. § 102 (b) and the products that are the subjects of the alleged sales did not embody each and every element of the asserted claims of the '867 patent. (CBr. at 130.) According to SWM, to be an on-sale bar, there must be clear and convincing evidence that the product was sold before the critical date, which is November 13, 2000. (*Id.* (citing *Pfaff v. Well Elecs., Inc.*, 119 S. Ct. 304, 311-312 (1998)).) SWM says that Glatz cannot prove that the cigarettes it relies on, the ones that were tested by Drs. Kremer and Fleming, were manufactured or sold in the United States before November 13, 2000. (*Id.*) According to SWM, Glatz contends that over ten years ago Dr. McCarty obtained for Mr. Fritzching the cigarettes that were tested by Dr. Kremer and Dr. Fleming in this investigation; however, Dr. McCarty testified that he did not in any way mark the cigarettes he sent to Mr. Fritzching. (*Id.* (citing Tr. at 1345 (McCarty)).) SWM argues that Dr. Kremer admitted that the cigarettes he tested, which were alleged to be 11 years old and to have been locked in a cabinet all that time, showed no signs of age. (*Id.* (citing Tr. at 895-896 (Kremer)).) SWM points out that Dr. Kremer admitted that he did not know when the cigarette samples he tested were manufactured, obtained, or sold. (*Id.* (citing Tr. at 896-897 (Kremer)).)

SWM argues that, although Glatz contends that the packaging of the cigarettes that were examined indicates that they were manufactured on September 6 and 18, 2000, there is no evidence showing when the cigarettes were actually sold. (*Id.* at 131.) SWM points to the fact that Dr. McCarty testified that he had obtained the samples in question through a contact in the cigarette industry and did not purchase them. (*Id.* (citing Tr. at 1339-40).) Therefore, reasons SWM, Glatz cannot prove that the Merit cigarettes Dr. McCarty obtained were sold prior to the

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critical date of the '867 patent. (*Id.*) SWM says that, given the manufacture date on the packaging and the estimated time it takes for the Philip Morris cigarettes to ship and get to market, these cigarettes would not have been available for retail until after the critical date of the '867 patent. (*Id.*)

In addition, argues SWM, the activities of SWM and Philip Morris fall within the experimental use exception of 35 U.S.C. § 102 (b). (*Id.* (citing *Del. Valley Floral Group, Inc. v. Shaw Rose Nets, LLC*, 597 F.3d 1374, 1379 (Fed. Cir. 2010)).) SWM says that customers often request that SWM provide samples and trials of different products, and {

}.
}

(*Id.* (citing JX-59 at 39, 109-110 (Steidel); JX-60 at 192-193 (Thompson)).) In regards to the instance at hand, SWM says that the amount of bobbins in { } demonstrates Philip Morris's { } (*Id.* (citing RX-270).) SWM argues that Philip Morris's own documents demonstrate that it did not intend to proceed with commercialization of the Merit cigarettes with the PaperSelect papers until 2001. (*Id.* (citing RX-529 at 1).)

SWM says that none of the documents cited to by Glatz identifies when Merit cigarettes with PaperSelect papers went on sale. (*Id.* at 131-132.) SWM argues that evidence shows that during the 1999-2000 time frame, Philip Morris was still experimenting with its Merit cigarette. SWM says that Glatz has not proven when these cigarettes were commercially available, and thus, the evidence is not clear and convincing that the Merit cigarettes relied on were in fact manufactured or sold in the United States before November 13, 2000. Therefore, argues SWM, there is no on-sale bare under 35 U.S.C. § 102 (b). (*Id.* at 132.)

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SWM also contends that PaperSelect is not invalidating prior art because it does not have a film forming composition. (*Id.*) SWM argues that PaperSelect paper used in the Merit Light and Ultra Light cigarettes was not made with a film forming composition as required by the asserted claims of the '867 patent. (*Id.* at 133.) Instead, argues SWM, PaperSelect was made by a MOD process where a cellulosic slurry, not a film forming composition, was applied. (*Id.*) SWM says that RX-496C, which Glatz relies on, shows the use of flax fibers and chalk (calcium carbonate) which Mr. Honeycutt testified is cellulosic slurry and not a film former. (*Id.* (citing Tr. at 2024-25 (Honeycutt)).) Moreover, argues SWM, the images and measurements presented by Dr. Kremer, who took pictures of PaperSelect papers, are consistent with what would be expected for the application of a cellulosic slurry or suspension to a wet paper pulp, not a film to paper. (*Id.*) SWM says that even though Glatz relies on Dr. Kremer to establish that the bands on the Merit Cigarettes he examined form a film, he admitted that when he wrote his expert report that he had not even considered the '867 patent in reaching his conclusions on film forming composition. (*Id.* (citing Tr. at 889-890 (Kremer)).) Further, according to SWM, Dr. Kremer also admitted to not reviewing the ingredients contained in the cigarette wrappers he reviewed. (*Id.* (citing Tr. at 892 (Kremer)).) SWM says that Dr. Kremer testified that all of his inspections were merely visual and he did not analyze the actual composition of the bands. (*Id.* (citing Tr. at 906, 908, 920-921).)

SWM says that Dr. Kremer could not deny that both the base paper and the banded areas he tested reflect a fibrous network and admitted when asked at the hearing that he could not distinguish between the base paper and the band when reviewing his pictures. (*Id.* at 134 (citing Tr. at 912-914, 917 (Kremer)).) SWM says that despite admitting that there is a distinction between particles, fibers, and films, Dr. Kremer concluded that the Merit cigarette papers have a

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film and therefore his conclusions are inconsistent and do not establish that PaperSelect paper has a film forming composition. (*Id.*) SWM says that persons of ordinary skill in the art would understand that applying a film forming composition to a wet paper pulp is substantially more difficult than applying an additional layer of flax fibers and chalk such as on the Merit Light and Ultra Light cigarette wrappers. (*Id.*) In addition, according to SWM, unlike cellulose banded papers which reduce band permeability simply by adding more cellulose, print banded wrappers using high permeability base sheets require the application of more film forming composition to reduce the base sheet permeability in the banded regions, further increasing the amount of chemicals on the wrapper that could cause taste or other acceptance problems. (*Id.*) Thus, PaperSelect and cigarettes made from PaperSelect do not meet the film forming composition element of the asserted claims of the '867 patent, according to SWM. (*Id.*)

SWM argues that claim 36 requires "providing a paper wrapper comprised of a paper web, said paper web having a relatively high permeability, the permeability of the paper web being from about 60 Coresta to about 110 Coresta; applying a film forming composition, to said paper wrapper...." (*Id.* at 134-135 (citing JX-2 at claim 36).) SWM says that Glatz and Staff failed to prove that the coating applied to PaperSelect papers is applied to a paper web with permeability being from about 60 CU to about 110 CU. (*Id.* at 135.) SWM says that Glatz's only support for this contention was in its Pre-Hearing Brief where Glatz argued that the BCP Paper Making Operations Manual as well as a paper supply agreement, made clear that the MOD process applied a film forming composition to a paper web. (*Id.* (referring to Glatz PHB at 136-137).) SWM says that not even Glatz's own expert, Dr. McCarty, could opine on this issue and the two documents referred to by Glatz do not prove whether the MOD process meets this claim element. (*Id.*)

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SWM says that Mr. Steidel, a SWM employee at Spotswood, the location where MOD paper is manufactured, explained how the MOD process actually worked. He said that when the paper passed under the MOD chamber where the bands are applied, the {

}

(*Id.*) SWM says that it is understood in the art that during cigarette production the fibers remain as slurry or pulp for the entire length of the wire section. (*Id.* (citing RX-443 at Fig. 1; Tr. at 1329 (McCarty); CFF-V-38)).) SWM says on the wire section the slurry contains about 80 percent water and 20 percent solids, and the fibers only become known as a “papersheet” or “paper web” after they reach the press section, where the water is reduced to approximately 60 percent. (*Id.*) Moreover, argues SWM, neither Glatz nor Staff provided the permeability of this wet paper pulp at the time the bands were applied and therefore there is no way to determine whether the wet pulp had a permeability from about 60 CU to about 110 CU at the time the bands were applied as required by the ‘867 patent. (*Id.*)

SWM says that the two documents Glatz relies on do not support Glatz’s position because the BCP Paper Operations Manual does not prove that during the MOD process the bands were applied on a paper web having a permeability from about 60 CU to about 110 CU. The document states that {

} implying that the paper web has not yet formed. (*Id.* at

136 (citing RX-496 at 7).) SWM argues that the document continues to state that {

} again implying that the base sheet has

yet to dry and form a web. (*Id.*) SWM argues that the BCP Paper Making Operations Manual

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does not mention the ability to even measure the permeability of the wet paper pulp on which the bands are being applied. Furthermore, the paper supply agreement that Glatz relies on is not a technical document and therefore cannot be used to establish whether the bands are applied to a paper web having a porosity between about 60 CU and about 110 CU. (*Id.*) SWM says Dr. Kremer and Dr. McCarty did not review documents or have any understanding of how the Merit cigarette paper wrappers were produced. (*Id.* (citing Tr. at 892 (Kremer), 1343-44 (McCarty)).)

In its reply brief, SWM argues that the evidence shows that the dates on the cigarette boxes are manufacturing dates, not dates of sales. (CRBr. at 82 (citing Tr. at 2065-66 (Honeycutt); RX-510; CRRFF-252; CRRFF-260; CRSFF-187-190).) SWM says that, according to several Philip Morris documents, it could take up to six weeks or even longer for a product to go from a manufacturing warehouse to a commercial sale location. (*Id.* (citing RX-584 at 2, which includes the statement, “Philip Morris U.S.A. will begin shipping Merit Cigarettes with PaperSelect the week of July 17, which should result in widespread retail availability by early September, 2000.”).) SWM argues that Glatz provided no evidence of the amount of time a product went from production to commercial sales locations, but it can be assumed that it took additional time. (*Id.*) As such, argues SWM, the manufacturing dates shown on the cigarette packages do not demonstrate any “on-sale” date. (*Id.*) Moreover, argues SWM, the documentation that Glatz and Staff rely on for establishing retail sales of Merit cigarettes with PaperSelect all identify plans to begin shipping of the Merit cigarettes, and do not disclose when they actually shipped, much less when they were sold.

Glatz says that there exists detailed evidence of SWM’s sales of PaperSelect wrappers to Philip Morris as early as { } and Philip Morris’s test market of Merit cigarettes made from those wrappers in early 2000, with nationwide introduction in mid- 2000. (RRBr. at 105

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(citing RFF 38-41).) Glatz argues that the evidence establishing these dates of sales and production includes sworn testimony from Dr. McCarty, Mr. Honeycutt, SWM's corporate witness Mr. Steidel, and Mr. Fritzching, as well as contemporaneous press releases, newspaper articles, original packaging, internal documents from Philip Morris, and SWM's own records, including sales data, and product certifications. (*Id.* (citing RFF 38-41).) Glatz argues that the testimony and documentation are extensive and consistent, beginning with the start of cooperation between Philip Morris and SWM and continuing through initial wrapper sales, test market, and national roll-out. Glatz says the evidence provides a clear and convincing record of what was sold and when, including contemporaneous reactions of cigarette companies and cigarette paper manufacturers when they first examined Merit Light and Ultra Light cigarettes in mid-2000. (*Id.* at 105-106.)

Glatz says that SWM's only answer to the evidence Glatz has cited is a mixture of out-of-context statements from a few selected documents and unsupported speculation. (*Id.* at 106.) Glatz argues that SWM's own expert, Mr. Honeycutt, who acquired and tested the Merit cigarettes well before the critical date for the '867 patent, resolves any doubts in the matter. (*Id.* (citing Tr. at 2054-61 (Honeycutt)).) Glatz argues that the documentary record, including many Philip Morris and SWM agreements leading up to SWM's sales of PaperSelect to Philip Morris and the plainly commercial—and well publicized—nature of the sales of Merit cigarettes by Philip Morris in 2000, press releases and news articles, and the acquisition of Merit cigarettes from public sources by Dr. McCarty and Mr. Honeycutt in 2000 establish that there was no “experimental” purpose behind the cited activities that constitute commercial sales from late 1999 through 2000 and beyond. (*Id.*)

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Glatz says that Mr. Kremer did not need to know what materials were used to form the bands or how they were applied in order to see and photograph the thin layers, coatings, and films deposited on the base paper. (*Id.* at 107.) Glatz says that even Mr. Honeycutt conceded that the Kremer photomicrographs show a thin film, coating, or layer of a material different from the base paper and if Glatz's proposed construction of film is adopted, the photomicrographs show a film. (*Id.* (citing Tr. at 2070 (Honeycutt)).)

Glatz protests that SWM has belatedly raised the issue of whether the on-line MOD process used to make PaperSelect applies the permeability reducing materials to a "wrapper comprised of a paper web." (*Id.* (referring to CBr. at 134-136).) Glatz says this argument is refuted by Mr. Honeycutt's testimony that he does not dispute that the band materials applied to a paper wrapper, by SWM's previous infringement allegations {

}, and by SWM's own documents. (*Id.* (referencing ROCFF-V-38).)

Moreover, argues Glatz, if SWM's argument on this point is even considered, one skilled in the art understands that paper is being formed on the wire of the paper making machine, and in the MOD process, the bands are applied beyond the "dry line" and therefore are deposited on a paper sheet or wrapper. (*Id.* (citing JX-59 at 30 (Steidel Depo), Tr. at 1329-30 (McCarty); ROCFF-V-38).)

The Administrative Law Judge concludes that the priority date of the asserted claims of the '867 patent is November 13, 2001, for the reasons discussed above in Section V.B.1.a, and, consequently, finds that PaperSelect wrappers and Merit Light and Ultra Light cigarettes precede the invention of the '867 patent as claimed in the asserted claims, for the reasons and evidence

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advanced by Glatz and Staff, discussed above. *See* 35 U.S.C. §102(b)³³. Mr. Steidel provided testimony establishing, through SWM's records, that SWM offered for sale and sold MOD banded LIP cigarette wrapping papers, identified as PaperSelect, to Philip Morris in the United States for use in Merit Light and Merit Ultra Light cigarettes beginning { } and continuing through at least { }. (JX-59C at 7-10; RX-270C; RX-271C; RX-280C; RX-283C.) Philip Morris used PaperSelect wrappers it purchased from SWM to make Merit cigarettes for sale to United States customers starting in the first half of the year 2000.

³³ It is irrelevant to the on sale bar inquiry whether SWM knew at the time of the PaperSelect sales that the invention as claimed in the asserted claims of the patent at issue was being sold. (*Abbott Laboratories v. Geneva Pharmaceuticals*, 182 F.3d 1315, 1318-19 (Fed. Cir. 1999). In *Abbott*, the Federal Circuit explained:

The invention at issue in this case clearly meets the *Pfaff* test. Even though the parties did not know it at the time, it is undisputed that Form IV was the subject matter of at least three commercial sales in the United States before the critical date. It is also clear that the invention was "ready for patenting" because at least two foreign manufacturers had already reduced it to practice. *See Pfaff*, 525 U.S. at — n. 2, 119 S.Ct. at 307 n. 2, 48 USPQ2d at 1642 n. 2 ("A composition of matter is reduced to practice when it is completely composed.") (citing *Corona Cord Tire Co. v. Dovan Chem. Corp.*, 276 U.S. 358, 383, 48 S.Ct. 380, 72 L.Ed. 610 (1928)). Furthermore, the statutory on-sale bar is not subject to exceptions for sales made by third parties either innocently or fraudulently. *See Evans Cooling Sys., Inc. v. General Motors Corp.*, 125 F.3d 1448, 1453-54, 44 USPQ2d 1037, 1040-42 (Fed.Cir. 1997). The fact that these sales were not made by Abbott is therefore irrelevant.

Abbott insists that there can be no on-sale bar unless conception of the invention has been proved, and that the lack of knowledge of the exact crystalline nature of the material that was sold precludes there having been a conception. We disagree that proof of conception was required. The fact that the claimed material was sold under circumstances in which no question existed that it was useful means that it was reduced to practice. In any event, this is not a priority dispute in which conception is a critical issue. The sale of the material in question obviates any need for inquiry into conception.

(*Id.*)

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(RFF-38.) These sales took place to the public³⁴ more than a year before the filing date of the nonprovisional application for the '867 patent. These PaperSelect wrappers included base paper permeabilities of 60 and 85 Coresta and band permeabilites of about 9 Coresta, thus falling within the scope of the limitations of claim 36. (RFF-39.) Production codes on the packages of cigarettes that were examined by Professor Schabel and Mr. Kremer show that they were produced in September 2000. (Tr. at 787-788 (Fritzching).) The fact that the precise cigarettes that were examined or tested by Professor Schabel and Mr. Kremer were not shown to have been purchased does not foreclose the conclusion that they comprise, among other things, PaperSelect wrappers of the kind made by SWM and sold to Philip Morris for manufacturing Merit cigarettes and sold by Philip Morris to customers more than a year before the '867 patent was filed.

Professor Schabel measured the Burn Mode Index values of the bands for each of the Merit cigarette brands retained by Mr. Fritzching and determined the value of the Merit Light cigarettes to be 3.2 and for the Merit Ultra Light cigarettes to be 2.1, thereby fulfilling the less than 8 cm^{-1} limitation of claim 36. (Tr. at 815-817 (Schabel).) Professor Schabel also measured the air permeabilities of the base paper and found it was 82.3 Coresta for the Merit Light cigarettes and 84.2 for Merit Ultra Lights, within the range of 60 to 110 Coresta mentioned in claim 36. Thus, the Administrative Law Judge finds that the permeability limitations of claim 36 are met.

Mr. Kremer of IPS Testing examined the bands using a light and scanning electron-microscopy and determined that there was a thin coating or film deposited on the surface of the base paper that was not present in other, untreated areas of the paper, and that film was

³⁴ This also raises the issue of whether the asserted claims would be equally invalid for "public use" pursuant to 35 U.S.C. §102(b). *New Railhead*, 298 F.3d at 1297 (public use includes any use of the claimed invention by a person other than the inventor who is under no obligation of secrecy).

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continuous and easily identified. (Tr. at 849-850, 854-855, 871-878 (Kremer).) Thus, the Administrative Law Judge finds that the film forming composition element of claim 36 is also met.

With respect to SWM's argument that the evidence does not show that the MOD process deposits a layer or coating on a paper web, the Administrative Law Judge concludes that this is a new argument that has been raised belatedly by SWM and should not be considered at this late point. Specifically, this argument made by SWM regarding the necessity for "paper web" to be fully realized before application of the film forming composition introduces matter not put in issue at the hearing: the construction of the term "paper web" and what criteria establish its existence. In addition, SWM's argument imposes an ordering of steps not shown to be essential to the invention. The preamble of the claim recites, "A process for producing a paper wrapper having reduced ignition proclivity characteristics when incorporated into a smoking article comprising the following steps[.]" (JX-2 at 12:34-36.) The claim then describes the steps as "providing a paper wrapper comprised of a paper web, said paper web having a relatively high permeability, the permeability of the paper web being from 60 Coresta to about 110 Coresta;" and "applying a film-forming composition, to said paper wrapper at particular locations...." (*Id.* at 12:37-42.) A proper reading of this claim only suggests that the paper wrappers, comprised of a paper web, have a permeability of about 60 Coresta to about 110 Coresta, and that a composition of materials is applied so that a film is present on the paper wrappers at discrete areas so that a paper wrapper is provided meeting the permeability standards set forth in the claim. There is nothing in the claim or the specification that requires that the film forming composition be applied off-line and, in fact, the specification states: "The manner in which the

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composition is applied to the paper wrapper can vary. For example, the composition can be sprayed or printed onto the wrapper.” (JX-2 at 9:21-23.)

SWM has not provided a satisfactory evidentiary basis for why at this juncture it should not be held to the testimony given at the hearing by its witness, Mr. Honeycutt, who testified that there is no requirement in claim 36 that the process for producing the wrapper be on-line or off-line. (Tr. at 2063-64 (Honeycutt).) In fact, Mr. Honeycutt testified that even though this is a process claim, he read it as basically a patent that describes a wrapper (*id.*), which justifiably leads to the conclusion that the paper web is the basis of the end product even if, arguably, the “paper web” is nascent until the pulp reaches a certain level, which has not been specified, of moisture content.

In JX-67 the parties entered into a Joint Stipulation Regarding Technology, and nowhere therein, except in the actual quotation of claims 1 and 36, is there any mention of “paper web” or discussion of how it is implicated in the parties’ dispute. Paragraph 6 of JX-67 states:

The general process for making paper starts with a water slurry of wood pulp, flax pulp, or a combination thereof. This slurry can be refined and filler, such as calcium carbonate (“chalk”), added. Screens can be used to remove any extraneous materials. The pulp slurry is fed into a headbox. Slurry from the headbox is uniformly deposited across a moving wire mesh. Along the wire, gravity and a series of vacuum boxes remove water from the material. The material then enters one or more press and drying sections where even more water is removed. At the end of the process, the finished sheet is wound onto a reel.

In succeeding paragraphs there is a description of various methods of applying the bands that make up the areas of reduced permeability, such as gravure printing (§ 9), flexographic printing (§ 10), screen printing (§ 11), spray painting (§ 12), and the moving orifice device (MOD) (§ 13). In each case the stipulation describes applying the bands to a substrate, never mentioning the term “paper web” or how that term is implicated in the technology at issue. In the course of the technology tutorial given by SWM’s counsel prior to the start of evidentiary portion of the

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hearing, he described the paper making process but never mentioned the term “paper web” or the point in the process when it appears. (Tr. at 13-17.) In his presentation, he said there are many way to add bands or treatment to “cigarette paper” (*id.* at 18), such as relief printing (*id.* at 19), gravure printing (*id.*), offset printing (*id.*), direct gravure printing (*id.* at 20) and MOD, or moving orifice device (*id.* at 21-22). There was no mention that any of these applications did not involve applying the banded material to “cigarette paper” and no intimation of any issue with respect to whether the existence of a “paper web” was pertinent to any of these applications. In summary, SWM’s argument that proof of invalidity of the ‘867 patent requires evidence that a film forming composition was applied to a paper web is rejected as having been waived.

For the foregoing reasons, the Administrative Law Judge concludes that the asserted claims of the ‘867 patent are invalid under 35 U.S.C. § 102 (b).

c) Allen—United States Patent No. 5,474,095

Glatz asserts that the asserted claims of the ‘867 patent are invalid as anticipated by the prior art disclosed in U.S. Patent No. 5,474,095 issued to Allen *et al.* (“Allen”). (RBr. at 130.) Glatz says that the Allen patent teaches an on-line process for making cigarette wrapping papers by applying cellulosic bands to the paper to impart special burn characteristics to cigarettes made with the wrapper. (RBr. at 130 (citing RX-443 at 1:38-41).) Glatz says this is very clearly a reduction in ignition proclivity, especially when combustion terminates altogether. (*Id.* (citing RX-443 at 4:16-20; Tr. at 1121-23 (McCarty)).) Glatz argues that both base paper porosity (25-60 Coresta) and band porosity (up to 10 Coresta) are taught in the Allen patent; so is suitable band width and spacing. (*Id.* (citing RX-443 at 4:5-15, 31-41; Tr. at 1124 (McCarty)).)

Glatz says the Allen patent describes every one of the claim limitations in claims 36 and 45 of the ‘867 patent and thus anticipates and invalidates these claims under 35 U.S.C. § 102.

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(*Id.*) With respect to claim 36, Glatz says it requires a base paper web having a permeability from about 60 Coresta to about 110 Coresta, discrete areas or bands made from a film forming composition, air permeability within the bands of less than about 20 Coresta, a Burn Mode Index within the bands of less than about 8 cm⁻¹, and the ability on the part of the discrete areas or bands to reduce ignition proclivity by reducing the amount of oxygen that reaches the smoldering coal as the cigarette burns and the coal advances into the discrete areas. (*Id.* at 131.)

Glatz argues that each of these elements is present in Allen. (*Id.*) Allen describes a reduced ignition proclivity cigarette paper that includes a paper wrapper or paper web, says Glatz. (*Id.* (citing Tr. at 1121-23 (McCarty); RX-443 at 4:16-30).) Also, Allen states that the “porosity of wrapping materials normally found in smoking articles such as cigarettes is about 25-60 Coresta,” which overlaps by at least 12 Coresta the range of air permeability for the base paper recited in claim 36, Glatz argues. (*Id.* (citing Tr. at 1124 (McCarty)).) Glatz says the bands of the paper described in Allen have an air permeability of “up to about 10 Coresta,” which is within the range of “less than about 20 Coresta” of claim 36. (*Id.* (citing RX-443 at 4:10-13).) Glatz says the bands described in Allen are discrete and cross-sectional regions, the widths of which are preferably 3-7 millimeters and are separated by untreated regions of preferably 15-30 millimeters. (*Id.* (citing RX-443 at 4:35-40, 57-61; Tr. at 1128-29 (McCarty)).)

Glatz says that the Allen bands are made using a film forming composition according to its definition of that term—pulp, highly refined pulp, high surface area cellulosic fibers, microcrystalline cellulose or a mixture of highly refined pulp and calcium carbonate. (*Id.* (citing RX-443 at 3:21-28).) According to Glatz, these materials are film forming compositions under the proper construction of the term and are specifically defined as such in the ‘753 patent (JX-1 at 4:41-65) which is incorporated by reference into the ‘867 patent. (*Id.* at 131-132.) Glatz says

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the material that makes the bands forms a layer or coating on the base paper web that reduces permeability in the areas to which the material is applied. (*Id.* at 132 (citing RFF at 46).) Glatz says that Allen states that a smoking article, such as a cigarette, made with its banded paper “will smolder for about 0.5-4 minutes before extinguishing” and the time-to-extinguishment “can be determined and manipulated” by simple experimentation with the band parameters, that is, the width of the bands and the spacing between the bands and any burn additives that are used. (*Id.* (citing RX-443 at 4:20-30; RFF at 42).) Glatz says that Allen also describes the mechanism that causes the reduction in burn rate: “it is believed that oxygen must diffuse through the paper to the burning tobacco to support combustion; when oxygen has difficulty passing through the paper [such as when the burning coal advances to the band region of the wrapper], the rate of combustion decreases.” (*Id.* (citing RX-443C at 3:63-4:3; Tr. at 1130 (McCarty)).) As regards the Burn Mode Index, Glatz acknowledges that Allen does not provide such information, but Glatz says a determination of such information can still be arrived at based on what is included in Allen. (*Id.*)

Glatz, acknowledging that all three asserted claims³⁵ of the ‘867 patent mention that “said treated areas [the bands] having a Burn Mode Index of less than about 8 cm^{-1} ,” says that Burn Mode Index (“BMI”) is a measurement promoted by SWM as a predictor of low ignition proclivity characteristics, although the prior art, including SWM’s own ‘753 patent, never mentions BMI. (*Id.* at 132-133.) Consequently, according to Glatz, this raises the issue whether the prior art teaching, insofar as it is silent regarding BMI, but does provide low band Coresta values for LIP paper, can be shown to have BMI’s below that which is specified in the asserted claims of the ‘867 patent. (*Id.* at 133.) Glatz contends that they can, and Glatz argues that SWM

³⁵ It should be noted that while Glatz references “all three asserted claims,” Glatz only argues that claims 36 and 45 of the ‘867 patent are anticipated by this reference.

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should not be permitted to re-patent old technology by dressing it up with an additional measurement of an old, inherent property. (*Id.*)

Glatz points to the '867 patent at 6:43-56, which describes the BMI measurement and its correlation to reduced ignition proclivity characteristics:

Besides permeability, another measurement that can be used to indicate reduced ignition proclivity properties is Burn Mode Index. In fact, the Burn Mode Index of a paper wrapper can be more accurate in indicating the burning characteristics in a paper as opposed to simply measuring the permeability of the paper.

(JX-2.) Glatz says that this disclosure shows that BMI is merely “another measurement” that “can be used” to “indicate reduced ignition proclivity properties,” in addition to the permeability, or Coresta value, of the bands. (*Id.*) Glatz says that while BMI “can be more accurate” than “simply measuring” permeability, both BMI and Coresta permeability values in a band signal the same ability of the band to impart ignition proclivity characteristics to a cigarette made with the banded wrapper, and for that purpose, both techniques are measuring for the same characteristic and are reflecting the same property, reduced ignition proclivity. (*Id.* (citing RFF 47).)

Glatz says the '867 patent states that the permeability of the bands should be “within a range which is known to provide improved ignition proclivity characteristics” for the resulting cigarette (*id.* (citing Tr. at 2080-81 (Honeycutt))) and this range of “known” permeability that provides “improved ignition proclivity” in a cigarette is “less than 20...CORESTA, particularly less than 12...[CORESTA], and generally within a range of 2 to 8...[CORESTA].” (*Id.* (citing JX-2 at 6:28-31, 36-39; Tr. at 2082-83 (Honeycutt))). According to Glatz, this admittedly “known” range of band permeability that imparts reduced ignition proclivity characteristics to the resulting cigarette is confirmed by the prior art, such as the '753 patent, which says that the “bands...have a permeability within a range which is known to provide improved ignition

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proclivity characteristics” for the resulting cigarettes (*id.* (citing JX-1 at 5:50-52)), which is “less than 6...CORESTA, and generally within a range of 2 to 6” CORESTA. (*Id.* (citing JX-1 at 5:57-60).) Glatz says that if the band CORESTA range of the prior art ‘753 patent is used, Mr. Honeycutt agreed that he would expect that bands treated with film forming compositions would reduce ignition proclivity for the make-up cigarette. (*Id.* (citing Tr. at 2084-85 (Honeycutt)).) Therefore, concludes Glatz, the ‘867 patent teaches the following: 1) band BMI is just another measure of reduced ignition proclivity; 2) band BMI is an alternative to using band permeability for the same purpose, and both measurements correlate with reduced ignition proclivity; 3) band BMI values which produce reduced ignition proclivity properties “can be generally less than about 8;” 4) band permeabilities “known to provide improved ignition proclivity characteristics” are less than 20 CORESTA and in particular from 2 to 6, and 5) therefore, band permeability of less than 20 is also expected to have a band BMI of less than 8. (*Id.* at 134-135 (citing RFF 48).)

Glatz says that Mr. Honeycutt testified that in all of the work and investigation he has done as an expert for SWM in this Investigation he has “never seen a band of a LIP cigarette with a CORESTA measuring less than 20 and a BMI greater than 8.” (*Id.* at 135 (citing Tr. at 2075 (Honeycutt); RFF 49).) Glatz says that Mr. Honeycutt never asked SWM if it had ever seen a band with a CORESTA of less than 20 and a BMI greater than 8 and never tried to create such a band himself; nor had he heard of anyone else trying to create such a band. (*Id.* (citing Tr. at 2076 (Honeycutt)).) Glatz argues that all of the evidence, including SWM’s extensive studies of the relationship between BMI and CORESTA values in banded low ignition proclivity cigarette wrappers, establishes that bands with a CORESTA value below 20 also will have a BMI below 8, and consequently, when the prior art describes a LIP cigarette wrapper with band CORESTA below 20, that band necessarily will also have a BMI value below 8. (*Id.*)

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Therefore, concludes Glatz, the prior art, such as the '753 patent that expressly teaches band CORESTA values in the range of 2 to 6 most certainly had a band BMI below 8 even though BMI was never expressly mentioned in the prior art. (*Id.* at 135-136 (citing Tr. at 2076-77 (Honeycutt)).)

Glatz refers to a variety of evidence for support of its contention that a band CORESTA is below 8, including a SWM paper³⁶ presented at a CORESTA meeting containing data showing that band CORESTA values below 20 also have BMI values substantially below 8; a collection of SWM data³⁷ demonstrating that when the band CORESTA value is below 20, the band BMI will be below 8, and in fact, below 2; and SWM documents³⁸ discussing the direct relationship between band air permeability (CORESTA) and BMI values. (*Id.* at 135 (citing Tr. at 1114-18 (McCarty); RDX-88).) Glatz says the reason for the correlation between band BMI and CORESTA permeability, where CORESTA values below 20 equate with BMI below 8, is that both values depend on the porosity of the bands, and a film forming composition that reduces permeability does so by closing pores in the base paper and simultaneously lowering the BMI value. (*Id.* at 136-137 (citing Tr. at 2077-78 (Honeycutt)).) Glatz says that, based on this evidence, Dr. McCarty concluded that a banded LIP cigarette wrapper having a measured band permeability value below 20 CORESTA would also necessarily have a band BMI value below 8, as recited in each of the asserted '867 claims. (*Id.* at 137 (citing Tr. at 1116-18 (McCarty); RFF 49).)

Glatz resorts to other patents to fortify its argument regarding the relationship between BMI and CORESTA, noting that the '867 patent incorporates by reference an earlier SWM

³⁶ RX-344.

³⁷ RX-1367.

³⁸ CX-712C at 4, RX-3 at 14, and RX-10C.

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patent to Hampl, the '775 patent (JX-10), which affords a fuller description of the BMI test. (*Id.*) Glatz says that Hampl '775 teaches wrappers for reduced ignition proclivity cigarettes made by gluing bands of preformed paper material at selected locations along the length of the cigarette. These bands normally will not sustain combustion of the resulting cigarette and have a BMI between 0 and 4, and will thus cause a cigarette to self-extinguish when the coal reaches the low BMI bands. (*Id.* (citing Tr. at 1102-03 (McCarty); JX-10 at Abstract, 2:14-37, 2:38-44).) Glatz argues that Hampl '775 explains that BMI "is a direct measure of a cigarette paper's ability to sustain continuous combustion of a cigarette supported in air" and further that BMI "correlates very well with the ability of the wrapper to support combustion of a cigarette." (*Id.* at 137-138 (citing Tr. at 1103-04 (McCarty); JX-10 at 2:41-43, 3:26-28).) Glatz says that to "obtain a desired level of reduction in the ignition proclivity of the smoking article," Hampl '775 teaches that the bands preferably have a BMI of from about 0 to about 2 as compared with conventional wrappers having substantially higher BMI that is above 10, and usually in excess of 15. (*Id.* at 138 (citing JX-10 at 4:30-41).) Glatz says that Hampl '775's Example 1 shows that when the CORESTA value of the band is zero the BMI value is also zero. (*Id.* (citing JX-10 at 6:6-9; Tr. at 1104-05 (McCarty)).) Thus, says Glatz, Hampl '775 discloses that the lower the BMI value in a band of a cigarette wrapper, significantly below 8, the greater "a reliable self-extinction or at least a reduction in the ignition proclivity in the banded zone." (*Id.* (citing JX-10 at 5:24-35).)

Glatz says that column 1, lines 53 to 60 of Hampl '775 refer to yet another and earlier patent, U.S. Patent No. 4,615,345 to Durocher (RX-434), which describes cigarette wrapper constructions for reduced ignition proclivity, comprising either single or double wraps of paper, that are inherently incapable of supporting free burn of a cigarette and will reliably self-extinguish cigarettes made from that wrapper. (*Id.* (citing Tr. at 1105-06 (McCarty); RX-434 at

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Abstract).) Glatz says the BMI value of this paper is very low, from about 1.5 to about 6 for the single wrap embodiment, and about 0.1 to about 4 for the inner wrap of the double wrap embodiment. (*Id.* (citing Tr. at 1106-07 (McCarty)).) Glatz says that Durocher treats this non-combustible paper with bands of a burn promoter to cause the paper to burn in the treated area, thereby providing alternative bands of burnable and non-burnable paper wrapper, the non-burnable areas or bands having a BMI value below 6 causing the cigarette to self-extinguish. (*Id.* (citing RX-434 at 2:9-65; Tr. at 1106 (McCarty)).)

Glatz argues that Durocher, like Hampl '775, teaches that BMI is a "direct measure of a cigarette paper's ability to sustain continuous combustion of a cigarette supported in air" and that BMI "correlates very well with the ability of the wrapper to support combustion of a cigarette." (*Id.* at 139 (citing RX-434, at 3:34-39, 43-45; Tr. at 1107 (McCarty)).) Glatz argues that Durocher explains that the normal high BMI value of a cigarette paper wrapper can be lowered to a level that will extinguish the burning coal because of a lack of oxygen by treating or coating the paper with a variety of film forming materials such as starch, carboxymethyl cellulose, and guar gum, all of which are film forming compositions as described in the '867 patent. (*Id.* (citing RX-434 at 7:16-46, 10:35-62; Tr. at 1107-08 (McCarty)).) According to Glatz, Durocher teaches that the BMI value of cigarette wrappers that will not sustain combustion are well below 8—about 1.5 to 6—whereas conventional wrappers that will sustain combustion have BMI values greater than 10. (*Id.*) Glatz argues that, as in the case of Hampl '775, Durocher teaches that BMI correlates with the ability of a paper to support composition [sic "combustion"] of a cigarette. The lower the BMI value, the greater the likelihood that a band of low BMI will cause the cigarette to self-extinguish. (*Id.* (citing Tr. at 1105-08 (McCarty)).)

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Glatz also alludes to another SWM patent, Hampl '403 (U.S. Patent No. 6,568,403 (RX-459)), which Glatz says has an effective prior art reference date of June 22, 2000 and teaches a reduced ignition proclivity wrapper with a specified BMI value that can be coated in bands with an aqueous film forming solution composed of such things as alginate and cellulosic polymers. (*Id.* (citing RX-1359 at 12:16-26; Tr. at 1108-09 (McCarty)).) Glatz says the burn rate of the cigarette can be further reduced by applying the techniques described in both the '753 patent and another patent, Baldwin '228, discussed below, which are incorporated by reference into Hampl '403. (*Id.* (citing Tr. at 1110-11 (McCarty); RX-1359 at 19:3-11).) Glatz argues that the Hampl '403 provisional application discussed the Diffusion Conductance Index ("DCI"), which Glatz says is simply another name for BMI, and according to Hampl '403, "correlates very well with the ability of the wrapper to support combustion of a cigarette." (*Id.* (citing RX-1359 at 13:21-14:7; Tr. at 1110 (McCarty)).) Thus, says Glatz, like Hampl '775 and Durocher, the Hampl '403 prior art teaches that BMI values reflect the ability of a paper to support combustion and that the lower the BMI value, the less likely the paper is to allow continued burning and the more probable it is that a low BMI band will cause the cigarette to self-extinguish. (*Id.*) Glatz argues that, like Durocher, Hampl '403 teaches that applying a film forming composition will lower the BMI value and reduce ignition proclivity still further. (*Id.* (citing Tr. at 1108-11 (McCarty)).)

Glatz says that a person skilled in the art, knowing from these teachings that a cigarette paper wrapper having bands with low BMI values (well below 8), including bands treated with a film forming composition that lowers both permeability and BMI, would thus know to use low BMI value bands having reduced ignition proclivity characteristics made from such a wrapper. (*Id.*) In light of this, argues Glatz, BMI is simply another measure of the inherent ability of the bands to allow oxygen to pass through the paper wrapper and is directly related to reduced

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ignition proclivity, like the band CORESTA values described in Allen. Therefore a BMI of “less than 8 cm^{-1} ” in a cigarette wrapper band will be met by any treated band with an air permeability of less than about 20 CORESTA. (*Id.* at 139-140 (citing Tr. at 1129 (McCarty)).) Glatz reasons that the bands described in the Allen patent, which have an air permeability value of less than 10 CORESTA, necessarily meet the “less than about 8 cm^{-1} ” BMI requirement, concluding that Allen anticipates every one of the elements recited in claim 36 of the ‘867 patent. (*Id.* at 140-141.)

SWM says that Allen does not disclose with sufficient specificity any of the following elements: (1) applying a film forming composition at particular locations to a relatively high permeability paper web to reduce ignition proclivity; (2) a Burn Mode Index (BMI) of less than about 8 cm^{-1} ; and (3) the claimed permeability range of about 60 to 110 Coresta. (CBr. at 123 (citing Tr. at 1994-95 (Honeycutt)).) SWM says that Allen applies additional cellulosic material to create bands of increased base weight, discloses only base sheet permeabilities of 25-60 Coresta with specific examples at 40 Coresta, and does not disclose BMI. (*Id.* at 123-124 (citing Tr. at 1324-25 (McCarty), 1995-96 (Honeycutt); RX-448 at 8:43-9:26; RX-443 at 8:41-9:26; CFF-V-31).) SWM says that none of the BMI data cited by Dr. McCarty to establish inherency was for bands of additional cellulosic material, so any conclusions regarding BMI of the bands of Allen are purely speculative. (*Id.* at 124 (citing Tr. at 1997 (Honeycutt)).) In addition, argues SWM, even if one were to improperly consider the additional cellulosic material of Allen to be a film forming composition, Allen fails to disclose its application to a “paper wrapper comprised of a paper web” much less to a paper web having a permeability of about 60 to about 110 Coresta. (*Id.*) SWM says that the additional cellulosic material in Allen is applied to a “pulp web” while on the forming wire. (*Id.* (citing RX-442 at 5:51-53, Fig. 1).) SWM says that Dr.

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McCarty admitted that he did not know whether one of ordinary skill in the art would consider the pulp mixture passing under the applicator to be a paper web at that point. (*Id.* (citing Tr. at 1329-32 (McCarty)).) SWM says also that Glatz failed to present any evidence that the pulp web had a permeability of about 60 to about 110 Coresta and for these reasons Allen does not anticipate the asserted claims of the '867 patent. (*Id.*)

Glatz responds that SWM, in its opening brief, added a new argument that is totally at odds with the testimony of its expert Mr. Honeycutt and is directly refuted by SWM's earlier contentions that certain Delfort paper wrappers infringed the '867 patent. (RRBr. at 92.) Glatz says that SWM newly contends that because Allen uses an on-line process, it does not meet the claim element requiring the application of the permeability-reducing material to a "paper wrapper comprised of a paper web." According to Glatz, SWM waived this argument by not previously making such a contention anywhere in its Pre-Hearing Brief or in the expert report of Mr. Honeycutt. (*Id.* at 92-93.) Glatz says that this is especially true because Mr. Honeycutt on cross-examination at the hearing conceded that he was not disputing that applying the band material as discussed in Allen was applying it to a "paper wrapper." (*Id.* at 92.) More specifically, argues Glatz, with respect to the MOD process of making PaperSelect, which is a similar "online" process as disclosed in Allen, Mr. Honeycutt was specifically asked if he disputed that the bands were applied to a "paper wrapper" and unequivocally said that he did not dispute that that element existed in the prior art. (*Id.* (citing Tr. at 2062 (Honeycutt)).) Glatz says that Mr. Honeycutt also admitted that there is nothing in claim 36 that restricts the point in the process at which the film forming composition is applied and that the claim embraces both online process (like Allen and PaperSelect) and off-line processes. (*Id.* at 2063-65 (Honeycutt).)

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The Administrative Law Judge concludes that Allen does not anticipate any of the asserted claims of the '867 patent because it fails to disclose the use of high permeability base papers in an LIP product in the range of 60-100 Coresta. Allen merely discloses that the "porosity of the wrapping materials normally found in smoking articles such as cigarette papers is about 25-60 Coresta." (RX-443 at 8:41-9:26.) The '867 patent relates to wrapping papers having substantially greater permeability values, in the range of 60-110. (JX-2 at 12:32-40.) The Administrative Law Judge rejects SWM's argument that Allen does not satisfy the "applying" element of the '867 insofar as SWM contends that Allen does not disclose application to a "paper wrapper comprised of a paper web." (CBr. at 124.) This contention was not previously disclosed by SWM and is contradicted by the admission of SWM's expert Mr. Honeycutt. (Tr. at 2063-65 (Honeycutt).) The Administrative Law Judge, for the reasons discussed above with respect to claim construction of the term "film forming composition" also rejects SWM's argument that Allen does not disclose that limitation of claims 36 and 45 of the '867 patent.

d) Baldwin—United States Patent No. 5,417,228

Glatz says that the Baldwin patent (RX-442) anticipates claims 36 and 45 of the '867 patent³⁹. (RBr. at 141 (citing Tr. at 1132-42 (McCarty)).) As regards claim 36, Glatz says its limitations include a paper web having an air permeability from about 60 to about 110 Coresta, a film forming composition applied to the paper wrapper in bands that have an air permeability of less than about 20 Coresta, a Burn Mode Index of less than about 8 cm^{-1} , and a reduction in ignition proclivity obtained by reducing the amount of oxygen that reaches the cigarette's

³⁹ While Glatz initially states that only claims 36 and 45 are anticipated by Baldwin, Glatz goes on to also argue that claim 43 is anticipated by Baldwin. (See RBr. at 144.)

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smoldering coal as it burns into the lower permeability bands. Glatz says that each of these elements is described by the Baldwin patent. (*Id.* at 142.) Glatz argues that Baldwin describes a cigarette paper with burn control properties where the “inherent porosity of the paper varies from about 2 to about 150 Coresta units and preferably should be in the range from about 20 to about 60 Coresta. (*Id.*) Glatz says that both of these ranges include permeability values for base paper as required by claim 36. (*Id.* (citing RX-442 at 4:60-5:4; Tr. at 1134-35 (McCarty)).)

Glatz says the Baldwin patent does not provide specific values of air permeability for the bands on its paper wrapper. (*Id.*) Instead Baldwin states that “simple experimentation” is all that is needed to determine the correct amount of permeability-reducing material to be deposited onto the base paper in order to achieve the desired permeability-reducing material to be deposited onto the base paper to result in the desired permeability and burn characteristics. (*Id.* (citing RX-442 at 4:65-5:1).) Glatz argues that SWM has conceded that bands on LIP papers should have an air permeability of less than 20 Coresta in order to satisfy the usual cigarette self-extinguishment tests. Therefore the requirement expressed in claim 36 for bands with an air permeability of less than 20 Coresta is implicitly present in Baldwin. (*Id.* (citing JX-1 at 5:50-62; JX-2 at 6:28-42; RFF 43).) Glatz says Baldwin describes the bands as discrete treated regions with a width of preferably 5-10 millimeters, separated by untreated regions of preferably 10-25 millimeters. (*Id.* (citing RX-442 at 8:3-10; Tr. at 1137-39 (McCarty)).)

Glatz says the bands described in Baldwin are made with a “film forming composition” as Glatz has construed this term. Glatz argues that Baldwin describes permeability-reducing materials, including fibrous cellulose, and more specifically, microcrystalline cellulose, bacterial cellulose and microfibrillated cellulose, among other materials. (*Id.* at 143 (citing RX-442 at 3:25-30).) Glatz argues that Baldwin also teaches that the band-forming composition may

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include a “binder” such as carboxymethyl cellulose, hydroxypropyl cellulose, starch, guar or other various polysaccharides. (*Id.* (citing RX-442 at 7:1-8, 30-42).) Glatz says that these binders are expressly stated in the ‘867 patent to be “film forming compositions” (*id.* (citing JX-2 at 5:38-52)) and that the permeability-reducing materials of Baldwin, alone or in combination, form a layer or coating that reduces the air permeability of the paper in the areas (bands) to which they have been applied. (*Id.* (citing Tr. at 1135 (McCarty)).)

Glatz contends that Baldwin describes the purpose of the invention as providing a means for controlling the burn rate of a cigarette, and in examples 1-6, and 8 the bands are used to reduce a cigarette’s static burn rate in the regions of the band. (*Id.* (citing RX-442, Example 1, 8:38-39).) Glatz says that Baldwin explicitly states that achieving particular desired burn characteristics requires only “simple experimentation.” (*Id.* (citing RX-442 at 4:65-68; RFF 42).) Glatz argues that from the information given in Baldwin, a person of skill in the art needs only routine experimentation and adjustment of the band dimensions and spacing, and would envisage immediately how to construct a cigarette with banded wrappers made according to Baldwin that exhibited reduced ignition proclivity characteristics. Thus, the reduced ignition proclivity feature is present in Baldwin. (*Id.* at 143-144 (citing Tr. at 1132-34 (McCarty)).) Glatz contends that reducing oxygen to the smoldering coal was well recognized before the ‘867 patent as the mechanism by which lower permeability bands imparted reduced ignition proclivity properties. (*Id.* at 144 (citing Tr. at 1140-41 (McCarty)).)

Glatz says that Burn Mode Index (BMI) is merely another measure, like band Coresta, of the inherent ability of bands to reduce ignition proclivity, and a BMI value of less than 8 cm^{-1} is inherent in any treated cigarette paper band with an air permeability of less than about 20 Coresta, as in the case of Baldwin. (*Id.* (citing Tr. at 1139-40 (McCarty)).) Therefore, argues

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Glatz, Baldwin anticipates every one of the limitations or elements that are recited in claim 36 of the '867 patent and invalidates this claim. (*Id.*)

With respect to claim 43, Glatz argues that in addition to the elements of claim 36, claim 43 requires a film forming composition that may include a pectin, silicate, polyvinyl alcohol, starch, or cellulose composition. (*Id.*) Glatz says that under Baldwin the bands may include carboxymethylcellulose, hydroxypropyl cellulose and “various other polysaccharide binders and the like. (*Id.* (citing RX-442 at 7:5-9).) Glatz says that these compositions are within the scope of a “cellulose derivative” within the meaning of claim 43 and therefore Baldwin anticipates claim 43 as well as claim 36. (*Id.* (citing Tr. at 1141 (McCarty)).)

Glatz says that claim 45 of the '867 patent describes making a smoking article by surrounding a tobacco column with the paper wrapper defined in claim 36. Baldwin produces cigarettes using the paper wrappers described in the patent wherein it states: “The present invention relates to a paper wrapper construction for use in conjunction with a smoking article, such as a cigarette.” (*Id.* at 145 (citing RX-442 at 1:13-17).) Glatz says Baldwin refers explicitly to the process of incorporating the paper into a cigarette in Examples 1-8: “Cigarettes were hand-made (diameter of 24.8 mm) using the wrapper described above and a conventional tobacco blend. The cigarettes showed a reduction of the static burn rate in the regions of the band.” (*Id.* (citing RX-442 at 3:36-38).) Glatz argues that smoking articles made from the papers described in Baldwin necessarily have a tobacco column surrounded by a paper wrapper and therefore Baldwin anticipates claim 45 as well as claims 36 and 43 of the '867 patent. (*Id.*)

SWM says that the evidence shows that Baldwin does not anticipate the asserted claims of the '867 patent because it fails to disclose with any specificity the following elements: (1) applying a film forming composition at particular locations to a relatively high permeability

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paper web to reduce ignition proclivity; (2) a Burn Mode Index (BMI) of less than about 8 cm^{-1} ; (3) a band permeability of less than 20 Coresta; or (4) the range of permeability in the base paper of about 60-110 Coresta. (CBr. at 124-125 (citing Tr. at 1998 (Honeycutt)). SWM says that Baldwin discloses the application of additional cellulosic materials, which it expressly describes as forming fibrous mats and not films. (*Id.* (citing RX-442 at 4:22-27, Example 9).) Moreover, argues SWM, it is undisputed that Baldwin does not expressly disclose a wrapper having reduced ignition proclivity, much less one with the claimed base sheet permeability. (*Id.* (citing Tr. at 1321 (McCarty)).) SWM contends that Baldwin's general disclosure of base sheet permeabilities of 2-150 for non-LIP wrappers is insufficient to anticipate. (*Id.*)

SWM argues that broad disclosures of possible base sheet permeabilities do not anticipate or render obvious the claimed range of about 60 Coresta to about 110 Coresta. (*Id.* at 116.) SWM argues that broad disclosures of "commercially available" wrappers or wrappers having permeability of 2-150 Coresta fail to sufficiently specify the claimed range of about 60 to about 110 Coresta so as to anticipate claim 36. (*Id.* at 117.) SWM says that in order to anticipate claim 36, the prior art must "disclose a specific embodiment of the claimed [] range with sufficient specificity to anticipate" the claimed invention. (*Id.* (citing *Atofina v. Great Lakes Chem. Corp.*, 441 F.3d 991, 999-1000 (Fed. Cir. 2006)).) SWM argues that while a narrow range anticipates a broader range, the converse is not true. (*Id.* (citing *Sanofi-Synthelabo v. Apotex, Inc.*, 550 F.3d 1075, 1083-84 (Fed. Cir. 2008)).) SWM notes that Baldwin generally discloses base sheet permeabilities of 2 to 150 for non-LIP wrappers and this is insufficient to anticipate. (*Id.* at 125.) Moreover, says SWM, it is undisputed that Baldwin does not disclose any particular band permeabilities, and as was the case with Allen, the starch and alginate BMI data cited by Dr. McCarty fails to clearly and convincingly establish that the cellulosic bands of

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Baldwin necessarily have a BMI of less than 8 cm^{-1} , especially since Baldwin does not disclose any particular band permeability. Therefore Baldwin does not anticipate the asserted claims of the '867 patent. (*Id.*)

The Administrative Law Judge concludes that the evidence does not clearly and convincingly establish that Baldwin anticipates the '867 patent. This finding is based on the fact that the range of permeability of papers disclosed in Baldwin is overly broad in relation to the range of the invention disclosed in the asserted claims of the '867 patent. *See Atofina*, 441 F.3d at 999-1000. Furthermore, Baldwin does not disclose particular band permeabilities as provided in independent claim 36 of the '867 patent, from which the other asserted claims depend. The Administrative Law Judge disagrees with SWM's other arguments with respect to Baldwin.

e) Peterson—United States Patent No. 5,878,753

Glatz alleges that the '753 patent to Peterson *et al.* (U.S. Patent No. 5,878,753) anticipates claims 36, 43, and 45 of the '867 patent. (RBr. at 145 (citing Tr. at 1092-1121 (McCarty)).) Glatz says that each of the elements of claim 36 is disclosed in the '753 patent (also referred to herein as "Peterson") because the patent describes a reduced ignition proclivity cigarette paper that includes a paper wrapper or paper web. (*Id.* (citing Tr. at 1093 (McCarty); JX-1 at 5:29-30).) Glatz says the '753 patent says the paper wrapper may include any manner of commercially available cigarette paper and paper web. (*Id.* at 145-146 (citing JX-1 at 5:23-27).) Glatz argues that any manner of paper web would necessarily include cigarette paper wrappers with an air permeability in the range of about 60 to about 110 Coresta, as claimed in claim 36 of the '867 patent. (*Id.* (citing RFF 44).) Moreover, argues Glatz, although the asserted '867 claims recite a base paper permeability range of from about 60 to about 110 Coresta, the '867 patent itself teaches that this range is not critical and that any permeability from about 10 to 200

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Coresta can be used. (*Id.* (citing JX-2 at 5:9-22).) Glatz says that Mr. Honeycutt admitted that there is no magic in the use of the narrow permeability range claimed, and Glatz argues that the allegedly inventive process of applying multiple layers works equally well both above and below that range. (*Id.* (citing Tr. at 2100-03 (Honeycutt)).)

Glatz says the bands of the paper wrapper described in Peterson have an air permeability of less than 6 Coresta and preferably between 2 and 6 Coresta. (*Id.* (citing JX-1 at 3:30-40).) Glatz argues that this is the preferred range described in Peterson for creating a reduced ignition proclivity cigarette and it is “within a range which is known to provide improved ignition proclivity characteristics for the make-up of cigarette.” (*Id.* (citing JX-1 at 5:50-62).) Glatz says that many of the examples in Peterson have band air permeabilities of less than 6 Coresta. (*Id.* at 147 (citing JX-1 at 7:57-59, 8:3-5, 8:17-19, 8:31-33, 8:45-47).) Glatz says that all of these band permeabilities, “known to provide improved ignition proclivity characteristics” are within the range of “less than about 20 Coresta” required in claim 36 of the ‘867 patent. (*Id.* (citing Tr. at 1098-99).)

