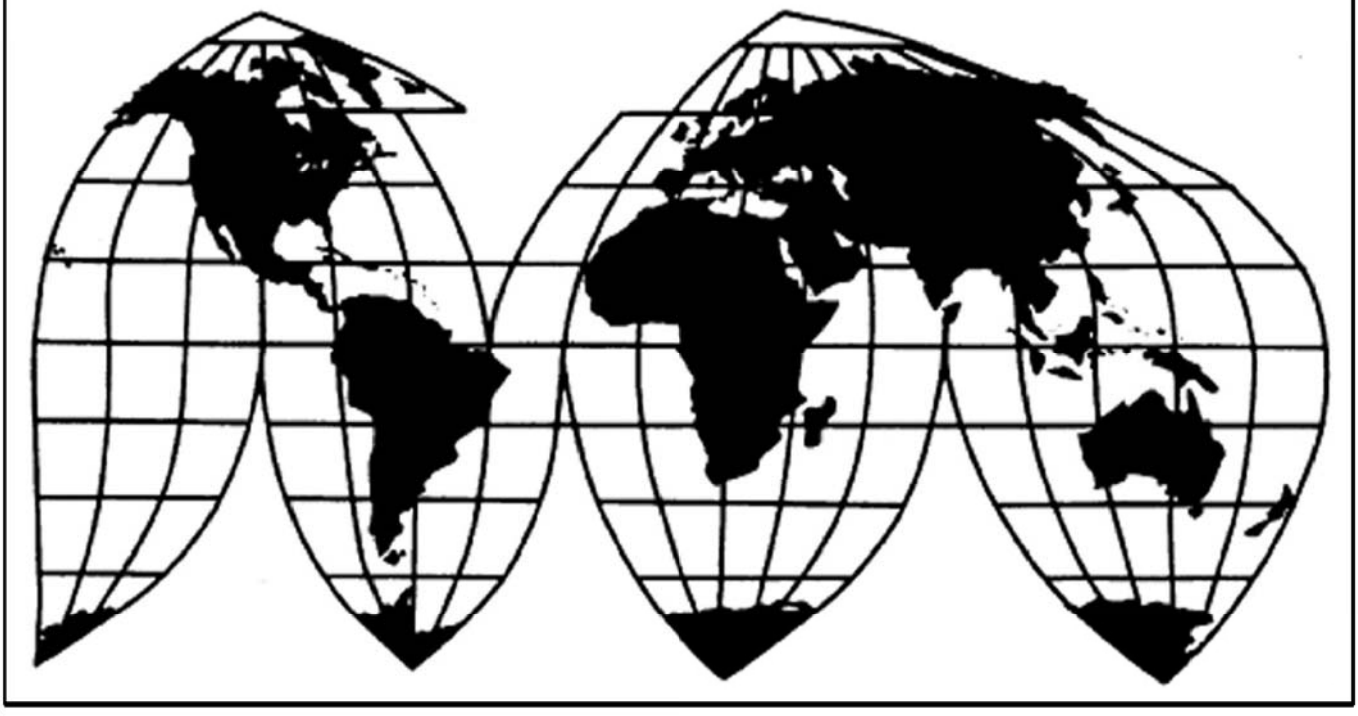
Aluminum Foil from China

Investigation Nos. 701-TA-570 and 731-TA-1346 (Preliminary)

Publication 4684 **May 2017**

U.S. International Trade Commission



Washington, DC 20436

U.S. International Trade Commission

COMMISSIONERS

Rhonda K. Schmidtlein, Chairman
David S. Johanson, Vice Chairman
Irving A. Williamson
Meredith M. Broadbent
F. Scott Kieff

Catherine DeFilippo
Director of Operations

Staff assigned

Justin Enck, Investigator
Daniel Matthews, Industry Analyst
Aimee Larsen, Economist
Jennifer Brinckhaus, Accountant
Russell Duncan, Senior Statistician
Darlene Smith, Statistical Assistant
Peter Sultan, Attorney
Elizabeth Haines, Supervisory Investigator

Address all communications to
Secretary to the Commission
United States International Trade Commission
Washington, DC 20436

U.S. International Trade Commission

Washington, DC 20436
www.usitc.gov

Aluminum Foil from China

Investigation Nos. 701-TA-570 and 731-TA-1346 (Preliminary)

Publication 4684

May 2017

CONTENTS

Page

CONTENTS

Page

CONTENTS

Page

Appendixes

Note.—Information that would reveal confidential operations of individual concerns may not be published and therefore has been deleted. Such deletions are indicated by asterisks.

UNITED STATES INTERNATIONAL TRADE COMMISSION

Investigation Nos. 701-TA-570 and 731-TA-1346 (Preliminary)

Aluminum Foil from China

DETERMINATIONS

On the basis of the record[1] developed in the subject investigations, the United States International Trade Commission ("Commission") determines, pursuant to the Tariff Act of 1930 ("the Act"), that there is a reasonable indication that an industry in the United States is materially injured by reason of imports of aluminum foil from China, provided for in subheadings 7607.11.30, 7607.11.60, 7607.11.90, and 7607.19.60 of the Harmonized Tariff Schedule of the United States, that are alleged to be sold in the United States at less than fair value ("LTFV") and to be subsidized by the government of China.

COMMENCEMENT OF FINAL PHASE INVESTIGATIONS

Pursuant to section 207.18 of the Commission's rules, the Commission also gives notice of the commencement of the final phase of its investigations. The Commission will issue a final phase notice of scheduling, which will be published in the *Federal Register* as provided in section 207.21 of the Commission's rules, upon notice from the Department of Commerce ("Commerce") of affirmative preliminary determinations in the investigations under sections 703(b) or 733(b) of the Act, or, if the preliminary determinations are negative, upon notice of affirmative final determinations in those investigations under sections 705(a) or 735(a) of the Act. Parties that filed entries of appearance in the preliminary phase of the investigations need not enter a separate appearance for the final phase of the investigations. Industrial users, and, if the merchandise under investigation is sold at the retail level, representative consumer organizations have the right to appear as parties in Commission antidumping and countervailing duty investigations. The Secretary will prepare a public service list containing the names and addresses of all persons, or their representatives, who are parties to the investigations.

BACKGROUND

On March 9, 2017, The Aluminum Association Trade Enforcement Working Group (Arlington, Virginia), on behalf of JW Aluminum Company (Goose Creek, South Carolina), Novelis North America (Atlanta, Georgia), and Reynolds Consumer Products (Lake Forest, Illinois) filed a petition with the Commission and Commerce, alleging that an industry in the United States is materially injured or threatened with material injury by reason of LTFV and

[1] The record is defined in sec. 207.2(f) of the Commission's Rules of Practice and Procedure (19 CFR § 207.2(f)).

subsidized imports of aluminum foil from China. Accordingly, effective March 9, 2017, the Commission, pursuant to sections 703(a) and 733(a) of the Act (19 U.S.C. 1671b(a) and 1673b(a)), instituted countervailing duty investigation No. 701-TA-570 and antidumping duty investigation No. 731-TA-1346 (Preliminary).

Notice of the institution of the Commission's investigations and of a public conference to be held in connection therewith was given by posting copies of the notice in the Office of the Secretary, U.S. International Trade Commission, Washington, DC, and by publishing the notice in the *Federal Register* of March 15, 2017 (82 FR 13853). The conference was held in Washington, DC, on March 30, 2017, and all persons who requested the opportunity were permitted to appear in person or by counsel.

Views of the Commission

Based on the record in the preliminary phase of these investigations, we determine that there is a reasonable indication that an industry in the United States is materially injured by reason of imports of aluminum foil from China that are allegedly sold in the United States at less than fair value and that are allegedly subsidized by the government of China.

I. The Legal Standard for Preliminary Determinations

The legal standard for preliminary antidumping and countervailing duty determinations requires the Commission to determine, based upon the information available at the time of the preliminary determinations, whether there is a reasonable indication that a domestic industry is materially injured or threatened with material injury, or that the establishment of an industry is materially retarded, by reason of the allegedly unfairly traded imports.[1] In applying this standard, the Commission weighs the evidence before it and determines whether "(1) the record as a whole contains clear and convincing evidence that there is no material injury or threat of such injury; and (2) no likelihood exists that contrary evidence will arise in a final investigation."[2]

II. Background

The Aluminum Association Trade Enforcement Working Group and its members JW Aluminum Company ("JW"), Novelis North America ("Novelis"), and Reynolds Consumer Products ("Reynolds") filed the petitions in these investigations on March 9, 2017. JW, Novelis, and Reynolds are domestic producers of aluminum foil. Petitioners appeared at the staff conference and submitted a postconference brief.

The following respondents appeared at the conference and/or submitted postconference briefs or statements:

- Bemis Company Inc. ("Bemis"), an importer of the subject merchandise;
- Commodity Foil & Paper, Inc. ("Commodity"), an importer of the subject merchandise;
- Flexible Packaging Association's U.S. Aluminum Foil Converters Committee, an organization representing industrial users and consumers of the subject merchandise; Galex, Inc., an importer of the subject merchandise; Manakin Industries, LLC, an importer of the subject merchandise; Luoyang Wanji Aluminium Processing Co., Ltd., Kunshan Aluminium Co., Ltd, Jiangsu Zhongji Lamination Materials Co., (HK) Ltd., Jiangsu Zhongji Lamination Materials Co.,

[1] 19 U.S.C. §§ 1671b(a), 1673b(a) (2000); *see also American Lamb Co. v. United States*, 785 F.2d 994, 1001-04 (Fed. Cir. 1986); *Aristech Chem. Corp. v. United States, 2*0 CIT 353, 354-55 (1996). No party argues that the establishment of an industry in the United States is materially retarded by the allegedly unfairly traded imports.

[2] *American Lamb Co*., 785 F.2d at 1001; *see also Texas Crushed Stone Co. v. United States*, 35 F.3d 1535, 1543 (Fed. Cir. 1994).

Ltd. and Jiangsu Zhongji Lamination Materials Stock Co., Ltd., all producers and exporters of the subject merchandise (collectively the "FPA Respondent Group")[3];

- Hanon Systems Alabama and Hanon Systems El Paso Distribution Center (collectively "Hanon"), importers of the subject merchandise;
- Hangzhou Dingsheng Import & Export Co., Ltd. and Jiangsu Dingsheng New Energy Materials Co., Ltd., producers and/or exporters of the subject merchandise (collectively "Dingsheng");
- MAHLE Behr Troy Inc. and Valeo North America, Inc. (collectively "Fin Stock Respondents"), importers of the subject merchandise;
- Oracle Flexible Packaging, Inc. and LLFLEX, LLC, importers of the subject merchandise (collectively "Oracle");
- Trinidad Benham Corporation ("Trinidad"), an importer of the subject merchandise; and
- Xiamen Xiashun Aluminum Foil Co. Ltd. ("Xiashun"), a producer and exporter of the subject merchandise.[4]

U.S. industry data are based on the questionnaire responses of five producers, accounting for virtually all U.S. production of aluminum foil in 2016.[5] U.S. import data are based on official Commerce import statistics and on questionnaire responses from 23 U.S. importers, accounting for 83.0 percent of total subject imports during the 2014-2016 period of investigation ("POI").[6] The Commission received responses to its questionnaires from 12 producers of subject merchandise, accounting for approximately 28.2 percent of production of subject merchandise in 2016.[7]

III. Domestic Like Product

In determining whether there is a reasonable indication that an industry in the United States is materially injured or threatened with material injury by reason of imports of the subject merchandise, the Commission first defines the "domestic like product" and the "industry."[8] Section 771(4)(A) of the Tariff Act of 1930, as amended ("the Tariff Act"), defines

[3] Counsel for the FPA Respondent Group subsequently filed a letter on behalf of Shanghai Shenhou Aluminum Foil Co. Ltd., a producer of the subject merchandise, expressing that company's support for the FPA Respondent Group's postconference brief.

[4] Another purchaser of the subject merchandise, Durable Packaging of Wheeling, Illinois, which produces household aluminum foil rolls and aluminum foil containers, filed a letter with the Commission protesting the possible imposition of duties on its raw material but not on finished products from China. Letter from Scott Anders dated April 13, 2017.

[5] Confidential Report ("CR") at III-1 & n.1, Public Report ("PR") at III-1.

[6] CR/PR at IV-1.

[7] CR/PR at VII-3.

[8] 19 U.S.C. § 1677(4)(A).

the relevant domestic industry as the "producers as a whole of a domestic like product, or those producers whose collective output of a domestic like product constitutes a major proportion of the total domestic production of the product."[9] In turn, the Tariff Act defines "domestic like product" as "a product which is like, or in the absence of like, most similar in characteristics and uses with, the article subject to an investigation."[10]

The decision regarding the appropriate domestic like product(s) in an investigation is a factual determination, and the Commission has applied the statutory standard of "like" or "most similar in characteristics and uses" on a case-by-case basis.[11] No single factor is dispositive, and the Commission may consider other factors it deems relevant based on the facts of a particular investigation.[12] The Commission looks for clear dividing lines among possible like products and disregards minor variations.[13] Although the Commission must accept Commerce's determination as to the scope of the imported merchandise that is subsidized and/or sold at less than fair value,[14] the Commission determines what domestic product is like the imported articles Commerce has identified.[15] The Commission may, where appropriate,

[9] 19 U.S.C. § 1677(4)(A).

[10] 19 U.S.C. § 1677(10).

[11] *See*, *e.g.*, *Cleo Inc. v. United States*, 501 F.3d 1291, 1299 (Fed. Cir. 2007); *NEC Corp. v. Department of Commerce*, 36 F. Supp. 2d 380, 383 (Ct. Int'l Trade 1998); *Nippon Steel Corp. v. United States*, 19 CIT 450, 455 (1995); *Torrington Co. v. United States*, 747 F. Supp. 744, 749 n.3 (Ct. Int'l Trade 1990), *aff'd*, 938 F.2d 1278 (Fed. Cir. 1991) ("every like product determination 'must be made on the particular record at issue' and the 'unique facts of each case'"). The Commission generally considers a number of factors including the following: (1) physical characteristics and uses; (2) interchangeability; (3) channels of distribution; (4) customer and producer perceptions of the products; (5) common manufacturing facilities, production processes, and production employees; and, where appropriate, (6) price. *See Nippon*, 19 CIT at 455 n.4; *Timken Co. v. United States*, 913 F. Supp. 580, 584 (Ct. Int'l Trade 1996).

[12] *See*, *e.g.*, S. Rep. No. 96-249 at 90-91 (1979).

[13] *See*, *e.g.*, *Nippon*, 19 CIT at 455; *Torrington*, 747 F. Supp. at 748-49*; see also* S. Rep. No. 96-249 at 90-91 (Congress has indicated that the like product standard should not be interpreted in "such a narrow fashion as to permit minor differences in physical characteristics or uses to lead to the conclusion that the product and article are not 'like' each other, nor should the definition of 'like product' be interpreted in such a fashion as to prevent consideration of an industry adversely affected by the imports under consideration.").

[14] *See*, *e.g.*, *USEC, Inc. v. United States*, 34 Fed. App'x 725, 730 (Fed. Cir. 2002) ("The ITC may not modify the class or kind of imported merchandise examined by Commerce."); *Algoma Steel Corp. v. United States,* 688 F. Supp. 639, 644 (Ct. Int'l Trade 1988), *aff'd*, 865 F.3d 240 (Fed. Cir.), *cert. denied*, 492 U.S. 919 (1989).

[15] *Hosiden Corp. v. Advanced Display Mfrs.,* 85 F.3d 1561, 1568 (Fed. Cir. 1996) (the Commission may find a single like product corresponding to several different classes or kinds defined by Commerce); *Cleo*, 501 F.3d at 1298 n.1 ("Commerce's {scope} finding does not control the Commission's {like product} determination."); *Torrington*, 747 F. Supp. at 748-52 (affirming the Commission's determination defining six like products in investigations where Commerce found five classes or kinds).

include domestic articles in the domestic like product in addition to those described in the scope.[16]

A. Scope Definition

In its notice of initiation, Commerce defined the imported merchandise within the scope of these investigations as follows:

> The merchandise covered by this investigation is aluminum foil having a thickness of 0.2 mm or less, in reels exceeding 25 pounds, regardless of width. Aluminum foil is made from an aluminum alloy that contains more than 92 percent aluminum. Aluminum foil may be made to ASTM specification ASTM B479, but can also be made to other specifications. Regardless of specification, however, all aluminum foil meeting the scope description is included in the scope.
>
> Excluded from the scope of this investigation is aluminum foil that is backed with paper, paperboard, plastics, or similar backing materials on only one side of the aluminum foil, as well as etched capacitor foil and aluminum foil that is cut to shape.
>
> Where the nominal and actual measurements vary, a product is within the scope if application of either the nominal or actual measurement would place it within the scope based on the definitions set forth above. The products under investigation are currently classifiable under Harmonized Tariff Schedule of the United States (HTSUS) subheadings 7607.11.3000, 7607.11.6000, 7607.11.9030, 7607.11.9060, 7607.11.9090, and 7607.19.6000. Further, merchandise that falls within the scope of this proceeding may also be entered into the United States under HTSUS subheadings 7606.11.3060, 7606.11.6000, 7606.12.3045, 7606.12.3055, 7606.12.3090, 7606.12.6000, 7606.91.3090, 7606.91.6080, 7606.92.3090, and 7606.92.6080. Although the HTSUS subheadings are provided for convenience and customs purposes, the written description of the scope of this proceeding is dispositive.[17]

Aluminum foil is a thin wrought aluminum product that is produced via a rolling process.[18] It is produced in a variety of gauges.[19] Aluminum foil is used extensively in food and pharmaceutical packaging because it provides protection against light, oxygen, moisture, and

---

[16] *See*, *e.g.*, *Pure Magnesium from China and Israel*, Inv. Nos. 701-TA-403 and 731-TA-895-96 (Final), USITC Pub. 3467 at 8 n.34 (Nov. 2001); *Torrington,* 747 F. Supp. at 748-49 (holding that the Commission is not legally required to limit the domestic like product to the product advocated by the petitioner, co-extensive with the scope).

[17] *Certain Aluminum Foil from the People's Republic of China: Initiation of Less Than Fair Value Investigation*, 82 Fed. Reg. 15691, 15696 (March 30, 2017); and *Certain Aluminum Foil from the People's Republic of China: Initiation of Countervailing Duty Investigation*, 82 Fed. Reg. 15688, 15691 (March 30, 2017).

[18] CR at I-10, PR at I-8.

[19] CR at I-11, PR at I-9. "Gauge" refers to the thickness of the aluminum foil.

bacteria.[20] It is also used in industrial applications such as thermal insulation, cables, and electronics where properties such as heat reflectivity and barrier protection are desired.[21] Common products that use aluminum foil include pie pans, food and candy wrappers, and household foil.[22]

B. Arguments of the Parties

Petitioners argue that there is a single domestic like product that is coextensive with the scope of these investigations.[23] Respondents raise a number of arguments regarding the definition of the domestic like product. A number of respondents argue that ultra-thin gauge aluminum foil (foil with gauges of less than 0.0003 inches or 8 microns[24]) should be treated as a separate domestic like product from other aluminum foil.[25] Other respondents argue that fin stock should be treated as a domestic like product separate from aluminum foil. They define "fin stock" as flat-rolled aluminum of 45 microns (0.00177") or more in thickness, containing 1 percent or more by weight, of manganese.[26] Although it does not explicitly make an argument that the domestic like product should be defined differently than proposed by Petitioners, Trinidad argues that the minimum reel size of 25 pounds with which Petitioners defined the scope is arbitrary, and has the result of excluding from consideration commercial sales data for domestic producers' sales of household foil.[27]

C. Analysis

Based on the record in the preliminary phase of these investigations, we define a single domestic like product consisting of all aluminum foil coextensive with the scope of the investigations. For the following reasons, we do not define ultra-thin gauge aluminum foil or fin stock as separate domestic like products from other aluminum foil.

---

[20] CR at I-12, PR at I-10.

[21] CR at I-12-13, PR at I-10-11.

[22] CR at I-13, PR at I-11.

[23] Petitioners' Postconference Brief at 4, Conference Tr. at 44-45 (Herrmann).

[24] The measurements of 0.0003 inches and 8 microns are almost identical and are used interchangeably in the industry. Conference Transcript at 148 (Mowry).

[25] FPA Respondent Group Postconference Brief at 3, Commodity Postconference Brief at 17, Bemis Postconference Brief at 1, Oracle Postconference Brief at 4, and Xiashun Postconference Brief at 2.

[26] The Fin Stock Respondents argue that fin stock should be treated as a separate like product, while Hanon argues that fin stock used to make heat exchangers for automotive applications should be treated as a separate like product. Fin Stock Respondents' Postconference Brief at 1 and Hanon Postconference Brief at 1. In addition, Fin Stock Respondents note that Petitioners "clarified" that the scope of these petitions excludes aluminum foil that is backed on only one side, but includes aluminum foil that is backed on both sides of the foil. Fin Stock Respondents question how there can be a clear dividing line demarcating the proposed like product, given that foil that is backed on only one side falls in the middle of any continuum like product containing both non-backed and double-backed foil. Fin Stock Respondents' Postconference Brief at 6-9.

[27] Trinidad Postconference Brief at 7-10.

1. Ultra-Thin Aluminum Foil

Physical Characteristics and Uses. Respondents' contention that ultra-thin gauge aluminum foil can be distinguished from other aluminum foil because this gauge foil has a thickness of 0.0003 inches or less[28] is not supported by the record. As described in detail by Petitioners, ***.[29] Also, the website of an aluminum foil distributor uses a demarcation line of 0.0004 to distinguish between "thin" and standard foil.[30] Thus, a thickness of 0.0003 inches or less, the distinction on which respondents rely, is not a clear dividing line separating ultra-thin aluminum foil from other aluminum foil.

It is uncontested, as Petitioners note,[31] that all aluminum foil follows certain industry specifications for chemistry and thickness. Respondents' arguments that ultra-thin foil has tighter tolerances and higher quality than thicker foil are based, at least in part, on the product characteristics of ultra-thin aluminum foil produced outside of the United States.[32] Thus, whatever the merits of these arguments, they are not relevant to the domestic like product analysis, which focuses on similarities and distinctions between domestically produced products.[33] Ultra-thin aluminum foil and thicker gauge foil are characterized generally by the same qualities (light weight, formability, and ability to form a barrier to light, air, and moisture). Ultra-thin aluminum foil is characterized by lighter weight and greater flexibility, whereas heavier foil is more durable.[34] For these reasons, ultra-thin aluminum foil tends to have different uses (primarily flexible packaging applications) than thicker-gauge foil.[35]

Manufacturing Facilities, Production Processes and Employees. The manufacturing processes for aluminum foil consists generally of three distinct stages: (1) melting and refining aluminum, (2) casting aluminum into semi-finished forms, and (3) rolling semi-finished forms into aluminum foil.[36] A representative of JW testified that his firm produces ultra-thin aluminum foil in the same facilities, and using the same production equipment and employees, as are involved in the production of thicker gauge foil. He stated that "{i}t's just a matter of the number of passes you take on the rolling operations, the cold mills."[37] He conceded, though, that "it's a little tougher to produce the lighter gauge versus the thicker gauges," thereby suggesting that the processes for making ultra-thin aluminum foil may be at least slightly

[28] *E.g.*, FPA Respondents' Postconference Brief at 3.

[29] Petitioners' Postconference Brief at 6-7 and Exh. 8.

[30] CR at III-11, PR at III-8.

[31] Petitioners' Postconference Brief at 4.

[32] *See, e.g.*, Conference Tr. at 109 (Casey) (domestic producers incapable of providing quality required by Bemis).

[33] *See*, *e.g.*, *Large Residential Washers from China*, Inv. No. 731-TA-1306 (Preliminary) USITC Pub. 4591 at 10 (Feb. 2016).

[34] FPA Respondents Group Postconference Brief, Exh. 3 at 2, paras. 10 & 11.

[35] FPA Respondents Group Postconference Brief at 4.

[36] CR at I-14-21, PR at I-12-17.

[37] Conference Tr. at 51 (Roush).

different than those used to make thicker-gauge foil.[38] A respondent witness asserted that the production of ultra-thin aluminum foil may require three additional steps (doubling, finish rolling, and separating) and additional equipment for these steps.[39]

Channels of Distribution. Although ultra-thin aluminum foil and thicker foil are sold to different types of customers, the channels of distribution through which both groups of products are sold are generally similar. Both are sold to entities that further process the product: ultra-thin aluminum foil is sold to converters, and thicker foil is sold to entities that also further process the product (by producing products such household foil, pie pans, thermal insulation, and heat exchanger fins).[40]

Interchangeability. Ultra-thin aluminum foil and thicker foil are generally not interchangeable. Thicker foil cannot be substituted for ultra-thin aluminum foil because the thicker product cannot be formed as well,[41] and ultra-thin aluminum foil cannot be substituted for thicker foil because it is not durable enough.[42]

Producer and Customer Perceptions. There is record evidence that aluminum foil producers regard lighter-gauge foil to be a higher-value product,[43] and that customers perceive ultra-thin aluminum foil as having qualities that the thicker-gauge foil lacks.[44] On the other hand, it is not clear that the industry recognizes a product category known as "ultra-thin" gauge foil. Among producers and customers, different gauges of foil are referred to by their numeric gauge, and not as "thin gauge" or "ultra-thin gauge" foil.[45]

Price. The average unit value (AUV) of U.S. producers' U.S. commercial shipments of ultra-thin aluminum foil was *** per short ton during 2016, while it was *** per short ton for all other domestically produced aluminum foil.[46] A witness for Petitioners testified that lighter gauges of aluminum foil carry a higher value.[47]

Conclusion. In investigations such as these, where domestically manufactured merchandise is made up of a grouping of similar products or involves niche products, the Commission does not consider each item of merchandise to be a separate like product that is only "like" its identical counterpart in the scope, but considers the grouping itself to constitute

---

[38] Conference Tr. at 55 (Roush).

[39] The respondent witness who testified to these processes and equipment was the former chief executive officer of a Chinese producer of aluminum foil, but he also had experience in the domestic aluminum foil industry. Conference Tr. at 122 (Morrison). He was discussing the equipment and processes used at the Chinese firm. *Id.* at 123. It is not clear whether these additional processes and equipment are used in domestic production of ultra-thin aluminum foil.

[40] CR at I-12-13, PR at I-10-11.

[41] Conference Tr. at 155 (Rinkevich).

[42] FPA Respondents Group Postconference Brief at 4.

[43] Conference Tr. at 65 (Rudisill & McCarter).

[44] *E.g.*, Conference Tr. at 155 (Rinkevich).

[45] Conference Tr. at 149 (Mowry) and 150 (Dewar and Casey).

[46] CR at I-27, PR at I-21.

[47] Conference Tr. at 65 (Rudisill).

the domestic like product[48] and "disregards minor variations,"[49] absent a "clear dividing line" between particular products in the group.

Aluminum foil with a thickness of 0.0003 inches or less and thicker aluminum foil share many of the same physical characteristics and properties, albeit not formability and durability. Although the uses of the thinner and thicker foils are largely different, varying uses are typical where a grouping of similar products is involved. Both types of foil are made using the same manufacturing facilities, production processes, and employees, although the production of thinner-gauge foil may involve some additional equipment and production steps. The channel of distribution through which both types of foil are predominantly sold – to end users that further process the foil – is the same. While the interchangeability of aluminum foil with a thickness of 0.0003 inches or less and thicker aluminum foil may be limited or nonexistent, such limited interchangeability is also true for other types of aluminum foil that serve a range of applications. Although customers perceive thin-gauge foil as having qualities that the thicker-gauge foil lacks, there does not appear to be a clear understanding in the industry as to what constitutes "ultra-thin" gauge foil. Based on AUV data, the price of ultra-thin foil is significantly higher than that of all other domestically produced aluminum foil.

In sum, the record does not indicate that the 0.0003 inch standard proffered by respondents provides an objective standard that distinguishes thin- and thicker-gauge aluminum foil. In light of this, the record of the preliminary phase of these investigations does not in our view indicate that there is a clear dividing line separating ultra-thin aluminum foil from the other foil products described by the scope definition, and consequently we decline to treat ultra-thin aluminum foil as a separate domestic like product.

2. Fin Stock

Physical Characteristics and Uses. Fin stock, which typically has a gauge of 45 microns (or 0.00177 inches) or more, is thicker than most, or perhaps all, other aluminum foil.[50] Fin stock appears to be characterized by its higher strength, improved corrosion resistance, increased fatigue strength, and enhanced formability.[51] It is unclear whether *domestically*

---

[48] *See, e.g.*, *Certain Corrosion-Resistant Steel Products from China*, *India, Italy, Korea, and Taiwan*, Inv. Nos. 701-TA-534-538 and 731-TA-1274-1278 (Preliminary), USITC Pub. 4547 at 9 (July 2015); *Carbon and Certain Alloy Steel Wire Rod from China, Germany, and Turkey*, Inv. Nos. 731-TA-1099-1101 (Preliminary), USITC Pub. 3832 (January 2006) at 10 ("a lack of interchangeability among products comprising a continuum is not unexpected and not inconsistent with finding a single like product."); *Stainless Steel Bar from France, Germany, Italy, Korea, and the United Kingdom*, Inv. Nos. 701-TA-413 (Final) and 731-TA-913-916 and 918 (Final), USITC Pub. 3488 (February 2002) at 6-7.

[49] *See* S. Rep. No. 96-249 at 90-91 (1979).

[50] *See* CR/PR at III-1 (aluminum foil with a thickness greater than 0.001 inches classified as extra heavy duty).

[51] The website of Novelis, one of the domestic producers of fin stock, states: "Novelis aluminum is the material of choice for HVAC/R Heat Exchangers because it:

- Conducts heat extremely well
- Is lightweight and workable, yet strong

(Continued…)

produced fin stock is made from the same kind of alloys as other aluminum foil, as Petitioners contend, or whether fin stock production involves proprietary alloys, as respondents contend.[52]

Fin stock is used to make fins for heat exchangers, whose principal function is to conduct heat.[53] Other aluminum foil is used in food and pharmaceutical packaging, and also in certain industrial applications, such as thermal insulation and cables.[54] In those applications, the functions of the aluminum are primarily to form a barrier to light, air, and moisture.[55]

Manufacturing Facilities, Production Processes and Employees. The record shows that fin stock was produced by one of the domestic producers on the same equipment, using the same production processes, and the same employees as other types of aluminum foil that the company makes.[56] However, the record also contains evidence suggesting that fin stock production entails additional manufacturing processes (such as annealing and cutting) beyond what is required to make other aluminum foil.[57]

Channels of Distribution. The channels of distribution for fin stock and other aluminum foil are broadly the same, in that both are sold almost exclusively to end users.[58]

Interchangeability. Petitioners do not contest that fin stock and other aluminum foil are not interchangeable.

Producer and Customer Perceptions. The record contains evidence that a U.S. producer perceives that product and most other aluminum foil differently. The "Markets We Serve" section of Novelis' website lists aluminum fin stock under "Industrial Aluminum Applications" (which also describes aluminum insulation and foil), whereas there is a separate section for

---

(…Continued)

- Resists corrosion
- Can be easily recycled"

The website further states that "Novelis aluminum fin stock sets the standard for the HVAC/R industry through exceptional gauge and mechanical property control, which improves the performance of the final heat exchanger." http://novelis.com/markets-we-serve/industrial-applications/ (accessed and printed April 16, 2017) (EDIS Doc. #608992). The descriptions of the company's aluminum packaging materials and of Industrial Aluminum Insulation and Foil do not refer to any of these physical characteristics. http://novelis.com/markets-we-serve/packaging/ and http://novelis.com/markets-we-serve/industrial-applications/ (accessed and printed April 16, 2017) (EDIS Doc. #608992) .

[52] A witness for Fin Stock Respondents testified that fin stock is made from proprietary alloys with higher alloy content (Conference Tr. at 135 (Garcia)), but it appears that he may have been describing foreign production of fin stock, because he also stated that U.S. mills are unable to supply many of the alloys required in the U.S. automotive industry. *Id.* at 134.

[53] Conference Tr. at 155-156 (Cannistra).

[54] CR at I-12-13, PR at I-10-11.

[55] Petitioners' Postconference Brief at 4.

[56] Petitioners' Postconference Brief at 11 and Exh. 9, para. 12.

[57] Fin Stock Respondents' Postconference Brief at 14 and Exh. 6. It is unclear to what extent these additional processes are used in domestic production of fin stock.

[58] *See* CR/PR at Table II-1 and Fin Stock Respondents' Postconference Brief at 13-14 and Hanon Postconference Brief at 6-7.

"Aluminum Packaging Material."[59] As for customer perceptions, as noted above, fin stock appears to be characterized by its higher strength, improved corrosion resistance, increased fatigue strength, and enhanced formability. Customers expect that fin stock will have these properties and that it will conduct heat very well.[60] Also, fin stock is subject to validation and testing by customers[61] -- something which is not the case for other aluminum foil, except foil used in medical packaging.[62]

Price. There is no specific price data for fin stock in the record. The AUV of U.S. producers' U.S. commercial shipments of extra heavy duty aluminum foil in 2016 was slightly below that for all other aluminum foil.[63]

Conclusion. The preliminary phase record indicates that fin stock has different uses and is not interchangeable with other types of aluminum foil. The record is less clear whether these distinctions reflect physical differences in the alloys used for fin stock and other types of aluminum foil. By contrast, there is overlap in the production process and in channels of distribution. There are, however, two additional distinctions between fin stock and other aluminum foil. First, fin stock, unlike ultra-thin aluminum foil, can be more objectively defined in terms of physical characteristics (such as higher strength, improved corrosion resistance, increased fatigue strength, and enhanced formability). Second, the record does indicate that there are some clear differences in producer perceptions between fin stock and other aluminum foil. These distinctions may be sufficient to constitute a clear dividing line between fin stock and other aluminum foil. Nevertheless, in light of the limited nature of the record in the preliminary phase of these investigations and the fact that the foil within the scope encompasses a variety of products with a range of distinct physical characteristics and uses, we do not define fin stock as a separate like product for purposes of the preliminary phase of these investigations. We intend, however, to examine this issue further in any final phase of these investigations and to collect data concerning domestic production of fin stock.[64]

---

[59] http://novelis.com/markets-we-serve/industrial-applications/ and http://novelis.com/markets-we-serve/packaging/ (accessed and printed April 16, 2017) (EDIS Doc. #608992).

[60] *E.g.*, Conference Tr. at 135 (Garcia) and Hanon Postconference Brief, Exh. 1 at para.5.

[61] Conference Tr. at 143 (Garcia).

[62] Conference Tr. at 105 (Nelson).

[63] CR at I-32, PR at I-24.

[64] Several respondents have argued that the Commission should be guided by the ways in which the scope was defined in past antidumping duty cases before the European Commission ("EC"). Bemis Postconference Brief at 7, and Fin Stock Respondents' Postconference Brief at 4-6. Even assuming *arguendo* that the EC considered the issue of whether ultra-thin gauge foil or fin stock and other aluminum foil are separate like products – a proposition for which these respondents provide no evidence – the EC's treatment of this issue has no bearing on the appropriate definition of the domestic like product in these investigations. Among other reasons, the European aluminum foil market and production operations could be quite different than they are in the United States. Moreover, it appears that the scope of the investigation was different in the EC proceedings than it is here.

As noted above, certain respondents have questioned the exclusion from the domestic like product of foil that is backed on only one side (in light of the inclusion of foil that is backed on both sides) and of reels weighing 25 pounds and less. We intend to collect data on domestic production of these two products in any final phase of these investigations, and we encourage parties to address the issue of whether the domestic like product should be defined to encompass these products beyond the scope.

For these reasons, we define a single domestic like product corresponding to the scope of these investigations.

IV. Domestic Industry

The domestic industry is defined as the domestic "producers as a whole of a domestic like product, or those producers whose collective output of a domestic like product constitutes a major proportion of the total domestic production of the product."[65] In defining the domestic industry, the Commission's general practice has been to include in the industry producers of all domestic production of the like product, whether toll-produced, captively consumed, or sold in the domestic merchant market.

We must determine whether any producer of the domestic like product should be excluded from the domestic industry pursuant to Section 771(4)(B) of the Tariff Act. This provision allows the Commission, if appropriate circumstances exist, to exclude from the domestic industry producers that are related to an exporter or importer of subject merchandise or which are themselves importers.[66] Exclusion of such a producer is within the Commission's discretion based upon the facts presented in each investigation.[67]

---

[65] 19 U.S.C. § 1677(4)(A).

[66] *See Torrington Co. v. United States*, 790 F. Supp. 1161, 1168 (Ct. Int'l Trade 1992), *aff'd without opinion*, 991 F.2d 809 (Fed. Cir. 1993); *Sandvik AB v. United States*, 721 F. Supp. 1322, 1331-32 (Ct. Int'l Trade 1989), *aff'd mem.,* 904 F.2d 46 (Fed. Cir. 1990); *Empire Plow Co. v. United States*, 675 F. Supp. 1348, 1352 (Ct. Int'l Trade 1987).

