Certain Aluminum Extrusions from China

Investigation Nos. 701-TA-475 and 731-TA-1177 (Review)

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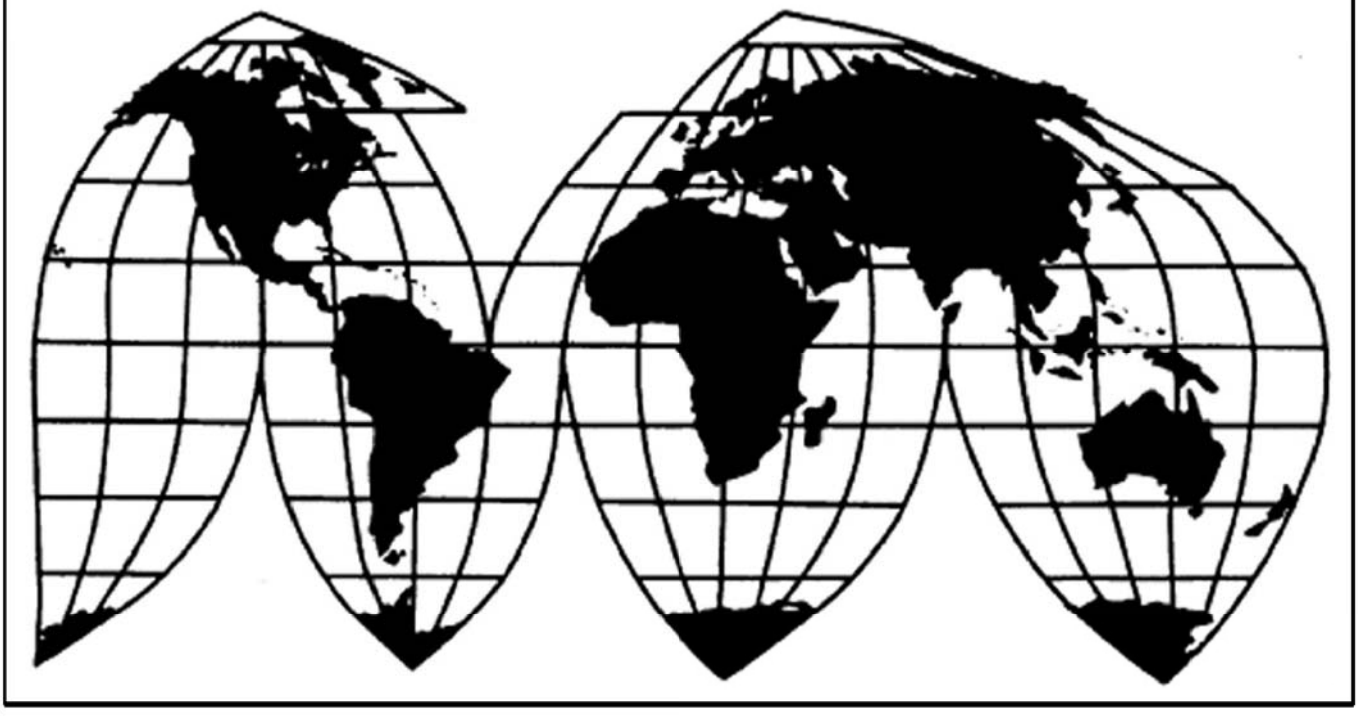
U.S. International Trade Commission



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U.S. International Trade Commission

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CONTENTS

Page

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Note.—Information that would reveal confidential operations of individual concerns may not be published and therefore has been deleted.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-475 and 731-TA-1177 (Review)

Aluminum Extrusions from China

DETERMINATIONS

On the basis of the record[1] developed in the subject five-year reviews, the United States International Trade Commission ("Commission") determines, pursuant to the Tariff Act of 1930 ("the Act"), that revocation of the countervailing and antidumping duty orders on aluminum extrusions from China would be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time.

BACKGROUND

The Commission, pursuant to section 751(c) of the Act (19 U.S.C. 1675(c)), instituted these reviews on April 1, 2016 (81 F.R. 18884) and determined on July 5, 2016 that it would conduct full reviews (81 F.R. 45304, July 13, 2016). Notice of the scheduling of the Commission's reviews and of a public hearing 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* on October 5, 2016 (81 F.R. 69078). The hearing was held in Washington, DC, on January 26, 2017, and all persons who requested the opportunity were permitted to appear in person or by counsel.

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

Views of the Commission

Based on the record in these five-year reviews, we determine under section 751(c) of the Tariff Act of 1930, as amended ("the Tariff Act"), that revocation of the antidumping and countervailing duty orders on aluminum extrusions from China would be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time.

I. Background

A. Original Investigations

On March 31, 2010, the Aluminum Extrusions Fair Trade Committee ("AEFTC"), an association of U.S. producers of aluminum extrusions,[1] and the United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union ("USW") filed antidumping and countervailing duty petitions regarding imports of aluminum extrusions from China. In May 2011, the Commission determined that an industry in the United States was materially injured by reason of imports of aluminum extrusions other than certain finished heat sinks ("FHS")[2] that the U.S. Department of Commerce ("Commerce") had found were sold in the United States at less than fair value and subsidized by the government of China. The Commission also determined that the domestic FHS industry was not materially injured or threatened with material injury by reason of imports of FHS from China.[3] On May 26, 2011, Commerce issued antidumping and countervailing duty orders with respect

[1] AEFTC's individual members currently include the following: Aerolite Extrusion Company; Alexandria Extrusion Company; William L. Bonnell Company, Inc.; Frontier Aluminum Corporation; Futura Industries Corporation; Hydro Aluminum North America, Inc. ("Hydro"'); Kaiser Aluminum Corporation; Profile Extrusion Company; Sapa Extrusions, Inc. ("Sapa"); and Western Extrusions Corporation. Hydro and Sapa merged in late 2013, and Sapa now owns Hydro's extrusions assets. AEFTC's Prehearing Brief Cover Letter at 1 n.1.