Glatz says that the Peterson bands are also described as discrete, cross-directional regions having a width of at least 4 millimeters and spacing of between 5 and 10 millimeters in order to exhibit the preferred reduced ignition proclivity characteristics. (*Id.* (citing JX-1 at 6:21).) Glatz argues that the bands described in Peterson are made with a film forming composition and the patent specifically describes the composition of the bands as created from, among other things, a “film forming solution to reduce permeability of the smoking article wrapper in the treated areas.” (*Id.* (citing JX-1 at 3:15-23).) Glatz argues that, according to Peterson, this composition may be “any type of solution which, when dried, forms a film which reduces permeability of the smoking article wrapper to a level necessary for reducing ignition proclivity...” (*Id.*) Glatz says

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that Peterson also specifies that this film forming composition may include aqueous solutions (or suspensions where fillers are employed) of permeability-reducing materials such as alginate, pectin, carboxymethyl-cellulose, and polyvinyl alcohol, and “[f]ibrous slurries applied from an aqueous solution are also effective” as film forming compositions, according to the ‘753 patent. (*Id.* (citing JX-1 at 4:53-65).) Glatz says that these materials form a layer or coating that reduces the permeability of the paper in the areas to which the composition is applied. (*Id.*) Glatz says that Peterson identifies as suitable film forming compositions many of the specific materials illustrated in the ‘867 patent. (*Id.* (citing JX-1 at 5:38-52).)

Glatz argues further that Peterson includes the following statement:

Treated areas **18**, or bands **24**, have a permeability within a range which is known to provide improved ignition proclivity characteristics for the make-up of cigarette **10**. As the coal of cigarette **10** burns into one of bands **24**, oxygen available at the burning coal is substantially reduced due to the decreased permeability of wrapper **14** in the treated areas.

(*Id.* at 148 (citing JX-1 at 5:50-62).) Glatz argues that this is the exact mechanism for reduced ignition proclivity specified in claim 36. (*Id.* (citing Tr. at 1099 (McCarty)).)

Glatz says that with regard to BMI of “less than 8 cm^{-1} ,” that is satisfied for any cigarette paper band with an air permeability of less than about 20 Coresta. (*Id.* (citing Tr. at 1099-1111, 1114-20 (McCarty)).) Glatz says this would certainly hold true for the cigarette paper bands described in Peterson, which are described as being in the preferred range of between about 2 to about 6 Coresta with specific examples of 1.6, 1.8 and 0.91. (*Id.* (citing JX-1 at 5:57-60, Examples 2, 3, 5).) Accordingly, asserts Glatz, Peterson’s bands also meet the limitation of “less than about 8 cm^{-1} ” BMI in claim 36 of the ‘867 patent. (*Id.*) Therefore, concludes Glatz, Peterson describes every limitation recited in claim 36 of the ‘867 patent, anticipates the claim, and invalidates the claim. (*Id.*)

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Glatz further argues that claim 43 of the '867 patent requires that the film forming composition be of or include some unspecified amount of pectin, a silicate, a polyvinyl alcohol, a starch, or cellulose derivative composition, and specifically states that the permeability-reducing compositions can include alginate, pectin, carboxymethyl cellulose, and polyvinyl alcohol. (*Id.* (citing JX-1 at 4:57-59).) Glatz says Peterson identifies these materials as film forming compositions. (*Id.* (citing Tr. at 1120 (McCarty))). Therefore, argues Glatz, Peterson anticipates and invalidates claim 43 as well as claim 36 of the '867 patent. (*Id.* at 149.)

Glatz asserts that claim 45 of the '867 patent simply requires a smoking article made by surrounding a tobacco column with the paper wrapper of claim 36. (*Id.*) Glatz says Peterson produces cigarettes using paper wrappers: “[t]he present invention relates to a smoking article wrapper composition, and a method of making a smoking article wrapper composition, for significantly reducing ignition proclivity of the smoking article without adversely affecting smoking characteristics.” (*Id.* (citing JX-1 at 1:7-15).) Glatz says that Peterson specifically states, “Smoking article 10 includes a tobacco column 12 surrounded by a paper wrapper.” (*Id.* (citing JX-1 at 9:55-58).) Consequently, argues Glatz, claim 45 is also anticipated by the '753 patent. (*Id.* (citing Tr. at 1120-21 (McCarty))).

SWM disputes that Peterson anticipates the asserted claims of the '867 patent, for the reason that the '867 patent improved upon the technology of Peterson by specifying the use of base sheets having permeabilities between 60 and 110 Coresta combined with a band BMI of less than 8 cm^{-1} , neither of which is disclosed in Peterson. (*Id.* at 125 (citing Tr. at 2002 (Honeycutt))). SWM disputes Glatz's contention that the claimed BMI is inherently disclosed in Peterson, and SWM argues that Peterson's specific examples use ethyl cellulose as a film former, which is not addressed in the BMI/Permeability data relied on by Glatz's expert. (*Id.* at 125-126

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(citing Tr. at 2004-05 (Honeycutt)).) Therefore, contends SWM, BMI is not inherently present in Peterson. (*Id.* at 126.)

In addition, argues SWM, Mr. Honeycutt testified that Peterson discloses that the base sheet “may include any manner of commercially available cigarette wrapper” and that “[i]t should be understood that any manner of paper web may be used in this regard.” (*Id.* (citing JX-1 at 5:23-28).) SWM argues that this fact would not lead a person of ordinary skill in the art to the claimed narrower range of about 60-110 Coresta base paper. (*Id.* (citing Tr. at 2003-04 (Honeycutt)).) SWM says the evidence demonstrates that the broad knowledge of what cigarette papers were commercially available would not have led one of ordinary skill in the art to use the narrower range of base papers with about 60-110 Coresta permeability for an LIP product. (*Id.*) Therefore, argues SWM, the broad disclosure of Peterson is insufficient to disclose a base paper with permeability of about 60-110 Coresta. (*Id.* at 127 (citing Tr. at 2003-04 (Honeycutt); JX-1 at 5:23-24).) For these reasons, SWM concludes that Peterson does not disclose treated area having a BMI of less than about 8 cm^{-1} or a paper web having relatively high permeability—from about 60 to about 110 Coresta—and thus does not anticipate the asserted claims of the ‘867 patent.

The Administrative Law Judge concludes that Peterson does not anticipate the asserted claims of the ‘867 patent because it does not expressly or inherently disclose the permeability range, in terms of Coresta, of the base paper or LIP bands or the Burn Mode Index specified in claim 36, upon which dependent claims 43 and 45 depend. The Administrative Law Judge finds that Peterson does disclose the additional elements of the asserted claims of the ‘867 patent.

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f) Hammersmith—United States Patent No. 6,645,605

Glatz alleges that U.S. Patent No. 6,645,605 (“Hammersmith”) filed on January 15, 2001 before the earliest effective filing date to which the asserted claims of the ‘867 patent are entitled, November 13, 2001, describes every element of the asserted the asserted claims of the ‘867 patent. (RBr. at 149.)

With respect to claim 36 of the ‘867 patent, Glatz argues that Hammersmith is directed to “making low ignition propensity products” by treating cigarette base paper with a thermoplastic polymer to obtain bands with Coresta porosities less than 15. (*Id.* (citing RX-460, Title, Abstract, drawings on first page, 1:16-25).) Glatz says that Hammersmith teaches band permeabilities from 0 to 14, with 0 Coresta being when all the pores in the coated regions “are sealed.” (*Id.* (citing RX-460 at 2:34-37, 7:2-7; Tr. at 1144-47 (McCarty)).) Glatz argues that thermoplastic, permeability-reducing material is a film forming composition under all proposed constructions and may be hydroxypropyl cellulose, ethyl cellulose and other materials specifically identified as suitable in the ‘867 patent. (*Id.* at 150 (citing RX-460 at 2:41-56; Tr. at 1145 (McCarty)).) The base paper used is a “conventional cigarette wrapper,” which is illustrated by Coresta porosities “ranging from 20-120.” (*Id.* (citing RX-460 at 7:2-4 and Tr. at 1145 (McCarty)).)

Glatz argues regarding the term “applying” that Hammersmith teaches applying only a single layer of film forming composition and therefore if Glatz’s interpretation of “applying” is adopted, Hammersmith’s would not anticipate that element; however, says Glatz, using two or more applications would be obvious, for reasons given by Glatz regarding PaperSelect/Merit, Baldwin and Allen. (*Id.* (citing Tr. at 1146 (McCarty)).)

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Glatz acknowledges that Hammersmith does not provide BMI values but Glatz argues that, given the disclosure of very low band Coresta values, including 0 where all the pores are blocked, Hammersmith's bands would have a BMI value well below 8 for the same reasons discussed by Glatz with respect to Allen, Baldwin, and Peterson. (*Id.* (citing Tr. at 1147-48 (McCarty)).) Therefore, concludes Glatz, Hammersmith describes each element of claim 36 of the '867 patent. (*Id.*)

Glatz argues that claim 43 specifies that the film forming composition contains certain specified materials, in unstated amounts, and at least one of them, a cellulose derivative, is specifically described in Hammersmith. (*Id.* (citing Tr. at 1148 (Honeycutt)).)

Regarding claim 45, Glatz argues that Hammersmith teaches making cigarettes with his paper wrappers, which completely describes the added step of this claim. (*Id.* at 151 (citing Tr. at 1148-49 (McCarty)).) Consequently, according to Glatz, Hammersmith describes all of the elements of every asserted claim of the '867 patent. (*Id.*)

SWM argues that the evidence shows that Hammersmith is not prior to the asserted claims of the '867 patent, because it was filed on January 15, 2001 and was first published on September 9, 2002. (CBr. at 127 (citing RX-460; CFF-V-33).) SWM says that Hammersmith is not prior art at least because SWM reduced the claimed inventions to practice before Hammersmith's filing date and notes that Glatz does not contest SWM's conception and reduction to practice of the '867 invention. (*Id.* (citing CX-1004C at Q/A 70-95 (Kraker)).) Here, SWM essentially repeats its arguments raised previously with respect to its contention that the '867 patent is entitled to an earlier effective priority date. (*Compare id.* at 127-130 with *id.* at 12-15.)

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SWM argues that even if it were determined in this Investigation that Hammersmith is prior art, it does not disclose each and every element of the asserted claims, specifically, a BMI of less than about 8 cm^{-1} . (*Id.* (citing Tr. at 2006 (Honeycutt)).) SWM says that Dr. McCarty also acknowledged that Hammersmith does not expressly disclose any BMI values for its bands. (*Id.* (citing Tr. at 1315 (McCarty); CFF-V-34).) Instead, argues SWM, Glatz asserts that Hammersmith inherently discloses a BMI of less than about 8 cm^{-1} and this is based on flawed and inaccurate oversimplifications of the BMI/permeability relationship. (*Id.*) SWM says that Hammersmith does not disclose the use of starch or alginate as film formers, which were the film formers addressed in the BMI/Permeability data relied on by Dr. McCarty to make the his conclusions regarding BMI. (*Id.* (citing Tr. at 1315-16 (McCarty)).) SWM argues, based on Mr. Honeycutt's testimony (Tr. at 2006-07) that a person could not predict what the BMI would be in the bands of Hammersmith from the data Dr. McCarty cited because Hammersmith discloses the use of compositions which were not in the data set used by Dr. McCarty. (*Id.*) For these reasons, argues SWM, Hammersmith is not prior art to the '867 patent and does not anticipate the asserted claims of that patent. (*Id.* at 130.)

As discussed *supra* at Section V.B.1.a), Glatz presented extensive arguments in response to SWM's assertion that the asserted claims of the '867 patent are entitled to an earlier priority date that pre-dates Hammersmith. (*See* RRBr. at 94-105.)

As found *supra*, the priority date of the asserted claims of the '867 patent is November 13, 2001 and not earlier. However, the Administrative Law Judge concludes that Hammersmith does not anticipate claim 36 of the '867 patent because the evidence is not clear and convincing that Hammersmith satisfies all of the limitations of that claim, particularly with respect to the Burn Mode Index element. Although Dr. McCarty concluded that the Burn Mode Index could

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be inferred from Coresta information, he was disputed by Mr. Honeycutt, who testified that BMI could not be predicted in the bands based on the data relied on by Dr. McCarty. (Tr. at 2006-07.) While Glatz may contend that Dr. McCarty's reasoning is more convincing or is entitled to greater reliance, the fact remains that, in light of Mr. Honeycutt's opposing testimony, the Administrative Law Judge cannot conclude that there is clear and convincing evidence that Hammersmith satisfies the BMI element of claim 36. Since the other asserted claims depend therefrom, it follows that they too are not anticipated, although, admittedly, in all other respects Hammersmith does satisfy the limitations of claim 36 of the '867 patent (*see* Tr. at 2006), and the Administrative Law Judge finds that there is sufficient evidence to show that the additional limitations of claims 43 and 45 would be satisfied if the BMI limitation of claim 36 were met.

C. Obviousness

Under 35 U.S.C. § 103(a), a patent is valid unless "the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made" to a person having ordinary skill in the art. 35 U.S.C. § 103(a). The ultimate question of obviousness is a question of law, but "it is well understood that there are factual issues underlying the ultimate obviousness decision."

Richardson-Vicks Inc. v. Upjohn Co., 122 F.3d 1476, 1479 (Fed. Cir. 1997) (citing *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17 (1966) ("*Graham*")).

After claim construction, "[t]he second step in an obviousness inquiry is to determine whether the claimed invention would have been obvious as a legal matter, based on underlying factual inquiries including: (1) the scope and content of the prior art, (2) the level of ordinary skill in the art, (3) the differences between the claimed invention and the prior art; and (4) secondary considerations of non-obviousness." *Smiths Indus. Med. Sys., Inc. v. Vital Signs, Inc.*,

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183 F.3d 1347, 1354 (Fed. Cir. 1999) (citing *Graham*, 383 U.S. at 17). The existence of secondary considerations of non-obviousness does not control the obviousness determination: a court must consider “the totality of the evidence” before reaching a decision on obviousness.

Richardson-Vicks, 122 F.3d at 1483.

The Supreme Court recently clarified the obviousness inquiry in *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 389 (2007) (“*KSR*”). The Supreme Court said:

When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill. *Sakraida* and *Anderson's-Black Rock* are illustrative—a court must ask whether the improvement is more than the predictable use of prior art elements according to their established functions.

Following these principles may be more difficult in other cases than it is here because the claimed subject matter may involve more than the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for the improvement. Often, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue. To facilitate review, this analysis should be made explicit.

* * *

The obviousness analysis cannot be confined by a formalistic conception of the words teaching, suggestion, and motivation, or by overemphasis on the importance of published articles and the explicit content of issued patents. The diversity of inventive pursuits and of modern technology counsels against limiting the analysis in this way. In many fields it may be that there is little discussion of obvious techniques or combinations, and it often may be the case that market demand, rather than scientific literature, will drive design trends. Granting patent protection to advances that would occur in the ordinary course without real innovation retards progress and may, in the case of patents combining previously known elements, deprive prior inventions of their value or utility.

KSR, 550 U.S. at 417-19.

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The Federal Circuit has since held that when a patent challenger contends that a patent is invalid for obviousness based on a combination of several prior art references, “the burden falls on the patent challenger to show by clear and convincing evidence that a person of ordinary skill in the art would have had reason to attempt to make the composition or device, or carry out the claimed process, and would have had a reasonable expectation of success in doing so.”

PharmaStem Therapeutics, Inc. v. ViaCell, Inc., 491 F.3d 1342, 1360 (Fed. Cir. 2007) (citations omitted).

The TSM⁴⁰ test, flexibly applied, merely assures that the obviousness test proceeds on the basis of evidence--teachings, suggestions (a tellingly broad term), or motivations (an equally broad term)--that arise before the time of invention as the statute requires. As *KSR* requires, those teachings, suggestions, or motivations need not always be written references but may be found within the knowledge and creativity of ordinarily skilled artisans.

Ortho-McNeil Pharmaceutical, Inc. v. Mylan Laboratories, Inc., 520 F.3d 1358, 1365 (Fed. Cir. 2008).

1. ‘753 patent.

Glatz asserts that three prior art patents render each of the asserted claims of the ‘753 patent invalid as obvious under 35 U.S.C. § 103: Baldwin (RX-442), Allen (RX-443), and Baker (RX-429). (RBr. at 75.) Glatz says that before the ‘753 patent was filed, it had been known for many years in the cigarette paper industry to create bands on cigarette wrappers using film forming compositions. (*Id.* (citing Tr. at 2033 (Honeycutt)).) Glatz says the industry was well aware that these bands caused cigarettes made with the treated wrappers to be more fire safe and caused them to self-extinguish. (*Id.* (citing Tr. at 2033 (Honeycutt)).) Glatz says the bands known in the prior art were formed from various permeability-reducing materials which, when

⁴⁰ TSM means teaching, suggestion, motivation.

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applied and dried, resulted in a coating or layer on the base paper that reduced permeability in the areas treated. (*Id.* (citing Tr. at 2035 (Honeycutt)).) According to Glatz, the resulting reduced permeability areas restricted the amount of oxygen that reached the smoldering coal and thereby reduced the ignition proclivity characteristics of the resulting cigarettes. (*Id.* (citing Tr. at 2036 (Honeycutt)).) Glatz says these statements, acknowledged by Mr. Honeycutt, have been confirmed by SWM at page 14 of its Pre-Hearing Brief. (*Id.* at 74.) Glatz says that the only element of claim 1 of the '753 patent that is not expressly found in the prior art concerns the gradually changing permeability profile. (*Id.* (citing RFF 22).) Glatz points out that the '753 patent attempts to distinguish the admitted prior art bands through the difference between an abrupt change in permeability and a gradual change. (*Id.* (citing RFF 23).)

In light of these facts, argues Glatz, any arguments by SWM parsing and criticizing the prior art Baldwin, Allen, and Baker patents are without merit. (*Id.*) According to Glatz, SWM's unambiguous general admissions regarding what was known and understood in the prior art before the '753 patent was filed outweigh SWM's inaccurate complaints about what is purportedly missing from some of those individual reference teachings. (*Id.* at 74-75.) Glatz emphasizes that despite SWM's contention that the gradually changing permeability profile is a meaningful distinction over what was known in the art, there is no evidence that such a profile provides any difference, much less a practical one, over the prior art. In particular, there is no evidence that this profile results in any difference in smoke delivery or taste when compared to an abrupt band edge. (*Id.* at 75.) Glatz says that it is SWM and Mr. Honeycutt's position that (1) "gradually," by definition, means anything less than an absolutely abrupt 90 degree angle; (2) none of the asserted claims requires that there be any actual discernible difference in smoke delivery or taste; (3) the gradual change can occur over a few CORESTA units, in a band with a

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thickness of a few microns and over a transition distance of 1-2 microns; and (4) there is no evidence whatsoever that the “gradually” changing profile has any effect at all on any property (other than permeability) as compared with a conventional band having a sharp edge. (*Id.* (citing Tr. at 2041, 2048, 2052-53 (Honeycutt)).) Glatz argues that although Mr. Honeycutt acknowledged that the only problem addressed and solved by the ‘753 patent was taste and smoke delivery, he contended that the ‘753 band could be indistinguishable to the smoker in comparison with a band made according to the prior art and still could be within the scope of the ‘753 patent. (*Id.* at 76 (citing Tr. at 2044-47 (Honeycutt)).)

Staff is in accord with Glatz in concluding that prior art discloses all of the limitations of the asserted claims of the ‘753 patent. (SBr. at 60-61.) Staff concludes that there is clear and convincing evidence that the asserted claims of the ‘753 patent would have been obvious to one of ordinary skill at the time of the invention.

SWM responds that Glatz and Staff concede that the prior art does not expressly teach an LIP wrapper having horizontal bands composed of a film forming composition wherein those bands have a gradually decreasing or gradually changing permeability profile. (CBr. at 75.) SWM argues that the evidence demonstrates that one of ordinary skill in the art would not have been motivated to modify prior art banded designs to achieve the claimed invention and the evidence at the hearing highlighted the unique and unobvious invention that compelled the PTO to grant the ‘753 patent and to recently reaffirms patentability during reexamination. (*Id.*)

a) Allegations With Respect To Allen

Glatz says that Dr. McCarty testified that United States Patent No. 5,474,095 to Allen *et al.* (“the Allen patent” or “Allen”) (RX-443), issued on December 12, 1995, and it describes a cigarette wrapping paper with discrete cross-sectional “bands” used to control the static burn rate

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of cigarettes made with this paper. (*Id.*) According to Allen, the paper wrapper it teaches is capable of promoting uneven burn characteristics so that the static burn rate of the smoking article is decreased “to the point that combustion of the article is decreased, substantially negligible or terminates altogether.” (*Id.* (citing RX-443 at 1:34-41, 3:59-63).) In other words, argues Glatz, Allen describes a reduced ignition proclivity cigarette paper formed by applying bands of a permeability-reducing substance in the cross-direction or around the circumference of a cigarette made with this wrapper. (*Id.*) Glatz contends that if, as Allen expressly teaches, combustion is terminated altogether at the bands, then clearly the cigarette will not ignite a substrate, so ignition proclivity is reduced as required by the asserted ‘753 patent claims. (*Id.*)

Glatz argues that Allen’s cigarette paper comprises a paper wrapper or paper web and applies discrete regions or bands to it. (*Id.*) According to Glatz, Allen describes the bands as preferably being 3 to 7 millimeters wide, separated by untreated regions preferably 15 to 30 millimeters wide. (*Id.* at 76-77 (citing RX-443 at 4:35-40, 57-61).) Glatz says the cross-directional regions or bands extend the entire width of the unrolled cigarette paper wrapper or around the entire circumference of the cigarette when the paper wrapper is surrounding a tobacco column. Within the cross-sectional regions, the low porosity coating can be continuous and uninterrupted. (*Id.* at 77 (citing RX-443 at 4:38-40, 4:44-50).)

According to Glatz, the bands described in Allen are made from a “film forming composition” as that term has been interpreted by Glatz, as Allen’s permeability-reducing materials are identified in the ‘753 patent. (*Id.* (citing JX-1 at 4:41-65).) Glatz says that Allen describes the use of pulp, highly refined pulp, high surface area cellulosic fibers, microcrystalline cellulose, or a mixture of highly refined pulp and calcium carbonate. (*Id.* (citing RX-443 at 3:21-28).) These materials form a layer or coating on the base paper web that reduces the

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paper's permeability in the areas to which the composition is applied, says Glatz. (*Id.*) Glatz contends that the specifically described permeability-reducing materials identified as suitable in Allen are also exemplified in the '753 patent as suitable film forming compositions. (*Id.* (citing JX-1 at 4:20-65).)

Glatz says Allen states that a smoking article such as a cigarette made from the paper wrapper described in the patent "will smolder for about 0.5-4 minutes before extinguishing" and that the time-to-extinguishment "can be determined and manipulated" by simple experimentation with the band parameters, that is, the width of the bands, the spacing between the bands and any burn additives that may be used. (*Id.* (citing RX-443 at 4:20-30).) Thus, concludes Glatz, Allen teaches that one can achieve a variation in time-to-extinguishment by routine experimentation which includes extinguishing the cigarette before it can ignite a substrate. (*Id.*)

According to Glatz, Allen also describes the cause of this reduced ignition proclivity effect: "it is believed that oxygen must diffuse through the paper to the burning tobacco to support combustion; when oxygen has difficulty passing through the paper [such as when the burning coal advances to the band region of the wrapper], the rate of combustion decreases." (*Id.* (citing RX-443 at 3:63-4:3).)

Glatz says Allen concerns the process for producing a cigarette using the paper described in the patent, quoting the following passage: "[t]he paper of the present invention, once incorporated into a smoking article, is capable of promoting uneven burn characteristics...." (*Id.* at 78.) Glatz refers explicitly to the process of incorporating the paper into a cigarette in Examples 1, 2, and 3—"Cigarettes machine-made from this paper extinguished during static burn in 30 to 120 seconds after the burn line reached the first band." (*Id.*)

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For the foregoing reasons, argues Glatz, Allen describes all essential elements of the asserted claims of the '753 patent, except a gradually increasing, decreasing or changing permeability profile. (*Id.*)

Staff agrees with Glatz. Staff says that Allen issued on December 12, 1995, before the March 11, 1997 priority date for the '753 patent and describes a cigarette paper having discrete cross-directional "bands" of thicker basis-weight material that can cause an unattended cigarette to self-extinguish. (SBr. at 61.) Staff says that Allen discloses (a) a smoking article wrapper, (b) with discrete areas of reduced permeability, (c) that improve ignition proclivity control of a smoking article. (*Id.*) According to Staff, the discrete areas are (d) treated with a permeability-reducing substance, (e) applied in horizontal bands spaced apart in a longitudinal direction, (f) preferably 3-7 millimeters wide and (g) and preferably separated by untreated regions of 15 to 30 millimeters. (*Id.* (citing RX-443 at 4:35-40, 4:57-61).) Staff says the cross-directional bands extend (h) the entire width of the paper wrapper and (i) around the entire circumference of the cylinder when wrapped around a tobacco column. (*Id.* (citing RX-443 at 4:38-40).)

Staff says that Allen identifies various potential permeability-reducing substances that may be applied in the banded areas, including pulp, highly refined pulp, high surface area cellulosic fibers, microcrystalline cellulose, and a mixture of highly refined pulp and calcium carbonate. (*Id.* (citing RX-443 at 3:21-28).) Staff says that several of these substances are also explicitly identified in the '753 patent as examples of a "film forming composition." (*Id.* (citing JX-1 at 4:59-65).)

In light of the foregoing, Staff concludes that Allen describes all the essential elements of claim 12 of the '753 patent and its asserted dependent claims, with one exception. (*Id.* at 62.) Staff says that Allen also discloses how these essential elements function in smoking articles

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incorporating the claimed paper wrapper, thus reading on claim 1 of the '753 patent and its asserted dependent claims. (*Id.* (citing RX-443 at 3:59-63).) In Staff's view, the only feature of the '753 asserted claims that is not expressly present in Allen is a gradually increasing, decreasing or changing permeability profile. (*Id.*)

b) Allegations With Respect To Baldwin

Glatz says that United States Patent No. 5,417,228 issued to Baldwin *et al.* ("the Baldwin patent" or "Baldwin") (RX-442). (RBr. at 78.) Glatz says that Dr. McCarty explained where and why the Baldwin patent describes each element of the asserted '753 patent claims, referring to RDX-90. (*Id.* (citing Tr. at 1049-59 (McCarty))). Glatz says that Baldwin, like Allen, issued to Philip Morris and the two patents have inventors in common and describe related technologies. (*Id.*) Glatz says that Baldwin describes cigarette wrappers with "banded areas" for controlling the burn rate of a cigarette made with wrappers; the bands are of decreased porosity and are used to control the burn rate of cigarettes made with the banded wrappers by "modifying or tailoring" the amount of permeability-reducing material applied, and the width and spacing of the bands. (*Id.* (citing RX-442 at 4:65-5:1).) Glatz says that Baldwin describes a reduced ignition proclivity cigarette paper formed by applying bands of a permeability-reducing material around the circumference of a cigarette made with this paper and states that only routine experimentation is needed to modify and tailor the burn rate—meaning to reduce ignition proclivity. (*Id.* at 78-79.) Glatz says that by 1996 these adjustments were just a matter of every-day experimentation to influence reduction in ignition proclivity. (*Id.* at 78 (citing Tr. at 1052 (McCarty))).

Glatz says that Baldwin's bands are deposited on the paper web using film forming compositions as defined by Glatz. (*Id.*) Glatz says that these compositions, which reduce the

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permeability of the base paper, include fibrous cellulose, microcrystalline cellulose, bacterial cellulose and microfibrillated cellulose. (*Id.* (citing RX-442 at 3:25-30).) These film forming compositions may also include a “binder” such as carboxymethyl cellulose, hydroxypropyl cellulose, starch, guar or other various polysaccharides, says Glatz. (*Id.* (citing RX-442 at 7:1-8 and 30-42).) These materials, says Glatz, form a dense layer or coating of fibers, fibrils or microfibrils on the surface of the base paper that reduces the permeability of the paper in the areas to which the composition is applied. (*Id.* (citing Tr. 1055-57 (McCarty)).) Glatz argues that at least some of the binders specifically identified in the Baldwin patent are the same as those that are exemplified in the ‘753 patent as film forming compositions. (*Id.* (referencing JX-1 at 4:41-65).)

Glatz says that Baldwin describes the purpose of its invention as providing a means for controlling the burn rate of a cigarette, and in its examples 1-8 the bands are used to reduce a cigarette’s static burn rate in the regions of the band. (*Id.* (referencing RX-442, Example 1, 8:38-39) (“The cigarettes show a reduction of the static burn rate in the regions of the band.”).) Glatz argues that Baldwin states that obtaining the desired burn characteristics requires only “simple experimentation.” (*Id.* (citing RX-442 at 4:65-68).) Glatz concludes that it is clear from the information given in Baldwin that, with only routine experimentation and adjustment of the band dimensions and other known characteristics of the burn rate of cigarettes, a person of ordinary skill in the art would immediately appreciate how to construct a cigarette with bands made according to the patent that exhibited reduced ignition proclivity characteristics. (*Id.*)

In summary, according to Glatz, Baldwin describes every essential element of the ‘753 patent’s asserted claims except for express mention of a gradually changing permeability profile. (*Id.*) Thus, says Glatz, Baldwin confirms SWM’s admissions regarding the state of knowledge

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in the art and leaves for determination only whether the gradually changing permeability profile is obvious. (*Id.*)

Staff argues that Baldwin teaches that with “simple experimentation” it is possible to generate specific burn characteristics by tailoring the amount of permeability-reducing material applied to the treated areas, as well as the width and spacing of the bands. (SBr. at 62 (citing RX-441 at 4:30-38, 4:65-5:1).) Staff says that a person of ordinary skill in the art would immediately appreciate, in light of Baldwin, how to construct a banded LIP cigarette by using routine experimentation to adjust factors known to affect the burn rate of cigarettes, such as the dimensions of the treated bands. (*Id.*)

Staff says that Baldwin describes cigarette wrappers with “banded areas” that are less porous than the untreated areas of the wrappers and thus control the burn rate of the cigarette. (*Id.*) Staff says that the bands in Baldwin are formed from cellulosic fibers, including microcrystalline cellulose, bacterial cellulose, and microfibrillated cellulose. (*Id.* (citing RX-441 at 3:25-30).) Staff says that Baldwin provides that these compositions may also include a “binder” such as carboxymethyl cellulose, hydroxypropyl cellulose, starch, guar or other various polysaccharides. (*Id.* at 63 (citing RX-441 at 7:1-8, 7:30-42).) The result is a mixture that forms a layer or coating in the treated areas that reduces the permeability of the paper. (*Id.*) Staff says that some of the binders in Baldwin are provided as examples of film forming compositions in the ‘753 patent. (*Id.* (referencing JX-1 at 4:41-65).) Staff concludes that Baldwin describes every essential element of the asserted claims of the ‘753 patent except for an express mention of a gradually decreasing, increasing or changing permeability profile.

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c) Allegations With Respect to Baker

Glatz says that U.S. Patent No. 4,077,414 to Baker *et al.* (“the Baker patent” or “Baker”), which issued on March 7, 1978, describes cigarette paper wrappers having discrete, cross-sectional bands to control the static burn rate of cigarettes made from such wrappers. (*Id.* at 80.) Glatz says that Baker describes the object of the invention as providing “means for advantageously controlling the burn rate of a cigarette, for instance, and/or for increasing the puff number.” (*Id.* (citing RX-429 at 2:8-9, 1:21-23).) According to Glatz, Baker describes a cigarette paper with a controlled burn rate formed by applying bands of a permeability-reducing material in the cross-direction or around the circumference of a cigarette made from this wrapper. (*Id.*) Glatz says that Baker makes clear that a cigarette’s burn rate can be adjusted to many different levels depending upon routine adjustment of the band characteristics. (*Id.*) Glatz says Baker therefore discloses all of the features necessary to create reduced ignition proclivity cigarette paper where the static burn rate in the paper’s bands effectively drops to zero. (*Id.*) Glatz says that by a year before the ‘753 patent was filed, it was well known how to modify the width of bands and the composition of the bands to control burn rate. (*Id.* (citing Tr. at 1061 (McCarty)).)

Glatz argues that, according to Baker, the cross-directional bands of a film forming composition are applied by “painting, printing or other coating technique,” and in these bands of lower porosity the film forming composition blocks or fills the pores of the paper or forms a film across the gaps between cellulose fibers thereby preventing air from diffusing from one side of the paper to the other. (*Id.* at 81 (citing RX-429 at 2:7-11).) Glatz says that the resulting permeability of the low porosity bands may be zero or substantially zero and preferably within a range of 0 to 5 CORESTA. (*Id.* (citing RX-429 at 1:38-40).) Glatz notes that Baker describes

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the bands as discrete, cross-directional, and separated by areas of untreated paper. (*Id.* (referencing RX-429 at Examples 5, 6, 7, 3:67-4:1, 4:12-14, 4:22-24).) Glatz says that, according to Baker, the untreated base paper—also called the “higher porosity” bands—has an air permeability of 15 to 20 CORESTA. (*Id.* (citing RX-429 at 1:32-35).)

Glatz maintains that Baker teaches the making of “low porosity bands” with a permeability-reducing material, preferably a substance that forms gels in water, including “gelatine, alginates, methyl cellulose, methylethyl cellulose and gums” and “[w]ater-insoluble substances such as lacquers and varnishes may also be used....” (*Id.* (citing RX-429 at 2:13-18).) Glatz argues that all of these materials form a layer or coating on the base paper that reduces the permeability of the paper in the areas to which the composition has been applied, and Glatz says that many of the materials specifically identified by Baker as suitable to form the lower permeability bands are also the film forming compositions expressly illustrated in the ‘753 patent. (*Id.* (referencing RX-429 at 4:41-65).) Therefore, Glatz concludes that Baker, like Allen and Baldwin, describes every element of the asserted claims of the ‘753 patent but is silent regarding a gradually decreasing, increasing, or changing permeability profile. Glatz argues that this confirms once again admissions of SWM regarding what was known to one skilled in the art before the ‘753 patent was applied for and leaving open only whether it would have been obvious at the time of the cited prior art to include a gradually changing permeability profile. (*Id.*)

Staff notes that Baker issued March 7, 1978, nineteen years before the priority date of the ‘753 patent. (SBr. at 63 (citing RX-429).) Staff says that Baker describes cigarette paper wrappers with discrete, cross-directional bands that control the static burn rate of cigarettes made from such wrappers. (*Id.* (citing RX-429 at 2:8-9).) Staff says that Baker teaches that this static

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burn rate can be adjusted to many different levels by making routine adjustments to the characteristics of the bands, which are applied by a painting, printing or other coating technique to create discrete areas of low porosity separated by areas of untreated paper. (*Id.* (citing RX-429 at 2:9-11).) According to Staff, the coating material in Baker acts in the same manner as the film forming composition of the '753 patent by blocking or filling pores in the paper and forming a film across the gaps between its cellulose fibers, thereby reducing the permeability of the treated areas. (*Id.* (citing RX-429 at 2:7-9).) Staff also says that Baker teaches that within these low-porosity bands, the air permeability may be zero or substantially zero and preferably within a range of 0 to 5 Coresta units, while the higher-porosity untreated areas may have an air permeability of 15 to 200 Coresta units. (*Id.* (citing RX-429 at 1:32-40).)

Staff argues that Baker also discloses low-porosity bands that are created by applying a permeability-reducing material to the base paper, preferably a substance that forms a gel in water and notes that preferred substances include "gelatin, alginates, methyl cellulose, methylethyl cellulose and gums." (*Id.* at 63-64 (citing RX-429 at 2:11-18).) Staff says that, as in Allen and Baldwin, many of the materials named in Baker as suitable for forming the bands are also identified as film forming compositions in the '753 patent. (*Id.* at 64 (citing JX-1 at 4:41-65).) Staff concludes that Baker describes every essential element of the '753 patent's asserted claims except a gradually decreasing, increasing, or changing permeability profile. (*Id.*)

d) Allegations With Respect to Houck

Staff says that U.S. Patent No. 3,911, 932 to Houck *et al.* issued on October 14, 1975 describes how to "provide a cigarette with a relatively level smoke delivery profile" by changing the porosity of certain areas on a cigarette paper wrapper. (*Id.* at 64 (citing RX-427 at 1:5-6, 1:18-23, 1:39-55).) Staff argues that Houck reduces the permeability of the treated areas by

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applying a film forming composition to the cigarette base paper, using the same porosity-reducing additives identified in the '753 patent. (*Id.* (comparing RX-427 at 2:23-31, 3:51-68 to JX-1 at 4:41-65).) Staff says that unlike Allen, Baldwin, and Baker, Houck discloses an embodiment of the inventions that contains three zones of differing permeability in the cigarette wrapper, rather than the two zones shown in other embodiments. (*Id.* (citing RX-427 at 3:7-10 and Fig. 3).) Staff says that Houck discloses a first zone of maximum permeability reduction at about 120 to about 400 seconds Greiner, a second intermediate zone at about 60 to about 120 seconds Greiner, and a third zone of minimum permeability reduction at about 20 to about 60 seconds Greiner. (*Id.* at 64-65 (citing RX-427 at 2:4, 2:13, 4:25-43, 6:33-38).) According to Staff, Houck teaches that the purpose of using three zone of varying permeability is "to provide a smoother transition" from one permeability level to another. (*Id.* at 65 (citing RX-427 at 4:36-53).)

Staff argues that the three-zone embodiment described in Houck teaches the gradually changing permeability profile limitation of the asserted claims in the '753 patent as it is understood under SWM's construction. This is because by "providing a smoother transition" as the burning coal progresses through multiple permeability zones, Houck provides for "a relatively level smoke delivery profile. Staff says that this is equivalent to the '753 patent's objective of "minimizing the chance of discernible changes in smoke delivery. (*Id.* (referencing JX-1 at 2:37-38).)

Staff says that by combining any one or more of the cigarette wrappers disclosed in Allen, Baldwin, and Baker with the gradual change in permeability levels disclosed in Houck, a person of ordinary skill in the art at the time of the '753 invention would immediately appreciate how to construct a banded LIP cigarette with a gradually decreasing, increasing, or changing

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permeability profile and it would have been obvious that one could create any of the profile shapes described in the asserted dependent claims by arranging zones of differing permeability in the desired order. (SBr. at 65.) Staff argues that a person of ordinary skill attempting to control the burn rate of a cigarette by adjusting the air permeability of certain areas of the cigarette wrapper would have been motivated to combine any of the banding methods disclosed in Allen, Baldwin, or Baker with the finer degree of control possible by incorporating the multiple permeability zones described in Houck. (*Id.*) In sum, argues Staff, multiple prior art references demonstrate that there was little or no difference between the subject matter sought to be patented in the '753 patent and the existing prior art. (*Id.*)

Glatz says that as the '753 patent is written the only possible distinction between the asserted claims and the admitted state of the art is the "gradually" changing permeability profile at one or both edges of the conventional bands. Thus, a "gradually" changing shape or profile is said to minimize discernible changes in smoke delivery and taste as compared to the same treated paper without "gradual" permeability change. (RBr. at 83 (citing Tr. at 1576-77 (Honeycutt)).) Glatz argues that even though the prior art does not expressly describe such a "gradual" permeability change, this is because a gradual permeability change at one or both edges of the band has no practical effect on taste or smoke delivery and thus is unnecessary. (*Id.* at 83-84.) "[T]o the extent that the transition between the known higher permeability of the untreated base paper and the known lower permeability of the treated bands in a prior art LIP paper wrapper might be seen as a problem, because of an "abrupt" transition, smoothing out that transition to make it less noticeable by interposing zones of intermediate permeability," as taught in Houck, was obvious to one of ordinary skill in the art as of at least one year before the '753 filing date, Glatz argues. (*Id.* at 84.)

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Glatz says, after acknowledging that “[i]t is known to be desirable to provide a cigarette with a relatively level smoke delivery profile” and referencing previous ways of “leveling or flattening the smoke delivery profile,” Houck teaches accomplishing that objective by changing the porosity, or permeability, of portions of the cigarette paper wrapper and the air flow through the paper. (*Id.* (citing RX-427 at 1:5-6, 18-23, 39-55).) Glatz notes that Houck explains that cigarette companies prefer to deliver the same amount of tar, nicotine, and carbon monoxide to the smoker throughout the entire smoke but conventional cigarettes tended to deliver more of these substances toward the end of the smoke. (*Id.*) Therefore, argues Glatz, leveling some delivery was desired and Houck does this by adjusting the permeability of the base paper by applying a film forming composition to the paper wrapper surface using many of the same porosity-reducing additives mentioned in the ‘753 patent. (*Id.* at 84-85 (comparing RX-427 at 2:23-31, 3:51-68 to JX-1 at 4:41-65).)

Glatz says that Figure 3 of Houck illustrates three zones of different permeability as compared to only two zones in other configurations, as for example, Figures 1 and 2, “to provide a smoother transition” from one permeability level to another. (RFF 25.) Glatz argues that Houck illustrates three zones of different permeability consisting of about 120 to 400 seconds Greiner, about 60 to 120 Greiner, and about 20 to about 60 Greiner, noting that “Seconds Grenier” is another measure of permeability, but unlike CORESTA, the higher the number, the lower the permeability. (*Id.*) Thus, argues Glatz, Houck teaches that if a “smoother transition” from one permeability level to another is desired in a cigarette designed to provide “a relatively level smoke delivery profile,” the “smother transition” can be achieved by interposing a further zone of intermediate permeability and so provides a gradually changing permeability profile, in which the permeability does not occur all at once, for the overall purpose of “leveling or

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flattening the smoke delivery profile.” (*Id.*) Glatz says that even though Houck’s permeability change occurs in “steps,” this stepped configuration is expressly taught as “an alternative embodiment” of the ‘753 patent invention. (*Id.* (citing JX-1 at 11:12-18).)

Glatz says that, assuming (1) a problem actually existed in prior, conventional LIP banded wrappers caused by an “abrupt” or “sharp” transition between different permeability levels in the wrapper—between treated and untreated areas—and (2) more than mere common sense was needed to overcome that problem by making the change occur gradually, the use of Houck’s gradually changing permeability profile in any of the admitted prior art banded LIP papers, such as Allen, Baldwin, or Baker, to minimize such discernible changes when the burning coal moves from one permeability level to another would have been obvious to one of ordinary skill in the art. (*Id.* at 85-86.) Glatz argues that this is true for both the gradually changing permeability profiles of independent claims 1 and 12, as well as for the various other profile shapes of the dependent claims that are merely obvious variations of the profile taught by Houck.

e) Allegations With Respect to “Common Sense”

Glatz says that although the prior art did not expressly describe either the physical shape of the edges of the bands of the permeability-reducing material or the profile of any permeability change occurring at one or both edges of the bands, common sense and everyday experience teach that allowing a change to occur over a longer time or distance will make the change less discernible. Consequently if one were concerned that the edges of a band on a conventional cigarette paper wrapper for making reduced ignition proclivity cigarettes were too abrupt and thus permeability changed sharply, an obvious and common-sense solution would be to smooth out the permeability change by causing it to occur over a longer distance, that is, make the

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change occur gradually. (RBr. at 82.) Glatz argues that Mr. Honeycutt agreed that with respect to any problems associated with sharply edged banded LIP papers it would make common sense to make the bands gradual. (*Id.* (citing RFF 24).) Glatz argues that even though Mr. Honeycutt suggested that a person of ordinary skill in the art, upon encountering a problem attributable to sharp band edges, would simply discard entirely the banded approach to improving low ignition propensity characteristics and turn instead to some entirely different technology, in 1996, a year before the filing date of the '753 patent, those skilled in the art were very familiar with and preferred a banded solution for LIP cigarettes and would have had no incentive or desire to abandon that well-established technology. (*Id.* at 83 (citing Tr. at 1088-89 (McCarty))). Glatz contends that one skilled in the art would have done exactly what the '753 patent suggests, make the band edges less sharp so that "the change in taste and smoke delivery to the smoker occurs over a gradual period and is less discernible to the smoker." (*Id.* (citing JX-1 at 10:11-13).)

Glatz argues that the formation of LIP bands with a gradually changing permeability profile was easily accomplished using well known printing techniques already in use in the cigarette paper wrapper art for decades. (*Id.* at 86 (citing Tr. at 2033-35, 2065 (Honeycutt))). Glatz says that such methods were taught in Milner United Kingdom Patent Application 2,100,572 (RX-463) for use on cigarette papers, and it was well known in general how to print films, layers, or coatings on a variety of papers, and it was also well known in general how to print films, layers, or coating on a variety of substrates to provide physical profiles of any desired shape. (*Id.* (citing RFF 26).) Glatz says that it is acknowledged in the '753 patent specification that those of ordinary skill in the cigarette wrapper art were aware that generally the thicker the layer of deposited permeability reducing material on the base paper, the greater the reduction in permeability. (*Id.* (citing JX-1 at 10:20-26).) Glatz argues that a person of ordinary skill in the

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art of printing LIP bands using the rotogravure process would understand the basic principles needed to create gradually changing amounts of coating materials on a cigarette paper wrapper and thus a gradually changing permeability profile in accord with all of the asserted '753 patent claims. Such a person, motivated by common sense and/or the Houck patent, and knowing generally that the thicker the coating of permeability-reducing material deposited on a cigarette paper wrapper, the greater the resulting reduction in permeability, would have found it obvious to create a LIP band on a cigarette paper wrapper having any of the profiles specified in the asserted claims of the '753 patent.

Glatz says that certain of the dependent '753 claims recite specific profiles or shapes for the bands but these are routine modifications that would be obvious to one skilled in the art and have no proven effect on the performance of the paper wrappers especially in the form of smoke delivery and taste; all such profiles could easily be printed and are well within the basic teaching of Houck to smooth out smoke delivery by using a gradually changing profile. (*Id.* (citing Tr. at 1074-88 (McCarty)).)

f) SWM Response

SWM argues that the three prior art patents disclosing banded wrappers—Allen, Baldwin, and Baker—do not teach bands having a gradually changing permeability profile of any type. (CBr. at 75 (citing Tr. at 1045, 1047-49, 1057, 1059, 1062 (McCarty)).) Also, argues SWM, they each suffer other deficiencies that further distance them from the wrappers claimed in the '753 patent. (*Id.*) SWM says that Allen “discloses a nonlaminated cigarette paper onto which localized and crossdirectional regions of increased basis weight are applied to affect static burn rate.” (*Id.* at 76 (citing RX-443 at 3:9-21, 3:59-63).) These regions contain “additional material such as a second quantity of pulp, or alternatively, a filler,” notes SWM. (*Id.* (citing

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RX-443 at 3:21-25).) Therefore, according to SWM, the bands in Allen are made from cellulosic fibers, microcrystalline cellulose, and highly refined pulp and these are not film forming compositions as claimed. (*Id.* (citing Tr. at 1044, 1046-47 (McCarty)).) SWM says that Allen explains the advantages of using cellulosic material to form the bands and teaches away from using burn retardants to reduce ignition proclivity. (*Id.* (citing RX-443 at 2:4-5, 2:25-27).) SWM says that Allen explains that “burn retardants can contribute undesirable flavors to the smoking article upon combustion.” (*Id.* (citing RX-443 at 1:62-64).) SWM argues that, by using cellulosic fibers, microcrystalline cellulose, and highly refined pulp, Allen essentially just adds more paper to the paper wrapper and does not add a film forming composition. SWM says that the band material in Allen is not distinct from the smoking article wrapper, as required by the claims. (*Id.*) SWM says that Dr. McCarty admitted that Allen does not contain any reference to bands having a gradually changing permeability profile as required by the ‘753 patent’s independent claims and that Allen does not describe additional characteristics relating to gradually changing permeability profiles in dependent claims 2-6, and 13-18. (*Id.* (citing Tr. at 1045-46, 1048 (McCarty)).)

With respect to Baldwin, SWM argues that it is even further removed from the inventive wrappers of the ‘753 patent. (*Id.*) SWM argues that like ‘Allen, Baldwin notes the benefits of banded wrappers made from “[a]ny cellulosic material capable of forming a suspension in liquid which is sufficiently stable for coating” and thus just adds more paper to the paper wrapper, not a separate film forming composition. (*Id.* at 76-77 (citing RX-442 at 5:16-6:68; Tr. at 1052-53 (McCarty)).) SWM argues that Dr. McCarty admitted that there are many reasons to control burn rate beyond attempting to achieve reduced ignition proclivity and not every patent that talks about burn rate control is related to reducing ignition proclivity. (*Id.* at 77 (citing Tr. at 1271

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(McCarty)).) SWM says that most patents regarding burn rate control relate to controlling smoke deliveries and puff number, which are important for all cigarettes, not just LIP cigarettes. (*Id.* (citing Tr. at 1272 (McCarty)).)

SWM says that Baldwin teaches away from using non-cellulosic materials for band formation, explaining that an advantage of omitting even small amounts of non-cellulosic binders is that “the taste of the smoking article may be improved.” (*Id.* (citing RX-442 at 7:47-53; CFF-IV-30).) SWM says that Baldwin, in comparing the wrappers of the invention to a wrapper made with a film forming composition (Klucel),⁴¹ notes that “cigarettes so produced showed no reduction of the static burn rate in regions of the band.” (*Id.* (citing RX-442 at 10:29-31).) Thus, argues SWM, Baldwin teaches away from using a film forming composition for bands and consequently a person of ordinary skill in the art would not have been motivated to use film forming compositions in lieu of the cellulosic material used for band formation in the wrappers of Baldwin. (*Id.*) SWM also points out that Baldwin does not disclose the gradually changing permeability profile limitations in the independent or dependent claims of the ‘753 patent. (*Id.*)

SWM argues that Baker, like Baldwin, discloses a banded wrapper and is directed toward providing a “means for advantageously controlling the burn rate of a cigarette, for instance, and/or for increasing the puff number” and is not directed to wrappers having reduced ignition proclivity. (*Id.* at 78 (citing RX-429 at 1:21-23).) SWM argues that the experts agree that the bands of Baker are too narrow to achieve reduced ignition proclivity. (*Id.* (citing Tr. at 1321-22 (McCarty), 1946-47 (Honeycutt)).) SWM says that according to Baker, the cigarette burns through the narrow bands to achieve a higher puff count, but this does not result in self

⁴¹ The “film forming composition” of Klucel that SWM refers to is hydroxypropyl cellulose. (RX-442 at 10:3.)

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extinguishing cigarettes. (*Id.* (citing Tr. at 1947 (Honeycutt); CFF-IV-31).) And, argues SWM, Baker does not disclose a gradually changing permeability profile. (*Id.* (citing Tr. at 1062 (McCarty)).)

SWM says that Glatz's expert admitted that none of Allen, Baldwin, or Baker discloses all of the limitations of the asserted '753 patent claims, including most notably a gradually changing permeability profile. (*Id.* (citing Tr. at 1257 (McCarty), 1900 (Honeycutt)).) SWM argues that the evidence demonstrates that it would not have been obvious to a person of ordinary skill in the art to use, modify, or combine these references with other prior art references to achieve the claimed inventions, and in particular, it was not obvious to select a banded design using a film forming composition and modify that design to have a gradually changing permeability profile. (*Id.*) In the first place, according to SWM, the industry had not settled on banded wrappers as the preferred design for achieving reduced ignition proclivity when the '753 patent application was filed. (*Id.* (citing Tr. at 1901, 1913 (Honeycutt)).) SWM says that banded design was just one of many viable options for achieving reduced ignition proclivity and was known to have many drawbacks; designs involving low permeability papers, reduced circumference, and reduced tobacco density were recommended by previous studies and were the focus of industry work even after the filing of the '753 patent. (*Id.* at 78-79 (referencing CX-512; CX-515).) For instance, argues SWM, in {

} designed a 35-sample matrix study to explore all of these design factors and of the 35 { }. (*Id.* at 79 (citing { }; Tr. at 1908-11 (Honeycutt)).) The rest, says SWM, were reduced circumference, low permeability and altered tobacco density designs. (*Id.* (citing { })). Moreover, according to SWM, { } continued to explore low permeability and low static burn rate designs for years after the filing of the '753 patent

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application. (*Id.* (citing CX-707; CX-708; Tr. at 1911-13 (Honeycutt)).) SWM argues that other alternatives included double wrap cigarettes and patterns other than bands, such as spiral patterns and the helical and cross-hatch patterns. (*Id.* (citing Tr. at 1910, 1915 (Honeycutt); RX-230C at 3, 6).) SWM says that { } research focused on cross-hatch designs, not banded designs. (*Id.* (citing { } at 7; { } at 7).) That there were many non-banded designs that were promising and warranted research evidences the non-obviousness of the claimed wrappers, argues SWM. (*Id.* (citing *Takeda Chemical Indus. Ltd., v. Alphapharm PTY., Ltd.*, 492 F.3d 1350, 1356-60 (Fed. Cir. 2007)).)

SWM says that banded designs using film forming compositions had many known drawbacks, demonstrating non-obviousness. (*Id.* (citing Tr. 1901-03 (Honeycutt)).) For example, the industry expressed concerns regarding the ability of banded designs to effectively reduce ignition proclivity. (*Id.* at 79-80 (citing RX-621 at 6; Tr. at 1850-51 (Honeycutt)).) SWM says that abrupt transition in banded regions was a known drawback, as it raised the potential for perceptible differences as the burning coal goes into and out of a band. (*Id.* at 80 (citing Tr. at 1902, 1918 (Honeycutt)).) SWM says that because banded cigarettes caused a difference in taste when smoked through the band, the industry attempted to use alternative designs involving consistent treatment of the wrapper, such as cross-hatch or diamond patterns, to avoid this problem. (*Id.* (citing Tr. at 1919-20, 1922 (Honeycutt); RX-230C).) SWM says that these patterns avoided the known drawback to banded designs and gave a more uniform smoke taste. (*Id.* (citing Tr. at 1921 (Honeycutt)).)

SWM says that another well-recognized disadvantage of a banded design using film forming compositions was the potential use of new material in cigarettes, which raised additional concerns about smoke deliveries, taste, and the presence of Hoffman analytes: the 41

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compounds that had been identified as carcinogens in cigarette smoke. (*Id.* (citing Tr. at 1902-03 (Honeycutt)).) SWM argues that any time new material is added to cigarettes, that new material must gain approval as acceptable for use in a cigarette. (*Id.* (citing Tr. at 1902-03 (Honeycutt)).) SWM says it was for this reason that Allen, Baldwin, and Hampl '775 explain the benefits of cellulosic bands, which merely add more paper to the paper wrapper, over non-cellulosic bands that add foreign materials to the wrapper. (*Id.* (citing RX-443 at 1:62-64; RX-442 at 5:16-6:68; JX-10 at 5:10-14; Tr. at 2012 (Honeycutt)).) SWM says that there was also the potential for manufacturing problems (*id.* (citing Tr. at 1903 (Honeycutt))) and as a result work continued on a number of designs to determine the best solution in terms of ignition propensity, consumer acceptability, manufacturing, liability and supply. (*Id.* (citing Tr. at 1903-04, 1908-09 (Honeycutt); CX-513).) Thus, says SWM, it would not have been obvious to one of ordinary skill in the art to select a banded design using a film forming composition as a starting point.