[67] The primary factors the Commission has examined in deciding whether appropriate circumstances exist to exclude a related party include the following:

(1) the percentage of domestic production attributable to the importing producer;

(2) the reason the U.S. producer has decided to import the product subject to investigation (whether the firm benefits from the LTFV sales or subsidies or whether the firm must import in order to enable it to continue production and compete in the U.S. market);

(3) whether inclusion or exclusion of the related party will skew the data for the rest of the industry;

(4) the ratio of import shipments to U.S. production for the imported product; and

(5) whether the primary interest of the importing producer lies in domestic production or importation.

Changzhou Trina Solar Energy Co. v. USITC, 100 F. Supp.3d 1314, 1326-31 (Ct. Int'l. Trade 2015); see *also Torrington Co. v. United States*, 790 F. Supp. at 1168.

Petitioners argue that the domestic industry should be defined to consist of all U.S. producers of aluminum foil.[68] Commodity argues that both Reynolds and JW benefitted from their imports of the subject merchandise. Commodity states that the Commission should consider whether it is appropriate to exclude these firms from the domestic industry, but it does not explicitly advocate such exclusion.[69]

Three domestic producers – ***, JW, and Reynolds – meet the statutory definition of a related party. We discuss below whether appropriate circumstances exist to exclude any of these producers from the domestic industry.

***. *** was the *** domestic producer in 2016, accounting for *** percent of domestic production.[70] It is a related party because it is related to ***, an exporter of the subject merchandise, through common ownership.[71] Imports of subject merchandise produced by *** were *** short tons in 2014 (the equivalent of *** percent of *** domestic production), *** short tons in 2015 (the equivalent of *** percent of *** domestic production), and *** short tons in 2016 (the equivalent of *** percent of *** domestic production).[72] [73] The company ***.[74]

We find that the appropriate circumstances do not exist to exclude *** from the domestic industry. There is no indication that its *** shielded it from subject imports to any significant degree. *** U.S. production is considerably larger than its U.S. imports from the related exporter. Moreover, there is no indication that *** derived any benefit from these imports. We also observe that no party has argued for the exclusion of *** as a related party.

JW. JW was the fourth largest domestic producer in 2016, accounting for *** percent of domestic production.[75] It is a related party because it imported subject merchandise during the POI. JW imported *** short tons of aluminum foil from China in 2014 (the equivalent of *** percent of its domestic production) and *** short tons in 2015 (the equivalent of *** percent of its domestic production).[76] JW gave as its reason for these imports that ***.[77] The company supports the petition.[78]

---

[68] Petitioners' Postconference Brief at 13-14.

[69] Commodity Postconference Brief at 10-11 n.18.

[70] CR/PR at Table III-1.

[71] CR/PR at Tables III-2 and III-3 n.2. ***. CR/PR at Table III-2.

[72] Derived from EDIS doc. No. 606797 (***) and CR/PR at Table III-5.

[73] *** may also meet the definition of a related party because it is ***.[73] It is unclear whether a requisite control relationship exists that would make *** a related party.[73] *** short tons of aluminum foil from China in 2014 (the equivalent of *** percent of *** domestic production), *** short tons in 2015 (the equivalent of *** percent of *** domestic production), and *** short tons in 2016 (the equivalent of *** percent of *** domestic production). CR/PR at Table III-11.

[74] CR/PR at Table III-1.

[75] CR/PR at Table III-1.

[76] CR/PR at Table III-11.

[77] CR/PR at Table III-11.

[78] CR/PR at Table III-1.

The ***. There is no indication that its limited quantity of imports of the subject merchandise shielded it from subject imports to any significant degree. Also, no party has argued that JW be excluded from the definition of the domestic industry. Accordingly, we find that appropriate circumstances do not exist to exclude JW from the domestic industry.

Reynolds. Reynolds was the third largest domestic producer in 2016, accounting for *** percent of domestic production.[79] It is a related party because it imported subject merchandise during the POI. Reynolds imported *** short tons of aluminum foil from China in 2014 (the equivalent of *** percent of its domestic production), *** short tons in 2015 (the equivalent of *** percent of its domestic production), and *** short tons in 2016 (the equivalent of *** percent of its domestic production).[80] A company representative stated that after Reynolds closed its Richmond, Virginia plant,[81] it purchased aluminum foil from other domestic producers for a period of time, but then "was forced to" source aluminum foil from China after its domestic suppliers, which faced low-priced imports from China, stopped selling the product.[82] The company supports the petition.[83]

The ***. There is no indication that its imports of the subject merchandise shielded it from subject imports to any significant degree. Also, no party has argued that Reynolds be excluded from the definition of the domestic industry. We find that appropriate circumstances do not exist to exclude Reynolds from the domestic industry.

Accordingly, we define the domestic industry to include all domestic producers of aluminum foil. In any final phase of these investigations, to the extent that we decide to include aluminum foil reels weighing 25 pounds and less and aluminum foil that is backed on one side in the domestic like product, we would need to decide whether converters (firms that convert larger reels into smaller ones and firms that laminate foil to make flexible packaging) engage in sufficient production-related activity to be considered domestic producers of the domestic like product. We invite the parties' comments on these issues.

V. Negligible Imports

Pursuant to Section 771(24) of the Tariff Act, imports from a subject country of merchandise corresponding to a domestic like product that account for less than 3 percent of all such merchandise imported into the United States during the most recent 12 months for which data are available preceding the filing of the petition shall be deemed negligible.[84] Subject imports from China accounted for 71.4 percent of total U.S. imports of aluminum foil in

[79] CR/PR at Table III-1.

[80] CR/PR at Table III-11.

[81] Reynolds stopped making thin-gauge aluminum foil in Richmond in 2007, and shut that plant entirely in 2009. Conference Tr. at 26 (Rudsill).

[82] Conference Transcript at 26 (Rudsill/Reynolds). The company also reported that it ***. CR/PR at Table III-11.

[83] CR/PR at Table III-1.

[84] 19 U.S.C. §§ 1671b(a), 1673b(a), 1677(24)(A)(i), 1677(24)(B); *see also* 15 C.F.R. § 2013.1 (developing countries for purposes of 19 U.S.C. § 1677(36)).

the 12 month period preceding the filing of the petition (March 2016 through February 2017).[85] Accordingly, we find that subject imports are not negligible.

VI. Reasonable Indication of Material Injury by Reason of Subject Imports

A. Legal Standard

In the preliminary phase of antidumping and countervailing duty investigations, the Commission determines whether there is a reasonable indication that an industry in the United States is materially injured or threatened with material injury by reason of the imports under investigation.[86] In making this determination, the Commission must consider the volume of subject imports, their effect on prices for the domestic like product, and their impact on domestic producers of the domestic like product, but only in the context of U.S. production operations.[87] The statute defines "material injury" as "harm which is not inconsequential, immaterial, or unimportant."[88] In assessing whether there is a reasonable indication that the domestic industry is materially injured by reason of subject imports, we consider all relevant economic factors that bear on the state of the industry in the United States.[89] No single factor is dispositive, and all relevant factors are considered "within the context of the business cycle and conditions of competition that are distinctive to the affected industry."[90]

Although the statute requires the Commission to determine whether there is a reasonable indication that the domestic industry is "materially injured by reason of" unfairly traded imports,[91] it does not define the phrase "by reason of," indicating that this aspect of the injury analysis is left to the Commission's reasonable exercise of its discretion.[92] In identifying a causal link, if any, between subject imports and material injury to the domestic industry, the Commission examines the facts of record that relate to the significance of the volume and price effects of the subject imports and any impact of those imports on the condition of the domestic industry. This evaluation under the "by reason of" standard must ensure that subject imports

[85] CR at IV-13, PR at IV-11.

[86] 19 U.S.C. §§ 1671b(a), 1673b(a). The Trade Preferences Extension Act of 2015, Pub. L. 114-27, amended the provisions of the Tariff Act pertaining to Commission determinations of reasonable indication of material injury and threat of material injury by reason of subject imports in certain respects. We have applied these amendments here.

[87] 19 U.S.C. § 1677(7)(B). The Commission "may consider such other economic factors as are relevant to the determination" but shall "identify each {such} factor ... {a}nd explain in full its relevance to the determination." 19 U.S.C. § 1677(7)(B).

[88] 19 U.S.C. § 1677(7)(A).

[89] 19 U.S.C. § 1677(7)(C)(iii).

[90] 19 U.S.C. § 1677(7)(C)(iii).

[91] 19 U.S.C. §§ 1671b(a), 1673b(a).

[92] *Angus Chemical Co. v. United States*, 140 F.3d 1478, 1484-85 (Fed. Cir. 1998) ("{T}he statute does not 'compel the commissioners' to employ {a particular methodology}."), *aff'g* 944 F. Supp. 943, 951 (Ct. Int'l Trade 1996).

are more than a minimal or tangential cause of injury and that there is a sufficient causal, not merely a temporal, nexus between subject imports and material injury.[93]

In many investigations, there are other economic factors at work, some or all of which may also be having adverse effects on the domestic industry. Such economic factors might include nonsubject imports; changes in technology, demand, or consumer tastes; competition among domestic producers; or management decisions by domestic producers. The legislative history explains that the Commission must examine factors other than subject imports to ensure that it is not attributing injury from other factors to the subject imports, thereby inflating an otherwise tangential cause of injury into one that satisfies the statutory material injury threshold.[94] In performing its examination, however, the Commission need not isolate the injury caused by other factors from injury caused by unfairly traded imports.[95] Nor does the

---

[93] The Federal Circuit, in addressing the causation standard of the statute, has observed that "{a}s long as its effects are not merely incidental, tangential, or trivial, the foreign product sold at less than fair value meets the causation requirement." *Nippon Steel Corp. v. USITC*, 345 F.3d 1379, 1384 (Fed. Cir. 2003). This was re-affirmed in *Mittal Steel Point Lisas Ltd. v. United States*, 542 F.3d 867, 873 (Fed. Cir. 2008), in which the Federal Circuit, quoting *Gerald Metals, Inc. v. United States*, 132 F.3d 716, 722 (Fed. Cir. 1997), stated that "this court requires evidence in the record 'to show that the harm occurred "by reason of" the LTFV imports, not by reason of a minimal or tangential contribution to material harm caused by LTFV goods.'" *See also Nippon Steel Corp. v. United States*, 458 F.3d 1345, 1357 (Fed. Cir. 2006); *Taiwan Semiconductor Industry Ass'n v. USITC*, 266 F.3d 1339, 1345 (Fed. Cir. 2001).

[94] SAA, H.R. Rep. 103-316, Vol. I at 851-52 (1994) ("{T}he Commission must examine other factors to ensure that it is not attributing injury from other sources to the subject imports."); S. Rep. 96-249 at 75 (1979) (the Commission "will consider information which indicates that harm is caused by factors other than less-than-fair-value imports."); H.R. Rep. 96-317 at 47 (1979) ("in examining the overall injury being experienced by a domestic industry, the ITC will take into account evidence presented to it which demonstrates that the harm attributed by the petitioner to the subsidized or dumped imports is attributable to such other factors;" those factors include "the volume and prices of nonsubsidized imports or imports sold at fair value, contraction in demand or changes in patterns of consumption, trade restrictive practices of and competition between the foreign and domestic producers, developments in technology and the export performance and productivity of the domestic industry"); *accord Mittal Steel*, 542 F.3d at 877.

[95] SAA at 851-52 ("{T}he Commission need not isolate the injury caused by other factors from injury caused by unfair imports."); *Taiwan Semiconductor Industry Ass'n* , 266 F.3d at 1345. ("{T}he Commission need not isolate the injury caused by other factors from injury caused by unfair imports ... . Rather, the Commission must examine other factors to ensure that it is not attributing injury from other sources to the subject imports." (emphasis in original)); *Asociacion de Productores de Salmon y Trucha de Chile AG v. United States*, 180 F. Supp. 2d 1360, 1375 (Ct. Int'l Trade 2002) ("{t}he Commission is not required to isolate the effects of subject imports from other factors contributing to injury" or make "bright-line distinctions" between the effects of subject imports and other causes.); *see also Softwood Lumber from Canada*, Inv. Nos. 701-TA-414 and 731-TA-928 (Remand), USITC Pub. 3658 at 100-01 (Dec. 2003) (Commission recognized that "{i}f an alleged other factor is found not to have or threaten to have injurious effects to the domestic industry, *i.e*., it is not an 'other causal factor,' then there is nothing to further examine regarding attribution to injury"), *citing Gerald Metals,* 132 F.3d at 722 (the statute (Continued…)

"by reason of" standard require that unfairly traded imports be the "principal" cause of injury or contemplate that injury from unfairly traded imports be weighed against other factors, such as nonsubject imports, which may be contributing to overall injury to an industry.[96] It is clear that the existence of injury caused by other factors does not compel a negative determination.[97]

Assessment of whether material injury to the domestic industry is "by reason of" subject imports "does not require the Commission to address the causation issue in any particular way" as long as "the injury to the domestic industry can reasonably be attributed to the subject imports" and the Commission "ensure{s} that it is not attributing injury from other sources to

---

(…Continued)
"does not suggest that an importer of LTFV goods can escape countervailing duties by finding some tangential or minor cause unrelated to the LTFV goods that contributed to the harmful effects on domestic market prices.").

[96] S. Rep. 96-249 at 74-75; H.R. Rep. 96-317 at 47.

[97] *See Nippon*, 345 F.3d at 1381 ("an affirmative material-injury determination under the statute requires no more than a substantial-factor showing. That is, the 'dumping' need not be the sole or principal cause of injury.").

the subject imports."[98] [99] Indeed, the Federal Circuit has examined and affirmed various Commission methodologies and has disavowed "rigid adherence to a specific formula."[100]

The Federal Circuit's decisions in *Gerald Metals*, *Bratsk,* and *Mittal Steel* all involved cases in which the relevant "other factor" was the presence in the market of significant volumes of price-competitive nonsubject imports. The Commission interpreted the Federal Circuit's guidance in *Bratsk* as requiring it to apply a particular additional methodology following its finding of material injury in cases involving commodity products and a significant market presence of price-competitive nonsubject imports.[101] The additional "replacement/benefit" test looked at whether nonsubject imports might have replaced subject imports without any benefit to the U.S. industry. The Commission applied that specific additional test in subsequent cases, including the *Carbon and Certain Alloy Steel Wire Rod from Trinidad and Tobago* determination that underlies the *Mittal Steel* litigation.

Mittal Steel clarifies that the Commission's interpretation of *Bratsk* was too rigid and makes clear that the Federal Circuit does not require the Commission to apply an additional test nor any one specific methodology; instead, the court requires the Commission to have "evidence in the record 'to show that the harm occurred 'by reason of' the LTFV imports,'" and

---

[98] *Mittal Steel*, 542 F.3d at 877-78; *see also id.* at 873 ("While the Commission may not enter an affirmative determination unless it finds that a domestic industry is materially injured 'by reason of' subject imports, the Commission is not required to follow a single methodology for making that determination ... {and has} broad discretion with respect to its choice of methodology.") *citing United States Steel Group v. United States*, 96 F.3d 1352, 1362 (Fed. Cir. 1996) and S. Rep. 96-249 at 75. In its decision in *Swiff-Train v. United States*, 793 F.3d 1355 (Fed. Cir. 2015), the Federal Circuit affirmed the Commission's causation analysis as comporting with the Court's guidance in *Mittal*.

[99] Commissioner Kieff does not join this paragraph or the following three paragraphs. He points out that the Federal Circuit, in *Bratsk*, 444 F.3d 1369, and *Mittal Steel*, held that the Commission is *required*, in certain circumstances when analyzing present material injury, to consider a particular issue with respect to the role of nonsubject imports, without reliance upon presumptions or rigid formulas. The Court has not prescribed a specific method of exposition for this consideration. *Mittal Steel* explains as follows:

> What *Bratsk* held is that "where commodity products are at issue and fairly traded, price competitive, non-subject imports are in the market," the Commission would not fulfill its obligation to consider an important aspect of the problem if it failed to consider whether non-subject or non-LTFV imports would have replaced LTFV subject imports during the period of investigation without a continuing benefit to the domestic industry. 444 F.3d at 1369. Under those circumstances, *Bratsk* requires the Commission to consider whether replacement of the LTFV subject imports might have occurred during the period of investigation, and it requires the Commission to provide an explanation of its conclusion with respect to that factor.

542 F.3d at 878.

[100] *Nucor Corp. v. United States*, 414 F.3d 1331, 1336, 1341 (Fed. Cir. 2005); *see also Mittal Steel*, 542 F.3d at 879 ("*Bratsk* did not read into the antidumping statute a Procrustean formula for determining whether a domestic injury was 'by reason' of subject imports.").

[101] *Mittal Steel*, 542 F.3d at 875-79.

requires that the Commission not attribute injury from nonsubject imports or other factors to subject imports.[102] Accordingly, we do not consider ourselves required to apply the replacement/benefit test that was included in Commission opinions subsequent to *Bratsk*.

The progression of *Gerald Metals*, *Bratsk*, and *Mittal Steel* clarifies that, in cases involving commodity products where price-competitive nonsubject imports are a significant factor in the U.S. market, the Court will require the Commission to give full consideration, with adequate explanation, to non-attribution issues when it performs its causation analysis.[103]

The question of whether the material injury threshold for subject imports is satisfied notwithstanding any injury from other factors is factual, subject to review under the substantial evidence standard.[104] Congress has delegated this factual finding to the Commission because of the agency's institutional expertise in resolving injury issues.[105]

B. Conditions of Competition and the Business Cycle

The following conditions of competition inform our analysis of whether there is a reasonable indication of material injury by reason of subject imports.

1. Captive Production

We first consider the applicability of the statutory captive production provision. Internal consumption accounted for between *** and *** percent of U.S. producers' U.S. shipments of aluminum foil during the POI. *** accounted for all of the industry's captive production. It produces household foil primarily from its own aluminum foil rolling operations.[106] Accordingly, we have considered whether the statutory captive production provision requires us to focus

[102] *Mittal Steel*, 542 F.3d at 873 (quoting from *Gerald Metals*, 132 F.3d at 722), 875-79 & n.2 (recognizing the Commission's alternative interpretation of *Bratsk* as a reminder to conduct a non-attribution analysis).

[103] To that end, after the Federal Circuit issued its decision in *Bratsk*, the Commission began to present published information or send out information requests in the final phase of investigations to producers in nonsubject countries that accounted for substantial shares of U.S. imports of subject merchandise (if, in fact, there were large nonsubject import suppliers). In order to provide a more complete record for the Commission's causation analysis, these requests typically seek information on capacity, production, and shipments of the product under investigation in the major source countries that export to the United States. The Commission plans to continue utilizing published or requested information in the final phase of investigations in which there are substantial levels of nonsubject imports.

[104] We provide in our respective discussions of volume, price effects, and impact a full analysis of other factors alleged to have caused any material injury experienced by the domestic industry.

[105] *Mittal Steel*, 542 F.3d at 873; *Nippon Steel Corp.*, 458 F.3d at 1350, *citing U.S. Steel Group*, 96 F.3d at 1357; S. Rep. 96-249 at 75 ("The determination of the ITC with respect to causation is ... complex and difficult, and is a matter for the judgment of the ITC.").

[106] CR at III-17, PR at III-12.

our analysis primarily on the merchant market when assessing market share and the factors affecting the financial performance of the domestic industry.[107]

We determine that the threshold criterion for application of the captive production provision has been met. As noted above, internal consumption accounted for between *** percent and *** percent of the quantity of U.S. producers' U.S. shipments of aluminum foil during the POI, and commercial shipments accounted for between *** percent and *** percent of U.S. producers' total shipments in this period.[108] We find that both the domestic industry's internal consumption and commercial shipments are significant.

We also determine that the first statutory criterion has been met. This criterion focuses on whether any of the domestic like product that is transferred internally for further processing is in fact sold on the merchant market.[109] ***, which accounted for all of the domestic industry's internal consumption, reported that ***.[110] In other words, no aluminum foil that was to be ***.

In applying the second statutory criterion, we generally consider whether the domestic like product is the predominant material input into a downstream product by referring to its share of the raw material cost of the downstream product.[111] Aluminum foil reportedly

---

[107] The captive production provision, 19 U.S.C. § 1677(7)(C)(iv), as amended by the Trade Preferences Extension Act of 2015, provides:

(iv) CAPTIVE PRODUCTION – If domestic producers internally transfer significant production of the domestic like product for the production of a downstream article and sell significant production of the domestic like product in the merchant market, and the Commission finds that-

(I) the domestic like product produced that is internally transferred for processing into that downstream article does not enter the merchant market for the domestic like product, and

(II) the domestic like product is the predominant material input in the production of that downstream article.

then the Commission, in determining market share and the factors affecting financial performance set forth in clause (iii), shall focus primarily on the merchant market for the domestic like product.

The SAA indicates that where a domestic like product is transferred internally for the production of another article coming within the definition of the domestic like product, such transfers do not constitute internal transfers for the production of a "downstream article" for purposes of the captive production provision. SAA at 853.

[108] CR/PR at Table III-7.

[109] *See*, *e.g.*, *Hot-Rolled Steel Products from Argentina and South Africa*, Inv. Nos. 701-TA-404, 731-TA-898, 905 (Final), USITC Pub. 3446 at 15-16 (Aug. 2001); *Certain Cold-Rolled Steel Products from Argentina, Brazil*, *China*, *Indonesia*, *Japan*, *Russia*, *Slovakia*, *South Africa*, *Taiwan*, *Turkey and Venezuela*, Inv. Nos. 701-TA-393 and 731-TA-829-40 (Final) (Remand), USITC Pub. 3691 at 2 & n.19 (May 2004).

[110] CR at III-18, PR at III-12.

[111] *See generally*, *e.g.*, *Polyethylene Terephthalate Film*, *Sheet and Strip from Brazil*, *China*, *Thailand*, *and the United Arab Emirates*, Inv. Nos. 731-TA-1131-1134 (Final), USITC Pub. 4040 (October (Continued…)

comprises a significant majority or approximately 70 percent of the finished cost of household aluminum foil products.[112] Thus, this criterion also is satisfied.

Conclusion. We conclude that the criteria for application of the captive production provision are met in these investigations and, accordingly, we focus primarily on the merchant market in analyzing the market share and financial performance of the domestic industry. We also have considered the market as a whole and the captive portion of the market.

2. Demand Conditions

U.S. demand for aluminum foil depends on the demand for U.S.-produced downstream products. There is a broad variety of end uses for aluminum foil, including household foil, semi-rigid containers, flexible packaging, and durable goods such as fin stock used in air conditioners and radiators. Aluminum foil producers' shipments to these major end-use segments have remained relatively stable in the last several years, with the exception of the transportation market in which shipments have increased.[113]

Apparent U.S. consumption of aluminum foil overall increased by 3.7 percent from 2014 to 2016.[114] Similarly, apparent U.S. consumption of aluminum foil in the merchant market increased by *** percent in this period.[115] Most U.S. producers and some importers reported that demand for aluminum foil increased during the POI.[116]

3. Supply Conditions

The domestic industry supplied the majority of U.S. demand for aluminum foil during the POI. The share of apparent U.S. consumption in the merchant market supplied by the domestic industry declined from *** percent in 2014 to *** percent in 2015 and then to *** percent in 2016.[117] In 2016, five domestic producers accounted for essentially all domestic production of aluminum foil.[118]

One domestic production facility was closed during the POI. ***.[119] Another domestic producer, ***.[120] The record indicates that the domestic industry has been moving away from

---

(…Continued)
2008) at 17 n.103; *Polyethylene Terephthalate Film*, *Sheet*, *and Strip from India and Taiwan*, Inv. Nos. 701-TA-415 and 731-TA-933-34 (Final), USITC Pub. 3518 (June 2002) at 11 & n.51.

[112] CR at III-18, PR at III-12.

[113] CR at II-8, PR at II-5-6 and CR/PR at Table II-3.

[114] CR/PR at Table C-1.

[115] CR/PR at Table C-2.

[116] CR at II-10, PR at II-6, and CR/PR at Table II-4.

[117] CR/PR at Table C-2. The domestic industry supplied 71.0 percent of apparent U.S. consumption in the overall market in 2014, 69.1 percent in 2015, and 67.6 percent in 2016. CR/PR at Table C-1.

[118] CR/PR at Table III-1.

[119] CR/PR at Tables III-3 and III-4.

[120] CR/PR at Table III-4.

certain segments of the aluminum foil market, most notably thinner gauge foil.[121] Petitioners attribute this to competition from low-priced subject imports.[122] We intend to explore this issue further in any final phase of these investigations.

Subject imports were the second largest source of supply to the U.S. market after the domestic industry. Subject imports' share of apparent U.S. consumption in the merchant market increased from *** percent in 2014 to *** percent in 2015 and *** percent in 2016.[123]

Nonsubject imports' share of apparent U.S. consumption in the merchant market declined from *** percent in 2014 to *** percent in 2015 and *** percent in 2016.[124] In 2016, the largest source of nonsubject imports was Germany.[125]

4. Substitutability and Other Conditions

The record indicates that there is a moderate degree of substitutability between domestically produced aluminum foil and aluminum foil imported from China.[126] Most U.S. producers reported that domestic aluminum foil was always interchangeable with imported aluminum foil from China. On the other hand, a plurality of importers reported that the U.S. product was never interchangeable with the imported product from China.[127]

Producers and importers were asked to assess how often factors other than price were significant in sales of aluminum foil from the United States, subject, or nonsubject countries. Most U.S. producers reported that differences other than price were never a factor in their firms' sales of aluminum foil.[128] Most importers, on the other hand, reported that differences other than price were always a factor in their firms' sales of aluminum foil.[129] Differences other than price cited by importers include poor domestic quality, shorter lead times for Chinese product, limited domestic supply availability, superior Chinese service, and other issues concerning product availability.[130]

---

[121] We note, in this regard, that most purchasers responding to Petitioners' lost sales and lost revenue allegations that decreased their purchases from domestic producers reported doing so because of declining domestic product availability. CR at V-26-27, PR at V-18.

[122] *E.g.*, Conference Tr. at 55-56 (Roush) and Petitioners' Postconference Brief at 19.

[123] CR/PR at Table C-2. In the total market, subject imports' share of apparent U.S. consumption market increased from 17.1 percent in 2014 to 20.7 percent in 2015 and 22.9 percent in 2016. CR/PR at Table C-1.

[124] CR/PR at Table C-2. In the total market, nonsubject imports' share of apparent U.S. consumption declined from 11.9 percent in 2014 to 10.1 percent in 2015 to 9.5 percent in 2016. CR/PR at Table C-1.

[125] CR/PR at Table IV-3.

[126] CR at II-11, PR at II-7.

[127] CR at II-13, PR at II-9, and CR/PR at Table II-5.

[128] CR at II-15, PR at II-10, and CR/PR at Table II-6.

[129] CR at II-15, PR at II-10, and CR/PR at Table II-6.

[130] CR at II-15, PR at II-10, and CR/PR at Table II-6.

U.S. producers reported selling 41.7 percent of their commercial shipments through long-term contracts, 48.0 percent through annual contracts, and 10.3 percent on the spot market.[131] Importers sold 16.7 percent of their commercial shipments through long-term contracts, 45.2 percent through annual contracts, 7.1 percent through short-term contracts, and 31.0 percent on the spot market.[132]

The costs of raw materials used to produce aluminum foil, as a share of U.S. producers' total cost of goods sold (COGS), declined from 74.4 percent in 2014 to 68.5 percent in 2016. The primary raw material used to manufacture aluminum foil is unwrought aluminum derived from primary and/or secondary sources.[133] In the United States, the price of primary aluminum is comprised of two components: the London Metal Exchange ("LME") price and the U.S. Midwest premium.[134] The price of U.S.-produced aluminum foil consists of three components: the LME price for high-grade (HG) unwrought aluminum, the Midwest premium, and the fabrication or conversion price. Respondents contend that most prices of imported foil are not affected by the U.S. Midwest premium, and thus consist of only two components, the LME price of aluminum and a conversion price.[135]

C. Volume of Subject Imports

Section 771(7)(C)(i) of the Tariff Act provides that the "Commission shall consider whether the volume of imports of the merchandise, or any increase in that volume, either in absolute terms or relative to production or consumption in the United States, is significant."[136]

Subject imports increased from 109,287 short tons in 2014 to 131,324 short tons in 2015 and then to 151,658 short tons in 2016, a level 38.8 percent higher than in 2014.[137] Subject imports increased their share of apparent U.S. consumption in the merchant market from *** percent in 2014 to *** percent in 2015 and *** percent in 2016.[138] Subject imports' gain in merchant market share during the POI came at the expense of both the domestic

[131] CR/PR at Table V-2.

[132] CR/PR at Table V-2.

[133] CR at I-14, PR at I-12.

[134] CR/PR at V-1. The U.S. Midwest premium is the daily premium (or discount) to the LME cash price. The U.S. Midwest premium is "***." CR/PR at V-1 (quoting ***). It reflects both delivery to a typical freight consumer in a broad U.S. Midwest region via truck or rail as well as the transaction costs. CR at V-1-2, PR at V-1. Like the LME price, the Midwest premium is publicly known. Conference Tr. at 70 (Landa).

[135] CR at V-4, PR at V-2, and Conference Tr. at 110 (Casey).

[136] 19 U.S.C. § 1677(7)(C)(i).

[137] CR/PR at Table IV-2.

[138] CR/PR at Table C-2. Subject imports also increased as a share of apparent U.S. consumption in the overall market during the period, increasing from 17.1 percent in 2014 to 20.7 percent in 2015 and to 22.9 percent in 2016. CR/PR at Table C-1.

industry, which lost *** percentage points of market share in the merchant market from 2014 to 2016, and nonsubject imports, which lost *** percentage points.[139]

In light of the foregoing, we find that the volume of subject imports and the increase in the volume of subject imports are significant in both absolute terms and relative to consumption.

Respondents have argued that competition between the domestic like product and subject imports is attenuated and that subject imports gained market share in parts of the aluminum foil market in which the domestic industry had little or no presence.[140] We note, however, that the share of U.S. shipments accounted for by subject imports increased in all four foil thickness categories for which data were collected, and that the domestic industry participated in all four of these segments and was the dominant supplier in three of the segments.[141]

D. Price Effects of the Subject Imports

Section 771(7)(C)(ii) of the Tariff Act provides that, in evaluating the price effects of subject imports, the Commission shall consider whether –

> (I) there has been significant price underselling by the imported merchandise as compared with the price of domestic like products of the United States, and
>
> (II) the effect of imports of such merchandise otherwise depresses prices to a significant degree or prevents price increases, which otherwise would have occurred, to a significant degree.[142]

As addressed in section VI.B. above, the record indicates that there is a moderate degree of substitutability between subject imports and the domestic like product and that, although market participants dispute the importance of price in purchasing decisions, price is at least a moderate concern to purchasers.[143]

Four domestic producers and 11 importers of subject merchandise provided usable quarterly f.o.b. price data for seven aluminum foil pricing products,[144] although not all firms

---

[139] The domestic industry's market share in the merchant market declined from *** percent in 2014 to *** percent in 2015 and to *** percent in 2016. CR/PR at Table C-2. In the overall market, the domestic industry's market share declined from 71.0 percent in 2014 to 69.1 percent in 2015 and to 67.6 percent in 2016. CR/PR at Table C-1.

[140] *E.g.*, Trinidad Postconference Brief at 2-5 and Bemis Postconference Brief at 10-17.

[141] CR/PR at Table IV-7. In any final phase of these investigations, we would welcome comments on the draft questionnaires concerning the information that should be collected to determine whether there is attenuated competition in the market for aluminum foil.

[142] 19 U.S.C. § 1677(7)(C)(ii).

[143] CR at II-12, II-15, and V-27, PR at II-8, II-10, and V-18.

[144] CR at V-8, PR at V-6. Product 1 is aluminum in the 1000 series, standard tempers, 0.00025-0.0003 inch thickness, width 30-70", matte/bright; Product 2 is aluminum in the 1000 series, (Continued…)

reported pricing for all products for all quarters.[145] Subject imports were only present in the market for four of the seven pricing products.[146] [147] Subject imports undersold the domestic like product in 30 of 35 quarterly comparisons, at margins ranging from 1.0 percent to 31.1 percent.[148] There were *** pounds of subject import shipments involved in underselling comparisons and *** pounds of subject import shipments involved in overselling comparisons.[149] Thus, on a volume basis, 98.8 percent of subject imports undersold the domestic like product. This underselling was concentrated in Product 1 and, to a lesser extent, in Product 2.[150] Given the moderate degree of substitutability between the domestic like product and the subject imports and the moderate importance of price in purchasing decisions, we find this underselling to be significant for the purposes of these preliminary determinations.[151]

We have also considered changes in prices for the domestic like product and subject imports. Prices for the domestic like product and subject imports generally rose in the early part of the POI and then declined from early to mid-2015 through the rest of the POI, with the exception of Product 5 for which domestic prices increased at the end of the POI.[152] Prices for the domestically produced pricing products (with the exception of Product 5 for which prices

---

(…Continued)
standard tempers, 0.00031-0.0005 inch thickness, width 30-70", matte/bright; Product 3 is aluminum in the 8000 series, standard tempers, 0.0004-0.0014 inch thickness, width 12-18", mill finish; Product 4 is aluminum in the 8000 series, standard tempers, 0.002-0.0039 inch thickness, width 11" to 31.375", mill finish; Product 5 is aluminum in the 8000 series, standard tempers, 0.004-0.0078 inch thickness, width 11" to 31.375", mill finish; Product 6 is aluminum in the 3000 series, standard tempers, 0.002-0.0033 inch thickness, width 0.5-2", mill finish; and Product 7 is aluminum in the 3000 series, standard tempers, 0.0034-0.0078 inch thickness, width 0.5-10", mill finish. CR at V-7-8, PR at V-6.

[145] Reported pricing data account for approximately 11.3 percent of domestic producers' U.S. commercial shipments during the POI, and *** percent of U.S. commercial shipments of subject imports from China. CR at V-8-9, PR at V-6.

[146] There were no subject imports for Products 4, 6, and 7. CR/PR at Tables V-6, V-8, and V-9.

[147] A number of importers imported aluminum foil for internal consumption/company transfers. Such direct imports accounted for 58.5 percent of total imports of subject merchandise in 2016. CR at II-2 n.5, PR at II-1 n.5. We intend to collect data for such direct imports in any final phase of these investigations.

[148] CR/PR at Table V-11.

[149] CR/PR at Table V-11.

[150] CR/PR at Table V-11.

[151] Seventeen of the 18 purchasers that responded to the preliminary phase lost sales/lost revenues survey reported purchasing imported aluminum foil from China instead of U.S.-produced product since 2014. Sixteen of these purchasers reported that subject import prices were lower than U.S.-produced product, and two of these purchasers reported that price was a primary reason for the decision to purchase imported aluminum foil rather than U.S.-produced aluminum foil. Purchasers identified quality of lighter gauge foil, product availability, supply constraints, and delivery time as non-price reasons for purchasing imported rather than U.S.-produced aluminum foil. CR at V-27-28, PR at V-18, CR/PR at Table V-13.

[152] CR/PR at Figures V-2 through V-8.

rose by *** percent) declined between *** percent and *** percent over the POI.[153] Prices for subject imports declined by *** percent for pricing Product 1 and by *** percent for pricing Product 2 over the POI.[154]

As discussed above, the price of U.S.-produced aluminum foil consists of three components: the LME price of aluminum, the Midwest premium, and the fabrication or conversion price. In other words, domestic aluminum foil prices are influenced to a large extent by raw material costs, which accounted for a substantial share of U.S. producers' total COGS. Over the POI, the composite of the LME price of aluminum and the Midwest premium fell by 10.8 percent.[155] As noted above, the prices for most domestically produced aluminum foil fell over the POI by between *** percent and *** percent. Based on the record in the preliminary phase of these investigations, we cannot conclude that subject imports depressed the prices of the domestic like product to a significant degree due to the linkage between aluminum foil prices and raw material costs. In any final phase of these investigations, we intend to further explore the role of raw material costs in determining how aluminum foil prices are set.

In light of the linkage between raw material costs and aluminum foil prices, any increase in prices for the domestic like product during the POI would have been unlikely. We consequently do not find that subject imports prevented price increases which otherwise would have occurred to a significant degree.[156]

Accordingly, based on the record in the preliminary phase of these investigations, we find that subject imports significantly undersold the domestic like product. As a result of this underselling, the subject imports gained market share at the expense of the domestic industry, as described in section V.C. above. The low-priced subject imports consequently had significant effects on the domestic industry, which are described further below.

E. Impact of the Subject Imports[157]

Section 771(7)(C)(iii) of the Tariff Act provides that the Commission, in examining the impact of the subject imports on the domestic industry, "shall evaluate all relevant economic

---

[153] CR/PR at Table V-10.

[154] CR/PR at Table V-10.

[155] *See* CR/PR at Figure V-1.

[156] In the merchant market, the domestic industry's unit COGS declined to a greater extent (by *** percent) than the unit value of U.S. shipments (which declined by *** percent) over the POI. The domestic industry's ratio of COGS to sales declined from *** percent to *** percent. CR/PR at Table C-2. In the overall market, the domestic industry's unit COGS declined by 16.0 percent and the unit value of U.S. shipments declined by 15.8 percent over the POI. The domestic industry's ratio of COGS to sales declined from 92.7 percent to 92.5 percent. CR/PR at Table C-1.

[157] In its notice initiating the antidumping duty investigation on aluminum foil from China Commerce reported estimated dumping margins ranging from 38.40 percent to 140.21 percent. C*ertain Aluminum Foil from the People's Republic of China: Initiation of Less Than Fair Value Investigation,* 82 FR 15691, 15695 (March 30, 2017).

factors which have a bearing on the state of the industry." These factors include output, sales, inventories, capacity utilization, market share, employment, wages, productivity, gross profits, net profits, operating profits, cash flow, return on investment, return on capital, ability to raise capital, ability to service debt, research and development, and factors affecting domestic prices. No single factor is dispositive and all relevant factors are considered "within the context of the business cycle and conditions of competition that are distinctive to the affected industry."[158]

Many of the domestic industry's performance indicators declined over the POI, notwithstanding the increase in demand for aluminum foil during the period. The domestic industry's production of aluminum foil declined from 478,216 short tons in 2014 to 456,388 short tons in 2015 but then increased to 468,940 short tons in 2016.[159] Its capacity declined from 630,806 short tons in 2014 to 580,806 short tons in 2015 and was at the same level in 2016.[160] [161] As capacity declined more rapidly than production over the POI, capacity utilization was 75.8 percent in 2014, 78.6 percent in 2015, and 80.7 percent in 2016.[162] U.S. producers' inventories were 22,831 short tons in 2014, 20,201 short tons in 2015, and 21,555 short tons in 2016.[163]

The domestic industry's commercial U.S. shipments, by quantity, declined from *** short tons in 2014 to *** short tons in 2015 and then rose to *** short tons in 2016.[164] The domestic industry's market share in the merchant market declined from *** percent in 2014 to *** percent in 2015 and to *** percent in 2016.[165]

The industry's employment, hours worked, and wages paid all declined from 2014 to 2016.[166] Productivity and hourly wages, however, improved.[167]

The domestic industry's sales revenues in the merchant market were $*** billion in 2014, $*** million in 2015, and $*** million in 2016.[168] Gross profit in the merchant market

[158] 19 U.S.C. § 1677(7)(C)(iii). This provision was amended by the Trade Preferences Extension Act of 2015, Pub. L. 114-27.

[159] CR/PR at Table III-5.

[160] CR/PR at Table III-5.

[161] Petitioners have argued that subject imports led to plant closures and production curtailments. Petitioners' Postconference Brief at 32. We intend to examine the connection between subject imports and these closures/curtailments further in any final phase of these investigations.

[162] CR/PR at Table III-5.

[163] CR/PR at Table III-10. As a share of U.S. production, U.S. shipments, and total shipments, U.S. producers' inventories fluctuated within a narrow band, and were *** lower in 2016 than in 2014. *Id.*

[164] CR/PR at Table III-7. Total U.S. shipments were 453,741 short tons in 2014, 438,527 short tons in 2015, and 447,711 short tons in 2016. Internal consumption was *** short tons in 2014, *** short tons in 2015, and *** short tons in 2016. *Id.*

[165] CR/PR at Table C-2. In the overall market, the domestic industry's market share declined from 71.0 percent in 2014 to 69.1 percent in 2015 and to 67.6 percent in 2016. CR/PR at Table C-1.

[166] From 2014 to 2016, employment declined by 137 production related workers or by 7.5 percent, hours worked declined by 7.5 percent, wages paid declined by 3.2 percent. CR/PR at Table C-1.

[167] Productivity rose by 6.0 percent from 2014 to 2016 and hourly wages rose by 4.6 percent. CR/PR at Table C-1.

declined from $*** million in 2014 to $*** million in 2015, but then rose to $*** million in 2016.[169] Operating income in the merchant market declined from $*** million in 2014 to a loss of $*** million in 2015, but then rose to $*** million in 2016.[170] The industry's operating income ratio in the merchant market declined from *** percent in 2014 to negative *** percent in 2015, but then improved to *** percent in 2016.[171] Net income in the merchant market declined from $*** million in 2014 to a loss of $*** million in 2015, but then rose to $*** million in 2016.[172] The industry's return on assets, expressed as operating income as a share of total assets, declined from *** percent in 2014 to negative *** percent in 2015, but then rose to *** percent in 2016.[173] The industry's capital expenditures declined from 2014 to 2015, but then rose in 2016.[174]

For purposes of the preliminary phase of these investigations, we find that subject imports had a significant impact on the domestic industry. Subject import volume increased significantly in absolute terms during the POI, and subject import market share also increased as the domestic industry's market share declined in the merchant market and overall market. There was significant underselling by subject imports. As a result of this loss in market share, at a time when demand for aluminum foil was growing, the domestic industry's revenues were lower than they would have been otherwise. The lower revenues, in turn, resulted in reduced gross, operating, and net profits, as well as a negative operating income ratio in 2015. In light of these considerations, we find that subject imports had a significant impact on the domestic industry.

Respondents argue that subject imports have not been the cause of any material injury to the domestic industry because subject imports are serving markets from which the domestic industry has withdrawn, for reasons unrelated to subject imports.[175] As already noted, however, the share of U.S. shipments accounted for by subject imports increased in all four foil thickness categories for which data were collected, and the domestic industry participated in all

---

(…Continued)

[168] CR/PR at Table C-2. Total net sales were $1.5 billion in 2014, $1.3 billion in 2015, and $1.2 billion in 2016. CR/PR at Table C-1.

[169] CR/PR at Table C-2. In the total market, gross profit declined from $106.6 million in 2014 to $43.0 million in 2015, but then rose to $89.4 million in 2016. CR/PR at Table C-1.

[170] CR/PR at Table C-2. In the total market, operating income declined from $50.4 million in 2014 to a loss of $15.3 million in 2015, but then rose to $37.2 million in 2016. CR/PR at Table C-1. Reynolds, *** (CR/PR at Tables III-5, III-7, and VI-3) had *** gross, operating, and net income throughout the POI, but each of these indicators *** throughout the POI. CR/PR at Table VI-3.

[171] CR/PR at Table C-2. In the total market, the operating income ratio declined from 3.5 percent in 2014 to negative 1.2 percent in 2015, but then improved to 3.1 percent in 2016. CR/PR at Table C-1.

[172] CR/PR at Table C-2. In the total market, net income declined from $33.4 million in 2014 to a loss of $46.0 million in 2015, but then rose to $22.0 million in 2016. CR/PR at Table C-1.

[173] CR/PR at Table VI-6.

[174] The domestic industry's capital expenditures were $21.6 million in 2014, $18.4 million in 2015 and $27.8 million in 2016. CR/PR at Table VI-5. The industry *** during the POI. *Id.*

[175] *E.g.*, Bemis Postconference Brief at 10-17, Commodity Postconference Brief at 6-8 and 11-13, FPA Respondents Group Postconference Brief at 18-20, and Oracle Postconference Brief at 2-3.

four of these segments and was the dominant supplier in three of the segments.[176] Respondents also argue that purchasers increased their purchases of subject imports because of non-price factors, such as superior quality and shorter lead times associated with subject imports.[177] We intend to explore whether the domestic industry lost market share as a result of these issues further in any final phase of these investigations.

We have also examined the role of nonsubject imports. Nonsubject imports as a share of apparent U.S. consumption in the merchant market decreased from *** percent in 2014 to *** percent in 2015 to *** percent in 2016.[178] Consequently, nonsubject imports cannot explain the domestic industry's loss of market share over the POI. The record therefore does not indicate that nonsubject imports are responsible for the observed declines in the domestic industry's market share, revenues, and financial performance.

For the foregoing reasons, the record of the preliminary phase of these investigations supports a determination that there is a reasonable indication of material injury by reason of subject imports.

VII. Conclusion

For the reasons stated above, we determine that there is a reasonable indication that an industry in the United States is materially injured by reason of subject imports of aluminum foil from China that are allegedly subsidized and sold in the United States at less than fair value.

[176] CR/PR at Table IV-7.

[177] *E.g.*, FPA Respondents Group Postconference Brief at 34-47.

[178] CR/PR at Table C-2. Nonsubject imports as a share of U.S. consumption in the total market decreased from 11.9 percent in 2014 to 10.1 percent in 2015 and to 9.5 percent in 2016. CR/PR at Table C-1.

PART I: INTRODUCTION

BACKGROUND

These investigations result from petitions filed with the U.S. Department of Commerce ("Commerce") and the U.S. International Trade Commission ("USITC" or "Commission") by The Aluminum Association Trade Enforcement Working Group, Arlington, Virginia, and its individual members[1] on March 9, 2017, alleging that an industry in the United States is materially injured and threatened with material injury by reason of subsidized and less-than-fair-value ("LTFV") imports of aluminum foil from China.[2] The following tabulation provides information relating to the background of these investigations.[3] [4]

Effective date	Action
March 9, 2017	Petition filed with Commerce and the Commission; institution of Commission investigation (82 FR 13853, March 15, 2017)
March 28, 2017	Commerce's notice of initiation of countervailing duty investigation (82 FR 15688, March 30, 2017)
March 28, 2017	Commerce's notice of initiation of less-than-fair-value investigation (82 FR 15691, March 30, 2017)
March 30, 2017	Staff conference
April 21, 2017	Commission's vote
April 24, 2017	Commission's determination
May 1, 2017	Commission's views

[1] The members of the Working Group are JW Aluminum Company ("JW Aluminum"), Novelis North America ("Novelis"), and Reynolds Consumer Products ("Reynolds"). Letter from John Herrmann to Secretary Barton concerning request for proprietary treatment of membership of the Aluminum Association Trade Enforcement Working Group, April 3, 2017.

[2] See the section entitled "The Subject Merchandise" in *Part I* of this report for a complete description of the merchandise subject to these proceedings.

[3] Pertinent *Federal Register* notices are referenced in appendix A, and may be found at the Commission's website (www.usitc.gov).

[4] A list of witnesses appearing at the conference is presented in appendix B of this report.

STATUTORY CRITERIA AND ORGANIZATION OF THE REPORT

Statutory criteria

Section 771(7)(B) of the Tariff Act of 1930 (the "Act") (19 U.S.C. § 1677(7)(B)) provides that in making its determinations of injury to an industry in the United States, the Commission--

> *shall consider (I) the volume of imports of the subject merchandise, (II) the effect of imports of that merchandise on prices in the United States for domestic like products, and (III) the impact of imports of such merchandise on domestic producers of domestic like products, but only in the context of production operations within the United States; and. . . may consider such other economic factors as are relevant to the determination regarding whether there is material injury by reason of imports.*

Section 771(7)(C) of the Act (19 U.S.C. § 1677(7)(C)) further provides that--[5]

> *In evaluating the volume of imports of merchandise, the Commission shall consider whether the volume of imports of the merchandise, or any increase in that volume, either in absolute terms or relative to production or consumption in the United States is significant.. . .In evaluating the effect of imports of such merchandise on prices, the Commission shall consider whether. . .(I) there has been significant price underselling by the imported merchandise as compared with the price of domestic like products of the United States, and (II) the effect of imports of such merchandise otherwise depresses prices to a significant degree or prevents price increases, which otherwise would have occurred, to a significant degree.. . . In examining the impact required to be considered under subparagraph (B)(i)(III), the Commission shall evaluate (within the context of the business cycle and conditions of competition that are distinctive to the affected industry) all relevant economic factors which have a bearing on the state of the industry in the United States, including, but not limited to. . . (I) actual and potential decline in output, sales, market share, gross profits, operating profits, net profits, ability to service debt, productivity, return on investments, return on assets, and utilization of capacity, (II) factors affecting domestic prices, (III) actual and potential negative effects on cash flow, inventories, employment, wages, growth, ability to raise capital, and investment, (IV) actual and potential negative effects on the existing development and production efforts of the domestic industry, including efforts to develop a derivative or more*

[5] Amended by PL 114-27 (as signed, June 29, 2015), Trade Preferences Extension Act of 2015.

advanced version of the domestic like product, and (V) in {an antidumping investigation}, the magnitude of the margin of dumping.

In addition, Section 771(7)(J) of the Act (19 U.S.C. § 1677(7)(J)) provides that—[6]

(J) EFFECT OF PROFITABILITY.—The Commission may not determine that there is no material injury or threat of material injury to an industry in the United States merely because that industry is profitable or because the performance of that industry has recently improved.

Organization of report

Part I of this report presents information on the subject merchandise, alleged subsidy and dumping margins, and domestic like product. *Part II* of this report presents information on conditions of competition and other relevant economic factors. *Part III* presents information on the condition of the U.S. industry, including data on capacity, production, shipments, inventories, and employment. *Parts IV* and *V* present the volume of subject imports and pricing of domestic and imported products, respectively. *Part VI* presents information on the financial experience of U.S. producers. *Part VII* presents the statutory requirements and information obtained for use in the Commission's consideration of the question of threat of material injury as well as information regarding nonsubject countries.

MARKET SUMMARY

Aluminum foil is produced in many widths and strengths for multiple applications in food packaging, pharmaceutical packaging, and construction industries. Aluminum foil is used in food and pharmaceutical packaging applications because it provides a complete barrier to light, oxygen, moisture, and bacteria.[7] Aluminum foil is also used to manufacture thermal insulation, fin stock for air conditioners and heat exchangers, electrical coils for transformers, capacitors for radios and televisions and insulation for storage tanks.[8]

The leading U.S. producers of aluminum foil are Granges Americas, Inc. ("Granges"); JW Aluminum; Novelis; and Reynolds, while leading producers of aluminum foil in China are Jiangsu Alcha Aluminum Co., Ltd. ("Alcha"); Loften Aluminum (Hong Kong) Limited ("Loften"); Hunan Suntown Marketing Limited ("Suntown"); and Xiamen Xiashun Aluminium Foil Co., Ltd. ("Xiashun"). The leading U.S. importers of aluminum foil from China are Durable Packaging International ("Durable"); Galex, Inc. ("Galex"); Manakin Industries, LLC ("Manakin"); and Trinidad Benham Corp. ("Trinidad Benham"). Leading importers of aluminum foil from nonsubject countries include Durable; MAHLE Behr USA Inc. ("MAHLE Behr"); Norca Heat

[6] Amended by PL 114-27 (as signed, June 29, 2015), Trade Preferences Extension Act of 2015.
[7] Petition, Vol. 1, p. 7.
[8] Petition, Vol. 1, p. 7.

Transfer, LLC ("Norca Heat Transfer"); Oracle Flexible Packaging, Inc. ("Oracle"); and Trinidad Benham.[9] U.S. purchasers of aluminum foil are mostly firms that produce packaging or other consumer and industrial products for end users; leading purchasers include ***; ***; and ***.

Apparent U.S. consumption of aluminum foil totaled approximately 662,391 short tons ($1.799 billion) in 2016. U.S. producers' U.S. shipments of aluminum foil totaled 447,711 short tons ($1.141 billion) in 2016, and accounted for 67.6 percent of apparent U.S. consumption by quantity and 63.4 percent by value. U.S. imports from China totaled 151,658 short tons ($432 million) in 2016 and accounted for 22.9 percent of apparent U.S. consumption by quantity and 24.0 percent by value. U.S. imports from nonsubject sources totaled 63,023 short tons ($227 million) in 2016 and accounted for 9.5 percent of apparent U.S. consumption by quantity and 12.6 percent by value.

SUMMARY DATA AND DATA SOURCES

A summary of data collected in these investigations is presented in appendix C, table C-1.[10] Except as noted, U.S. industry data are based on questionnaire responses of five firms that accounted for the vast majority of U.S. production of aluminum foil during 2016.[11] U.S. imports are based on official import statistics.[12] [13]

PREVIOUS AND RELATED INVESTIGATIONS

Aluminum foil has not been the subject of any prior countervailing or antidumping duty investigations in the United States. The Commission is currently conducting a section 332 investigation regarding aluminum[14] and the Office of the United States Trade Representative

---

[9] MAHLE Behr imported from ***; Norca Heat Transfer imported from ***; Oracle imported from ***; and Trinidad Benham imported from ***.

[10] Table C-2 presents summary data excluding production data reported by ***.

[11] Petitioners estimated that total U.S. production in 2016 was *** short tons of aluminum foil. The five responding U.S. producers reported production of 468,940 short tons of aluminum foil in 2016. Alpha Aluminum ("Alpha"); Golden Aluminum ("Golden"); Republic Foil Inc. ("Republic"); and United Aluminum Corporation ("United") are believed to have produced aluminum foil since January 2014, but did not provide questionnaire responses. Petition, Vol. 1, pp. 2-5.

[12] Official import statistics include the following HTS nos: 7607.11.3000, 7607.11.6000, 7607.11.9030, 7607.11.9060, 7607.11.9090, and 7607.19.6000. Petition, p. 9.

[13] Official import statistics include aluminum foil in reels weighing less than 25 lbs. ("small reels"), which are outside of the scope of these investigations. Staff collected data regarding imports of these small reels in the questionnaires. According to the responses of 23 U.S. importers, *** short tons of small reels were imported from 2014 to 2016.

[14] Following receipt of a request dated February 24, 2016 from the U.S. House of Representatives, Committee on Ways and Means under section 332(g) of the Tariff Act of 1930 (19 U.S.C. § 1332(g)), the Commission instituted an investigation. *Aluminum: Competitive Conditions Affecting the U.S. Industry*, Inv. No. 332-557, 81 FR 21591, April 12, 2016.

recently requested WTO consultations with the government of China regarding overcapacity in its aluminum industry.[15]

NATURE AND EXTENT OF ALLEGED SUBSIDIES AND SALES AT LTFV

Alleged subsidies

On March 30, 2017, Commerce published a notice in the *Federal Register* of the initiation of its countervailing duty investigation on aluminum foil from China.[16] Commerce determined to initiate investigations with respect to the following government programs in China: [17]

A. Preferential Lending

1. Policy Loans to the Aluminum Foil Industry
2. Preferential Loans for State-Owned Enterprises (SOEs)
3. Export Loans from Chinese State-Owned Banks
4. Export Credits from Export-Import Bank of China
    a. Export Seller's Credit
    b. Export Buyer's Credit

B. Equity Infusions and Exemption for SOEs from Distributing Dividends

1. Equity Infusions into Nanshan Aluminum
2. Exemptions for SOEs from Distributing Dividends

C. Tax Programs

1. Income Tax Reduction for High or New Technology Enterprises
2. Income Tax Deductions for Research and Development Expenses Under the Enterprise Income Tax Law
3. Income Tax Concessions for Enterprises Engaged in Comprehensive Resource Utilization
4. Income Tax Deductions/Credits for Purchase of Special Equipment

---

[15] Office of the United States Trade Representative, *Obama Administration Files WTO Complaint on China's Subsidies to Aluminum Producers,* https://ustr.gov/about-us/policy-offices/press-office/press-releases/2017/january/Obama-Administration-Files-WTO-Complaint-China-Aluminum, retrieved January 17, 2017. On April 18, 2016, the USW submitted a petition under the Trade Act of 1974 requesting that the Commission conduct a global safeguard investigation of imports of primary unwrought aluminum. On April 22, 2016, USW withdrew this petition. *Primary Unwrought Aluminum*, Inv. No. 201-TA-74.

[16] *Certain Aluminum Foil from the People's Republic of China: Initiation of Countervailing Duty Investigation,* 82 FR 15688, March 30, 2017.

[17] *Department of Commerce Enforcement and Compliance Office of AD/CVD Operations, CVD Investigation Initiation Checklist, Certain Aluminum Foil from the People's Republic of China,* Case No. C-570-054, March 28, 2017.

D. Indirect Tax Programs

1. Import Tariff and VAT Exemptions on Imported Equipment in Encouraged Industries
2. VAT Rebates on Domestically-Produced Equipment
3. Stamp Tax Exemption on Share Transfers Under Non-Tradeable Share Reform
4. Deed Tax Exemption for SOEs Undergoing Mergers or Restructuring

E. Government Provision of Goods and Services for Less Than Adequate Remuneration (LTAR)

1. Government Provision of Land for LTAR
2. Government Provision of Primary Aluminum for LTAR
3. Provision of Steam Coal for LTAR
4. Provision of Electricity for LTAR

F. Grant Programs

1. GOC and Sub-Central Government Subsidies for the Development of Famous Brands and China World Top Brands
2. The State Key Technology Project Fund
3. Foreign Trade Development Fund Grants
4. Grants for Energy Conservation and Emission Reduction
5. Grants for the Retirement of Capacity
6. Grants for the Relocation of Productive Facilities
7. Grants to Nanshan Aluminum[18]

Alleged sales at LTFV

On March 30, 2017, Commerce published a notice in the *Federal Register* of the initiation of its antidumping duty investigation on aluminum foil from China.[19] Commerce has initiated an antidumping duty investigation based on estimated dumping margins of 38.40 and 140.21 percent for aluminum foil from China.[20]

On April 3, 2017, Commerce gave notice in the *Federal Register* that it is conducting an inquiry into its designation of China as a non-market economy (NME) as part of its antidumping duty investigation. This inquiry resulted from the December 11, 2016, change in the PRC's Protocol of Accession to the World Trade Organization. Commerce is seeking public comment

[18] Commerce declined to initiate an investigation of one alleged program (Income Tax Credits for Domestically-Owned Enterprises Purchasing Domestically Produced Equipment). *Ibid.*

[19] *Certain Aluminum Foil from the People's Republic of China: Initiation of Less Than Fair Value Investigation,* 82 FR 15691, March 30, 2017.

[20] *Certain Aluminum Foil from the People's Republic of China: Initiation of Less Than Fair Value Investigation, 82 FR 15695, March 30, 2017.*

and information, to be submitted no later than May 3, 2017, with respect to the following factors that require consideration under the Tariff Act of 1930:

(i) the extent to which the currency of the foreign country is convertible into the currency of other countries;
(ii) the extent to which wage rates in the foreign country are determined by free bargaining between labor and management;
(iii) the extent to which joint ventures or other investments by firms of other foreign countries are permitted in the foreign country;
(iv) the extent of government ownership or control of the means of production;
(v) the extent of government control over allocation of resources and over price and output decisions of enterprises; and
(vi) such other factors as the administering authority considers appropriate.[21]

THE SUBJECT MERCHANDISE

Commerce's scope

Commerce has defined the scope of these investigations as follows:

> The merchandise covered by this investigation is aluminum foil having a thickness of 0.2 mm or less, in reels exceeding 25 pounds, regardless of width. Aluminum foil is made from an aluminum alloy that contains more than 92 percent aluminum. Aluminum foil may be made to ASTM specification ASTM B479, but can also be made to other specifications. Regardless of specification, however, all aluminum foil meeting the scope description is included in the scope.
>
> Excluded from the scope of this investigation is aluminum foil that is backed with paper, paperboard, plastics, or similar backing materials on only one side of the aluminum foil, as well as etched capacitor foil and aluminum foil that is cut to shape.
>
> Where the nominal and actual measurements vary, a product is within the scope if application of either the nominal or actual measurement would place it within the scope based on the definitions set forth above. The products under investigation are currently classifiable under Harmonized Tariff Schedule of the

[21] *Certain Aluminum Foil from the People's Republic of China: Notice of Initiation of Inquiry Into the Status of the People's Republic of China as a Nonmarket Economy Country Under the Antidumping and Countervailing Duty Laws*, 82 FR 16162, April 3, 2017.

United States (HTSUS) subheadings 7607.11.3000, 7607.11.6000, 7607.11.9030, 7607.11.9060, 7607.11.9090, and 7607.19.6000. Further, merchandise that falls within the scope of this proceeding may also be entered into the United States under HTSUS subheadings 7606.11.3060, 7606.11.6000, 7606.12.3045, 7606.12.3055, 7606.12.3090, 7606.12.6000, 7606.91.3090, 7606.91.6080, 7606.92.3090, and 7606.92.6080. Although the HTSUS subheadings are provided for convenience and customs purposes, the written description of the scope of this proceeding is dispositive.[22]

Tariff treatment

Based upon the scope set forth by Commerce, information available to the Commission indicates that the merchandise subject to these investigations is imported under the following subheadings of the 2017 Harmonized Tariff Schedule of the United States ("HTS"): 7607.11.30, 7607.11.60, 7607.11.90, and 7607.19.60.[23] Aluminum foil imported under these subheadings is accorded a column-1 general duty rate of 5.8 percent, 5.3 percent, 3.0 percent, and 3.0 percent, *ad valorem*, respectively.

THE PRODUCT

Description and applications

Aluminum foil is a thin wrought[24] aluminum product that is produced via a rolling process. The subject product is aluminum foil having a thickness of 0.2 mm or less, in reels exceeding 25 pounds, regardless of width. Also, it is made from an aluminum alloy that contains more than 92 percent aluminum.[25] Aluminum foil is commonly produced using 1000,[26] 3000,[27]

---

[22] *Certain Aluminum Foil from the People's Republic of China: Initiation of Less Than Fair Value Investigation*, 82 FR 15697, March 30, 2017 and *Certain Aluminum Foil from the People's Republic of China: Initiation of Countervailing Duty Investigation,* 82 FR 15688, March 30, 2017.

[23] Commerce also noted that aluminum foil may also be imported under statistical reporting numbers 7606.11.3060, 7606.11.6000, 7606.12.3045, 7606.12.3055, 7606.12.3090, 7606.12.6000, 7606.91.3090, 7606.91.6080, 7606.92.3090, and 7606.92.6080. Decisions on the tariff classification and treatment of imported goods are within the authority of U.S. Customs and Border Protection.

[24] Wrought aluminum consists of aluminum products that are rolled, drawn, extruded, or otherwise mechanically formed of aluminum or aluminum alloys.

[25] *Certain Aluminum Foil from the People's Republic of China: Initiation of Less-Than-Fair-Value Investigation*, 82 FR 15696, March 30, 2017.

[26] 1000 series contains 99 percent or more aluminum by weight. This is considered commercially pure by industry standards.

[27] The main alloying metal in 3000 series alloys is manganese.

and 8000[28] series alloys, which account for approximately 95 percent of the foil market.[29] Aluminum foil can be produced to meet the requirements of various international standard specifications, including: ASTM International Standard B-479[30] for annealed aluminum and aluminum alloy foil for flexible barrier, food contact, and other applications; ISO International Standard 7271:2011(E) for aluminum and aluminum alloy foil and thin strip for general purposes; in addition to other specifications.[31] One importer indicated that it purchases the subject product almost exclusively to EN Standards.[32] Among the major chemical and physical properties of aluminum, the alloy type, level of thickness, surface finish, temper, and width all play an important role in meeting the specifications of end users.[33]

[28] 8000 series alloys include metals such as tin and nickel.

[29] Conference transcript, p. 83 (Roush).

[30] This standard was withdrawn by ASTM International in 2015 and was not replaced. One importer indicated that standards that have not been valid and approved after eight years are automatically withdrawn; however the process to renew a standard is very simple. The importer also indicated that there are additional standards to evaluate various properties of aluminum foil. Conference transcript, pp. 172-173 (Dodrill).

[31] ISO International Standard 7271:2011(E) is applicable to the following products shipped in rolls: double-rolled foil, of aluminum or aluminum alloys having a minimum mass fraction of aluminum of 98 percent with one side matte and the other side bright, and of thicknesses in the range 0.006mm (6 microns) to 0.050 mm (50 microns) inclusive; and single-rolled foil and thin strip, of aluminum or aluminum alloys having a minimum mass fraction of aluminum of 98 percent or of alloys shown in Annex A or similar, with both sides the same, and of thicknesses in the range 0.021 mm (21 microns) to 0.200 mm (200microns). Petitioner's postconference brief, p. 107.

[32] EN standards are standards that are ratified by the three European Standardization Organizations. Conference transcript, p. 172 (Lutterbein).

[33] Conference transcript, p. 23 (Rudisill).

Aluminum foil is produced and imported in a variety of gauges, or levels of thickness, and is commonly denominated in inches, millimeters, and microns.[34] The major categories of aluminum foil by thickness include:[35]

- **Thin**. Aluminum foil less than or equal to 0.0004 inch (0.01016 mm) thickness.[36]
- **Standard**. Aluminum foil greater than 0.0004 inch (0.01016 mm) and less than or equal to 0.0007 inch (0.01778 mm) thickness. [37]
- **Heavy duty**. Aluminum foil greater than 0.0007 inch (0.01778 mm) and less than or equal to 0.0010 inch (0.0254 mm) thickness.[38]
- **Extra heavy duty**. Aluminum foil greater than 0.0010 inch (0.0254 mm) thickness.[39]

The scope of these investigations excludes "aluminum foil that is backed with paper, paperboard, plastics, or similar backing materials on only one side of the aluminum foil, as well as etched capacitor foil and aluminum foil that is cut to shape."[40]

Aluminum foil is used extensively in food and pharmaceutical packaging because it provides protection against light, oxygen, moisture, and bacteria. It is also used in industrial applications such as thermal insulation, cables, and electronics where properties such as heat

---

[34] Microns are commonly referred to as micrometers and represent one thousandth of a millimeter, or one millionth of a meter.

[35] U.S. Packaging and Wrapping LLC, "Thickness of Aluminum Foil," http://www.uspackagingandwrapping.com/blog/Thickness-of-Aluminum-Foil.html, (accessed April 6, 2017).

[36] The thin category generally corresponds to aluminum foil used in packaging, but multiple respondents argue that aluminum foil of 0.0003 inch thickness or less is best suited for packaging applications and that aluminum foil with less than 0.0003 inch thickness constitutes a separate like product. This category of foil is referred to as "ultra-thin" hereafter. Further discussion on this topic follows in this part of the staff report. Email from Jeffrey Grimson to Justin Enck regarding ultra-thin aluminum foil, March 16, 2017. U.S. shipments of ultra-thin aluminum foil are presented in appendix D.

[37] The standard aluminum foil category (presented above) generally corresponds to aluminum foil used for production of household foil products, though some household foil products are produced using a heavier gauge. Trinidad Benham's postconference brief, p. 4. Dingsheng identified a range for household foil thickness at 0.000485 to 0.000079 inch thickness. Dingsheng's postconference brief, p. 2.

[38] Heavy duty and extra heavy duty aluminum foil are also used for household foil products because they provide extra strength and tear resistance for baking, grilling and storage applications. U.S. Packaging and Wrapping LLC, "Thickness of Aluminum Foil," http://www.uspackagingandwrapping.com/blog/Thickness-of-Aluminum-Foil.html, (accessed April 6, 2017).

[39] The extra heavy duty aluminum foil category is used in some household foil applications but it also includes fin stock, which is 0.001771654 inches (0.045mm) or greater in thickness. MAHLE Behr and Valeo's postconference brief, p. 11.

[40] *Certain Aluminum Foil from the People's Republic of China: Initiation of Less-Than-Fair-Value Investigation*, 82 FR 15696, March 30, 2017.

reflectivity and barrier protection are desired.[41] Common products that use aluminum foil include pie pans, food and candy wrappers, and household foil, among others.[42] Figure I-1 presents images of some common aluminum foil products.

Figure I-1
Aluminum foil: Images of aluminum foil products

Images from left to right (top): pie pan, Reynolds™ Foodservice Foil, foil coil in jumbo roll.

Source: Foil-Pans, https://www.foil-pans.com/handi-foil-5-3-4-aluminum-foil-pot-pie-pan-12-oz-125-pk.html, (accessed April 5, 2017); Amazon, https://www.amazon.com/Reynolds-Wrap-Heavy-Aluminum-Silver/dp/B00J9SDXF8, (accessed April 5, 2017); Alibaba, https://www.alibaba.com/product-detail/manufacturer-aluminium-foil-coil-for-food_591684034.html, (accessed April 5, 2017).

Images from left to right (bottom): Stand-up barrier pouches, pharmaceutical packaging, bare fin in heat exchanger.

Source: https://www.uline.com/Product/Detail/S-19167SILB/Plastic-Retail-Food-Bags/Stand-Up-Barrier-Pouches-4-x-6-x-2-Silver-Back?pricode=WZ749&gadtype=pla&id=S-19167SILB&gclid=CJ_x0ZuBn9MCFdiPswod-msDUw&gclsrc=aw.ds, (accessed April 12, 2017); Norsk Hydro, http://www.hydro.com/en/products/Rolled-products/Foil-and-strip-for-packaging/Pharmaceutical-packaging/, (accessed April 12, 2017); Alcom, http://alcom.com.my/main/products.php?cat=20, (accessed April 12, 2017).

[41] Aluminum Association, "Foil and Packaging," http://www.aluminum.org/product-markets/foil-packaging, (accessed March 17, 2017).

[42] Conference transcript, p. 23 (Rudisill).

Manufacturing processes

The manufacturing processes for aluminum foil are summarized below. In general, there are three distinct stages that include: (1) melting and refining aluminum, (2) casting[43] aluminum into semi-finished forms, and (3) rolling semi-finished forms into flat rolled products such as aluminum foil.

Melting and refining

Aluminum is produced using either the primary or the secondary smelting process. Inputs for the primary smelting process are derived from aluminum-containing ore (bauxite) that is first mined then refined into aluminum-oxide (alumina) in the Bayer process. In the Hall-Héroult electrolytic smelting process, the aluminum-oxide is then smelted to remove oxygen and produce molten aluminum metal. The molten aluminum is then alloyed with different metals to enhance certain properties and qualities.

During the secondary smelting process, aluminum scrap (both old[44] and new[45]) is smelted and alloyed, producing molten aluminum. Some producers use a combination of primary and secondary sources to produce molten aluminum. The desired metallurgical characteristics (e.g., hardness, strength, resistance to corrosion) of aluminum are determined prior to the casting stage.

Casting

Following the production of molten aluminum with the desired properties, the molten aluminum is then cast into a semi-finished form that can enter the rolling process. The most common casting methods used during the production of aluminum foil include continuous casting and direct chill casting.[46] Direct chill casting requires more energy than continuous casting, however both methods are commonly used amongst domestic[47] and subject country[48] producers.

Continuous casting

During the continuous casting process, molten aluminum is transferred to a holding hearth where it is stored at the correct level of purity and temperature until it is ready to be fed

---

[43] The two casting methods used in the production of aluminum foil are continuous and direct chill casting.

[44] Old scrap is post-consumer material derived from various end uses such as manufactured products and construction materials.

[45] New scrap is generated during the manufacturing of various aluminum products, and often takes the form of shavings and trimmings.

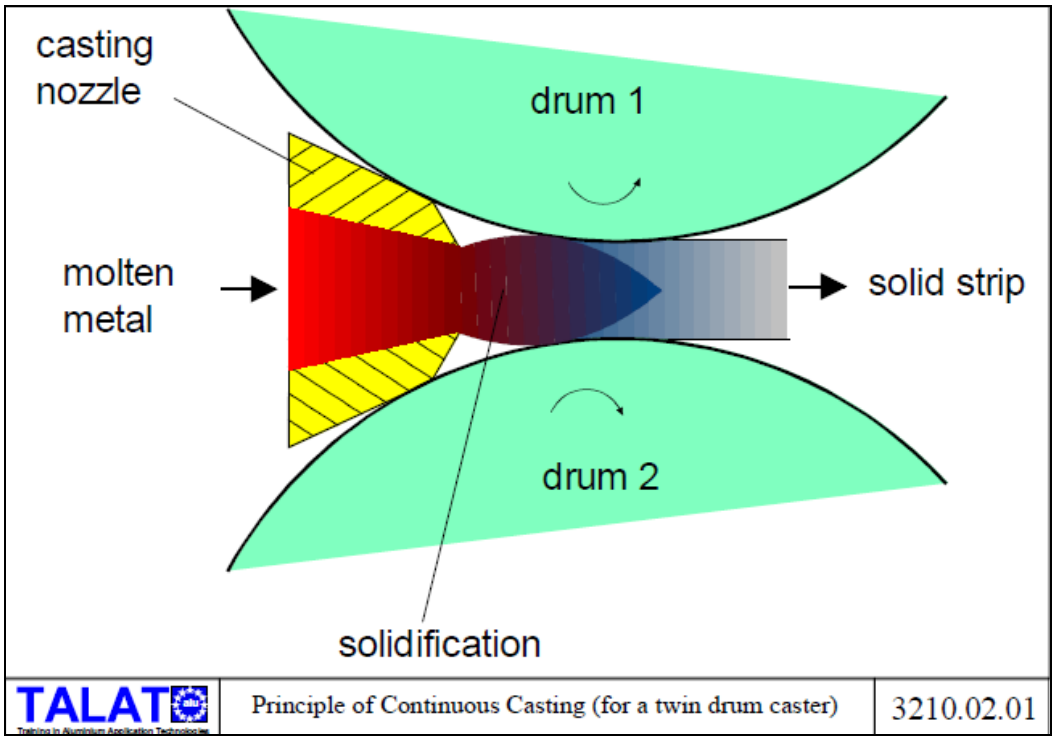
[46] One petitioner indicated that it was not aware of other casting methods besides variations of the continuous casting process. Conference transcript, p. 85 (Rudisill).