SWM argues that if one were motivated to choose a banded film forming design for modification it would not be obvious to modify those designs to create bands having gradually changing permeability profiles. (*Id.* at 81.) According to SWM, while making an abrupt change into a gradual one might make sense in a general context, it is not the most logical option in the context of cigarette paper. Those skilled in the art recognized that eliminating the abrupt change altogether was the most logical approach, as evidenced by the focus on non-banded designs with a uniform smoking profile, rather than the disjointed experience offered by banded designs. (*Id.* (citing Tr. at 1914-15 (Honeycutt); RX-31C at 29; CX-747C at 7).) Doing so, argues SWM, eliminated the industry-recognized disadvantages of banded designs. (*Id.* (citing Tr. at 1902-03 (Honeycutt)).) In addition, argues SWM, one of ordinary skill in the art would have recognized that creating a gradually changing profile in a band made from film forming compositions would

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necessarily require the addition of even more foreign substances that Allen and Baldwin seek to avoid and this additional material would further increase the likelihood of experiencing an “off” taste. (*Id.* (citing Tr. at 1916, 1932 (Honeycutt)).) SWM says this occurs because one cannot reduce the width of the band having maximum reduction in permeability since that would adversely affect LIP properties. Therefore to achieve a gradually changing permeability profile one would have to add even more unwanted material and thus would not find it a matter of common sense to create bands of film forming composition having gradually changing permeability profiles. (*Id.*)

SWM says that Houck deals with leveling smoke profiles across the entire tobacco rod so that the first puff is the same as the last. (*Id.* (citing Tr. at 1075, 1257-58 (McCarty), 1927 (Honeycutt)).) SWM says that Houck states that the “smoke delivery profile, that is, the yield in total particulate matter (TPM) measured in milligrams, of particulate material delivery to the smokestream, per puff, should be about equal for the later stage smoking puffs as from those of the initial stage smoking puffs.” (*Id.* (citing RX-427 at 1:5-11, Tr. at 1928 (Honeycutt)).) SWM says that Houck explains that by adding a porosity-reducing compound at the burning coal end of the cigarette wrapper, the total particulate matter can be increased in earlier cigarette puffs, causing relatively level yield in total particulate matter. (*Id.* (citing RX-427 at 1:39-67; Tr. at 1928 (Honeycutt)).) SWM argues that adding permeability reducing material in bands separated by untreated areas anywhere but toward the lighting end of the cigarette, as in banded LIP designs, would exacerbate the very problem Houck set out to solve. (*Id.* (citing Tr. at 1262-63 (McCarty)).) SWM argues that doing this would further increase already high deliveries in the latter stages of the cigarette and one of ordinary skill in the art would recognize that by selecting a banded LIP design, the goal of Houck could no longer be accomplished. Widening those bands

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to have a gradually changing permeability profile would further defeat the purpose of Houck.

(Id.)

Also, argues SWM, one of ordinary skill in the art would not have looked to Houck for guidance on how to solve problems with a banded design because Houck was concerned with maintaining uniform deliveries across the entire wrapper, not with minimizing taste differences within a single puff as the cigarette burns from an area of relatively high permeability into a low permeability area. *(Id. at 83.)* According to SWM, Houck does not teach a gradually decreasing permeability profile because the three zones of permeability described by Houck begin with an area of low permeability, followed by an area of intermediate permeability, and ending with an area of high permeability, the permeability increasing from the smoking end to the mouth end. *(Id. (citing Tr. at 1931 (Honeycutt); RX-427 at Figs. 1, 3, 2:66-3:4, 4:25-42).)* SWM says that for these reasons Houck reveals that it teaches the exact opposite of the gradually decreasing permeability profile of independent claims 1 and 12 of the '753 patent. *(Id.)* SWM argues that Dr. McCarty admitted that Houck only teaches a gradually decreasing permeability profile if one starts at the filter, or mouth, end of the cigarette and goes to the lighting end. *(Id. (citing Tr. at 1080, 1085 (McCarty)).)* According to SWM, Dr. McCarty's testimony that Houck teaches a gradually changing permeability profile starting from the filter end and moving in the direction of the burning end of the cigarette is nonsensical because a smoker would not smoke a cigarette in that direction. *(Id. (citing Tr. at 1260 (McCarty)).)* Further, argues SWM, the contention that Houck teaches a gradually decreasing permeability profile is contrary to Dr. McCarty's deposition testimony. *(Id. (citing Tr. at 1260 (McCarty)).)*

In addition, argues SWM, a person of ordinary skill in the art at the time of the '753 invention would have had no reason to combine the teachings of Houck with prior art banded

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LIP wrappers because Houck does not disclose discrete treated areas of reduced permeability for improving ignition proclivity characteristics or control. (*Id.* (citing Tr. at 1929-33 (Honeycutt), 1258 (McCarty)).) According to SWM, Houck teaches away from combining its disclosed technology with reduced ignition proclivity references, as for example, teaching that a “burn-promoting additive is provided to offset a lower burning rate in the wrapper which stems from the use of the porosity-reducing additive.” (*Id.* at 84 (citing RX-427 at 2:17-22, 4:1-24).) SWM says that adding a burn promoter to counter the effects of reducing porosity is contrary to the goals of LIP cigarettes. (*Id.* (citing Tr. at 1258 (McCarty), 1929-30 (Honeycutt)).)

SWM argues that Houck also fails to disclose or suggest numerous limitations of the dependent claims of the ‘753 patent, such as “a substantially ramped-shape profile.” (*Id.* (citing Tr. at 1266 (McCarty)).) Instead, argues SWM, the transition between the permeability zones in Houck occurs all at once. (*Id.* (citing Tr. at 1080, 1264-65 (McCarty)).) For the same reason, says SWM, Houck does not disclose a “gradually increasing permeability profile following said gradually decreasing permeability profile” or a “substantially ramped-shaped profile with increasing and decreasing ramp sections.” (*Id.*) SWM argues that, unless one considers the teachings of Houck to include smoking the cigarette backward, it does not disclose “an area of sustained maximum permeability reduction following said gradually decreasing permeability profile.” (*Id.* (citing Tr. at 1086, 1261-62 (McCarty); CFF-IV-34).) Nor does Houck disclose “an area of sustained maximum permeability reduction between said gradually increasing and gradually decreasing permeability profiles.” (*Id.* (citing Tr. at 1262 (McCarty)).) In fact, argues SWM, having such a region would be counter to what Houck was trying to achieve. (*Id.* (citing Tr. at 1262 (McCarty)).) SWM argues that the area of maximum permeability reduction in the cigarette disclosed by Houck is at the lighting end of the cigarette rod, not following a gradually

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decreasing profile, and not between a gradually increasing and gradually decreasing profile and, therefore, none of these elements would be obvious. (*Id.*) As a result, argues SWM, the asserted claims of the '753 patent are not obvious over any of the prior art banded cigarette paper references discussed by Glatz in view of Houck. (*Id.* at 84-85 (citing Tr. at 1933 (Honeycutt)).)

SWM argues that there is evidence of secondary considerations that also stand in opposition to Glatz's and Staff's assertions of invalidity based on obviousness. (*Id.* at 89.) According to SWM, the evidence shows that there was a long-felt need in the industry for the claimed invention of the '753 patent. (*Id.* (citing Tr. at 1843-45 (Honeycutt)).) SWM says that for decades, paper manufacturers and tobacco companies struggled to create cigarette papers that struck the delicate balance of achieving lower ignition propensity without sacrificing the smoke delivery and aesthetic characteristics that consumers had come to expect and demand. (*Id.* (citing Tr. at 1843-45 (Honeycutt)).) During that time, many options for achieving acceptable LIP performance were developed, tested, and found unacceptable, says SWM, and banded designs, especially of film forming compositions were known to have drawbacks, including a change in taste as the cigarette was smoked into the band. (*Id.* (citing Tr. at 2012 (Honeycutt); JX-10).) SWM says that banded designs using film forming compositions as burn retardants were frowned upon by those in the industry as exacerbating taste and smoke delivery problems known to exist. (*Id.* (citing RX-443 at 1:62-64; RX-442 at 5:26-6:68; JX-10 at 5:10-14; Tr. at 2012 (Honeycutt)).) SWM argues that, despite decades of research and development those in the industry never created a design having bands with a gradually changing permeability profile; instead, says SWM, those in the industry developed and pursued other technologies such as low burn rate papers of consistent porosity wrappers having consistent patterns like a cross-hatching to solve the problem. (*Id.* at 89-90 (citing Tr. at 1846-47, 1905 (Honeycutt)).)

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According to SWM, it achieved commercial success selling products embodying the claimed invention of the '753 patent, citing the following financial information, which SWM says represents revenues from sales of its domestic industry products that practice claim 12 of the '753 patent:

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(*Id.* at 90 (citing CX-704C at Q/A 79 (Thompson)).) SWM says that other documents confirm these sales (*id.* (citing CX-658C-CX-660C)) and argues that a nexus between the claimed invention and these reported sales is presumed because, "as the evidence shows," the marketed LIP papers embody the features of claim 12 of the '753 patent. (*Id.* (citing *Crocs, Inc. v. Int'l Trade Comm'n*, 598 F.3d 1294, 1310-11 (Fed. Cir. 2010)).) SWM argues that the burden therefore shifts to the party asserting obviousness to present evidence to rebut the presumed nexus. (*Id.*)

SWM says that it has licensed the claimed invention of the '753 patent to such companies as { } (*id.* (citing CX-704C at Q/A 46-58 (Thompson); { } at 14: { } at 15; { } at 15)) and { } (*id.* (citing CX-704C at Q/A 59-62 (Thompson); { } at 3-4)). SWM says that this licensing evidences industry acquiescence and supports a finding that the asserted claims of the '753 patent are not obvious. (*Id.* at 90-91.) SWM argues that the evidence discloses that these licenses are directed to the '753 patent because it shows that { } initially approached SWM in order to obtain a license to SWM's technology. {

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} and requested that the '753 patent be included. (*Id.* at 91 (citing CX-461C at 14; { } at 15; { } at 15).) Moreover, argues SWM, {

} (*Id.*

(citing { } at 2; { } at 2; { } at 2).) SWM argues that, with respect to the film forming solution, the '753 patent is directed toward “a non-aqueous solution of a solvent soluble cellulosic polymer dissolved in a non-aqueous solvent.” (*Id.* (citing JX-1 at claim 8).) As such, argues SWM, { } are directed toward the '753 patent. (*Id.*)

g) Analysis

The Administrative Law Judge concludes that the evidence is not clear and convincing that Allen, Baldwin, and Baker, in light of Houck or “common sense,” render the '753 patent invalid for obviousness. All of the parties recognize that Allen, Baldwin, and Baker do not disclose a gradually changing permeability profile, as that term has been construed herein. Nor does Houck supply what is lacking in Allen, Baldwin, and Baker in respect to a gradually changing permeability profile, for several of the reasons given by SWM discussed above. Houck addresses a different objective than the gradually changing permeability profile—leveling the yield of total particulate matter (TPM). Houck employs a method for doing so that is neither revelatory nor suggestive of the ramped-shaped profile disclosed in the '753 patent or of other aspects of that patent insofar as they concern techniques for achieving a gradual change in permeability. Although Houck does discuss regulating delivery of particulate matter in order to effect a sense of uniformity in the smoking experience, by varying the porosity of the paper at different locations along the length of the cigarette, the evidence does not clearly and

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convincingly demonstrate how a person of skill in the art would have found it obvious, as a matter of common sense, to combine Houck, using the technology and technique disclosed therein, with any of the discussed prior art, or how combining Houck with Allen, Baldwin, or Baker would have led to the invention of the '753 patent. Hindsight is not enough; something more has to be demonstrated and that has not been done here. *Star Scientific, Inc. v. R. J.*

Reynolds Tobacco Co., 655 F.3d 1364, 1375 (Fed. Cir. 2011). The Administrative Law Judge, however, does not agree with SWM's validity argument as it relates to the film forming composition, for the reasons discussed above in relation to claim construction of that term.

Furthermore, the Administrative Law Judge does not agree with SWM's arguments regarding secondary considerations. To prove non-obviousness via evidence of secondary considerations, a party must establish a nexus between the evidence relied upon and the patented invention.

Western Union Co. v. MoneyGram Payment Systems, Inc., 626 F.3d 1361, 1372 (Fed. Cir. 2010).

Regarding commercial success, the Administrative Law Judge finds that SWM has failed to show that the alleged commercially successful product "is the invention disclosed and claimed in the patent" because, as found *infra* at Section VI.A.1., SWM's LIP cigarette papers do not practice claim 12 of the '753 patent, and thus, SWM has failed to establish a nexus between its evidence of commercial success and the patented invention. *Crocs*, 598 F.3d at 1310-11.

Regarding SWM's licensing activities, the Administrative Law Judge finds that the evidence is not sufficient to demonstrate a nexus between those licenses and the invention claimed in the '753 patent.

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2. '867 patent.

a) Allen with Hampl '775 or Hampl '403.

Glatz notes that United States Patent No. 4,739,775 to Hampl ("Hampl '775") (JX-10) issued on April 26, 1988, and United States Patent No. 6,568,403 to Hampl *et al.* ("Hampl '403") (RX-459) was filed on June 15, 2001, with the application claiming priority from an earlier provisional application filed June 22, 2000. (RBr. at 151.) Glatz says that the Hampl patents describe the technique of using Burn Mode Index ("BMI") as an alternative indication of a banded paper's ability to reduce ignition propensity when used to make a cigarette. (*Id.* at 151-152.) Glatz believes that the evidence establishes that a person of ordinary skill in the art would have had the motivation to combine either or both of these prior art patents with the teachings of Allen (discussed above in Section V.B.1.c). Glatz says that all three of these patents are from the same technical field and all three deal with similar problems involving banded cigarette paper for enhanced ignition proclivity. (*Id.* at 152 (citing RFF 52).) Glatz argues that to the extent one skilled in the art needed specific information about BMI testing or recognition of its relationship to reduced ignition proclivity characteristics, the Hampl patents clearly provided it. Hampl '775 is specifically cross-referenced and incorporated by reference in the '867 patent. (*Id.* (referencing and incorporating arguments elsewhere in its brief regarding the relationship between BMI and Coresta, discussed in Section V.B.1.c above).) Glatz says that if it is determined that there are any minor differences between the express or implicit disclosures of Allen and the elements described in claims 36 and 45⁴² of the '867 patent, such differences would have been completely obvious to one of ordinary skill in this technical field. (*Id.*)

⁴² Glatz also later argues that asserted claim 43 of the '867 patent is obvious when Allen and Hampl '775 or Hampl '403 are taken with Peterson '753. (*See* RBr. at 157.)

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Glatz argues, with respect to the limitations of claim 36 requiring “said paper web having relatively high permeability, the permeability of the paper web being from about 60 Coresta to about 110 Coresta,” that if that limitation is not deemed anticipated by Allen’s express disclosure of about 25-60 Coresta, it would have been obvious for one of ordinary skill in the art to apply the disclosures of Hampl ‘403 to Allen and to use base papers with air permeability values in the range of about 60 to about 110. Glatz contends that the range as expressed is not critical and that no magical results are obtained within this range as compared to Coresta values below 60 and above 110, citing Mr. Honeycutt’s testimony (Tr. at 2100-02). (*Id.* at n. 59.) Glatz argues that the application for Hampl ‘403 (RX-1359) incorporates by reference “in their entirety” the disclosures of Baldwin (RX-1359 at 19:3-11), discussed above, which includes the following statements:

Cigarette papers in use cover a wide range in porosity and burn rate. The inherent porosity of the paper varies from about 2 to about 150 Coresta units. Papers with lower values or inherent porosity require less added fibrous cellulose in the banded region to control the burn rate than papers with higher values. Therefore simple experimentation will be required to adjust the level of slurry applied to the base paper based on the type of base paper used and the desired burn characteristics. Preferably, the base paper should have a basis weight of about 25 to about 30 g/m²; the inherent porosity should be in a range from about 20 to about 60 Coresta units...”

(*Id.* (citing RX-442 at 4:60-5:4).) Glatz says that the obviousness of employing a base paper air permeability in the range of 60 to 110 Coresta flows directly from the general knowledge in the art and the many known advantages and benefits of high permeability base papers that have been well known and widely used by those of ordinary skill in the art for decades and certainly by November 13, 2000. (*Id.* (citing RFF 53).)

According to Glatz, by November 13, 2000, cigarette companies and cigarette paper companies recognized the advantages and benefits of using cigarette wrappers with high

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permeabilities, as for example, above 60. (*Id.*) Glatz says that such wrappers allowed cigarette companies to offer lighter cigarettes with low tar, nicotine, and carbon monoxide deliveries. (*Id.* (citing Tr.at 1004-05 (McCarty)).) Glatz says that cigarette companies knew how to make high permeability wrappers and that wrappers for banded LIP applications were known with Coresta values up to 200. (*Id.* (citing Tr. at 1005-06 (McCarty)).) {

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Glatz contends that, in addition to multiple written prior art disclosures about the use of high permeability base papers generally and for reduced ignition proclivity cigarette wrappers specifically, Merit Light and Ultra Light cigarettes with PaperSelect were the first ever banded LIP cigarettes marketed anywhere and they used base papers with air permeabilities of 60 and 85, within the claimed range of 60-110. (*Id.* at 154.) Glatz argues that Mr. Honeycutt, who claimed to favor lower permeability base papers, conceded that Philip Morris taught the world that banded LIP cigarettes could and should be made with base paper permeabilities of 60 and 85 Coresta. (*Id.* (citing Tr. at 2102-03 (Honeycutt)).) Glatz says that cigarette manufacturers like Philip Morris, not paper companies like SWM, required high permeability papers in order to make low tar and nicotine cigarettes. (*Id.*) Glatz argues that SWM merely made papers to comply with the specifications of companies like Philip Morris, rather than devising these products themselves. (*Id.*) In fact, argues Glatz, {

}, as admitted by SWM's corporate witness, Bruce Steidel. (*Id.*)

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Therefore, says Glatz, SWM actually derived the Coresta values of the PaperSelect base papers from Philip Morris rather than inventing them itself. (*Id.*)

Glatz says the high Coresta base papers of Merit/PaperSelect were part of the art that preceded the '867 patent and dispelled any purported prejudice against higher Coresta base papers for banded LIP applications, assuming a prejudice actually existed. (*Id.*) Glatz argues that there was no prejudice in the art by November 2000 against the use of base paper permeabilities above 60 for banded LIP applications and higher Coresta base papers were needed to offset the lower band permeabilities and maintain prior smoke deliveries. (*Id.* at 154-155 (citing Tr. at 1017-19 (McCarty)).)

Glatz argues that it would have been a matter of routine experimentation to combine the papers of Hampl '403 with Allen to arrive at the Coresta range of claim 36. (*Id.*) Moreover, claims Glatz, a person of ordinary skill in the art would have been motivated to do so in light of the disclosures of Hampl '403 and the numerous known advantages of using high permeability base papers which were well understood in the art. (*Id.*) Glatz maintains that, to the extent that Hampl '403 is not sufficient alone to establish the obviousness of the 60-110 Coresta range, then Glatz also relies on the practices, patents, and products elsewhere discussed in its brief (in the section dealing with obviousness of the '753 patent) to establish obviousness of this Coresta feature in the '867 claims, as well as the admissions of SWM's witnesses and the testimony of Glatz's witnesses in this Investigation. (*Id.*)

With respect to the limitation of claim 36 requiring "said treated areas having a Burn Mode Index of less than about 8 cm^{-1} ," Glatz argues that it also have been obvious for a person of ordinary skill in the art to apply the disclosures in Hampl '775 or Hampl '403 to Allen and arrive at this claim limitation. (*Id.*) Glatz argues that Hampl '775 teaches that "[i]n order to

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obtain a desired level of reduction in the ignition proclivity of the smoking article, band materials of the present invention have an inherent BMI within the range of from about 0 to about 4 cm^{-1} and more preferably the BMI is in the range of from about 0 to about 2 cm^{-1} For comparison BMI test values obtained on conventional wrappers are greater than 10 cm^{-1} and usually are in excess of 15 cm^{-1} In order for the smoking article to have self-extinguishing properties, the band materials of the present invention have a BMI within the range from about 0 cm^{-1} to about 2 cm^{-1} . (*Id.*) Glatz argues that the band width is, in such cases, generally “greater than about 6 millimeters.” (*Id.* (citing JX-10 at 4:30-46).) Similarly, says Glatz, Hampl '403 teaches that “[i]n particular, paper wrappers of the present invention typically have a [BMI] value less than about 15 cm^{-1} to about 15 cm^{-1} , and in some embodiments, between about 5 cm^{-1} to about 12 cm^{-1} . . .” (*id.* at 156 (citing RX-459 at 2:26-29)) and “in most embodiments of the present invention, the DCI [BMI] of the paper wrapper is less than about 15 cm^{-1} , and in some embodiments, between about 5 cm^{-1} to about 15 cm^{-1} .” (*Id.* (citing RX-459 at 6:9-13).) Glatz repeats that BMI is just another indicator (like band Coresta values) of the ability of the banded areas of a cigarette paper to impart reduced or low ignition propensity characteristics to cigarettes made from such papers. (*Id.*) According to Glatz, the broad limitation of a band BMI “less than about 8 cm^{-1} ” is satisfied for any treated cigarette paper bands with a band air permeability of less than about 20 Coresta, and accordingly, the claimed BMI limitation is explicitly taught by Hampl '775 or Hampl '403. (*Id.*)

Glatz argues that the use of BMI in this manner, and the teaching that lower band BMI and lower band Coresta are more likely to provide enhanced ignition propensity characteristics, have been well known in the industry in view of Hampl '775, Hampl '403, and SWM's promotion of BMI at industry conferences. (*Id.*) Glatz says that SWM has touted the advantages

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of using BMI for years and has also made it very clear by data presented at such conferences and by data relied on in this Investigation in an effort to establish infringement of the '867 patent that bands made from permeability-reducing materials having permeabilities less than 20 Coresta necessarily have a BMI of less than 8 cm^{-1} . (*Id.*) Glatz argues that it would have been a matter of routine experimentation for persons of ordinary skill in the art to apply the BMI disclosures of Hampl '775 or Hampl '403 to Allen to arrive at this limitation of claim 36, especially in view of SWM's advocacy of BMI as simply an alternative to the test for air permeability for measuring lower ignition proclivity characteristics. (*Id.*) Glatz says that a person of ordinary skill in the art would have been motivated to do so in light of SWM's promotion of BMI and the disclosures of Hampl '775 and Hampl '403. (*Id.* at 156-157.)

With respect to claim 43 of the '867 patent, Glatz argues that it merely adds to claim 36 a specific list of useful permeability-reducing materials the fibrous slurries, such as microcrystalline cellulose, Cellulon bacterial cellulose and highly refined wood pulp fibers, described by Allen. (*Id.*) Glatz argues that for these reasons, and those previously set forth with respect to PaperSelect and Merit cigarettes combined with the '753 patent to Peterson, claim 43 is obvious when the Allen and the Hampl patents are additionally taken with Peterson '753. (*Id.*)

With respect to claim 45, Glatz says it merely surrounds a tobacco column with the paper wrapper of claim 36 and is obvious for the same reasons as claim 36. (*Id.*)

SWM responds that Allen fails to disclose multiple elements of the asserted claims, including the following: (1) applying a film forming composition at particular locations to a relatively high permeability paper web to reduce ignition proclivity; (2) a Burn Mode Index (BMI) of less than about 8 cm^{-1} ; and (3) a base paper having permeability of about 60 to about 110 Coresta with specificity to a person of ordinary skill in the art. (CBr. at 137 (referencing its

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arguments elsewhere in its brief with respect to the '735 patent).) SWM argues that Hampl '775 and Hampl '403 do not cure these deficiencies and therefore the combination of patents discussed by Glatz does not render the inventions of the asserted claims obvious. (*Id.*)

SWM says Allen does not disclose the application of a film forming composition at particular locations to a relatively high permeability paper web to reduce ignition proclivity and neither Hampl '755 nor Hampl '403 fills this gap. (*Id.* at 138.) SWM says that Hampl '403 is not prior art to the '867 patent. Hampl '403 claims priority to United States Provisional Application No. 60/213,313, filed June 22, 2000, but is not entitled to the priority of the '313 application because substantial changes were made to that provisional application when the utility application was filed. (*Id.*) In particular, argues SWM, none of the '403 patent's disclosure of a base paper with relatively high permeability was included in the provisional application. (*Id.* (citing RX-1359; CFF-V-33).) According to SWM, the specification of the provisional application emphasized that the base paper should be 35 Coresta or less—among the portions of the disclosure that were deleted in the nonprovisional filing. (*Id.* (citing CFF-V-33).) Therefore, argues SWM, Hampl '403 cannot be relied on as a piece of prior art to fill the gap in Allen's disclosure of potential base sheet permeabilities. (*Id.*)

SWM says Hampl '775 also fails to teach the claimed base sheet permeability. Although it notes that conventional base paper can be used, it only discloses base papers of 30 Coresta units in its examples. (*Id.* (citing JX-10 at 5:24-29, Exs. 1-3).) SWM argues that the broad disclosure of conventional base papers would not have been sufficient to lead a person of ordinary skill in the art to the range of 60 to 110 Coresta units, especially in light of an industry bias against using high-permeability base papers for the LIP products. (*Id.* (citing Tr. at 2010 (Honeycutt)).) Moreover, argues SWM, Hampl '775 discloses a LIP wrapper that instead of

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incorporating a film forming composition “includes a normally burning cellulose fiber base web and one or more encircling bands of a cellulose fiber base web....” (*Id.* (citing JX-10 at 2:19-25, Example 1 (which explains that the patent’s invention involve creating “bands of paper” that are “glued to the inner surface of the conventional base paper”); CFF-V-41).) SWM argues that Hampl ’775 emphasizes the need to avoid chemical burn retardants, like film forming compositions,⁴³ when reducing ignition proclivity. (*Id.* at 138-139 (citing Tr. at 2012 (Honeycutt); JX-10 at 5:10-14; RX-443 at 1:59-2:15).) SWM argues that modifying Allen or Hampl ’775 to incorporate chemical burn retardants runs directly counter to the teachings of both patents and therefore it would not be obvious to use a film forming composition in place of cellulose bands, such as those disclosed in Allen and Hampl ’775. (*Id.* at 139.) SWM argues that this is especially true for designs using high permeability base paper and says that persons of ordinary skill in the art would understand that applying a film forming composition to a fragile cigarette paper is substantially more difficult than applying an additional layer of cellulose in the manner disclosed in Allen. (*Id.* (citing Tr. at 2013, 2026-27 (Honeycutt)).) In addition, says SWM, unlike banded papers which reduce band permeability simply by adding more cellulose, print banded wrappers using high permeability base sheets require the application of even more film forming composition to reduce the base sheet permeability in the banded regions, further increasing the amount of chemicals on the wrapper that could cause taste or other acceptance problems. (*Id.* (citing Tr. at 2012 (Honeycutt)).)

SWM says that Allen also does not expressly or inherently disclose a BMI of less than about 8 cm⁻¹, and SWM argues that the evidence shows that those of ordinary skill in the art were skeptical of the BMI test, not recognizing the benefit of measuring BMI and permeability to

⁴³ Hampl ’775 does not mention the term “film forming composition”; this is SWM’s emendation based on its construction of that term.

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achieve improved results. (*Id.*) Specifically, notes SWM, Mr. Honeycutt testified that Hampl disclosed information about BMI in 1998 and, based on his own experience with BMI and what he has heard from others, including Glatz's witnesses, there was a general skepticism at the time, outside of SWM, that BMI meant anything or was worth using. (*Id.* at 140 (citing Tr. at 2019 (Honeycutt)).) Likewise, according to SWM, Dr. McCarty testified that even though he was unable to measure the permeability of the bands because the head on the Coresta instrument at Ecusta (where he was employed at the time) was too large, he had never used the BMI test as an alternative way to discern the characteristics of the band. (*Id.* (citing Tr. at 1284-85 (McCarty); CFF-V-44).) SWM says that Dr. McCarty agreed with Mr. Fritzching's assessment that he did "not see any good reason" for doing BMI/DCI testing on cigarette paper. (*Id.* (citing RX-382C at Q/A 67 (Fritzching); CFF-V-44).) Further, according to SWM, Dr. McCarty testified that prior to the filing of the '867 patent, the BMI test was not an accepted method of measurement. (*Id.* (citing Tr. at 1285 (McCarty); CFF-V-44).) SWM says that such evidence of skepticism on the part of experts is indicative of the non-obviousness of the invention of the '867 patent. (*Id.* (citing *Pressure Prods. Med. Supplies, Inc. v. Greatbatch Ltd.*, 599 F.3d 1308, 1319 (Fed. Cir. 2010); *United States v. Adams*, 383 U.S. 39, 52 (1966)).) Therefore, argues SWM, Allen does not render claim 36 obvious, whether viewed alone or in combination with other references. (*Id.*)

Glatz argues that SWM is wrong in respect to its contention that Hampl '403 is not entitled to the priority date of its provisional application, June 22, 2000, because the relevant issue is whether the disclosures in Hampl '403 on which Glatz relies were also found in the provisional application; and Glatz says, if they were, the disclosures relied on were carried through from the provisional application to the issued patent and the prior art reference date is

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the provisional filing date, regardless of whether, technically, Hampl '403's claims are entitled to the benefit of the priority application. (RRBr. at 109.) Glatz says the arguments in its opening brief show that all relevant disclosures relied on in Hampl '403 are also found in the provisional application and SWM has made no effort to show a date of invention earlier than June 22, 2000. (*Id.*)

Glatz says that SWM's arguments about the failure of Hampl '775 to disclose base sheet permeabilities within the claimed range or the use of a film forming composition overlook Glatz's explanation that Hampl '775 is relied on in respect to its BMI disclosure and not these other elements, which are taught by Allen itself. (*Id.*) Glatz says that SWM's assertion that the use of BMI would not be obvious because only SWM used and promoted it, while others were skeptical of its benefits, ignores the fact that the '867 patent expressly recites BMI and SWM itself promoted BMI to the cigarette industry for many years. (*Id.* at 109-110.) Glatz says BMI is described and touted in Hampl '775 (JX-10) and Hampl '403 (RX-459) as well as Durocher (RX-434), and SWM having included BMI as a limitation in the '867 patent cannot now refute obviousness because others purportedly did not see the benefit of measuring BMI. (*Id.*) Glatz says that from the standpoint of the obviousness of a BMI value below 8 (and band BMI is simply an alternative to band Coresta), Glatz and the public are entitled to take SWM at its word about what BMI is, what it measures, and that it is useful. Otherwise validity would depend on a measurement about which the industry is skeptical but that SWM still promotes. (*Id.*)

The Administrative Law Judge concludes that the evidence of record does not establish clearly and convincingly that the combination of Allen, Hampl '775, and Hampl '403, along with other references generally referred to by Glatz in its briefs, renders obvious independent claim 36 of the '867 patent, or dependent claims 43 and 45. The Administrative Law Judge concludes that

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the evidence is not sufficient to establish that the base sheet permeability ranges claimed in the '867 patent, expressly or inherently, were made obvious by these combinations, for the reasons argued by SWM as discussed above. The Administrative Law Judge rejects SWM's arguments with respect to the film forming element of the '867 patent, for the reasons discussed above regarding claim construction. With respect to the other issues raised by Glatz, the Administrative Law Judge concludes that the priority date for Hampl '403 is June 22, 2000 the filing date of the provisional application, for the reasons advanced by Glatz, discussed above. The Administrative Law Judge concludes that the evidence is sufficient to disclose a Burn Mode Index of less than 8 cm^{-1} as taught by the '867 patent. Both Hampl '775 and Hampl '403 disclose BMI's less than 8 cm^{-1} , and in conjunction with Allen are sufficient to render obvious the BMI element of the asserted claims of the '867 patent to persons of ordinary skill in the art, for the reasons advanced by Glatz as discussed above. The Administrative Law Judge further concludes that the additional elements of both claims 43 and 45 of the '867 patent are obvious in light of the combination of Allen and Hampl '775 and Hampl '403 for the reasons advanced by Glatz as discussed above. However, as noted herein, Glatz failed to advance clear and convincing evidence that these references render all of the elements of the asserted claims of the '867 patent obvious.

b) Baldwin with Durocher

Glatz alleges that the combination of United States Patent No. 5,417,228 to Baldwin (RX-442) and United States Patent No. 4,615,345 to Durocher *et al.* (RX-434) render obvious the asserted claims of the '867 patent. (RBr. at 157-162.) Glatz says that Durocher describes the technique of using BMI as an alternative indicator of a paper's ability to suppress smolder and illustrates the use of cross-directional bands to create a reduced ignition proclivity cigarette. (*Id.*

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at 158.) Glatz says that Durocher also explains the meaning of BMI and how to test for it and teaches that the lower the BMI of a paper the more likely it will suppress burning. (*Id.*) Glatz argues that there are more than sufficient facts to show that a person of ordinary skill in the art would have had the motivation to combine Durocher with the teachings of Baldwin because these patents are from the same field of technology and address similar issues involving banded cigarette paper. (*Id.*) Glatz argues that to the extent it is determined that there are any minor differences between the disclosures of Baldwin and the elements described in claims 36, 43, and 45 of the '867 patent, such differences would have been obvious to a person of ordinary skill in this technical field, saying the reasons are essentially the same as described in relation to the combination of Allen and Hampl in the preceding section. (*Id.*)

Glatz argues that the many advantages and benefits of a paper web with a relatively high permeability of about 60 to about 110 Coresta as discussed by Glatz in relation to the combination of Allen and Hampl likewise apply to the combination of Baldwin and Durocher. (*Id.*) Glatz says that under SWM's construction of the term "film forming composition," the obviousness of employing such materials in place of the fibrous slurries described in Baldwin is based on the same arguments advanced by Glatz in relation to the combination of Allen and Hampl. Glatz says those same arguments equally apply to claim 43 of the '867 patent, which merely describes common, well-known and interchangeable banding materials such as are specifically described in the '753 patent. (*Id.*)

According to Glatz, the film forming limitation in claims 36 and 43, as construed by SWM, is explicitly taught by Durocher. (*Id.* (citing RX-434 at 7:22-43).) Glatz argues that it would have been a matter of obvious and routine experimentation to combine the specific film forming compositions of Durocher with the Baldwin disclosures. This is particularly so in light

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of the disclosures of Durocher and the numerous advantages of using “film forming compositions,” even as that term is construed by SWM, which were well known in the art. (*Id.*) Glatz says this is also true given the teachings in Baldwin that “binders” such as carboxymethyl cellulose, hydroxypropyl cellulose, starch, guar and the like can be added to Baldwin’s fibrous slurries in amounts up to ten percent, if not already present. (*Id.* at 160 (citing RX-44C at 7:1-8, 30-32).)

With respect to the limitation in claim 36 providing that “said permeability being less than about 20 Coresta within the treated areas,” Glatz argues that this is obvious, if not inherently disclosed, in Baldwin. (*Id.* (citing RX-442 at 4:65-5:1, Examples 1-6, 8).) Glatz says that Durocher discloses three examples with band air permeabilities within the range claimed in the ’867 patent: Example 1 disclosing “permeability of 4 cm/min at 1 centibar [sic] (as measured by the Coresta method)” (*id.* (citing RX-442 at 6:2-3)); Example 2 disclosing “permeability of 1.5 cm/min (as measured by the Coresta method)” (*id.* (citing RX-442 at 6:35-36)); and Example 3 disclosing “permeability of 2 cm/min (as measured by the Coresta method)” (*id.* (citing RX-442 at 6:63-65)). Accordingly, says Glatz, the claim limitation of an air permeability in the band of less than about 20 Coresta is inherently disclosed in Baldwin and is explicitly taught by Durocher. (*Id.*)

Glatz argues that the use of low air permeability bands and the advantages of doing so have been well known by persons of ordinary skill in the art for decades and for a variety of purposes. (*Id.*) Glatz says that SWM’s own “Patent Review—Burn Rate Control” memo of

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(citing RX-42C at 4.) Glatz says that many more patents on banded approaches to burn control and LIP cigarette wrappers were issued after this memo. (*Id.*) Therefore “the background knowledge and understanding of one having ordinary skill in the art would have motivated combining the disclosures of Durocher regarding suitable band permeabilities with Baldwin and would have been a routine and obvious determination of specific permeabilities that have been well known in the industry for the better part of a century.” (*Id.* at 161.)

With respect to the limitation of claim 36 requiring “said treated areas having a Burn Mode Index of less than about 8 cm^{-1} ,” Glatz says this limitation was already discussed elsewhere in its brief regarding the prior art of the Allen patent. Glatz adopts those same arguments in regards to the combination of Baldwin and Durocher. (*Id.* at 161.) Additionally, argues Glatz, Durocher teaches that “[i]n the single embodiment, wrappers of the present invention preferably have a BMI within the range of from about 1.5 cm^{-1} to about 3.5 cm^{-1} .” (*Id.* (citing RX-434 at 4:28-32).) Glatz says that Durocher also discloses the following:

FIG. 4 shows that the preferred wrapper constructions for single-wrapped cigarettes having the defined BMI range will not sustain combustion unless driven with elevated levels of burn promoter. The top line represents a BMI of 3.5 cm^{-1} and tobacco column density of 13.2 mg/mm . While the level of burn promoter necessary will vary depending on the promoter used and the composition and construction of the smoking article, it may be readily determined by observation of burn sustaining tests.

(*Id.* (citing RX-434 at 9:48-60).) Glatz argues that a BMI of “less than about 8 cm^{-1} ” is satisfied for any cigarette paper bands with air permeability of less than about 20 Coresta and therefore the claimed BMI limitation of the '867 claims at issue is explicitly taught by Durocher. Glatz concludes that it would have been obvious to combine Baldwin with Durocher and provide the BMI below 8 if not already inherent in Durocher. (*Id.* at 161-162.)

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SWM responds that Baldwin fails to disclose multiple elements of the asserted claims, including the following: (1) applying a film forming composition at particular locations to a relatively high permeability paper web to reduce ignition proclivity; (2) discrete treated areas with permeability less than 20 Coresta; (3) a Burn Mode Index (BMI) of less than about 8 cm^{-1} ; and (4) a base paper having permeability of about 60 to about 110 Coresta with specificity to a person of ordinary skill in the art, as SWM previously discussed in regard to Allen, etc. above. (CBr. at 140-141.) According to SWM, neither Hampl '775, Hampl '403, nor Durocher cure the deficiencies identified above and therefore none of them renders the asserted claims obvious. (*Id.* at 141.)

SWM argues that the combination of Baldwin with the two Hampl patents does not render the asserted claims obvious for all of the same reasons given by SWM in relation to Allen and the two Hampl patents, discussed in the preceding section. (*Id.*) SWM says that, likewise, Durocher fails to cure the deficiencies in Baldwin because in Durocher, bands of alkali metal burn promoters, such as potassium citrate, are applied to low permeability base paper. (*Id.* (citing Tr. at 2018 (Honeycutt)).) SWM says that persons of ordinary skill in the art at the time of the invention would have thought of bands of alkali metal salts as film forming compositions but to the extent that Durocher does disclose film forming materials, it only does so as a step to “coat[] or saturate[]” a conventional paper to make the low permeability base paper needed for that disclosure’s embodiments. (*Id.* (citing RX-434 at 7:30-46).) SWM points to testimony of Mr. Honeycutt who said that Durocher does not disclose the application of film forming bands on base paper but, rather, discloses the treatment of the entire surface of standard paper to make a suitable low permeability base paper. (*Id.* (citing Tr. at 2019 (Honeycutt)).) Further, argues SWM, Durocher teaches base paper with extremely low permeability that is treated with bands

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having an elevated level of burn promoter. (*Id.*) SWM points to the fact that in the examples disclosed in Durocher the permeability of the base papers are 1, 4, 1.5, 2, and 25 Coresta units and thus do not teach the use of film forming compositions to create bands of low porosity on relatively high permeability base paper. Therefore Baldwin does not render the asserted claims obvious. (*Id.* (citing Tr. at 2020 (Honeycutt)).)

Glatz responds that regarding non-obviousness of the asserted claims over Baldwin in view of the two Hampl patents or Durocher, SWM presents no new arguments except for certain criticisms of Durocher for reasons that Glatz says are irrelevant. (RRBr. at 110-111.) Glatz says SWM has ignored the important teachings of Durocher that Glatz discussed in its opening brief. (*Id.* at 111.)

The Administrative Law Judge concludes that the evidence is not clear and convincing that the combination of Baldwin and Durocher, with or without the two Hampl patents, renders obvious the asserted claims of the '867 patent because they relate to low permeability base paper and do not expressly or inherently disclose high permeability paper, for the reasons advanced by SWM and discussed above.

c) Peterson with Hampl '775 or Hampl '403

Glatz argues that to the extent it is determined that there are any minor differences between the disclosures of the '753 patent to Peterson and the elements described in claims 36, 43, and 45 of the '867 patent, such differences would have been obvious to a person of ordinary skill in this field within the meaning of 35 U.S.C. § 103. (RBr. at 162.) Glatz says the reasons for obviousness have previously been explained by Glatz in relation to the combination of the Hampl patents with the '753 patent because of the Hampl patents' disclosures of BMI and other elements. (*Id.*) Glatz summarizes those reasons by arguing that claim 36 requires the "said

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paper web having a relatively high permeability of about 60 to about 110 Coresta and Hampl '403 incorporates by reference the disclosures of Baldwin which states: "Cigarette papers in use cover a wide range in porosity and burn rate. The inherent porosity of the paper varies from about 2 to about 150 Coresta units." (*Id.* (citing RX-442 at 4:60-5:4).) Accordingly, argues Glatz, the claimed base paper permeability limitations of the '867 patent are explicitly taught by Hampl '775 or Hampl '403. (*Id.*) Furthermore, says Glatz, the many advantages and benefits of using high permeability base papers have been well known and widely used for decades as previously argued by Glatz. (*Id.* at 162-163.) Glatz says that it would have been a matter of routine experimentation to combine the high permeability base papers of Hampl with Peterson to arrive at the non-critical base paper permeability range of claim 36. A person of ordinary skill in the art would have been motivated to do so in light of well-understood advantages of using high permeability base papers—for delivering lower tar and nicotine levels. This caused cigarette manufacturers, not paper manufacturers such as SWM, to specify base paper permeabilities in the claimed range of about 60 to about 110 Coresta. (*Id.*) Glatz says that the combination of Hampl with Peterson would have been routine and obvious given what was well known about high Coresta papers in the industry for years, if not decades. (*Id.*)

With respect to claim 36's requirement of "said treated areas having a Burn Mode Index of less than about 8 cm^{-1} ," it would have been obvious to apply the BMI disclosures in Hampl '775 or Hampl '403 to Peterson. Hampl '775 teaches that "[i]n order to obtain a desired level of reduction in the ignition proclivity of the smoking article, band materials of the present invention have an inherent BMI with the range of about 0 to 4 cm^{-1} and more preferably the BMI is in the range of about 0 to about 2 cm^{-1} In order for the smoking article to have self-extinguishing properties, the band materials of the present invention have a BMI within the range of from

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about 0 cm^{-1} to about 2 cm^{-1} .” (*Id.* (citing JX-10 at 4:30-46).) Glatz again argues that BMI is just another indicator, like Coresta permeability, of banded areas of a cigarette paper that will minimize smolder and a BMI of “less than about 8 cm^{-1} ” will be met by any cigarette paper band with an air permeability value of less than about 20 Coresta. (*Id.*)

Glatz argues that the use of BMI in this manner was well known in the industry as taught by Hampl '775 and Hampl '403, as well as by SWM's promotion of BMI at industry conferences. (*Id.* at 164.) Glatz says that if not inherent in the very low band permeabilities specifically described by the '753 examples, it would have been a matter of routine experimentation for persons of ordinary skill in the art to apply the BMI disclosures of Hampl '775 or Hampl '403 to Peterson to arrive at a BMI value below the maximum value of 8 in claim 36, especially in view of SWM's advocacy of BMI. (*Id.*)

SWM responds that the asserted claims are not obvious over Peterson in view of the Hampl patents. (CBr. at 142.) SWM says that Peterson does not teach a paper web having a relatively high permeability—about 60 to about 110 Coresta—and substituting a high permeability paper into the disclosure of the '753 patent would not have been obvious to a person of ordinary skill in the art at the time of the invention. (*Id.*) SWM argues that Peterson teaches away from the use of papers of high permeability because each of its examples uses a base sheet having a permeability of about 33 Coresta, which is much lower than the claimed range. (*Id.*) Moreover, argues SWM, Peterson teaches that band permeability should be low—2 to 6 Coresta—and that differences in band to base permeability should be minimized. (*Id.*) Thus, argues SWM, Peterson undermines the very reason offered by Glatz in saying that a person of ordinary skill in the art would have combined known elements. (*Id.*) SWM argues that using paper with a relatively high permeability would render the wrapper of Peterson

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unsatisfactory for its intended purpose. (*Id.* (citing JX-1 at 2:22-38).) SWM says that using a base paper having a permeability of about 60 to about 110 Coresta would increase the difference in permeability between the treated areas and the untreated areas and would be in direct conflict with the teachings of Peterson. (*Id.* at 142-143.)

SWM argues that the prior art expresses a clear preference for base sheets having permeabilities less than 60 Coresta and that it was well known that high porosity papers exhibit a “higher fire risk” further illustrating that a person of ordinary skill in the art would not find it obvious to use relatively high permeability base sheets in the LIP wrappers of Peterson. (*Id.* at 143.) SWM says that neither Hampl ’775 nor Hampl ’403 cures that deficiency. (*Id.* (citing Tr. at 2016-18 (Honeycutt)).)

SWM says that Peterson does not expressly or inherently disclose a BMI of less than about 8 cm^{-1} because, as elsewhere argued by SWM, a person of ordinary skill in the art would not have been motivated to create bands having the claimed BMI given the admitted skepticism in the industry regarding the BMI test. (*Id.*)

The Administrative Law Judge concludes that the evidence does not clearly and convincingly demonstrate that the combination of Peterson and the two Hampl patents anticipate the asserted ’867 claims, because they do not expressly or inherently teach LIP bands applied to high permeability bands in the range from about 60 to about 110 Coresta, for the reasons advanced by SWM discussed above.

d) Statutory Bar Sales to Philip Morris with Peterson

Glatz argues that to the extent that it is determined that there are any minor differences between SWM’s MOD banded PaperSelect cigarette paper wrappers or Philip Morris’s Merit cigarettes incorporating PaperSelect paper and the elements described in claims 36, 43, and 45,

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such differences would have been obvious to a person of ordinary skill in this technical field at least a year before the earliest effective filing date of the '867 patent, especially given the teachings of SWM's '753 patent to Peterson. (RBr. at 164.)

With respect to the limitations of all asserted '867 claims requiring “applying a film forming composition, to said paper wrapper at particular locations,” Glatz argues that if SWM's claim construction of the term “film forming composition” is adopted, the substitution of the '753 patent's film forming compositions for the fibrous slurries of PaperSelect and Merit cigarettes would have been obvious for a person of ordinary skill in the art. (*Id.* at 165.) Glatz says that the '753 patent discloses that the “discrete areas of reduced permeability may comprise areas treated with a film forming solution to reduce permeability of the smoking article wrapper in the treated areas[]” and “[t]he film forming solution may comprise any type of solution which, when dried, forms a film which reduces permeability of the smoking article to self-extinguish if left dropped on a flammable substrate.” (*Id.* (citing JX-1 at 3:15-23).) Glatz further says that the '753 patent says, “The treated areas can be applied in the printing operations in either a single pass or multiple passes.” (*Id.* (citing JX-1 at 7:27-28).) Therefore, according to Glatz, the claim limitation of applying a film forming composition, as that term is interpreted by SWM, is explicitly taught by the '753 patent. (*Id.*)

Glatz contends that many advantages and benefits of applying a film forming composition have been well known and widely used by persons of ordinary skill in the art for decades. It would have been a matter of routine experimentation to combine the specific film forming compositions of the '753 patent, which meet SWM's definition of a film forming composition, with SWM's MOD banded PaperSelect cigarette paper, as well as Philip Morris's Merit cigarettes incorporating PaperSelect paper, to arrive at this limitation of claim 36. (*Id.* at

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165-166.) Moreover, argues Glatz, a person of ordinary skill in the art would have been motivated to do so in light of the disclosure in the '753 patent, which mentions and equates both fibrous slurries and solutions as suitable permeability-reducing materials, and the numerous advantages of using film forming compositions which were well known in the art. (*Id.* at 166 (citing JX-1 at 4:41-45).)

Glatz says that claim 43 of the '867 patent, in addition to the elements of claim 36, requires that the film forming composition be or include some unstated amount of a pectin, a silicate, a polyvinyl alcohol, a starch, or a cellulose derivative composition. (*Id.*) Glatz says that each of these compositions was obvious to a person of ordinary skill in the art for use in the PaperSelect cigarette wrapping papers of SWM or Merit-branded cigarettes of Philip Morris, as previously discussed by Glatz. (*Id.*) Glatz says that all of the compositions listed in claim 43 are, and have been, commonly known and widely used in the cigarette industry for creating coatings or layers (films) on cigarette wrappers. The '867 patent concedes and the '753 patent expressly teaches this. (*Id.*) Glatz says the use or inclusion in PaperSelect wrappers or Merit brand cigarettes of these specific and well-known film forming compositions would have been obvious to a person of ordinary skill in the art more than a year before the earliest effective filing date of the '867 patent. (*Id.*)

Glatz says claim 45 merely surrounds a tobacco column with the paper wrapper of claim 36 and that method of making a cigarette is plainly obvious, and, in fact, is how Merit cigarettes were made. (*Id.*)

SWM argues that even if PaperSelect, Merit Light and Merit Ultra Light cigarettes were considered prior art, they do not disclose the following elements of the '867 patent: (1) applying a film forming composition at particular locations (2) to a relatively high permeability paper web

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to reduce ignition proclivity. (CBr. at 144.) SWM argues that PaperSelect is made by a MOD process where a cellulosic slurry, not a film forming composition, is applied. (*Id.*) SWM says that Allen, Baldwin, and Hampl '775 profess the benefits of cellulosic bands and all teach away from using a film forming composition. (*Id.* (citing Tr. at 1996, 1998, 2012 (Honeycutt)).) SWM says that a person of ordinary skill in the art would not be motivated to modify the PaperSelect wrappers to have bands composed of film forming composition. (*Id.* (citing Tr. at 2025-27 (Honeycutt)).) SWM says Peterson teaches away from high permeability base sheets which would merely exacerbate the very problem Peterson sought to solve—discernible changes in taste and smoke deliveries caused by the bands. (*Id.*) SWM says that problem is even more acute when using film forming compositions that were known to impact taste, unlike bands of additional cellulosic material, which merely add more of what is already there. (*Id.*)

Moreover, argues SWM, fundamental differences between the process for producing PaperSelect and the claimed process requiring application of a film forming composition further demonstrate the non-obviousness of the claimed process. (*Id.* at 144-145.) SWM argues that PaperSelect wrappers are made by depositing additional cellulose on wet pulp, not by applying a film forming composition on a paper wrapper as claimed. (*Id.* at 145.) SWM says that a person of ordinary skill in the art would have understood that applying a film forming composition to a paper web is substantially more difficult than applying an additional layer of fiber during the formation of the paper web and therefore would not have been motivated to combine the teachings of Peterson with the PaperSelect process. (*Id.* (citing Tr. at 2026 (Honeycutt)).) SWM argues that this is especially true when utilizing high permeability base sheets, which require the application of even more film forming material to reduce permeability on a base paper of even greater fragility. (*Id.* (citing Tr. at 2012-13, 2026-27 (Honeycutt)).) Therefore, argues SWM, a

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person of ordinary skill would not be motivated to combine the PaperSelect process with the process disclosed in Peterson, much less for the production of wrappers having a high permeability base sheet. (*Id.*)

Glatz responds that SWM's argument that Peterson teaches away from high permeability paper is without merit because PaperSelect employed base papers with 60 and 85 Coresta values and Peterson is not being relied on by Glatz for base paper permeability. (RRBr. at 112.)

With respect to SWM's argument that the MOD process is fundamentally different from applying a film forming composition, using SWM's definition, Glatz responds that SWM's position is belied by the '753 patent's express disclosure that all of the recited permeability-reducing materials can be used and are interchangeable. (*Id.* (citing JX-1 at 4:41-65).)

The Administrative Law Judge found *supra* that PaperSelect and Merit cigarettes meet every limitation of the asserted claims of the '867 patent, and thus, sales of PaperSelect and Merit cigarettes render the asserted claims of the '867 patent invalid under 35 U.S.C. § 102(b). *See* Section V.B.1.b). The Administrative Law Judge also found *supra* that Peterson does not anticipate claim 36 of the '867 patent because it does not disclose the permeability range, in terms of Coresta, of the base paper or LIP bands or the Burn Mode Index specified in claim 36. *See* Section V.B.I.e). However, the Administrative Law Judge found that the '753 patent discloses each of the additional elements of the asserted claims of the '867 patent. *Id.* Assuming, *arguendo*, that PaperSelect and Merit cigarettes do not meet the limitations of claim 36 of the '867 patent as argued by SWM, the Administrative Law Judge concludes that the combination of PaperSelect and Merit Cigarettes taken with Peterson renders the asserted claims of the '867 patent obvious for the reasons advanced by Glatz discussed above.

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e) Hammersmith with Hampl '775 and Hampl '403

Glatz argues that the disclosures in Hammersmith, a patent previously discussed in regard to Glatz's allegations of anticipation of the '867 patent, combined with Hampl '775 and Hampl '403 render the '867 patent obvious. (RBr. at 167.) Glatz says that Hammersmith (RX-460) describes every feature of the '867 patent's asserted claims, including very low band permeabilities which necessarily have BMI values well below 8. (*Id.*) Glatz argues that, if it is determined that band Coresta below 20 does not mean that the BMI of the band is below 8, it would be obvious to provide a band below 8 for reasons previously explained. (*Id.*) According to Glatz, band BMI is simply another measure or indicator of a paper's ability to sustain combustion, and the Hampl patents clearly teach that, like Coresta permeability, the lower the BMI, the less likely it is that the paper will sustain combustion and therefore the more likely that bands with low BMI will reduce ignition proclivity. (*Id.*) Consequently, argues Glatz, a person of ordinary skill in the art would be motivated to lower the BMI of the bands by conventional methods such as applying a film forming composition as taught in Hampl '403 in order to reduce ignition proclivity. Employing band BMI below 8 would have been obvious to a person of ordinary skill in the art more than a year before the '867 patent's effective filing date. (*Id.*)

SWM repeats its argument that Hammersmith does not anticipate the '867 patent because it is not prior art. (CBr. at 143.) SWM argues that even if it is determined that Hammersmith is prior art, it fails to disclose elements of the asserted claims, including treated areas having a BMI of less than about 8 cm^{-1} . (*Id.* (citing Tr. at 2006-07 (Honeycutt)).) Further, says SWM, the two Hampl patents do not cure these deficiencies. (*Id.*) SWM argues that the evidence shows that a person of ordinary skill in the art would be skeptical of the BMI test of Hampl '775 as the benefit of measuring BMI and permeability to achieve improved results. Therefore a person of skill would have had no reason or motivation to combine the teachings of Hampl '775 with

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Hammersmith and, therefore, whether viewed alone or in combination Hammersmith does not render the invention of the asserted claims obvious. (*Id.* at 143-144.)