[47] Conference transcript, p. 84 (Rudisill).

[48] Conference transcript, p. 172 (Lu).

into a casting unit. As the molten aluminum is fed into the casting unit, it flows between water-cooled rollers[49] and emerges as a continuous solid strip of aluminum (figure I-2). The strip of aluminum is fed into a combination stand where it is cut into designated lengths by shears before it is wound into a coil of foil stock (figure I-3).[50] Strips produced during this process can be between 3 and 20 mm (0.11811 and 0.787402 inches) in thickness.[51] The foil stock is then transferred to a cold rolling mill where it is then further reduced in thickness to produce different gauges of aluminum foil.[52] One petitioner indicated that there are different versions of the continuous casting process that are equipment specific.[53]

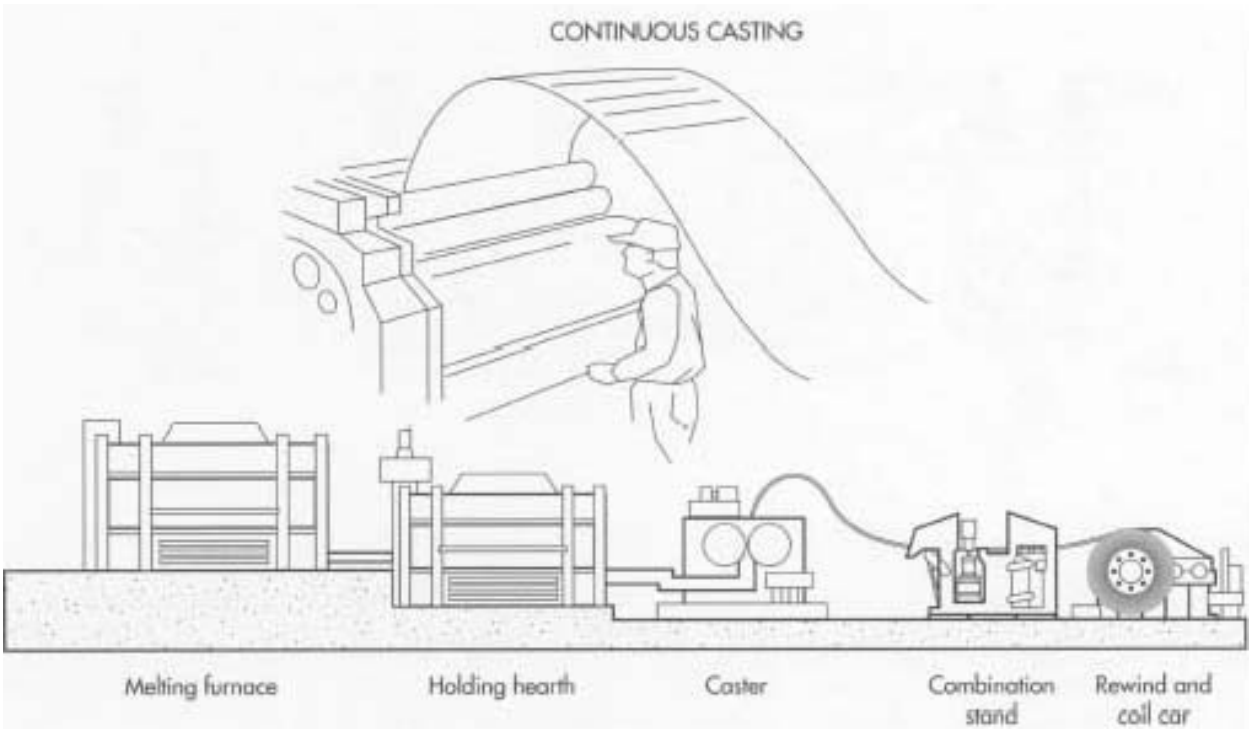
Figure I-2
Aluminum foil: Casting molten aluminum into solid strip (continuous casting process)



Source: Catrin Kammer, European Aluminum Association, "TALAT Lecture 3210, Continuous Casting of Aluminum", 1999, 4.

[49] The water-cooled rollers are labeled drum 1 and drum 2 in figure I-2.
[50] How Products are Made, "Aluminum Foil: Smelting," http://www.madehow.com/Volume-1/Aluminum-Foil.html, (accessed March 10, 2017).
[51] Catrin Kammer, European Aluminum Association, "TALAT Lecture 3210, Continuous Casting of Aluminum", 1999, p. 3.
[52] Novelis, "Metal Production: CC Casting," http://novelis.com/about-us/metal-production/#1444742157266-1bded669-dec8, (accessed March 17, 2017).
[53] Conference transcript, p. 85 (Rudisill).

Figure I-3
Aluminum foil: Continuous casting process



Source: http://www.madehow.com/Volume-1/Aluminum-Foil.html, (accessed March 8, 2017).

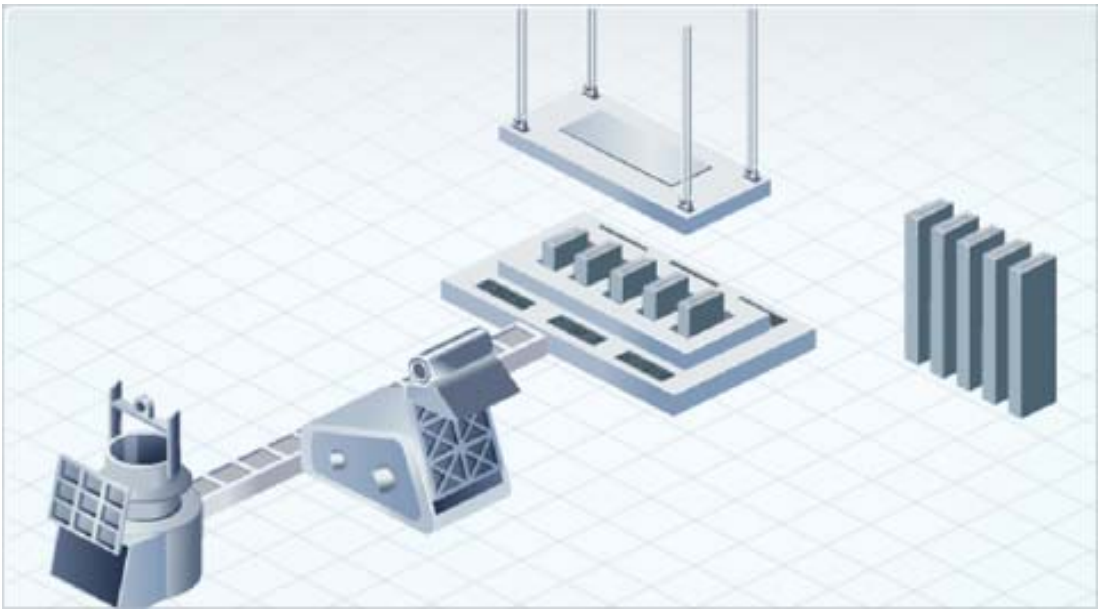
Direct chill casting

Another method of casting used in the production of aluminum foil is direct chill casting. During this process, molten aluminum is transferred to a holding hearth where it is stored at the correct level of purity and temperature until it is ready to be fed into a casting unit with a mold. As the molten aluminum flows into in the casting unit, cold water is pumped around the base of the mold. This cools the molten aluminum, solidifying it into the shape of the mold, producing a semi-finished product known as slab or sheet ingot (figure I-4). These semi-finished products are then removed from the casting unit and undergo a process known as scalping[54] before they are cooled to room temperature and transferred to a hot rolling mill for further processing.[55]

[54] Scalping removes irregularities or undesirable chemical compositions from the surface of the ingot.

[55] Novelis, "Metal Production: DC Casting," http://novelis.com/about-us/metal-production/#1444741293585-194762c7-e276, accessed March 17, 2017.

Figure I-4
Aluminum foil: Direct chill casting process



Source: Novelis, http://novelis.com/about-us/metal-production/#1444741293585-194762c7-e276, (accessed March 17, 2017).

Rolling process

Semi-finished forms of aluminum derived from the continuous casting and direct chill casting processes are reduced in thickness in a rolling mill. Hot rolling and cold rolling are two different methods by which semi-finished forms of aluminum are reduced in thickness between rollers. The major difference between these methods is how the input (foil stock in coils, slabs, sheet ingot) is treated before it is reduced.

Slabs and sheet ingots

Slabs or sheet ingots are re-heated, or annealed, to approximately 500 °C before they make successive passes through a hot rolling mill line where steel rollers reduce the slab or sheet ingot to a desired gauge, usually between 4 and 6 mm (0.15748 and 0.23622 inches).[56] The sheet of aluminum produced during this process is then coiled and cooled to room temperature before it is sent to a cold rolling mill for further processing. Once it arrives at the cold rolling mill, the coil is then unrolled into a continuous sheet, or web, that is then fed into the cold rolling mill line where it makes successive passes through a series of work rolls (figure I-5) that are paired with backup rolls that further reduce the foil sheet's gauge to less than 0.2

[56] Roy Woodward, European Aluminum Association, "TALAT Lecture 1301, The Rolling of Aluminum: the Process and the Product," 1994, p. 6.

mm (0.00787 inches).[57] Rolling oils or rolling lubricants are used to control friction between the rollers and the foil, and to cool the rollers.[58] During the cold rolling process, the aluminum foil must be annealed, or heat treated in order to enhance its workability. This can occur between passes on the cold rolling mill line or after a final gauge has been produced.[59]

Cold rolling two coils at the same time, a process known as doubling, is used to avoid breakage that may occur as the foil is reduced in thickness.[60] This process is used to produce thinner gauges of aluminum foil. Doubling the foil sheet produces two natural finishes, bright[61] and matte.[62] As the two layers of aluminum foil are separated, they are coiled into large rolls of foil stock that are trimmed and slitted with circular and razor-like knives into rectangular pieces.[63] During the trimming stage, edges of the foil are cut, and during the slitting stage the foil is cut further into several sheets of designated widths and lengths.[64] Once inspected and packed, the finished rolls of aluminum foil are then shipped to customers for various end uses.[65]

Foil stock

The manufacturing process for rolling foil stock produced from continuous casting differs from semi-finished forms derived from the direct chill casting process. Unlike slabs or sheet ingots, foil stock produced using continuous casting technology does not require the annealing stage in the hot rolling process since this is achieved during the continuous casting phase.[66] For this reason, continuous casting has lower processing, investment, operating, and energy costs when compared to direct chill casting and hot rolling of slabs or sheet ingots.[67] Following the continuous casting process, the foil stock is cooled down to room temperature

---

[57] Conference transcript, p. 24-5 (Rudisill).

[58] All Foils, Inc., "Rolling Aluminum Foil," http://www.aluminumfoils.com/foil-production/rolling.html, (accessed April 5, 2017).

[59] Conference transcript, pp. 24-25 (Rudisill).

[60] Aluminum Association, "Foil and Packaging," http://www.aluminum.org/product-markets/foil-packaging, accessed March 23, 2017.

[61] The bright finish is produced when the foil comes into contact with the rollers.

[62] The matte finish is produced when the two sheets come into contact with each other.

[63] European Aluminum Foil Association, "Facts about aluminum foil," http://www.alufoil.org/facts.html, (accessed April 5, 2017).

[64] How Products are Made, "Aluminum Foil: Smelting," http://www.madehow.com/Volume-1/Aluminum-Foil.html, (accessed March 23, 2017).

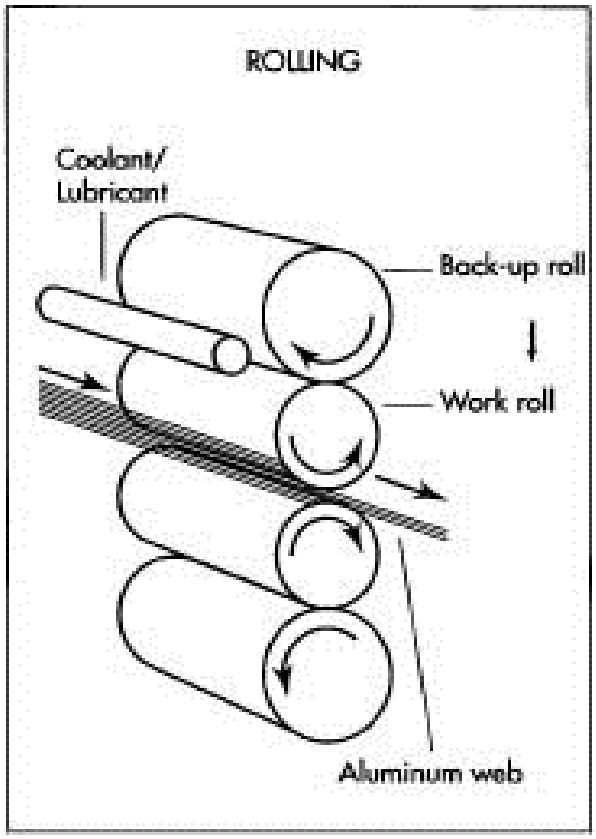
[65] Conference transcript, p. 25 (Rudisill).

[66] How Products are Made, "Aluminum Foil: Smelting," http://www.madehow.com/Volume-1/Aluminum-Foil.html, (accessed March 23, 2017).

[67] Catrin Kammer, European Aluminum Association, "TALAT Lecture 3210, Continuous Casting of Aluminum," 1999, p. 4.

before it is sent directly to a cold rolling mill rather than a hot rolling mill. The cold rolling process is similar for foil stock produced using the continuous casting process.[68]

Figure I-5
Aluminum foil: Rolling aluminum foil stock



Source: http://www.madehow.com/Volume-1/Aluminum-Foil.html, (accessed March 8, 2017).

Following the rolling process, aluminum foil can be coated with a wide variety of materials to enhance its appearance or to provide greater protection. Aluminum foil can also be laminated to other products such as paper and plastic, however "aluminum foil that is backed with paper, paperboard, plastics, or similar backing materials on only one side of the aluminum foil" is excluded from the scope of these investigations.[69]

[68] Following the continuous casting process, the foil stock is rolled into a coil and then transferred to a cold rolling mill where it is unrolled and fed into a cold rolling mill line. The production process from this point is similar to that of cold rolling for foil stock produced from direct chill casting and the subsequent hot rolling process.

[69] *Certain Aluminum Foil from the People's Republic of China: Initiation of Less-Than-Fair-Value Investigation*, 82 FR 15696, March 30, 2017.

DOMESTIC LIKE PRODUCT ISSUES

Certain respondents argued at the staff conference and in their postconference briefs that at least two subject products (ultra-thin gauge foil and fin stock) should be considered separate domestic like products. Ultra-thin gauge foil has a thickness of less than 0.0003 inches (0.00762 mm or 7.62 microns). It tends to be used as flexible packaging for the food,[70] medical device, pharmaceutical, and health care industries,[71] among other applications. Fin stock is used in the production of fins used in heat exchangers for automotive and HVAC applications, including air coolers, condensers, evaporators, heater cores, oil coolers, and radiators.[72]

The Commission's decision regarding the appropriate domestic products that are "like" the subject imported product is based on a number of factors including: (1) physical characteristics and uses; (2) common manufacturing facilities and production employees; (3) interchangeability; (4) customer and producer perceptions; (5) channels of distribution; and (6) price. Information regarding these factors is discussed below.

Ultra-thin gauge aluminum foil[73]

Physical characteristics and uses

The Mowry respondents asserted that ultra-thin gauge aluminum foil ("ultra-thin foil") is not suited for household product purposes, for which thicker "standard foil" is used, because it lacks durability. Conversely, they argue that standard foil cannot provide adequate flexibility or an acceptable yield to end users (in terms of square feet of packaging per pound) that ultra-thin foil can.[74] Thus, the Mowry respondents contend that ultra-thin foil is "uniquely suited" for the flexible packaging industry.[75] U.S. importer Bemis converts imported ultra-thin foil into items such as ketchup packets, juice pouches, and medical device packages for customers that

---

[70] Conference transcript, p. 112 (Higgins).

[71] Conference transcript, p. 115 (Dodrill).

[72] MAHLE Behr and Valeo's postconference brief, p. 12.

[73] Respondents arguing for ultra-thin gauge aluminum foil to be considered a separate domestic like product include:

- Bemis Company, Inc. ("Bemis"),
- Commodity Foil & Paper, Inc. ("CFP"),
- Flexible Packaging Association's U.S. Aluminum Foil Converters Committee ("FPA"); Galex; Manakin; Luoyang Wanji Aluminum Processing Co., Ltd.("Wanji Group"), Kunshan Aluminum Co., Ltd ("Kunshan"), Jiangsu Zhongji Lamination Materials Co., (HK) Ltd., Jiangsu Zhongji Lamination Materials Co., Ltd. and Jiangsu Zhongji Lamination Materials Stock Co., Ltd. ("Zhongji"); collectively, "Mowry Respondents,"
- Oracle and LLFLEX, and
- Xiashun.

[74] Mowry Respondents' postconference brief, p. 4.

[75] Mowry Respondents' postconference brief, p. 4.

require thin and flexible packaging. It explained that thicker foil would not meet its customers' end-use requirements nor would it run on Bemis' or the end-user's equipment.[76] Bemis noted that it and its customers require ultra-thin foil made of primary aluminum (i.e., without recycled content) which is allegedly more widely available in China than the United States.[77] U.S. importer CFP reported that ultra-thin foil is not a commodity product; instead, it goes through "significant qualification processes" for use in pharmaceutical and food packaging applications.[78]

The petitioners argue that aluminum foil used in flexible packaging applications is similar to other gauges of aluminum foil, and that aluminum foil with a gauge of less than 0.0003 inches (0.00762 mm or 7.62 microns) falls within the scope of this investigation. Foil used in flexible packaging is similar to other aluminum foil products in that it shares physical properties that provide protection from air, light, and moisture, and its end uses are "relevant with respect to aluminum foil used in household applications."[79]

Manufacturing facilities and production employees

Respondents asserted that ultra-thin foil requires three additional steps (doubling, finish rolling, and separating) which are not required in production of standard gauge foil. As discussed above, doubling involves putting two coils together for rolling in order to achieve the required reduction in thickness. A separate piece of equipment is used to double the coils and another to separate the two coils.[80] The respondents argued that producing ultra-thin foil is not as simple as rolling the foil more times as the petitioners claim, and that light gauge foil requires stricter operating procedures such as controlling rolling speed and the amount, type, and temperature of the rolling oil used.[81] According to respondents and petitioners, the amount of time required to produce ultra-thin foil is greater than that of standard foils.[82] A representative from Bemis argued that domestic producers are unable to provide product that meets the qualities desired by Bemis due to a lack of investment in new equipment.[83]

Two of five U.S. producers reported U.S. shipments of ultra-thin foil in 2016, accounting for less than one percent of all U.S. producers' shipments in that year. The petitioners argued that the same manufacturing facilities can be used to produce ultra-thin foil as thicker gauges of aluminum foil. A representative from Novelis argued that the same production processes,

---

[76] Bemis' postconference brief, pp. 2-3.

[77] Bemis' postconference brief, p. 3; and conference transcript, pp. 23-24 (Rudisill) and p. 67 (McCarter).

[78] CFP's postconference brief, p. 17 and conference transcript, pp. 104-5 (Nelson).

[79] Petitioners' postconference brief, p. 6-7.

[80] Xiashuns'postconference brief, p. 4; Mowry Respondents' postconference brief, p. 7; Bemis' postconference brief, p. 5; and conference transcript, pp. 150-51 (Morrison).

[81] Xiashun's postconference brief, p. 6.

[82] Mowry Respondents' postconference brief, p. 8. ; conference transcript, pp. 65-66 (McCarter), 86-86 (Herrmann), 159 (Wang), 142 (Morrison).

[83] Conference transcript, p. 109 (Casey).

equipment, and employees are used to make thinner gauge foils as thicker household gauges.[84] A representative for JW Aluminum argued that ultra-thin foil and thick gauges of aluminum foil can be produced using the same equipment, and that it depends on the number of successive passes the product takes on a cold rolling mill line.[85]

Interchangeability

A representative from Xiashun argued that ultra-thin foil is produced to meet the specific gauge requirements of the end user and is not interchangeable with other aluminum foil products.[86] The respondents argue that thicker foil cannot be substituted for ultra-thin foil as different gauges have different applications.[87]

The petitioners argue that purchasers of foil used in flexible packaging have the ability to switch between different gauges.[88] A representative from Novelis argued that purchasers can shift to "slightly thicker or thinner gauges, depending on the price."[89]

Customer and producer perceptions

Respondents argued that ultra-thin foil has greater quality requirements compared to medium and heavy gauge foils because defects could disrupt the production process.[90] The respondents further asserted that customers and producers perceive the products to be different because ultra-thin foil has a higher value than other gauges[91]and that it allows producers in the flexible packaging industry to reduce transportation costs and environmental impact.[92]

The petitioners argued that customers and producers of aluminum foil distinguish subject product by a numerical gauge rather than the terms "ultra-thin" and "thin" gauges.[93]

Channels of distribution

The respondents contend that the channels of distribution for ultra-thin foil products are different from thicker gauge products. Respondents argue that thicker gauge products have

---

[84] Conference transcript, p. 63 (Landa).
[85] Conference transcript, p. 53 (Roush).
[86] Conference transcript, pp. 123-4 (Morrison).
[87] Mowry Respondents' postconference brief, p. 5; Oracle and LLFLEX's postconference brief, p. 4; CFP's postconference brief, p. 18.
[88] Petitioners' postconference brief, p. 8.
[89] Conference transcript, p. 73 (D'Amico).
[90] CFP's postconference brief, pp. 18-19; Oracle and LLFLEX's postconference brief, exh. A, p. 2; Bemis' postconference brief, p. 3.
[91] Mowry respondents' postconference brief, p. 6.
[92] Conference transcript, pp. 124-5 (Rinkevich).
[93] Petitioners' postconference brief, p. 8.

different channels of distribution (e.g., package manufacturers, spoolers, or grocery stores) than ultra-thin foil that is distributed to converters. The respondents also asserted that industry experts and a previous investigation by the European Union distinguish between ultra-thin foil and foils of a thicker gauge.[94]

The petitioners reported that the subject product is sold through the same channels of distribution, including end users and distributors.[95]

Price

The average unit value of U.S. producers' U.S. commercial shipments of ultra-thin foil was *** per short ton during 2016 (table D-1), while it was *** per short ton for all other domestically produced subject foil (derived from table III-9 and table D-1).

Fin stock[96]

Physical characteristics and uses

Respondents listed fin stock's defining characteristics, in contrast to aluminum foil, as follows: "…higher strength, improved corrosion resistance, increased fatigue strength, enhanced formability, higher thermal conductivity, improved sagging resistance and improved high temperature properties."[97] Fin stock is composed of a thicker gauge of aluminum, usually above 45 microns (0.045 mm or 0.001771654 inches). Among the differences in chemical composition, Valeo asserted that proprietary alloys and processes are used to produce fin stock, while aluminum foil comprises 1100, 1200, 3000, and 8000 series alloys.[98] Proprietary alloys are used to ***. Proprietary processes include ***.[99] MAHLE Behr and Valeo contended that aluminum foil is purchased annealed while fin stock is purchased annealed and strain hardened, and that fin stock in its annealed state has additional alloying content that increases its strength compared to aluminum foil.[100] Hanon reported that petitioners referenced one standard specification for aluminum foil (ASTM B479), but those specifications do not meet the description of fin stock.[101] Hanon also noted that fin stock is permanently integrated into an

[94] Mowry respondents' postconference brief, p. 9.

[95] Petitioners' postconference brief, p. 4.

[96] Respondents arguing for fin stock used for automotive heat exchangers (e.g., radiators, charge air coolers, oil coolers, evaporators, and condensers) to be considered a separate domestic like product are MAHLE Behr, Valeo, and Hanon Systems Alabama and Hanon Systems El Paso Distribution Center (collectively, "Hanon").

[97] MAHLE Behr and Valeo's postconference brief, p. 10 and Hanon's postconference brief, pp. 3-5.

[98] Conference transcript, p. 135 (Garcia). MAHLE Behr and Valeo's postconference brief, exh. 3, Valeo PowerPoint Presentation, slide 4.

[99] MAHLE Behr and Valeo's postconference brief, exh. 3, Valeo PowerPoint Presentation, slide 5.

[100] MAHLE Behr and Valeo's postconference brief, p. 11.

[101] Hanon's postconference brief, pp. 3-4.

end product unlike other packaging products for which the foil is removed from a product prior to use.[102]

The petitioners argued that fin stock is sold within the same gauge ranges as other aluminum foil products, and that 3000 series alloys commonly used in fin stock are also used in the production of aluminum foil.[103] A representative from Reynolds argued that products covered under the scope of this investigation with different alloys can be produced using the same machinery, and that alloys used in direct chill casting and continuous casting are for the most part interchangeable.[104] Petitioners asserted that fin stock's ability to resist corrosion should not distinguish it from other aluminum foil products.[105]

Manufacturing facilities and production employees

Valeo reported that fin stock is produced using a 15-step manufacturing process, that includes direct chill casting.[106] The respondents contended that the production process for foil is simpler than for fin stock, and that due to the complexity of the fin stock production process, "most U.S. rolling mills have left the heat exchangers markets."[107]

Petitioners contended that fin stock uses the same equipment, same production processes, and same employees as other types of aluminum foil products.[108] ***.[109] A representative from Reynolds argued that the domestic industry uses a combination of continuous and direct chill casting to produce various aluminum foil products, including fin stock.[110]

Interchangeability

The respondents asserted that fin stock and aluminum foil are separate products that have separate end markets, and are therefore not interchangeable. Fin stock is produced using direct chill casting and hot mill rolling, while aluminum foil has a simpler manufacturing process that uses continuous casting.[111] The respondents also argued that aluminum foil and fin stock are not interchangeable because aluminum foil is produced in large amounts, while fin stock is produced in smaller amounts according to the specifications of the end user.[112] A representative from Valeo argued that even different grades of fin stock are not

---

[102] Hanon's postconference brief, p. 5.
[103] Petitioners' postconference brief, p. 11.
[104] Conference transcript, p. 53 (Rudisill).
[105] Petitioners' postconference brief, p. 11
[106] MAHLE Behr and Valeo's postconference brief , exh. 3, Valeo PowerPoint Presentation, slide 6.
[107] MAHLE Behr and Valeo's postconference brief, p. 14.
[108] Petitioners' postconference brief, p. 11.
[109] Petitioners' postconference brief, Exhibit 9, pp. 9-10.
[110] Conference transcript, 84-85 (Rudisill).
[111] MAHLE Behr and Valeo's postconference brief, p. 13; and Hanon's postconference brief, p. 6
[112] MAHLE Behr and Valeo's postconference brief, p. 13.

interchangeable with each other. Each specific grade of fin stock has distinct corrosion resistance and grain orientation for designated end uses.[113]

The petitioners argued that in the past, the Commission has found that a single like product can involve a "continuum of merchandise" that can be used in the production of various downstream products.[114]

Customer and producer perceptions

The respondents argued that the perception amongst customers and producers is that fin stock and aluminum foil are different products. Tier 1 producers[115] of heat exchangers purchase fin stock according to specific chemical and mechanical properties as required by OEMs, such as vehicle and refrigeration system manufacturers. Suppliers of fin stock are expected by Tier 1 producers to have ISO certifications which require an extensive testing and validation process.[116]

The petitioners argued that fin stock used in heat exchangers is just one of multiple applications for aluminum foil and therefore fin stock should not be distinguished from other aluminum foil products.[117]

Channels of distribution

The respondents argued that fin stock uses different channels of distribution than other subject products. The channels of distribution for fin stock include three segments: Tier 1 producers, Tier 2 producers, and original equipment manufacturers (OEMs).[118] Fin stock is sold by Tier 2 producers to Tier 1 producers. Tier 1 producers, such as the respondents, then use the fin stock to produce heat exchangers. The heat exchangers are then sold to OEMs such as vehicle and refrigeration system manufacturers. The respondents argue that unlike fin stock, the channels of distribution for aluminum foil are different and include other end users such as food and medical packaging producers.[119]

The petitioners argued that the respondents did not distinguish the channels of distribution for aluminum foil used as fin stock from other aluminum foil products that can be sold to both distributors and original equipment manufacturers (OEMs). [120]

---

[113] Conference transcript, p. 135 (Garcia).

[114] Petitioner's postconference brief, p. 12.

[115] Tier 1 producers are heat exchanger manufacturers who sell the heat exchangers to vehicle manufacturers and refrigeration system manufacturers (OEMs). Tier 2 producers are OEM parts producers who sell fin stock to Tier 1 manufacturers. Valeo and MAHLE Behr's postconference brief, p. 13.

[116] MAHLE Behr and Valeo's postconference brief, 16 and Hanon's postconference brief, pp. 8-9.

[117] Petitioners' postconference brief, p. 12.

[118] MAHLE Behr and Valeo's postconference brief , exh. 3, Valeo PowerPoint Presentation, slide 4.

[119] MAHLE Behr and Valeo's postconference brief, pp. 13-14; Hanon's postconference brief, pp. 7-8.

[120] Petitioners' postconference brief, p. 11.

Price

The Commission did not collect separate U.S. shipment data for fin stock, however it did collect shipment data on a somewhat larger category of aluminum foil (extra heavy duty).[121] The average unit value of U.S. producers U.S. commercial shipments of extra heavy duty aluminum foil was *** per short ton during 2016 (table III-9), while it was *** per short ton for all other subject aluminum foil (derived from table III-9).

[121] Fin stock was described by respondents as typically greater than 0.001771654 inches (0.045mm) in thickness, while extra heavy duty aluminum foil was defined in the Commission's questionnaire as aluminum foil greater than 0.0010 inches (0.0254mm) in thickness.

PART II: CONDITIONS OF COMPETITION IN THE U.S. MARKET

U.S. MARKET CHARACTERISTICS

Aluminum foil is used in consumer applications (e.g., packaging of foods, cosmetics, and chemical products)[1] and industrial applications (e.g., thermal insulation, cables, and electronics) where the barrier properties and heat reflectivity of aluminum foil are required.[2] Aluminum foil is used in food and pharmaceutical packaging to provide a barrier to light, oxygen, moisture, and bacteria, and is also used to manufacture thermal insulation for the construction industry, fin stock for air conditioners, electrical coils for transformers, and capacitors for radios and televisions, as well as for insulating storage tanks.[3] The largest end-use markets include household foil, semi-rigid food containers, durable goods (e.g., air conditioners), other types of containers and packaging (e.g., flexible packaging, caps and closures, composite cans), and passenger cars (figure II-1).

Figure II-1
Aluminum foil: Share of U.S. and Canadian shipments by major end-use markets, 2015

* * * * * * *

Apparent U.S. consumption of aluminum foil fluctuated during 2014-16. Overall, apparent U.S. consumption in 2016 was 3.7 percent higher than in 2014.

CHANNELS OF DISTRIBUTION

Aluminum foil is sold primarily to end users.[4] U.S. producers sold almost entirely to industrial end users while importers sold mostly to industrial end users with the remaining share to consumer product end users, as shown in table II-1.[5]

---

[1] The U.S. end users of thin-gauged aluminum foil are converters, who laminate and/or print aluminum foil to make flexible packaging. This flexible packaging is used for a variety of purposes including food packaging, tobacco, pharmaceutical applications, and others. Conference transcript, p. 99 (Dewar).

[2] Petition, vol. 1, p. 10.

[3] Petition, vol. 1, p. 7.

[4] Petition, vol. 1, p. 10.

[5] Eleven of 23 importers imported aluminum foil for internal consumption/company transfers and did not report any U.S. commercial shipments. Chinese imports of aluminum foil for internal consumption increased during 2014-16. Imports of aluminum foil from China for internal consumption accounted for *** percent of total imports from China in 2016, an increase of 17.8 percentage points since 2014. One U.S. producer (***) reported that *** during 2014-16.

Table II-1
Aluminum foil: U.S. producers' and importers' U.S. commercial shipments, by sources and channels of distribution, 2014-16

Item	Calendar year		
	2014	2015	2016
	Share of commercial U.S. shipments (percent)		
U.S. producers' U.S. commercial shipments of aluminum foil to:			
Distributors	2.8	2.9	2.8
Consumer product end users	0.0	0.0	0.0
Industrial end users	97.2	97.1	97.2
U.S. importers' U.S. commercial shipments of aluminum foil from China to:			
Distributors	0.3	0.3	0.2
Consumer product end users	24.2	14.8	4.9
Industrial end users	75.6	84.9	94.9
U.S. importers' U.S. commercial shipments of aluminum foil from all other countries:			
Distributors	7.1	2.9	6.0
Consumer product end users	0.0	0.0	0.0
Industrial end users	92.9	97.1	94.0

Source: Compiled from data submitted in response to Commission questionnaires.

GEOGRAPHIC DISTRIBUTION

U.S. producers reported selling aluminum foil to all regions in the contiguous United States (table II-2). At least one importer was reported to be selling to each U.S. region; however, only one of ten importers, (***) reported selling to all regions. Importers reported selling to primarily to the Northeast, Midwest and Southeast regions. For U.S. producers, 4.4 percent of sales were within 100 miles of their production facility, 92.8 percent were between 101 and 1,000 miles, and 2.8 percent were over 1,000 miles. Importers sold 39.2 percent within 100 miles of their U.S. point of shipment, 58.4 percent between 101 and 1,000 miles, and 2.5 percent over 1,000 miles.

Table II-2
Aluminum foil: Geographic market areas in the United States served by U.S. producers and importers

Region	U.S. producers	Importers
Northeast	4	9
Midwest	4	9
Southeast	4	8
Central Southwest	4	5
Mountain	3	2
Pacific Coast	4	2
Other[1]	0	0
All regions (except Other)	3	1
Reporting firms	4	10

[1] All other U.S. markets, including AK, HI, PR, and VI.

Source: Compiled from data submitted in response to Commission questionnaires.

SUPPLY AND DEMAND CONSIDERATIONS

U.S. supply

Domestic production

Based on available information, U.S. producers of aluminum foil have the ability to respond to changes in demand with moderately large changes in the quantity of shipments of U.S.-produced aluminum foil to the U.S. market. The main contributing factors to this degree of responsiveness of supply are the availability of unused capacity and some ability to shift production to or from alternate products; factors mitigating responsiveness of supply include limited inventories and a limited ability to shift shipments from alternate markets.

Industry capacity

Domestic capacity utilization increased from 75.8 percent in 2014 to 80.7 percent in 2016, as a result of decreased industry capacity and production. This moderate level of capacity utilization suggests that U.S. producers may have a substantial ability to increase production of aluminum foil in response to an increase in prices.[6]

Alternative markets

U.S. producers' exports, as a percentage of total shipments, decreased from *** percent in 2014 to *** percent in 2016. This level of exports indicates that U.S. producers may have

[6] Petitioners contend that existing capacity could be supplemented by bringing idled capacity on-line in a relatively short period of time. Petitioners' postconference brief, p. 19.

limited ability to shift shipments between the U.S. market and other markets in response to price changes.

Inventory levels

All domestically produced aluminum foil is produced-to-order. U.S. producers' inventories, as a ratio to total shipments, declined from *** percent in 2014 to *** percent in 2016. These inventory levels suggest that U.S. producers may have limited ability to respond to changes in demand with changes in the quantity shipped from inventories.

Production alternatives

Three of five U.S. producers stated that they could switch production from aluminum foil to other products. Other products that producers reportedly can produce on the same equipment as aluminum foil are aluminum coil and aluminum sheet.

Supply constraints

Two of five U.S. producers reported experiencing supply constraints since January 1, 2014. U.S. producer *** reported that its coater capacity constrained its supply. U.S. producer *** reported that during high seasonal demand, the demand has exceeded its capacity.

Subject imports from China[7]

Based on available information, producers of aluminum foil from China have the ability to respond to changes in demand with moderately large changes in the quantity of shipments of aluminum foil to the U.S. market. The main contributing factors to this degree of responsiveness of supply are the ability to shift shipments from alternate markets or inventories and some ability to shift production to or from alternate products; factors mitigating responsiveness of supply include limited availability of unused capacity and limited inventories.

Industry capacity

Chinese producers' capacity utilization increased from 86.7 percent in 2014 to 90.5 percent in 2016, with both industry capacity and production increasing from 2014 to 2016. This relatively high level of capacity utilization suggests that Chinese producers may have limited ability to increase production of product in response to an increase in prices.

[7] The Commission received questionnaire responses from 12 Chinese producers/exporters. The exports to the United States of these 12 firms were equivalent to 61.6 percent of U.S. imports of aluminum foil from China in 2016.

Alternative markets

Chinese producers' home market shipments declined from 58.8 percent in 2014 to 52.4 percent in 2016. Chinese producers' shipments to export markets other than the United States, as a percentage of total shipments, increased from 31.0 percent in 2014 to 36.0 percent in 2016. In addition to the United States, leading export markets for aluminum foil from China are India, the Middle-East, East Asia, and Mexico. This level of exports indicates that Chinese producers may have some ability to shift shipments between the U.S. market and other markets in response to price changes.

Inventory levels

Approximately three-fourths of aluminum foil from China is produced-to-order. Chinese producers' inventories, relative to total shipments, declined from 6.8 percent in 2014 to 5.4 percent in 2016. These inventory levels suggest that responding foreign firms may have limited ability to respond to changes in demand with changes in the quantity shipped from inventories.

Production alternatives

Four responding foreign producers stated that they could switch production from aluminum foil to other products. Other products that responding foreign producers reportedly can produce on the same equipment as aluminum foil are ***.

Supply constraints

Most importers reported no supply constraints since January 1, 2014. Importer *** stated that according to its customers, its longer lead times have caused them to miss deadlines. Importer *** reported that the U.S. port strikes on the West and East coast, as well as Hanjin Ocean freight line bankruptcy in 2016, have caused supply constraints for aluminum foil from China.

Nonsubject imports

Imports of aluminum foil from nonsubject countries accounted for 9.5 percent of total apparent consumption in 2016. The largest sources of aluminum foil imports from nonsubject sources to the U.S. market were Germany and Russia. Combined, imports from these two sources accounted for 46.5 percent of imports from nonsubject sources in 2016.

U.S. demand

Based on available information, the overall demand for aluminum foil is likely to experience low-to-moderate changes in response to changes in price. The main contributing factors are lack of substitute products and the moderate-to-large cost share of aluminum foil in most of its end-use products.

End uses and cost share

U.S. demand for aluminum foil depends on the demand for U.S.-produced downstream products. Reported end uses include household foil, semi-rigid containers, flexible packaging, and durable goods such as fin stock used in air conditioners and radiators.[8] [9] As shown in table II-3, producers' shipments of aluminum foil to these major end-use segments have remained relatively stable in the last several years, with the exception of the transportation market which has increased.

Table II-3
Aluminum foil: U.S. and Canadian producer shipments by major end-use markets, 2010-15

* * * * * * *

The share of the total cost of an end-use product that is accounted for by aluminum foil varies greatly depending on the end-use product. Aluminum foil accounts for a large share of the total cost of household aluminum and disposable aluminum containers, for a moderate share of the total cost of flexible packaging end uses (e.g., labels, cartons, wrappers, bags, pouches, etc.), and for a relatively small share of the total cost of heat exchangers, humidifiers, and baseboard space heaters.[10] Reported cost shares for some end uses were as follows:

- Automotive radiators (17-30 percent)
- Automotive condensers (16-20 percent)
- Caps & closures (25 percent)
- Confectionary foil (50-60 percent)
- Disposable aluminum containers (60-76 percent)
- Composite laminates/foil laminates (18-40 percent)
- Flexible packaging (20-50 percent)
- Household aluminum (63-100 percent)
- HVAC (3-28 percent)
- Insulation (14-25 percent)

Business cycles

Four of five U.S. producers and 11 of 21 importers indicated that the market was subject to business cycles or conditions of competition. U.S. producers and importers reported that demand for aluminum foil was seasonal, with some firms noting specifically that the demand for confectionary foil and container foil increases around the holidays including Easter,

[8] Conference transcript, p. 23 (Rudsill).

[9] Importers MAHLE Behr and Valeo estimated that fin stock, used in automotive applications and durable goods such as air conditioners, represents approximately 28 percent of the U.S. aluminum foil market. Sandler, Travis, and Rosenberg's postconference brief, exhibit 1, p. 4.

[10] Petitioners' postconference brief, exhibit 1, p. 9.

Independence Day, Thanksgiving, and Christmas. Two U.S. producers reported that fin stock was cyclical and followed weather patterns and was influenced by trends in the construction sector. Two U.S. producers reported a reduction in their production of light gauge foil; *** reported a *** percent decrease in its light weight foil shipments from 2013 to 2016 and *** reported that ***.

Demand trends

All U.S. producers and some importers (9 of 21) reported an increase in U.S. demand for aluminum foil since January 1, 2014 (table II-4). U.S. producers reported a modest increase in demand for aluminum foil, which is driven overall by economic growth. Importer Trinidad stated that demand for aluminum foil used in disposable aluminum containers and household foil is a relatively mature market with low growth.[11] Four importers attributed the increased demand for aluminum foil to automotive industry changes which has switched to using aluminum instead of steel for lighter components and additional heat exchangers.[12]

Table II-4
Aluminum foil: Firms' responses regarding U.S. demand and demand outside the United States

Item	Increase	No change	Decrease	Fluctuate
Demand in the United States				
U.S. producers	5	0	0	0
Importers	9	9	1	2
Demand outside the United States				
U.S. producers	5	0	0	0
Importers	9	3	1	2

Source: Compiled from data submitted in response to Commission questionnaires.

Substitute products

Substitutes for aluminum foil are limited. Most U.S. producers (4 of 5) and importers (17 of 21) reported that there were no substitutes. Substitute products include plastic in food containers and sandwich wraps, caps and closures, and converter coils; foam in food containers; paper in food packaging and tobacco; and metalized PET film in composite lamination. All firms that reported substitutes reported that the prices of substitute products have affected the price for aluminum foil.

[11] Conference transcript, p. 163 (Cannistra).

[12] According to importers MAHLE Behr and Valeo, demand for fin stock is driven by automotive production (for automotive heat exchangers) and the housing market (for air conditioners and refrigeration appliances). They estimated that automotive production has increased by 4.6 percent in the United States from 2014 to 2016. MAHLE Behr and Valeo's postconference brief, exhibit 1, pp. 3-4.

SUBSTITUTABILITY ISSUES

The degree of substitution between domestic and imported aluminum foil depends upon such factors as relative prices, quality (e.g., grade standards, reliability of supply, defect rates, etc.), and conditions of sale (e.g., price discounts/rebates, lead times between order and delivery dates, payment terms, product services, etc.). Based on available data, staff believes that there is moderate degree of substitutability between domestically produced aluminum foil and aluminum foil imported from China.

Lead times

Aluminum foil is primarily produced-to-order. U.S. producers reported that 100.0 percent of their commercial shipments were produced-to-order, with lead times averaging 36 days. Importers reported that 89.3 percent of their commercial shipments were produced-to-order, with lead times averaging 97 days. Importers reported that 4.3 percent of subject import shipments were shipped from a foreign manufacturer's inventory, with lead times averaging 66 days. The remaining 6.5 percent of importers' commercial shipments came from U.S. inventories, with lead times averaging 4 days.

Factors affecting purchasing decisions

Purchasers responding to lost sales lost revenue allegations[13] were asked to identify the main purchasing factors their firm considered in their purchasing decisions for aluminum foil. The major purchasing factors identified by firms include quality,[14] availability of product specifications (e.g., gauge, alloys, etc.), price, minimum order quantity, lead times, and reliability of supply.[15]

Firms consider tensile strength and surface finish requirements when determining the quality of aluminum foil.[16] Importer Tetra Pak reported that is considers the ability of foil to unwind without breaking, good adhesion to polyethylene, and lack of surface impurities.[17] American Packaging, an importer and converter of aluminum foil, reported that gauge is the primary product characteristic that drives purchasing decisions for aluminum foil.[18]

---

[13] This information is compiled from responses by purchasers identified by petitioners or other U.S. producers to the lost sales and lost revenue allegations. See Part V for additional information.

[14] Petitioners reported that they follow the Aluminum Association standards as their industry standards as a benchmark for quality. Conference transcript, pp. 54, 76 (Roush).

[15] According to MAHLE Behr and Valeo North America, purchasers of aluminum foil consider technical capability, financial stability, ISO/TS-16949 certification, delivery times, and payment terms. Sandler, Travis, and Rosenberg's postconference brief, exhibit 1, p. 1.

[16] Conference transcript, p. 77 (Rudisill).

[17] Conference transcript, p. 135 (Rinkevich).

[18] Conference transcript, p. 100 (Dewar).

According to respondents, most purchasers require their suppliers to become certified or qualified to sell aluminum foil to their firm. Several importers and purchasers of aluminum foil reported that it took a minimum of one year to qualify a new supplier.[19] Importer and purchaser Sonoco reported that its qualification process has three phases involving multiple iterations of testing which involves input from its customer. Sonoco reported that for some end-use products considered pharmaceutical (i.e., powdered infant formula), the qualification process for any substrate or supplier change can take over two years.[20]

Comparison of U.S.-produced and imported aluminum foil

According to petitioners, because aluminum foil is produced to meet identified industry specifications, it is interchangeable regardless of the source.[21] In order to determine whether U.S.-produced aluminum foil can generally be used in the same applications as imports from China, U.S. producers and importers were asked whether the products can always, frequently, sometimes, or never be used interchangeably. As shown in table II-5, most U.S. producers reported that domestic aluminum foil was always interchangeable with imported aluminum foil from China and all other countries. A plurality of importers reported that U.S. product was never interchangeable with imported product from China. Most importers reported that domestic aluminum foil was sometimes interchangeable with aluminum foil from nonsubject countries.

Table II-5
Aluminum foil: Interchangeability between aluminum foil produced in the United States and in other countries, by country pairs

Country pair	Number of U.S. producers reporting				Number of U.S. importers reporting			
	A	F	S	N	A	F	S	N
U.S. vs. subject countries:								
U.S. vs. China	3	2	0	0	1	5	6	7
Nonsubject countries comparisons:								
U.S. vs. nonsubject	3	2	0	0	1	4	11	0
China vs. nonsubject	4	0	0	0	4	5	6	1

Note.—A=Always, F=Frequently, S=Sometimes, N=Never.

Source: Compiled from data submitted in response to Commission questionnaires.

Importers reported various factors that limited the interchangeability of domestic and Chinese product. Importers reported that domestic product was lower quality than Chinese

[19] Conference transcript, pp. 103, 104-105, 167, and p. 187 (Dewar, Nelson, Dodrill, and Mowry).
[20] Conference transcript, p. 105 (Nelson).
[21] Petition, vol. 1, p. 10.

product for both thin gauge and thicker gauge foil.[22] Importers also reported that certain widths and gauges were not available domestically, particularly thinner gauges. Importer *** stated that only one U.S. producer produces foil with a gauge of 0.0003 inch in thickness with a maximum width of 60.5 inches and has limited capacity to produce this product. It stated that no producer in the United States makes aluminum foil with a gauge of less than 0.0003 inches. Importer *** reported that Chinese producers have a wider availability of alloys, including 8079 alloy which domestic producers do not produce. Importers *** reported that lead times for domestic foil are 25 percent longer than Chinese foil.

U.S. producers contend that while they have the capability to produce ultra-thin gauge foils, they do not produce them because the current price points are too low to make economic sense.[23]

In addition, producers and importers were asked to assess how often factors other than price were significant in sales of aluminum foil from the United States, subject, or nonsubject countries. As seen in table II-6, most U.S. producers reported that differences other than price were never a factor in their firms' sales of aluminum foil. In contrast, most importers reported that differences other than price were always a factor in their firms' sales of aluminum foil. Differences other than price cited by importers include poor domestic quality, shorter lead times for Chinese product, limited domestic supply availability, superior Chinese service, and product availability.

Table II-6
Aluminum foil: Significance of factors other than price between aluminum foil produced in the United States and in other countries, by country pairs

Country pair	Number of U.S. producers reporting				Number of U.S. importers reporting			
	A	F	S	N	A	F	S	N
U.S. vs. subject countries:								
U.S. vs. China	0	0	2	3	10	1	6	2
Nonsubject countries comparisons:								
U.S. vs. nonsubject	0	0	2	3	7	1	5	1
China vs. nonsubject	0	0	1	3	4	2	8	2

Note.--A = Always, F = Frequently, S = Sometimes, N = Never.

Source: Compiled from data submitted in response to Commission questionnaires.

[22] Importer and purchaser American Packaging stated that domestic foil unwinds poorly, which causes breaks in the aluminum foil and results in significant machine down time as the converter processes the aluminum foil. Conference transcript, p. 100 (Dewar). Purchaser Rollprint Packaging reported quality issues with its domestic supply of aluminum foil in gauges of 0.003 inches in thickness to 0.001 inches. Conference transcript, p. 116 (Dodrill).

[23] Conference transcript, pp. 55-56 (Roush).

PART III: U.S. PRODUCERS' PRODUCTION, SHIPMENTS, AND EMPLOYMENT

The Commission analyzes a number of factors in making injury determinations (see 19 U.S.C. §§ 1677(7)(B) and 1677(7)(C)). Information on the subsidies and dumping margins was presented in *Part I* of this report and information on the volume and pricing of imports of the subject merchandise is presented in *Part IV* and *Part V*. Information on the other factors specified is presented in this section and/or *Part VI* and (except as noted) is based on the questionnaire responses of five U.S. producers of aluminum foil.

U.S. PRODUCERS

The Commission issued a U.S. producer questionnaire to nine firms based on information contained in the petition. Five firms provided useable data on their productive operations. Staff believes that these responses represent the vast majority of U.S. production of aluminum foil.[1]

Table III-1 lists U.S. producers of aluminum foil, their production locations, positions on the petition, and shares of total production during 2016.

[1] Petitioners estimated that total U.S. production was *** short tons of aluminum foil in 2016. Petition, Vol. 1, p. 6. The five responding U.S. producers reported production of 468,940 short tons of aluminum foil in 2016.

The petition listed an additional 3 firms (Alpha, Golden, and United) believed to produce aluminum foil but these firms did not provide a questionnaire response. The petitioners estimated that Alpha produced *** pounds (*** short tons), Golden produced *** pounds (*** short tons), and United produced *** pounds (*** short tons) during 2016. These three firms combined produced *** short tons of aluminum foil in 2016, which is equal to *** percent of the petitioners' estimate of total U.S. production. The petitioners believe that *** after being acquired by Garmco USA, Inc. ("Garmco") on October 19, 2015. Petition, Vol. 1, pp. 2-5. Staff was unable to contact representatives of Republic and Garmco.

Table III-1
Aluminum foil: U.S. producers, their position on the petition, location of production, and shares of reported production, 2016

Firm	Position on petition	Production location(s)	Share of production (percent)
Aleris	***	Clayton, NJ	***
Granges	***	Huntingdon, TN Salisbury, NC Newport, AR	***
JW Aluminum	Support	Goose Creek, SC St. Louis, MO Russellville, AR Williamsport, PA	***
Novelis	Support	Fairmont, WV Terre Haute, IN	***
Reynolds	Support	Louisville, KY Malvern, AR	***
Total			***

Source: Compiled from data submitted in response to Commission questionnaires.

Table III-2 presents information on U.S. producers' ownership, related and/or affiliated firms, and share of total production of aluminum foil.

Table III-2
Aluminum foil: U.S. producers' ownership, related and/or affiliated firms

* * * * * * *

As indicated in table III-2, *** is related to a foreign producer of the subject merchandise2 and *** are related to producers of nonsubject merchandise. *** is related to a U.S. importer of the subject merchandise. In addition, as discussed in greater detail below, three U.S. producers (***) directly imported the subject merchandise and *** purchased the subject merchandise from U.S. importers.

[2] According to *** during 2014-16.

Table III-3 presents important industry events since 2014.

Table III-3
Aluminum foil: Important industry events, since January 1, 2014

Year	Company	Description of event
2014	Reynolds Consumer Products, Novelis Inc.	**Acquisition**: Reynolds Consumer Products acquired Novelis Inc.'s North American foil products division. The acquisition included a U.S. sales office in LaGrange, Georgia but no U.S. production.
	Noranda (now Granges)	Layoff: Noranda announced that it would lay off 40 employees (40 percent of workforce) at its foil facility in Newport, Arkansas.
	Novelis	***.
2015	Aluminum Source LLC (now Alpha Aluminum)	**Acquisition:** Aluminum Source LLC acquired Oracle Flexible Packaging's aluminum rolling assets. **Name change**: Aluminum Source LLC changed its name to Alpha Aluminum.
	Republic Foil Inc., Garmco (USA) Inc.	**Acquisition:** Republic Foil Inc. acquired by Garmco (USA) Inc., a subsidiary of Bahrain-based producer Garmco.
2016	Alpha Aluminum	**Production suspension and layoff**: Alpha Aluminum suspended production and laid off 100 employees at its foil facility in Winston-Salem, North Carolina.
	Granges	**Acquisition**: Gränges acquired Noranda Aluminum Holding Corporation's downstream aluminum rolling assets (including foil) in the United States.
	Aleris	**Acquisition:** Aleris announced that it entered into a definitive agreement to be acquired by Zhongwang USA LLC, a subsidiary of China Zhongwang Holdings Limited, the parent company of China Zhongwang.
	JW Aluminum	***.
	Reynolds	**Expansion:** Reynolds Consumer Products announced that it will expand its west Louisville, Kentucky foil plant and add up to 50 new jobs. The State of Kentucky also approved a $650,000 development subsidy to be paid out over 10 years that is conditional on the plant's expansion.

Note. – Brackets indicate business proprietary information revealed in surveys for which no public source found.

Note.—In late 2013, Noranda (now Granges) announced that it would lay off 59 employees, a third of the workforce at its foil facility in Salisbury, North Carolina.

Source: Various company websites and news articles.

Table III-4 presents U.S. producers' reported changes in operations since 2014.

Table III-4
Aluminum foil: U.S. producers' reported changes in operations, since January 1, 2014

* * * * * * *

U.S. PRODUCTION, CAPACITY, AND CAPACITY UTILIZATION

Table III-5 and figure III-1 present U.S. producers' production, capacity, and capacity utilization. U.S. producers' production capacity decreased by 7.9 percent from 2014 to 2016, which is ***.[3] U.S. producers' production decreased by 1.9 percent from 2014 to 2016 but capacity utilization increased by 4.9 percentage points.

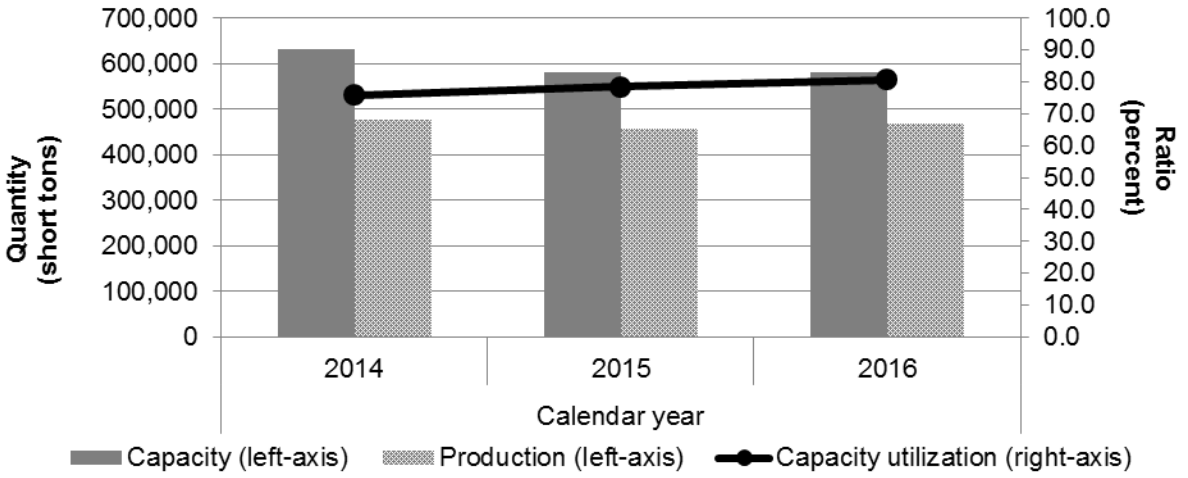
Table III-5
Aluminum foil: U.S. producers' capacity, production, and capacity utilization, 2014-16

Item / firm	Calendar year		
	2014	2015	2016
	Capacity (short tons)		
Aleris	***	***	***
Granges	***	***	***
JW Aluminum	***	***	***
Novelis	***	***	***
Reynolds	***	***	***
Total capacity	630,806	580,806	580,806
	Production (short tons)		
Aleris	***	***	***
Granges	***	***	***
JW Aluminum	***	***	***
Novelis	***	***	***
Reynolds	***	***	***
Total production	478,216	456,388	468,940
	Capacity utilization (percent)		
Aleris	***	***	***
Granges	***	***	***
JW Aluminum	***	***	***
Novelis	***	***	***
Reynolds	***	***	***
Average capacity utilization	75.8	78.6	80.7

Source: Compiled from data submitted in response to Commission questionnaires.

[3] ***.

Figure III-1
Aluminum foil: U.S. producers' capacity, production, and capacity utilization, 2014-16



Source: Compiled from data submitted in response to Commission questionnaires.

Alternative products

As shown in table III-6, roughly *** of the products produced during 2014-16 by U.S. producers was aluminum foil. Three firms reported producing *** products on the same machinery as aluminum foil.

Table III-6
Aluminum foil: U.S. producers' overall capacity and production on the same equipment as subject production, 2014-16

Item	Calendar year		
	2014	2015	2016
	Quantity (short tons)		
Overall capacity	***	***	***
Production:			
Aluminum foil	478,216	456,388	468,940
Other out-of-scope products	***	***	***
Total production on same machinery	***	***	***
	Ratios and shares (percent)		
Overall capacity utilization	***	***	***
Share of production:			
Aluminum foil	***	***	***
Other out-of-scope products	***	***	***
Total production on same machinery	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

U.S. PRODUCERS' U.S. SHIPMENTS AND EXPORTS

Table III-7 presents U.S. producers' U.S. shipments, export shipments, and total shipments. The quantity of U.S. producers' U.S. shipments decreased by 1.3 percent from 2014 to 2016; over the same period, the value decreased by 17.2 percent and average unit value decreased by 16.1 percent. The quantity of U.S. producers' exports decreased by *** percent from 2014 to 2016; over the same period, the value decreased by *** percent and average unit value decreased by *** percent. U.S. producers reported that *** were their primary export markets.

Table III-7
Aluminum foil: U.S. producers' U.S. shipments, export shipments, and total shipments, 2014-16

Item	Calendar year		
	2014	2015	2016
	Quantity (short tons)		
Commercial U.S. shipments	***	***	***
Internal consumption	***	***	***
U.S. shipments	453,741	438,527	447,711
Export shipments	***	***	***
Total shipments	***	***	***
	Value (1,000 dollars)		
Commercial U.S. shipments	***	***	***
Internal consumption	***	***	***
U.S. shipments	1,377,873	1,212,526	1,141,168
Export shipments	***	***	***
Total shipments	***	***	***
	Unit value (dollars per short ton)		
Commercial U.S. shipments	***	***	***
Internal consumption	***	***	***
U.S. shipments	3,037	2,765	2,549
Export shipments	***	***	***
Total shipments	***	***	***
	Share of quantity (percent)		
Commercial U.S. shipments	***	***	***
Internal consumption	***	***	***
U.S. shipments	***	***	***
Export shipments	***	***	***
Total shipments	100.0	100.0	100.0
	Share of value (percent)		
Commercial U.S. shipments	***	***	***
Internal consumption	***	***	***
U.S. shipments	***	***	***
Export shipments	***	***	***
Total shipments	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

Table III-8 and figure III-2 present U.S. producers' monthly U.S. shipments. Monthly U.S. shipments quantities are consistently higher in the months of March through October compared to the months of November through February. A representative of JW Aluminum testified that the company typically plans for eight weeks of maintenance and repair over the winter season.[4]

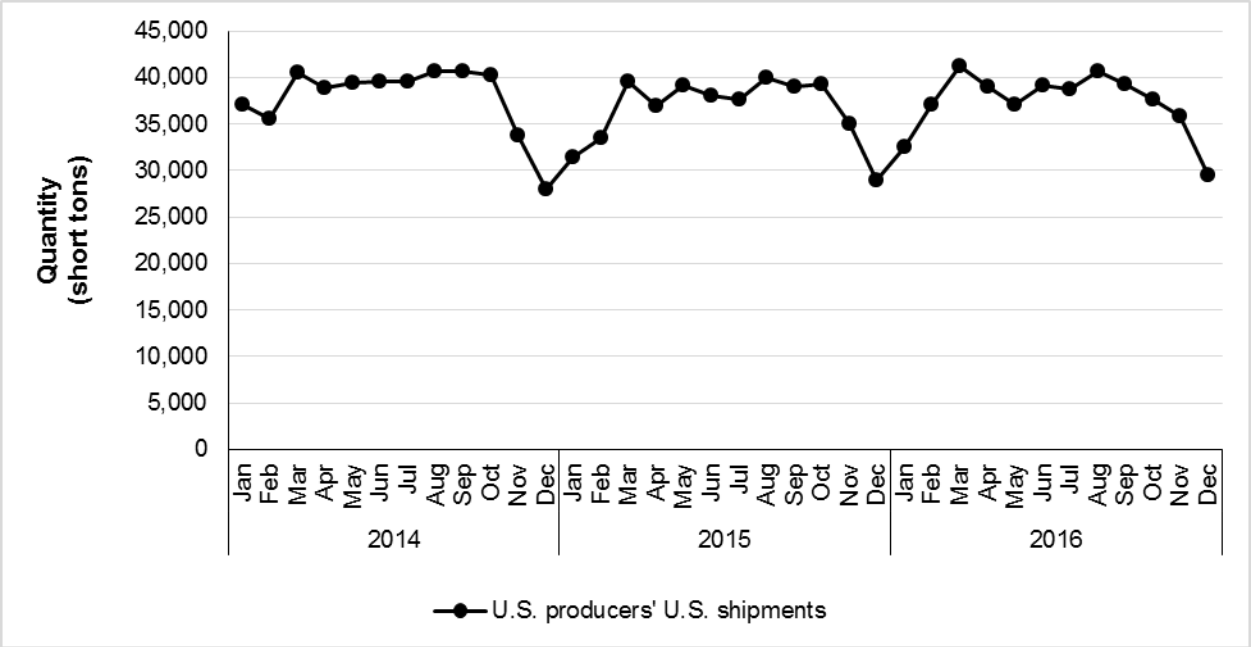
Table III-8
Aluminum foil: U.S. producers' monthly U.S. shipments, 2014-16

Item	Calendar year		
	2014	2015	2016
	Quantity (short tons)		
U.S. producers' U.S. shipments.--			
January	37,119	31,458	32,487
February	35,627	33,515	37,033
March	40,556	39,608	41,263
April	38,802	37,006	38,991
May	39,355	39,139	37,130
June	39,509	37,976	39,097
July	39,565	37,628	38,727
August	40,646	39,950	40,621
September	40,698	39,064	39,274
October	40,182	39,233	37,645
November	33,722	34,985	35,901
December	27,960	28,965	29,542
All months	453,741	438,527	447,711

Source: Compiled from data submitted in response to Commission questionnaires

[4] Conference transcript, p. 56 (McCarter).

Figure III-2
Aluminum foil: U.S. producers' monthly U.S. shipments, January 2014 through December 2016



Source: Table III-8.

Table III-9 and figure III-3 present U.S. producers' U.S. shipments by thickness. The thickness categories defined by staff[5] in the questionnaires are as follows:

Thin.—Aluminum foil less than or equal to 0.0004 inch thickness.

Standard.—Aluminum foil greater than 0.0004 inch and less than or equal to 0.0007 inch thickness.

Heavy duty.—Aluminum foil greater than 0.0007 inch and less than or equal to 0.0010 inch thickness.

Extra heavy duty.—Aluminum foil greater than 0.0010 inch thickness.

[5] Staff relied on information provided on U.S. Packaging and Wrapping, LLC's website to draft its request for breakout of shipments by thickness. http://www.uspackagingandwrapping.com/blog/Thickness-of-Aluminum-Foil.html, retrieved March 10, 2017. Questionnaires requested breakouts of U.S. shipments of aluminum foil, including thin-gauge of less than or equal to 0.0004 inch thickness, but respondents requested an additional breakout of aluminum foil with less than 0.0003 inch thickness ("ultra-thin"). Email from *** to Justin Enck regarding ultra-thin aluminum foil, March 16, 2017. U.S. shipments of ultra-thin aluminum foil are presented in appendix D.

Table III-9
Aluminum foil: U.S. producers' U.S. shipments by thickness category, 2014-16

Item	Calendar year		
	2014	2015	2016
	Quantity (short tons)		
Thin	***	***	***
Standard	***	***	***
Heavy duty	***	***	***
Extra heavy duty	***	***	***
U.S. shipments	453,741	438,527	447,711
	Value (1,000 dollars)		
Thin	***	***	***
Standard	***	***	***
Heavy duty	***	***	***
Extra heavy duty	***	***	***
U.S. shipments	1,377,873	1,212,526	1,141,168
	Unit value (dollars per short ton)		
Thin	***	***	***
Standard	***	***	***
Heavy duty	***	***	***
Extra heavy duty	***	***	***
U.S. shipments	3,037	2,765	2,549
	Share of quantity (percent)		
Thin	***	***	***
Standard	***	***	***
Heavy duty	***	***	***
Extra heavy duty	***	***	***
U.S. shipments	100.0	100.0	100.0
	Share of value (percent)		
Thin	***	***	***
Standard	***	***	***
Heavy duty	***	***	***
Extra heavy duty	***	***	***
U.S. shipments	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

Figure III-3
Aluminum foil: U.S. producers' U.S. shipments by thickness category, 2016

* * * * * * *

U.S. PRODUCERS' INVENTORIES

Table III-10 presents U.S. producers' end-of-period inventories and the ratio of these inventories to U.S. producers' production, U.S. shipments, and total shipments.

Table III-10
Aluminum foil: U.S. producers' inventories, 2014-16

Item	Calendar year		
	2014	2015	2016
	Quantity (short tons)		
U.S. producers' end-of-period inventories	22,831	20,201	21,555
	Ratio (percent)		
Ratio of inventories to.--			
U.S. production	4.8	4.4	4.6
U.S. shipments	5.0	4.6	4.8
Total shipments	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

U.S. PRODUCERS' IMPORTS AND PURCHASES

U.S. producers' subject imports and purchases of subject imports of aluminum foil are presented in tables III-11 and III-12, respectively. Reynolds began importing *** and imported *** short tons of aluminum foil from it in 2016.[6] JW Aluminum began importing ***. JW Aluminum imported ***. According to Dingsheng, ***.[7]

Table III-11
Aluminum foil: U.S. producers' subject imports, 2014-16

* * * * * * *

Table III-12
Aluminum foil: U.S. producers' purchases of subject imports, 2014-16

* * * * * * *

[6] Dingsheng's postconference brief, p. 2.
[7] Dingsheng's postconference brief, p. 3.

U.S. EMPLOYMENT, WAGES, AND PRODUCTIVITY

Table III-13 presents U.S. producers' employment-related data. All U.S. producers, except ***, reported fewer PRWs in 2016 than in 2014. The industry reported that both PRWs and hours worked a decreased by 7.5 percent from 2014 to 2016. Average wages and productivity increased by 4.6 and 6.0 percent, respectively, from 2014 to 2016.

Table III-13
Aluminum foil: U.S. producers' employment related data, 2014-16

Item	Calendar year		
	2014	2015	2016
Production and related workers (PRWs) (number)	1,830	1,767	1,693
Total hours worked (1,000 hours)	3,948	3,749	3,652
Hours worked per PRW (hours)	2,157	2,122	2,157
Wages paid ($1,000)	99,084	97,872	95,902
Hourly wages (dollars per hour)	$25.10	$26.11	$26.26
Productivity (short tons per 1,000 hours)	121.1	121.7	128.4
Unit labor costs (dollars per short tons)	$207.20	$214.45	$204.51

Source: Compiled from data submitted in response to Commission questionnaires.

CAPTIVE CONSUMPTION

Section 771(7)(C)(iv) of the Act states that–[8]

> *If domestic producers internally transfer significant production of the domestic like product for the production of a downstream article and sell significant production of the domestic like product in the merchant market, and the Commission finds that–*
>
> *(I) the domestic like product produced that is internally transferred for processing into that downstream article does not enter the merchant market for the domestic like product,*
>
> *(II) the domestic like product is the predominant material input in the production of that downstream article, and then the Commission, in determining market share and the factors affecting financial performance . . ., shall focus primarily on the merchant market for the domestic like product.*

[8] Amended by PL 114-27 (as signed, June 29, 2015), Trade Preferences Extension Act of 2015.

Transfers and sales

As reported in table III-7 above, internal consumption accounted for between *** and *** percent of U.S. producers' U.S. shipments of aluminum foil during 2014-16. *** accounted for all of the industry's internal consumption. It produces household foil primarily from its own aluminum foil rolling operations.[9]

First statutory criterion in captive consumption

The first requirement for application of the captive consumption provision is that the domestic like product that is internally transferred for processing into that downstream article not enter the merchant market for the domestic like product. ***.

Second statutory criterion in captive consumption

The second criterion of the captive consumption provision concerns whether the domestic like product is the predominant material input in the production of the downstream article that is captively produced. With respect to the downstream articles resulting from captive production, aluminum foil reportedly comprises a significant majority or between 70[10] and ***[11] percent of the finished cost of household aluminum foil products.

[9] Petitioner's postconference brief, exh. 11 and conference transcript, pp. 131-132 (Walters).
[10] Conference transcript, p. 132 (Walters).
[11] ***.

PART IV: U.S. IMPORTS, APPARENT U.S. CONSUMPTION, AND MARKET SHARES

U.S. IMPORTERS

The Commission issued importer questionnaires to 44 firms believed to account for a large share of U.S. imports of aluminum foil, as well as to all U.S. producers of aluminum foil.[1] Usable questionnaire responses were received from 23 firms, representing 79.8 percent of U.S. imports of aluminum foil from China during 2016 and 83.0 percent of U.S. imports from China between 2014 and 2016 under HTS subheadings 7607.11.30, 7607.11.60, 7607.11.90, and 7607.19.60.[2] Table IV-1 lists all responding U.S. importers of aluminum foil from China and other sources, their locations, and their shares of U.S. imports in 2016.

[1] The Commission issued questionnaires to firms that may have accounted for more than one percent of total imports in 2016 or in total during 2014-16. The Commission relied on data provided by ***, for U.S. imports under HTS subheadings 7607.11.30, 7607.11.60, 7607.11.90, and 7607.19.60. *** provided certification that they had not imported aluminum foil since January 2014.

[2] Importer responses represented 50.4 percent of U.S. imports from nonsubject countries during 2016 and 50.6 percent of U.S. imports from nonsubject countries from 2014 through 2016.

Table IV-1
Aluminum foil: U.S. importers, their headquarters, and share of total imports by source, 2016

Firm	Headquarters	Share of imports by source (percent)		
		China	All other sources	Total imports
American Packaging	Rochester, NY	***	***	***
CFP	Richmond, VA	***	***	***
Durable	Wheeling, IL	***	***	***
Galex	Monsey, NY	***	***	***
Global	Isle Of Palms, SC	***	***	***
Hanon Alabama	Shorter, AL	***	***	***
Hanon Netherlands	Heerlen, Netherlands	***	***	***
Johns Manville	Denver, CO	***	***	***
JW Aluminum	Goose Creek, SC	***	***	***
LLFLEX	Louisville, KY	***	***	***
MAHLE Behr	Troy, MI	***	***	***
Manakin	Manakin-Sabot, VA	***	***	***
Medalco	South Hadley, MA	***	***	***
Multifilm	Elgin, IL	***	***	***
Noble	Stamford, CT	***	***	***
Norca Foil	Lake Success, NY	***	***	***
Norca Heat Transfer	Lake Success, NY	***	***	***
Oracle	Winston-Salem, NC	***	***	***
Reynolds	Lake Forest, IL	***	***	***
Tetra Pak	Denton, TX	***	***	***
Trinidad Benham	Denver, CO	***	***	***
Valeo	Troy, MI	***	***	***
Zhengzhang	Rochester, NY	***	***	***
Total		***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

U.S. IMPORTS

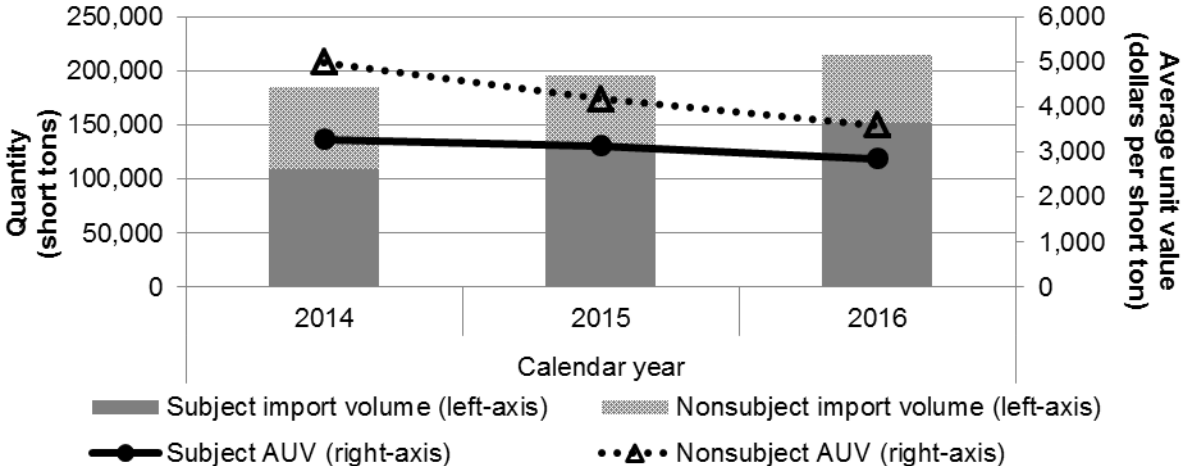
Table IV-2 and figure IV-1 present data for U.S. imports of aluminum foil from China and nonsubject sources. The quantity of U.S. imports from China increased by 38.8 percent from 2014 to 2016, while over the same period, imports from nonsubject sources decreased by 17.1 percent. The average unit value of U.S. imports from China decreased by 13.1 percent from 2014 to 2016 while over the same period, the average unit value of imports from nonsubject sources decreased by 27.8 percent.