The Administrative Law Judge concludes that the evidence does not demonstrate clearly and convincingly that Hammersmith combined with the Hampl patents renders obvious the asserted claims of the '867 patent, for the same reasons discussed above in Section V.B.1.f in regard to Glatz's allegation that the asserted prior art anticipates the '867 patent.

f) Secondary Considerations

i. Long-felt Need and Skepticism in the Industry

SWM argues that there are secondary considerations of non-obviousness, such as long-felt need, skepticism in the industry, failure of others, commercial success, copying of others, and commercial acquiescence through licensing that further bolster the validity of the asserted claims of the '867 patent. (CBr. at 145.) SWM argues that the evidence shows that there was a long-felt need in the industry for the claimed invention of the '867 patent. (*Id.* (citing Tr. at 1843-45 (Honeycutt)).) SWM says that for decades paper manufacturers and tobacco companies struggled to create cigarette papers that struck the delicate balance of achieving lower ignition propensity without sacrificing the smoke delivery and aesthetic characteristics that consumers had come to expect and demand. (*Id.* at 145-146 (citing Tr. at 1843-45 (Honeycutt)).) During that time, says SWM, many options for achieving acceptable LIP performance were developed, tested, and found acceptable. (*Id.* (citing Tr. at 1848-50 (Honeycutt); RX-621).) SWM says that banded designs, especially of film forming compositions, were known to have drawbacks, including a change in taste as the cigarette was smoked into the band. (*Id.* (citing Tr. at 2012 (Honeycutt); JX-10).) SWM argues that those in the industry developed and pursued other technologies in an attempt to solve the problem. (*Id.* (citing Tr. at 1846-47; 1905 (Honeycutt)).)

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SWM contends that it never would have been predicted to employ a banded design utilizing a film forming composition to create bands on a high permeability base sheet given the concerns of those skilled in the art regarding the use of film forming compositions, as opposed to cellulosic materials, and the increased fire risk associated with using high permeability papers. (*Id.*)

Glatz responds that there is no nexus between the evidence and the merits attributed to the '867 patent invention by SWM. (RRBr. at 113.) Glatz argues that the weight of the evidence shows that the driving force for SWM's so-called success was its accidental market position during a period of heightened legislative activity. (*Id.* (citing Tr. at 326-27 (Thompson), 936, 941, 943-44, 948-949, 956-57, 1017-18, 1214-15, 1372, 1376 (McCarty); RX-386C at 61-62, 114-115 (Fritzching Stmt. Q 31-37, 360-362); RFF 6).) Glatz says none of SWM's asserted evidence of secondary considerations overcomes Glatz's clear and convincing evidence that the asserted claims of the '867 patent are invalid under 35 U.S.C. § 103. (*Id.*)

Glatz says that as regards SWM's argument that the asserted claims of the '867 patent include solvent-based solutions, the claims do not include any limitations that strike a balance between tar delivery, puff count, nicotine delivery, and carbon monoxide delivery which SWM asserts "fueled its commercial success." (*Id.*) Glatz says there is no evidence that any balance was struck and SWM's alleged evidence of long-felt need and skepticism in the industry based on negative smoke delivery and taste characteristics is not commensurate in scope with SWM's asserted claims. (*Id.*) Glatz argues that SWM's purported evidence of long-felt need and skepticism relating to cockling and wrinkling is also not commensurate with the scope of the asserted claims as alleged by SWM. (*Id.* at 114.) Noting that SWM criticized prior art technologies as causing "unattractive wrinkling or puckering of the cigarette paper around the

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bands,” Glatz says SWM asserts that elimination of wrinkling or puckering is not claimed. (*Id.* (citing CBr. at 15).) Glatz says that all of SWM’s alginate-based commercial products fall under the Alginex[®] brand name, all are aqueous-based, and all are and {

} . (*Id.* (citing Tr. at 300-302 (Mongeon); JX-703C at 15 (Mongeon Stmt. Q 51); CX-703C at 11-12, 15 (Mongeon Stmt. Q 35, 49, 50)).) Glatz says that despite the teachings in the ‘867 specification, SWM contends that the scope of the asserted claims of the ‘867 patent encompass {

}, even though SWM {

} . (*Id.*) In short, argues Glatz,

SWM has offered no persuasive evidence of long-felt need or skepticism that is in any way related to or commensurate with the scope of the asserted claims of the ‘867 patent. (*Id.*)

ii. Unexpected Results

SWM says that the degree of unpredictability in this field, the sheer number of interrelated variables that affect product performance—including LIP characteristics, taste, tar delivery, and other properties affecting the overall desirability of the product to the market—and the myriad options available to wrapper manufacturers for experimentation to produce LIP wrappers further underscores the non-obviousness of the claimed process. (CBr. at 146.) For instance, says SWM, a person skilled in the art would not have expected that using a base sheet of high permeability and a band permeability as high as the claimed 20 Coresta would deliver desirable reduced ignition proclivity characteristics; indeed, says SWM, consistent with the other cited art, Allen teaches that a band “porosity of up to about 10 Coresta” is desirable. (*Id.* (citing RX-443 at 4:10-12).) SWM says that Peterson taught in the ‘753 patent that when using film formers a band permeability of 2 to 6 Coresta is preferred. (*Id.* at 146-147 (citing JX-1 at 5:57-60).) However, according to SWM, the invention of the ‘867 patent delivered highly

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unexpected results. (*Id.*) SWM says that, as reflected in the charts of RX-167 at 17 and 18, wrappers produced according to the invention have a band BMI that increases as the base sheet permeability increases; thus, bands of higher permeability than those found in prior art LIP products may be used and still achieve the needed reduced ignition proclivity. (*Id.* (citing Tr. at 1990-91; CX-1004C at Q/A 233-235 (Kraker)).) One skilled in the art would never have expected that increased base sheet permeability would actually enhance reduced ignition proclivity characteristics of banded paper made of film forming compositions, says SWM. (*Id.*) SWM argues that when a substitution in materials or a combination of known elements yields unexpected results, the invention is non-obvious. (*Id.* (citing *Crocs*, 598 F.3d 1294; *Callaway Gulf Co. v. Acushnet Co.*, 576 F.3d 1331 (Fed. Cir. 2009)).) SWM says that those in the industry would have expected that moving to base papers of higher permeability would require bands of even lower permeability to achieve a satisfactory LIP performance, but on the contrary, many of SWM's current commercial products have band permeabilities greater than 10 Coresta. This exceeds the band permeability previously considered to be the upper limit for acceptable LIP performance. (*Id.* (citing CX-313C at 13, 15, 16, 18; CX-314C at 1, 2, 4).)

Glatz responds that, according to both parties' experts, it was well known that high permeability base papers impart certain advantages and features to smoking articles, including reduced tar and nicotine delivery. (RRBr. at 114-115 (citing Tr. at 1004-06, 1017-18 (McCarty); RFF 53).) Glatz says the materials and processes needed to fill cigarette manufacturer's orders were also well-known. (*Id.* at 115.) In fact, argues Glatz, banded LIP designs on high permeability base papers had been successfully developed by companies such as Ecusta and Philip Morris. (*Id.* (citing Tr. at 956-957, 1017-18, 1214-15 (McCarty); RX-382C at 61-62, 114-115 (Fritzching Stmt. Q 31-37, 360-361)).) Glatz says that Ecusta and Lorillard evaluated and

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developed a wide variety of LIP paper wrappers with high permeability base papers (Tr. at 1013-16 (McCarty); RX-474C) and Philip Morris's Merit Light and Ultra Light cigarettes, sold in 2000—more than a year before the '867 patent's filing date—gave the smoking world banded LIP cigarettes on high permeability base paper (60 and 85 Coresta). (*Id.* (citing Tr. at 2102-03 (Honeycutt)).) Glatz says that, far from yielding unexpected results, applying well known permeability-reducing materials in the form of bands on high permeability base papers provided the precise results that cigarette manufacturers expected and were demanding—a paper wrapper having low tar and nicotine deliveries that complied with new or threatened reduced ignition proclivity legislation. (*Id.*)

iii. Commercial Success

SWM says it has experienced commercial success in selling products embodying the claimed invention of the '867 patent and refers to a table of yearly revenues showing that it has received more than { } in revenue from sales of its domestic industry products that practice claim 36 of the '867 patent. (CBr. at 147-148 (citing CX-704C at Q/A 80 (Thompson)).) SWM says that other documents confirm these sales and SWM argues that a nexus between the claimed invention and the sales is presumed because, as the evidence shows, the marketed LIP papers embody the features of claim 36 of the '867 patent. (*Id.* at 148 (citing *Crocs*, 598 F. 3d at 1310-11).) SWM says the burden therefore shifts to the party asserting obviousness to present evidence to rebut the presumed nexus. (*Id.*)

Glatz replies that there is no evidence of nexus because SWM has failed to show that the twelve products tested by Dr. Rogers practice any claim of the '867 patent or that any of its other 217 commercial products practice the '867 patent. Glatz argues that SWM's argument is flawed because SWM simply gathered all the sales numbers for all of its alginate and starch LIP papers

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and there was no further testing or analysis done to figure out whether these papers had any features of the '753 and '867 claims at issue. (*Id.* (citing Tr. at 353-356 (Thompson)).) Rather, argues Glatz, SWM simply assumed that all of its alginate-based LIP products practice the '867 claims at issue. (*Id.* (citing CX-704C at 15 (Thompson Stmt. Q 80); Tr. at 354-357 (Thompson)).)

iv. Copying of Others

SWM says the evidence shows that others in the field, in particular Glatz, copied SWM's ideas involving the asserted patents, as evidenced by the very fact that they allegedly practice them. (CBr. at 148.) For instance, argues SWM, Glatz and Delfort copied the ideas of the patents to achieve a commercially viable product. (*Id.*) SWM says that Mr. Muigg, a Delfort employee, testified that he {

} (*Id.* (citing JX-48C at 113-119, 123, 126-128 (Muigg); CX-106C at 1-12; CX-334C at 2; CX-335C at 1-2).) SWM says that Delfort employees attempted to work { } to determine how SWM manufactures its domestic industry products and to work around the asserted patents. (*Id.* (citing JX-47C at 113-121 (Mayr); CX-265C at 1.)

SWM argues that the evidence shows Delfort's continuous and unsuccessful efforts to design around the asserted patents to avoid infringement, which includes {

} (*Id.* at 149 (citing JX-48C at 119-120, 122-123 (Muigg); JX-47C at 88:4-17, 89-90, 98-99, 100-110 (Mayr); JX-45C at 59:18-61:8, 80-81, 90:6-25 (Giener)).) SWM says that Delfort engaged in significant LIP paper development efforts { } at least between { } (*Id.*) These {

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}. (*Id.* (citing CX-333C at 1-32).) SWM argues that as recently as { }, Delfort worked with { } on LIP technology that Delfort calls { } and says that those efforts required multiple meetings and subsequent paper trials over the course of many months between { }. (*Id.* (citing CX-136C at 1; CX-220C at 1-2; CX-265C at 1; CX-177C at 1-4).)

SWM says that Glatz has undertaken similar efforts to design around SWM's patents. (*Id.* (citing JX-42C at 32-33, 93-97 (Engelking); JX-41C at 19-23 (Fritzching); JX-40C at 103 (Epailly)).) For example, argues SWM, { }

SWM says a review of all the actions taken by Delfort and Glatz shows that they strove to match SWM's patented ideas. (*Id.*)

Glatz replies that SWM has not, and cannot, show any nexus between purported copying and the novel aspects of the '867 patent. (RRBr. at 116-117.) Glatz says that SWM relies on irrelevant documents and testimony that have nothing to do with alleged copying by anyone. (*Id.* at 117.) First, argues Glatz, SWM contends that if its infringement case against Glatz is successful, that would constitute evidence of copying sufficient to refute obviousness of the '867 patent. (*Id.*) However, argues Glatz, "mere evidence of infringement is not enough to furnish objective indicia of non-obviousness." (*Id.* (citing *Iron Grip Barbell Co., v. USA Sports, Inc.*, 392 F.3d 1317, 1324 (Fed. Cir. 1965)).) In any event, argues Glatz, the evidence shows no infringement. (*Id.*)

Secondly, argues Glatz, the evidence of Delfort's copying cited by SWM relates only to Delfort { } discussions about the scope of SWM's patents and has nothing to do

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with copying; in fact, argues Glatz, taking SWM at its word, the object of these discussions was to work around or avoid the patent(s). (*Id.*) As for SWM's argument that Delfort engaged in

{

}, Glatz says that is irrelevant to the question of copying for various reasons.

The evidence cited by SWM relating to {

}; or relating to an analysis of another Delfort

paper { }; or relating to various options to lower smoke values {

}; or relating to quality control data for a Delfort LIP

paper { }; or a spreadsheet listing an assortment of data

which may or may not be permeability data for various grades of paper; or an agenda for a

business pleasure trip; or discussions about the scope of SWM's patents that do not involve the

topic of copying, does not involve copying SWM's invention or products. (*Id.* at 117-118.)

Glatz says that SWM's evidence that Glatz allegedly engaged in copying is also irrelevant because {

}. (*Id.*) Glatz argues that none of this evidence relied on

by SWM is related to copying. (*Id.*)

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v. Commercial Acquiescence and Licensing

SWM says that the '867 patent is not obvious due to commercial acquiescence and licensing. (CBr. at 149.) SWM argues that it has licensed the claimed invention of the '867 patent under agreements with { } (CX-704C at Q/A 46-58 (Thompson); { } at 14: { } at 15; { } at 15) and { } (CX-704C at Q/A 59-62 (Thompson); { } at 3-4). (CBr. at 90, 149.) SWM argues that this license indicates industry acquiescence supporting a finding that the asserted claims are not obvious. (*Id.* at 90-91.)

Glatz replies that SWM merely incorporates by reference the arguments it made for the '753 patent on this subject and Glatz says SWM again fails to present any affirmative evidence of a nexus between the purported merits of the '867 invention and the licenses of record (which include many patents) as required under Federal Circuit precedent. (RRBr. at 119 (citing *Iron Grip Barbell*, 392 F.3d at 1324; *In re GPAC Inc.*, 57 F.3d 1573, 1580 (Fed. Cir. 1995)).)

The Administrative Law Judge concludes, insofar as SWM asserts that there existed a long-felt need and there was skepticism in the industry about the invention disclosed in the '867 patent, that the evidence does not support SWM's contentions in that regard. It is concluded herein that the asserted claims of the '867 patent are invalid under 35 U.S.C. § 102 (b) by reason of PaperSelect and Merit Light and Merit Ultra Light cigarettes. The introduction of Merit Light and Ultra Light cigarettes predated the '867 patent. Save for SWM's argument that these products do not include a film forming composition under its definition, which has been rejected, it does not follow that the '867 patent pioneered such a result.

Although SWM contends that the '867 patent struck a balance between tar delivery, puff count, nicotine delivery, and carbon monoxide delivery, the evidence in support of that statement is wanting. Merit Light and Ultra Light cigarettes were sold in the United States more than a

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year before the filing date of the '867 patent and included high permeability base paper between 60 and 85 Coresta with a Burn Mode Index below 8 cm^{-1} , as previously discussed in relation to the invalidity issue under 35 U.S.C. § 102 (b) above. The evidence does not support SWM's conclusory assertion that prior to the '867 patent there was long-felt need for the invention of the '867 patent. The evidence does not demonstrate that the '867 invention is capable of producing a LIP wrapper that overcomes the wrinkling and cockling problems associated with single layer applications. { }

(CX-703C at 11-12, 15 (Mongeon Stmt. Q 35, 49, 50); Tr. at 300-302 (Mongeon).)

With respect to SWM's claim that the '867 patent achieved unexpected results, the evidence shows that prior to the patent, manufacturers were actively seeking high porosity LIP papers and Philip Morris had sold Merit Light and Ultra Light cigarettes, using 60 and 85 Coresta base paper, more than a year before the filing date of the '867 patent. This belies SWM's claim that the '867 invention yielded unexpected results. As to the remaining arguments put forward by SWM in support of its contention that the evidence reveals that the invention of the '867 achieved unexpected results, that is not demonstrated since it cannot be shown that there is a nexus between the results achieved and the '867 patent.

As for the commercial success of the '867 patent, SWM has not pointed to any evidence that the sales records it produced were a direct result of the unique characteristics of the claimed invention. *See Tokai Corp. v. Easton Enterprises, Inc.*, 632 F.3d 1358, 1370 (Fed. Cir. 2011). Sales results alone do not evidence that the unique aspects claimed by the patent are causative, and SWM has not produced specific evidence that would warrant a conclusion that the '867 patent was the nexus therefor. Insofar as SWM's contention that its sales records demonstrate the market's acceptance of the invention, the evidence does not show that there is a nexus

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between the invention of the '867 patent and the sales figures that SWM points to. The sales figures themselves are not enough to demonstrate that the invention of the '867 patent has a causal relationship. *Id.*

With respect to SWM's assertion that the patent was copied by others, the evidence is wanting here as well. "Copying 'requires evidence of efforts to replicate a specific product.'" *Id.* (citing *Wyers v. Master Lock Co.*, 616 F.3d 1231, 1246 (Fed. Cir. 2010).) The evidence referred to by SWM does not show that actual copying of the '867 invention was undertaken by anyone. Infringement by itself, assuming that it had been or were to be shown, is not probative of copying. *Id.* (citing *Iron Grip Barbell*, 392 F.3d at 1325).

As regards SWM's licensing activities, once again, the evidence is not sufficient to demonstrate that there is a nexus between those licenses and the invention claimed in the '867 patent. The evidence of licensing activities, like the evidence of sales, is not enough by itself to establish a nexus between the merits of the claimed invention and execution of the licenses. "If the feature that creates the commercial success was known in the prior art, the success is not pertinent." *In re Woodruff*, 919 F.2d 1575, 1578 (Fed. Cir. 1990).

The Administrative Law Judge concludes that the alleged evidence of secondary considerations that SWM cites does not overcome the evidence of obviousness by reason of the combination of PaperSelect, Merit cigarettes, and the '753 patent.

D. Validity Under 35 U.S.C. §101—Lack of Utility

1. Applicable Law.

Section 101 of the Patent Act provides that patents may be granted for only "new and useful" inventions. 35 U.S.C. § 101. This requires that a patent specification "disclose as a matter of fact a practical utility for the invention." *In re Ziegler*, 992 F.2d 1197, 1201

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(Fed.Cir.1993). “To meet the utility requirement, the Supreme Court has held that a new product or process must be shown to be ‘operable’ - that is, it must be ‘capable of being used to effect the object proposed.’” *Stiftung v. Renishaw PLC*, 945 F.2d 1173, 1180 (Fed. Cir. 1991) (citing *Mitchell v. Tilghman*, 86 U.S. (19 Wall.) 287, 396 (1873)). The Federal Circuit has interpreted this language to mean that the patented device need only accomplish one of the objectives stated in the specification in order to satisfy the utility requirement. *Id.* (citing *Raytheon Co. v. Roper Corp.*, 724 F.2d 951, 958 (Fed. Cir. 1983)).

2. The ‘753 Patent

Glatz contends that the ‘753 patent is invalid under 35 U.S.C. § 101. Glatz argues that there is no evidence that the claimed permeability profile in a LIP band provides any practical difference over prior art LIP bands, much less a difference in smoke delivery or taste when compared to an abrupt band edge. (RBr. at 95.) According to Glatz, the prior art is simply silent on the subject of band edges because a gradual permeability change at one or both band edges has no practical effect on either taste or smoke delivery, and therefore is unnecessary. (*Id.*) Glatz says the prior art did not concern itself with profiles of band edges because the bands are microscopically thin—a few microns only—and the permeability changes, if any, occur over exceedingly short distances—tenths of a millimeter. The coal burns through the band edges extremely quickly, and as a practical matter, it makes no difference what the physical or permeability profile of the edges is. (*Id.*)

Glatz says the ‘753 patent contains no data or support for its assertions that a “gradually” changing permeability profile provides any distinction or advance over the prior art. The claims embrace minor permeability differences between banded and untreated areas. (*Id.*) Glatz argues that the ‘753 patent does not teach how to measure whether a given band edge has a gradually

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changing permeability profile; does not describe any suitable equipment that can be used to make such measurements; contains no actual permeability data showing what is or is not a gradually changing permeability profile; gives no slope of the claimed permeability change; provides no minimum or maximum transition distance where the gradual change can occur; provides no minimum or maximum band thickness, width, or spacing; and its claims recite no base paper or band permeabilities. (*Id.* at 95-96.) Despite these deficiencies, argues Glatz, SWM contends that the most miniscule changes in permeability solve the “problem” associated with the abrupt bands of the prior art and are within the scope of the ‘753 patent. (*Id.* at 96.)

Glatz argues that SWM’s expert testified that an 89 degree permeability profile is gradual, and within the scope of the ‘753 patent, but a 90 degree profile is abrupt, and not within the scope of the patent. (*Id.* (citing Tr. at 2044 (Honeycutt)).) Glatz says that SWM’s expert also testified that the claimed “gradual” change can occur over a few CORESTA units, in a band with a thickness of a few microns and over a transition distance of one to two microns. (*Id.* (citing Tr. at 2042-43 (Honeycutt)).) Glatz says that even with this exceedingly broad scope there is no credible evidence that any of SWM’s or Glatz’s papers actually have band edges with a gradually changing permeability profile. (*Id.*)

Glatz says that the ‘753 patent purports to solve a “problem” that does not exist, namely, that there is some human-perceptible or discernible change in a banded LIP cigarette’s smoke characteristics when the burning coal moves from an area of high permeability to one of low permeability, or vice versa, and then proposes a non-functional “solution” to this non-existent problem. (*Id.*) Glatz argues that while SWM’s expert acknowledged that the only “problem” addressed and solved by the ‘753 patent was taste and smoke delivery (*id.* (citing Tr. at 2045 (Honeycutt))), he testified that a claimed “gradual” band could be indistinguishable to the

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smoker compared with a prior art abrupt band and that none of the asserted claims requires any actual discernible difference in smoke delivery or taste. (*Id.* (citing RFF 29).) Glatz says that, according to SWM's expert, the taste and smoke delivery "problem" of prior art abrupt bands can be solved by a "gradual" band having taste and smoke delivery characteristics that are indistinguishable from the problem bands. (*Id.*) Glatz says that by SWM's own admission the '753 patent is incapable of being used to effect the object proposed by the patent, and thus, the asserted claims of the '753 patent are invalid as inoperable. (*Id.*)

SWM argues that 35 U.S.C. § 101 requires that a patentable invention be "new and useful," and SWM says that the evidence establishes that the claimed invention of the '753 patent is both. (CBr. at 91-93; CRBr. at 67.) SWM notes that claim 1 recites a smoking article with a wrapper "comprising discrete areas of reduced permeability for improving ignition proclivity characteristics of said smoking article..." (*Id.* (citing JX-1 at 11:64-66; CFF-IV-38).) SWM says the smoking article wrapper of claim 12 similarly recites "discrete areas of reduced permeability for improving ignition proclivity characteristics of a smoking article." (*Id.* at 92 (citing JX-1 at 12:40-42; CFF-IV-39).) SWM says a person of ordinary skill would understand claims 1 and 12 to require that the permeability difference between the treated and untreated areas needs to be sufficient to impart improved ignition proclivity characteristics. (*Id.* (citing JX-1 at 2:42-44; CFF-IV-40).) SWM says that because the smoking article and smoking article wrappers claimed in the '753 patent have reduced ignition proclivity characteristics, the '753 patent satisfies the utility requirement. (*Id.* (citing Tr. at 1948 (Honeycutt); *Raytheon Co. v. Roper Corp.*, 724 F.2d 951, 959 (Fed. Cir. 1983) (accomplishing at least one, and a major one, of the patent's stated objectives is sufficient)).)

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SWM says that, contrary to what Glatz has argued regarding smoke delivery or taste in association with improved ignition proclivity, an invention does not need to meet every stated objective in order to satisfy the utility requirement. (*Id.* (citing *Raytheon*)). Instead, argues SWM, “[w]hen a properly claimed invention meets at least one stated objective, utility under § 101 is clearly shown.” (*Id.* (quoting *Stiftung*, 945 F.2d at 1180).) Moreover, argues SWM, the ‘753 patent offers a functional way to address the adverse taste and smoke delivery problems associated with smoking into the bands of these patents. (*Id.* (citing Tr. at 1948-50, 2045 (Honeycutt); CFF-IV-42).) SWM argues that the fact that one of the objectives, minimizing discernible taste differences, might not always be met is irrelevant in assessing utility. (*Id.* (citing *Stiftung*, 945 F.2d at 1180).) SWM says the claimed inventions indisputably satisfy the objective of reducing ignition proclivity, which alone establishes the utility of the claimed invention. (*Id.*)

Glatz responds that the ‘753 patent is invalid under § 101 because it purports to solve a nonexistent problem with a solution that has no function. (RRBr. at 68.) Glatz argues that it is not credible for SWM to argue that the ‘753 patent is useful for solving the taste and smoke delivery “problems” of bands having abruptly changing permeability profiles SWM and at the same time argue that the ‘753 patent covers bands that are indistinguishable from the very same prior art bands that allegedly caused the “problem” in the first place. Glatz says that, in reality, there is no “problem” with abrupt profiles. (*Id.* at 69.) Glatz points out that SWM’s expert testified that any permeability profile less than 90 degrees is “gradual.” (*Id.* (citing Tr. at 2042-44 (Honeycutt)).) Glatz concludes that it is ridiculous to conclude that these microscopic geometrics could ever result in a LIP band having an abrupt permeability change of just one degree more. (*Id.*) Glatz argues that such “impossible” claims lack utility under § 101. (*Id.*)

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(citing *EMI Group North America, Inc. v. Cypress Semiconductor Corp.*, 262 F.3d 1342, 1348-49 (Fed. Cir. 2001)).)

Staff asserts that Glatz's contention regarding utility is actually an enablement argument. (SBr. at 20.) Staff says that the '753 patent meets the utility requirement because "it is undisputed that the claimed inventions at least satisfy the goal of reducing ignition proclivity, which is one of the objectives of the '753 patent." (*Id.* (citing *Stiftung*, 945 F.2d at 1180).)

The Administrative Law Judge concludes that the evidence does not support the conclusion that the asserted claims of the '753 patent are invalid under 35 U.S.C. § 101. The '753 patent states that "[i]t is a principle object of the present invention to provide a smoking article having improved ignition proclivity characteristics." (JX-1 at 2:42-44.) The undisputed evidence is that invention accomplishes at least this objective. (Tr. at 1948 (Honeycutt).) The Administrative Law Judge concludes that this is sufficient for purposes of utility under 35 U.S.C. § 101. To satisfy the utility requirement under § 101 a patent does not have to be shown to meet all of its stated objectives, and simply meeting one of its objectives is sufficient. *Stiftung*, 945 F.2d at 1180.

E. Validity Under 35 U.S.C. § 112

1. The '753 Patent

According to the Federal Circuit a claim is indefinite only if the claim is "insolubly ambiguous, and no narrowing construction can properly be adopted. . . . If the meaning of the claim is discernible, even though the task may be formidable and the conclusion may be one over which reasonable persons will disagree, we have held the claim sufficiently clear to avoid invalidity on indefiniteness grounds." *Exxon Research & Eng'g Co. v. United States*, 265 F.3d 1371, 1375 (Fed. Cir. 2001).

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Glatz contends that the claim term “gradually increasing/decreasing/changing permeability profile” is insolubly ambiguous, and therefore indefinite, unless Glatz’s proposed construction is adopted. (RBr. at 97.) Staff says the asserted claims of the ‘753 patent are indefinite under 35 U.S.C. § 112 if either Glatz’s or Staff’s proposed construction is adopted. (SBr. at 66.)

More specifically, Glatz argues that the ‘753 patent does not define “gradually” and does not provide any numerical value for the maximum or minimum “slope” or “step” of the permeability change that would be regarded as “gradual,” as opposed to abrupt. (RBr. at 97 (citing Tr. at 2051-52 (Honeycutt)).) Glatz contends that none of the examples shown in the patent provides information sufficient to determine what a “gradual” slope might be and that the patent does not disclose any exemplary permeability values that are considered “gradual.” (*Id.*) According to Glatz, the patent also fails to explain how to measure changes in air permeability at the band edges to determine whether they are gradual or abrupt and fails to identify equipment suitable to make such measurements. (*Id.*) Instead, argues Glatz, the patent characterizes “gradually” solely in terms of whether a discernible difference in smoke and taste delivery is avoided. (*Id.* (citing Tr. at 2045 (Honeycutt), 974-975, 988-989 (McCarty)).)

Glatz argues that if the ‘753 invention is patentable at all, it is only because the prior art’s allegedly “abrupt” permeability change at the edge of a cigarette band causes discernible changes in smoke delivery and taste, while the claimed “gradual” permeability change in the same cigarette band of the ‘753 patent does not. (*Id.* at 98.) Glatz contends that any construction of a claim term that includes the word “gradual,” or a form thereof, that is not tethered to providing minimal discernible changes in smoke delivery and taste as compared to the bands that have abrupt profiles would render the claim term insolubly ambiguous. Such would be the case if

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SWM's claim construction were adopted. (*Id.*) Glatz says that if “gradually” does not reflect that the claimed band profiles provide minimal discernible changes in smoke delivery and taste as compared to prior art “abrupt” bands, it does not describe anything at all and one cannot determine whether or not infringement exists. (*Id.* at 99.) Therefore, argues Glatz, if its proposed construction is not adopted, the asserted claims of the ‘753 patent are indefinite and invalid under 35 U.S.C. § 112. (*Id.*)

Staff's position is that the ‘753 patent is indefinite under either Glatz's or Staff's proposed constructions because the boundaries of the claimed “gradual” rate of change in permeability cannot be determined. (SBr. at 66.) Staff says that the second paragraph of 35 U.S.C. § 112 states that “[t]he specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.” (*Id.* at 67.) According to Staff, this requirement “ensure[s] that the claims delineate the scope of the invention using language that adequately notifies the public of the patentee's right to exclude.” (*Id.* (citing *Datamize, LLC. v. Plumtree Software, Inc.* 417 F. 3d 1342, 1347 (Fed. Cir. 2005)).) Staff contends that there is nothing in the patent claims or specification to indicate how shallow the curve of a permeability profile must be in order to fall within the scope of the asserted claims. A manufacturer of cigarette wrappers would have no way to determine how “gradual” a change in permeability profile would have to be to avoid infringing the ‘753 patent. (*Id.*) Staff argues that the only guidance provided is the implied limitation imposed by Glatz's proposed construction, that the change must be gradual enough for any resulting differences in taste or smoke delivery to be undetectable to the smoker. (*Id.*) Staff says that nothing in the patent specification indicates how a person of ordinary skill would measure the relationship between a change in the taste or smoke delivery of a cigarette made with that

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wrapper, as perceived by an unknown future consumer. (*Id.*) Staff contends that nothing in the patent specification indicates how a person of ordinary skill would measure the relationship between a change in the permeability of a cigarette wrapper at the time of manufacture and a potential change in the taste or smoke delivery of a cigarette made with that wrapper, as perceived by an unknown future consumer. (*Id.*) Staff argues that because there is no way to quantify how rapidly the permeability of a cigarette wrapper may change before the resulting difference in taste becomes discernible to future cigarette consumers, under Glatz's and Staff's proposed constructions, there is no way to determine whether Accused Products infringe the asserted claims. (*Id.*) Therefore, reasons Staff, each of the asserted claims of the '753 patent is indefinite under *Amgen, Inc. v. Chugai Pharmaceutical Co.*, 927 F.2d 1200, 1218 (Fed. Cir. 1991).

SWM responds that the specification states that “[t]he gradually decreasing permeability is defined such that the burning coal does not engage the maximum permeability reduction of the band all at once, but gradually burns into the area of maximum permeability reduction.” (CBr. at 93 (citing JX-1 at 10:7-11; CFF-IV-43).) SWM says the illustrations of ramp patterns that have gradually changing permeability profiles are shown in Figures 4, 5, 6A, and 6B. (*Id.* (citing JX-1 at 10:58-11:12; Figures 4, 5, 6A, 6B; Tr. at 1887 (Honeycutt); CFF-IV-44).) SWM says that Glatz's own expert did not dispute that the patent figures define a gradually changing permeability profile. (*Id.* (citing Tr. at 1247-48 (McCarty)).)

SWM says that the evidence shows that one of ordinary skill in the art would not need specific directions or dimensions to measure a gradually changing permeability profile, as there are a number of techniques available to make such determinations. (*Id.* at 93-94 (citing Tr. at 1250 (McCarty), 1887-90 (Honeycutt); CFF-IV-46).) For example, argues SWM, one of

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ordinary skill in the art would understand that unless a person were applying a film forming composition that completely shut down permeability, a change in the amount of film forming composition being applied would result in a change in permeability. (*Id.* at 94 (citing Tr. at 1248-49 (McCarty), 1888-89 (Honeycutt); CFF-IV-45).) SWM argues that this is illustrated in the Figures 4, 5, 6A, and 6B of the '753 patent showing a physical profile of the film forming composition that would achieve a gradually changing permeability profile. (*Id.* (citing CFF-IV-44).) SWM says that one of ordinary skill in the art could discern whether a gradually changing permeability profile exists through direct knowledge of how the band was formed, visual inspection of the band, such as by use of a dye, or direct measurement of the permeability of the edges of the band and would view the gradually changing permeability profile as a distinct and definite feature of the claims regardless of whether specific profile data was shown or explicit directions were given on how to measure such a profile. (*Id.* (citing Tr. at 1887-90 (Honeycutt)).)

The Administrative Law Judge concludes that the '753 patent is not indefinite and, therefore, is not invalid under 35 U.S.C. § 112. Glatz's assertion in that regard is premised on SWM's proposed construction, which has not been adopted. As for Staff's argument in that respect, it assumes that there is a subjective taste requirement that is necessitated, but that is not the case. While the patent aims to improve the smoker's experience, it proceeds on the basis that introducing LIP bands that are so profiled as to allow for gradual changes in permeability will contribute to that objective. There are clear ways of accomplishing that, as illustrated in the figures of the '753 patent and as explained in the specification, such as mentioned by SWM in the discussion above. The Administrative Law Judge finds that this information found in the patent's specification is sufficient to fulfill the requirements of the second paragraph of 35

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U.S.C. § 112. See *Hearing Components, Inc. v. Shure Inc.*, 600 F.3d 1357, 1366-67 (Fed. Cir. 2010) (noting that the claim term “readily” was a word of degree and finding the phrase “readily installed” to be definite where the specification provided clear examples for determining the scope of the phrase).

2. The ‘867 Patent

a) Lack of Written Description

Patents are presumed valid. 35 U.S.C. § 282. The first paragraph of Section 112 says: “The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same. . . .” 35 U.S.C. § 112. “The form and presentation of the description can vary with the nature of the invention; compliance with the written description requirement is a fact-dependent inquiry.” *In re Skvorecz*, 580 F.3d 1262, 1269 (Fed. Cir. 2009). “[T]he applicant [for a patent] may employ ‘such descriptive means as words, structures, figures, diagrams, formulas, etc., that fully set forth the claimed invention.’” (*Id.* (citing *In re Alton*, 76 F.3d 1168, 1172 (Fed. Cir. 1996)).) The adequacy of the description depends on content, rather than length. *In re Hayes Microcomputer Products, Inc. Patent Litigation*, 982 F.2d 1527, 1534 (Fed. Cir. 1992). “Specifically, the level of detail required to satisfy the written description requirement varies depending on the nature and scope of the claims and on the complexity and predictability of the relevant technology.” *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1352 (Fed. Cir. 2010) (en banc). The specification must objectively demonstrate that the applicant was in possession of the claimed subject matter. (*Id.* at 10, 12.) Compliance with the written description requirement is a question of fact, and in order to overcome the presumption of

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validity a party must set forth clear and convincing evidence. *Centocor Ortho Biotech, Inc. v. Abbott Labs.*, 636 F.3d 1341, 1347 (Fed. Cir. 2011).

Glatz asserts that if the term “applying” is construed to include applying film forming compositions in a single application to form a single layer band (as it has), the asserted claims are invalid for failure to comply with the written description requirement of 35 U.S.C. § 112. (RBr. at 168.) Glatz argues that the specification, excluding the claims, includes no less than 17 usages of the term “multiple layers,” or variations thereof, but never describes the application of a single application or explains how the wrinkling and cockling problems could be solved with a single layer or a single application. (*Id.* at 169.) According to Glatz, a person of ordinary skill in the art would not conclude that the named inventors were in possession of an invention broad enough to include a single application of film forming composition to form a single layer. (*Id.* (citing Tr. at 1033 (McCarty)).) Rather, argues Glatz, the specification reasonably conveys to those skilled in the art that the inventors only had possession of a process directed to applying multiple layers of a film forming composition to a paper wrapper in multiple steps. (*Id.*) Accordingly, says Glatz, the asserted claims of the ‘867 patent are invalid under the written description requirement of § 112 if the claim term “applying” is construed to include single-layer application processes. (*Id.*)

SWM contests Glatz on this issue, saying that § 112 merely “requires sufficient information in the specification to show that the inventor possessed the invention at the time of the original disclosure. (CRBr. at 113 (citing *Pandrol, USA, LP v. Airboss Railway Prods., Inc.*, 424 F.3d 1161, 1165 (Fed. Cir. 2005); *Boston Scientific Corp. v. Johnson & Johnson*, 647 F.3d 1353, 1361-62 (Fed. Cir. 2011)).) SWM argues this does not require the applicant to describe

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exactly the subject matter claimed and instead the description must clearly allow a person of ordinary skill in the art to recognize the inventor invented what is claimed. (*Id.*)

SWM argues that the specification clearly describes application of a single layer of film forming composition, including the single application of enough film forming material to achieve the desired band permeability for base sheets having a permeability of 60 Coresta or greater. (*Id.* (citing Tr. at 2027-29 (Honeycutt); JX-2 at 7:45-48, 8:52-65; CFF-V-52).) SWM says the fact that the specification includes no less than 17 usages of the term “multiple layers” or some variation thereof is irrelevant. (*Id.*) SWM argues that a person of ordinary skill in the art would understand the specification to describe both single-layer and multi-layer applications and thus the claims are supported by the written description. (*Id.* at 114.)

In reply, Glatz argues that SWM has failed to show that the ‘867 inventors were in possession of a single-layer application process. (RRBr. at 119.) Glatz says a specification adequately describes an invention when it “reasonably conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date.” (*Id.* (citing *Boston Scientific*, 647 F.3d 1353 at (Fed. Cir. 2011)).) According to Glatz, the specification of the ‘867 patent does not convey that the inventors had possession of any invention other than the application of multiple layers of a film forming composition. (*Id.* (citing Tr. at 1033 (McCarty)).) Glatz argues that SWM’s expert’s conclusory statements to the contrary are not sufficient. (*Id.* (citing *Ariad*, 598 F.3d at 1358).)

Glatz says that SWM’s patent citations are inapposite because they refer to application of “layers.” Glatz argues that the inventors explained that “[t]he inventive method for producing the smoking article...includes sequentially applying a composition to a smoking article paper,” drying the treated areas, and repeating “a plurality of times so that multiple layers of film are

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built up and formed on the paper wrapper.” (*Id.* (citing JX-2 at 7:59-67).) Specifically, argues Glatz, the inventors taught multiple layers of the film forming composition to overcome the identified problem of “non-uniform dimensional changes.” (*Id.* at 120 (citing JX-2 at 1:58-63).) Nowhere, argues Glatz, does the ‘867 patent specification describe using a single application of a film forming composition to accomplish the objectives of the alleged invention or how a process of applying only a single layer could be carried out while avoiding the distortions and adverse effects purportedly caused by prior art methods. (*Id.* (citing Tr. at 1032-34 (McCarty)).)

Glatz concludes that SWM failed to show that the inventors were in possession of the full extent of the alleged invention and therefore the claims are invalid under the written description requirement of § 112 if the term “applying” is construed to include a single-layer application. (*Id.*)

The Administrative Law Judge concludes that the asserted claims of the ‘867 patent satisfy the requirements of 35 U.S.C. § 112. Glatz bases its argument on its contention that the sole objective of the ‘867 patent is to produce ignition proclivity paper devoid of wrinkling or cockling exclusively through a process of applying multiple layers. While applying multiple layers is the principle means for accomplishing this objective according to the specification, it is not the only means. The specification states that “[t]he number of layers of the composition that are applied to the discrete areas of the paper wrapper can vary depending upon the particular circumstances.” (JX-2 at 8:1-3.) Elsewhere, the specification states:

The amount of composition that is added to the paper will depend on various factors, including the type of composition that is used and the desired result. For most applications, especially when using a film-forming composition, the composition can be added to the paper in an amount from about 1% to about 50% by weight of the paper within the banded region, and particularly from about 1% to about 20% by weight of the paper within the banded region after the bands have been formed and dried.

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(JX-2 at 7:30-39.)

The specification also states:

[T]he amount of composition that is applied during any single application step can depend upon many numerous factors. When applying relatively light layers according to the present invention, however, the composition can be applied to the web in an amount from about 0.25% to about 10% by weight, based upon the weight of the web. Relatively heavier amounts of composition applied to the web, on the other hand, can range from about 1% by weight to about 20% by weight, based on the weight of the web. When applying the different layers, the amount difference between light layers and heavy layers can be, for instance, greater than 1% by weight add on, particularly greater than 3% by weight add on, and in some applications, greater than 5% by weight add on.

(JX-2 at 8:52-65.) A person of ordinary skill in the art could reasonably discern from reading these passages, in light of the patent as a whole, that variables, including the weight of the base paper and the nature of composition materials being applied, will affect the result and determine the weight percentage of a given layer to be applied. But there is no reason to conclude that a desired result cannot be achieved other than by the application of some multiple of layers, whether that be two, three, four, five, without taking into consideration the composition of the film forming materials and the weight of the base paper. There is no evidence that all wrapping papers are susceptible to wrinkling or cockling to the same degree. Indeed, it appears that heavier weighted paper may be less susceptible. Likewise, different compositions are likely to affect papers differently as well. These variables are recognized in the specification and in the discussion of them, single layer applications are not foreclosed.

The Administrative Law Judge therefore concludes that the asserted claims of the '867 patent are not invalid under 35 U.S.C. § 112 as alleged by Glatz.

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b) Enablement

The first paragraph of Section 112 says: “The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same. . . .” 35 U.S.C. § 112.

According to the Federal Circuit:

Enablement is determined as of the effective filing date of the patent's application. To be enabling, the specification of a patent must teach those skilled in the art how to make and use the full scope of the claimed invention without ‘undue experimentation.’ Whether undue experimentation would have been required to make and use an invention, and thus whether a disclosure is enabling under 35 U.S.C. § 112, ¶ 1, is a question of law that we review de novo, based on underlying factual inquiries that we review for clear error. Because patents are presumed valid, lack of enablement must be proven by clear and convincing evidence.

ALZA Corp. v. Andrx Pharmaceuticals, LLC, 603 F.3d 935, 940 (Fed. Cir. 2010) (internal citations and quotations omitted). Factors that should be considered with respect to this inquiry into whether a disclosure requires undue experimentation (“*Wands* factors”) are as follows:

(1) the quantity of experimentation necessary, (2) the amount of direction or guidance presented, (3) the presence or absence of working examples, (4) the nature of the invention, (5) the state of the prior art, (6) the relative skill of those in the art, (7) the predictability or unpredictability of the art, and (8) the breadth of the claims.

Id.

Glatz asserts that there is no disclosure anywhere in the ‘867 specification that a single application of a film forming composition can accomplish the objectives of the alleged invention. (CBr. at 170 (citing Tr. at 1032-34 (McCarty)).) According to Glatz, the patent is entirely silent as to how a process of applying only a single layer could be carried out while avoiding the distortions and adverse effects purportedly caused by prior art methods of providing the same

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bands on the same paper wrappers using the same film forming compositions to provide the same reduced ignition proclivity cigarettes. (*Id.*) Glatz argues that a person of ordinary skill in the art, reading the '867 patent at the time of its priority date, would have no understanding or insight into how to apply the full scope of reduced permeability bands described in the patent, using only a single layer application, while avoiding the distortions, wrinkles and other problems purportedly caused by prior art methods. (*Id.*) Glatz argues that SWM's corporate representative has confirmed that as of the date of filing of the application for the '867 patent SWM had never produced a paper wrapper with a base paper permeability of 60 or greater Coresta and a band permeability of less than 20 Coresta, {

} (*Id.* (citing JX-56C at 54 (Kraker))). Glatz says the use of multiple applications to form bands, according to the '867 patent, is not an optional feature; it is central to and required for the functioning of the invention and the accomplishing of the expressly-stated goals and objectives. (*Id.* at 170-171.)

Glatz maintains that the '867 patent does not enable or describe any method of making the desired paper wrappers or low ignition propensity cigarettes from them without the unacceptable distortions, non-uniform dimensional changes, crinkles or puckers using other than multiple applications of a film forming composition. (*Id.* at 171 (citing Tr. at 1032-34 (McCarty))). Thus, argues Glatz, if "applying" is interpreted to include a single application of a film forming composition to form a single-layer band, the asserted claims are invalid for failure to comply with the enablement requirement of 35 U.S.C. § 112 because the specification does not enable the full scope of the claims such that a person of skill in the art could obtain the characteristics allegedly achieved by multiple applications. (*Id.*)

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SWM responds that the specification describes application of single and multiple layers, which enables a person of ordinary skill to practice claim 36. (CRBr. at 152 (citing Tr. at 2027-29 (Honeycutt); JX-2 at 7:45-48, 8:52-65).) SWM argues that the specification need not enable the production of wrappers free of non-uniform dimensional changes, as that is not claimed. (*Id.*) Nor does the specification need to enable the commercial manufacture of wrappers described in claim 36, as Glatz suggests. (*Id.*) According to SWM, the process of claim 36 simply does not require commercial production, that is, high-speed or high-production rate of the claimed invention. SWM says the Mr. Kraker explained that he was able to create samples made from high permeability base paper reduced to less than 20 Coresta { }. (*Id.* (citing Tr. at 1766 (Kraker); CX-1004C at Q/A 291-293, 297-298, 303-304 ; CX-938C at 6; CX-940C at 3; CX-927C at 6; CFF-V-53).)

The Administrative Law Judge concludes that the asserted claims of the '867 patent are not invalid under the second paragraph of 35 U.S.C. § 112, as contended by Glatz. As previously discussed, the '867 patent is not solely concerned with the aesthetics or appearance of paper wrappers; it also concerns a process for reducing the permeability of a paper wrapper used in the construction of a smoking article by treating it with a film forming composition that forms treated discrete areas that have a permeability within a predetermined range sufficient to reduce the ignition proclivity properties of a smoking article made with the wrapper. (JX-2 at Abstract.) In *Stiftung*, 945 F.2d at 1181, the court said: "It has long been held, and we today reaffirm, that it is entirely consistent with the claim definiteness requirement of the second paragraph of section 112, to present "subcombination" claims, drawn to only one aspect or combination of elements of an invention that has utility separate and apart from other aspects of the invention. As one of our predecessor courts stated, "it is not necessary that a claim recite each and every element

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needed for the practical utilization of the claimed subject matter,” as it is “entirely appropriate, and consistent with § 112, to present claims to only [one] aspect[.]” citing *Bendix Corp. v. United States*, 600 F.2d 1364, 1369, 220 Ct.Cl. 507, 514, 204 USPQ 617, 621 (1979). Claim 36 does not mention aesthetic considerations but, instead, addresses reduced ignition proclivity in a wrapper for a smoking article using high permeability base paper in the range of 60 to 110 Coresta utilizing bands produced by film forming compositions the achieve a Burn Mode Index of less than 8 cm⁻¹. (JX-2 at 12:34-52.) The specification includes sufficient information that is particular to that objective to satisfy 35 U.S.C. § 112.

VI. DOMESTIC INDUSTRY

As stated in the Notice of Investigation, a determination must be made as to whether an industry in the United States exists as required by subsection (a)(2) of Section 337. Section 337 declares unlawful the importation, the sale for importation or the sale in the United States after importation of articles that infringe a valid and enforceable U.S. patent “only if an industry in the United States, relating to articles protected by the patent . . . concerned, exists or is in the process of being established.” 19 U.S.C. § 1337(a)(2); *Certain Ammonium Octamolybdate Isomers*, Inv. No. 337-TA-477, Comm’n Op. at 55 (U.S.I.T.C., Jan. 2004) (“*Certain Isomers*”). The domestic industry requirement consists of both an economic prong (*i.e.*, the activities of, or investment in, a domestic industry) and a technical prong (*i.e.*, whether complainant practices its own patents). *Certain Isomers*, at 55. The complainant bears the burden of proving the existence of a domestic industry. *Certain Methods of Making Carbonated Candy Products*, Inv. No. 337-TA-292, Comm’n Op. at 34-35, Pub. No. 2390 (U.S.I.T.C., June 1991).

Thus, in this Investigation SWM must show that it satisfies both the technical and economic prongs of the domestic industry requirement with respect to the ‘753 and ‘867 patents.

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SWM alleges that its products supporting domestic industry include the with respect to the ‘753 patent include SWM’s alginate-banded and starch-banded LIP cigarette paper wrappers, which allegedly practice claim 12 of the ‘753 patent. (CBr. at 65.) SWM also alleges that its products supporting domestic industry with respect to the ‘867 patent include SWM’s alginate-banded cigarette paper wrappers, which allegedly practice claim 1 of the ‘867 patent. (*Id.* at 113.)

The Administrative Law Judge previously found that the economic prong of the domestic industry requirement has been met with respect to all of the asserted patents. (*See* Order No. 24 at 10-12.) The Administrative Law Judge further finds that the technical domestic industry prong is not met with respect to the ‘753 patent and is met with respect to the ‘867 patent, as discussed below. Thus, the Administrative Law Judge finds that SWM has not established that a domestic industry exists with respect to the ‘753 patent and SWM has established that a domestic industry exists with respect to the ‘867 patent.

A. Technical Analysis

A complainant in a patent-based Section 337 investigation must demonstrate that it is practicing or exploiting the patents at issue. *See* 19 U.S.C. § 1337(a)(2) and (3); *Certain Microsphere Adhesives, Process for Making Same, and Products Containing Same, Including Self-Stick Repositionable Notes*, Inv. No. 337-TA-366, Comm’n Op. at 8, Pub. No. 2949 (U.S.I.T.C., January 16, 1996). “In order to satisfy the technical prong of the domestic industry requirement, it is sufficient to show that the domestic industry practices any claim of that patent, not necessarily an asserted claim of that patent.” *Certain Isomers, supra*, at 55. Fulfillment of the “technical prong” of the domestic industry requirement is not determined by a rigid formula but rather by the articles of commerce and the realities of the marketplace. *Certain Diltiazem Hydrochloride and Diltiazem Preparations*, Inv. No. 337-TA-349, Initial Determination at 139,

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Pub. No. 2902 (U.S.I.T.C., June 1995) (unreviewed in relevant part); *Certain Double-Sided Floppy Disk Drives and Components Thereof*, Inv. No. 337-TA-215, Views of the Comm'n, Additional Views of Chairwoman Stern on Domestic Industry and Injury at 22, 25, Pub. No. 1860 (U.S.I.T.C., May 1986).

The test for claim coverage for the purposes of the technical prong of the domestic industry requirement is the same as that for infringement. *Certain Doxorubicin and Preparations Containing Same*, Inv. No. 337-TA-300, Initial Determination at 109, 1990 WL 710463 (U.S.I.T.C., May 21, 1990), *aff'd*, Views of the Commission at 22 (October 31, 1990). “First, the claims of the patent are construed. Second, the complainant’s article or process is examined to determine whether it falls within the scope of the claims.” *Id.* The technical prong of the domestic industry can be satisfied either literally or under the doctrine of equivalents. *Certain Dynamic Sequential Gradient Devices and Component Parts Thereof*, Inv. No. 337-TA-335, Initial Determination at 44, Pub. No. 2575 (U.S.I.T.C., November 1992).

1. The ‘753 patent

SWM argues that its products practice claim 12 of the ‘753 patent. (CBr. at 64.) SWM says that the evidence shows that its alginate-banded and starch-banded LIP cigarette paper wrappers practice claim 12 of the ‘753 patent. (*Id.* at 65 (citing CFF-IV-26, 27).) SWM argues that it is undisputed that SWM’s alginate-banded and starch banded LIP papers are used in smoking articles. (*Id.* (citing Tr. at 418-419, 433-434 (Rogers)).) According to SWM, cigarette manufacturers { } use SWM’s LIP papers as wrappers around the tobacco, as evidenced by the qualifications summary and charts of SWM LIP paper for { }. (*Id.* (citing { } at 9-11; CFF-IV-20).)

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SWM says that its LIP papers have discrete areas of reduced permeability for improving ignition proclivity of a smoking article in the shape of bands. (*Id.*) SWM says the bands are discrete areas of reduced permeability and when applied improve ignition proclivity control of a smoking article. (*Id.* (citing Tr. at 419-421 (Rogers)).) SWM argues that the discrete areas of reduced permeability are shown by the specifications for SWM's LIP papers, where target band width and target band spacing are mentioned. (*Id.* (citing Tr. at 421 (Rogers)).) SWM says the discrete areas are treated with either starch or sodium alginate, both of which are film forming compositions. (*Id.* (citing Tr. at 422-424, 496-497, 521 (Rogers); CX-703C at Q/A 19 (Mongeon)).) SWM says that Dr. Rogers confirmed that the bands on SWM's LIP papers contained either starch or alginate by iodine testing of SWM's LIP papers. (*Id.* at 65-66 (citing Tr. at 421-424 (Rogers); CX-425 at 23, 69, 138, 207, 253).) SWM points out that Mr. Mongeon, SWM's product and process manager, testified that SWM applies either a starch solution or an alginate solution to its papers, as shown in the product specifications for the starch { } and alginate { }. (*Id.* at 66 (citing CX-703C at Q/A 51-53, 68-69 (Mongeon); CX-666; CX-682; CFF-IV-22; CFF-IV-23).)