Table IV-2
Aluminum foil: U.S. imports by source, 2014-16

Item	Calendar year		
	2014	2015	2016
	Quantity (short tons)		
U.S. imports from.--			
China	109,287	131,324	151,658
Nonsubject sources	75,980	64,324	63,023
Total U.S. imports	185,266	195,648	214,680
	Value (1,000 dollars)		
U.S. imports from.--			
China	358,024	412,377	431,534
Nonsubject sources	378,371	268,618	226,500
Total U.S. imports	736,395	680,995	658,033
	Unit value (dollars per short ton)		
U.S. imports from.--			
China	3,276	3,140	2,845
Nonsubject sources	4,980	4,176	3,594
Total U.S. imports	3,975	3,481	3,065
	Share of quantity (percent)		
U.S. imports from.--			
China	59.0	67.1	70.6
Nonsubject sources	41.0	32.9	29.4
Total U.S. imports	100.0	100.0	100.0
	Share of value (percent)		
U.S. imports from.--			
China	48.6	60.6	65.6
Nonsubject sources	51.4	39.4	34.4
Total U.S. imports	100.0	100.0	100.0
	Ratio to U.S. production		
U.S. imports from.--			
China	22.9	28.8	32.3
Nonsubject sources	15.9	14.1	13.4
Total U.S. imports	38.7	42.9	45.8

Source: Official U.S. imports statistics using HTS statistical reporting numbers 7607.11.3000, 7607.11.6000, 7607.11.9030, 7607.11.9060, 7607.11.9090, and 7607.19.6000, accessed March 15, 2017.

Figure IV-1
Aluminum foil: U.S. imports by source, 2014-16



Source: Table IV-2.

Table IV-3 presents data for nonsubject U.S. imports by source.

Table IV-3
Aluminum foil: U.S. nonsubject imports by source, 2014-16

Item	Calendar year		
	2014	2015	2016
	Quantity (short tons)		
Nonsubject U.S. imports from.--			
Germany	15,427	15,994	16,423
Russia	2,217	8,442	12,890
Armenia	28,745	15,198	8,000
Brazil	8,537	5,466	5,583
Sweden	3,289	3,931	3,846
Korea	1,132	2,193	2,592
Japan	3,872	1,077	1,385
All other sources	12,761	12,023	12,303
Nonsubject sources	75,980	64,324	63,023
	Ratio to total U.S. imports (percent)		
Nonsubject U.S. imports from.--			
Germany	8.3	8.2	7.7
Russia	1.2	4.3	6.0
Armenia	15.5	7.8	3.7
Brazil	4.6	2.8	2.6
Sweden	1.8	2.0	1.8
Korea	0.6	1.1	1.2
Japan	2.1	0.6	0.6
All other sources	6.9	6.1	5.7
Nonsubject sources	41.0	32.9	29.4

Source: Official U.S. imports statistics using HTS statistical reporting numbers 7607.11.3000, 7607.11.6000, 7607.11.9030, 7607.11.9060, 7607.11.9090, and 7607.19.6000, accessed March 15, 2017.

Table IV-4 and figure IV-2 present data for monthly U.S. imports.

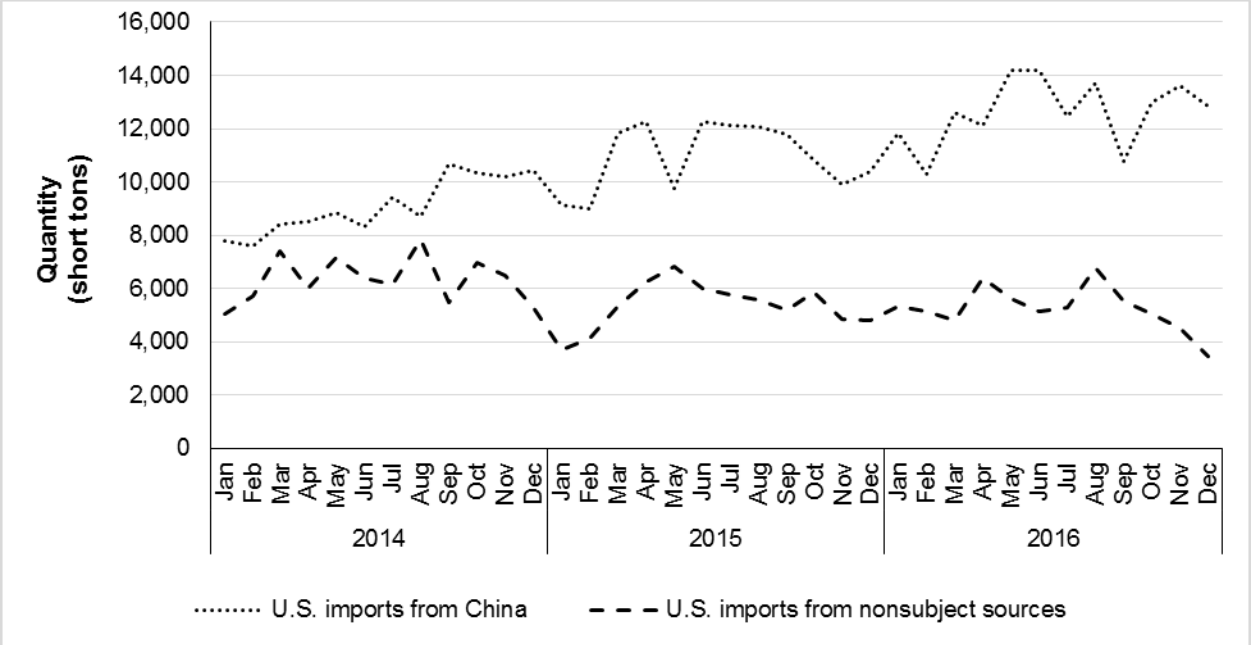
Table IV-4
Aluminum foil: Monthly U.S. imports, 2014-16

Item	Calendar year		
	2014	2015	2016
	Quantity (short tons)		
U.S. imports from China.--			
January	7,782	9,136	11,822
February	7,597	9,009	10,304
March	8,411	11,845	12,596
April	8,502	12,247	12,118
May	8,840	9,741	14,182
June	8,331	12,256	14,211
July	9,426	12,106	12,481
August	8,703	12,060	13,708
September	10,702	11,790	10,761
October	10,360	10,811	13,002
November	10,191	9,913	13,639
December	10,442	10,409	12,833
All months	109,287	131,324	151,658
	Quantity (short tons)		
U.S. imports from nonsubject sources.--			
January	5,061	3,698	5,319
February	5,721	4,155	5,153
March	7,402	5,329	4,816
April	5,991	6,258	6,403
May	7,181	6,811	5,620
June	6,411	6,000	5,139
July	6,133	5,754	5,267
August	7,859	5,559	6,784
September	5,497	5,200	5,506
October	6,955	5,882	5,061
November	6,483	4,862	4,519
December	5,287	4,816	3,437
All months	75,980	64,324	63,023

Source: Official U.S. imports statistics using HTS statistical reporting numbers 7607.11.3000, 7607.11.6000, 7607.11.9030, 7607.11.9060, 7607.11.9090, and 7607.19.6000, accessed March 15, 2017.

Figure IV-2

Aluminum foil: Monthly U.S. imports, January 2014 through December 2016



Source: Table IV-4.

Table IV-5 and figure IV-3 present data for U.S. importers' U.S. shipments by source and thickness category. The thickness categories defined by staff [3] in the questionnaires are as follows:

Thin.—Aluminum foil less than or equal to 0.0004 inch thickness.
Standard.—Aluminum foil greater than 0.0004 inch and less than or equal to 0.0007 inch thickness.[4]
Heavy duty.—Aluminum foil greater than 0.0007 inch and less than or equal to 0.0010 inch thickness.
Extra heavy duty.—Aluminum foil greater than 0.0010 inch thickness.

Thin foil accounted for more than half of all U.S. shipments of imported aluminum foil from China in 2014 and 2015, but increasing shares of heavy duty and extra heavy duty reduced thin foil's share to 44.2 percent in 2016. The increase in extra heavy duty shipments from China was attributable in large part to *** which reported *** short tons more in 2016 than in 2014.[5] Extra heavy duty foil from nonsubject sources also increased in share of nonsubject import shipments by *** percentage points from 2014 to 2016. Thin foil imports from nonsubject sources did not exceed *** percent of U.S. shipments from 2014 to 2016.

[3] Staff relied on information provided on U.S. Packaging and Wrapping, LLC's website to draft its request for breakout of shipments by thickness. http://www.uspackagingandwrapping.com/blog/Thickness-of-Aluminum-Foil.html, retrieved March 10, 2017. Questionnaires requested breakouts of U.S. shipments of aluminum foil, including thin-gauge of less than or equal to 0.0004 inch thickness, but respondents requested an additional breakout of aluminum foil with less than 0.0003 inch thickness ("ultra-thin"). Email from *** to Justin Enck regarding ultra-thin aluminum foil, March 16, 2017. U.S. shipments of ultra-thin aluminum foil are presented in appendix D.

[4] The standard aluminum foil category (presented above) generally corresponds to aluminum foil used for production of household foil products, though some household foil products are produced with heavy duty aluminum foil. Trinidad Benham's postconference brief, p. 4. Dingsheng identified a range for household foil thickness at 0.000485 to 0.00079 inch thickness. Dingsheng's postconference brief, p. 2.

[5] The majority of ***.

Table IV-5
Aluminum foil: U.S. importers' U.S. shipments by source and thickness category

Item	Calendar year		
	2014	2015	2016
	Quantity (short tons)		
U.S. shipments: China.--Thin	46,112	56,654	51,914
Standard	20,976	25,965	25,338
Heavy duty	6,214	8,854	13,672
Extra heavy duty	14,344	20,171	26,412
Total	87,646	111,644	117,336
	Value (1,000 dollars)		
U.S. shipments: China.--Thin	144,850	172,062	148,518
Standard	61,741	76,488	67,806
Heavy duty	18,008	23,575	32,540
Extra heavy duty	48,793	62,266	75,758
Total	273,392	334,391	324,622
	Unit value (dollars per short ton)		
U.S. shipments: China.--Thin	3,141	3,037	2,861
Standard	2,943	2,946	2,676
Heavy duty	2,898	2,663	2,380
Extra heavy duty	3,402	3,087	2,868
Total	3,119	2,995	2,767
	Share of quantity (percent)		
U.S. shipments: China.--Thin	52.6	50.7	44.2
Standard	23.9	23.3	21.6
Heavy duty	7.1	7.9	11.7
Extra heavy duty	16.4	18.1	22.5
Total	100.0	100.0	100.0
	Share of value (percent)		
U.S. shipments: China.--Thin	53.0	51.5	45.8
Standard	22.6	22.9	20.9
Heavy duty	6.6	7.1	10.0
Extra heavy duty	17.8	18.6	23.3
Total	100.0	100.0	100.0

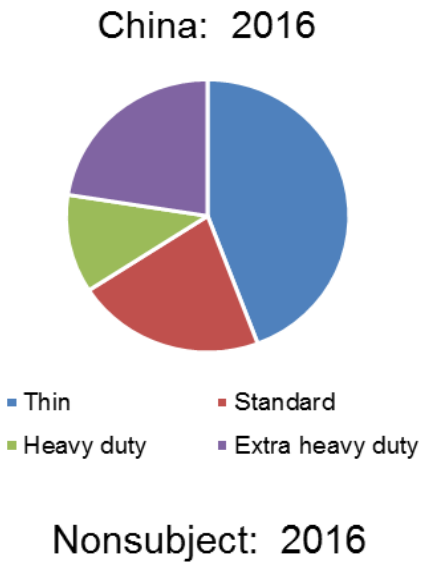
Table continued on next page.

Table IV-5—continued
Aluminum foil: U.S. importers' U.S. shipments by source and thickness category

Item	Calendar year		
	2014	2015	2016
	Quantity (short tons)		
U.S. shipments: Nonsubject.--Thin	***	***	***
Standard	***	***	***
Heavy duty	***	***	***
Extra heavy duty	***	***	***
Total	38,657	34,023	32,608
	Value (1,000 dollars)		
U.S. shipments: Nonsubject.--Thin	***	***	***
Standard	***	***	***
Heavy duty	***	***	***
Extra heavy duty	***	***	***
Total	117,561	115,140	104,432
	Unit value (dollars per short ton)		
U.S. shipments: Nonsubject.--Thin	***	***	***
Standard	***	***	***
Heavy duty	***	***	***
Extra heavy duty	***	***	***
Total	3,041	3,384	3,203
	Share of quantity (percent)		
U.S. shipments: Nonsubject.--Thin	***	***	***
Standard	***	***	***
Heavy duty	***	***	***
Extra heavy duty	***	***	***
Total	100.0	100.0	100.0
	Share of value (percent)		
U.S. shipments: Nonsubject.--Thin	***	***	***
Standard	***	***	***
Heavy duty	***	***	***
Extra heavy duty	***	***	***
Total	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

Figure IV-3
Aluminum foil: U.S. importers' U.S. shipments by source and thickness category, 2016



* * * * * * *

Source: Table IV-5.

NEGLIGIBILITY

The statute requires that an investigation be terminated without an injury determination if imports of the subject merchandise are found to be negligible.[6] Negligible imports are generally defined in the Tariff Act of 1930, as amended, as imports from a country of merchandise corresponding to a domestic like product where such imports account for less than 3 percent of the volume of all such merchandise imported into the United States in the most recent 12-month period for which data are available that precedes the filing of the petition or the initiation of the investigation. However, if there are imports of such merchandise from a number of countries subject to investigations initiated on the same day that individually account for less than 3 percent of the total volume of the subject merchandise, and if the imports from those countries collectively account for more than 7 percent of the volume of all such merchandise imported into the United States during the applicable 12-month period, then imports from such countries are deemed not to be negligible.[7] Imports from China accounted for 71.4 percent of total U.S. imports of aluminum foil by quantity during the 12 months preceding the petition (March 2016 through February 2017).[8]

---

[6] Sections 703(a)(1), 705(b)(1), 733(a)(1), and 735(b)(1) of the Act (19 U.S.C. §§ 1671b(a)(1), 1671d(b)(1), 1673b(a)(1), and 1673d(b)(1)).

[7] Section 771 (24) of the Act (19 U.S.C § 1677(24)).

[8] According to official import statistics China was the source of 154,366 of 216,247 short tons of aluminum foil imported to the United States from March 2016 through February 2017.

APPARENT U.S. CONSUMPTION AND MARKET SHARES

Table IV-6 and figure IV-4 present data on apparent U.S. consumption and U.S. market shares for aluminum foil. The quantity of apparent U.S. consumption increased by 3.7 percent from 2014 to 2016, but value decreased by 14.9 percent over the same period. The quantity share of apparent U.S. consumption of U.S. imports from China increased by 5.8 percentage points from 2014 to 2016, but the share of imports from nonsubject sources decreased by 2.4 percentage points over the same period.[9]

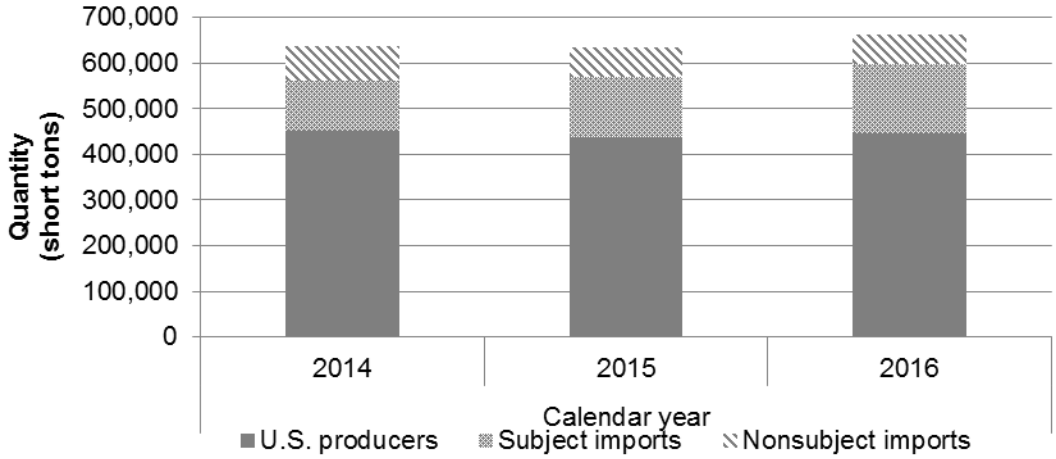
Table IV-6
Aluminum foil: Apparent U.S. consumption, 2014-16

Item	Calendar year		
	2014	2015	2016
	Quantity (short tons)		
U.S. producers' U.S. shipments	453,741	438,527	447,711
U.S. imports from.--			
China	109,287	131,324	151,658
Nonsubject sources	75,980	64,324	63,023
All import sources	185,266	195,648	214,680
Apparent U.S. consumption	639,007	634,175	662,391
	Value (1,000 dollars)		
U.S. producers' U.S. shipments	1,377,873	1,212,526	1,141,168
U.S. imports from.--			
China	358,024	412,377	431,534
Nonsubject sources	378,371	268,618	226,500
All import sources	736,395	680,995	658,033
Apparent U.S. consumption	2,114,268	1,893,521	1,799,201
	Share of quantity (percent)		
U.S. producers' U.S. shipments	71.0	69.1	67.6
U.S. imports from.--			
China	17.1	20.7	22.9
Nonsubject sources	11.9	10.1	9.5
All import sources	29.0	30.9	32.4
	Share of value (percent)		
U.S. producers' U.S. shipments	65.2	64.0	63.4
U.S. imports from.--			
China	16.9	21.8	24.0
Nonsubject sources	17.9	14.2	12.6
All import sources	34.8	36.0	36.6

Source: Compiled from data submitted in response to Commission questionnaires and official U.S. imports statistics using HTS statistical reporting numbers 7607.11.3000, 7607.11.6000, 7607.11.9030, 7607.11.9060, 7607.11.9090, and 7607.19.6000, accessed March 15, 2017.

[9] Appendix E presents monthly apparent consumption and market shares.

Figure IV-4
Aluminum foil: Apparent U.S. consumption, 2014-16



Source: Table IV-6.

Table IV-7 presents data for U.S. producers' and U.S. importers' U.S. shipments by source, thickness category, and share of apparent U.S. consumption.

Table IV-7
Aluminum foil: U.S. producers' and U.S. importers' U.S. shipments by source, thickness category, and share of apparent U.S. consumption, 2014-16

Item	Calendar year			Comparison years		
	2014	2015	2016	2014-16	2014-15	2015-16
	U.S. shipments (short tons)			Change (percent)		
Thin aluminum foil.-- U.S. producers	***	***	***	***	***	***
Subject importers	46,112	56,654	51,914	12.6	22.9	(8.4)
Nonsubject importers	***	***	***	***	***	***
All reporting importers	***	***	***	***	***	***
All reporting firms	62,149	69,760	61,105	(1.7)	12.2	(12.4)
	Share of U.S. shipments (percent)			Change (percentage points)		
Thin aluminum foil.-- U.S. producers	***	***	***	***	***	***
Subject importers	74.2	81.2	85.0	10.8	7.0	3.7
Nonsubject importers	***	***	***	***	***	***
All reporting importers	***	***	***	***	***	***
All reporting firms	100.0	100.0	100.0	0.0	0.0	0.0
	U.S. shipments (short tons)			Change (percent)		
Standard aluminum foil.-- U.S. producers	***	***	***	***	***	***
Subject importers	20,976	25,965	25,338	20.8	23.8	(2.4)
Nonsubject importers	***	***	***	***	***	***
All reporting importers	***	***	***	***	***	***
All reporting firms	116,499	113,552	110,178	(5.4)	(2.5)	(3.0)
	Share of U.S. shipments (percent)			Change (percentage points)		
Standard aluminum foil.-- U.S. producers	***	***	***	***	***	***
Subject importers	18.0	22.9	23.0	5.0	4.9	0.1
Nonsubject importers	***	***	***	***	***	***
All reporting importers	***	***	***	***	***	***
All reporting firms	100.0	100.0	100.0	0.0	0.0	0.0

Table continued on next page.

Table IV-7--Continued
Aluminum foil: U.S. producers' and U.S. importers' U.S. shipments by source, thickness category, and share of apparent U.S. consumption, 2014-16

Item	Calendar year			Comparison years		
	2014	2015	2016	2014-16	2014-15	2015-16
	U.S. shipments (short tons)			Change (percent)		
Heavy duty aluminum foil.--U.S. producers	***	***	***	***	***	***
Subject importers	6,214	8,854	13,672	120.0	42.5	54.4
Nonsubject importers	***	***	***	***	***	***
All reporting importers	***	***	***	***	***	***
All reporting firms	57,823	55,276	58,486	1.1	(4.4)	5.8
	Share of U.S. shipments (percent)			Change (percentage points)		
Heavy duty aluminum foil.--U.S. producers	***	***	***	***	***	***
Subject importers	10.7	16.0	23.4	12.6	5.3	7.4
Nonsubject importers	***	***	***	***	***	***
All reporting importers	***	***	***	***	***	***
All reporting firms	100.0	100.0	100.0	0.0	0.0	0.0
	U.S. shipments (short tons)			Change (percent)		
Extra heavy duty aluminum foil.--U.S. producers	***	***	***	***	***	***
Subject importers	14,344	20,171	26,412	84.1	40.6	30.9
Nonsubject importers	***	***	***	***	***	***
All reporting importers	***	***	***	***	***	***
All reporting firms	343,573	345,606	367,886	7.1	0.6	6.4
	Share of U.S. shipments (percent)			Change (percentage points)		
Extra heavy duty aluminum foil.--U.S. producers	***	***	***	***	***	***
Subject importers	4.2	5.8	7.2	3.0	1.7	1.3
Nonsubject importers	***	***	***	***	***	***
All reporting importers	***	***	***	***	***	***
All reporting firms	100.0	100.0	100.0	0.0	0.0	0.0

Source: Compiled from data submitted in response to Commission questionnaires.

.

PART V: PRICING DATA

FACTORS AFFECTING PRICES

Raw material costs

The primary raw material used to manufacture aluminum foil is aluminum. Raw material costs, as a share of U.S. producers' total cost of goods sold (COGS), declined from 74.4 percent in 2014 to 68.5 percent in 2016.

Aluminum prices are determined through global and regional exchanges, along with regional premiums that include transportation and transaction costs. The price of aluminum fluctuated from January 2014 to December 2016, peaking in September and November of 2014 and declining to its lowest price in November of 2015 (figure V-1). The London Metal Exchange (LME) price of aluminum increased by *** percent from January 2014 to September 2014, decreased by *** percent from September 2014 to November 2015, and then increased by *** percent from November 2015 to December 2016. The Shanghai Metal Exchange (SHME) price of aluminum fluctuated during the period, but decreased overall by *** percent from January 2014 to December 2016.

In the United States, the price of aluminum is comprised of two components: the LME price and the U.S. Midwest premium. The U.S. Midwest premium is the daily premium (or discount) to the LME cash price. The U.S. Midwest premium is "***."[1] It not only reflects delivery to a typical-freight consumer in a broad U.S. Midwest region via truck or rail, but also the state of supply and demand in North America.[2] The U.S. Midwest premium was at an historic high of 14.75 cents per pound on January 3, 2014.[3] [4] The U.S. Midwest premium continued to increase modestly between January 2014 and January 2015, peaking at ***, and then sharply declined beginning in February 2015.[5] Overall, the U.S. Midwest premium price decreased by *** percent from January 2014 to December 2016.

Figure V-1
Aluminum extrusions: LME and SHFE price index of aluminum, January 2014-December 2016

* * * * * * *

[1] ***.

[2] S & P Global Platts, *The Price of US Aluminum: Metals Price Assessments,* http://www.platts.com/price-assessments/metals/aluminum-transaction, accessed April 6, 2017.

[3] Bloomberg, "U.S. Aluminum Premium Surges as Financing Limits Supplies," January 6, 2014, https://www.bloomberg.com/news/articles/2014-01-06/aluminum-premiums-seen-reaching-record-as-u-s-surcharge-climbs, accessed April 14, 2017.

[4] ***. According to respondents, the U.S. Midwest premium has historically been less than ten cents per pound. In 2014 and 2015, the Midwest premium increased to an historic high of over 24 cents per pound. Conference transcript, pp. 110-111 (Casey).

[5] The U.S. Midwest premium fell by *** percent from January 2015 to December 2016.

Three of five U.S. producers reported that raw material costs have decreased since January 1, 2014; and two U.S. producers reported that raw material costs have fluctuated. U.S. producer *** reported that the transactional costs of aluminum, the U.S. Midwest premium, fell during the period. Importers' responses were varied. Eight of 19 responding importers reported that raw material costs have fluctuated since January 1, 2014; four importers reported that costs have decreased; four importers reported that costs have increased; and three importers reported that raw material costs have remained unchanged. Importers reported that the price for aluminum ingot, indexed by the LME, fluctuated during the period.

Most U.S. producers and importers stated that raw material costs are directly passed through to their customers. U.S. producers reported that they typically purchase aluminum ingot and scrap aluminum on an annual planning basis, using a mix of annual contracts and spot sales.[6]

U.S. inland transportation costs

All four responding U.S. producers and all eight responding importers reported that they typically arrange transportation to their customers. Most U.S. producers and importers reported that their U.S. inland transportation costs ranged from 2 to 5 percent.[7]

PRICING PRACTICES

Pricing structure

The price of U.S.-produced aluminum foil consists of two components: the cost of aluminum that is used in the manufacturing of aluminum foil (including the U.S. Midwest premium) and the fabrication or conversion price.[8] The fabrication price consists of the firms' conversion and overhead costs. Petitioners contend that because raw material costs are passed directly through to the customers, they have had to reduce their fabrication price in order to compete with low-priced imports of Chinese aluminum foil.[9] [10] However, respondents contend that most imported foil is not subject to the U.S. Midwest premium;[11] and therefore, because

[6] Conference transcript, p. 66 (McCarter).

[7] Three of the 11 responding importers reported U.S. inland transportation costs ranging from 95 to 100 percent.

[8] Conference transcript, pp. 38-39 (McCarter).

[9] Conference transcript, p. 39 (McCarter).

[10] Importer *** contends that ***. *** importer questionnaire, section III-17a.

[11] Importers reported that their price of aluminum foil imported from China is based on the LME price of aluminum and the Chinese producers' fabrication fee. Aluminum foil from China does not include the U.S. Midwest premium cost. Mowry Respondents' postconference brief, p. 40; Trinidad Benham's postconference brief, p. 21.

the U.S. Midwest premium sharply increased during 2014-15, U.S. producers were unable to compete with imported product.[12]

Pricing methods

U.S. producers and importers reported using transaction-by-transaction negotiations and contracts (table V-1). One importer indicated that it used an "other" method, stating that it did not use an official contract but that its pricing method was based on "industry practices."

Table V-1
Aluminum foil: U.S. producers' and importers' reported price setting methods, by number of responding firms[1]

Method	U.S. producers	Importers
Transaction-by-transaction	4	8
Contract	4	7
Set price list	0	0
Other	0	1

[1] The sum of responses down may not add up to the total number of responding firms as each firm was instructed to check all applicable price setting methods employed.

Source: Compiled from data submitted in response to Commission questionnaires.

U.S. producers reported selling the majority of their product under either annual or long-term contracts while importers reported selling the majority of their product under annual contracts and spot sales (table V-2).[13]

Table V-2
Aluminum foil: U.S. producers' and importers' shares of U.S. commercial shipments by type of sale, 2016

Type of sale	U.S. producers	Importers
Long-term contracts	41.7	16.7
Annual contracts	48.0	45.2
Short-term contracts	0.0	7.1
Spot sales	10.3	31.0
Total	100.0	100.0

Note.--Because of rounding, figures may not add to the totals shown.

Source: Compiled from data submitted in response to Commission questionnaires.

All four responding U.S. producers reported that their long-term contracts averaged 2 years.[14] All four responding U.S. producers reported that their long-term contracts did not allow

[12] Conference transcript, pp. 110-111 (Casey). According to respondents, the Midwest premium has ranged as high as 29 percent above the LME aluminum ingot price. Conference transcript, p. 102 (Dewar).

[13] U.S. producer JW Aluminum stated that annual contracts are signed in the fourth quarter of each year, setting the volume and price commitments for the following year. Conference transcript, p. 68 (McCarther).

for price renegotiations, three U.S. producers reported that their long-term contracts fixed both price and quantity, and half of responding U.S. producers reported that long-term contracts did not have meet-or-release provisions. All four responding U.S. producers reported that their annual contracts did not allow for price renegotiations and three of four U.S. producers reported that their annual contracts fixed both price and quantity and did not have meet-or-release provisions. Both JW and Novelis reported that sometimes multiple products are bundled under a single contract with a purchaser.[15]

Two importers of aluminum foil from China reported that their short-term contracts averaged 90 days, one importer reported an average of 45 days, and one importer reported an average of 180 days. Most importers reported (5 of 6) that their short-term contracts did not allow for price renegotiations, fixed both price and quantity, and did not have meet-or-release provisions. Most responding importers (5 of 6) reported that their annual contracts did not allow for price renegotiations, fixed both price and quantity, and did not have meet-or-release provisions. Two importers reported that their long-term contracts averaged two years and one importer reported an average of three years. Two of the three responding importers reported that their long-term contracts did not allow for price renegotiations; and all three importers reported that their long-term contracts fixed both price and quantity and did not have meet-or-release provisions.

Four of five U.S. producers and most responding importers reported that their firms' selling price of aluminum foil, sold either through contracts or in the spot market, was indexed to the LME. Both U.S. producers and importers reported that the cost of aluminum is adjusted monthly while the fabrication price is generally fixed for the duration of the contract.[16]

Purchasers provided a general description of their firms' method of purchase for aluminum foil. Thirteen of 18 purchasers reported that they purchase aluminum foil under a contract, with five purchasers specifying that their contracts averaged one year. Thirteen purchasers reported that they also purchase aluminum foil on the spot market on an as needed basis. Purchaser *** stated that for its purchases of aluminum foil from China, it has a set pricing agreement and its orders contain mixed widths and gauges; for its domestic purchases, *** has a set pricing agreement and orders using individual purchase orders.

Sales terms and discounts

U.S. producers and importers typically quote prices on delivered basis. Two U.S. producers reported offering quantity and total volume discounts and two U.S. producers reported that they do not have discount policies. The majority of importers (7 of 9) reported that they did not have discount policies; two importers reported offering financial term discounts. The majority of U.S. producers reported sales terms of net 30 days while importers'

(…*continued*)

[14] U.S. producer *** also reported that some of its long-term contracts average 5 years.

[15] Conference transcript, pp. 79-80 (McCarter and Landa).

[16] Conference transcript, p. 68 (McCarter).

responses were split with six importers reporting sales terms of net 30 days and five reporting sales terms of net 60 days.

PRICE DATA

The Commission requested U.S. producers and importers to provide quarterly data for the total quantity and f.o.b. value of the following aluminum foil products shipped to unrelated U.S. customers during 2014-16.

Product 1.--Aluminum in the 1000 series, standard tempers, 0.00025-0.0003 inch thickness, width 30-70", matte/bright.

Product 2.--Aluminum in the 1000 series, standard tempers, 0.00031-0.0005 inch thickness, width 30-70", matte/bright.

Product 3.--Aluminum in the 8000 series, standard tempers, 0.0004-0.0014 inch thickness, width 12-18", mill finish.

Product 4.--Aluminum in the 8000 series, standard tempers, 0.002-0.0039 inch thickness, width 11" to 31.375", mill finish.

Product 5.--Aluminum in the 8000 series, standard tempers, 0.004-0.0078 inch thickness, width 11" to 31.375", mill finish.

Product 6.--Aluminum in the 3000 series, standard tempers, 0.002-0.0033 inch thickness, width 0.5-2", mill finish.

Product 7.-- Aluminum in the 3000 series, standard tempers, 0.0034-0.0078 inch thickness, width 0.5-10", mill finish.

Four U.S. producers and 11 importers provided usable pricing data for sales of the requested products, although not all firms reported pricing for all products for all quarters. [17] [18]

---

[17] Two importers provided price data for products that did not match the pricing product definitions. Importer *** provided price data for product 1 from China consisting of ***. It also provided price data for product 2 from China consisting of ***. Both products had lower unit values, averaging *** percent and *** percent below the weighted-average price of subject imports for products 1 and 2, respectively. These data were not included in the pricing analysis. *** also reported price data for product 3 that fit the pricing product definition; these data were included in the pricing data analysis.

Importer *** reported that it sold equivalent products for products 6 and 7 that were ***. ***. These data were not included in the pricing analysis.

[18] *** reported price data for products 1 and 2 which reflect year end totals divided quarterly. ***. *** unit values were on average *** percent below the weighted average price of subject imports for both products 1 and 2. These data were not included in the pricing analysis.

Pricing data reported by these firms accounted for 11.3 percent of U.S. producers' shipments of aluminum foil and *** percent of U.S. shipments of subject imports from China during 2014-16. Price data for products 1-7 are presented in tables V-3 to V-9 and figures V-2 to V-8. [19]

Table V-3
Aluminum foil: Weighted-average f.o.b. prices and quantities of domestic and imported product 1[1] and margins of underselling/(overselling), by quarters, January 2014-December 2016

	United States		China		
Period	Price (dollars per pound)	Quantity (pounds)	Price (dollars per pound)	Quantity (pounds)	Margin (percent)
2014:					
Jan.-Mar.	***	***	***	***	***
Apr.-Jun.	***	***	***	***	***
Jul.-Sep.	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***
2015:					
Jan.-Mar.	***	***	1.82	13,141,963	***
Apr.-Jun.	***	***	1.79	11,681,149	***
Jul.-Sep.	***	***	1.74	10,567,302	***
Oct.-Dec.	***	***	1.68	8,399,403	***
2016:					
Jan.-Mar.	***	***	1.63	9,337,005	***
Apr.-Jun.	***	***	***	***	***
Jul.-Sep.	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***

[1] Product 1: Aluminum in the 1000 series, standard tempers, 0.00025-0.0003 inch thickness, width 30-70", matte/bright.

Source: Compiled from data submitted in response to Commission questionnaires.

[19] Per-unit pricing data are calculated from total quantity and total value data provided by U.S. producers and importers. The precision and variation of these figures may be affected by rounding, limited quantities, and producer or importer estimates.

Table V-4
Aluminum foil: Weighted-average f.o.b. prices and quantities of domestic and imported product 2[1] and margins of underselling/(overselling), by quarters, January 2014-December 2016

Period	United States		China		
	Price (dollars per pound)	Quantity (pounds)	Price (dollars per pound)	Quantity (pounds)	Margin (percent)
2014:					
Jan.-Mar.	***	***	***	***	***
Apr.-Jun.	***	***	1.82	1,121,632	***
Jul.-Sep.	***	***	1.83	1,588,769	***
Oct.-Dec.	***	***	1.83	1,260,606	***
2015:					
Jan.-Mar.	***	***	1.88	2,052,883	***
Apr.-Jun.	***	***	1.82	1,615,072	***
Jul.-Sep.	***	***	1.75	1,184,716	***
Oct.-Dec.	***	***	1.68	1,178,185	***
2016:					
Jan.-Mar.	***	***	***	***	***
Apr.-Jun.	***	***	***	***	***
Jul.-Sep.	***	***	***	***	***
Oct.-Dec.	***	***	1.67	1,114,622	***

[1] Product 2: Aluminum in the 1000 series, standard tempers, 0.00031-0.0005 inch thickness, width 30-70", matte/bright.