SWM argues that it is undisputed that its LIP papers also satisfy claim 12 of the '753 patent under the ordinary meanings and Glatz's proposed constructions for the claim terms "discrete areas" and "reduced permeability areas" because each of the papers has an "area or areas that have been treated to reduce permeability." (*Id.* (citing Tr. at 419-421 (Rogers)).)

SWM argues that its LIP papers also satisfy claim 12 under all proposed constructions of the term "film forming composition" because the ordinary meaning applies to sodium alginate, or { } starch, to form a film. (*Id.* (citing Tr. at 424-425 (Rogers); CX-703C at Q/A 51-53, 68-69 (Mongeon); CX-425 at 46, 69, 138, 207; CX-313C at 7; CX-314C; CX-421C; CX-

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433C-CX-454C; CX-500C; CX-666—CX-670; CX-678C—CX-682C.) SWM argues that its LIP papers also satisfy claim 12 under Glatz’s construction because SWM applies a composition to the paper that forms a layer or coating that reduces the permeability of the paper in the areas to which the composition has been applied. (*Id.* (citing Tr. at 421-424 (Rogers)).) SWM also says that under Staff’s proposed construction, SWM’s LIP papers also satisfy claim 12 because SWM applies a composition—alginate or starch—to the paper that, when dried, forms a film on the surface to which it is applied. (*Id.*)

SWM says that during the hearing Glatz provided Mr. Mongeon with several datasheets from { }, a company not affiliated with SWM, asking whether alginate can be used in a slurry, thereby implying that SWM’s own products may not use a film forming composition. In response Mr. Mongeon confirmed that SWM does not use this { } alginate in its commercial products. (*Id.* at 66-67 (citing Tr. at 283-286, 298-299 (Mongeon)).) SWM says that whether a film former can be used in a slurry is not what the term “film forming composition” in the patent addresses because SWM dissolves its alginate and its starch into solution in order to form a film. (*Id.* at 67 (citing Tr. at 422-424 (Rogers); CX-703C at Q/A 51-53, 68-69 (Mongeon); CX-425 at 46, 69, 138, 207; CX-313C at 7; CX-314C; CX-421C; CX-433C—CX-454C; CX-500C; CX-666—CX-670C; CX-678C—CX-682C).)

SWM says that Glatz also asked Mr. Mongeon whether solids existed in SWM’s alginate film forming composition, implying that a film forming composition could include solids but, argues SWM, the term “percent solids” in reference to its alginate film forming solution relates to the amount of solid material remaining after the solution is dried and has nothing to do with whether SWM’s alginate products contain a film forming composition. (*Id.* (citing Tr. at 714-715 (Rogers), 280 (Mongeon); CX-669 at 2).)

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SWM argues that it is undisputed that the discrete areas of reduced permeability of SWM's LIP papers are horizontal bands across the paper. (*Id.* (citing Tr. at 434-435 (Rogers); CFF-V-24).) SWM says this was demonstrated by Dr. Rogers's iodine testing. (*Id.* (citing CX-425C at 23, 69, 138, 207, 253).) SWM says that the bands on its LIP papers are 6-7 millimeters wide and spaced about 18-20 millimeters apart. (*Id.* (citing CX-703C at Q/A 61-63 (Mongeon)).)

SWM says the evidence shows that all the reduced permeability areas of SWM's LIP papers have a gradually changing permeability profile in the longitudinal direction such that the permeability reductions in the reduced permeability areas gradually increases from a minimum zero permeability reduction to a maximum permeability reduction. (*Id.* at 68 (citing Tr. at 436-439, 444-448, 451-452, 460-461 (Rogers); CX-425 at 7-20, 30-43, 35-66, 76-89, 99-112, 122-135, 145-148, 168-181, 191-204, 214-227, 237-250, 260-272).) SWM contends that the term "gradually" is satisfied under all proposed constructions. (*Id.*) SWM says that Dr. Rogers measured the permeability of SWM's LIP paper samples and concluded that they satisfied claim 12 because there were no sharp changes in permeability across the band. (*Id.* (citing Tr. at 439-441 (Rogers)).) SWM claims that Dr. Rogers's test data for SWM's LIP papers repeatedly show small changes in permeability where the measuring head was positioned entirely within the visible band area. (*Id.*) SWM argues that Glatz's criticisms of Dr. Rogers conclusions about SWM's LIP papers' gradual change in permeability are the same as the ones they interposed in the case of Glatz's own papers and for the same reasons previously given by SWM in connection with the infringement analysis of Glatz's papers, Glatz's argument here, regarding SWM's papers also fails. (*Id.* at 71.) Specifically, argues SWM, there are multiple data points in the plots relied upon by Dr. Rogers showing gradually changing permeability measurements where

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the measuring head is not overlapping the edge of the visible band and there are multiple plots showing greater than four points of gradually changing permeability that cannot be explained away. (*Id.* at 71-72.) Furthermore, claims SWM, Dr. Fleming, Glatz's own expert, showed a gradual change in permeability according to his own permeability test data for the SWM LIP paper labeled SWM 10985FH. (*Id.* at 72-73 (citing Tr.at 1998-99 (Fleming)).) SWM argues that because permeability changes in small steps, it does not change all at once. (*Id.* at 73.)

SWM argues that when asked about his permeability data for the SWM paper labeled SWM 10985FJ, Dr. Fleming could not deny that it showed gradual changes from about 20 to about 30 Coresta and could only respond that it was a "relatively small variation" within the band. (*Id.* (citing Tr. at 1504 (Fleming)).) SWM says that Dr. Fleming acknowledged the small steps in permeability in his data for SWM 12817RJ. (*Id.* (citing Tr. at 1506-07 (Fleming)).) SWM argues that Dr. Fleming attempted to explain the gradual change in permeability shown in his data as "variation" of a particular grade but it is exactly this smoothly transitioning "variation" that SWM designed in its LIP papers to give a gradually changing permeability profile. (*Id.*) SWM argues that while Dr. Fleming relied on "variation" and "error bars" to try to explain away his own data, he tested each piece of paper twice and got almost exactly the same measurements both times, each of which showed a gradual change. (*Id.* at 73-74.)

SWM says that its LIP papers satisfy the claim limitation "gradually" under SWM's construction because the change in permeability does not occur all at once. (*Id.* at 74 (citing Tr. at 439-441, 448 (Rogers)).) SWM argues that the term "gradually" is also satisfied under Glatz's proposed construction and Staff's because Glatz's construction requires that the change in permeability must occur in small steps or degrees and this is shown by both Dr. Rogers's and Dr. Fleming's test results. (*Id.* (citing Tr. at 448 (Rogers), 1498 (Fleming)).) Also, according to

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SWM, Glatz's construction requires that SWM's LIP products have minimal discernible changes in smoke delivery and taste and its LIP papers satisfy this limitation as well as evidenced by their acceptance and commercial success. (*Id.*)

Glatz counters that, as previously argued in relation to the alleged infringement of its Accused Products, Dr. Rogers's testing methodology is fundamentally flawed because the measuring orifice was placed partially on the base paper. (RBr. at 64.) Glatz says that, according to SWM, measuring this combination tells you "nothing" and "for the data to mean anything at all, the orifice must be either entirely on the band or entirely off the band." (*Id.* (citing Tr. at 385-386 (Steidel Depo), 382 (Codwise)).) In contrast, argues Glatz, when SWM's papers are properly analyzed according to Dr. Fleming's testing methodology, to avoid the overlap region, there is no evidence of a gradually changing permeability profile and every indication that the SWM papers possess an abrupt permeability profile. (*Id.* at 64-65 (citing Tr. at 1453, 1467, 1499-1503 (Fleming)).)

Glatz says that not only is there a lack of evidence of a gradually changing permeability profile based on the air permeability data, there is also a lack of evidence of a gradually changing permeability profile based on the physical shape of the bands on SWM's papers. This physical shape of a "gradually changing band edge" was, according to one of the named inventors of the '753 patent, the distinguishing characteristic of the '753 invention over conventional bands, which had abruptly changing band edges. (*Id.* at 65 (citing Tr. at 1580 (Peterson)).) In fact, argues Glatz, because SWM "did not have technology that would measure [permeability] changes along a ramped-up type band" at the time the '753 patent's application was filed in March 1997, SWM { } in an attempt to see "a gradual

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increase in { } through the ramp portion to a maximum level { } in the totally treated area.” (*Id.* (citing Tr. at 1587-88 (Peterson)).)

Glatz says that SWM uses { } to manufacture its LIP papers, one is the { } in which { }. (*Id.* (citing Tr. at 291-293, 309 (Mongeon); JX-57C at 23 (Mongeon)).) Glatz says that in { }, bands with sharp edges are produced { }. (*Id.* (citing JX-57C at 34 (Mongeon)).) Glatz argues that in order to avoid sharp edges and instead create a gradually changing permeability profile using a { }, “one would design the printing process to apply less material at the edge of the band.” (*Id.* at 66 (citing CX-1005C at 5 (Kucherovsky Stmt. Q 21)).) According to Glatz, SWM has no idea whether any aspects of SWM’s processes are so designed. (*Id.* (citing CX-703C at 3-4 (Mongeon Stmt. Q. 12-13); JX-57C at 31-4 (Mongeon)).)

Moreover, according to Glatz, even if SWM had produced papers with less material at the band edge by accident, SWM did not conduct any dye tests of its bands to support a finding that any of its papers have bands with such shape. (*Id.*) Nor did SWM rely on any profilometry testing of its papers, even though Dr. Rogers conducted profilometry testing of Delfort papers to “confirm the physical profile of how Delfort’s manufacturing process applies the band to the base paper” in response to Delfort’s non-infringement contentions; no such data was ever provided by SWM to support its claim of a gradually changing permeability profile for its own papers. (*Id.* (citing SWM Mem. in Support of Mot. for Leave to Submit Expert Report at 5, 6 (Aug. 22, 2011)).)

Glatz says there is no evidence that SWM papers have “minimal discernible changes in smoke delivery and taste as compared to the same treated paper having an abrupt increase,

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decrease or change in permeability,” which is required under Glatz’s proposed claim construction. (*Id.*) Glatz argues that SWM has presented no evidence that taste panels compared cigarettes made from SWM’s papers at issue with the same SWM papers having abrupt profiles. (*Id.* (citing RFF 20).) Instead, argues Glatz, Dr. Rogers merely relied on the alleged commercial success of SWM’s papers in forming his opinion regarding the taste and smoke delivery differences between SWM’s papers in forming his opinion regarding the taste and smoke delivery differences between the SWM papers at issue and other SWM papers allegedly having abrupt profiles. (*Id.* at 67 (citing Tr. at 451 (Rogers)).) Glatz says that Dr. Rogers’s reliance on SWM’s sales ignores the overwhelming evidence that SWM’s commercial success, if any, was driven by other factors, such as pending legislation. (*Id.* (citing Tr. at 326 (Thompson), 944-949, 1373-75 (McCarty)).) Glatz argues that it is pure speculation and conjecture to assume that the commercial success of SWM’s papers was due to SWM’s papers having minimally discernible changes in smoke delivery and taste as compared to the same treated paper with bands having an abrupt increase, decrease or change in permeability in their edges. (*Id.*)

Glatz additionally argues that SWM failed to show that any of its products include a film forming composition under its proposed construction. (*Id.*) Glatz acknowledges that under its own proposed construction of that term SWM’s products include a composition that forms a layer or coating that reduces the permeability in the areas to which the composition has been applied. (*Id.* at 67-68.) However, argues Glatz, the evidence does not show that SWM’s papers include a soluble “film former” or that it forms a film that is “coherent at the molecular level.” (*Id.* at 68 (citing Tr. at 1023-24 (McCarty), 1862-63, 1877-78, 2085-85 (Honeycutt)).) Glatz argues that the sole basis for Dr. Rogers’s opinion that SWM’s products include a film forming composition was the apparent presence of starch and/or alginate in SWM’s products, based on

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FTIR and iodine testing, product specifications, and testimony of fact witnesses. (*Id.* (citing Tr. at 421-424, 464-465 (Rogers)).) Glatz says the mere presence of starch and/or alginate does not answer whether the starch or alginate is a soluble “film former” and whether the material forms a film that is “coherent at the molecular level.” (*Id.*) In fact, argues Glatz, Dr. Honeycutt testified that the presence of alginate or certain types of starches does not ensure the formation of a film. (*Id.* (citing RFF 21).) Thus, argues Glatz, SWM’s own experts disagree as to whether permeability-reducing materials, including those used in SWM’s products, are film forming compositions simply because they contain some form of alginate or starch. (*Id.*)

Staff concludes that the evidence does not demonstrate that SWM’s representative LIP papers practice claim 12 of the ‘753 patent. (SBr. at 56.) Staff says that Dr. Rogers tested the permeability profiles of the SWM wrappers and found profiles that were similar to those of the Glatz Accused Products: the permeability of the untreated areas of SWM’s domestic products range from 18 to 110 Coresta, while the permeability of the discrete areas treated with sodium alginate or starch is between 3.5 and 16 Coresta. (*Id.* at 55 (citing CX-314C at SWMITC01024106 (SWM Printing Specification)).) Staff says that, in its view, SWM’s domestic LIP papers practice claim 12 of the ‘753 patent to the same degree as the Glatz Accused Products, and under SWM’s proposed construction of the term “gradually” these products read on every element of claim 12 and therefore would satisfy the technical prong of the domestic industry. However, under Glatz’s proposed construction of the term, with which Staff agrees, SWM’s products have not been shown to read on the final element of claim 12: “at least one gradually changing permeability profile in the longitudinal direction such that permeability in said changing permeability area gradually changes from zero permeability reduction to a maximum permeability reduction.” (*Id.* at 56 (citing JX-1 at 12:40-50).) For the same reasons

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previously discussed in regard to infringement of the '753 patent by the Accused Products, Staff concludes that SWM has not met its burden of proof that either the Accused Products or its own domestic products contain a "gradually changing permeability profile" indicating a change in permeability gradual enough for any resulting differences to be undetectable to the end consumer. (*Id.*)

The Administrative Law Judge concludes that the evidence is not sufficient to demonstrate that SWM's LIP wrappers satisfy claim 12 of the '753 patent with respect to the limitation involving a gradually changing permeability profile. The Administrative Law Judge bases his conclusion on the same reasons discussed above in regard to the issue of infringement of the '753 patent by the Accused Products. The analysis there discussed applies equally to the evidence insofar as SWM's own products. In short, a preponderance of evidence does not support a conclusion that SWM's products include gradually changing permeability profiles. The testing methodology employed by SWM's expert is found to be flawed, as previously discussed in relation to the infringement analysis of the Accused Products, and the results inconclusive, especially in light of the countervailing testimony, and supporting testing information, provided by Dr. Fleming. Although SWM contends that both Dr. Rogers's and Dr. Fleming's data evidence a gradual change of some sort, that is not confirmed by the testimony and data, as set forth above in regard to the infringement analysis, and need not be repeated here. Furthermore, curiously, SWM never explained how its manufacturing process supposedly produces LIP paper that does have a gradually changing permeability profile. SWM has not explained how by simply applying a film forming composition of any of the materials mentioned in the '753 patent SWM is able to produce a gradually changing permeability profile, although that omission is not the basis for the finding here. What matters is that the Administrative Law

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Judge finds that the evidence as a whole does not show that SWM's domestic products practice claim 12 of the '753 patent with respect to possessing gradually changing permeability profiles.

2. The '867 patent

SWM argues that its alginate-banded cigarette paper wrappers practice claim 1 of the '867 patent. (CBr. at 113.) SWM asserts that it is undisputed that its alginate-banded LIP papers practice each element of claim 1 of the '867 patent. (*Id.* at 113-115.)

Glatz does not dispute that SWM's papers practice claim 1 of the '867 patent with respect to Glatz's proposed construction of the claim term "film-forming composition." (RBr. at 115.) Thus, Glatz concedes that "SWM Products include a composition that forms a layer or coating that reduces the permeability in the areas to which the composition has been applied." (*Id.*) However, Glatz asserts that if SWM's proposed construction of "film-forming composition is adopted, SWM's papers do not practice claim 1 of the '867 patent because SWM has not presented evidence to demonstrate its papers include a film that is "coherent at the molecular level." (*Id.*; RRBBr. at 77.)

Staff says that SWM's LIP papers satisfy every element of claim 1 of the '867 patent, and thus, SWM has met its burden of showing that SWM's LIP papers practice claim 1 of the '867 patent. (SBr. at 76-77.)

The Administrative Law Judge construed the term "film forming composition" to mean "any composition that, when dried, forms a film on the surface to which it is applied." *See supra* Section III.B.2. and Section III.C.4. With respect to whether SWM's products practice this claim element, Glatz does not address this construction in its briefs. The Administrative Law Judge finds that SWM's LIP products satisfy this element of claim 1 of the '867 patent. The Administrative Law Judge finds that Glatz's concession that SWM's products include a

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composition that forms a layer or coating on the products and Dr. Roger's examination of the SWM papers and SWM product specifications, and his testimony based thereon, are sufficient to demonstrate that SWM's products have LIP bands made of a composition that forms a film on the paper. (Tr. at 421-424, 464-465 (Rogers); CX-666C; CX-682C.)

Based on the foregoing, the Administrative Law Judge concludes that SWM has established that its alginate-banded LIP papers practice claim 1 of the '867 patent.

B. Economic Analysis

As discussed *supra* at Section I.A., the Administrative Law Judge previously found that the economic domestic prong is met with respect to all asserted patents. (*See* Order No. 24.)

VII. PUBLIC INTEREST

As noted in Section I *supra*, the Commission ordered the Administrative Law Judge to take evidence and provide findings of fact with respect to the public interest in this Investigation. Notice of Investigation, 76 Fed. Reg. 4935 (Jan. 27, 2011). Public interest considerations in Section 337 Investigations include the effect of any remedy on "the public health and welfare, competitive conditions in the United States economy, the production of like or directly competitive articles in the United States, and United States consumers." 19 U.S.C. § 1337(d)(1).

SWM argues that public interest considerations in this Investigation do not warrant preclusion of SWM's requested relief. (CBr. at 158.) In support of this argument, SWM first notes that the Commission has only determined three times that public interest factors outweigh enforcement of a mandated exclusion order and each of these instances occurred prior to 1988 when the patentee was still required to show irreparable harm. (*Id.* at 158-159.) SWM also

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asserts that Respondents did not address the public interest in their pre-hearing brief or provide any witness testimony regarding the public interest at the evidentiary hearing. (*Id.* at 159.)

SWM argues that enforcing its requested exclusion order and cease and desist order would not “distort competition in the U.S. cigarette market.” (CBr. at 159.) SWM argues that any adverse effect on competition is outweighed by the beneficial public interest effects of eliminating unfair competition and protecting SWM’s intellectual property rights and domestic investments. (*Id.* at 159-160.) SWM also argues that there is no evidence regarding which manufacturers might be effected by a regulatory delay and any effect on competition is minimized because the only manufacturers potentially affected by SWM’s requested remedy would be manufacturers who only use Glatz/LIPtec paper and who have not already filed an application with the FDA to be able to use SWM or Delfort paper. (CRBr. at 115.) With respect to any manufacturers affected, SWM argues that there is sufficient time before the end of the Presidential Review period for those manufacturers to mitigate any potential harm caused by regulatory delay. (*Id.* at 116.) SWM further argues that the requested remedy would not harm consumers or have any negative effect on the public health and welfare because SWM “has sufficient capacity to supply the U.S. market.” (CBr. at 159 (citing CX-704C at Q/A 67 (Thompson)).)

Respondents do not address the public interest in their initial post-hearing brief⁴⁴. (*See generally* RBr.) However, Respondents briefly address the issue in their reply post-hearing brief. (*See* RRBr. at 122.) Respondents argue that circumstances regarding FDA and state regulation

⁴⁴ The Administrative Law Judge notes that Glatz’s failure to address this issue would ordinarily constitute a waiver of the issue under Ground Rule 10.1. However, given the Commission’s specific instruction in the Notice of Investigation regarding findings on the public interest discussed *supra*, the Administrative Law Judge finds that it is still necessary to address this issue and make appropriate findings.

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of tobacco products, including delays for cigarette manufacturers in seeking approval for cigarettes with substituted wrappers, merit the Commission's consideration in formulating an appropriate remedy in this Investigation. (*Id.*) Respondents rely upon the arguments presented in Delfort's pre-hearing brief at 158-163 and Staff's initial post-hearing brief at 88-91. (*Id.*)

Staff argues that public interest considerations related to any adverse impact on U.S. consumers, competitive conditions, and the production of like or directly competitive articles do not merit denying relief to SWM, should a violation be found. (SBr. at 88.) However, Staff argues that certain circumstances unique to the cigarette industry have public interest implications related to the effect of a remedy on the public health and welfare and on competitive conditions in the U.S. (*Id.*) In Staff's view, should a violation be found, the Commission should consider "a stay of any remedy imposed for a commercially reasonable period of time, sufficient to allow cigarette manufacturers to obtain mandatory FDA approval and state fire-safety recertifications needed to legally sell a redesigned cigarette in the United States." (*Id.* at 89.)

Staff argues that cigarette manufacturers who use only Respondents' paper wrappers would be disproportionately burdened by an exclusion order or cease and desist orders because of regulatory hurdles. (SBr. at 89-90.) Staff states that any manufacturer forced to change paper wrappers would need to apply to the FDA for approval of the cigarette as either a "new tobacco product" or a "substantially equivalent" product under the "Family Smoking Prevention and Tobacco Control Act (TCA)." (*Id.* at 89 (citing 21 U.S.C. §§ 387j(a)(1)(A)-(B), 387e(j)(1)(A)(i)).) Staff also states that these cigarette manufactures would also need to have any redesigned products recertified as fire-safe compliant in each state in which they are sold, offered for sale, or manufactured. (*Id.* at 90 (citing N.Y. EXEC. LAW § 156-c(2)(a)(1) (2006)).)

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Staff asserts that these regulatory requirements could prevent affected manufacturers from selling products for 90 days to six months. (*Id.*)

While the Delfort Respondents were terminated from the Investigation prior to the evidentiary hearing, the Administrative Law Judge finds that arguments made and evidence relied upon by the Delfort Respondents in their pre-hearing brief are particularly relevant to the public interest and warrant consideration in the Administrative Law Judge's analysis. (*See* DPHBr. at 157-173.) The Delfort Respondents argued that public interest factors weighed against issuing an exclusion order against their accused products. (*Id.* at 157.) Specifically, the Delfort Respondents argued that the FDA's regulation of new or substantially equivalent tobacco products would cause delays in introducing products with alternate paper, and those delays coupled with the heavy regulation of cigarette advertising would make reentering the market difficult for affected manufacturers. (*Id.* at 158-160.) The Delfort Respondents further argued that a delay in manufacturing caused by regulatory requirements would cause U.S. cigarette production to decrease by about { } based upon the market share of the Delfort Respondents and the portion of { } market share representing its use of Delfort Respondents' LIP paper, would limit consumer choice, would reduce the market for discount cigarettes, and would shift the market in favor of large cigarette manufacturers. (*Id.* at 160-161.) Finally, the Delfort Respondents argued that a cease and desist order would cause considerable harm to the affected cigarette manufacturers, would have negligible benefit to SWM, and therefore, an issued cease and desist order should be stayed for a reasonable time in order for the affected manufacturers to receive FDA approval for their new products incorporating alternative LIP paper. (*Id.* at 170.)

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As noted above, the Commission has previously determined in three Investigations that public interest considerations outweighed the interest in protecting intellectual property rights. *See In the Matter of Certain Fluidized Supporting Apparatus and Components*, Inv. No. 337 –TA–182/188, USITC Pub. 1667 (U.S.I.T.C., Oct. 1984); *In the Matter of Inclined–Field Acceleration Tubes and Components*, Inv. No. 337–TA–67, USITC Pub. 1119 (U.S.I.T.C., Dec. 1980); *In the Matter of Certain Automatic Crankpin Grinders*, Inv. No. 337–TA–60, USITC Pub. 1022 (U.S.I.T.C., Dec. 1979). The Federal Circuit has explained, “in those three cases, the exclusion order was denied because inadequate supply within the United States—by both the patentee and domestic licensees—meant that an exclusion order would deprive the public of products necessary for some important health or welfare need: energy efficient automobiles, basic scientific research, or hospital equipment.” *Spansion, Inc. v. International Trade Comm’n.*, 629 F.3d 1331, 1360 (Fed. Cir. 2010). The Court in *Spansion* also noted that each of those three cases was decided before a 1988 amendment to Section 337, which removed a requirement of proof of injury to the domestic industry. *Id.* at 1358-1360.

More recently, the Commission has reiterated that in balancing the patent holder’s rights versus any adverse impact a remedy may have on the public interest, the Commission “must take into account the strong public interest in enforcing intellectual property” and must avoid improperly imposing an injury requirement. *Certain Baseband Processor Chips and Chipsets, Transmitter, and Receiver (Radio) Chips, Power Control Chips, and Products Containing Same, Including Cellular Telephone Handsets*, Inv. No. 337-TA-543, Comm’n Op. at 136-137 (U.S.I.T.C., June 19, 2007). In weighing the public interest factors, the Commission looks to evidence showing how enforcement of a remedy is likely to affect each factor and has consistently found that the public interest factors have not precluded issuance of a remedy. For

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example, the Commission has found that an increase in prices for retailers and consumers does not outweigh the interest in protecting intellectual property rights where the general health and welfare is not implicated and where there is no evidence that unaffected suppliers could not meet the demand for products. *Certain Ink Jet Print Cartridges and Components Thereof*, Inv. No. 337-TA-446, Comm'n Op. at 14 (U.S.I.T.C., May 8, 2002); *see also Certain EPROM, EEPROM, Flash Memory and Flash Microcontroller Semiconductor Devices and Products Containing Same*, Inv. No. 337-TA-395, Comm'n Op. at 132-133 (U.S.I.T.C., Oct. 16, 2000) (finding that no public interest considerations preclude issuance of a limited exclusion order considering the numerous designs of non-infringing products and the presence of many domestic manufacturers assuring continued competition and adequate supply of products); *Certain Cigarettes and Packaging Thereof*, Inv. No. 337-TA-424, Comm'n Op. at 20 (U.S.I.T.C., Nov. 7, 2000) (finding that while eliminating competition from lower-priced re-imported cigarettes would cause consumers to have fewer choices and pay higher prices and may put some distributors out of business, those effects did not warrant denying a remedy); *Certain Chemiluminescent Compositions, Components Thereof and Methods of Using, and Products Incorporating Same*, Inv. No. 337-TA-285, U.S.I.T.C. Pub. No. 2370 at 29-30 (U.S.I.T.C., March 1991) (rejecting argument for denial of remedy based solely on the fact that a supplier would be shut out of the market by an exclusion order where there was no evidence that complainant could not supply the entire U.S. market); *Certain Digital Television Products and Certain Products Containing Same and Methods of Using Same*, Inv. No. 337-TA-617, Comm'n Op. at 16 (U.S.I.T.C., Apr. 23, 2009) ("the Commission has consistently held that the benefit of lower prices to consumers does not outweigh the benefit of providing complainants with an

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effective remedy for an intellectual property-based section 337 violation”) (“*Digital Television Products*).

Under the “Family Smoking Prevention and Tobacco Control Act (TCA),” U.S. cigarette manufacturers are required to obtain FDA approval for new tobacco products introduced after February 15, 2007 or any older products that undergo a change in ingredients. 31 U.S.C. §§ 387j(a)(1)(A)-(B). A new tobacco product under this statute must be approved or rejected by the FDA within 180 days. 31 U.S.C. § 387j(c)(1)(A)(i). Alternatively, a cigarette manufacturer may file a report with the FDA regarding “substantially equivalent” products at least 90 days before a “substantially equivalent” product is introduced to the market. 31 U.S.C. § 387e(j). Thus, the Administrative Law Judge finds that to the extent any exclusion order or cease and desist order issued in this Investigation causes any U.S. cigarette manufacture to change its cigarette paper supplier, those affected U.S. cigarette manufacturers may experience a delay of 90 to 180 days before products incorporating an alternative cigarette paper may be introduced.

Further, the Administrative Law Judge finds that it is undisputed that all fifty states and the District of Columbia have enacted fire-safe cigarette laws that would require any redesigned cigarette to be recertified as fire-safe compliant. (*See* SFF C.1.5. (undisputed in relevant part) (citing N.Y. EXEC. LAW § 156-c(2)(a)(1) (2006)).) The Administrative Law Judge also finds that this requirement for recertification may cause further delay for affected manufacturers in introducing redesigned products. However, should the Commission determine that a violation has occurred, the Administrative Law Judge finds that these regulatory delays would be mitigated at least in part by the Presidential Review Period, during which the affected manufacturers could submit the necessary reports to substitute an alternative paper into their cigarettes.

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The Administrative Law Judge also finds that the requested remedy in this Investigation raises issues related to the public health and welfare as affected cigarette manufacturers would potentially be denied access to certain cigarette paper with reduced ignition proclivity. Thus, the Administrative Law Judge finds that the requested remedy raises a concern that affected manufacturers may use alternative cigarette paper with higher ignition proclivity and manufacture non-fire safe cigarettes for the U.S. market. However, the Administrative Law Judge further finds that the FDA and state requirements regarding introduction of new or redesigned cigarettes significantly minimizes this public health and welfare concern such that the requested remedy would not create a significant risk of non-fire-safe cigarettes entering the U.S. market.

Regarding the public interest factors related to competitive conditions and the production of competitive articles in the United States, the Administrative Law Judge finds that neither Respondents nor Staff presented evidence at the hearing regarding how competition in the United States would be affected by any remedy in this Investigation. Specifically, while the Administrative Law Judge has found that regulatory requirements may cause a delay in introduction of new products that might affect the market for cigarettes, none of the parties submitted evidence at the hearing showing what specific cigarette manufacturers might actually be affected by such a delay. Thus, it is not possible to tell the percentage portion of the affected market or the likely impact on competitive articles in the U.S. Further, while enforcement of a remedy in this Investigation may decrease competition with respect to the availability of alternative LIP cigarette papers in the market, the Administrative Law Judge finds that any effects on competition in the LIP cigarette paper market are also minimized by the fact that the Delfort Respondents were terminated from this Investigation based upon an executed license

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agreement with SWM. This license agreement is likely to ensure the continued availability of alternative LIP cigarette paper in the market beyond the paper made available by SWM.

Regarding the public interest factor related to the effects of any remedy on U.S. consumers, the Administrative Law Judge finds that neither Respondents nor Staff submitted evidence regarding this factor. As noted above, because none of the parties submitted evidence showing which manufacturers would be affected by regulatory delays, it is not possible to infer how delays would affect consumers. In their pre-hearing brief, the Delfort Respondents argued that enforcement of a remedy in this Investigation would affect U.S. consumers by increasing prices of discount cigarettes and reducing the market for discount cigarettes. (DPHBr. at 161.) However, the Delfort Respondents did not specifically cite to any evidence in their pre-hearing brief in support of this argument, and none of the parties remaining in this Investigation presented evidence supporting this argument. Further, “the Commission has consistently held that the benefit of lower prices to consumers does not outweigh the benefit of providing complainants with an effective remedy for an intellectual property-based section 337 violation.” *Digital Television Products*, Comm’n Op. at 16.

Regarding whether the overall supply of cigarettes would be affected by enforcement of any remedy in this Investigation, the Administrative Law Judge finds that SWM presented un rebutted testimony that SWM could meet 100 percent of the demand in the LIP cigarette paper market. (See CX-704C at Q/A 67 (“Considering SWM estimates that it has about 80-85% of the U.S. market for LIP cigarette paper wrappers, and SWM is not running at full capacity, SWM will have no problem providing 100% of the LIP cigarette paper wrappers market if necessary.”).) Further, the Administrative Law Judge finds that the license agreement between the Delfort Respondents and SWM is likely to ensure the market is fully supplied with LIP

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cigarette paper even if SWM cannot supply 100% of the market. This license agreement is also likely to ensure that the { } decrease in supply of cigarettes to the U.S. market argued by the Delfort Respondents in their pre-hearing brief is not likely to occur. However, to the extent enforcement of any remedy in this Investigation causes a cigarette manufacture to redesign products to incorporate alternative cigarette papers, there is likely to be a short-lived, temporary drop in cigarette supply caused by the regulatory delays described *supra*. As found *supra*, none of the parties presented evidence regarding which manufacturers might actually be affected by any remedy, and thus, the parties have not provided any evidence regarding the extent to which the cigarette supply would be affected. Thus, the Administrative Law Judge finds that the overall supply of cigarettes in the market is not likely to be more than temporarily affected by enforcement of any remedy in this Investigation.

Based on the foregoing, the Administrative Law Judge finds that potential enforcement of a remedy in this Investigation does raise some short-lived public interest issues related to each of the factors set forth in Section 337, *i.e.* “the public health and welfare, competitive conditions in the United States economy, the production of like or directly competitive articles in the United States, and United States consumers.” 19 U.S.C. § 1337(d)(1). However, the Administrative Law Judge finds that these effects on the public interest are for the most part likely to be temporary and modest, and therefore, do not overcome the strong interest in protecting SWM’s intellectual property rights. Thus, should the Commission determine that a violation of Section 337 has occurred, the Administrative Law Judge recommends that the Commission find that analysis of the public interest factors does not warrant preclusion of any remedy in this Investigation.

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VIII. CONCLUSIONS

1. The Commission has personal jurisdiction over the parties, subject-matter jurisdiction, and in rem jurisdiction over the Accused Products.
2. The importation or sale requirement of Section 337 is satisfied.
3. None of the Accused '753 Products identified in Section I.E. above directly or indirectly infringe asserted claims 1–6, 10–18, and 22–25 of the '753 patent.
4. All of the Accused '867 Products identified in Section I.E. above, except for the Untested Products, directly infringe asserted claims 36 and 43 of the '867 patent.
5. Respondents Julius Glatz GmbH, LIptec GmbH, and KneX Worldwide LLC do induce infringement of the asserted claim 45 of the '867 patent.
6. Respondents Julius Glatz GmbH, LIptec GmbH, and KneX Worldwide LLC do contributorily infringe the asserted claim 45 of the '867 patent.
7. Asserted claims 36, 43, and 45 of the '867 patent are invalid under 35 U.S.C. § 102 for anticipation.
8. Asserted claims 1–6, 10–18, and 22–25 of the '753 patent are not invalid under 35 U.S.C. § 103 for obviousness.
9. Asserted claims 36, 43, and 45 of the '867 patent are invalid under 35 U.S.C. § 103 for obviousness.
10. Asserted claims 1–6, 10–18, and 22–25 of the '753 patent do meet the utility requirements of 35 U.S.C. § 101.
11. The asserted claims 1–6, 10–18, and 22–25 of the '753 patent are not invalid under 35 U.S.C. § 112 as indefinite.

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12. The asserted claims 36, 43, and 45 of the '867 patent are not invalid under 35 U.S.C. § 112 for lack of written description.
13. The asserted claims 36, 43, and 45 of the '867 patent are not invalid under 35 U.S.C. § 112 for lack of enablement.
14. A domestic industry does not exist with respect to the '753 patent, as required by Section 337.
15. A domestic industry exists with respect to the '867 patent, as required by Section 337.
16. Any public interest issues raised by enforcement of a remedy with respect to Respondents Julius Glatz GmbH, LIPtec GmbH, and KneX Worldwide LLC do not overcome the public interest in protecting Schweitzer-Mauduit International, Inc.'s property rights with respect to the '753 and '867 patents.
17. With respect to Respondents Julius Glatz GmbH, LIPtec GmbH, and KneX Worldwide LLC, it has been established that no violation exists of Section 337 for claims 1–6, 10–18, and 22–25 of the '753 patent.
18. With respect to Respondents Julius Glatz GmbH, LIPtec GmbH, and KneX Worldwide LLC, it has been established that no violation exists of Section 337 for claims 36, 43, and 45 of the '867 patent.

This Initial Determination's failure to discuss any matter raised by the parties, or any portion of the record, does not indicate that it has not been considered. Rather, any such matter(s) or portion(s) of the record has/have been determined to be irrelevant, immaterial or meritless. Arguments made on brief which were otherwise unsupported by record evidence or legal precedent have been accorded no weight.

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IX. INITIAL DETERMINATION AND ORDER

Based on the foregoing, it is the INITIAL DETERMINATION (“ID”) of this Administrative Law Judge that with respect to Respondents Julius Glatz GmbH, LIPTec GmbH, and KneX Worldwide LLC, no violation of Section 337 of the Tariff Act of 1930, as amended, has occurred in the importation into the United States, the sale for importation, or the sale within the United States after importation of certain reduced ignition proclivity cigarette paper wrappers by reason of infringement of one or more of claims 1–6, 10–18, and 22–25 of United States Patent No. 5,878,753.

The Administrative Law Judge further determines that with respect to Respondents Julius Glatz GmbH, LIPTec GmbH, and KneX Worldwide LLC, no violation of Section 337 of the Tariff Act of 1930, as amended, has occurred in the importation into the United States, the sale for importation, or the sale within the United States after importation of certain reduced ignition proclivity cigarette paper wrappers by reason of infringement of claims 36, 43, and 45 of United States Patent No. 6,725,867.

Further, this ID, together with the record of the hearing in this Investigation consisting of:

- (1) the transcripts of the evidentiary hearing, with appropriate corrections as may hereafter be ordered, and
- (2) the exhibits received into evidence in this Investigation, as listed in the attached exhibit lists in **Appendix A**,

are CERTIFIED to the Commission. In accordance with 19 C.F.R. § 210.39(c), all material found to be confidential by the undersigned under 19 C.F.R. § 210.5 is to be given *in camera* treatment.

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The Secretary shall serve a public version of this ID upon all parties of record and the confidential version upon counsel who are signatories to the Protective Order (Order No. 1) issued in this Investigation, and upon the Commission Investigative Attorney.

RECOMMENDED DETERMINATION ON REMEDY AND BOND

I. REMEDY AND BONDING

The Commission's Rules provide that subsequent to an initial determination on the question of violation of Section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337, the Administrative Law Judge shall issue a recommended determination containing findings of fact and recommendations concerning: (1) the appropriate remedy in the event that the Commission finds a violation of Section 337, and (2) the amount of bond to be posted by respondents during Presidential review of Commission action under Section 337(j). *See* 19 C.F.R. § 210.42(a)(1)(ii).

A. Applicable Law

The Commission may issue a remedial order excluding the goods of respondents found in violation of Section 337 (a limited exclusion order) or, if certain criteria are met, excluding all infringing goods regardless of the source (a general exclusion order). 19 U.S.C. § 1337(d); *Certain Hydraulic Excavators and Components Thereof*, Inv. No. 337-TA-582, Comm'n Op., at 15 (U.S.I.T.C., February 3, 2009) ("*Certain Excavators*"). Here, SWM requests a limited exclusion order if it prevails in the Investigation. A limited exclusion order instructs the U.S. Customs and Border Protection ("CBP") to exclude from entry all articles that are covered by the patents at issue and that originate from a named respondent in the investigation. *See* 19 U.S.C. § 1337(d).

B. Remedy with Respect to the '753 and '867 patents

As discussed above in the Initial Determination on Violation of Section 337, the Administrative Law Judge has found that no violation has occurred with Respondents Julius

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Glatz GmbH, LIptec GmbH, and KneX Worldwide LLC with respect to the '753 and '867 patents. Therefore, remedy with respect to these patents is not warranted. In the event the Commission were to find a violation of the '753 patent and/or the '867 patent, the Administrative Law Judge's recommendation with respect to remedy follows.

SWM argues that a limited exclusion order should issue, prohibiting the importation of the Accused Products. (CBr. at 160-161.) Staff agrees that entry of a limited exclusion order, excluding entry into and sale within the United States all infringing Glatz cigarette wrappers and products containing the same, is appropriate in this Investigation. (SBr. at 86.)

Glatz argues that if the Commission finds a violation of Section 337 with respect to the '753 patent, a "tailored limited exclusion order" is appropriate. (RBr. at 172.) Glatz says that this limited exclusion order "should only be against the products specifically found to infringe and found to be imported into the United States by or on behalf of Glatz Respondents" and no other products should be covered. (*Id.*) If the Commission finds a violation of Section 337 with respect to the '867 patent, Glatz argues that an exclusion order "should only be against the accused products that practice claim 1 of the '867 patent, which is the only claim of the '867 patent that SWM has relied on for purposes of satisfying the technical prong of the domestic industry requirement." (*Id.*) Glatz asserts that allowing SWM to rely on an unasserted claim with respect to domestic industry undermines the "essential nexus" between enforcing Section 337 and the domestic industry. (*Id.* (citing *Certain Microspheres Adhesives, Process for Making Same, and Products Containing Same, Including Self-Stick Repositionable Notes*, Inv. No. 337-TA-366, Comm'n Op., 1996 WL 1056095 at *8 (U.S.I.T.C., Jan. 16, 1996)).)

SWM responds to Glatz arguments concerning the '867 patent by pointing to established ITC precedent allowing complainants to rely on unasserted claims to meet the technical prong of

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the domestic industry requirement. (CRBr. at 117) Staff agrees with SWM and notes that Glatz has not provided any reason to deviate from the usual practice of the Commission in this regard. (SRBr. at 38.)

The Administrative Law Judge finds that Glatz does not dispute that its position regarding the issuance of an exclusion order with respect to the '867 patent is contrary to the usual practice of the Commission. The Administrative Law Judge finds that Glatz has not provided any reason to deviate from the standard practice of the Commission with respect to the issuance of a limited exclusion order.

The Administrative Law Judge recommends that in the event the Commission finds a Section 337 violation, a limited exclusion order should issue. The limited exclusion order should apply to Glatz, LIptec, and KneX, and affiliated companies, parents, subsidiaries, or other related business entities, or their successors or assigns, and should prohibit the unlicensed entry of all reduced ignition proclivity cigarette paper wrappers and products containing reduced ignition proclivity cigarette paper wrappers that infringe the claims of the asserted patents for which a Section 337 violation is found.

II. Cease and Desist Order

Section 337 provides that in addition to, or in lieu of, the issuance of an exclusion order, the Commission may issue a cease and desist order as a remedy for violation of Section 337. *See* 19 U.S.C. § 1337(f)(1). The Commission generally issues a cease and desist order directed to a domestic respondent when there is a “commercially significant” amount of infringing, imported product in the United States that could be sold so as to undercut the remedy provided by an exclusion order. *See Certain Crystalline Cefadroxil Monohydrate*, Inv. No. 337-TA-293,

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Comm'n Op. on the Issue Under Review, and on Remedy, the Public Interest and Bonding at 37-42, Pub. No. 2391 (U.S.I.T.C., June 1991). Cease and desist orders have been declined when the record contains no evidence concerning infringing inventories in the United States. *Certain Condensers, Parts Thereof and Products Containing Same, Including Air Conditioners for Automobiles*, Inv. No. 337-TA-334, Comm'n Op. at 28 (U.S.I.T.C., Aug. 27, 1997).

SWM argues that a cease and desist order is appropriate in this Investigation because of the amount of inventory KneX maintains. (CBr. at 161-162.) Specifically, SWM says that

{

} (Id. at 162 (citing

JX-43C at 36:6-9, 38:5-19, 44:1-4, 48:17-49:2, 171:8-172:7, 172:11-18, 173:10-22, 174:1-3

(Makepeace)).) Staff agrees that {

}, and thus cease and desist orders

should issue. (SBr. at 87 (citing CX-253C).)

Glatz argues that cease and desist orders should not issue in the event the Commission finds a violation of Section 337 in this Investigation. (RBr. at 173.) Glatz asserts that SWM has not provided "adequate evidence to show that Glatz Respondents have a sufficient commercially viable domestic inventory of infringing product(s) to warrant a cease and desist order." (Id. at 173-174.) In response to SWM's arguments, Glatz asserts {

} (RRBr. at 123.)

The Administrative Law Judge finds that Glatz does not directly dispute the evidence cited by SWM and Staff in support of their position that a cease and desist order should issue. Based on this undisputed evidence, the Administrative Law Judge finds that KneX maintains a

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commercially significant inventory of Accused Products and therefore recommends that a cease and desist order against KneX be issued should a violation be found.

III. Bond During Presidential Review Period

The Administrative Law Judge and the Commission must determine the amount of bond to be required of a respondent, pursuant to Section 337(j)(3), during the 60-day Presidential review period following the issuance of permanent relief, in the event that the Commission determines to issue a remedy. 19 C.F.R. § 210.42(a)(1)(ii). The purpose of the bond is to protect the complainant from any injury. 19 C.F.R. § 210.50(a)(3).

When reliable price information is available, the Commission has often set the bond by eliminating the differential between the domestic product and the imported, infringing product. *See Certain Microsphere Adhesives, Process for Making Same, and Products Containing Same, Including Self-Stick Repositionable Notes*, Inv. No. 337-TA-366, Comm'n Op., at 24 (U.S.I.T.C., December 15, 1995). In circumstances where pricing information is unclear, or where variations in pricing make price comparisons complicated and difficult, the Commission typically has set a 100 percent bond. *Id.*, at 24-25; *Certain Digital Multimeters and Products with Multimeter Functionality*, Inv. No. 337-TA-588, Comm'n Op., at 12-13 (U.S.I.T.C., June 3, 2008) (finding 100 percent bond where each respondent set its price differently, preventing clear differentials between complainant's products and the infringing imports) ("*Digital Multimeters*"). When a pricing comparison is impossible, it is also appropriate to set the bond based on a reasonable royalty. *Certain Digital Televisions and Certain Products Containing Same and Methods of Using Same*, Inv. No. 337-TA-617, Commission Opinion at 18 (U.S.I.T.C., April 23, 2009).

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SWM argues that a bond of 100 percent of the entered value is appropriate in this Investigation. (CBr. at 162-163.) SWM asserts that the Accused Products and the domestic industry products vary in price and product characteristics such as weight, air permeability, diffusivities, and burn additives. (*Id.* at 163 (citing JX-43C at 32:10-33:3 (Makepeace); CX-319C; CX-320C; CX-321C; CX-322; CX-324C; CX-325C).) Based on these product differences, SWM says that there is insufficient evidence to establish a reliable price differential, and in such instances, a bond of 100 percent of the entered value is appropriate. (*Id.*) SWM also asserts that KneX has caused price erosion in the market for LIP cigarette paper such that a bond based solely on price differential would not sufficiently protect SWM from injury. (*Id.* (citing JX-43C at 53:21-54:14, 69:5-17 (Makepeace)).)

Glatz argues that a bond equal “to the price differential between Glatz Respondents’ competitive accused products found to infringe and any of SWM’s products found to practice the claimed invention and support the domestic industry” is appropriate in this Investigation. (RBr. at 174.) Glatz asserts that SWM has not presented evidence supporting its bond contentions cannot seek a bond of 100 percent without doing so. (*Id.*)

Staff argues that there is sufficient evidence in the record to calculate a bonding rate based on actual price differentials. (SBr. at 91.) Based on the evidence of record, Staff asserts that the appropriate bonding rate is { } . (*Id.* at 91-92 (citing JX-43C at 53:16-54:5, 60:2-9 (Makepeace); CX-458C).)

The Administrative Law Judge is unpersuaded by SWM’s arguments regarding the differences in product characteristics and price erosion. Regarding product characteristics, Administrative Law Judge finds that the Accused Products and SWM’s domestic industry products are not so different that a reliable price differential is impossible to calculate. Further,

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the Administrative Law Judge finds that SWM has not cited to any evidence showing that SWM has been forced to lower its prices to retain customers. In sum, Administrative Law Judge finds that SWM has not established that a reliable price differential is impossible to calculate, SWM has not presented any pricing information, and SWM has not shown that pricing information is unclear.

With respect to Staff's calculation, although a calculation should be possible, the Administrative Law Judge is not persuaded that the evidence cited by Staff is sufficient to reliably calculate said price differential. Regarding the prices paid by KneX, Staff cites to deposition testimony regarding the price of only one of the Accused Products without reference to any supporting documentation or the price of the other Accused Products.

Accordingly, the Administrative Law Judge finds that SWM and Staff have failed to make an adequate showing with respect to bond and recommends that no bond be set.

IV. Conclusion

In accordance with the discussion of the issues contained herein, it is the RECOMMENDED DETERMINATION of the Administrative Law Judge that in the event the Commission finds a violation of Section 337, the Commission should issue a limited exclusion order directed to Respondents Julius Glatz GmbH, LIptec GmbH, and KneX Worldwide LLC, and all of their affiliated companies, parents, subsidiaries, or other related business entities, or their successors or assigns, and should prohibit the unlicensed entry of all reduced ignition proclivity cigarette paper wrappers and products containing same, that infringe the claims of the asserted patents for which a Section 337 violation is found.

Should the Commission determine that a violation has occurred, the Administrative Law Judge further recommends that the Commission issue a cease and desist order against

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Respondent KneX Worldwide LLC. Furthermore, if the Commission intends to impose a remedy following a finding of violation, Respondents should not be required to post a bond during the Presidential review period.

Within seven days of the date of this document, each party shall submit to the office of the Administrative Law Judge a statement as to whether or not it seeks to have any portion of this document deleted from the public version. The parties' submissions must be made by hard copy by the aforementioned date.

Any party seeking to have any portion of this document deleted from the public version thereof must submit to this office a copy of this document with red brackets clearly indicating any portion asserted to contain confidential business information by the aforementioned date. The parties' submission concerning the public version of this document need not be filed with the Commission Secretary.

SO ORDERED.



E. James Gildea
Administrative Law Judge

APPENDIX A

FINAL COMBINED COMPLAINANT'S TRIAL EXHIBIT LIST

CX Exhibit No.	Description	Purpose	Sponsoring Witness	Status of Receipt
15C	Testing report from Arista, dated 2008 (Bailey 10) S&M0000073- S&M0000084	Infringement/Remedy/ Public Interest	Rogers	11/4/2011
90	Summary of information about Schweitzer-Mauduit (Eitzinger 118) DELFORT0039729- DELFORT0039737	Secondary Considerations	Eitzinger	11/8/2011
106C	Memo dated 9/10/2007 (Geiner 89) DELFORT0049313- DELFORT0049324	Validity - Secondary Considerations	Geiner	11/8/2011
136C	Minutes dated 8/2/2010 (Mayr 28) DELFORT0050582- DELFORT0050582	Validity - Secondary Considerations	Mayr	11/8/2011
148C	Memo regarding the meeting between Feurstein and Wattens dated 9/10/2007 (Muigg 5) DELFORT0049313- DELFORT0049323	Validity - Secondary Considerations	Muigg	11/8/2011
177C	Altria/Philip Morris USA-Agenda for Visit 1/24-31/2009 dated 1/23/2009 (Saxl 21) DELFORT0049471- DELFORT0049474	Validity - Secondary Considerations	Saxl	11/8/2011
206C	Wachter memo to Trierenberg et al., Dated 8/22/2005 (Volgger 5) DELFORT0010817- DELFORT0010818	Validity - Secondary Considerations	Volgger	11/8/2011
207C	Email from D. Volgger dated 11/13/2008 (Volgger 10) DELFORT0043426	Validity - Secondary Considerations	Volgger	11/8/2011
220C	Memo from Delfort, customer Altria Client Services, several participants, issuer is R. Wesling dated 9/24/2010 (Mayr 29)	Validity - Secondary Considerations	Mayr	11/8/2011

FINAL COMBINED COMPLAINANT'S TRIAL EXHIBIT LIST

CX Exhibit No.	Description	Purpose	Sponsoring Witness	Status of Receipt
	DELFORT0050443- DELFORT0050444			
226C				Withdrawn
227C	Specification CIGLA 75 MV 1.0 MC LI (Engelking 14) GL0003516- GL0003516	Infringement	Engelking	11/8/2011
228C				Withdrawn
231C				Withdrawn
232	Complainant Schweitzer-Mauduit International, Inc.'s Notice of Deposition of Joachim Engelking (Engelking 13)	Infringement	Engelking	11/8/2011
233	Complainant Schweitzer-Mauduit International, Inc.'s Notice of Deposition of Sylvain Epailly (Epailly 1)	Infringement	Epailly	11/8/2011
234C	Order form dated 1/13/2010 (Epailly 6) GL0010693- GL0010693	Infringement	Epailly	11/8/2011
235C	Order form dated 9/8/2010 (Epailly 7) GL0010694- GL0010694	Infringement	Epailly	11/8/2011
236C	Email attaching orders from Y. Emier dated 4/27/2010 (Epailly 8) GL0011532- GL0011539	Infringement	Epailly	11/8/2011
237C	RJR Invoice and Delivery Note (Epailly 12) GL0040682- GL0040687	Infringement	Epailly	11/8/2011
238				Withdrawn
239C	Email from D. Makepeace dated 4/18/2008 (Epailly 10) GL0012364- GL0012365	Validity-Secondary considerations	Epailly	11/8/2011

FINAL COMBINED COMPLAINANT'S TRIAL EXHIBIT LIST

CX Exhibit No.	Description	Purpose	Sponsoring Witness	Status of Receipt
240C	Email from D. Makepeace to R. Hill dated 5/18/2010 (Epailly 4) GL0015047-GL0015048	Validity- Second Considerations	Epailly	11/8/2011
241C				Withdrawn
242C	PowerPoint Presentation Of Glatz (Fritzsching 42) GL0023513- GL0023521	Infringement	Fritzsching	11/8/2011
243C	"Certificate of Analysis" (Fritzsching 43) GL0031551	Infringement	Fritzsching	11/8/2011
244	Complainant Schweitzer-Mauduit International, Inc.'s Notice of Deposition of Glatz/LIPtec (Fritzsching 27)	Infringement	Fritzsching	11/8/2011
245	Complainant Schweitzer-Mauduit International, Inc.'s Notice of Deposition of Thomas Fritzsching (Fritzsching 28)	Infringement	Fritzsching	11/8/2011
246C	Invoice and Weight List (Makepeace 8) KNEX0000484- KNEX0000486	Infringement/Remedy/ Public Interest	Makepeace	11/8/2011
247C	Knex outgoing orders and shipping forms (Makepeace 11) KNEX0000681- KNEX0000697	Infringement/Remedy/ Public Interest	Makepeace	11/8/2011
248C	Knex orders and importation forms (Makepeace 5) KNEX0001655- KNEX0001682	Infringement/Remedy/ Public Interest	Makepeace	11/8/2011
249C	Knex orders and importation forms (Makepeace 6) KNEX0001796-	Infringement/Remedy/ Public Interest	Makepeace	11/8/2011

FINAL COMBINED COMPLAINANT'S TRIAL EXHIBIT LIST

CX Exhibit No.	Description	Purpose	Sponsoring Witness	Status of Receipt
	KNEX0001816			
250C	Knex outgoing orders and shipping forms (Makepeace 7) KNEX0002022- KNEX0002031	Infringement/Remedy/ Public Interest	Makepeace	11/8/2011
251	Complainant Schweitzer-Mauduit International, Inc.'s First Notice of 30(b)(6) Deposition of Respondent KneX (Makepeace 1)	Infringement/Remedy/ Public Interest	Makepeace	11/8/2011
252	Schweitzer-Mauduit International, Inc.'s Notice of Deposition of Robert Dennis Makepeace (Makepeace 2)	Infringement/Remedy/ Public Interest	Makepeace	11/8/2011
253C	Document titled of "Actual Sales of LIP Paper for 2010" (Makepeace 9) KNEX0000136	Infringement/Remedy/ Public Interest	Makepeace	11/8/2011
254C	Document titled "LIP Paper Forecast for 2010/2011" (Makepeace 10) KNEX0000137	Infringement/Remedy/ Public Interest	Makepeace	11/8/2011
255C	E-mail dated 9/11/08 from Dennis Makepeace to Alvaro Martinez (Makepeace 12) KNEX0000170- KNEX0000171	Infringement/Remedy/ Public Interest	Makepeace	11/8/2011
256C	E-mails, Subject: 33 gsm LIP Cig.Pper (Makepeace 4) KNEX0000165- KNEX0000169	Infringement/Remedy/ Public Interest	Makepeace	11/8/2011
257C	Purchase Order 9090516 (Makepeace 3)	Infringement/Remedy/	Makepeace	11/8/2011

FINAL COMBINED COMPLAINANT'S TRIAL EXHIBIT LIST

CX Exhibit No.	Description	Purpose	Sponsoring Witness	Status of Receipt
	KNEX0000109	Public Interest		
265C	Email from M. Myr dated 2/16/2010 (Eitzinger 117) DELFORT0050398	Validity - Secondary Considerations	Eitzinger Mayr	11/8/2011
266C	Email from M. Myr dated 2/16/2010 (Mayr 32) DELFORT0050398	Validity - Secondary Considerations	Eitzinger Mayr	11/8/2011
269C	Email chain dated 10/1/2009 regarding LIP-Patents PM USA vs. SWM (Eitzinger 116) DELFORT0039156 - DELFORT0039157	Validity - Secondary Considerations	Eitzinger	11/8/2011
270	Presentation by Dr. Joachim Engelking (Engelking 18) GL0002925- GL0002937	Infringement	Rogers	11/4/2011
271C	Concept Drawing of LIP3 Machine (Engelking 20) GL0020678- GL0020679	Infringement	Engelking	11/8/2011
272				Withdrawn
273				Withdrawn
274				Withdrawn
275				Withdrawn
276				Withdrawn
277				Withdrawn
278				Withdrawn
279	Rogers Profilometry data SWMITC01027311- SWMITC01027411	Infringement - Validity	Rogers	11/4/2011
280C				Withdrawn
281				Withdrawn

FINAL COMBINED COMPLAINANT'S TRIAL EXHIBIT LIST

CX Exhibit No.	Description	Purpose	Sponsoring Witness	Status of Receipt
282	A 10 Air Permeability Test (Coresta) SWMITC0037080	Infringement	Rogers	11/4/2011
283	SWM R&D Lab Method Diffusional Conductance Index SWMITC0037082- SWMITC0037106	Infringement	Codwise	11/1/2011
284	R. Rogers Curriculum Vitae and List of Papers Authored and Co-Authored	Infringement	Rogers	11/4/2011
294C				Withdrawn
296C				Withdrawn
297C				Withdrawn
298C				Withdrawn
299				Withdrawn
305	F6493 Starch MSDS GL0001923-GL0001927	Infringement	Rogers	11/4/2011
306C				Withdrawn
307C	Very similar taste achievable between LIP and and non-LIP cigarette GL0002405	Infringement	Rogers	11/4/2011
308C				Withdrawn
309				Withdrawn
311	LIP Amazement Report SWMITC00341309- SWMITC00341356	Domestic Industry	Mongeon	11/1/2011
312C	Qualification of a Printing Press II at SWM's Newberry, SC Facility for FSC Print Banded Alginate Cigarette Papers	Domestic Industry	Rogers	11/4/2011

FINAL COMBINED COMPLAINANT'S TRIAL EXHIBIT LIST

CX Exhibit No.	Description	Purpose	Sponsoring Witness	Status of Receipt
	Reynolds 54158 3025			
313C	SWM Printing Specifications SWMITC01024073-SWMITC01024090	Domestic Industry	Mongeon	11/1/2011
314C	SWM Printing Specifications SWMITC01024103- SWMITC01024108	Domestic Industry	Mongeon	11/1/2011
315C				Withdrawn
316C	Quality System Printout SWMITC01024528- SWMITC01024553	Domestic Industry	Mongeon	11/1/2011
317C	SWM Printed Banded Paper Process SWMITC00381357- SWMITC00381358	Domestic Industry	Mongeon	11/1/2011
318C	"Certificate of Analysis" (Fritzsching 31) GL0003579	Infringement	Fritzsching	11/8/2011
319C	Specification CIGLA 75 MVM 1,OMC LI - 1002" (Fritzsching 35) GL0042287	Infringement	Rogers	11/4/2011
320C	Specification CIGLA 75 MVM 0,6CA PROBE (Fritzsching 36) GL0042284	Infringement	Rogers	11/4/2011
321C	Specification CIGLA 75 MV 1,OMC- 337801 (Fritzsching 34) GL0042286	Infringement	Rogers	11/4/2011
322C	Specification CIGLA 75 MVM 0,6CA LI PROBE (Fritzsching 37) GL0042285	Infringement	Rogers	11/4/2011
323C				Withdrawn
324C	"Certificate of Analysis" (Fritzsching 44) GL0031552	Infringement	Fritzsching	11/8/2011
325C	"Test - Report CIGLA 75 MV,OMC LI -	Infringement		11/4/2011

FINAL COMBINED COMPLAINANT'S TRIAL EXHIBIT LIST

CX Exhibit No.	Description	Purpose	Sponsoring Witness	Status of Receipt
	1002" (Fritzsching 33) GL0020374		Rogers	
333C	ALCS/PMUSA bobbins were tested and had an average band permeability of the following: 3.71, 3.6, 3.53, 3.75, 3.64, 3.31, 4.11, 3.76, 4.27 (Mayr 30) DELFORT0011574- DELFORT0011605	Validity - Secondary Considerations	Mayr	11/8/2011
334C	Email from R. Wesling dated 1/15/2010 (Muigg 6) DELFORT0049846	Validity - Secondary Considerations	Muigg	11/8/2011
335C	email chain from D. Hammersmith 8/23/2004 (Muigg 8) DELFORT0000998- DELFORT000999	Validity - Secondary Considerations	Muigg	11/8/2011
414				Withdrawn
415C				Withdrawn
416				Withdrawn
417C	Low Ignition Propensity (LIP) Cigarette Papers SWMITC00007012- SWMITC00007044	Domestic Industry	Mongeon	11/1/2011
419C				Withdrawn
420C				Withdrawn
421C	SWM Printing Specifications SWMITC01023665- SWMITC01023671	Domestic Industry	Mongeon	11/1/2011
422C				Withdrawn
424	Appendix A Part 1 (R. Rogers Initial Expert Report) SWMITC01026744-	Infringement/ Domestic Industry	Rogers	11/4/2011

FINAL COMBINED COMPLAINANT'S TRIAL EXHIBIT LIST

CX Exhibit No.	Description	Purpose	Sponsoring Witness	Status of Receipt
	SWMITC01027032			
425	Appendix A Part 2 (R. Rogers Initial Expert Report) SWMITC01027033- SWMITC01027310	Infringement/ Domestic Industry	Rogers	11/4/2011
426C	Test Report -- ASTM Test GL0003534	Infringement	Rogers	11/4/2011
427C				Withdrawn
428C				Withdrawn
429C				Withdrawn
430C				Withdrawn
431C				Withdrawn
432C				Withdrawn
433C	SWM Printing Specification SWMITC00312786	Domestic Industry	Mongeon	11/1/2011
434C	Printing Specification SWMITC00454379- SWMITC00454380	Domestic Industry	Mongeon	11/1/2011
435C	SWM Printing Specification	Domestic Industry	Mongeon	11/1/2011
436C	SWM Printing Specifications SWMITC01023680- SWMITC01023684	Domestic Industry	Mongeon	11/1/2011
437C	SWM Printing Specifications SWMITC01023687- SWMITC01023691	Domestic Industry	Mongeon	11/1/2011
438C	SWM Printing Specifications SWMITC01023701- SWMITC01023787	Domestic Industry	Mongeon	11/1/2011
439C	SWM Printing Specifications SWMITC01023790- SWMITC01023801	Domestic Industry	Mongeon	11/1/2011

FINAL COMBINED COMPLAINANT'S TRIAL EXHIBIT LIST

CX Exhibit No.	Description	Purpose	Sponsoring Witness	Status of Receipt
440C	SWM Printing Specifications SWMITC01023804- SWMITC01023835	Domestic Industry	Mongeon	11/1/2011
441C	SWM Printing Specifications SWMITC01023838- SWMITC01023867	Domestic Industry	Mongeon	11/1/2011
442C	SWM Printing Specifications SWMITC01023870- SWMITC01023893	Domestic Industry	Mongeon	11/1/2011
443C	SWM Printing Specifications SWMITC01023900- SWMITC01023917	Domestic Industry	Mongeon	11/1/2011
444C	SWM Printing Specifications SWMITC01023920- SWMITC01023921	Domestic Industry	Mongeon	11/1/2011
445C	SWM Printing Specifications SWMITC01023923- SWMITC01023936	Domestic Industry	Mongeon	11/1/2011
446C	SWM Printing Specifications SWMITC01023939- SWMITC01023941	Domestic Industry	Mongeon	11/1/2011
447C	SWM Printing Specifications SWMITC01023957- SWMITC01023999	Domestic Industry	Mongeon	11/1/2011
448C	SWM Printing Specifications SWMITC01024002- SWMITC01024071	Domestic Industry	Mongeon	11/1/2011
449C	SWM Printing Specifications SWMITC01024093- SWMITC01024100	Domestic Industry	Mongeon	11/1/2011
450C	SWM Printing Specifications SWMITC01024110- SWMITC01024137	Domestic Industry	Mongeon	11/1/2011
451C	SWM Printing Specifications SWMITC01024139- SWMITC01024173	Domestic Industry	Mongeon	11/1/2011

FINAL COMBINED COMPLAINANT'S TRIAL EXHIBIT LIST

CX Exhibit No.	Description	Purpose	Sponsoring Witness	Status of Receipt
452C	SWM Printing Specification SWMITC01024474	Domestic Industry	Mongeon	11/1/2011
453C	SWM Printing Specification SWMITC01024554	Domestic Industry	Mongeon	11/1/2011
454C	SWM Printing Specification SWMITC00239291	Domestic Industry	Mongeon	11/1/2011
457C				Withdrawn
458C				Withdrawn
459C				Withdrawn
460C	Royalty Charts 2002-2010 (Thompson 154) SWMITC00908426- SWMITC00908438	Domestic Industry	Thompson	11/1/2011
461C	License Agreement between SWM and R.J. Reynolds dated 7/20/2002 (Thompson 151) SWMITC00381298- SWMITC00381311	Domestic Industry	Thompson	11/1/2011
462C	Sublicense Agreement between SWM and R.J. Reynolds dated 4/28/2005 (Thompson 152) SWMITC00381312- SWMITC00381326	Domestic Industry	Thompson	11/1/2011
463C	Amendment No. 1 To License Agreement between SWM and Shamrock Corp. 4/25/2005 (Thompson 155) SWMITC00381327- SWMITC00381341	Domestic Industry	Thompson	11/1/2011
464C	Sublicense Agreement between SWM and R.J. Reynolds and Mundet (Thompson 153)	Domestic Industry	Thompson	11/1/2011

FINAL COMBINED COMPLAINANT'S TRIAL EXHIBIT LIST

CX Exhibit No.	Description	Purpose	Sponsoring Witness	Status of Receipt
	SWMITC00381342- SWMITC00381356			
465C				Withdrawn
466C				Withdrawn
467				Withdrawn
468C				Withdrawn
469C				Withdrawn
470C				Withdrawn
471C				Withdrawn
472C	Test specifications and instructions SWMITC00037080- SWMITC00037081	Infringement	Codwise	11/1/2011
473C				Withdrawn
474C				Withdrawn
475C				Withdrawn
476C				Withdrawn
477C				Withdrawn
478C				Withdrawn
479C				Withdrawn
480C				Withdrawn
481C				Withdrawn
482C				Withdrawn
483C				Withdrawn
484C				Withdrawn
485C				Withdrawn
486C				Withdrawn

FINAL COMBINED COMPLAINANT'S TRIAL EXHIBIT LIST

CX Exhibit No.	Description	Purpose	Sponsoring Witness	Status of Receipt
487C				Withdrawn
488				Withdrawn
489	ISO 187, 2nd Edition 1990-12-01	Domestic Industry	Codwise	11/1/2011
490C				Withdrawn
491C				Withdrawn
492C				Withdrawn
493C				Withdrawn
494C				Withdrawn
495C				Withdrawn
496C				Withdrawn
497C				Withdrawn
498C				Withdrawn
499C				Withdrawn
500C	SWM Printing Specifications SWMITC01023943- SWMITC01023954	Domestic Industry	Mongeon	11/1/2011
501				Withdrawn
502C				Withdrawn
503C				Withdrawn
504C				Withdrawn
505C				Withdrawn
506C				Withdrawn
507C				Withdrawn
508C				Withdrawn
509C				Withdrawn

FINAL COMBINED COMPLAINANT'S TRIAL EXHIBIT LIST

CX Exhibit No.	Description	Purpose	Sponsoring Witness	Status of Receipt
510C				Withdrawn
511C				Withdrawn
512	October 1987 final report of the technical study group on cigarette and little cigar fire safety; toward a less fire-prone cigarette GL0042755- GL0042799	Validity- Secondary Considerations	Honeycutt	11/8/2011
513C	Brown and Williamson R&D test - reduced ignition propensity matrix study SWMITC00665911- SWMITC00665951	Validity-Secondary considerations	Honeycutt	11/8/2011
514	Jacqueline Jones-Smith, US CPSC publication - practicability of developing a performance standard to reduce cigarette ignition propensity SWMITC00735881- SWMITC00735931	Validity-Secondary considerations	Honeycutt	11/8/2011
515	NIST Technical Note 1436 - Gann et al. relative ignition propensity of test market cigarettes SWMITC00763838- SWMITC00763872	Validity-Secondary considerations	Honeycutt	11/8/2011
516C	Email from A. de la Torre dated 6/14/2010 (Fritzsching 41) GL0012167- GL0012170	Validity-Secondary considerations	Fritzsching	11/8/2011
517C				Withdrawn
518C				Withdrawn
519C				Withdrawn

FINAL COMBINED COMPLAINANT'S TRIAL EXHIBIT LIST

CX Exhibit No.	Description	Purpose	Sponsoring Witness	Status of Receipt
520C				Withdrawn
521	Richard G. Gann et al., The Effect of Cigarette Characteristics on the Ignition of Soft Furnishings, TECH. STUDY GROUP CIGARETTE SAFETY ACT of 1984 (Oct. 1987) SWMITC00035200-SWMITC00035413	Validity-Secondary considerations	Honeycutt	11/8/2011
522C				Withdrawn
523C				Withdrawn
524				Withdrawn
525				Withdrawn
526				Withdrawn
527				Withdrawn
528				Withdrawn
529				Withdrawn
530				Withdrawn
531				Withdrawn
557				Withdrawn
558				Withdrawn
559C				Withdrawn
560C				Withdrawn
561	JULIUS GLATZ'S AND LIPTEC'S FIRST SUPPLEMENTAL RESPONSES TO SCHWEITZER-MAUDUIT	Infringement/Validity/Remedy Public Interest	Epailly	11/8/2011

FINAL COMBINED COMPLAINANT'S TRIAL EXHIBIT LIST

CX Exhibit No.	Description	Purpose	Sponsoring Witness	Status of Receipt
	INTERNATIONAL'S FIRST SET OF INTERROGATORIES dated 3/11/2011			
562C				Withdrawn
563C				Withdrawn
564C				Withdrawn
565C				Withdrawn
566C	JULIUS GLATZ'S AND LIPTEC'S SUPPLEMENTAL RESPONSES TO SCHWEITZER-MAUDUIT INTERNATIONAL'S INTERROGATORIES 3, 4, 8, AND 17 dated 5/6/2011	Infringement/Validity/Remedy Public Interest	Rogers	11/4/2011
567				Withdrawn
571C				Withdrawn
576				Withdrawn
577C				Withdrawn
578				Withdrawn
579				Withdrawn
580				Withdrawn
581				Withdrawn
584C				Withdrawn
585C				Withdrawn
586C				Withdrawn
587C	SWM profit-loss statement december 2010	Public Interest	Thompson	11/1/2011

FINAL COMBINED COMPLAINANT'S TRIAL EXHIBIT LIST

CX Exhibit No.	Description	Purpose	Sponsoring Witness	Status of Receipt
	SWMITC01024520- SWMITC01024526			
588C	SWM profit-loss statement april 2011 SWMITC01024555- SWMITC01024561	Public Interest	Thompson	11/1/2011
589C	SWM NYSE third quarter 2010 report SWMITC00415378- SWMITC00415421	Public Interest	Thompson	11/1/2011
590C	Presentation, NYSE: SWM SWMITC00415424- SWMITC00415469	Public Interest	Thompson	11/1/2011
591C	SWM NYSE firs quarter 2009 report SWMITC00704022- SWMITC00704058	Public Interest	Thompson	11/1/2011
592C	Presentation; NYSE: SWM SWMITC00705333- SWMITC00705370	Public Interest	Thompson	11/1/2011
593C	Presentation; NYSE: SWM SWMITC00715103- SWMITC00715141	Public Interest	Thompson	11/1/2011
594C	Presentation; NYSE: SWM SWMITC00721245- SWMITC00721281	Public Interest	Thompson	11/1/2011
595C	Presentation; NYSE: SWM SWMITC00721344- SWMITC00721380	Public Interest	Thompson	11/1/2011
596C	SWM NYSE first quarter 2011 SWMITC01024481- SWMITC01024517	Public Interest	Thompson	11/1/2011
597C				Withdrawn
599				Withdrawn
600				Withdrawn
601				Withdrawn
607C	Email chain regarding 4th qtr 2010 solvent	Domestic Industry/Remedy/Bond	Thompson	11/1/2011

FINAL COMBINED COMPLAINANT'S TRIAL EXHIBIT LIST

CX Exhibit No.	Description	Purpose	Sponsoring Witness	Status of Receipt
	royalty / FSC share SWMITC00768178-SWMITC00768182			
610 (JX-9)	International Organization for Standardization, "Materials used as cigarette papers, filter plug wrap and filter joining paper, including materials having an oriented permeable zone- Determination of air permeability" (ISO 2965) - 2009 (3 rd Edition)	Infringement	Codwise (JX-9)	11/1/2011
614C				Withdrawn
625C				Withdrawn
637C				Withdrawn
640				Withdrawn
641C				Withdrawn
642C				Withdrawn
643C				Withdrawn
644C				Withdrawn
645C				Withdrawn
646C				Withdrawn
647C				Withdrawn
648C				Withdrawn
649C				Withdrawn
650C				Withdrawn
651C	SWM presentation - Americas papers 2011 sales and marketing plan development	Domestic Industry	Thompson	11/1/2011

FINAL COMBINED COMPLAINANT'S TRIAL EXHIBIT LIST

CX Exhibit No.	Description	Purpose	Sponsoring Witness	Status of Receipt
	SWMITC00351306- SWMITC00351406			
652C	Purchase and Sale Agreement between SMI and Confalonieri SWMITC00664417- SWMITC00664424	Domestic Industry	Thompson	11/1/2011
653C	SWM capital construction cost for Newberry SC facility SWMITC00664425- SWMITC00664492	Domestic Industry	Thompson	11/1/2011
654C	Newberry salary spreadsheet SWMITC01024475	Domestic Industry	Thompson	11/1/2011
655C	Newberry data spreadsheet SWMITC01024476- SWMITC01024478	Domestic Industry	Thompson	11/1/2011
656C	Third amended and restated printing service agreement between SWM and MILprint SWMITC00693716- SWMITC00693736	Domestic Industry	Thompson	11/1/2011
657C	Total spending of Bemis and Milpring SWMITC01024765- SWMITC01024767	Domestic Industry	Thompson	11/1/2011
658C	Sales Summary by print solution by year 2001-2010 (Thompson 166) SWMITC01023558- SWMITC01023569	Domestic Industry	Thompson	11/1/2011
659C	LIP Sales and Volumes 2000-Sept. 2010 (Thompson 167) SWMITC01023510- SWMITC01023570	Domestic Industry	Thompson	11/1/2011
660C	LIP Sales and Volumes 2000-Sept. 2010 (Thompson 168) SWMITC01023611-	Domestic Industry	Thompson	11/1/2011

FINAL COMBINED COMPLAINANT'S TRIAL EXHIBIT LIST

CX Exhibit No.	Description	Purpose	Sponsoring Witness	Status of Receipt
	SWMITC01023648			
661				Withdrawn
662				Withdrawn
663				Withdrawn
664	F. Bulian et al., Wood Coating: Theory & Practice, Ch. 3, 2009 (Honeycutt Ex. 34)	Claim Construction	Honeycutt	11/8/2011
665				Withdrawn
666C	Product specifications - Scogin LB Sodium Alginate SWMITC00138829- SWMITC00138830	Domestic Industry	Mongeon	11/1/2011
667C	SWM Newberry Plant coating operations work instructions SWMITC01023036	Domestic Industry	Mongeon	11/1/2011
668C	SWM Newberry Facility - alginate makeup specification SWMITC00442942	Domestic Industry	Mongeon	11/1/2011
669C	SWM North American Operations - Formula S4 - Alginate LIP Solution SWMITC00680125- SWMITC00680128	Domestic Industry	Mongeon	11/1/2011
670C	Email from Herve to Snow regarding preparations for trials SWMITC00428123- SWMITC00428124	Domestic Industry	Mongeon	11/1/2011
677C				Withdrawn
678C	SWM Printing Specifications SWMITC01023692- SWMITC01023698	Domestic Industry	Mongeon	11/1/2011
679C	SWM Manufacturing Trial Run Completion	Domestic Industry	Mongeon	11/1/2011

FINAL COMBINED COMPLAINANT'S TRIAL EXHIBIT LIST

CX Exhibit No.	Description	Purpose	Sponsoring Witness	Status of Receipt
	Report SWMITC00384511- SWMITC00384524			
680C	SWM Newberry Facility, S2 Makeup Specification SWMITC00384786- SWMITC00384790	Domestic Industry	Mongeon	11/1/2011
681C	Material Safety Data Sheet SWMITC00444159- SWMITC00444163	Domestic Industry	Mongeon	11/1/2011
682C	Flokote 64 surface/dry end starch SWMITC00444164	Domestic Industry	Mongeon	11/1/2011
703C	Witness Statement of Francois Mongeon	Domestic Industry/ Validity	Mongeon	11/1/2011
704C	Witness Statement of Peter Thompson	Domestic Industry/ Validity - Secondary Considerations	Thompson	11/1/2011
705C	Witness Statement of William Codwise	Infringement/ Domestic Industry/ Validity	Codwise	11/1/2011
706C				Withdrawn
707C	Letter from Kraker to Wanna enclosing Bobbin samples SWMITC00039120	Validity	Honeycutt	11/8/2011
708C	Letter from Kraker to Wanna enclosing low static burn rate cigarette paper SWMITC00039171	Validity	Honeycutt	11/8/2011
709C	Email from Kraker to Durocher re DCI theory SWMITC00040203	Validity	Kraker	11/8/2011
710C				Withdrawn

FINAL COMBINED COMPLAINANT'S TRIAL EXHIBIT LIST

CX Exhibit No.	Description	Purpose	Sponsoring Witness	Status of Receipt
712C	Article: using paper diffusion measurements to assess the ignition strength of cigarettes SWMITC00053802- SWMITC00053807	Validity	Kraker	11/8/2011
713C				Withdrawn
714C				Withdrawn
715C				Withdrawn
716C				Withdrawn
717C				Withdrawn
718C				Withdrawn
720C	Permeability measurements - bemis trial SWMITC00181225	Validity	Kraker	11/8/2011
723C				Withdrawn
725C				Withdrawn
726C				Withdrawn
727				Withdrawn
728C				Withdrawn
729C				Withdrawn
730C				Withdrawn
731C				Withdrawn
732C	Spreadsheet - cigarette information SWMITC01025988	Validity	Honeycutt	11/8/2011
733				Withdrawn
734C	9/22/2000, Trial Report—Bemis Coating Trial	Validity	Kraker	11/8/2011

FINAL COMBINED COMPLAINANT'S TRIAL EXHIBIT LIST

CX Exhibit No.	Description	Purpose	Sponsoring Witness	Status of Receipt
	SWMITC00550928- SWMITC00550932			
735C	V. Hampl, The Effect of Calcium Carbonate on Paper Structure and Cigarette Burn Rate SWMITC00033073- SWMITC00033080	Validity	Honeycutt	11/8/2011
736				Withdrawn
737				Withdrawn
738				Withdrawn
739C				Withdrawn
740C				Withdrawn
741	Powerpoint "Using Paper Diffusion Measurements to Assess the ignition Strengths of Cigarettes" by D. Durocher et al. (McCarty 4)	Validity	Kraker	11/8/2011
742C	Kraker Lab Notebook 3/24/2000 through 9/15/2009 SWMITC00213261- SWMITC00213478	Validity	Kraker	11/8/2011
743C				Withdrawn
744C				Withdrawn
745C				Withdrawn
746C				Withdrawn
747C	Memo from Pleu - B&W research and development update may 1998 SWMITC00665991- SWMITC00665999	Validity	Kraker	11/8/2011
766C	Trip Report, Longview Printing Trials	Validity	Kraker	11/8/2011

FINAL COMBINED COMPLAINANT'S TRIAL EXHIBIT LIST

CX Exhibit No.	Description	Purpose	Sponsoring Witness	Status of Receipt
	SWMITC00181223- SWMITC00181224			
767C				Withdrawn
768C				Withdrawn
769C				Withdrawn
770	Declaration Under 37 C.F.R. § 1.131 SWMITC00036402- SWMITC00036403	Validity	Kraker	11/8/2011
771C				Withdrawn
772C				Withdrawn
773C				Withdrawn
774C				Withdrawn
775C				Withdrawn
776C	Overview of PBCP SWMITC00114156- SWMITC00114157	Validity	Kraker	11/8/2011
777C	Trip Report-B&W SWMITC00114225- SWMITC00114227	Validity	Kraker	11/8/2011
778C	Brown & Williamson R&D Program Update SWMITC00114233- SWMITC00114237	Validity	Kraker	11/8/2011
779C	Letter to D.Beaty of B&W SWMITC00114609	Validity	Kraker	11/8/2011
780C	Letter to J. Wanna of B&W SWMITC00114611	Validity	Kraker	11/8/2011
781C				Withdrawn
782C	Letter to J. Wanna of B&W SWMITC00114731	Validity	Kraker	11/8/2011

FINAL COMBINED COMPLAINANT'S TRIAL EXHIBIT LIST

CX Exhibit No.	Description	Purpose	Sponsoring Witness	Status of Receipt
783C	Letter to D.Beaty of B&W SWMITC00114739	Validity	Kraker	11/8/2011
784C	Letter to K.Kuroda SWMITC00115214	Validity	Kraker	11/8/2011
785C	Letter to P.Chapman of RJRT SWMITC00115353	Validity	Kraker	11/8/2011
786C	Letter to E.Crooks of RJR SWMITC00115354	Validity	Kraker	11/8/2011
787C	Letter to P.Chapman of RJRT SWMITC00115359	Validity	Kraker	11/8/2011
788C	Letter to P.Chapman of RJRT SWMITC00115361	Validity	Kraker	11/8/2011
789C	Letter to P.Chapman of RJRT SWMITC00115362	Validity	Kraker	11/8/2011
790C	Letter to P.Chapman of RJRT SWMITC00115364- SWMITC00115365	Validity	Kraker	11/8/2011
791C	Letter to P.Chapman of RJRT SWMITC00115367	Validity	Kraker	11/8/2011
792C	Letter to P.Chapman of RJRT SWMITC00115368	Validity	Kraker	11/8/2011
793C	Letter to P.Chapman of RJRT SWMITC00115369	Validity	Kraker	11/8/2011
794C	Letter to P.Chapman of RJRT SWMITC00115370	Validity	Kraker	11/8/2011
795C	Letter to P.Chapman of RJRT	Validity	Kraker	11/8/2011

FINAL COMBINED COMPLAINANT'S TRIAL EXHIBIT LIST

CX Exhibit No.	Description	Purpose	Sponsoring Witness	Status of Receipt
	SWMITC00115371			
796C	Minutes from Bemis/SWM Meeting on Print-Banded Paper Development SWMITC00115535- SWMITC00115536	Validity	Kraker	11/8/2011
797C				Withdrawn
798C	Print-Banded Cigarette Paper Project Plan SWMITC00115565- SWMITC00115566	Validity	Kraker	11/8/2011
799C	Print-Banded Trial Plan SWMITC00115567- SWMITC00115568	Validity	Kraker	11/8/2011
800C				Withdrawn
801C				Withdrawn
802C				Withdrawn
803C	December 2000 Progress Report by T.Kraker SWMITC00115814- SWMITC00115816	Validity	Kraker	11/8/2011
805C				Withdrawn
806C	Progress Report SWMITC00115826- SWMITC00115829	Validity	Kraker	11/8/2011
807C				Withdrawn
808C				Withdrawn
809C	February 2001 Progress Report by T.Kraker SWMITC00115841- SWMITC00115842	Validity	Kraker	11/8/2011
810C				Withdrawn
811C	March 2001 Progress Report by T.Kraker	Validity	Kraker	11/8/2011

FINAL COMBINED COMPLAINANT'S TRIAL EXHIBIT LIST

CX Exhibit No.	Description	Purpose	Sponsoring Witness	Status of Receipt
	SWMITC00115847- SWMITC00115849			
812C				Withdrawn
813C				Withdrawn
814C	September 2001 Progress Report by T.Kraker SWMITC00115854- SWMITC00115855	Validity	Kraker	11/8/2011
815C				Withdrawn
816C	November 2000 Longview Trial Data SWMITC00118205- SWMITC00118210	Validity	Kraker	11/8/2011
817C				Withdrawn
818C				Withdrawn
819C	1998 Customer Responsibilities SWMITC00128530- SWMITC00128554	Validity	Kraker	11/8/2011
820C	Paper Technologies for Reduction of Cigarette Ignition Propensity SWMITC00129004- SWMITC00129024	Validity	Kraker	11/8/2011
821C	Paper Technologies for Reduction of Cigarette Ignition Propensity SWMITC00129048- SWMITC00129068	Validity	Kraker	11/8/2011
822C	Project PBS Meeting Notes- 12/01/00 SWMITC00181220- SWMITC00181221	Validity	Kraker	11/8/2011
823C	Permeability Measurements-RFR Paper SWMITC00181227- SWMITC00181230	Validity	Kraker	11/8/2011
824C	Permeability Measurements	Validity	Kraker	11/8/2011

FINAL COMBINED COMPLAINANT'S TRIAL EXHIBIT LIST

CX Exhibit No.	Description	Purpose	Sponsoring Witness	Status of Receipt
	SWMITC00181279			
825C				Withdrawn
826C				Withdrawn
827C				Withdrawn
828C				Withdrawn
829C				Withdrawn
830C				Withdrawn
831C	Permeability Measurements, Bemis Trial, Longview, TX 2/19/2001 SWMITC00551068- SWMITC00551071	Validity	Kraker	11/8/2011
832C				Withdrawn
834C				Withdrawn
835C				Withdrawn
836C				Withdrawn
837C				Withdrawn
838C				Withdrawn
839C				Withdrawn
840C				Withdrawn
841C				Withdrawn
842C	Bemis Update SWMITC00320196	Validity	Kraker	11/8/2011
843C				Withdrawn
844C				Withdrawn
845C	"11/13 Project PBS Trials-Update #2" E-mail from T.Kraker SWMITC00331454	Validity	Kraker	11/8/2011

FINAL COMBINED COMPLAINANT'S TRIAL EXHIBIT LIST

CX Exhibit No.	Description	Purpose	Sponsoring Witness	Status of Receipt
846C	Email: Participation of SWM-France and Brazil SWMITC00343605- SWMITC00343606	Validity	Kraker	11/8/2011
847C	01-10 PBS samples, NIST, SBR, cigs by Santa Fe.xls SWMITC00343970- SWMITC00344000	Validity	Kraker	11/8/2011
848C				Withdrawn
849C	PBS Development SWMITC00344062	Validity	Kraker	11/8/2011
850C	Update on Starch Coating Trials SWMITC00344064	Validity	Kraker	11/8/2011
851C	Product Development/Process Development SWMITC00344076	Validity	Kraker	11/8/2011
852C				Withdrawn
853C				Withdrawn
854C				Withdrawn
855C				Withdrawn
856C				Withdrawn
857C				Withdrawn
858C				Withdrawn
859C				Withdrawn
860C				Withdrawn
861C				Withdrawn
862C				Withdrawn
863C				Withdrawn

FINAL COMBINED COMPLAINANT'S TRIAL EXHIBIT LIST

CX Exhibit No.	Description	Purpose	Sponsoring Witness	Status of Receipt
864C				Withdrawn
865C				Withdrawn
866C				Withdrawn
867C				Withdrawn
868C				Withdrawn
869C				Withdrawn
870C				Withdrawn
871C				Withdrawn
872C				Withdrawn
873C				Withdrawn
874C				Withdrawn
875C				Withdrawn
876C				Withdrawn
877C				Withdrawn
878C	2/19 Longview Trials SWMITC00531769- SWMITC00531770	Validity	Kraker	11/8/2011
879C				Withdrawn
880C				Withdrawn
881C	NIST and SBR Testing of PBS Cigarettes SWMITC00532086	Validity	Kraker	11/8/2011
882C	LIP Testing (spreadsheet of data) SWMITC00532087- SWMITC00532120	Validity	Kraker	11/8/2011
883C	Update from Bemis SWMITC00532191	Validity	Kraker	11/8/2011
884C	Bemis Trials - Update SWMITC00532204	Validity	Kraker	11/8/2011

FINAL COMBINED COMPLAINANT'S TRIAL EXHIBIT LIST

CX Exhibit No.	Description	Purpose	Sponsoring Witness	Status of Receipt
885C				Withdrawn
886C	PBS Trials at Bemis SWMITC00532208	Validity	Kraker	11/8/2011
887C				Withdrawn
888C				Withdrawn
889C				Withdrawn
890C	Bemis Trial Update SWMITC00532235	Validity	Kraker	11/8/2011
891C	Bemis Trial Update SWMITC00532236	Validity	Kraker	11/8/2011
892C				Withdrawn
893C				Withdrawn
894C				Withdrawn
895C	B&W RFR Sample Feedback SWMITC00532292	Validity	Kraker	11/8/2011
896C				Withdrawn
897C				Withdrawn
898C	Status Report-Project PBS SWMITC00552869	Validity	Kraker	11/8/2011
899C				Withdrawn
900C				Withdrawn
901C				Withdrawn
902C				Withdrawn
903C				Withdrawn
904C	Bemis Products SWMITC00644482- SWMITC00644498	Validity	Kraker	11/8/2011
905C				Withdrawn

FINAL COMBINED COMPLAINANT'S TRIAL EXHIBIT LIST

CX Exhibit No.	Description	Purpose	Sponsoring Witness	Status of Receipt
906C				Withdrawn
907C				Withdrawn
908C				Withdrawn
909C				Withdrawn
910C	Email from T. Krakerto SWM re PBSL_Trials_Update dated 3/16/2001 SWMITC00664978	Validity	Kraker	11/8/2011
911C	Coating trials - Mactack Faustel Coater for 30,55 and 80 CU papers SWMITC00665523- SWMITC00665524	Validity	Kraker	11/8/2011
912C	Email from R. Peterson to N. Baskevitch, L. Snow, V. Hampl & T. Kraker dated 8/25/2000 SWMITC00665525- SWMITC00665526	Validity	Kraker	11/8/2011
913C				Withdrawn
914C				Withdrawn
915C				Withdrawn
916C				Withdrawn
917C				Withdrawn
918C				Withdrawn
919C				Withdrawn
920C	permeability measurements - bemis trial BEMIS000604- BEMIS000615	Validity	Kraker	11/8/2011
921C				Withdrawn

FINAL COMBINED COMPLAINANT'S TRIAL EXHIBIT LIST

CX Exhibit No.	Description	Purpose	Sponsoring Witness	Status of Receipt
922C				Withdrawn
923C				Withdrawn
924C				Withdrawn
925C				Withdrawn
926C				Withdrawn
927C	Data spreadsheets SWMITC00118296- SWMITC00118305	Validity	Kraker	11/8/2011
928C	Permeability measurements - bemis trial SWMITC00181279	Validity	Kraker	11/8/2011
929C				Withdrawn
930C				Withdrawn
931C				Withdrawn
932C				Withdrawn
933C				Withdrawn
934C	Test data spreadsheets SWMITC00320197- SWMITC00320233	Validity	Kraker	11/8/2011
935C				Withdrawn
936C				Withdrawn
937C				Withdrawn
938C	Test data spreadsheets SWMITC00353530	Validity	Kraker	11/8/2011
939C				Withdrawn
940C	Test data spreadsheets SWMITC00379950	Validity	Kraker	11/8/2011
941C				Withdrawn
942C				Withdrawn

FINAL COMBINED COMPLAINANT'S TRIAL EXHIBIT LIST

CX Exhibit No.	Description	Purpose	Sponsoring Witness	Status of Receipt
943C				Withdrawn
944C				Withdrawn
945C				Withdrawn
946C				Withdrawn
947C	Memo from Kraker re noted from 10/3 meeting and proposed project plan SWMITC01023413- SWMITC01023414	Validity	Thompson	11/1/2011
948C				Withdrawn
949				Withdrawn
950				Withdrawn
951C				Withdrawn
952				Withdrawn
953				Withdrawn
954				Withdrawn
955C				Withdrawn
956				Withdrawn
957C				Withdrawn
958C				Withdrawn
959C				Withdrawn
960				Withdrawn
961C				Withdrawn
962C				Withdrawn
963C				Withdrawn
964				Withdrawn

FINAL COMBINED COMPLAINANT'S TRIAL EXHIBIT LIST

CX Exhibit No.	Description	Purpose	Sponsoring Witness	Status of Receipt
965C				Withdrawn
966C				Withdrawn
967C	Email from T. Kraker dated 11/26/2011, Subj: B&W Trip Report SWMITC00664961- SWMITC00664962	Validity	Kraker	11/8/2011
968C				Withdrawn
971C				Withdrawn
972C	Correspondence from Peterson to Kraker regarding 2/19/2001 Longview Trials BEMIS000740- BEMIS000743	Validity	Peterson	11/8/2011
973C				Withdrawn
974C				Withdrawn
975C				Withdrawn
976C				Withdrawn
977C				Withdrawn
978				Withdrawn
979				Withdrawn
980C				Withdrawn
981C				Withdrawn
982C	Customer Coordination Action form - Kraker March 4, 1999 SWMITC00039018- SWMITC00039025	Validity	Kraker	11/8/2011
983C	Memo from Kraker to Snow regarding Brown & Williamson R&D Program Update	Validity	Kraker	11/8/2011

FINAL COMBINED COMPLAINANT'S TRIAL EXHIBIT LIST

CX Exhibit No.	Description	Purpose	Sponsoring Witness	Status of Receipt
	SWMITC00114216- SWMITC00114220			
984C				Withdrawn
985C				Withdrawn
986C				Withdrawn
987C	Dec 2001 Progress Report SWMITC00115838- SWMITC00115840	Validity	Kraker	11/8/2011
988				Withdrawn
989				Withdrawn
990C				Withdrawn
991C	Memo from Kraker to snow regarding June 2000 progress report SWMITC00115820- SWMITC00115822	Validity	Kraker	11/8/2011
992C				Withdrawn
993C				Withdrawn
994C				Withdrawn
995C				Withdrawn
996C	Correspondence from Kraker to Snow regarding september progress report SWMITC00115832	Validity	Kraker	11/8/2011
997C				Withdrawn
998C				Withdrawn
999C				Withdrawn
1000C	Memo from Hampl to Snow regarding montly report for March 2011	Validity	Kraker	11/8/2011

FINAL COMBINED COMPLAINANT'S TRIAL EXHIBIT LIST

CX Exhibit No.	Description	Purpose	Sponsoring Witness	Status of Receipt
	SWMITC00115834- SWMITC00115835			
1001C	Email from Kraker to Snow regarding Bemis Trial update SWMITC00664967	Validity	Kraker	11/8/2011
1002C	Email from Kraker to Snow regarding Bemis Trial update SWMITC00664966	Validity	Kraker	11/8/2011
1003C	Data from January 2001 Longview Trial SWMITC00531563- SWMITC00531567	Validity	Kraker	11/8/2011
1004C	Rebuttal Witness Statement of Thomas A. Kraker	Validity/Enforceability	Kraker	11/8/2011
1005C	Rebuttal Witness Statement of Joseph S. Kucherovsky	Validity/Enforceability	Kucherovsky	11/8/2011
1006C	Rebuttal Witness Statement of Richard M. Peterson	Validity/Enforceability	Peterson	11/8/2011
1007C	Rebuttal Witness Statement of Peter J. Thompson	Validity	Thompson	11/1/2011
1008				Withdrawn
1009				Withdrawn
1010C				Withdrawn
1011C				Withdrawn
1012C				Withdrawn
1013C				Withdrawn
CDX-1				Withdrawn

FINAL COMBINED COMPLAINANT'S TRIAL EXHIBIT LIST

CX Exhibit No.	Description	Purpose	Sponsoring Witness	Status of Receipt
CDX-2				Withdrawn
CDX-3				Withdrawn
CDX-4	Relevant Experience	Technology Tutorial	Honeycutt	11/8/2011
CDX-5				Withdrawn
CDX-6				Withdrawn
CDX-7				Withdrawn
CDX-8				Withdrawn
CDX-9				Withdrawn
CDX-10				Withdrawn
CDX-11				Withdrawn
CDX-12				Withdrawn
CDX-13				Withdrawn
CDX-15				Withdrawn
CDX-16				Withdrawn
CDX-17	Overview of the '753 Patent	Technology Tutorial	Rogers	11/4/2011
CDX-18				Withdrawn
CDX-19				Withdrawn
CDX-20				Withdrawn
CDX-21				Withdrawn
CDX-22	Overview of the '753 Patent	Technology Tutorial	Rogers	11/4/2011
CDX-23				Withdrawn
CDX-24				Withdrawn
CDX-25				Withdrawn
CDX-26				Withdrawn

FINAL COMBINED COMPLAINANT'S TRIAL EXHIBIT LIST

CX Exhibit No.	Description	Purpose	Sponsoring Witness	Status of Receipt
CDX-27				Withdrawn
CDX-28				Withdrawn
CDX-29				Withdrawn
CDX-30				Withdrawn
CDX-35				Withdrawn
CDX-36	Overview of the '867 Patent	Technology Tutorial	Rogers	11/4/2011
CDX-37				Withdrawn
CDX-38				Withdrawn
CDX-39				Withdrawn
CDX-40				Withdrawn
CDX-41				Withdrawn
CDX-42				Withdrawn
CDX-63				Withdrawn
CDX-65	Glatz Respondents	Infringement	Rogers	11/4/2011
CDX-68	Glatz Accused Products	Infringement	Rogers	11/4/2011
CDX-80	Testing Methodology	Infringement Domestic Industry	Rogers	11/4/2011
CDX-137	Glatz Infringement: 753 Patent - Claim Element 1a	Infringement	Rogers	11/4/2011
CDX-139	Glatz Infringement: 753 Patent - Claim Element 1b	Infringement	Rogers	11/4/2011
CDX-141C	Glatz Infringement: 753 Patent - Claim Element 1c	Infringement	Rogers	11/4/2011
CDX-142C	Glatz Infringement: 753 Patent - Claim Element 1c	Infringement	Rogers	11/4/2011

FINAL COMBINED COMPLAINANT'S TRIAL EXHIBIT LIST

CX Exhibit No.	Description	Purpose	Sponsoring Witness	Status of Receipt
CDX-143	Glatz Infringement: 753 Patent - Claim Element 1c	Infringement	Rogers	11/4/2011
CDX-144	Glatz Infringement: 753 Patent - Claim Element 1d	Infringement	Rogers	11/4/2011
CDX-145	Glatz Infringement: 753 Patent - Claim Element 1e	Infringement	Rogers	11/4/2011
CDX-146	Glatz Infringement: 753 Patent - Claim Element 1e	Infringement	Rogers	11/4/2011
CDX-147				Withdrawn
CDX-148				Withdrawn
CDX-152	Glatz Infringement: 753 Patent - Claims 2-3	Infringement	Rogers	11/4/2011
CDX-154	Glatz Infringement: 753 Patent - Claims 4-6	Infringement	Rogers	11/4/2011
CDX-157	Glatz Infringement: 753 Patent - Claim 24	Infringement	Rogers	11/4/2011
CDX-158				Withdrawn
CDX-159	Glatz Infringement: 753 Patent - Claim Element 12a	Infringement	Rogers	11/4/2011
CDX-160	Glatz Infringement: 753 Patent - Claim Element 12b	Infringement	Rogers	11/4/2011
CDX-161	Glatz Infringement: 753 Patent - Claim Element 12c	Infringement	Rogers	11/4/2011
CDX-162	Glatz Infringement: 753 Patent - Claim Element 12d	Infringement	Rogers	11/4/2011
CDX-163	Glatz Infringement: 753 Patent - Claims 13-17	Infringement	Rogers	11/4/2011

FINAL COMBINED COMPLAINANT'S TRIAL EXHIBIT LIST

CDX Exhibit No.	Description	Purpose	Sponsoring Witness	Status of Receipt
CDX-164	Glatz Infringement: 753 Patent - Claims 13-17	Infringement	Rogers	11/4/2011
CDX-165	Glatz Infringement: 753 Patent - Claims 13-17	Infringement	Rogers	11/4/2011
CDX-166	Glatz Infringement: 753 Patent - Claims 18	Infringement	Rogers	11/4/2011
CDX-167	Glatz Infringement: 753 Patent - Claim 25	Infringement	Rogers	11/4/2011
CDX-191	Glatz Infringement: 867 Patent - Claim 36a	Infringement	Rogers	11/4/2011
CDX-192C	Glatz Infringement: 867 Patent - Claim 36a	Infringement	Rogers	11/4/2011
CDX-193				Withdrawn
CDX-194				Withdrawn
CDX-195				Withdrawn
CDX-196C	Glatz Infringement: 867 Patent - Claim 36b	Infringement	Rogers	11/4/2011
CDX-199				Withdrawn
CDX-200				Withdrawn
CDX-201C	Glatz Infringement: 867 Patent - Claim 36c	Infringement	Rogers	11/4/2011
CDX-202	Glatz Infringement: 867 Patent - Claim 36c	Infringement	Rogers	11/4/2011
CDX-203				Withdrawn
CDX-204C	Glatz Infringement: 867 Patent - Claim 36d	Infringement	Rogers	11/4/2011
CDX-205	Glatz Infringement: 867 Patent - Claim 36d	Infringement	Rogers	11/4/2011
CDX-206				Withdrawn
CDX-207	Glatz Infringement: 867 Patent - Claim 36e	Infringement	Rogers	11/4/2011
CDX-208				Withdrawn
CDX-209	Glatz Infringement: 867 Patent - Claim 36f	Infringement	Rogers	11/4/2011
CDX-212C	Glatz Infringement: 867 Patent - Claim 43	Infringement	Rogers	11/4/2011

FINAL COMBINED COMPLAINANT'S TRIAL EXHIBIT LIST

CX Exhibit No.	Description	Purpose	Sponsoring Witness	Status of Receipt
CDX-213				Withdrawn
CDX-214	Glatz Infringement: 867 Patent - Claim 45	Infringement	Rogers	11/4/2011
CDX-216C	SWM Technical DI: Claim 12 of the '753 Patent	Domestic Industry	Rogers	11/4/2011
CDX-217C	SWM Technical DI: Claim 12 of the '753 Patent	Domestic Industry	Rogers	11/4/2011
CDX-218C	SWM Technical DI: Claim 12 of the '753 Patent	Domestic Industry	Rogers	11/4/2011
CDX-219C				Withdrawn
CDX-220C	SWM Technical DI: Claim 12 of the '753 Patent	Domestic Industry	Rogers	11/4/2011
CDX-221C				Withdrawn
CDX-222C	SWM Technical DI: Claim 12 of the '753 Patent	Domestic Industry	Rogers	11/4/2011
CDX-223C				Withdrawn
CDX-224C	SWM Technical DI: Claim 12 of the '753 Patent	Domestic Industry	Rogers	11/4/2011
CDX-225C	SWM Technical DI: Claim 12 of the '753 Patent	Domestic Industry	Rogers	11/4/2011
CDX-226C	SWM Technical DI: Claim 12 of the '753 Patent	Domestic Industry	Rogers	11/4/2011
CDX-227C				Withdrawn
CDX-228C	SWM Technical DI: Claim 12 of the '753 Patent	Domestic Industry	Rogers	11/4/2011

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CX Exhibit No.	Description	Purpose	Sponsoring Witness	Status of Receipt
CDX-229C				Withdrawn
CDX-230C	SWM Technical DI: Claim 12 of the '753 Patent	Domestic Industry	Rogers	11/4/2011
CDX-231C	SWM Technical DI: Claim 1 of the '867 Patent	Domestic Industry	Rogers	11/4/2011
CDX-232C	SWM Technical DI: Claim 1 of the '867 Patent	Domestic Industry	Rogers	11/4/2011
CDX-233C	SWM Technical DI: Claim 1 of the '867 Patent	Domestic Industry	Rogers	11/4/2011
CDX-234C				Withdrawn
CDX-235C				Withdrawn
CDX-236C				Withdrawn
CDX-237C	SWM Technical DI: Claim 1 of the '867 Patent	Domestic Industry	Rogers	11/4/2011
CDX-238C				Withdrawn
CDX-239C	SWM Technical DI: Claim 1 of the '867 Patent	Domestic Industry	Rogers	11/4/2011
CDX-240C				Withdrawn
CDX-241C	SWM Technical DI: Claim 1 of the '867 Patent	Domestic Industry	Rogers	11/4/2011
CDX-242C				Withdrawn
CDX-243C	SWM Technical DI: Claim 1 of the '867 Patent	Domestic Industry	Rogers	11/4/2011
CDX-244				Withdrawn

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CX Exhibit No.	Description	Purpose	Sponsoring Witness	Status of Receipt
CDX-245				Withdrawn
CDX-246				Withdrawn
CDX-247				Withdrawn
CDX-248				Withdrawn
CDX-249				Withdrawn
CDX-250				Withdrawn
CDX-251				Withdrawn
CDX-252				Withdrawn
CDX-253				Withdrawn
CDX-254				Withdrawn
CDX-255				Withdrawn
CDX-256				Withdrawn
CDX-257				Withdrawn
CDX-258				Withdrawn
CDX-260				Withdrawn
CDX-261.04	Houck Does Not Disclose a Gradually Decreasing Permeability Profile	Validity	McCarty	11/8/2011
CDX-263				Withdrawn
CDX-265				Withdrawn
CDX-267				Withdrawn
CDX-268C				Withdrawn
CDX-269				Withdrawn
CDX-270				Withdrawn
CDX-271C				Withdrawn

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CDX Exhibit No.	Description	Purpose	Sponsoring Witness	Status of Receipt
CDX-273				Withdrawn
CDX-274				Withdrawn
CDX-282				Withdrawn
CDX-283				Withdrawn
CDX-285				Withdrawn
CDX-286				Withdrawn
CDX-287				Withdrawn
CDX-289				Withdrawn
CDX-290				Withdrawn
CDX-291				Withdrawn
CDX-302C				Withdrawn
CDX-305C				Withdrawn
CDX-308				Withdrawn
CDX-310				Withdrawn
CDX-313				Withdrawn
CDX-320				Withdrawn
CDX-321				Withdrawn
CDX-322				Withdrawn
CDX-323				Withdrawn
CDX-324				Withdrawn
CDX-327				Withdrawn
CDX-328C				Withdrawn
CDX-329				Withdrawn
CDX-332				Withdrawn

In the Matter of CERTAIN REDUCED IGNITION PROCLIVITY CIGARETTE PAPER WRAPPERS AND PRODUCTS CONTAINING SAME
Investigation No. 337-TA-756
Respondent's Corrected Final Hearing Exhibit List

Hearing Exhibit No.	Description / Title	Bates Numbers	Purpose	Sponsoring Witness	Exhibits Rebutted	Received
RDX-081	Technology tutorial demonstrative exhibits		Invalidity Domestic Industry Non-infringement	McCarty		11/8/2011
RDX-082C	Demonstrative exhibit based on GL0042693, an engineering drawing showing an elevation view of the LIP 3 paper machine at Glatz/LIPtec (View 1)		Non-infringement Cross examination Invalidity	Fritzsching		11/8/2011
RDX-083C	Demonstrative exhibit based on GL0042693, an engineering drawing showing an elevation view of the LIP 3 paper machine at Glatz/LIPtec (View 2)		Non-infringement Cross examination Invalidity	Fritzsching		11/8/2011
RDX-084C	Demonstrative exhibit based on GL0032481, a schematic of Glatz/LIPtec's slit nozzle with three different roller spacings		Non-infringement Cross examination Invalidity	Fritzsching		11/8/2011
RDX-085C	Demonstrative exhibit based on GL0032518, a photograph of Glatz/LIPtec's slit nozzle, and GL0032459, an engineering drawing of Glatz/LIPtec's slit nozzle bearing a designation of "731557 Glueflow" (View 1)		Non-infringement Cross examination Invalidity	Fritzsching		11/8/2011
RDX-086C	Demonstrative exhibit based on GL0032518, a photograph of Glatz/LIPtec's slit nozzle, and GL0032459, an engineering drawing of Glatz/LIPtec's slit nozzle bearing a designation of "731557 Glueflow" (View 2)		Non-infringement Cross examination Invalidity	Fritzsching		11/8/2011
RDX-087	WITHDRAWN					
RDX-088	Band CU vs. Band BMI from SWM's Tests of Accused Products in Rogers' Expert Report Demonstrative		Cross examination Invalidity Non-infringement	McCarty, Rogers		11/4/2011
RDX-089	WITHDRAWN					
RDX-090	Claim charts for obviousness of '753 patent claims		Invalidity	McCarty, Honeycutt		11/8/2011
RDX-091	WITHDRAWN					
RDX-092	Claim charts for obviousness of '867 patent claims		Invalidity	McCarty, Honeycutt		11/8/2011