Source: Compiled from data submitted in response to Commission questionnaires.

Table V-5
Aluminum foil: Weighted-average f.o.b. prices and quantities of domestic and imported product 3[1] and margins of underselling/(overselling), by quarters, January 2014-December 2016

* * * * * * *

Table V-6
Aluminum foil: Weighted-average f.o.b. prices and quantities of domestic and imported product 4[1] and margins of underselling/(overselling), by quarters, January 2014-December 2016

* * * * * * *

Table V-7
Aluminum foil: Weighted-average f.o.b. prices and quantities of domestic and imported product 5[1] and margins of underselling/(overselling), by quarters, January 2014-December 2016

* * * * * * *

Table V-8
Aluminum foil: Weighted-average f.o.b. prices and quantities of domestic and imported product 6[1] and margins of underselling/(overselling), by quarters, January 2014-December 2016

* * * * * * *

Table V-9
Aluminum foil: Weighted-average f.o.b. prices and quantities of domestic and imported product 7[1] and margins of underselling/(overselling), by quarters, January 2014-December 2016

	United States		China		
Period	Price (dollars per pound)	Quantity (pounds)	Price (dollars per pound)	Quantity (pounds)	Margin (percent)
2014:					
Jan.-Mar.	1.63	8,174,352	---	0	---
Apr.-Jun.	1.66	8,547,631	---	0	---
Jul.-Sep.	1.72	7,537,211	---	0	---
Oct.-Dec.	1.77	7,601,774	---	0	---
2015:					
Jan.-Mar.	1.77	7,278,002	---	0	---
Apr.-Jun.	1.67	6,739,863	---	0	---
Jul.-Sep.	1.52	7,209,163	---	0	---
Oct.-Dec.	1.45	7,702,949	---	0	---
2016:					
Jan.-Mar.	1.46	6,231,899	---	0	---
Apr.-Jun.	1.48	5,544,463	---	0	---
Jul.-Sep.	1.49	6,197,817	---	0	---
Oct.-Dec.	1.51	5,550,768	---	0	---

[1] Product 7: Aluminum in the 3000 series, standard tempers, 0.0034-0.0078 inch thickness, width 0.5-10", mill finish.

Source: Compiled from data submitted in response to Commission questionnaires.

Figure V-2
Aluminum foil: Weighted-average prices and quantities of domestic and imported product 1, by quarters, January 2014-December 2016

* * * * * * *

Figure V-3
Aluminum foil: Weighted-average prices and quantities of domestic and imported product 2, by quarters, January 2014-December 2016

* * * * * * *

Figure V-4
Aluminum foil: Weighted-average prices and quantities of domestic and imported product 3, by quarters, January 2014-December 2016

* * * * * * *

Figure V-5
Aluminum foil: Weighted-average prices and quantities of domestic and imported product 4, by quarters, January 2014-December 2016

* * * * * * *

Figure V-6
Aluminum foil: Weighted-average prices and quantities of domestic and imported product 5, by quarters, January 2014-December 2016

* * * * * * *

Figure V-7
Aluminum foil: Weighted-average prices and quantities of domestic and imported product 6, by quarters, January 2014-December 2016

* * * * * * *

Figure V-8
Aluminum foil: Weighted-average prices and quantities of domestic and imported product 7, by quarters, January 2014-December 2016

* * * * * * *

Price trends

In general, prices decreased during 2014-16. Table V-10 summarizes the price trends, by country and by product. As shown in the table, domestic price decreases ranged from *** percent to *** percent during 2014-16 while import price decreases ranged from *** percent to *** percent. Domestic prices for product 5 increased by *** percent.

Table V-10
Aluminum foil: Summary of weighted-average f.o.b. prices for products 1-7 from the United States and China

Item	Number of quarters	Low price (dollars per pound)	High price (dollars per pound)	Change in price over period[1] (percent)
Product 1:				
United States	12	***	***	***
China	12	***	***	***
Product 2:				
United States	12	***	***	***
China	12	***	***	***
Product 3:				
United States	12	***	***	***
China	7	***	***	---
Product 4:				
United States	12	***	***	***
China	0	--	--	---
Product 5:				
United States	12	***	***	***
China	4	***	***	---
Product 6:				
United States	12	***	***	***
China	0	--	--	---
Product 7:				
United States	12	1.45	1.77	(7.0)
China	0	--	--	---

[1] Percentage change from the first quarter in which data were available to the last quarter in which price data were available.

Source: Compiled from data submitted in response to Commission questionnaires.

Price comparisons

As shown in table V-11, prices for aluminum foil imported from China were below those for U.S.-produced product in 30 of 35 instances (*** pounds); margins of underselling ranged from 1.0 to 31.1 percent. In the remaining 5 instances (*** pounds), prices for aluminum foil from China were between 0.2 to 15.7 percent above prices for the domestic product.

Table V-11
Aluminum foil: Instances of underselling/overselling and the range and average of margins, by product, January 2014-December 2016

Source	Underselling				
	Number of quarters	Quantity (pounds)	Average margin (percent)	Margin range (percent)	
				Min	Max
Product 1	12	***	***	***	***
Product 2	11	***	***	***	***
Product 3	6	***	***	***	***
Product 4	0	0	---	---	---
Product 5	1	***	***	***	***
Product 6	0	0	---	---	---
Product 7	0	0	---	---	---
Total, underselling	30	***	9.7	1.0	31.1
Source	(Overselling)				
	Number of quarters	Quantity (pounds)	Average margin (percent)	Margin range (percent)	
				Min	Max
Product 1	0	0	---	---	---
Product 2	1	***	***	***	***
Product 3	1	***	***	***	***
Product 4	0	0	---	---	---
Product 5	3	***	***	***	***
Product 6	0	0	---	---	---
Product 7	0	0	---	---	---
Total, overselling	5	***	(8.7)	(0.2)	(15.7)

[1] These data include only quarters in which there is a comparison between the U.S. and subject product.

Source: Compiled from data submitted in response to Commission questionnaires.

LOST SALES AND LOST REVENUE

The Commission requested that U.S. producers of aluminum foil to identify purchasers in which they experienced instances of lost sales or revenue due to competition from imports of aluminum foil from China during 2014-16. All four responding U.S. producers reported that they had to either reduce prices or roll back announced price increases, and all four firms reported that they had lost sales. Three U.S. producers submitted lost sales and lost revenue allegations. The U.S. producers identified 29 firms to which they lost sales or revenue (28 consisting of only lost sales allegations and 1 consisting of both types of allegations). U.S.

producers were also asked to provide information regarding the timing, method of sale, and product type related to the lost sales and lost revenue allegations. Allegations spanned the entire period of investigation from 2014 through 2016. Methods of sale included request for quote bids and contract negotiations.

Staff contacted 29 purchasers and received responses from 18 purchasers. Responding purchasers reported purchasing 245.8 million pounds of aluminum foil during 2014-16 (table V-12).

Table V-12
Aluminum foil: Purchasers' responses to purchasing patterns

Purchaser	Purchases in 2016 (pounds)			Change in domestic share[2] (pp, 2014-16)	Change in subject country share[2] (pp, 2014-16)
	Domestic	China	All other[1]		
***	***	***	***	***	***
***[3]	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***[3]	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***[3]	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
Total	141,520,455	85,190,020	18,963,687	(6.6)	6.0

[1] Includes all other sources and unknown sources.
[2] Percentage points (pp) change: Change in the share of the firm's total purchases of domestic and/or subject country imports between first and last years.
[3] Three firms (***) both purchased domestic aluminum foil and imported aluminum foil from China for internal consumption. Their imports of aluminum foil from China and all other sources have been included in the table.

Source: Compiled from data submitted in response to Commission questionnaires.

During 2016, purchasers purchased 57.6 percent from U.S. producers, 34.7 percent from China, and 7.7 percent from nonsubject countries.[20] Of the responding purchasers, nine reported decreasing purchases from domestic producers, three reported increasing purchases, two reported no change, three reported fluctuating purchases, and one did not purchase any domestic product. Explanations for increasing purchases of domestic product included increased business, with one firm noting increased demand for heavier gauge foil, customer cost pressure, and strategic sourcing plan. The majority of responding purchasers (7 of 9) stated that they had decreased purchases of domestic aluminum foil because of declining product availability. Three purchasers (***) stated that domestic aluminum foil in gauge thickness of less than 0.0003 inches is no longer available. Two purchasers noted that Norandal USA ceased production in early 2016 and JW no longer produces the ultra-thin gauge. Purchaser *** stated that 60 percent of its aluminum foil purchases from China had a gauge of less than 0.0003 inches; it noted that this gauge is not available from U.S. mills at the quality level required. Other reasons for decreasing purchases of domestic aluminum foil included poor or declining quality (4 firms) and higher prices (2 firms).

Of the 18 responding purchasers, 17 reported that they had purchased imported aluminum foil from China instead of U.S.-produced product since 2014. Sixteen of these purchasers reported that subject import prices were lower than U.S.-produced product, and two of these purchasers reported that price was a primary reason for the decision to purchase imported aluminum foil rather than U.S.-produced aluminum foil. The two purchasers estimated the quantity of aluminum foil from China purchased instead of domestic product was *** (table V-13). Purchasers identified quality of lighter gauge foil, product availability, supply constraints, and delivery time as non-price reasons for purchasing imported rather than U.S.-produced aluminum foil. [21]

Table V-13
Aluminum foil: Purchasers' responses to shifting supply sources

* * * * * * *

Of the 18 responding purchasers, two reported that U.S. producers had reduced prices in order to compete with lower-priced imports from China (table V-14; four reported that they did not know). The two reported estimated price reductions were 3.2 and 4.0 percent. In describing the price reductions, *** stated that the pricing was reduced to matched Chinese prices. *** stated that "the method by which we priced foil with our primary U.S. supplier changed from 2014 to 2015. In 2014, our supplier agreed to a fixed amount for the Midwest

[20] All responding purchasers indicated that they knew the source of the aluminum foil they purchased.

[21] Sonoco stated that it imports aluminum foil from China instead of domestic product because of quality issues. It purchases aluminum foil in gauges ranging from .0015" to below .0003". It stated that it had an official reject rate for domestic product between 4-8 percent. Reasons for rejection included: baggy edges, mill splice tear-outs, sticky foil, and wrinkles. Conference transcript, p. 105 (Nelson).

Premium ("MWP") portion of the aluminum cost. In 2015, the supplier requested a change to the aluminum pricing to include the actual MWP. In return, the supplier offered a $.075 price reduction for the fabrication portion of the aluminum cost. That reduction averaged approximately 4 percent for 2015. {The} 2016 fabrication prices did not change compared to 2015. {The} 2017 fabrication prices increased 0.6 percent."

Table V-14
Aluminum foil: Purchasers' responses to U.S. producer price reductions

* * * * * * *

Responding U.S. purchasers identified various methods they use in purchasing aluminum foil, including annual contracts, individual purchase orders, contract bids, and spot purchases. In responding to the lost sales lost revenue survey, some purchasers provided additional information on purchases and market dynamics. Several purchasers reported that U.S. mills have not invested in new equipment or technology, which has affected their ability to produce high quality light gauge foil. Purchaser *** stated that "our product mix has shifted to heavier gauge foils over the last few years. There are only a limited number of mills which supply the heavier foils at the widths we desire. A majority of the our purchases are from U.S. mills because U.S. mills offer the heavier foils while the newer mills in other countries tend to focus on lighter gauge foils." Purchaser *** reported experiencing domestic supply constraints in 2017, stating that Granges advised *** that it would be 2 million pounds short per month for the months of April, May, and June and that U.S. producer JW had no available capacity and cannot supply any additional product beyond what it has committed to through the fourth quarter of 2017. Purchaser ***, which produces pharmaceutical packaging, stated that it went through the multi-year qualification process with Chinese foil because Chinese product met its stringent quality and gauge requirements; it stated that domestic sources could not meet the requirements necessary needed for its end-use product.

PART VI: FINANCIAL EXPERIENCE OF U.S. PRODUCERS

BACKGROUND

Five U.S. producers, accounting for the vast majority of U.S. production of aluminum foil, provided usable financial data on their aluminum foil operations. All U.S. producers reported financial data on a calendar year basis and four U.S. producers reported their financial results on the basis of generally accepted accounting principles ("GAAP").[1]

OPERATIONS ON ALUMINUM FOIL

Table VI-1 presents aggregated data on U.S. producers' operations in relation to aluminum foil over the period examined, while table VI-2 presents the changes in average unit values ("AUVs") for the data presented in table VI-1 between yearly periods. Table VI-3 presents selected company-specific financial data.

Commercial sales accounted for approximately *** of net sales during the period examined. The remainder consists of internal consumption by ***."[2] This section of the report presents data for the entire aluminum foil industry including commercial sales and internal consumption. Information on the merchant market is available in appendix C at table C-2.

[1] ***.

[2] Email from ***.

Table VI-1
Aluminum foil: Results of operations of U.S. producers, 2014-16

Item	Calendar year		
	2014	2015	2016
	Quantity (short tons)		
Commercial sales	***	***	***
Internal consumption	***	***	***
Total net sales	477,142	459,017	467,586
	Value (1,000 dollars)		
Commercial sales	***	***	***
Internal consumption	***	***	***
Total net sales	1,453,882	1,285,300	1,198,986
Cost of goods sold.-- Raw materials	1,002,497	899,009	759,612
Direct labor	93,151	92,334	92,966
Other factory costs	251,614	250,992	257,032
Total COGS	1,347,262	1,242,335	1,109,610
Gross profit	106,620	42,965	89,376
SG&A expense	56,243	58,283	52,189
Operating income or (loss)	50,377	(15,318)	37,187
Interest expense	***	***	***
All other expenses	***	***	***
All other income	***	***	***
Net income or (loss)	33,440	(46,005)	21,999
Depreciation/amortization	36,453	35,341	39,043
Cash flow	69,893	(10,664)	61,042
	Ratio to net sales (percent)		
Cost of goods sold.-- Raw materials	69.0	69.9	63.4
Direct labor	6.4	7.2	7.8
Other factory costs	17.3	19.5	21.4
Average COGS	92.7	96.7	92.5
Gross profit	7.3	3.3	7.5
SG&A expense	3.9	4.5	4.4
Operating income or (loss)	3.5	(1.2)	3.1
Net income or (loss)	2.3	(3.6)	1.8

Table continued on next page.

Table VI-1—Continued
Aluminum foil: Results of operations of U.S. producers, 2014-16

Item	Calendar year		
	2014	2015	2016
	Ratio to total COGS (percent)		
Cost of goods sold.-- Raw materials	74.4	72.4	68.5
Direct labor	6.9	7.4	8.4
Other factory costs	18.7	20.2	23.2
Average COGS	100.0	100.0	100.0
	Unit value (dollars per short ton)		
Commercial sales	2,979	2,755	2,569
Internal consumption	3,305	2,960	2,546
Total net sales	3,047	2,800	2,564
Cost of goods sold.-- Raw materials	2,101	1,959	1,625
Direct labor	195	201	199
Other factory costs	527	547	550
Average COGS	2,824	2,707	2,373
Gross profit	223	94	191
SG&A expense	118	127	112
Operating income or (loss)	106	(33)	80
Net income or (loss)	70	(100)	47
	Number of firms reporting		
Operating losses	1	2	1
Net losses	3	3	2
Data	5	5	5

Source: Compiled from data submitted in response to Commission questionnaires.

Table VI-2
Aluminum foil: Changes in AUVs between yearly periods, 2014-16

Item	Between calendar years		
	2014-16	2014-15	2015-16
Commercial sales	***	***	***
Internal consumption	***	***	***
Total net sales	(483)	(247)	(236)
Cost of goods sold.-- Raw materials	(477)	(142)	(334)
Direct labor	4	6	(2)
Other factory costs	22	19	3
Average COGS	(451)	(117)	(333)
Gross profit	(32)	(130)	98
SG&A expense	(6)	9	(15)
Operating income or (loss)	(26)	(139)	113
Net income or (loss)	(23)	(170)	147

Source: Compiled from data submitted in response to Commission questionnaires.

Table VI-3
Aluminum foil: Results of operations of U.S. producers, by firm, 2014-16

* * * * * * *

Net sales quantity and value

Net sales of aluminum foil consisted of commercial sales (*** percent) and internal consumption (*** percent) during the period examined. As mentioned previously in this section, ***.

As shown in table VI-1, aggregate aluminum foil net sales quantity decreased from 2014 to 2015 and increased in 2016, but remained below the 2014 quantity. Net sales value decreased from 2014 to 2016. The aggregate net sales unit value (per short ton) for aluminum foil decreased from $3,047 in 2014 to $2,564 in 2016.

Cost of goods sold and gross profit or (loss)

Raw materials account for the single largest component of overall COGS, accounting for between 68.5 percent (in 2016) and 74.4 percent (in 2014) of total COGS. Raw material costs, which represented 69.0 percent of net sales value in 2014, declined to 63.4 percent of net sales value in 2016. ***.[3] [4]

Other factory costs, which are composed of both variable and fixed facility overhead costs, are the second largest component of total COGS, representing between 17.3 percent (in 2014) and 21.4 percent (in 2016) of total COGS. The last component of COGS, direct labor, decreased slightly from 2014 to 2016 and accounted for between 6.4 percent (in 2014) and 7.8 percent (in 2016) of total COGS.[5] The COGS to sales ratio increased from 92.7 percent in 2014 to 96.7 percent in 2015 and decreased to 92.5 percent in 2016.

Gross profit decreased from $106.6 million in 2014 to $89.4 million in 2016. *** of the decrease is attributable to ***, and the majority of ***.[6]

SG&A expenses and operating income or (loss)

As shown in table VI-1, the industry's SG&A expense ratios (i.e., total SG&A expenses divided by total revenue) moved within a relatively narrow range during 2014-16: 3.9 percent (2014) and 4.5 percent (2015).

---

[3] In accordance with Commission practice, *** producers reported cost information associated with the input purchases from related suppliers in the manner in which this information is reported in the U.S. producers' own accounting books and records. For ***.

[4] ***. ***.

[5] As can be seen in table VI-3, ***. Email from ***.

[6] ***.

Operating income decreased from $50.4 million in 2014 to a loss of $15.3 million in 2015 before improving to an income of $37.2 million in 2016. As can be seen from table IV-3, ***.

Other expenses and net income or (loss)

Classified below the operating income level are interest expense, other expense, and other income, which are usually allocated to the product line from high levels in the corporation. Interest and other expenses (net of other income), increased from $16.9 million in 2014 to $30.7 million in 2015, before decreasing to $15.2 million in 2016. Interest expense accounted for the majority of other expenses reported, but the increase in 2015 is mainly attributable to ***.[7]

By definition, items classified at this level in the income statement only affect net income or (loss). Net income decreased from $33.4 million in 2014 to a loss of $46.0 million in 2014 before improving to an income of $22.0 million in 2016.

Variance analysis

A variance analysis for the operations of U.S. producers of aluminum foil is presented in table VI-4.[8] The information for this variance analysis is derived from table VI-1. The analysis illustrates that from 2014 to 2016, the decrease in the industry's operating income is primarily attributable to a higher unfavorable price variance despite a favorable net cost/expense variance (i.e., net sales unit values decreased more than costs and expenses).

[7] ***. *** U.S. producer questionnaire, section III-11.

[8] The Commission's variance analysis is calculated in three parts: Sales variance, cost of sales variance (COGS variance), and SG&A expense variance. Each part consists of a price variance (in the case of the sales variance) or a cost or expense variance (in the case of the COGS and SG&A expense variance), and a volume variance. The sales or cost/expense variance is calculated as the change in unit price or per-unit cost/expense times the new volume, while the volume variance is calculated as the change in volume times the old unit price or per-unit cost/expense. Summarized at the bottom of the table, the price variance is from sales; the cost/expense variance is the sum of those items from COGS and SG&A variances, respectively, and the volume variance is the sum of the volume components of the net sales, COGS, and SG&A expense variances. The overall volume component of the variance analysis is generally small.

Table VI-4
Aluminum foil: Variance analysis on the operations of U.S. producers, 2014-16

Item	Between calendar years		
	2014-16	2014-15	2015-16
Net sales:			
Price variance	(225,778)	(113,354)	(110,308)
Volume variance	(29,118)	(55,228)	23,994
Net sales variance	(254,896)	(168,582)	(86,314)
COGS:			
Cost variance	210,670	53,749	155,917
Volume variance	26,982	51,178	(23,192)
COGS variance	237,652	104,927	132,725
Gross profit variance	(17,244)	(63,655)	46,411
SG&A expenses:			
Cost/expense variance	2,928	(4,176)	7,182
Volume variance	1,126	2,136	(1,088)
Total SG&A expense variance	4,054	(2,040)	6,094
Operating income variance	(13,190)	(65,695)	52,505
Summarized (at the operating income level) as:			
Price variance	(225,778)	(113,354)	(110,308)
Net cost/expense variance	213,597	49,573	163,099
Net volume variance	(1,009)	(1,914)	(286)

Source: Compiled from data submitted in response to Commission questionnaires.

CAPITAL EXPENDITURES AND RESEARCH AND DEVELOPMENT EXPENSES

Table VI-5 presents capital expenditures and research and development ("R&D") expenses by firm. Capital expenditures increased from $21.6 million in 2014 to $27.8 million in 2016. As can be seen in table VI-5, *** of the five responding U.S. producers reported increasing capital expenditures. All of the U.S. producers ***. *** reported R&D expenses.

Table VI-5
Aluminum foil: Capital expenditures and research and development expenses of U.S. producers, 2014-16

Item	Fiscal year		
	2014	2015	2016
	Capital expenditures (1,000 dollars)		
Aleris	***	***	***
Granges	***	***	***
JW Aluminum	***	***	***
Novelis	***	***	***
Reynolds	***	***	***
Total capital expenditures	21,607	18,394	27,806
	Research and development expenses (1,000 dollars)		
Aleris	***	***	***
Granges	***	***	***
JW Aluminum	***	***	***
Novelis	***	***	***
Reynolds	***	***	***
Total research and development expenses	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

ASSETS, INVESTMENT, AND CAPITAL

Table VI-6 presents data on the U.S. producers' total assets and their return on assets ("ROA").[9] Total assets for the industry decreased from $*** in 2014 to $*** in 2016. While *** producers reported decreasing assets from 2014 to 2016, the *** of the decrease was due to ***.[10]

Table VI-6
Aluminum foil: U.S. producers' total assets and return on assets, 2014-16

* * * * * * *

The Commission requested U.S. producers of aluminum foil to describe any actual or potential negative effects of imports of aluminum foil from China on their firms' growth, investment, ability to raise capital, development and production efforts, or the scale of capital investments. Table VI-7 presents a tally of U.S. producers' responses and table VI-8 provides the narrative responses.

[9] With respect to a company's overall operations, staff notes that a total asset value (i.e., the bottom line number on the asset side of a company's balance sheet) reflects an aggregation of a number of assets which are generally not product specific. Accordingly, high-level allocation factors and estimates may have been required in order to report a total asset value for aluminum foil.

[10] ***.

Table VI-7
Aluminum foil: Actual and anticipated negative effects of imports on investment, growth, and development, since January 1, 2014

Item	No	Yes
Negative effects on investment	1	4
Cancellation, postponement, or rejection of expansion projects		2
Denial or rejection of investment proposal		2
Reduction in the size of capital investments		2
Return on specific investments negatively impacted		1
Other		1
Negative effects on growth and development	0	5
Rejection of bank loans		0
Lowering of credit rating		0
Problem related to the issue of stocks or bonds		1
Ability to service debt		2
Other		3
Anticipated negative effects of imports	0	5

Source: Compiled from data submitted in response to Commission questionnaires.

Table VI-8
Aluminum foil: Company narratives relating to actual and anticipated negative effects of imports on investment, growth, and development, since January 1, 2014

* * * * * * *

PART VII: THREAT CONSIDERATIONS AND INFORMATION ON NONSUBJECT COUNTRIES

Section 771(7)(F)(i) of the Act (19 U.S.C. § 1677(7)(F)(i)) provides that—

> *In determining whether an industry in the United States is threatened with material injury by reason of imports (or sales for importation) of the subject merchandise, the Commission shall consider, among other relevant economic factors*[1]*--*
>
> *(I) if a countervailable subsidy is involved, such information as may be presented to it by the administering authority as to the nature of the subsidy (particularly as to whether the countervailable subsidy is a subsidy described in Article 3 or 6.1 of the Subsidies Agreement), and whether imports of the subject merchandise are likely to increase,*
>
> *(II) any existing unused production capacity or imminent, substantial increase in production capacity in the exporting country indicating the likelihood of substantially increased imports of the subject merchandise into the United States, taking into account the availability of other export markets to absorb any additional exports,*
>
> *(III) a significant rate of increase of the volume or market penetration of imports of the subject merchandise indicating the likelihood of substantially increased imports,*
>
> *(IV) whether imports of the subject merchandise are entering at prices that are likely to have a significant depressing or suppressing effect on domestic prices, and are likely to increase demand for further imports,*
>
> *(V) inventories of the subject merchandise,*

---

[1] Section 771(7)(F)(ii) of the Act (19 U.S.C. § 1677(7)(F)(ii)) provides that "The Commission shall consider {these factors} . . . as a whole in making a determination of whether further dumped or subsidized imports are imminent and whether material injury by reason of imports would occur unless an order is issued or a suspension agreement is accepted under this title. The presence or absence of any factor which the Commission is required to consider . . . shall not necessarily give decisive guidance with respect to the determination. Such a determination may not be made on the basis of mere conjecture or supposition."

(VI) the potential for product-shifting if production facilities in the foreign country, which can be used to produce the subject merchandise, are currently being used to produce other products,

(VII) in any investigation under this title which involves imports of both a raw agricultural product (within the meaning of paragraph (4)(E)(iv)) and any product processed from such raw agricultural product, the likelihood that there will be increased imports, by reason of product shifting, if there is an affirmative determination by the Commission under section 705(b)(1) or 735(b)(1) with respect to either the raw agricultural product or the processed agricultural product (but not both),

(VIII) the actual and potential negative effects on the existing development and production efforts of the domestic industry, including efforts to develop a derivative or more advanced version of the domestic like product, and

(IX) any other demonstrable adverse trends that indicate the probability that there is likely to be material injury by reason of imports (or sale for importation) of the subject merchandise (whether or not it is actually being imported at the time).[2]

Information on the nature of the alleged subsidies was presented earlier in this report; information on the volume and pricing of imports of the subject merchandise is presented in *Parts IV* and *V*; and information on the effects of imports of the subject merchandise on U.S. producers' existing development and production efforts is presented in *Part VI*. Information on inventories of the subject merchandise; foreign producers' operations, including the potential for "product-shifting;" any other threat indicators, if applicable; and any dumping in third-country markets follows. Also presented in this section of the report is information obtained for consideration by the Commission on nonsubject countries.

[2] Section 771(7)(F)(iii) of the Act (19 U.S.C. § 1677(7)(F)(iii)) further provides that, in antidumping investigations, ". . . the Commission shall consider whether dumping in the markets of foreign countries (as evidenced by dumping findings or antidumping remedies in other WTO member markets against the same class or kind of merchandise manufactured or exported by the same party as under investigation) suggests a threat of material injury to the domestic industry."

THE INDUSTRY IN CHINA

The Commission issued foreign producers' or exporters' questionnaires to more than 100 firms believed to produce and/or export aluminum foil from China.[3] Useable responses to the Commission's questionnaire were received from 12 firms.[4] These firms' exports to the United States accounted for 61.6 percent of U.S. imports of aluminum foil from China in 2016 and 62.1 percent from 2014 through 2016.[5] According to estimates requested of the responding producers in China, the production of aluminum foil in China reported in this part of the report accounts for approximately 28.2 percent of the country's overall production.[6] Table VII-1 presents information on the aluminum foil operations of the responding producers and exporters in China.

Table VII-1
Aluminum foil: Summary data for producers in China, 2016

Firm	Production (short tons)	Share of reported production (percent)	Exports to the United States (short tons)	Share of reported exports to the United States (percent)	Total shipments (short tons)	Share of firm's total shipments exported to the United States (percent)
Alcha	***	***	***	***	***	***
Kunshan	***	***	***	***	***	***
Loften	***	***	***	***	***	***
Manakin	***	***	***	***	***	***
North China Aluminum	***	***	***	***	***	***
Shal Foil	***	***	***	***	***	***
Suntown	***	***	***	***	***	***
Wanji Group	***	***	***	***	***	***
Xiashun	***	***	***	***	***	***
Yantai Donghai	***	***	***	***	***	***
Yinbang Clad	***	***	***	***	***	***
Zyongii Lamination	***	***	***	***	***	***
Total	806,659	100.0	93,351	100.0	806,836	11.6

Source: Compiled from data submitted in response to Commission questionnaires.

[3] These firms were identified through a review of information submitted in the petition and contained in *** records.

[4] *** submitted partially completed questionnaires that are not included in this report.

[5] The responding firms in China reported 93,351 of exports of aluminum foil to the United States in 2016 and 243,482 short tons from 2014 through 2016.

[6] *** estimates that the industry in China produced *** short tons in 2016. This estimate is somewhat overstated because it includes some nonsubject backed aluminum foil. Petitioners' postconference brief, exh. 16.

Changes in operations

As presented in table VII-2 producers in China reported several operational and organizational changes since January 1, 2014.

Table VII-2
Aluminum foil: Reported changes in operations by producers in China, since January 1, 2014

* * * * * * *

Operations on aluminum foil

Table VII-3 presents information on the aluminum foil operations of the responding producers and exporters in China.

Table VII-3
Aluminum foil: Data on industry in China, 2014-16 and projections, calendar years 2017 and 2018

Item	Actual experience			Projections	
	Calendar year				
	2014	2015	2016	2017	2018
	Quantity (short tons)				
Capacity	828,273	869,223	891,361	918,671	931,185
Production	718,358	714,409	806,659	832,908	850,247
End-of-period inventories	49,273	42,658	43,281	44,671	42,576
Shipments:					
Home market shipments:					
Internal consumption/ transfers	64,321	53,300	50,934	50,472	50,672
Commercial shipments	358,958	332,610	371,729	393,811	403,190
Subtotal, home market shipments	423,279	385,910	422,663	444,283	453,862
Export shipments to:					
United States	72,890	77,241	93,351	96,871	97,145
All other markets	223,417	257,870	290,822	292,894	305,439
Total exports	296,307	335,111	384,173	389,765	402,584
Total shipments	719,586	721,021	806,836	834,048	856,446
	Ratios and shares (percent)				
Capacity utilization	86.7	82.2	90.5	90.7	91.3
Inventories/production	6.9	6.0	5.4	5.4	5.0
Inventories/total shipments	6.8	5.9	5.4	5.4	5.0
Share of shipments:					
Home market shipments:					
Internal consumption/ transfers	8.9	7.4	6.3	6.1	5.9
Home market shipments	49.9	46.1	46.1	47.2	47.1
Subtotal, home market shipments	58.8	53.5	52.4	53.3	53.0
Export shipments to:					
United States	10.1	10.7	11.6	11.6	11.3
All other markets	31.0	35.8	36.0	35.1	35.7
Total exports	41.2	46.5	47.6	46.7	47.0
Total shipments	100.0	100.0	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

Alternative products

As shown in table VII-4, responding firms in China produced other products on the same equipment and machinery used to produce aluminum foil. The other products reported by producers in China include: ***.

Table VII-4
Aluminum foil: Overall capacity and production on the same equipment as in-scope production by producers in China, 2014-16

Item	Calendar year		
	2014	2015	2016
	Quantity (short tons)		
Overall capacity	1,101,953	1,142,903	1,175,041
Production:			
Aluminum foil	718,358	714,409	806,659
Other out-of-scope products	239,556	222,375	251,159
Total production on same machinery	957,914	936,784	1,057,818
	Ratios and shares (percent)		
Overall capacity utilization	86.9	82.0	90.0
Share of production:			
Aluminum foil	75.0	76.3	76.3
Other out-of-scope products	25.0	23.7	23.7
Total production on same machinery	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

Exports

According to GTA, the leading export markets for aluminum foil from China are the United States, India,[7] the Middle-East, East Asia, and Mexico (table VII-5). During 2016, the United States was the top export market for aluminum foil from China, accounting for 19.8 percent of shipment quantities, followed by the India, accounting for 13.1 percent.

[7] India is conducting an antidumping duty investigation of aluminum foil from China, as discussed in greater detail below.

Table IV-5:
Aluminum foil: Exports from China by destination market, 2014-16

Destination market	Calendar year		
	2014	2015	2016
	Quantity (short tons)		
Exports from China to the United States	104,860	128,081	142,864
Exports from China to other major destination markets.--			
India	76,262	81,880	95,010
United Arab Emirates	27,899	29,308	31,387
Korea South	16,307	18,972	30,270
Thailand	23,155	26,088	29,827
Indonesia	23,830	20,667	28,752
Mexico	20,919	22,748	28,054
Saudi Arabia	30,361	31,992	25,749
Japan	16,358	18,691	21,601
All other destination markets	243,242	266,233	289,263
Total exports from China	583,191	644,659	722,775
	Value (1,000 dollars)		
Exports from China to the United States	308,564	355,787	360,226
Exports from China to other major destination markets.--			
India	215,188	212,782	221,609
United Arab Emirates	72,157	71,385	68,071
Korea South	48,953	54,530	76,750
Thailand	70,301	75,605	78,270
Indonesia	72,926	57,916	70,182
Mexico	57,530	58,845	66,000
Saudi Arabia	82,314	80,455	59,215
Japan	54,684	59,419	63,031
All other destination markets	709,682	733,793	706,984
Total exports from China	1,692,298	1,760,517	1,770,337

Table continued on next page.

Table IV-5--Continued
Aluminum foil: Exports from China by destination market, 2014-16

Destination market	Calendar year		
	2014	2015	2016
	Unit value (dollars per short ton)		
Exports from China to the United States	2,943	2,778	2,521
Exports from China to other major destination markets.--			
India	2,822	2,599	2,332
United Arab Emirates	2,586	2,436	2,169
Korea South	3,002	2,874	2,536
Thailand	3,036	2,898	2,624
Indonesia	3,060	2,802	2,441
Mexico	2,750	2,587	2,353
Saudi Arabia	2,711	2,515	2,300
Japan	3,343	3,179	2,918
All other destination markets	2,918	2,756	2,444
Total exports from China	2,902	2,731	2,449
	Share of quantity (percent)		
Exports from China to the United States	18.0	19.9	19.8
Exports from China to other major destination markets.--			
India	13.1	12.7	13.1
United Arab Emirates	4.8	4.5	4.3
Korea South	2.8	2.9	4.2
Thailand	4.0	4.0	4.1
Indonesia	4.1	3.2	4.0
Mexico	3.6	3.5	3.9
Saudi Arabia	5.2	5.0	3.6
Japan	2.8	2.9	3.0
All other destination markets	41.7	41.3	40.0
Total exports from China	100.0	100.0	100.0

Note.--Data reported in this table does not include in-scope merchandise (fin stock) imported under HS subheading 7607.19.

Source: Official China export statistics under HS subheading 7607.11 as reported by China Customs in the IHS/GTA database, accessed March 17, 2017.

U.S. INVENTORIES OF IMPORTED MERCHANDISE

Table VII-6 presents data on U.S. importers' reported inventories of aluminum foil. The ratio of inventories of imports from China to U.S. shipments of all imports has decreased by *** percentage points from 2014 to 2016 and inventories of imports from all other countries decreased by *** percent over the same period. Importers reported various different levels of inventory requirements based on the end-use products they produce or availability of aluminum foil stock. Importers Global, MAEHL Behr, and Multifilm reported that they ***. Trinidad, a household foil converter cites ***. Norca Heat Transfer reported that it ***.

Table VII-6
Aluminum foil: U.S. importers' end-of-period inventories of imports by source, 2014-16

* * * * * * *

U.S. IMPORTERS' OUTSTANDING ORDERS

The Commission requested importers to indicate whether they imported or arranged for the importation of aluminum foil from China after December 31, 2016. These data are presented in table VII-7.

Table VII-7
Aluminum foil: Arranged imports, January 2017 through December 2017

* * * * * * *

ANTIDUMPING OR COUNTERVAILING DUTY ORDERS IN THIRD-COUNTRY MARKETS

There have been three antidumping duty investigations in third country markets on aluminum foil from China. Aluminum foil from China is currently subject to antidumping duties in the European Union and Turkey, while an investigation is currently underway in India. As of April 2017, there are no countervailing duty orders in place on aluminum foil from China.