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Hearing Exhibit No.	Description / Title	Bates Numbers	Purpose	Sponsoring Witness	Exhibits Rebutted	Received
RDX-093	Demonstrative of table of measurement results of air permeability according to DIN ISO 29 65 measured at ASL lab in Hamburg Germany		Invalidity	Schabel		11/8/2011
RDX-094	WITHDRAWN					
RDX-095	WITHDRAWN					
RDX-096	Demonstrative of measurement results for diffusional conductance index measured in Darmstadt Germany according to SWM lab method, Table 3		Invalidity	Schabel		11/8/2011
RDX-097	Demonstrative of setup of BMI/DCI measurement equipment in Darmstadt Germany		Invalidity	Schabel		11/8/2011
RDX-098	WITHDRAWN					
RDX-099	Demonstrative of Merit Ultra Light cigarette paper marked with felt tip pen in order to visualize the position of bands		Invalidity	Schabel		11/8/2011
RDX-100	Demonstrative of Merit cigarette paper samples with measurement head used for air permeability measurement		Invalidity	Schabel		11/8/2011
RDX-101	Demonstrative of Merit Light and Ultra Light cigarette papers as received after 45 minutes of iodine vapor staining; papers are lying with inside surface facing up		Invalidity	Kremer		11/8/2011
RDX-102	Demonstrative of inside surface of Merit cigarette paper after iodine staining has faded with blue pen marks indicating the width of the coating/band		Invalidity	Kremer		11/8/2011
RDX-103	Demonstrative of Merit cigarette paper surface band/coating, SEM 25x, panoramic SEM image (three images stitched together) showing the full width of a Merit coating/band		Invalidity	Kremer		11/8/2011
RDX-104	Demonstrative of detail view of Merit cigarette paper under a low power light microscope with low angle reflected light, arrows indicating coating/band boundary, print magnification = 65X		Invalidity	Kremer		11/8/2011

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Hearing Exhibit No.	Description / Title	Bates Numbers	Purpose	Sponsoring Witness	Exhibits Rebutted	Received
RDX-105	Demonstrative of Merit cigarette paper surface, SEM image of coating/band boundary, print magnification = 53X		Invalidity	Kremer		11/8/2011
RDX-106	Demonstrative of Merit cigarette paper surface, coating boundary, SEM, surface view, 250X		Invalidity	Kremer		11/8/2011
RDX-107	Demonstrative of Merit cigarette paper surface, coating boundary, SEM, surface view, 750X		Invalidity	Kremer		11/8/2011
RDX-108	Demonstrative of Merit cigarette paper coated surface, SEM, surface view, 300x		Invalidity	Kremer		11/8/2011
RDX-109	Demonstrative of Merit cigarette paper non-coated surface, SEM, surface view, 300x		Invalidity	Kremer		11/8/2011
RDX-110	Demonstrative of Merit cigarette paper coated surface, SEM, surface view, 1500x		Invalidity	Kremer		11/8/2011
RDX-111	Demonstrative of Merit cigarette paper non-coated surface, SEM, surface view, 1500x		Invalidity	Kremer		11/8/2011
RDX-112	Demonstrative of Merit cigarette paper freeze-fractured cross-section, SEM, 1000x, view A		Invalidity	Kremer		11/8/2011
RDX-113	Demonstrative of Merit cigarette paper freeze-fractured cross-section, SEM, 1000x, view B		Invalidity	Kremer		11/8/2011
RDX-114	Demonstrative of Merit cigarette paper freeze-fractured cross-section, SEM, 3000x, view A		Invalidity	Kremer		11/8/2011
RDX-115	Demonstrative of Merit cigarette paper freeze-fractured cross-section, SEM, 3000x, view B		Invalidity	Kremer		11/8/2011
RDX-116	Demonstrative of Merit cigarette paper freeze-fractured cross-section, SEM, 1000x, view C		Invalidity	Kremer		11/8/2011
RDX-117	Demonstrative of Merit cigarette paper freeze-fractured cross-section, SEM, 3000x, view C		Invalidity	Kremer		11/8/2011
RDX-118	Demonstrative of Merit cigarette paper room-temperature cross-section, SEM, 1000x, view A		Invalidity	Kremer		11/8/2011

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Hearing Exhibit No.	Description / Title	Bates Numbers	Purpose	Sponsoring Witness	Exhibits Rebutted	Received
RDX-119	Demonstrative of Merit cigarette paper room-temperature cross-section, SEM, 3000x		Invalidity	Kremer		11/8/2011
RDX-120	Demonstrative of Merit cigarette paper room-temperature cross-section, SEM, 1000x, view B		Invalidity	Kremer		11/8/2011
RDX-121	Demonstrative of Merit cigarette paper room-temperature cross-section, SEM, 1000x, view C		Invalidity	Kremer		11/8/2011
RDX-122	WITHDRAWN					
RDX-123	WITHDRAWN					
RDX-124	WITHDRAWN					
RDX-125	WITHDRAWN					
RDX-126	WITHDRAWN					
RDX-127	WITHDRAWN					
RDX-128	Expert Report of Paul D. Fleming - Figure page 13 Demonstrative		Cross examination Domestic Industry Invalidity Non-infringement	Fritzsching, Rogers		11/4/2011
RDX-129	Expert Report of Paul D. Fleming - Figure page 15A Demonstrative		Cross examination Invalidity Domestic Industry Non-infringement	Fritzsching		11/8/2011
RDX-130	Expert Report of Paul D. Fleming - Figure page 15B Demonstrative		Cross examination Domestic Industry Invalidity Non-infringement	Fritzsching, Fleming, Rogers		11/4/2011
RDX-131	Expert Report of Paul D. Fleming - Figure page 16A Demonstrative		Cross examination Domestic Industry Invalidity Non-infringement	Fritzsching, Fleming		11/8/2011
RDX-132	Expert Report of Paul D. Fleming - Figure page 16B Demonstrative		Cross examination Invalidity Domestic Industry Non-infringement	Fritzsching, Fleming, Rogers		11/4/2011
RDX-133	Exhibit I to Expert Report of Dr. Paul D. Fleming III: Graphs showing "B" and "C" data for Glatz/LIPtec and SWM's paper samples - Demonstrative		Cross examination Invalidity Domestic Industry Non-infringement	Fleming		11/8/2011
RDX-135	WITHDRAWN					

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Hearing Exhibit No.	Description / Title	Bates Numbers	Purpose	Sponsoring Witness	Exhibits Rebutted	Received
RDX-137	WITHDRAWN					
RDX-138	WITHDRAWN					
RDX-139	WITHDRAWN					
RDX-143	Demonstrative exhibits based on any exhibits included in Complainant's or Respondents' exhibit lists		Cross-examination Domestic Industry Invalidity Noninfringement Rebuttal	McCarty		11/8/2011
RDX-145	WITHDRAWN					
RDX-148	Demonstrative of 2 square centimeter air permeability orifice overlapping base paper and lower permeability band		Domestic Industry Noninfringement Rebuttal	Fleming		11/8/2011
RDX-149	WITHDRAWN					
RDX-150	Demonstrative of 2 x 15 millimeter air permeability orifice moving from base paper to lower permeability band, view A		Domestic Industry Noninfringement Rebuttal	Fleming		11/8/2011
RDX-151	Demonstrative of 2 x 15 millimeter air permeability orifice moving from base paper to lower permeability band, view B		Domestic Industry Noninfringement Rebuttal	Fleming, Rogers		11/4/2011
RDX-152	WITHDRAWN					
RDX-155	Demonstrative of air permeability data from Expert Report of Robin Rogers with overlapping band/base paper areas indicated		Domestic Industry Noninfringement Rebuttal	Fleming		11/4/2011
RDX-162	Demonstrative of air permeability data of cigarette wrapper sample created with metal foil band		Domestic Industry Noninfringement Rebuttal	Fleming		11/8/2011
RDX-163	WITHDRAWN					
RDX-166	WITHDRAWN					
RDX-168	WITHDRAWN					
RDX-173	Demonstrative of cigarette wrapper with marks to indicate band location		Domestic Industry Noninfringement Rebuttal	Fleming		11/8/2011
RDX-177	WITHDRAWN					
RDX-212	Demonstrative of sequential series of air permeability measurements in banded region of cigarette paper		Domestic Industry Noninfringement Rebuttal	Fleming		11/8/2011

In the Matter of CERTAIN REDUCED IGNITION PROCLIVITY CIGARETTE PAPER WRAPPERS AND PRODUCTS CONTAINING SAME
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Hearing Exhibit No.	Description / Title	Bates Numbers	Purpose	Sponsoring Witness	Exhibits Rebutted	Received
RDX-213	Demonstrative of sequential series of air permeability measurements of base paper beginning just outside of banded region		Domestic Industry Noninfringement Rebuttal	Fleming		11/8/2011
RDX-214	WITHDRAWN					
RDX-215	Demonstrative of sequential series of air permeability measurements on cigarette paper without marks to indicate when orifice crossed from base paper to band and back to base paper		Domestic Industry Noninfringement Rebuttal	Fleming		11/8/2011
RDX-223	Demonstrative exhibit of Borgwaldt machine		Cross examination Domestic Industry Invalidity Non-infringement Rebuttal	Fleming		11/8/2011
RDX-224	WITHDRAWN					
RDX-225	Hand drawn diagram showing band and orifice		Cross examination Domestic Industry Non-infringement	Fleming, Rogers		11/4/2011
RPX-05	Physical Exhibit of measuring head from a Borgwaldt A20 machine		Cross examination Invalidity Domestic Industry Non-infringement	Fritzsching, Fleming		11/8/2011
RPX-06C	Physical Exhibit of slit nozzle		Cross examination Invalidity Domestic Industry Non-infringement	Fritzsching		11/8/2011
RPX-07	Physical Exhibit of Merit Light and Ultra Light cigarettes		Invalidity Cross examination	Fritzsching, McCarty		11/8/2011
RPX-08	Physical Exhibit of Cigla 75 MVM 0,6 A LI cigarette paper bobbin		Invalidity Non-infringement	Fritzsching		11/8/2011
RPX-09	Physical Exhibit of Cigla 75 MV 1,0 MC LI cigarette paper bobbin		Invalidity Non-infringement	Fritzsching		11/8/2011
RPX-10	Physical Exhibit - Paper Samples Tested at IPS		Invalidity	Kremer		11/8/2011
RPX-11	Physical Exhibit - Paper Samples of Merit paper tested by Dr. Schabel		Invalidity	Schabel		11/8/2011
RPX-12	Physical Exhibit - collection of paper samples and data printouts tested by Dr. Fleming in July 2011		Non-infringement	Fritzsching, Fleming		11/8/2011

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RX-001	WITHDRAWN					
RX-003	"Novel Methods for Measuring the Diffusional Conductance of Porous Membranes"	SWMITC01023544-57	Invalidity, unenforceability	HAMPL, Kraker		11/8/2011
RX-004	Program for 41 st Tobacco Chemists' Research Conference, Oct. 4-7, 1987		Invalidity, unenforceability	HAMPL		11/8/2011
RX-005	"A Novel Method for Measuring the Diffusional Conductance of Paper"	SWMITC00037283-95	Invalidity, unenforceability	HAMPL		11/8/2011
RX-006C	"Cigarette Paper: A Brief Outline of Its History and Properties"	SWMITC00037655-75	Invalidity, unenforceability	HAMPL		11/8/2011
RX-007C	Diagram of Square Root of Permeability vs. BMI	SWMITC00037295	Invalidity, unenforceability	HAMPL		11/8/2011
RX-008C	Monthly Report - Specialty Products R&D, September 1985	SWMITC00669304-07	Invalidity, unenforceability	HAMPL		11/8/2011
RX-009C	Lab. Notebook P-325	SWMITC00198969-177	Invalidity, unenforceability	HAMPL		11/8/2011
RX-010C	Letter to Joseph Wanna	SWMITC00041712-13	Invalidity, unenforceability	HAMPL, Kraker		11/8/2011
RX-011C	R&D Progress Report	SWMITC00115852-53	Invalidity, unenforceability	HAMPL		11/8/2011
RX-012C	"The Effect of Calcium Carbonate Size on Paper Structure and Cigarette Burn Rate"	SWMITC00033073-80	Invalidity, unenforceability	HAMPL		11/8/2011
RX-013C	Technical exchange between Japan Tobacco and SWM	SWMITC00027130-65	Invalidity, unenforceability	HAMPL		11/8/2011
RX-014C	Memo: Qualification of #17 PM for Philip Morris.	SWMITC00054440-43	Invalidity, unenforceability	HAMPL		11/8/2011
RX-015C	List of Kimberly-Clark Paper Grades	SWMITC00036007	Invalidity, unenforceability	HAMPL, Kraker		11/8/2011
RX-016C	Technical Report: Burn Rate Control Development	SWMITC00212677-98	Invalidity, unenforceability	HAMPL, Peterson		11/8/2011
RX-017C	Email: NIST and SBR Testing of PBS Cigarettes	SWMITC00532077-86	Invalidity, unenforceability	HAMPL		11/8/2011
RX-018C	Recommended Design Changes for PBS papers	SWMITC00053920-31	Invalidity, unenforceability	HAMPL		11/8/2011
RX-019	U.S. Patent No. 4,622,983		Invalidity, unenforceability	HAMPL		11/8/2011
RX-020	WITHDRAWN					
RX-021	U.S. Patent No. 5,820,998	SWMITC00000561-68	Invalidity, unenforceability	HAMPL		11/8/2011
RX-022C	Lab Notebook P-2138	SWMITC00003174-380	Invalidity, unenforceability	HAMPL		11/8/2011

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RX-023C	Lab Notebook P-2137	SWMITC00002555-761	Invalidity, unenforceability	HAMPL		11/8/2011
RX-024	U.S. Patent No. 6,568,403		Invalidity, unenforceability	HAMPL		11/8/2011
RX-025C	Lab Notebook SMI-19	SWMITC00002978-3173	Invalidity, unenforceability	HAMPL		11/8/2011
RX-026C	Lab Notebook SMI-01	SWMITC00002762-977	Invalidity, unenforceability	HAMPL		11/8/2011
RX-027C	WITHDRAWN					
RX-028C	WITHDRAWN					
RX-029C	Lab Notebook P-430	SWMITC00200852-1057	Invalidity, unenforceability	Peterson		11/8/2011
RX-030C	WITHDRAWN					
RX-031C	Lab Notebook P-4706	SWMITC00209199-406	Invalidity, unenforceability	Peterson, Honeycutt		11/8/2011
RX-032C	WITHDRAWN					
RX-033C	WITHDRAWN					
RX-034C	WITHDRAWN					
RX-035C	WITHDRAWN					
RX-036C	Development Laboratory Sample Order Request	SWMITC00042461	Invalidity, unenforceability	Kraker		11/8/2011
RX-037C	Trip Report – Visit to Bemis	SWMITC00665525-26	Invalidity, unenforceability	Kraker		11/8/2011
RX-038C	Trip Report – Bemis Coating Trial	SWMITC00550928-32	Invalidity, unenforceability	Kraker		11/8/2011
RX-039C	WITHDRAWN					
RX-040C	WITHDRAWN					
RX-041	WITHDRAWN					
RX-042C	Memo: Patent Review – Burn Rate Control	SWMITC00173917-24	Invalidity, unenforceability	Peterson		11/8/2011
RX-043C	Memo: Confidential Analysis – BRC Patents	SWMITC00173925-26	Invalidity, unenforceability	Peterson		11/8/2011
RX-044C	Memo: Burn Rate Control Patents	SWMITC00665243-53	Invalidity, unenforceability	Peterson		11/8/2011
RX-045C	Memo: B&W Meeting – Patent Issues	SWMITC00665228-30	Invalidity, unenforceability	Peterson		11/8/2011
RX-046	WITHDRAWN					
RX-047	U.S. Patent No. 5,474,095 to Allen et al.	SWMITC000036077-86	Invalidity, unenforceability	Honeycutt		11/8/2011
RX-048	WITHDRAWN					
RX-049C	WITHDRAWN					
RX-050C	WITHDRAWN					

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RX-051C	WITHDRAWN					
RX-052C	WITHDRAWN					
RX-053C	Status Report – Project PBS	SWMITC00697028	Invalidity, unenforceability	Kraker		11/8/2011
RX-054C	WITHDRAWN					
RX-055	WITHDRAWN					
RX-056	WITHDRAWN					
RX-057C	Test results from Longview and Shelbyville trials from 11/14/2000 to 05/15/2001	SWMITC00181481	Invalidity, unenforceability	Kraker		11/8/2011
RX-058C	Trip Report - B&W	SWMITC00039116-18	Invalidity, unenforceability	Kraker		11/8/2011
RX-059C	Lorillard Technical Service Call Report	SWMITC00114249-51	Invalidity, unenforceability	Kraker		11/8/2011
RX-060C	Trip Report – Brown & Williamson – 2/5/99	SWMITC00039007-10	Invalidity, unenforceability	Kraker		11/8/2011
RX-061C	June Progress Report	SWMITC00115820-22	Invalidity, unenforceability	Kraker, Peterson		11/8/2011
RX-062C	Minutes from Bemis/SWM Meeting on Print-Banded Paper Development	SWMITC00115535-36	Invalidity, unenforceability	Kraker		11/8/2011
RX-063C	July Progress Report	SWMITC00115817-19	Invalidity, unenforceability	Kraker		11/8/2011
RX-064C	Print-Banded Trial Plan	SWMITC00115567-68	Invalidity, unenforceability	Kraker		11/8/2011
RX-065C	Lab Notebook SMI-28	SWMITC00213261-478	Invalidity, unenforceability	Kraker		11/8/2011
RX-066C	Email: 11/13 Project PBS Trials – Update #2	SWMITC00331454	Invalidity, unenforceability	Kraker		11/8/2011
RX-067C	Program Update – Project PBS	SWMITC01023357-58	Invalidity, unenforceability	Kraker		11/8/2011
RX-068C	Email: Alginate PBS Development Status with Bemis	SWMITC00664984	Invalidity, unenforceability	Kraker		11/8/2011
RX-069C	Email: PBSL Trials – Update #5	SWMITC00344057	Invalidity, unenforceability	Kraker		11/8/2011
RX-070C	Summary of work at Bemis.	SWMITC01023366	Invalidity, unenforceability	Kraker		11/8/2011
RX-071C	Bemis Trials – Update #2	SWMITC00664967	Invalidity, unenforceability	Kraker		11/8/2011
RX-072C	Memo: PBCP Product Development Update	SWMITC00624604-07	Invalidity, unenforceability	Kraker		11/8/2011
RX-073C	Email: PBCP Update 6/20-6/29	SWMITC01023280-81	Invalidity, unenforceability	Kraker		11/8/2011

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RX-074C	Memo: New Patent Disclosure	SWMITC00160828-29	Invalidity, unenforceability	Kraker		11/8/2011
RX-075C	B&W Trip Report	SWMITC00532306-07	Invalidity, unenforceability	Kraker		11/8/2011
RX-076C	Email: DCI	SWMITC00532279	Invalidity, unenforceability	Kraker		11/8/2011
RX-077C	Progress Report - PBS R&D Activity	SWMITC00508764-72	Invalidity, unenforceability	Kraker		11/8/2011
RX-078C	Permeability Measurements – Bemis Trials, Longview, TX January 16-18, 2001	SWMITC00181274	Invalidity, unenforceability	Kraker		11/8/2011
RX-079C	Permeability Measurements – Bemis Trials, Shelbyville, TN May 14-15, 2001	SWMITC00181279	Invalidity, unenforceability	Kraker		11/8/2011
RX-080C	Permeability Measurements – Bemis Trials, Shelbyville, TN May 30, 2001	SWMITC00181483	Invalidity, unenforceability	Kraker		11/8/2011
RX-081C	Permeability Measurements – Bemis Trials, Longview, TX 11/14-15/2001	SWMITC00181225	Invalidity, unenforceability	Kraker		11/8/2011
RX-082C	Email: Wattens PBS Analysis	SWMITC00062740-42	Invalidity, unenforceability	Kraker		11/8/2011
RX-083C	Email: Bemis Update #3	SWMITC00344040	Invalidity, unenforceability	Kraker		11/8/2011
RX-084C	Email: Permeability Testing Results	SWMITC00381116-17	Invalidity, unenforceability	Kraker		11/8/2011
RX-085C	WITHDRAWN					
RX-086C	WITHDRAWN					
RX-087C	WITHDRAWN					
RX-088C	WITHDRAWN					
RX-089C	WITHDRAWN					
RX-090C	Trip Report – Paramount Packaging Print Team	BEMIS000183-87	Invalidity, unenforceability	Kucherovsky		11/8/2011
RX-091C	Trial Report – Paramount Packaging Printing Trials	BEMIS000152-59	Invalidity, unenforceability	Kucherovsky		11/8/2011
RX-092C	Fax to Joseph Kucherovsky	BEMIS000125-131	Invalidity, unenforceability	Peterson		11/8/2011
RX-093C	Progress Report – Production of BRC Paper on Commercial Printing Equipment	BEMIS000103-10	Invalidity, unenforceability	Peterson		11/8/2011
RX-094	WITHDRAWN					
RX-095C	WITHDRAWN					
RX-096C	WITHDRAWN					
RX-097C	Project New Jersey - 7/2/1997 Trial Report	BEMIS000696-705	Invalidity, unenforceability	Kucherovsky		11/8/2011

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RX-098C	Summary Report – Project New Jersey	SWMITC00664553-55	Invalidity, unenforceability	Kucherovsky		11/8/2011
RX-099C	WITHDRAWN					
RX-100C	WITHDRAWN					
RX-101C	WITHDRAWN					
RX-102	WITHDRAWN					
RX-103	WITHDRAWN					
RX-104C	WITHDRAWN					
RX-105	WITHDRAWN					
RX-106C	WITHDRAWN					
RX-107	WITHDRAWN					
RX-108C	WITHDRAWN					
RX-109	Provisional application for the '867 patent	SWMITC00694053-72	Invalidity, unenforceability	McCarty, Kraker		11/8/2011
RX-110C	Specialty Products R&D Summary for May, 1983	SWMITC00042561-64	Invalidity, unenforceability	Bullwinkel		11/8/2011
RX-111C	Email: Scanning Electrode DCI	SWMITC00533393-99	Invalidity, unenforceability	Bullwinkel		11/8/2011
RX-112C	Letter to Edward Bullwinkel	SWMITC00664398	Invalidity, unenforceability	Bullwinkel		11/8/2011
RX-113C	Email: Progress Meeting 9/10/02 DCI Prototype	SWMITC00533402-03	Invalidity, unenforceability	Bullwinkel		11/8/2011
RX-114C	Email: History Repeats Itself	SWMITC00533401	Invalidity, unenforceability	Bullwinkel		11/8/2011
RX-115C	"Development of a DCI Prototype Device"	SWMITC00182472-498	Invalidity, unenforceability	Bullwinkel		11/8/2011
RX-116C	WITHDRAWN					
RX-117C	Memo: Lorillard Meeting at SWM	SWMITC00039777-83	Invalidity, unenforceability	Kraker		11/8/2011
RX-118C	Monthly Report – August 1990	SWMITC00663700-01	Invalidity, unenforceability	Reiter		11/8/2011
RX-119C	Monthly Report – February 1991	SWMITC00362460-62	Invalidity, unenforceability	Reiter		11/8/2011
RX-120C	Memo: Summary of Ignition Propensity	SWMITC00212755-61	Invalidity, unenforceability	Reiter		11/8/2011
RX-121	European Patent Application No. 0 601 933 A2 to Zwadlo published June 15, 1994		Invalidity, unenforceability	McCarty, Honeycutt		11/8/2011
RX-122	WITHDRAWN					
RX-123	WITHDRAWN					
RX-124C	WITHDRAWN					
RX-125	WITHDRAWN					

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RX-126	WITHDRAWN					
RX-127	WITHDRAWN					
RX-128C	WITHDRAWN					
RX-129C	WITHDRAWN					
RX-130C	WITHDRAWN					
RX-131C	WITHDRAWN					
RX-132C	WITHDRAWN					
RX-133C	WITHDRAWN					
RX-134C	WITHDRAWN					
RX-135C	Joseph Wanna's Resume	SWMITC00063640-43	Invalidity, unenforceability	Wanna		11/8/2011
RX-136C	Memo: Meeting with B&W R&D	SWMITC00041708-10	Invalidity, unenforceability	Wanna		11/8/2011
RX-137C	Letter to Joseph Wanna	SWMITC0041877	Invalidity, unenforceability	Wanna, Kraker		11/8/2011
RX-138	"Cigarette Ignition Performance"	SWMITC00036218-141	Invalidity, unenforceability	Wanna, Kraker		11/8/2011
RX-139C	WITHDRAWN					
RX-140C	Letter to Joseph Wanna enclosing sample trial matrix	SWMITC00042438-42	Invalidity, unenforceability	Wanna		11/8/2011
RX-141C	Memo: Performance of Cigarettes Using Various Band Technologies	SWMITC00072668-72	Invalidity, unenforceability	Wanna		11/8/2011
RX-142C	Email: LIP Competitive Analysis	SWMITC00092268-69	Invalidity, unenforceability	Wanna		11/8/2011
RX-143C	Tables showing permeability measurements for Podium cigarettes	SWMITC00092344-51	Invalidity, unenforceability	Wanna		11/8/2011
RX-144C	Letter to Joseph Wanna	SWMITC00039019	Invalidity, unenforceability	Wanna, Kraker		11/8/2011
RX-145C	Letter to Joseph Wanna	SWMITC00114741	Invalidity, unenforceability	Wanna		11/8/2011
RX-146C	WITHDRAWN					
RX-147C	WITHDRAWN					
RX-148C	WITHDRAWN					
RX-149C	WITHDRAWN					
RX-150	Respondents' Notice of Deposition to Complainant Schweitzer.		Invalidity, unenforceability, noninfringement, no domestic industry	Thompson		11/8/2011
RX-151C	License agreement between SWM and R. J. Reynolds	SWMITC00381298-311	Invalidity	Thompson		11/8/2011
RX-152C	Sublicense agreement between SWM, R.J.R. and Oracle Packaging.	SWMITC00381312-26	Invalidity	Thompson		11/8/2011

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RX-153C	Sublicense agreement between SWM, R.J.R. and Mundet.	SWMITC00381342-56	Invalidity	Thompson		11/8/2011
RX-154C	Collection of documents related to royalty payments, purchases, invoices, and notifications of payment for R.J.R.	SWMITC00908428-38	Invalidity	Thompson		11/8/2011
RX-155C	Amendment No. 1 to License Agreement between SWM, Lorillard, and Shamrock, and license agreement.	SWMITC00381327-41	Invalidity	Thompson		11/8/2011
RX-156C	Email: New Multi-pass Patent	SWMITC00865591-92	Invalidity, unenforceability	Thompson		11/8/2011
RX-157C	WITHDRAWN					
RX-158C	Global Strategy for Banded Cigarette Paper: Technical Review of Commercially Available Products	SWMITC00676704-09	Invalidity, unenforceability	Thompson		11/8/2011
RX-159C	Presentation: License Models	SWMITC00195265-76	Invalidity, unenforceability, lack of domestic industry	Thompson		11/8/2011
RX-160C	Schweitzer-Mauduit's Supplemental Objections and Responses to Delfortgroup AG's Interrogatories Nos. 10, 17-21, 25, 34-36, 43, 59-63, 67-86		Invalidity, unenforceability	Thompson, McCarty		11/8/2011
RX-161C	WITHDRAWN					
RX-162C	Master Agreement between SWM and RJR	SWMITC00668715-41	Invalidity	Thompson		11/8/2011
RX-163C	Amended and Restated Master Agreement between SWM and RJR	SWMITC00688464-80	Invalidity	Thompson		11/8/2011
RX-164C	Master Agreement between B&W and SWM	SWMITC00692024-51	Invalidity	Thompson		11/8/2011
RX-165C	Amendment to Master Agreement with Lorillard, Master Agreement, and correspondence with Lorillard	SWMITC00768137-77	Invalidity	Thompson		11/8/2011
RX-166C	Sales summary by print solution by year	SWMITC01023558-69	Invalidity	Thompson		11/8/2011
RX-167C	LIP sales and volumes 2000 thru Sep. 2010	SWMITC01023570-610	Invalidity	Thompson		11/8/2011
RX-168C	LIP sales and volumes 2000 thru Sep. 2010	SWMITC01023611-48	Invalidity	Thompson		11/8/2011
RX-169C	Tobacco Paper Imports through June 30, 2010	SWMITC00676993	Invalidity, unenforceability, Lack of Domestic Industry	Thompson		11/8/2011
RX-170C	WITHDRAWN					

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RX-171C	WITHDRAWN					
RX-172C	WITHDRAWN					
RX-173C	WITHDRAWN					
RX-174	WITHDRAWN					
RX-175C	WITHDRAWN					
RX-176	Slides Presented at the 2005 Coresta Joint Meeting of the Smoke Science and Product Technology Study Groups (the Coresta Slides) and Accompanying Explanatory Text (the Coresta Paper)		Invalidity, unenforceability, noninfringement	Schabel, McCarty, Honeycutt		11/8/2011
RX-177C	Schweitzer-Mauduit's Corrected Supplemental Objections and Responses to Delfort's Interrogatories Nos. 17, 56-57.		Invalidity, unenforceability, lack of domestic industry	Mongeon		11/8/2011
RX-178C	Exhibit 9 to Complaint – Declaration of F. Mongeon		Invalidity, unenforceability	Mongeon		11/8/2011
RX-179C	WITHDRAWN					
RX-180C	Annotated images of pressAlso attached to this exhibit appears to be a presentation on LIP Paper Process Technology dated 02/07/2008 that describes the Newberry process and includes images of the gravure cylinders Ex. 161.	SWMITC00337929-42 SWMITC00384274-87	Invalidity, unenforceability, lack of domestic industry	Mongeon		11/8/2011
RX-181C	Email chain with Interflex Laser Engravers	SWMITC0385419-20	Invalidity, unenforceability Lack of domestic industry	Mongeon		11/8/2011
RX-182C	Printout of quality control system for production runs between 02/05/2011 and 02/21/2011.	SWMITC01024528-53	Invalidity, unenforceability Lack of domestic industry	Mongeon		11/8/2011
RX-183C	Presentation : Newberry facility	SWMITC00395987-6000	Invalidity, unenforceability Lack of domestic industry	Mongeon		11/8/2011
RX-184C	Product Description of Alginate LFD 1205 S1	SWMITC00015619-20	Invalidity, unenforceability	Mongeon		11/1/2011
RX-185C	WITHDRAWN					
RX-186C	Product Description of Alginate LFD 2205 S1	SWMITC00015621-22	Invalidity, unenforceability	Mongeon		11/1/2011

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RX-187C	Email: Band Structure of Competitive Produce vs SWM	SWMITC00090084-87	Invalidity, unenforceability	Mongeon		11/8/2011
RX-188C	Inventory of gravure cylinders and rubber transfer cylinders	SWMITC00340972-95	Invalidity, unenforceability Lack of domestic industry	Mongeon		11/8/2011
RX-189C	Inventory of gravure cylinders and rubber transfer cylinders	SWMITC00340947-66	Invalidity, unenforceability Lack of domestic industry	Mongeon		11/8/2011
RX-190C	LIP Patents Process for Investigation	SWMITC00446009	Invalidity	Mongeon		11/8/2011
RX-191C	B&W Trip Report / Program Plan Update, February 1998	SWMITC00042112-20	Invalidity, unenforceability	Durocher, Kraker		11/8/2011
RX-192C	Email: Print-Banded Paper Request – B&W	SWMITC00059811	Invalidity, unenforceability	Durocher, Kraker		11/8/2011
RX-193C	Memo: JT Cigarette Evaluation	SWMITC00383532-533	Invalidity, unenforceability	Durocher, Kraker		11/8/2011
RX-194C	Presentation: LIP Product Development Review	SWMITC00076508-45	Invalidity, unenforceability	Durocher, Kraker		11/8/2011
RX-195C	Memo : Philip Morris Update – October 1999	SWMITC00376654-55	Invalidity, unenforceability	Durocher, Kraker		11/8/2011
RX-196C	Letter to Donna Smith	SWMITC00028585-87	Invalidity, unenforceability	Durocher, Kraker		11/8/2011
RX-197C	Scientific Affairs Monthly Report – March 2004	SWMITC00153138-39	Invalidity, unenforceability	Durocher		11/8/2011
RX-198C	Research and Development Records Retention Schedule	SWMITC01023590	Invalidity, unenforceability	Durocher		11/8/2011
RX-199C	Lab Notebook P – 565	SWMITC01024768-975	Invalidity, unenforceability	Durocher		11/8/2011
RX-200	WITHDRAWN					
RX-201	WITHDRAWN					
RX-202	WITHDRAWN					
RX-203C	WITHDRAWN					
RX-204	WITHDRAWN					
RX-205	WITHDRAWN					
RX-206	WITHDRAWN					
RX-207	WITHDRAWN					
RX-208C	WITHDRAWN					
RX-209	WITHDRAWN					
RX-210	WITHDRAWN					
RX-211	WITHDRAWN					
RX-212	WITHDRAWN					

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RX-213	WITHDRAWN					
RX-214C	WITHDRAWN					
RX-215	WITHDRAWN					
RX-216	WITHDRAWN					
RX-217C	WITHDRAWN					
RX-218C	Lab Notebook P-563	SWMITC01024976-5181	Invalidity, unenforceability	Durocher		11/8/2011
RX-219C	Lab Notebook P-2136	SWMITC01025182-389	Invalidity, unenforceability	Durocher		11/8/2011
RX-220C	WITHDRAWN					
RX-221C	WITHDRAWN					
RX-222C	WITHDRAWN					
RX-223	U.S. Patent No. 4,945,932 to Mentzel, et al. with additional text from fax machine indicating it was sent to D. Durocher	SWMITC00037458-61	Invalidity, unenforceability	Durocher		11/8/2011
RX-224C	Email: Update #3 – Bemis PBS Trials	SWMITC00026368	Invalidity, unenforceability	Kraker		11/8/2011
RX-225C	Email: Update #2 – Bemis PBS Trials	SWMITC00026369	Invalidity, unenforceability	Kraker		11/8/2011
RX-226C	WITHDRAWN					
RX-227C	Email: PBSL Trials – Update #4	SWMITC00026372	Invalidity, unenforceability	Kraker		11/8/2011
RX-228	Kimberly-Clark products list including paper with permeability of 80 CU.	GL000844-48	Invalidity, unenforceability	Durocher		11/8/2011
RX-229C	WITHDRAWN					
RX-230C	Final Report – Burn Rate Control	SWMITC00042462-74	Invalidity, unenforceability			11/8/2011
RX-231C	Final Report – Burn Rate Control	SWMITC0212703-14	Invalidity, unenforceability	Durocher		11/8/2011
RX-232C	WITHDRAWN					
RX-233	U.S. Patent No. 5,060,675 to Milford, et al.		Invalidity, unenforceability	Durocher, McCarty, Honeycutt		11/8/2011
RX-234C	WITHDRAWN					
RX-235C	WITHDRAWN					
RX-236C	WITHDRAWN					
RX-237C	WITHDRAWN					
RX-238C	WITHDRAWN					
RX-239C	WITHDRAWN					
RX-240C	WITHDRAWN					
RX-241C	WITHDRAWN					
RX-242C	WITHDRAWN					

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RX-243C	WITHDRAWN					
RX-244C	WITHDRAWN					
RX-245C	WITHDRAWN					
RX-246	WITHDRAWN					
RX-247C	Paper: "Techniques for Making Accurate Low Permeability Measurements on Print Banded Papers Using the Borgwaldt A-10"	SWMITC00167585-91	Invalidity, unenforceability, noninfringement	Codwise		11/8/2011
RX-248C	Paper: "Application of ISO 2965 Section 4 to the Permeability Measurement of Paper for Lower Ignition Strength Cigarettes"	DELFORT0010850-55	Invalidity, unenforceability, noninfringement	Codwise		11/8/2011
RX-249C	Presentation: "Application of ISO 2965 Section 4 to the Permeability Measurement of Paper for Lower Ignition Strength Cigarettes"	SWMITC00425882-904	Invalidity, unenforceability, noninfringement	Codwise		11/8/2011
RX-250C	Presentation: "Techniques for Making Accurate Low Permeability Measurements on Print Banded Papers Using the Borgwaldt A-10"	SWMITC00139082-106	Invalidity, unenforceability, noninfringement	Codwise		11/8/2011
RX-251C	WITHDRAWN					
RX-252	Drawing of permeability profile measurement setup.		Invalidity, unenforceability, noninfringement	Codwise		11/8/2011
RX-253C	WITHDRAWN					
RX-254C	Email: Wattens competitive LIP paper sample	SWMITC00765444-45	Invalidity, unenforceability, noninfringement	Codwise		11/8/2011
RX-255C	WITHDRAWN					
RX-256C	Presentation: "Techniques for Making Accurate Low Permeability Measurements on Print Banded Papers Using the Borgwaldt A-10"	SWMITC00139082-86	Invalidity, unenforceability, noninfringement	Codwise		11/1/2011
RX-257C	WITHDRAWN					
RX-258C	Competitive analysis review presentation.	SWMITC00085467-86	Invalidity	Codwise		11/8/2011
RX-259C	WITHDRAWN					
RX-260C	WITHDRAWN					
RX-261C	WITHDRAWN					
RX-262C	WITHDRAWN					
RX-263C	Brown & Williamson R&D Program Update	SWMITC00039037-41	Invalidity, unenforceability	Kraker		11/8/2011

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RX-264C	Email: Sodim in place of Hagerty	SWMITC00379566	Invalidity, unenforceability, noninfringement	Codwise		11/8/2011
RX-265C	Email: B&W Orders and Other R&D Work	SWMITC00679214	Invalidity, unenforceability	Codwise		11/8/2011
RX-266C	WITHDRAWN					
RX-267	Respondents' Notice of Deposition of Bruce Steidel		Invalidity	Steidel		11/8/2011
RX-268	Respondents' Second Notice of Deposition of Complainant Schweitzer Mauduit.		Invalidity	Steidel		11/8/2011
RX-269C	Appropriation Close-Out Report	SWMITC01026738	Invalidity, unenforceability	Steidel		11/8/2011
RX-270C	Collection of data related to sales to Philip Morris of MOD paper prior to 2000	SWMITC01026737	Invalidity, unenforceability	Steidel, McCarty		11/8/2011
RX-271C	Collection of data related to sales to Philip Morris of MOD paper in 2000 and 2001	SWMITC01026739-43	Invalidity, unenforceability	Steidel, McCarty, Kraker		11/8/2011
RX-272C	Letter to Lise Gleetin	SWMITC00382828-29	Invalidity, unenforceability	Steidel, Kraker		11/8/2011
RX-273	"The Development of Cigarette Paper to Reduce Ignition Propensity of Cigarettes."	SWMITC00037427-34	Invalidity, unenforceability	Steidel, Kraker		11/8/2011
RX-274	Joint Development Agreement: Banded Cigarette Paper Commercialization Project between Philip Morris and Kimberly-Clark		Invalidity, unenforceability	Steidel		11/8/2011
RX-275C	Welcome Presentation	SWMITC00645930-79	Invalidity, unenforceability	Steidel, Kraker		11/8/2011
RX-276C	Presentation: Schweitzer-Mauduit International Overview	SWMITC00647404-93	Invalidity, unenforceability	Steidel		11/8/2011
RX-277C	Philip Morris Projects	SWMITC00376537-44	Invalidity, unenforceability	Steidel, Kraker		11/8/2011
RX-278C	Philip Morris Projects	SWMITC00376561-73	Invalidity, unenforceability	Steidel, Kraker		11/8/2011
RX-279	U.S. Patent No. 5,534,114 to Cutright, et al.		Invalidity	Steidel		11/8/2011
RX-280C	Excel spreadsheets including Product Certification	SWMITC00645998-6011	Invalidity, unenforceability	Steidel, McCarty		11/8/2011
RX-281C	Banded Cigarette Paper Chronology	SWMITC00644272	Invalidity, unenforceability	Steidel, Kraker		11/8/2011

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RX-282	Commercial Development Launch Schedule	GL0042300-303	Invalidity, unenforceability	Stover		11/8/2011
RX-283C	Philip Morris USA Sales Volume and Price History 1992-2004	SWMITC00674379	Invalidity, unenforceability	Steidel		11/8/2011
RX-284C	Memo: Philip Morris Update – October 1999	SWMITC00376654-55	Invalidity, unenforceability	Steidel		11/8/2011
RX-285C	Memo: High Coresta Base Paper Development - Spotswood	SWMITC00376879-80	Invalidity, unenforceability	Steidel, Kraker		11/8/2011
RX-286C	Spreadsheet: Spotswood Mill Banded Cigarette Paper	SWMITC00647207-24	Invalidity, unenforceability	Steidel		11/8/2011
RX-287C	Fine Paper Supply Agreement	SWMITC01026193-346	Invalidity, unenforceability	Steidel		11/8/2011
RX-288C	Amended and Restated Agreement between Philip Morris and Schweitzer-Mauduit for Fine Paper Supply	SWMITC01026642-736	Invalidity, unenforceability	Steidel		11/8/2011
RX-289C	Technology Ownership, Technical Assistance and Technology License Agreement	SWMITC01026169-92	Invalidity, unenforceability	Steidel		11/8/2011
RX-290C	Addendum to Fine Papers Supply Agreement.	SWMITC01026499-641	Invalidity, unenforceability	Steidel		11/8/2011
RX-291C	Second Amended and Restated Agreement between Philip Morris and Schweitzer-Mauduit for Fine Paper Supply	SWMITC01023093-184	Invalidity, unenforceability	Steidel		11/8/2011
RX-292C	Amended and Restated Addendum to Fine Papers Supply Agreement.	SWMITC01026347-498	Invalidity, unenforceability	Steidel		11/8/2011
RX-293	Amended and Restated Technology Ownership, Technical Assistance and Technology License Agreement	GL0042714-735	Invalidity, unenforceability	Steidel, Stover		11/8/2011
RX-294C	Memo: 70 CORESTA Cigarette Paper for Philip Morris	SWMITC00115811	Invalidity, unenforceability	Steidel, Kraker		11/8/2011
RX-295C	WITHDRAWN					
RX-296C	WITHDRAWN					
RX-297C	Letter to Dr. Joseph Wanna	SWMITC00039126-135	Invalidity, unenforceability	Kraker		11/8/2011
RX-298C	Letter to Thomas Kraker	SWMITC00040243-44	Invalidity, unenforceability	Kraker		11/8/2011
RX-299C	WITHDRAWN					
RX-300C	WITHDRAWN					
RX-301C	B&W Research & Development Update, July 1998	SWMITC00042121-28	Invalidity, unenforceability	Kraker		11/8/2011

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RX-302C	May 1998 – Monthly Report	SWMITC00042255	Invalidity, unenforceability	Kraker		11/8/2011
RX-303C	Product Description of Alginate LFD 1205	SWMITC00054365-66	Invalidity, unenforceability, lack of domestic industry	Mongeon		11/1/2011
RX-304C	11/13 Project PBS Trials – Update #1	SWMITC00059809	Invalidity, unenforceability	Kraker		11/8/2011
RX-305	WITHDRAWN					
RX-306	U.S. Patent No. 3,599,153 to Lewis et al.		Invalidity, unenforceability	McCarty, Honeycutt		11/8/2011
RX-307	WITHDRAWN					
RX-308C	WITHDRAWN					
RX-309	WITHDRAWN					
RX-310C	Hand drawn illustration of band and base paper used at Rogers Deposition		Noninfringement, No domestic industry	Rogers		11/4/2011
RX-311C	Hand drawn illustration of band and base paper with invisible bands highlighted		Noninfringement, No domestic industry	Rogers		11/4/2011
RX-312C	WITHDRAWN					
RX-313C	WITHDRAWN					
RX-314C	WITHDRAWN					
RX-315	WITHDRAWN					
RX-316	WITHDRAWN					
RX-317C	WITHDRAWN					
RX-318C	WITHDRAWN					
RX-319	WITHDRAWN					
RX-320	WITHDRAWN					
RX-321C	WITHDRAWN					
RX-322C	Hand drawn illustration comparing abrupt to gradually changing permeability profile.		Noninfringement, No domestic industry	Rogers		11/4/2011
RX-323	WITHDRAWN					
RX-324C	WITHDRAWN					
RX-325C	WITHDRAWN					
RX-326C	WITHDRAWN					
RX-327	WITHDRAWN					
RX-328C	WITHDRAWN					
RX-337	Samet, J., "The Changing Cigarette and Disease Risk: Current Status of the Evidence"	GL0043160-GL0043160	Cross examination Invalidity Non-infringement	Fritzsching		11/8/2011

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RX-338	Photograph of Borgwaldt Air Permeability Tester A20	N/A	Cross examination Domestic Industry Invalidity Non-infringement	Fritzsching, Fleming		11/8/2011
RX-339	Photograph of Borgwaldt Air Permeability Tester A20 with paper positioned to be tested	N/A	Cross examination Domestic Industry Invalidity Non-infringement	Fritzsching, Fleming		11/8/2011
RX-340	Photograph of Borgwaldt Air Permeability Tester A20 Inspection Sticker	N/A	Cross examination Domestic Industry Invalidity Non-infringement	Fritzsching, Fleming		11/8/2011
RX-341	Coresta Recommended Method No 40: Determination of Air Permeability of Materials Used As Cigarette Papers, Filter Plug Wrap and Filter Joining Paper Including Materials Having An Oriented Permeable Zone	GL0000445-GL0000462	Cross examination Domestic Industry Invalidity Non-infringement	Fritzsching		11/8/2011
RX-342	ISO 2965: Materials used as cigarette papers, filter plug wrap and filter joining paper, including materials having an oriented permeable zone - determination of air permeability (Second Edition)	N/A	Cross examination Domestic Industry Invalidity Non-infringement	Fritzsching, Fleming		11/8/2011
RX-343	International Standard ISO 2965 "Materials used as cigarette papers, filter plug wrap and filter joining paper, including materials having a discrete or oriented permeable zone and materials with bands of differing permeability - Determination of Air Permeability	GL0026235-GL0026265	Cross examination Domestic Industry Invalidity Non-infringement	Fritzsching, Fleming		11/8/2011
RX-344	Presentation - Using Paper Diffusion Measurements to Assess the Ignition Strength of Cigarettes," Presented by D. Durocher et al., at the 2005 CORESTA Joint Meeting of the Smoke Science and Product Technology Study Groups with accompanying notes	SWMITC00053778- SWMITC00053799	Cross examination Domestic Industry Invalidity Non-infringement	McCarty		11/8/2011
RX-345	Solam Produktdatenblatt for Solcore S 500 (F-6493)	GL0043367	Non-infringement Cross examination	Fritzsching		11/8/2011

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RX-346	Letter from Solam to LIPTec GmbH regarding Offizielle Stellungnahme bzgl. Datenblätter/Sicherheitsdatenblätter Solcore S 500 and Solam Sicherheitsdatenblatt für Solcore s 500 (F-6493)	GL0043362-GL0043366	Non-infringement Cross examination	Fritzsching		11/8/2011
RX-347	Product Description - Emsland-Starke GmbH F-6493	GL0042697-GL0042698	Cross examination Non-infringement Domestic Industry Invalidity	Fritzsching		11/8/2011
RX-348	Gruber et al. , "Potenzial von fragmentierter Starke als Streichfarbenbindemittel", Bindemittel, Wochenblatt Für Papierfabrikation22, 2005	GL0006340-GL0006343	Cross examination Non-infringement	Fritzsching		11/8/2011
RX-349C	Prüfbericht Cigarettenpapier 09/2004	GL0042405	Cross examination Domestic Industry Invalidity Non-infringement	Fritzsching, Schabel		11/8/2011
RX-350	Photographs of Merit Cigarette Packaging	GL0042288-GL0042293	Cross examination Invalidity	Fritzsching, McCarty		11/8/2011
RX-351	Photograph of Metal Foil	N/A	Cross examination Domestic Industry Invalidity Non-infringement	Fritzsching, Fleming		11/8/2011
RX-352	Procedure used to make metal foil samples	N/A	Cross examination Domestic Industry Invalidity Non-infringement	Fritzsching, Fleming		11/8/2011
RX-353	U.S. Patent Application Publication No. 2009/0266371	N/A	Non Infringement	Fritzsching		11/8/2011
RX-354	Presentation - Production of tobacco papers by Thomas Fritzsching	GL0042663-GL0042680	Cross examination Domestic Industry Invalidity Non-infringement	Fritzsching		11/8/2011
RX-355	Ecusta Standard Products Catalog	GL0000481-GL0000483	Cross examination Domestic Industry Invalidity Non-infringement	Fritzsching, McCarty		11/8/2011

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RX-356	Chart - Kimberly Clark Corporation Product List Wood Cigarette Papers	GL0000844-GL0000848	Cross examination Domestic Industry Invalidity Non-infringement	Fritzsching, McCarty		11/8/2011
RX-357C	Presentation - Low Ignition Propensity Special Cigarette Paper	GL0002925-GL0002937	Cross examination Domestic Industry Invalidity Non-infringement	Fritzsching		11/8/2011
RX-358C	Drawing - Amcor-Druckversuche 24.+25.2.05 Bahnfuhrung hinten (Depiction of a paper machine)	GL0004557	Cross examination	Fritzsching		11/8/2011
RX-359C	Drawing - EP 12 Funktionsweise	GL0006515-GL0006518	Cross examination	Fritzsching		11/8/2011
RX-360C	Engelking Deposition Exhibit 23: Diagram Draufsicht Bobinenstreifen	GL0013786-GL0013786	Cross examination Domestic Industry Invalidity Non-infringement	Fritzsching		11/8/2011
RX-361C	Drawing - Anlagenkonzept Vertrauliche Information	GL0020678-GL0020679	Cross examination Domestic Industry Invalidity Non-infringement	Fritzsching		11/8/2011
RX-362C	Schematic - 731557 Glueflow	GL0032459	Cross examination Domestic Industry Invalidity Non-infringement	Fritzsching		11/8/2011
RX-363C	Drawing - Kleberfluss, Luftfluss	GL0032460	Cross examination Domestic Industry Invalidity Non-infringement	Fritzsching		11/8/2011
RX-364C	Schematic - WM801-8 Schutzvermerk nach DIN ISO 16016 beachten	GL0032462	Cross examination Domestic Industry Invalidity Non-infringement	Fritzsching		11/8/2011
RX-365C	Schematic - Slotnozzle	GL0032468	Cross examination Domestic Industry Invalidity Non-infringement	Fritzsching		11/8/2011
RX-366C	Drawing - Duse 15mm in Papier Dusenwinkel 10 degree	GL0032481	Cross examination Domestic Industry Invalidity Non-infringement	Fritzsching		11/8/2011

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RX-367C	Drawing - Duse tangiert mit Papier Dusenwinkel 10 degree	GL0032482	Cross examination Domestic Industry Invalidity Non-infringement	Fritzsching		11/8/2011
RX-368C	Drawing showing elevation view of LIP 3 machine	GL0042693	Cross examination Domestic Industry Invalidity Non-infringement	Fritzsching		11/8/2011
RX-369	Photograph of cigarette paper highlighted with orange	N/A	Cross examination Non-infringement	Fritzsching		11/8/2011
RX-370C	Photograph of Glatz slit nozzle	GL0032518	Cross examination Invalidity Non-infringement	Fritzsching		11/8/2011
RX-371	Video - opening Merit cigarettes	N/A	Invalidity Cross examination	Glatz Fact Witnesses (Thomas Fritzsching)		REJECTED (Order No. 29, 10/31/11)
RX-372C	WITHDRAWN					
RX-373C	T. Kraker PBS Project	SWMITC00114022	Cross examination	Kraker		11/8/2011
RX-374C	WITHDRAWN					
RX-375C	WITHDRAWN					
RX-376C	WITHDRAWN					
RX-377C	Memo - February Progress Report	SWMITC00115841- SWMITC00115842	Cross examination	Kraker		11/8/2011
RX-378C	WITHDRAWN					
RX-379C	WITHDRAWN					
RX-380C	WITHDRAWN					
RX-381C	WITHDRAWN					
RX-382C	Witness Statement of Thomas Fritzsching	N/A	Invalidity Non Infringement	Fritzsching		11/8/2011
RX-383	Certified trademark registration with Title and Status for U.S. Reg. 1701056	N/A	Cross-examination Domestic Industry Invalidity Non Infringement	Honeycutt		11/8/2011
RX-384	Expert Report of Tom Kremer - Figure 1	N/A	Invalidity	Kremer		11/8/2011
RX-385	Expert Report of Tom Kremer - Figure 2	N/A	Invalidity	Kremer, Honeycutt		11/8/2011
RX-386	Expert Report of Tom Kremer - Figure 3	N/A	Invalidity	Kremer		11/8/2011
RX-387	Expert Report of Tom Kremer - Figure 4	N/A	Invalidity	Kremer, Honeycutt		11/8/2011

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RX-388	Expert Report of Tom Kremer - Figure 5	N/A	Invalidity	Kremer		11/8/2011
RX-389	Expert Report of Tom Kremer - Figure 6	N/A	Invalidity	Kremer		11/8/2011
RX-390	Expert Report of Tom Kremer - Figure 7	N/A	Invalidity	Kremer		11/8/2011
RX-391	Expert Report of Tom Kremer - Figure 8	N/A	Invalidity	Kremer, Honeycutt		11/8/2011
RX-392	Expert Report of Tom Kremer - Figure 9	N/A	Invalidity	Kremer		11/8/2011
RX-393	Expert Report of Tom Kremer - Figure 10	N/A	Invalidity	Kremer, Honeycutt		11/8/2011
RX-394	Expert Report of Tom Kremer - Figure 11	N/A	Invalidity	Kremer		11/8/2011
RX-395	Expert Report of Tom Kremer - Figure 12	N/A	Invalidity	Kremer		11/8/2011
RX-396	Expert Report of Tom Kremer - Figure 13	N/A	Invalidity	Kremer		11/8/2011
RX-397	Expert Report of Tom Kremer - Figure 14	N/A	Invalidity	Kremer, Honeycutt		11/8/2011
RX-398	Expert Report of Tom Kremer - Figure 15	N/A	Invalidity	Kremer		11/8/2011
RX-399	Expert Report of Tom Kremer - Figure 16	N/A	Invalidity	Kremer		11/8/2011
RX-400	Expert Report of Tom Kremer - Figure 17	N/A	Invalidity	Kremer		11/8/2011
RX-401	Expert Report of Tom Kremer - Figure 18	N/A	Invalidity	Kremer		11/8/2011
RX-402	Expert Report of Tom Kremer - Figure 19	N/A	Invalidity	Kremer		11/8/2011
RX-403	Expert Report of Tom Kremer - Figure 20	N/A	Invalidity	Kremer		11/8/2011
RX-404	Expert Report of Tom Kremer - Figure 21	N/A	Invalidity	Kremer		11/8/2011
RX-405	WITHDRAWN					
RX-406	WITHDRAWN					
RX-407	WITHDRAWN					
RX-408	WITHDRAWN					
RX-409	WITHDRAWN					
RX-410	WITHDRAWN					

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RX-411	Exhibit H to Expert Report of Dr. Paul D. Fleming III: Thickness measurement of LIP-paper	N/A	Cross examination Invalidity Domestic Industry Non-infringement	Fleming, Honeycutt		11/8/2011
RX-412	Expert Report of S. Wayne McCarty - Figure 1	N/A	Invalidity	McCarty		11/8/2011
RX-413	Expert Report of S. Wayne McCarty - Figure 2	N/A	Invalidity	McCarty		11/8/2011
RX-414	WITHDRAWN					
RX-415	WITHDRAWN					
RX-416	Expert Report of S. Wayne McCarty - Figure 9	N/A	Invalidity	McCarty		11/8/2011
RX-417	WITHDRAWN					
RX-418	WITHDRAWN					
RX-419	WITHDRAWN					
RX-420	WITHDRAWN					
RX-421	WITHDRAWN					
RX-422	WITHDRAWN					
RX-423	WITHDRAWN					
RX-424	WITHDRAWN					
RX-425	WITHDRAWN					
RX-426	WITHDRAWN					
RX-427	U.S. Patent No. 3,911,932	N/A	Cross examination Domestic Industry Invalidity Non-infringement	McCarty, Honeycutt		11/8/2011
RX-428	WITHDRAWN					
RX-429	U.S. Patent No. 4,077,414	N/A	Cross examination Domestic Industry Invalidity Non-infringement	McCarty, Honeycutt		11/8/2011
RX-430	WITHDRAWN					
RX-431	WITHDRAWN					
RX-432	WITHDRAWN					
RX-433	WITHDRAWN					
RX-434	U.S. Patent No. 4,615,345	N/A	Cross examination Domestic Industry Invalidity Non-infringement	McCarty, Schabel		11/8/2011

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RX-435	U.S. Patent No. 4,739,775	N/A	Cross examination Domestic Industry Invalidity Non-infringement	Schabel		11/8/2011
RX-436	U.S. Patent No. 4,889,145	N/A	Cross examination Domestic Industry Invalidity Non-infringement	McCarty, Honeycutt		11/8/2011
RX-437	WITHDRAWN					
RX-438	WITHDRAWN					
RX-439	WITHDRAWN					
RX-440	U.S. Patent No. 5,231,524	N/A	Cross examination Domestic Industry Invalidity Non-infringement	McCarty, Honeycutt		11/8/2011
RX-441	WITHDRAWN					
RX-442	U.S. Patent No. 5,417,228	N/A	Cross examination Domestic Industry Invalidity Non-infringement	McCarty, Honeycutt		11/8/2011
RX-443	U.S. Patent No. 5,474,095	N/A	Cross examination Domestic Industry Invalidity Non-infringement	McCarty, Honeycutt		11/8/2011
RX-444	U.S. Patent No. 5,503,876	N/A	Cross examination Domestic Industry Invalidity Non-infringement	McCarty, Honeycutt		11/8/2011
RX-445	U.S. Patent No. 5,534,114	N/A	Cross examination	McCarty		11/8/2011
RX-446	WITHDRAWN					
RX-447	WITHDRAWN					
RX-448	WITHDRAWN					
RX-449	WITHDRAWN					
RX-450	WITHDRAWN					
RX-451	WITHDRAWN					
RX-452	WITHDRAWN					
RX-453	WITHDRAWN					
RX-454	WITHDRAWN					
RX-455	WITHDRAWN					
RX-456	WITHDRAWN					
RX-457	WITHDRAWN					

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RX-458	U.S. Patent No. 6,298,860	N/A	Cross examination Domestic Industry Invalidity Non-infringement	McCarty, Honeycutt		11/8/2011
RX-459	U.S. Patent No. 6,568,403	N/A	Cross examination Domestic Industry Invalidity Non-infringement	McCarty, Honeycutt		11/8/2011
RX-460	U.S. Patent No. 6,645,605	N/A	Cross examination Domestic Industry Invalidity Non-infringement	McCarty, Honeycutt		11/8/2011
RX-461	WITHDRAWN					
RX-462	WITHDRAWN					
RX-463	UK Patent Application No. GB 2,100,572	N/A	Cross examination Domestic Industry Invalidity Non-infringement	McCarty, Honeycutt		11/8/2011
RX-464	WITHDRAWN					
RX-465	WITHDRAWN					
RX-466	WITHDRAWN					
RX-467	WITHDRAWN					
RX-468	Meier, "Philip Morris Says It Has A Safer Paper," New York Times, January 11, 2000	GL0041536-GL0041537	Cross examination Domestic Industry Invalidity Non-infringement	McCarty		11/8/2011
RX-469	News Release - Philip Morris U.S.A. to Launch New Cigarette Paper Nationwide on All Merit Cigarettes	GL0042322-GL0042324	Cross examination Invalidity	Stover, Honeycutt		11/8/2011
RX-470	WITHDRAWN					
RX-471	WITHDRAWN					
RX-472	WITHDRAWN					
RX-473C	Owens, William F., "Effect of Cigarette Paper on Smoke Yield and Composition"	LTC_LIP_201-LTC_LIP_212	Cross examination	Stover		11/8/2011
RX-474C	Email from Zawadski to McCarty regarding IP Review	LTC_LIP_322-LTC_LP_336	Cross examination Invalidity Domestic Industry Non-infringement	Stover, McCarty		11/8/2011
RX-475	Hawley's Condensed Chemical Dictionary, Fourteenth Edition (2001)	N/A	Cross examination	Kremer		11/8/2011
RX-476	WITHDRAWN					

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RX-477	WITHDRAWN					
RX-478	The Condensed Chemical Dictionary 10th Ed, rev. by G. G. Hawley 1981	N/A	Cross examination	Kremer		11/8/2011
RX-479	WITHDRAWN					
RX-480	"Using Paper Diffusion Measurements to Assess the Ignition Strength of Cigarettes," Presented by D. Durocher et al., at the 2005 CORESTA Joint Meeting of the Smoke Science and Product Technology Study Groups, with accompanying notes	N/A	Cross examination	Fritzsching		11/8/2011
RX-481	Joint List Showing Each Party's Proposed Construction of Disputed Claim Terms	N/A	Cross examination Domestic Industry Invalidity Non-infringement	Fleming, Rogers		11/4/2011
RX-482	TSG, 1987, Technical Study Group on Cigarette and Little Cigar Fire Safety, Cigarette Fire Safety Act of 1984, "Towards a less fire-prone cigarette," Final Report to Congress	N/A	Cross examination Domestic Industry Invalidity Non infringement	McCarty		11/8/2011
RX-483	WITHDRAWN					
RX-484C	WITHDRAWN					
RX-485	WITHDRAWN					
RX-486C	WITHDRAWN					
RX-487C	WITHDRAWN					
RX-488C	WITHDRAWN					
RX-489	WITHDRAWN					
RX-490C	WITHDRAWN					
RX-491	WITHDRAWN					
RX-492	Curriculum Vitae for S. Wayne McCarty	N/A	Invalidity Domestic Industry	McCarty		11/8/2011
RX-493C	WITHDRAWN					
RX-494C	WITHDRAWN					
RX-495C	WITHDRAWN					
RX-496C	Schweitzer-Mauduit International, Inc. Spotswood, New Jersey, Banded Cigarette paper PaperMaking Operations Manual DRAFT v.3	SWMITC00377710- SWMITC00377770	Cross-examination Invalidity	Kraker		11/8/2011
RX-497C	WITHDRAWN					
RX-498	WITHDRAWN					
RX-499C	WITHDRAWN					

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RX-500	Curriculum Vitae for Thomas Kremer	N/A	Invalidity Domestic Industry	Kremer		11/8/2011
RX-501	WITHDRAWN					
RX-502C	Spreadsheet - Sales	SWMITC01026737	Cross examination Invalidity	Kraker		11/8/2011
RX-503C	WITHDRAWN					
RX-504	WITHDRAWN					
RX-505	Cellulose Trademark	GL0043393	Cross examination Invalidity	SWM Expert Witnesses Glatz Expert Witnesses (S. Wayne McCarty)		REJECTED (Order No. 29, 10/31/11)
RX-506	Report - Papermaking Process Development (2020297305 - 2020297307)	GL0043389-GL0043392	Cross examination Invalidity	Stover, Honeycutt		11/8/2011
RX-507	Report - Papermaking Process Development (2021372580 - 2021372581)	GL0043385-GL0043388	Cross examination Invalidity	Stover, Honeycutt		11/8/2011
RX-508	Beloit Trials - Cellulose Application by Moving Orifice Device (2078187853 - 2078187856)	GL0043380-GL0043384	Cross examination Invalidity	Stover, Honeycutt		11/8/2011
RX-509	Email from McComb to Lisbon et al regarding PaperSelect	GL0042294	Cross examination Invalidity	Stover		11/8/2011
RX-510	Memo - Pack Code Requirements for Phillip Morris USA Manufacturing	GL0042400-GL0042401	Cross examination Invalidity	Stover, McCarty, Honeycutt		11/8/2011
RX-511	Email from Osbourne to Barrington et al regarding Merit w/banded paper - national launch	GL0042402-GL0042403	Cross examination Invalidity	Stover		11/8/2011
RX-513	Presentation - Merit	GL0042408-GL0042416	Cross examination Invalidity	Stover		11/8/2011
RX-514C	WITHDRAWN					
RX-515C	Letter from Kraker to Takenaka re: sample bobbin of 200 CORESTA cigarette paper	SWMITC00039028- SWMITC00039029	Cross examination	Kraker		11/8/2011
RX-516C	Memo - R&D Program Update B&W	SWMITC00039160- SWMITC00039165	Cross examination	Kraker		11/8/2011
RX-517C	WITHDRAWN					
RX-518C	WITHDRAWN					
RX-519C	WITHDRAWN					
RX-520C	WITHDRAWN					
RX-521C	Agenda - B&W R&D Meeting	SWMITC00042137- SWMITC00042141	Cross examination	Kraker		11/8/2011
RX-522C	Email from Kraker to Snow regarding Report on R&D Meeting with B&W	SWMITC00059807	Cross examination	Kraker		11/8/2011

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RX-523C	WITHDRAWN					
RX-524C	WITHDRAWN					
RX-525C	WITHDRAWN					
RX-526C	WITHDRAWN					
RX-527C	Email from Snow to Baskevitch et al regarding Visit to B&W: PBS Discussions	SWMITC00181218-SWMITC00181219	Cross examination	Kraker		11/8/2011
RX-528C	WITHDRAWN					
RX-529C	WITHDRAWN					
RX-530C	WITHDRAWN					
RX-531C	WITHDRAWN					
RX-532C	WITHDRAWN					
RX-533C	WITHDRAWN					
RX-534C	Memo - Coating Integrity - Burn Rate Control Papers	SWMITC00381478-SWMITC00381490	Cross examination Invalidity	Peterson		11/8/2011
RX-535	Fisher, "Putting Out Fires - Philip Morris is the first manufacturer to produce cigarettes with less fire potential". Tobacco Reporter	SWMITC00381534-SWMITC00381535	Cross examination Invalidity	Kraker		11/8/2011
RX-536C	WITHDRAWN					
RX-537C	WITHDRAWN					
RX-538C	WITHDRAWN					
RX-539	WITHDRAWN					
RX-540C	WITHDRAWN					
RX-541C	WITHDRAWN					
RX-542C	WITHDRAWN					
RX-543	Information regarding Philip Morris USA Inc's Public Documents Database	GL0043368-GL0043379	Cross-examination Domestic Industry Invalidity Non infringement	Authenticating Witness (S. Wayne McCarty)		REJECTED (Order No. 29, 10/31/11)
RX-544C	WITHDRAWN					
RX-545	Comments by Schweitzer-Mauduit International, Inc. on Title 19 NYCRR Part 429 - Fire Safety Standards for Cigarettes	SWMITC00361290-SWMITC00361308	Cross-examination Invalidity	Kraker		11/8/2011
RX-546C	WITHDRAWN					
RX-547C	WITHDRAWN					
RX-548C	WITHDRAWN					
RX-549C	Commercialization of LIP Cigarette Papers From the 1980's to Present	SWMITC00363113-SWMITC00363153	Cross-examination Invalidity	Kraker		11/8/2011

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RX-550	Document information data sheet for document entitled "Schweitzer-Mauduit Announces its Role as a Development Partner with Philip Morris" (Bates No. 2078185898/5899)	GL0043394	Cross-examination Invalidity	SWM Fact Witnesses SWM Expert Witnesses Glatz Expert Witnesses (S. Wayne McCarty) Authentication Witness		REJECTED (Order No. 29, 10/31/11)
RX-551	Document information data sheet for document entitled "History of Project Tomorrow" (Bates No. 2078402941/2948)	GL0043395	Cross-examination Invalidity	SWM Fact Witnesses SWM Expert Witnesses Glatz Expert Witnesses (S. Wayne McCarty) Authentication Witness		REJECTED (Order No. 29, 10/31/11)
RX-552	Document information data sheet for document entitled "Banded Paper Program" (Bates No. 2078197299/7313)	GL0043396	Cross-examination Invalidity	SWM Fact Witnesses SWM Expert Witnesses Glatz Expert Witnesses (S. Wayne McCarty) Authentication Witness		REJECTED (Order No. 29, 10/31/11)
RX-553	Document information data sheet for document entitled "Banded Cigarette Paper Licensing" (Bates No. 2078190045/0062)	GL0043397	Cross-examination Invalidity	SWM Fact Witnesses SWM Expert Witnesses Glatz Expert Witnesses (S. Wayne McCarty) Authentication Witness		REJECTED (Order No. 29, 10/31/11)
RX-554	Document information data sheet for document entitled "Philip Morris Develops Paper to Limit Cigarette Fires" (Bates No. 2081294758A/4759)	GL0043398	Cross-examination Invalidity	SWM Fact Witnesses SWM Expert Witnesses Glatz Expert Witnesses (S. Wayne McCarty) Authentication Witness		REJECTED (Order No. 29, 10/31/11)
RX-555	Document information data sheet for document entitled "PaperSelect" (Bates No. 2078198258B)	GL0043399	Cross-examination Invalidity	SWM Fact Witnesses SWM Expert Witnesses Glatz Expert Witnesses (S. Wayne McCarty) Authentication Witness		REJECTED (Order No. 29, 10/31/11)
RX-556	Document information data sheet for document entitled "PaperSelect National Launch Messages" (Bates No. 2081962234/2238)	GL0043400	Cross-examination Invalidity	SWM Fact Witnesses SWM Expert Witnesses Glatz Expert Witnesses (S. Wayne McCarty) Authentication Witness		REJECTED (Order No. 29, 10/31/11)
RX-557	Document information data sheet for document entitled "Commercial Development Launch Schedule Merit PaperSelect National Launch" (Bates No. 2078602059/2062)	GL0043401	Cross-examination Invalidity	SWM Fact Witnesses SWM Expert Witnesses Glatz Expert Witnesses (S. Wayne McCarty) Authentication Witness		REJECTED (Order No. 29, 10/31/11)

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RX-558	Document information data sheet for document entitled "Philip Morris U.S.A. to Launch New Cigarette Paper on All Merit Cigarettes PaperSelect May Make Cigarettes Less Likely to Ignite Certain Fabrics" (Bates No. 2081973976/3978)	GL0043402	Cross-examination Invalidity	SWM Fact Witnesses SWM Expert Witnesses Glatz Expert Witnesses (S. Wayne McCarty) Authentication Witness		REJECTED (Order No. 29, 10/31/11)
RX-559	Document information data sheet for document entitled "Commercial Development Launch Schedule Merit PaperSelect National Launch" (Bates No. 2075181612/1615)	GL0043403	Cross-examination Invalidity	SWM Fact Witnesses SWM Expert Witnesses Glatz Expert Witnesses (S. Wayne McCarty) Authentication Witness		REJECTED (Order No. 29, 10/31/11)
RX-560	Document information data sheet for document designated with Bates No. 2080927818/7821	GL0043404	Cross-examination Invalidity	SWM Fact Witnesses SWM Expert Witnesses Glatz Expert Witnesses (S. Wayne McCarty) Authentication Witness		REJECTED (Order No. 29, 10/31/11)
RX-561	Document information data sheet for document entitled "Complaints on Banded Paper Merit" (Bates No. 2080927740/7744)	GL0043405	Cross-examination Invalidity	SWM Fact Witnesses SWM Expert Witnesses Glatz Expert Witnesses (S. Wayne McCarty) Authentication Witness		REJECTED (Order No. 29, 10/31/11)
RX-562	Document information data sheet for document entitled "RE: Merit Test Market - Pack Code" (Bates No. 2078186177)	GL0043406	Cross-examination Invalidity	SWM Fact Witnesses SWM Expert Witnesses Glatz Expert Witnesses (S. Wayne McCarty) Authentication Witness		REJECTED (Order No. 29, 10/31/11)
RX-563	Document information data sheet for document entitled "Merit w/ Banded Paper National Launch" (Bates No. 2082032831C/2832)	GL0043407-GL0043408	Cross-examination Invalidity	SWM Fact Witnesses SWM Expert Witnesses Glatz Expert Witnesses (S. Wayne McCarty) Authentication Witness		REJECTED (Order No. 29, 10/31/11)
RX-564	Document information data sheet for document entitled "Philip Morris U.S.A. to Launch New Cigarette Paper Nationwide on All Merit Cigarettes, PaperSelect Cigarette Paper May Make Cigarettes Less Likely to Ignite Certain Fabrics" (Bates No. 2078402652/2654)	GL0043409	Cross-examination Invalidity	SWM Fact Witnesses SWM Expert Witnesses Glatz Expert Witnesses (S. Wayne McCarty) Authentication Witness		REJECTED (Order No. 29, 10/31/11)

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RX-565	Document information data sheet for document entitled "Pack Code Requirements for Philip Morris USA Manufacturing" (Bates No. 2053749662/9663)	GL0043410	Cross-examination Invalidity	SWM Fact Witnesses SWM Expert Witnesses Glatz Expert Witnesses (S. Wayne McCarty) Authentication Witness		REJECTED (Order No. 29, 10/31/11)
RX-566	Document information data sheet for document entitled "Merit w/ Banded Paper - National Launch" (Bates No. 2082032831C/2832)	GL0043411-GL0043412	Cross-examination Invalidity	SWM Fact Witnesses SWM Expert Witnesses Glatz Expert Witnesses (S. Wayne McCarty) Authentication Witness		REJECTED (Order No. 29, 10/31/11)
RX-567	Document information data sheet for document designated with Bates No. 2080508954/8962	GL0043413	Cross-examination Invalidity	SWM Fact Witnesses SWM Expert Witnesses Glatz Expert Witnesses (S. Wayne McCarty) Authentication Witness		REJECTED (Order No. 29, 10/31/11)
RX-568	Document information data sheet for document entitled "Amended and Restated Technology Ownership, Technical Assistance and Technology License Agreement" (Bates No. 2079150722/2079150743)	GL0043414	Cross-examination Invalidity	SWM Fact Witnesses SWM Expert Witnesses Glatz Expert Witnesses (S. Wayne McCarty) Authentication Witness		REJECTED (Order No. 29, 10/31/11)
RX-569	Document information data sheet for document entitled "Banded Paper Program Status Summary Report" (Bates No. 2078191329)	GL0043415	Cross-examination Invalidity	SWM Fact Witnesses SWM Expert Witnesses Glatz Expert Witnesses (S. Wayne McCarty) Authentication Witness		REJECTED (Order No. 29, 10/31/11)
RX-570	Document information data sheet for document entitled "Notice to Proceed" (Bates No. 2078406291)	GL0043416	Cross-examination Invalidity	SWM Fact Witnesses SWM Expert Witnesses Glatz Expert Witnesses (S. Wayne McCarty) Authentication Witness		REJECTED (Order No. 29, 10/31/11)
RX-571	Document information data sheet for document entitled "Banded Paper Commercialization Milestone Summary" (Bates No. 2081984122/4125)	GL0043417	Cross-examination Invalidity	SWM Fact Witnesses SWM Expert Witnesses Glatz Expert Witnesses (S. Wayne McCarty) Authentication Witness		REJECTED (Order No. 29, 10/31/11)
RX-572	Document information data sheet for document entitled "SWM Prepayments" (Bates No. 2078400412)	GL0043418	Cross-examination Invalidity	SWM Fact Witnesses SWM Expert Witnesses Glatz Expert Witnesses (S. Wayne McCarty) Authentication Witness		REJECTED (Order No. 29, 10/31/11)

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RX-573	Document information data sheet for document entitled "Banded Paper Monthly Report - 000717 - 000818" (Bates No. 2505006132/6135)	GL0043419	Cross-examination Invalidity	SWM Fact Witnesses SWM Expert Witnesses Glatz Expert Witnesses (S. Wayne McCarty) Authentication Witness		REJECTED (Order No. 29, 10/31/11)
RX-574	Document information data sheet for document entitled "RE: Notice to Proceed" (Bates No. 2078400408)	GL0043420	Cross-examination Invalidity	SWM Fact Witnesses SWM Expert Witnesses Glatz Expert Witnesses (S. Wayne McCarty) Authentication Witness		REJECTED (Order No. 29, 10/31/11)
RX-575	Document information data sheet for document entitled "Banded Paper Commercialization 20001000" (Bates No. 2082029975/9986)	GL0043421	Cross-examination Invalidity	SWM Fact Witnesses SWM Expert Witnesses Glatz Expert Witnesses (S. Wayne McCarty) Authentication Witness		REJECTED (Order No. 29, 10/31/11)
RX-576	Document information data sheet for document entitled "Banded Paper Monthly Highlight Report - 000918 - 001018" (Bates No. 2081974390/4395)	GL0043422	Cross-examination Invalidity	SWM Fact Witnesses SWM Expert Witnesses Glatz Expert Witnesses (S. Wayne McCarty) Authentication Witness		REJECTED (Order No. 29, 10/31/11)
RX-577	Document information data sheet for document entitled "Schweitzer-Mauduit Announces New Supply Agreement with Philip Morris U.S.A." (Bates No. 2081509939)	GL0043423	Cross-examination Invalidity	SWM Fact Witnesses SWM Expert Witnesses Glatz Expert Witnesses (S. Wayne McCarty) Authentication Witness		REJECTED (Order No. 29, 10/31/11)
RX-578	Schweitzer-Mauduit Announces its Role as a Development Partner with Philip Morris	GL0041538-GL0041539	Cross-examination Invalidity	Stover		11/8/2011
RX-579	History of Project Tomorrow	GL0041543-GL0041550	Cross-examination Invalidity	Stover		11/8/2011
RX-580	Presentation - Banded Paper Program	GL0041551-GL0041565	Cross-examination Invalidity	Stover		11/8/2011
RX-581	Presentation - Banded Cigarette Paper Licensing Review	GL0041566-GL0041583	Cross-examination Invalidity	Stover		11/8/2011
RX-582	Philip Morris develops paper to limit cigarette fires	GL0041584-GL0041585	Cross-examination Invalidity	Stover		11/8/2011
RX-583	Discussion Draft PaperSelect National Launch Messages	GL0042295-GL0042299	Cross examination Invalidity	Stover		11/8/2011
RX-584	Draft New Release - Philip Morris U.S.A. to Launch New Cigarette Paper on All Merit Cigarettes	GL0042304-GL0042306	Cross examination Invalidity	Stover		11/8/2011

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RX-585	Chart - Production Schedule	GL0042307-GL0042310	Cross examination Invalidity	Stover		11/8/2011
RX-586	Letter from Ferreira to McComb et al regarding proposal for test market database and sample augmentation	GL0042311-GL0042314	Cross examination Invalidity	Stover		11/8/2011
RX-587	Memo - Complaints on Banded Paper Merit	GL0042315-GL0042319	Cross examination Invalidity	Stover		11/8/2011
RX-588	Email from Lisbon to Phan et al regarding Merit Test Market - Pack Code	GL0042320	Cross examination Invalidity	Stover		11/8/2011
RX-589	Email from Osbourne to Barrington et al regarding Merit w/banded paper - national launch	GL0042321	Cross examination Invalidity	Stover		11/8/2011
RX-590	Banded Paper Program Status Summary	GL0043024	Cross examination Invalidity	Stover		11/8/2011
RX-591	Letter from Long to Hodgkinson regarding Notice to Proceed	GL0043025	Cross examination Invalidity	Stover		11/8/2011
RX-592	Banded Paper Commercialization Milestone Summary	GL0043026-GL0043029	Cross examination Invalidity	Stover		11/8/2011
RX-593	Letter from Long to Birsinger regarding SWM Prepayments	GL0043030	Cross examination Invalidity	Stover		11/8/2011
RX-594	Memo - Banded Paper Monthly Report	GL0043031-GL0043034	Cross examination Invalidity	Stover		11/8/2011
RX-595	Letter from Long to Hodgkinson regarding Notice to Proceed	GL0043035	Cross examination Invalidity	Stover		11/8/2011
RX-596	Presentation - Banded Paper Commercialization	GL0043036-GL0043047	Cross examination Invalidity	Stover		11/8/2011
RX-597	Memo - Banded Paper Monthly Highlight Report 9/18-10/18	GL0043048-GL0043053	Cross examination Invalidity	Stover		11/8/2011
RX-598	Schweitzer-Mauduit Announces New Supply Agreement with Philip Morris USA	GL0043055	Cross examination Invalidity	Stover		11/8/2011
RX-599C	Email from Byrd to DiGrigoli regarding Bemis 7/26	SWMITC00320137	Cross examination	Kraker		11/8/2011
RX-600C	WITHDRAWN					
RX-601C	WITHDRAWN					
RX-602C	Email from Peterson to Kraker et al regarding Bemis Trial Results	SWMITC00531561- SWMITC00531562	Cross examination	Kraker		11/8/2011
RX-603C	WITHDRAWN					
RX-604C	WITHDRAWN					

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RX-605C	Letter from Thomas Kraker to Troy Sprang cc: Donald Durocher; Carmen DiGrigoli regarding Pro/Con List	SWMITC00532219	Cross examination	Kraker		11/8/2011
RX-606C	Email from Kraker to Durocher et al regarding Alginate PBS Development Status with Bemis	SWMITC00532227	Cross examination	Kraker		11/8/2011
RX-607C	Email from Kraker to Snow regarding Bemis Trials - Update #3	SWMITC00532235	Cross examination	Kraker		11/8/2011
RX-608C	Email from Kraker to Gu et al regarding Additional Data from LV Trials	SWMITC00551067	Cross examination	Kraker		11/8/2011
RX-609C	WITHDRAWN					
RX-610C	WITHDRAWN					
RX-611	Authenticating Witness Statement	N/A	Authentication	Stover		11/8/2011
RX-612	Declaration of Angela Starr Small	N/A	Authentication	Stover		11/8/2011
RX-615	WITHDRAWN					
RX-616	WITHDRAWN					
RX-617	WITHDRAWN					
RX-618	WITHDRAWN					
RX-619	WITHDRAWN					
RX-620	WITHDRAWN					
RX-621	International Application No. PCT Application No. PCT/US80/00120 to Cohn, published as WO 81/02443		Invalidity, unenforceability	Honeycutt		11/8/2011
RX-638C	WITHDRAWN					
RX-639	WITHDRAWN					
RX-710C	WITHDRAWN					
RX-981C	WITHDRAWN					
RX-983C	WITHDRAWN					
RX-984C	WITHDRAWN					
RX-985C	WITHDRAWN					
RX-986	WITHDRAWN					
RX-987	WITHDRAWN					
RX-988	WITHDRAWN					
RX-989	WITHDRAWN					
RX-990	WITHDRAWN					
RX-991	WITHDRAWN					
RX-992	WITHDRAWN					
RX-993	WITHDRAWN					
RX-994	WITHDRAWN					
RX-995	WITHDRAWN					
RX-996	WITHDRAWN					

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RX-997	WITHDRAWN					
RX-998	WITHDRAWN					
RX-999	WITHDRAWN					
RX-1000C	WITHDRAWN					
RX-1001C	WITHDRAWN					
RX-1002C	WITHDRAWN					
RX-1003C	WITHDRAWN					
RX-1004C	WITHDRAWN					
RX-1005C	WITHDRAWN					
RX-1006C	WITHDRAWN					
RX-1007	WITHDRAWN					
RX-1008	WITHDRAWN					
RX-1009	WITHDRAWN					
RX-1010	WITHDRAWN					
RX-1011	WITHDRAWN					
RX-1012	WITHDRAWN					
RX-1013	WITHDRAWN					
RX-1014	WITHDRAWN					
RX-1015	WITHDRAWN					
RX-1016	WITHDRAWN					
RX-1017C	WITHDRAWN					
RX-1018C	WITHDRAWN					
RX-1019	WITHDRAWN					
RX-1020C	WITHDRAWN					
RX-1021	WITHDRAWN					
RX-1022	WITHDRAWN					
RX-1023C	WITHDRAWN					
RX-1024C	WITHDRAWN					
RX-1025C	WITHDRAWN					
RX-1026C	WITHDRAWN					
RX-1027C	WITHDRAWN					
RX-1028	WITHDRAWN					
RX-1029C	WITHDRAWN					
RX-1030C	WITHDRAWN					
RX-1031C	WITHDRAWN					
RX-1032	WITHDRAWN					
RX-1033	WITHDRAWN					
RX-1034	WITHDRAWN					
RX-1035	WITHDRAWN					
RX-1036	WITHDRAWN					
RX-1037	WITHDRAWN					
RX-1038	WITHDRAWN					

In the Matter of CERTAIN REDUCED IGNITION PROCLIVITY CIGARETTE PAPER WRAPPERS AND PRODUCTS CONTAINING SAME
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Hearing Exhibit No.	Description / Title	Bates Numbers	Purpose	Sponsoring Witness	Exhibits Rebutted	Received
RX-1039	WITHDRAWN					
RX-1040	WITHDRAWN					
RX-1041	WITHDRAWN					
RX-1042	WITHDRAWN					
RX-1043	WITHDRAWN					
RX-1044	WITHDRAWN					
RX-1045	WITHDRAWN					
RX-1046	WITHDRAWN					
RX-1047	WITHDRAWN					
RX-1048	WITHDRAWN					
RX-1049	WITHDRAWN					
RX-1050	WITHDRAWN					
RX-1051	WITHDRAWN					
RX-1052	WITHDRAWN					
RX-1053	WITHDRAWN					
RX-1054	WITHDRAWN					
RX-1055	WITHDRAWN					
RX-1056	WITHDRAWN					
RX-1057	WITHDRAWN					
RX-1058	WITHDRAWN					
RX-1059	WITHDRAWN					
RX-1060	WITHDRAWN					
RX-1061	WITHDRAWN					
RX-1062	WITHDRAWN					
RX-1063	WITHDRAWN					
RX-1064	WITHDRAWN					
RX-1065	WITHDRAWN					
RX-1066	WITHDRAWN					
RX-1073	WITHDRAWN					
RX-1074C	WITHDRAWN					
RX-1075C	WITHDRAWN					
RX-1076C	PBCP Product Development Update	SWMITC00115551-54	Invalidity, unenforceability	Kraker		11/8/2011
RX-1077C	WITHDRAWN					
RX-1078C	WITHDRAWN					
RX-1079C	July Progress Report	SWMITC00115843-44	Invalidity, unenforceability	Kraker		11/8/2011
RX-1080C	March Progress Report	SWMITC00115847-49	Invalidity, unenforceability	Kraker		11/8/2011
RX-1081C	Handsheet Work for B&W	SWMITC00115682	Invalidity, unenforceability	Kraker		11/8/2011
RX-1082C	WITHDRAWN					

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Hearing Exhibit No.	Description / Title	Bates Numbers	Purpose	Sponsoring Witness	Exhibits Rebutted	Received
RX-1083C	WITHDRAWN					
RX-1084C	WITHDRAWN					
RX-1085C	WITHDRAWN					
RX-1086C	Product Description of Alginate FD 120	SWMITC00164821-22	Invalidity, unenforceability, lack of domestic industry	Mongeon		11/1/2011
RX-1087C	Product Description of Alginate FD 155	SWMITC00164823-24	Invalidity, unenforceability, lack of domestic industry	Mongeon		11/1/2011
RX-1088C	Product Description of Alginate FD 176	SWMITC00164825-26	Invalidity, unenforceability, lack of domestic industry	Mongeon		11/1/2011
RX-1089C	WITHDRAWN					
RX-1090C	WITHDRAWN					
RX-1091C	WITHDRAWN					
RX-1092C	WITHDRAWN					
RX-1093C	WITHDRAWN					
RX-1094C	WITHDRAWN					
RX-1095C	WITHDRAWN					
RX-1096C	WITHDRAWN					
RX-1097C	WITHDRAWN					
RX-1098C	WITHDRAWN					
RX-1099C	WITHDRAWN					
RX-1100C	WITHDRAWN					
RX-1101C	WITHDRAWN					
RX-1102C	WITHDRAWN					
RX-1103C	WITHDRAWN					
RX-1104	WITHDRAWN					
RX-1105C	Project PBS Trials – Update #1	SWMITC00343574	Invalidity, unenforceability	Kraker		11/8/2011
RX-1106C	WITHDRAWN					
RX-1107C	WITHDRAWN					
RX-1108C	PBSL Trials Update #3	SWMITC00344058	Invalidity, unenforceability	Kraker		11/8/2011
RX-1109C	PBSL Update #2	SWMITC00344059	Invalidity, unenforceability	Kraker		11/8/2011
RX-1110C	WITHDRAWN					
RX-1111C	WITHDRAWN					

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Hearing Exhibit No.	Description / Title	Bates Numbers	Purpose	Sponsoring Witness	Exhibits Rebutted	Received
RX-1112C	Longview Update	SWMITC00344064	Invalidity, unenforceability	Kraker		11/8/2011
RX-1113C	WITHDRAWN					
RX-1114C	WITHDRAWN					
RX-1115C	WITHDRAWN					
RX-1116C	LV Trials – Update #2	SWMITC00344067	Invalidity, unenforceability	Kraker		11/8/2011
RX-1117C	Longview Trials – Update #1	SWMITC00344068	Invalidity, unenforceability	Kraker		11/8/2011
RX-1118C	Bemis Trials – Update #2	SWMITC00344073	Invalidity, unenforceability	Kraker		11/8/2011
RX-1119C	WITHDRAWN					
RX-1120C	Print-Banded Cigarette Paper Product Development Update	SWMITC00354126-41	Invalidity, unenforceability	Kraker		11/8/2011
RX-1121C	WITHDRAWN					
RX-1122C	WITHDRAWN					
RX-1123C	WITHDRAWN					
RX-1124C	WITHDRAWN					
RX-1125C	WITHDRAWN					
RX-1126C	WITHDRAWN					
RX-1127C	WITHDRAWN					
RX-1128C	WITHDRAWN					
RX-1129C	WITHDRAWN					
RX-1130C	WITHDRAWN					
RX-1131C	WITHDRAWN					
RX-1132C	WITHDRAWN					
RX-1134C	WITHDRAWN					
RX-1135	WITHDRAWN					
RX-1150C	WITHDRAWN					
RX-1172	WITHDRAWN					
RX-1173	WITHDRAWN					
RX-1174	WITHDRAWN					
RX-1176	WITHDRAWN					
RX-1177	WITHDRAWN					
RX-1178	WITHDRAWN					
RX-1179	WITHDRAWN					
RX-1180	WITHDRAWN					
RX-1181	WITHDRAWN					
RX-1183	WITHDRAWN					
RX-1192	WITHDRAWN					
RX-1193	WITHDRAWN					
RX-1199	WITHDRAWN					

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Hearing Exhibit No.	Description / Title	Bates Numbers	Purpose	Sponsoring Witness	Exhibits Rebutted	Received
RX-1260C	WITHDRAWN					
RX-1261C	WITHDRAWN					
RX-1262C	WITHDRAWN					
RX-1268C	WITHDRAWN					
RX-1314	WITHDRAWN					
RX-1315C	WITHDRAWN					
RX-1316C	WITHDRAWN					
RX-1346	WITHDRAWN					
RX-1347	WITHDRAWN					
RX-1348	WITHDRAWN					
RX-1349	WITHDRAWN					
RX-1350	WITHDRAWN					
RX-1351	WITHDRAWN					
RX-1352	WITHDRAWN					
RX-1353	WITHDRAWN					
RX-1354	WITHDRAWN					
RX-1355	WITHDRAWN					
RX-1356	WITHDRAWN					
RX-1357	WITHDRAWN					
RX-1358	WITHDRAWN					
RX-1359	U.S. Provisional Application No. 60/213,313	N/A	Cross examination Domestic Industry Invalidity Non infringement	Kraker	CX-283, CX-705C, CX-473C, CX-597C, CX-524, CX-525, CX-526, CX-527, CX-528, CX-529, CX-530, CX-488C	11/8/2011
RX-1360	WITHDRAWN					
RX-1364	WITHDRAWN					
RX-1366	WITHDRAWN					
RX-1367	Exhibit D to Expert Report of S. Wayne McCarty: Tab 24 from Schweitzer-Mauduit International, Inc.'s Appendix A to Its Objections and Responses to Glatz/LIPtec's Interrogatories (Nos. 40-47) and Supplemental Objections and Responses to Delfortgroup AG's Interrogatories (Nos. 10, 17-21, 25, 34-36, 43, 59-63, 67-86)	N/A	Cross examination Invalidity Domestic Industry Non-infringement	McCarty	CX-283, CX-705C, CX-473C, CX-597C, CX-424, CX-425, CX-284, CX-488	11/8/2011
RX-1368	Exhibit E to Expert Report of Dr. Paul D. Fleming III: Test Records	N/A	Cross examination Invalidity Domestic Industry Non-infringement	Fleming	CX-424, CX-425, CX-284, CX-488	11/8/2011

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Hearing Exhibit No.	Description / Title	Bates Numbers	Purpose	Sponsoring Witness	Exhibits Rebutted	Received
RX-1369	WITHDRAWN					
RX-1370	Exhibit G to Expert Report of Dr. Paul D. Fleming III: Air Permeability Measurement of LIP bands at CP	N/A	Cross examination Invalidity Domestic Industry Non-infringement	Fleming	CX-424, CX-425, CX-284, CX-488	11/8/2011
RX-1372	WITHDRAWN					
RX-1374	Exhibit I to Expert Report of Dr. Paul D. Fleming III: Graphs showing "B" and "C" data for Glatz/LIPtec and SWM's paper samples	N/A	Cross examination Invalidity Domestic Industry Non-infringement	Fleming	CX-424, CX-425, CX-284, CX-488	11/8/2011
RX-1386	Exhibit A to Expert Report of Dr. Paul D. Fleming III: Curriculum Vitae	N/A	Cross examination Invalidity Domestic Industry Non-infringement	Fleming	CX-424, CX-425, CX-284, CX-488	11/8/2011
RX-1388	WITHDRAWN					
RX-1389	Expert Report of Paul D. Fleming - Figure A page 16	N/A	Domestic Industry Noninfringement	Fleming	CX-424, CX-425, CX-284, CX-488	11/8/2011
RX-1390	Expert Report of Paul D. Fleming - Figure B page 15	N/A	Domestic Industry Noninfringement	Fleming	CX-424, CX-425, CX-284, CX-488	11/8/2011
RX-1391	Expert Report of Paul D. Fleming - Figure B page 16	N/A	Domestic Industry Noninfringement	Fleming	CX-424, CX-425, CX-284, CX-488	11/8/2011
RX-1392	WITHDRAWN					
RX-1393	WITHDRAWN					
RX-1394	WITHDRAWN					
RX-1395	Expert Report of Paul D. Fleming - Figure page 19	N/A	Domestic Industry Noninfringement	Fleming	CX-424, CX-425, CX-284, CX-488	11/8/2011
RX-1396	WITHDRAWN					
RX-1399	Expert Report of Paul D. Fleming - Figure page 29	N/A	Domestic Industry Noninfringement	Fleming	CX-424, CX-425, CX-284, CX-488	11/8/2011
RX-1400	Expert Report of Paul D. Fleming - Figure page 36	N/A	Domestic Industry Noninfringement	Fleming	CX-424, CX-425, CX-284, CX-488	11/8/2011
RX-1401	Expert Report of Paul D. Fleming - Figure page 38	N/A	Domestic Industry Noninfringement	Fleming	CX-424, CX-425, CX-284, CX-488	11/8/2011
RX-1402	Expert Report of Paul D. Fleming - Figure page 40	N/A	Domestic Industry Noninfringement	Fleming	CX-424, CX-425, CX-284, CX-488	11/8/2011
RX-1403	Expert Report of Paul D. Fleming - Figure page 42	N/A	Domestic Industry Noninfringement	Fleming	CX-424, CX-425, CX-284, CX-488	11/8/2011
RX-1408	Expert Report of Paul D. Fleming - Photo page 17	N/A	Domestic Industry Noninfringement	Fleming	CX-424, CX-425, CX-284, CX-488	11/8/2011
RX-1409	WITHDRAWN					
RX-1410	Expert Report of Paul D. Fleming - Photo page 37	N/A	Domestic Industry Noninfringement	Fleming	CX-424, CX-425, CX-284, CX-488	11/8/2011

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Hearing Exhibit No.	Description / Title	Bates Numbers	Purpose	Sponsoring Witness	Exhibits Rebutted	Received
RX-1412	Exhibit B to Expert Report of Dr. Paul D. Fleming III: Materials Reviewed	N/A	Cross examination Invalidity Domestic Industry Non-infringement	Fleming	CX-424, CX-425, CX-284, CX-488	11/8/2011
RX-1414	Exhibit C to Expert Report of Dr. Paul D. Fleming III: Application of Metall foil (silver) at Cigarette Paper	N/A	Cross examination Invalidity Domestic Industry Non-infringement	Fleming	CX-424, CX-425, CX-284, CX-488	11/8/2011
RX-1415	WITHDRAWN					
RX-1418	Gann et al. "Relative Ignition Propensity of Test Market Cigarettes", National Institute of Standards and Technology, NIST Technical Note 1436	SWMITC00763838- SWMITC00763872	Cross examination Domestic Industry Invalidity Non-infringement	Kraker	CX-514C, CX-521C, CX-599C, CX-488C	11/8/2011
RX-1588C	Email from Kraker to Durocher et al regarding Update #1 - PBS Trials at Bemis	SWMITC00532208- SWMITC00532208	Cross examination	Kraker	CX-705C, CX-459C, CX-465C, CX-659C, CX-660C, CX-669C	11/8/2011
RX-1600C	WITHDRAWN					
RX-1602C	Email from Kraker to Snow regarding Bemis Trials - Update #1	SWMITC00532236- SWMITC00532236	Cross examination	Kraker	CX-705C, CX-459C, CX-465C, CX-659C, CX-660C, CX-669C	11/8/2011
RX-1611C	WITHDRAWN					
RX-1675	WITHDRAWN					
RX-1712	WITHDRAWN					
RX-1713	WITHDRAWN					
RX-1729	WITHDRAWN					
RX-1735	WITHDRAWN					
RX-1736	WITHDRAWN					
RX-1743C	WITHDRAWN					
RX-1875C	WITHDRAWN					
RX-2031C	WITHDRAWN					
RX-2088	WITHDRAWN					
RX-2793C	WITHDRAWN					
RX-2796C	WITHDRAWN					
RX-2797C	WITHDRAWN					
RX-2798C	WITHDRAWN					
RX-2799C	WITHDRAWN					
RX-2800C	WITHDRAWN					
RX-2802C	WITHDRAWN					
RX-2803C	WITHDRAWN					
RX-2804C	WITHDRAWN					
RX-2805C	WITHDRAWN					
RX-2806C	WITHDRAWN					

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Hearing Exhibit No.	Description / Title	Bates Numbers	Purpose	Sponsoring Witness	Exhibits Rebutted	Received
RX-2807C	WITHDRAWN					
RX-2808C	WITHDRAWN					
RX-2809C	WITHDRAWN					
RX-2810C	WITHDRAWN					
RX-2811C	WITHDRAWN					
RX-2812C	WITHDRAWN					
RX-2813C	WITHDRAWN					
RX-2814C	WITHDRAWN					
RX-2815C	WITHDRAWN					
RX-2817C	WITHDRAWN					
RX-2818C	WITHDRAWN					
RX-2819C	WITHDRAWN					
RX-2821C	WITHDRAWN					

UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, DC

Before the Honorable E. James Gildea
Administrative Law Judge

In the Matter of

CERTAIN REDUCED IGNITION
PROCLIVITY CIGARETTE PAPER
WRAPPERS AND PRODUCTS
CONTAINING SAME

Investigation No. 337-TA-756

COMMISSION INVESTIGATIVE STAFF'S FINAL EXHIBIT LIST

Pursuant to the procedural schedule entered in this investigation, *see* Order No. 16 (Aug. 18, 2011), and Ground Rules 8.6.4 and 8.6.7, *see* Order No. 2 (Jan. 27, 2011), the Commission Investigative Staff ("Staff") hereby provides its final trial exhibit list. This list has been revised to conform the Sponsoring Witness and Received columns to the trial testimony:

Ex. No.	Description/Title	Bates #'s	Purpose	Sponsoring Witness	Received
SDX-01	Diagram: Gradual Changes in Permeability Profile	SDX-01	Claim Construction	<i>Markman Tutorial</i> Rogers; Fleming	11/4/11
SDX-02	Diagram: Permeability Reduction	SDX-02	Claim Construction	<i>Markman Tutorial</i> Rogers; Fleming	11/4/11
SDX-03					WITHDRAWN
SDX-04	Diagram: Effect of Abrupt Change in Permeability on Permeability Profile	SDX-04	Claim Construction	<i>Markman Tutorial</i> Rogers; Fleming; McCarty	11/4/11
SDX-05	Diagram: Gradual vs. Abrupt Change	SDX-05	Claim Construction	<i>Markman Tutorial</i> Rogers; Fleming; McCarty	11/8/11
SPX-01	Native File: "756 SDX Exhibits.pptx"	SPX-01	Claim Construction	<i>Markman Tutorial</i> Rogers; Fleming; McCarty	11/4/11

Respectfully submitted,

/s/ Lisa A. Murray

Lynn I. Levine, Director

David O. Lloyd, Supervisory Attorney

Lisa A. Murray, Investigative Attorney

OFFICE OF UNFAIR IMPORT INVESTIGATIONS

U.S. International Trade Commission

500 E Street SW, Suite 401

Washington, DC 20436

202-205-2734

202-205-2158 (facsimile)

November 14, 2011

FINAL COMBINED JOINT TRIAL EXHIBIT LIST

Exhibit No.	Description	Purpose	Sponsoring Witness	Status of Receipt
1	Certified Copy of USP 5,878,753	Infringement/Validity	Rogers	11/4/2011
2	Certified Copy of USP 6,725,867	Infringement/Validity	Rogers	11/4/2011
3	Certified File History for U.S. Patent No. 5,878,753 SWMITC00000609- SWMITC00001503	Infringement/Validity	Honeycutt	11/8/2011
4	Certified File History for U.S. Patent No. 6,725,867 SWMITC00000001- SWMITC00000191	Infringement/Validity	No Sponsoring Witness	11/8/2011
5	American Society for Testing and Materials, "Standard Test Method for Measuring the Ignition Strength of Cigarettes" (ASTM E2187) - 2004	Infringement	No Sponsoring Witness	11/8/2011
6	American Society for Testing and Materials, "Standard Test Method for Measuring the Ignition Strength of Cigarettes" (ASTM E2187) - 2009 SWMITC00667158- SWMITC00667165	Infringement	No Sponsoring Witness	11/8/2011
7	Cooperation Centre for Scientific Research Relative to Tobacco, "CORESTA Recommended Method No. 40: Determination of Air Permeability of Materials Used as Cigarette Papers, Filter Plug Wrap and Filter Joining Paper Including Materials Having an Oriented Permeable Zone" (CORESTA Method No. 40) SWMITC00664625- SWMITC00664642	Infringement	No Sponsoring Witness	11/8/2011
8	International Organization for Standardization, "Materials used as cigarette papers, filter plug wrap and filter joining paper, including materials having an oriented permeable zone- Determination of air permeability" (ISO 2965) - 1997 (2 nd Edition)	Infringement	No Sponsoring Witness	11/8/2011

FINAL COMBINED JOINT TRIAL EXHIBIT LIST

JX Exhibit No.	Description	Purpose	Sponsoring Witness	Status of Receipt
9	International Organization for Standardization, "Materials used as cigarette papers, filter plug wrap and filter joining paper, including materials having an oriented permeable zone- Determination of air permeability" (ISO 2965) - 2009 (3 rd Edition)	Infringement	Codwise (CX-610)	11/1/2011
10	U.S. Patent 4,739,775 (Hampl) SWMITC00002204- SWMITC00002210	Validity	McCarty	11/8/2011
11	U.S. Patent 5,878,754 (Peterson et al.) SWMITC00000597- SWMITC00000608	Validity	Thompson	11/1/2011
12	U.S. Patent 6,779,530 (Kraker) SWMITC01023530- SWMITC01023538	Validity	No Sponsoring Witness	11/8/2011
13C				Withdrawn
14	U.S. Patent 5,263,999 (Baldwin et al.) SWMITC00038086- SWMITC00038092	Validity	No Sponsoring Witness	11/8/2011
15	U.S. Patent 4,044,778 (Cohn) SWMITC00002038- SWMITC00002044	Validity	No Sponsoring Witness	11/8/2011
16	U.S. Patent 3,220,418 (Cohn) SWMITC00001967- SWMITC00001971	Validity	No Sponsoring Witness	11/8/2011
17	U.S. Patent 2,998,012 (Lamm) SWMITC00001946- SWMITC00001948	Validity	No Sponsoring Witness	11/8/2011

FINAL COMBINED JOINT TRIAL EXHIBIT LIST

JX Exhibit No.	Description	Purpose	Sponsoring Witness	Status of Receipt
18	U.S. Patent 2,049,320 (Ruben) SWMITC00001883- SWMITC00001885	Validity	No Sponsoring Witness	11/8/2011
19	U.S. Patent 1,905,416 (Low) SWMITC00001870- SWMITC00001870	Validity	No Sponsoring Witness	11/8/2011
20	"The Effect of Cigarette Characteristics on the Ignition Strength of Soft Furnishings" SWMITC00035200- SWMITC00035413	Background	No Sponsoring Witness	11/8/2011
21C	Trial Report – Gravure Printing, Paramount Packaging, December 12, 1994 BEMIS000096- BEMIS0000101	Validity	Kucherovsky	11/8/2011
22	International Standard ISO 187:1990E: Paper, board and pulps – Standard atmosphere for conditioning and testing and procedure for monitoring the atmosphere and conditioning of samples	Infringement	No Sponsoring Witness	11/8/2011
23C				Withdrawn
24C				Withdrawn
25C				Withdrawn
26C				Withdrawn
27C	Presentation : Newberry facility SWMITC00395987- SWMITC00396000	Domestic Industry	No Sponsoring Witness	11/8/2011
28C				Withdrawn

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JX Exhibit No.	Description	Purpose	Sponsoring Witness	Status of Receipt
29C	Image of cells on Delfort gravure cylinders DELFORT0053527- DELFORT0053527	Infringement	Kuchеровsky	11/8/2011
30C				Withdrawn
31C				Withdrawn
32C				Withdrawn
33C	Print Banded Paper Sales Booklet Information SWMITC00152568- SWMITC00152609	Validity	Kraker	11/8/2011
34	SWM R&D Lab Test Method for measuring DCI SWMITC00037082- SWMITC00037106	Infringement	Codwise (CX-283C)	11/8/2011
35				Withdrawn
36	Chart: States with LIP Legislation SWMITC01024518- SWMITC0102451	Public Interest	No Sponsoring Witness	11/8/2011
37	Atomic Force Microscopy Profilometry Protocol SWMITC01027413- SWMITC01027414	Infringement	No Sponsoring Witness	11/8/2011
38				Withdrawn
39C	Data for process qualification DELFORT0011686- DELFORT0011697	Claim Construction	Mayr	11/8/2011
40C	Deposition Designation of S. Epailly	Infringement	Epailly	11/8/2011
41C	Deposition Designation of T. Fritzsching	Infringement	Fritzsching	11/8/2011
42C	Deposition Designation of J. Engelking	Infringement	Engelking	11/8/2011
43C	Deposition Designation of R. Makepeace	Infringement	Makepeace	11/8/2011
44C	Deposition Designation of B. Eitzinger	Secondary Considerations of Nonobviousness	Eitzinger	11/8/2011

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JX Exhibit No.	Description	Purpose	Sponsoring Witness	Status of Receipt
45C	Deposition Designation of H. Giener	Secondary Considerations of Nonobviousness	Giener	11/8/2011
46C	Deposition Designation of D. Maas	Secondary Considerations of Nonobviousness	Maas	11/8/2011
47C	Deposition Designation of M. Mayr	Secondary Considerations of Nonobviousness Claim Construction	Mayr	11/8/2011
48C	Deposition Designation of F. Muigg	Secondary Considerations of Nonobviousness	Muigg	11/8/2011
49C	Deposition Designation of H. Saxl	Secondary Considerations of Nonobviousness	Saxl	11/8/2011
50C	Deposition Designation of D. Volgger	Secondary Considerations of Nonobviousness	Volgger	11/8/2011
51C	Deposition Designation of E. Bullwinkel	Infringement Validity	Bullwinkel	11/8/2011
52C				Withdrawn
53C	Deposition Designation of W. Codwise	Infringement Validity	Codwise	11/8/2011
54C	Deposition Designation of D. Durocher	Infringement Validity	Durocher	11/8/2011

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JX Exhibit No.	Description	Purpose	Sponsoring Witness	Status of Receipt
55C	Deposition Designation of V. Hampl	Infringement Validity	Hampl	11/8/2011
56C	Deposition Designation of T. Kraker	Infringement Validity	Kraker	11/8/2011
57C	Deposition Designation of F. Mongeon	Infringement Validity Domestic Industry	Mongeon	11/8/2011
58C	Deposition Designation of R. Reiter	Infringement Validity	Reiter	11/8/2011
59C	Deposition Designation of B. Steidel	Infringement Validity	Steidel	11/8/2011
60C	Deposition Designation of P. Thompson	Infringement Validity Domestic Industry	Thompson	11/8/2011
61C	Deposition Designation of J. Wanna	Infringement Validity	Wanna	11/8/2011
62C				Withdrawn
63C				Withdrawn
64C				Withdrawn
65C				Withdrawn
66	Joint Stipulation Regarding Importation	Importation	No Sponsoring Witness	11/8/2011
67	Supplemental Joint Technology Stipulation served on 9/7/11 pursuant to Order No. 17	Background	No Sponsoring Witness	11/8/2011

**IN THE MATTER OF CERTAIN
REDUCTED IGNITION PROCLIVITY
CIGARETTE PAPER WRAPPERS
AND PRODUCTS CONTAINING SAME**

337-TA-756

PUBLIC CERTIFICATE OF SERVICE

I, James R. Holbein, hereby certify that the attached **ORDER** has been served by hand upon the Commission Investigative Attorney, **Lisa A. Murray, Esq.**, and the following parties as indicated on February 17, 2012.



James R. Holbein
Secretary to the Commission
U.S. International Trade Commission
500 E Street, SW, Room 112A
Washington, D.C. 20436

FOR COMPLAINANTS SCHWEITZER-MAUDUIT INTERNATIONAL, INC.:

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**FOR RESPONDENTS JULIUS GLATZ GMBH, LIPTEC GMBH, AND KNEX
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**IN THE MATTER OF CERTAIN
REDUCED IGNITION PROCLIVITY
CIGARETTE PAPER WRAPPERS
AND PRODUCTS CONTAINING SAME**

337-TA-756

CERTIFICATE OF SERVICE – PAGE TWO

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