European Union

In 2009, the European Union issued antidumping duty orders with duties of 6.4 to 24.2 percent for specific companies and 30 percent for all others on aluminum foil from China.[8] The European Union reviewed and reissued the orders in December 2015. The scope of these orders include "aluminum foil of a thickness of not less than 0.008 mm and not more than 0.018 mm, not backed, not further worked than rolled, in rolls of a width not exceeding 650

[8] Official Journal of the European Union, "Council Regulation (EC) No 925/2009," October 6, 2009, p. L 262/13.

mm and of a weight exceeding 10 kg from the People's Republic of China."[9] In May 2016, the European Union initiated an investigation into the possible circumvention of antidumping measures on aluminum foil from China.[10] The European Union determined that there was circumvention of the original order and extended antidumping duties to imports of slightly modified certain aluminum foil from China. The circumvention order covers products with the same physical characteristics as the previous scope, however whether or not annealed. The scope for this order includes:

> "aluminum foil of a thickness of not less than 0.007 mm and less than 0.008 mm, regardless of the width of the rolls, whether or not annealed; aluminum foil of a thickness of not less than 0.008 and not more than 0.018 mm and in rolls of a width exceeding 650 mm, whether or not annealed; aluminum foil of a thickness of more than 0.018 mm and less than 0.021 mm, regardless of the width of the rolls, whether or not annealed; aluminum foil of a thickness of not less than 0.021 mm and not more than 0.045 mm, when presented with at least two layers, regardless of the width of the rolls, whether or not annealed."[11]

India

In December 2015, India's Directorate General of Anti-Dumping and Allied Duties (DGAD) initiated an antidumping duty investigation into subject aluminum foil from China.[12] In March 2017, the DGAD found that aluminum foil imported from China to India was below its normal value, which resulted in dumping. The DGAD recommended duty rates on Indian imports of aluminum foil from China in the range of $0.69 to $1.63 per kilogram for specific companies and $1.63 per kilogram for all others.[13] The scope for India's investigation includes "aluminum foil whether or not printed or backed with paper, paper board, plastics or similar packing materials of a thickness ranging from 5.5 micron (0.000216535 inches) to 80 micron (0.00314961 inches) excluding AluAlu Laminate and Ultra Light Gauge Converted and Capacitor."[14]

---

[9] Official Journal of the European Union, "Council Regulation (EC) No 2017/271," February 17, 2017, p. L 40/51.

[10] Official Journal of the European Union, "Council Regulation (EC) No 2016/865," June 1, 2016, p. L 144/35.

[11] Official Journal of the European Union, "Council Regulation (EC) No 2017/271," February 17, 2017, p. L 40/54. A list of products excluded from the European Union order is available on pages L 40/53 and L 40/54 of Council Regulation (EC) No 2017/271.

[12] Committee on Antidumping Practices, Semi-Annual Report under Article 116.4 of the WTO Antidumping Agreement: India, G/ADP/N/N/286, October 7, 2016, p. 4.

[13] Directorate General of Anti-Dumping and Allied Duties, "Final Finding," http://www.dgtr.gov.in/anti-dumping-cases/aluminium-foil-originating-or-exported-china-pr, March 10, 2017, p. 68-70.

[14] Directorate General of Anti-Dumping and Allied Duties, "Final Finding," http://www.dgtr.gov.in/anti-dumping-cases/aluminium-foil-originating-or-exported-china-pr, March 10, 2017, p. 7. A list of exclusion requests for this investigation can also be found at this link.

Turkey

In 2014, Turkey issued antidumping duty orders of 22 percent on aluminum foil from China. The scope of Turkey's orders includes "aluminum foil of a thickness not exceeding 0.2 mm, not backed."[15]

GLOBAL MARKETS

Table VII-8 presents the largest global export sources of aluminum foil during 2014-16. Exports from China accounted for 42.6 percent of global exports of aluminum foil in 2016. The next largest source in 2016 was Germany (11.7 percent) followed by Turkey and Italy (4.8 and 4.6 percent of global exports, respectively).

[15] Committee on Antidumping Practices, Semi-Annual Report under Article 116.4 of the WTO Antidumping Agreement, Turkey: G/ADP/N/265, March 11, 2015.

Table VII-8

Aluminum foil: Global exports by exporter, 2014-16

Exporter	Calendar year		
	2014	2015	2016
	Quantity (short tons)		
United States	63,173	61,561	70,493
China	583,191	644,659	722,775
All other major reporting exporters.--			
Germany	193,549	193,406	199,184
Turkey	8,169	62,785	81,783
Italy	74,543	81,566	78,564
Greece	48,273	53,515	61,917
South Korea	43,115	43,332	44,303
Japan	41,488	38,056	42,075
Luxembourg	42,244	43,368	41,424
Slovenia	31,800	33,966	33,285
Armenia	33,006	32,428	31,970
Bulgaria	25,495	28,258	31,906
All other exporters	393,740	375,188	258,763
Total global exports	1,581,785	1,692,088	1,698,443
	Value (1,000 dollars)		
United States	251,751	248,428	250,847
China	1,692,298	1,760,517	1,770,337
All other major reporting exporters.--			
Germany	683,811	606,805	568,723
Turkey	25,675	168,901	206,800
Italy	261,835	255,963	221,321
Greece	170,613	169,687	176,759
South Korea	156,788	151,155	141,606
Japan	181,238	154,488	159,019
Luxembourg	149,676	132,754	115,699
Slovenia	105,338	101,973	90,001
Armenia	88,320	82,748	78,664
Bulgaria	77,543	76,831	82,045
All other exporters	1,448,288	1,235,303	802,546
Total global exports	5,293,174	5,145,554	4,664,368

Table continued on next page.

Table VII-8--Continued

Aluminum foil: Global exports by exporter, 2014-16

Exporter	Calendar year		
	2014	2015	2016
	Unit value (dollars per short ton)		
United States	3,985	4,035	3,558
China	2,902	2,731	2,449
All other major reporting exporters.-- Germany	3,533	3,137	2,855
Turkey	3,143	2,690	2,529
Italy	3,513	3,138	2,817
Greece	3,534	3,171	2,855
South Korea	3,637	3,488	3,196
Japan	4,368	4,059	3,779
Luxembourg	3,543	3,061	2,793
Slovenia	3,312	3,002	2,704
Armenia	2,676	2,552	2,461
Bulgaria	3,041	2,719	2,571
All other exporters	3,678	3,292	3,101
Total global exports	3,346	3,041	2,746
	Share of quantity (percent)		
United States	4.0	3.6	4.2
China	36.9	38.1	42.6
All other major reporting exporters.-- Germany	12.2	11.4	11.7
Turkey	0.5	3.7	4.8
Italy	4.7	4.8	4.6
Greece	3.1	3.2	3.6
South Korea	2.7	2.6	2.6
Japan	2.6	2.2	2.5
Luxembourg	2.7	2.6	2.4
Slovenia	2.0	2.0	2.0
Armenia	2.1	1.9	1.9
Bulgaria	1.6	1.7	1.9
All other exporters	24.9	22.2	15.2
Total global exports	100.0	100.0	100.0

Note.--Data reported in this table does not include in-scope merchandise (fin stock) imported under HS subheading 7607.19.

Source: Official export statistics under HS subheading 7607.11 as reported by various national statistical authorities in the IHS/GTA database, accessed April 10, 2017.

The industry in Germany

Germany was the largest nonsubject source of aluminum foil imports into the United States by quantity in 2016. The United States is the fifth largest export destination for aluminum foil from Germany and accounted for 6.8 percent of German exports in 2016. Other notable export destinations include Switzerland, France, and Italy which accounted for 16.1 percent, 13.1 percent, and 8.5 percent of aluminum foil exports from Germany, respectively. Germany's exports to the United States increased less than 1 percent during 2014-16, while total exports of aluminum foil increased 2.9 percent. Information on Germany's exports by destination is presented in table VII-9.

Table VII-9
Aluminum foil: Exports from Germany by destination market, 2014-16

Destination market	Calendar year		
	2014	2015	2016
	Quantity (short tons)		
Exports from Germany to the United States	13,450	14,499	13,512
Exports from Germany to other major destination markets.--			
Switzerland	32,706	32,048	32,093
France	19,346	21,455	26,156
Italy	19,282	16,612	16,911
Netherlands	17,649	13,920	14,496
Austria	9,547	10,449	13,453
Croatia	4,204	10,377	10,691
Spain	9,213	9,910	10,426
Mexico	5,088	5,515	6,085
All other destination markets	63,064	58,620	55,361
Total exports from Germany	193,549	193,406	199,184
	Value (1,000 dollars)		
Exports from Germany to the United States	50,977	50,149	41,501
Exports from Germany to other major destination markets.--			
Switzerland	113,915	96,609	89,534
France	66,223	63,284	71,822
Italy	70,710	52,767	47,123
Netherlands	61,281	45,561	43,503
Austria	38,624	37,235	42,928
Croatia	13,698	28,219	26,887
Spain	31,642	28,344	25,849
Mexico	19,511	20,220	19,482
All other destination markets	217,229	184,417	160,094
Total exports from Germany	683,811	606,805	568,723

Table continued on next page.

Table VII-9--Continued

Aluminum foil: Germany exports by destination market, 2014-16

Destination market	Calendar year		
	2014	2015	2016
	Unit value (dollars per short ton)		
Exports from Germany to the United States	3,790	3,459	3,071
Exports from Germany to other major destination markets.--			
Switzerland	3,483	3,015	2,790
France	3,423	2,950	2,746
Italy	3,667	3,176	2,787
Netherlands	3,472	3,273	3,001
Austria	4,046	3,564	3,191
Croatia	3,258	2,719	2,515
Spain	3,435	2,860	2,479
Mexico	3,834	3,666	3,202
All other destination markets	3,445	3,146	2,892
Total exports from Germany	3,533	3,137	2,855
	Share of quantity (percent)		
Exports from Germany to the United States	6.9	7.5	6.8
Exports from Germany to other major destination markets.--			
Switzerland	16.9	16.6	16.1
France	10.0	11.1	13.1
Italy	10.0	8.6	8.5
Netherlands	9.1	7.2	7.3
Austria	4.9	5.4	6.8
Croatia	2.2	5.4	5.4
Spain	4.8	5.1	5.2
Mexico	2.6	2.9	3.1
All other destination markets	32.6	30.3	27.8
Total exports from Germany	100.0	100.0	100.0

Note.--Data reported in this table does not include in-scope merchandise (fin stock) imported under HS subheading 7607.19.

Source: Official Germany export statistics under HS subheading 7607.11 as reported by Eurostat in the IHS/GTA database, accessed April 10, 2017.

Major producers of aluminum foil in Germany include Constellium, Norsk Hydro, and Novelis. Constellium owns a facility in Singen, Germany that produces foil stock used in the packaging industry. The facility has an integrated hot/cold rolling line and employs over 1,600 workers.[16] Norsk Hydro operates facilities in Grevenbroich and Hamburg, in addition to a joint venture with Novelis in Neuss. The facility in Grevenbroich produces 440,000 metric tons of various products per year, including aluminum foil, and employs 2,000 workers.[17] Norsk Hydro's Hamburg operations include a casthouse and rolling mill that is used to produce coil and sheet for foil re-rolling.[18] Norsk Hydro's Alunorf joint venture with Novelis in Neuss is the world's largest aluminum rolling mill and employs over 2,000 workers.[19] Novelis operates facilities in Lüdenscheid and Ohle, in addition to the Alunorf joint venture with Norsk Hydro. The facility in Lüdenscheid supplies converted aluminum foil for various end markets and applications, including electronics and packaging. Novelis' facility in Ohle, Germany produces foil for various applications, including foil trays used in the food industry.[20]

[16] Constellium, "Singen aluminum plant, Germany," http://www.constellium.com/aluminium-company/manufacturing-recycling-plants/singen-germany, (accessed April 4, 2017).

[17] Norsk Hydro, "Grevenbroich," http://www.hydro.com/en/about-hydro/hydro-worldwide/germany/grevenbroich/, (accessed April 4, 2017).

[18] Norsk Hydro, "Hydro Aluminium Rolled Products GmbH, Hamburg," http://www.hydro.com/en/about-hydro/hydro-worldwide/germany/hamburg/hydro-aluminium-rolled-products-gmbh-hamburg/, (accessed April 4, 2017).

[19] Norsk Hydro, "Neuss," http://www.hydro.com/en/about-hydro/hydro-worldwide/germany/neuss/, (accessed April 4, 2017).

[20] Novelis, "Geographic Locations (Europe), http://novelis.com/about-us/locations/, (accessed April 4, 2017).

APPENDIX A

FEDERAL REGISTER NOTICES

The Commission makes available notices relevant to its investigations and reviews on its website, www.usitc.gov. In addition, the following tabulation presents, in chronological order, *Federal Register* notices issued by the Commission and Commerce during the current proceeding.

Citation	Title	Link
82 FR 13853, March 15, 2017	*Aluminum Foil from China; Institution of Antidumping and Countervailing Duty Investigations and Scheduling of Preliminary Phase Investigations*	https://www.gpo.gov/fdsys/pkg/FR-2017-03-15/pdf/2017-05149.pdf
82 FR 15688, March 30, 2017	*International Trade Administration, Certain Aluminum Foil From the People's Republic of China (C–570–054): Initiation of Countervailing Duty Investigation*	https://www.gpo.gov/fdsys/pkg/FR-2017-03-30/pdf/2017-06390.pdf
82 FR 15691, March 30, 2017	*International Trade Administration, Certain Aluminum Foil From the People's Republic of China (A–570–053): Initiation of Less-Than-Fair-Value Investigation*	https://www.gpo.gov/fdsys/pkg/FR-2017-03-30/pdf/2017-06389.pdf
82 FR 16162, April 3, 2017	*Certain Aluminum Foil From the People's Republic of China: Notice of Initiation of Inquiry Into the Status of the People's Republic of China as a Nonmarket Economy Country Under the Antidumping and Countervailing Duty Laws*	https://www.gpo.gov/fdsys/pkg/FR-2017-04-03/pdf/2017-06535.pdf

APPENDIX B

CALENDAR OF THE PUBLIC STAFF CONFERENCE

CALENDAR OF PUBLIC PRELIMINARY CONFERENCE

Those listed below appeared as witnesses at the United States International Trade Commission's preliminary conference:

Subject: Aluminum Foil from China

Inv. Nos.: 701-TA-570 and 731-TA-1346 (Preliminary)

Date and Time: March 30, 2017 - 9:30 a.m.

Sessions were held in connection with these preliminary phase investigations in Courtroom B (room 111), 500 E Street, SW., Washington, DC.

OPENING REMARKS:	**TIME ALLOCATION:**
Petitioner (**John M. Herrmann**, Kelley Drye & Warren LLP)	5 minutes
Respondents (**Kristin H. Mowry**, Mowry & Grimson, PLLC)	5 minutes

In Support of the Imposition of Antidumping and Countervailing Duty Orders: **TIME ALLOCATION:**

Kelley Drye & Warren LLP — 60 minutes
Washington, DC
on behalf of

The Aluminum Association Trade Enforcement Working Group and its individual members

Lee McCarter, Chief Executive Officer, JW Aluminum Company

Chester Roush, Chief Commercial Officer, JW Aluminum Company

Beatriz Landa, Vice President – Specialties, Novelis North America

James D'Amico, Senior Account Manager, Novelis North America

In Support of the Imposition of
Antidumping and Countervailing Duty Orders (continued):

Murray Rudisill, Vice President – Operations, Reynolds Consumer Products

Charles Johnson, Vice President – Policy, The Aluminum Association

Holly Hart, Legislative Director and Assistant to the President, United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union

Brad Hudgens, Economist, Georgetown Economic Services, LLC

John M. Herrmann)
Paul C. Rosenthal) – OF COUNSEL
Grace W. Kim)

In Opposition to the Imposition of **TIME**
Antidumping and Countervailing Duty Orders: **ALLOCATION:**

60 minutes total

Mowry & Grimson, PLLC
Washington, DC
on behalf of

Flexible Packaging Association

Brian Nelson, Senior Category Manager, Sonoco Products Company

Dhuanne Dodrill, President, Rollprint Packaging Products, Inc.

Michael Higgins, Chief Operating Officer, Amgraph Packaging, Inc.

Donald Dewar, Corporate Purchasing Manager, American Packaging Corporation

Phil Brinkheide, Chief Financial Officer, American Packaging Corporation

Kristin H. Mowry) – OF COUNSEL

In Opposition to the Imposition of
Antidumping and Countervailing Duty Orders (continued):

Akerman LLP
Washington, DC
on behalf of

Oracle and LLFLEX

Jim Squatrito, CEO, Oracle and LLFLEX

Felicia Leborgne Nowels) – OF COUNSEL

Mayer Brown LLP
Washington, DC
on behalf of

Xiashun Holdings Limited and its affiliates
Daching Enterprises Limited
Xiamen Xiashun Aluminum Foil Co., Ltd.

Christina Chan, Executive Director, Xiashun Holdings Ltd.

Eric Lu, Vice President of Sales, Xiamen Xiashun Aluminum Foil Co., Ltd.

Tim Rinkevich, Denton Quality Leader, Tetra Pak

Jack Morrison (retired), Former CEO of Xiashun Holdings Ltd.

Matthew McConkey)
) – OF COUNSEL
Jing Zhang)

In Opposition to the Imposition of
Antidumping and Countervailing Duty Orders (continued):

Baker & McKenzie LLP
Washington, DC
on behalf of

Bemis Company, Inc. ("Bemis")

Steve Casey, Senior Director, Procurement, Bemis

Gary Michalkiewicz, Global Category Manager – Barrier Products, Bemis

Kevin M. O'Brien)
) – OF COUNSEL
Christine M. Streatfeild)

Arnold & Porter Kaye Scholer
Washington, DC
on behalf of

Trinidad Benham Corporation

Donna Waters, Aluminum Risk Manager, Trinidad Benham Corporation

Lynn M. Fischer Fox) – OF COUNSEL

Crowell & Moring LLP
Washington, DC
on behalf of

Valeo, Inc.
Valeo Engine Cooling, Inc.
Valeo Climate Control Corporation

Rogelio Garcia, Site Purchasing Manager, Valeo Thermal Systems North America

Albert Wang, North America Sales Director, Yinbang Clad Materials Co., Ltd.

Daniel Cannistra)
) – OF COUNSEL
Benjamin Caryl)

In Opposition to the Imposition of
Antidumping and Countervailing Duty Orders (continued):

Grunfeld, Desiderio, Lebowitz, Silverman & Klestadt LLP
Washington, DC
on behalf of

Commodity Foil & Paper, Inc. ("Commodity Foil")

Sean J. Gallagher, CEO, Commodity Foil

Francis J. Sailer)
Joseph M. Sprargen) – OF COUNSEL
Kavita Mohan)

Barnes Richardson & Colburn LLP
Washington, DC
on behalf of

Yantai Jintai International Trade Co.
Yantai Donghai Aluminum Co.

Brian F. Walsh) – OF COUNSEL

Non-Party in Opposition

Phoenix Films, Inc.
Clearwater, FL

Ted Nitka, CEO

REBUTTAL/CLOSING REMARKS:

Petitioner (**Paul C. Rosenthal**, Kelley Dry & Warren LLP) 10 minutes
Respondents (**Kristin H. Mowry**, Mowry & Grimson, PLLC) 10 minutes

-END-

APPENDIX C

SUMMARY DATA

Table C-1
Aluminum foil: Summary data concerning the total U.S. market, 2014-16
(Quantity=short tons; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per short ton; Period changes=percent--exceptions noted)

	Reported data			Period changes		
	Calendar year			Calendar year		
	2014	2015	2016	2014-16	2014-15	2015-16
U.S. consumption quantity:						
Amount	639,007	634,175	662,391	3.7	(0.8)	4.4
Producers' share (fn1)	71.0	69.1	67.6	(3.4)	(1.9)	(1.6)
Importers' share (fn1):						
China	17.1	20.7	22.9	5.8	3.6	2.2
Nonsubject sources	11.9	10.1	9.5	(2.4)	(1.7)	(0.6)
All import sources	29.0	30.9	32.4	3.4	1.9	1.6
U.S. consumption value:						
Amount	2,114,268	1,893,521	1,799,201	(14.9)	(10.4)	(5.0)
Producers' share (fn1)	65.2	64.0	63.4	(1.7)	(1.1)	(0.6)
Importers' share (fn1):						
China	16.9	21.8	24.0	7.1	4.8	2.2
Nonsubject sources	17.9	14.2	12.6	(5.3)	(3.7)	(1.6)
All import sources	34.8	36.0	36.6	1.7	1.1	0.6
U.S. imports from:						
China:						
Quantity	109,287	131,324	151,658	38.8	20.2	15.5
Value	358,024	412,377	431,534	20.5	15.2	4.6
Unit value	$3,276	$3,140	$2,845	(13.1)	(4.1)	(9.4)
Ending inventory quantity	***	***	***	***	***	***
Nonsubject sources:						
Quantity	75,980	64,324	63,023	(17.1)	(15.3)	(2.0)
Value	378,371	268,618	226,500	(40.1)	(29.0)	(15.7)
Unit value	$4,980	$4,176	$3,594	(27.8)	(16.1)	(13.9)
Ending inventory quantity	***	***	***	***	***	***
All import sources:						
Quantity	185,266	195,648	214,680	15.9	5.6	9.7
Value	736,395	680,995	658,033	(10.6)	(7.5)	(3.4)
Unit value	$3,975	$3,481	$3,065	(22.9)	(12.4)	(11.9)
Ending inventory quantity	***	***	***	***	***	***
U.S. producers':						
Average capacity quantity	630,806	580,806	580,806	(7.9)	(7.9)	0.0
Production quantity	478,216	456,388	468,940	(1.9)	(4.6)	2.8
Capacity utilization (fn1)	75.8	78.6	80.7	4.9	2.8	2.2
U.S. shipments:						
Quantity	453,741	438,527	447,711	(1.3)	(3.4)	2.1
Value	1,377,873	1,212,526	1,141,168	(17.2)	(12.0)	(5.9)
Unit value	$3,037	$2,765	$2,549	(16.1)	(8.9)	(7.8)
Export shipments:						
Quantity	***	***	***	***	***	***
Value	***	***	***	***	***	***
Unit value	***	***	***	***	***	***
Ending inventory quantity	22,831	20,201	21,555	(5.6)	(11.5)	6.7
Inventories/total shipments (fn1)	***	***	***	***	***	***
Production workers	1,830	1,767	1,693	(7.5)	(3.4)	(4.2)
Hours worked (1,000s)	3,948	3,749	3,652	(7.5)	(5.0)	(2.6)
Wages paid ($1,000)	99,084	97,872	95,902	(3.2)	(1.2)	(2.0)
Hourly wages (dollars)	$25.10	$26.11	$26.26	4.6	4.0	0.6
Productivity (short tons per 1,000 hours)	121.1	121.7	128.4	6.0	0.5	5.5
Unit labor costs	$207	$214	$205	(1.3)	3.5	(4.6)
Net sales:						
Quantity	477,142	459,017	467,586	(2.0)	(3.8)	1.9
Value	1,453,882	1,285,300	1,198,986	(17.5)	(11.6)	(6.7)
Unit value	$3,047	$2,800	$2,564	(15.8)	(8.1)	(8.4)
Cost of goods sold (COGS)	1,347,262	1,242,335	1,109,610	(17.6)	(7.8)	(10.7)
Gross profit or (loss)	106,620	42,965	89,376	(16.2)	(59.7)	108.0
SG&A expenses	56,243	58,283	52,189	(7.2)	3.6	(10.5)
Operating income or (loss)	50,377	(15,318)	37,187	(26.2)	fn2	fn2
Net income or (loss)	33,440	(46,005)	21,999	(34.2)	fn2	fn2
Capital expenditures	21,607	18,394	27,806	28.7	(14.9)	51.2
Unit COGS	$2,824	$2,707	$2,373	(16.0)	(4.1)	(12.3)
Unit SG&A expenses	$118	$127	$112	(5.3)	7.7	(12.1)
Unit operating income or (loss)	$106	$(33)	$80	(24.7)	fn2	fn2
Unit net income or (loss)	$70	$(100)	$47	(32.9)	fn2	fn2
COGS/sales (fn1)	92.7	96.7	92.5	(0.1)	4.0	(4.1)
Operating income or (loss)/sales (fn1)	3.5	(1.2)	3.1	(0.4)	(4.7)	4.3
Net income or (loss)/sales (fn1)	2.3	(3.6)	1.8	(0.5)	(5.9)	5.4

Notes:

fn1.--Reported data are in percent and period changes are in percentage points.
fn2.--Undefined.

Source: Compiled from data submitted in response to Commission questionnaires and official U.S. imports (detailed information provided in part IV).

Table C-2
Aluminum foil: Summary data concerning the U.S. merchant market, 2014-16
(Quantity=short tons; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per short ton; Period changes=percent--exceptions noted)

	Reported data			Period changes		
	Calendar year				Calendar year	
	2014	2015	2016	2014-16	2014-15	2015-16
U.S. consumption quantity:						
Amount	***	***	***	***	***	***
Producers' share (fn1)	***	***	***	***	***	***
Importers' share (fn1):						
China	***	***	***	***	***	***
Nonsubject sources	***	***	***	***	***	***
All import sources	***	***	***	***	***	***
U.S. consumption value:						
Amount	***	***	***	***	***	***
Producers' share (fn1)	***	***	***	***	***	***
Importers' share (fn1):						
China	***	***	***	***	***	***
Nonsubject sources	***	***	***	***	***	***
All import sources	***	***	***	***	***	***
U.S. imports from:						
China:						
Quantity	109,287	131,324	151,658	38.8	20.2	15.5
Value	358,024	412,377	431,534	20.5	15.2	4.6
Unit value	$3,276	$3,140	$2,845	(13.1)	(4.1)	(9.4)
Ending inventory quantity	***	***	***	***	***	***
Nonsubject sources:						
Quantity	75,980	64,324	63,023	(17.1)	(15.3)	(2.0)
Value	378,371	268,618	226,500	(40.1)	(29.0)	(15.7)
Unit value	$4,980	$4,176	$3,594	(27.8)	(16.1)	(13.9)
Ending inventory quantity	***	***	***	***	***	***
All import sources:						
Quantity	185,266	195,648	214,680	15.9	5.6	9.7
Value	736,395	680,995	658,033	(10.6)	(7.5)	(3.4)
Unit value	$3,975	$3,481	$3,065	(22.9)	(12.4)	(11.9)
Ending inventory quantity	***	***	***	***	***	***
U.S. producers':						
Average capacity quantity	***	***	***	***	***	***
Production quantity	***	***	***	***	***	***
Capacity utilization (fn1)	***	***	***	***	***	***
U.S. shipments:						
Quantity	***	***	***	***	***	***
Value	***	***	***	***	***	***
Unit value	***	***	***	***	***	***
Export shipments:						
Quantity	***	***	***	***	***	***
Value	***	***	***	***	***	***
Unit value	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***
Inventories/total shipments (fn1)	***	***	***	***	***	***
Production workers	***	***	***	***	***	***
Hours worked (1,000s)	***	***	***	***	***	***
Wages paid ($1,000)	***	***	***	***	***	***
Hourly wages (dollars)	***	***	***	***	***	***
Productivity (short tons per 1,000 hours)	***	***	***	***	***	***
Unit labor costs	***	***	***	***	***	***
Net sales:						
Quantity	***	***	***	***	***	***
Value	***	***	***	***	***	***
Unit value	***	***	***	***	***	***
Cost of goods sold (COGS)	***	***	***	***	***	***
Gross profit or (loss)	***	***	***	***	***	***
SG&A expenses	***	***	***	***	***	***
Operating income or (loss)	***	***	***	***	***	***
Net income or (loss)	***	***	***	***	***	***
Capital expenditures	***	***	***	***	***	***
Unit COGS	***	***	***	***	***	***
Unit SG&A expenses	***	***	***	***	***	***
Unit operating income or (loss)	***	***	***	***	***	***
Unit net income or (loss)	***	***	***	***	***	***
COGS/sales (fn1)	***	***	***	***	***	***
Operating income or (loss)/sales (fn1)	***	***	***	***	***	***
Net income or (loss)/sales (fn1)	***	***	***	***	***	***

Notes:

fn1.--Reported data are in percent and period changes are in percentage points.
fn2.--Undefined.

Source: Compiled from data submitted in response to Commission questionnaires and official U.S. imports (detailed information provided in part IV).

APPENDIX D

U.S. PRODUCERS AND IMPORTERS' SHIPMENTS OF ULTRA-THIN ALUMINUM FOIL

Table D-1
Aluminum foil: U.S. shipments of ultra-thin aluminum foil (less than 0.0003 inch thickness),[1] by source, 2016

Source	Calendar year
	2016
U.S. shipments from.—	Quantity (short tons)
China	42,857
Nonsubject countries	***
U.S. Producers	***
U.S. shipments from.—	Value (1,000 dollars)
China	122,109
Nonsubject countries	***
U.S. Producers	***
U.S. shipments from.—	Unit value (dollars per short ton)
China	2,849
Nonsubject countries	***
U.S. Producers	***

[1] Questionnaires requested breakouts of aluminum foil shipments by thickness including those less than or equal to 0.0004 inch thickness. After issuance of the questionnaires, respondents requested an additional breakout of aluminum foil less than 0.0003 inch thickness ("ultra-thin"). Email from *** to Justin Enck regarding ultra-thin aluminum foil, March 16, 2017.

Note.—0.0003 inches = 7.62 microns = 0.00762 millimeters.

Source: Responses to staff's supplemental requests.

APPENDIX E

MONTHLY APPARENT U.S. CONSUMPTION

Table E-1 presents monthly apparent consumption data for aluminum foil in the United States from January 2014 through December 2016. Table E-2 and figure E-1 present monthly U.S. market shares from January 2014 through December 2016.

Table E-1
Aluminum foil: Monthly apparent U.S. consumption, January 2014 through December 2016

Item	U.S. producers' U.S. shipments	U.S. imports from			Apparent U.S. consumption
		Subject	Nonsubject	All import sources	
	Quantity (short tons)				
2014.-- January	37,119	7,782	5,061	12,842	49,961
February	35,627	7,597	5,721	13,318	48,945
March	40,556	8,411	7,402	15,813	56,369
April	38,802	8,502	5,991	14,493	53,295
May	39,355	8,840	7,181	16,021	55,376
June	39,509	8,331	6,411	14,742	54,251
July	39,565	9,426	6,133	15,559	55,124
August	40,646	8,703	7,859	16,561	57,207
September	40,698	10,702	5,497	16,199	56,897
October	40,182	10,360	6,955	17,315	57,497
November	33,722	10,191	6,483	16,674	50,396
December	27,960	10,442	5,287	15,729	43,689
2015.-- January	31,458	9,136	3,698	12,835	44,293
February	33,515	9,009	4,155	13,164	46,679
March	39,608	11,845	5,329	17,174	56,782
April	37,006	12,247	6,258	18,505	55,511
May	39,139	9,741	6,811	16,551	55,690
June	37,976	12,256	6,000	18,256	56,232
July	37,628	12,106	5,754	17,860	55,488
August	39,950	12,060	5,559	17,619	57,569
September	39,064	11,790	5,200	16,990	56,054
October	39,233	10,811	5,882	16,693	55,926
November	34,985	9,913	4,862	14,775	49,760
December	28,965	10,409	4,816	15,225	44,190
2016.-- January	32,487	11,822	5,319	17,141	49,628
February	37,033	10,304	5,153	15,457	52,490
March	41,263	12,596	4,816	17,412	58,675
April	38,991	12,118	6,403	18,521	57,512
May	37,130	14,182	5,620	19,802	56,932
June	39,097	14,211	5,139	19,350	58,447
July	38,727	12,481	5,267	17,748	56,475
August	40,621	13,708	6,784	20,492	61,113
September	39,274	10,761	5,506	16,267	55,541
October	37,645	13,002	5,061	18,063	55,708
November	35,901	13,639	4,519	18,158	54,059
December	29,542	12,833	3,437	16,270	45,812

Source: Compiled from data submitted in response to Commission questionnaires and official U.S. imports statistics using HTS statistical reporting numbers 7607.11.3000, 7607.11.6000, 7607.11.9030, 7607.11.9060, 7607.11.9090, and 7607.19.6000, accessed March 15, 2017.

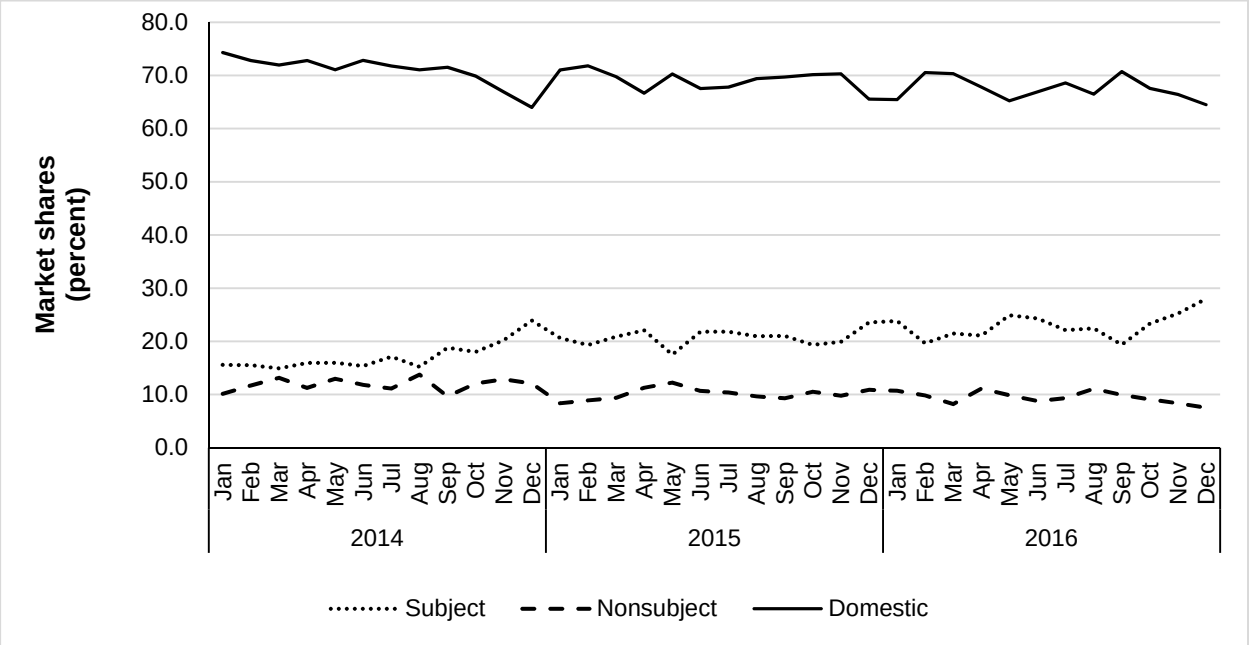
Table E-2

Aluminum foil: Monthly U.S. market shares, January 2014 through December 2016

Item	U.S. producers' U.S. shipments	U.S. imports from			Apparent U.S. consumption
		Subject	Nonsubject	All import sources	
	Share of quantity (percent)				
2014.--					
January	74.3	15.6	10.1	25.7	100.0
February	72.8	15.5	11.7	27.2	100.0
March	71.9	14.9	13.1	28.1	100.0
April	72.8	16.0	11.2	27.2	100.0
May	71.1	16.0	13.0	28.9	100.0
June	72.8	15.4	11.8	27.2	100.0
July	71.8	17.1	11.1	28.2	100.0
August	71.1	15.2	13.7	28.9	100.0
September	71.5	18.8	9.7	28.5	100.0
October	69.9	18.0	12.1	30.1	100.0
November	66.9	20.2	12.9	33.1	100.0
December	64.0	23.9	12.1	36.0	100.0
2015.--					
January	71.0	20.6	8.3	29.0	100.0
February	71.8	19.3	8.9	28.2	100.0
March	69.8	20.9	9.4	30.2	100.0
April	66.7	22.1	11.3	33.3	100.0
May	70.3	17.5	12.2	29.7	100.0
June	67.5	21.8	10.7	32.5	100.0
July	67.8	21.8	10.4	32.2	100.0
August	69.4	20.9	9.7	30.6	100.0
September	69.7	21.0	9.3	30.3	100.0
October	70.2	19.3	10.5	29.8	100.0
November	70.3	19.9	9.8	29.7	100.0
December	65.5	23.6	10.9	34.5	100.0
2016.--					
January	65.5	23.8	10.7	34.5	100.0
February	70.6	19.6	9.8	29.4	100.0
March	70.3	21.5	8.2	29.7	100.0
April	67.8	21.1	11.1	32.2	100.0
May	65.2	24.9	9.9	34.8	100.0
June	66.9	24.3	8.8	33.1	100.0
July	68.6	22.1	9.3	31.4	100.0
August	66.5	22.4	11.1	33.5	100.0
September	70.7	19.4	9.9	29.3	100.0
October	67.6	23.3	9.1	32.4	100.0
November	66.4	25.2	8.4	33.6	100.0
December	64.5	28.0	7.5	35.5	100.0

Source: Derived from table E-1.

Figure E-1
Aluminum foil: Monthly U.S. market shares, January 2014 through December 2016



Source: Table E-2.