[2] According to information submitted during the original investigations, FHS are designed and tested to perform within specific thermal resistance tolerances to remove damaging heat from electronic equipment. *Certain Aluminum Extrusions from China*, Inv. Nos. 701-TA-475 and 731-TA-1177 (Final), USITC Pub. 4229 at 6-8 (May 2011).

[3] The Commission's Views reflected the opinion of Commissioners Aranoff, Okun, Pearson, and Pinkert. Commissioners Williamson and Lane determined that there was one domestic like product consisting of all aluminum extrusions, including FHS, corresponding to the scope of the investigations, and they determined that the domestic industry was materially injured by reason of subject imports from China. USITC Pub. 4229 at 3. The U.S. Court of International Trade ("CIT") affirmed the Commission's decision to define FHS as a separate domestic like product and its final negative determinations regarding FHS. *Aluminum Extrusions Fair Trade Committee v. United States*, 2012 WL 5201218 (Ct. Int'l Trade Oct. 11, 2012).

to imports of aluminum extrusions from China other than finished heat sinks (hereinafter "aluminum extrusions").[4]

B. Current Reviews

On April 1, 2016, the Commission instituted the instant five-year reviews to determine whether revoking the antidumping and countervailing duty orders on aluminum extrusions from China would be likely to lead to the continuation or recurrence of material injury to a domestic industry.[5] On July 5, 2016, the Commission determined that it would conduct full five-year reviews.[6]

Parties to these investigations: The Commission received prehearing and posthearing submissions from AEFTC.[7] The Commission also received prehearing and posthearing submissions from Electrolux and Adams Thermal, importers of subject merchandise from China. Representatives of AEFTC and Electrolux participated in the hearing with their counsel and counsel for Adams Thermal.

Data coverage: U.S. industry data in these reviews are based on the questionnaire responses of 25 U.S. firms that accounted for *** percent of domestic production of aluminum extrusions in 2015.[8] U.S. import data and related information are based on Commerce's official

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[4] 76 Fed. Reg. 30650 (May 26, 2011) (antidumping duty order); 76 Fed. Reg. 30653 (May 26, 2011) (countervailing duty order). The CIT upheld Commerce's revision of the scope language to reflect the exclusion of FHS. *Aluminum Extrusions Fair Trade Committee v. United States*, 968 F. Supp. 2d 1244 (Ct. Int'l Trade 2014).

[5] 81 Fed. Reg. 18884 (Apr. 1, 2016). Commerce initiated five-year reviews on the same date, 81 Fed. Reg. 18829 (Apr. 1, 2016), and issued the results of its expedited reviews thereafter. 81 Fed. Reg. 51855 (Aug. 5, 2016); 81 Fed. Reg. 51858 (Aug. 5, 2016).

[6] The Commission found that the responses to the notice of institution submitted by AEFTC's members and by Electrolux Home Products, Inc. and Electrolux Home Care Products, Inc. (collectively "Electrolux") and Adams Thermal Systems, Inc. ("Adams Thermal"), U.S. importers of subject merchandise, were individually adequate. It found that the domestic interested parties' group response was adequate and that the respondent interested party group response was inadequate. Vice Chairman Johanson and Commissioners Broadbent and Kieff found that other circumstances, such as the need to examine further the appropriate definition of the domestic like product, warranted conducting full reviews, whereas Chairman Schmidtlein and Commissioners Pinkert and Williamson voted to conduct expedited reviews.

[7] AEFTC also submitted arguments for Brazeway Inc. ("Brazeway"), a U.S. producer of aluminum extrusions that is not a member of AEFTC and that did not file a notice of appearance; AEFTC included Brazeway's witness and its counsel on the domestic interested parties' panel during the hearing.

[8] Confidential Report, Memorandum INV-PP-025 (Feb. 23, 2017), as revised by Memorandum INV-PP-029 (Mar. 1, 2017) ("CR") at I-5, I-11, I-54 to I-55; Public Report, *Certain Aluminum Extrusions from China*, Inv. Nos. 701-TA-475 and 731-TA-1177 (Review), USITC Pub. 4677 (Mar. 2017) ("PR") at I-4, I-9, I-20. Commission staff typically collects five to six years of data in full first five-year reviews. The shifting scope definition and the multiple domestic like product issues in these reviews would have complicated reporting for the many small producers and importers and reduced the comparability of (Continued…)

import statistics[9] and the questionnaire responses of 16 U.S. importers of aluminum extrusions that accounted for *** percent of U.S. imports of subject merchandise from China in 2015 and *** percent of U.S. imports of aluminum extrusions from nonsubject sources in 2015.[10] Foreign industry data and related information are based on *** data, various public industry sources, and the questionnaire responses of two producers of aluminum extrusions that accounted for less than *** percent of total production in China in 2015 and ***.[11] The Commission also received 27 usable questionnaire responses from firms that have purchased aluminum extrusions since January 1, 2011.[12]

II. Domestic Like Product

In making its determination under section 751(c) of the Tariff Act, the Commission defines the "domestic like product" and the "industry."[13] 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 under this subtitle."[14] The Commission's

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data from the original investigations and the current reviews. Consequently, the Commission collected annual data for 2013 to 2015 and data for the first nine months of 2015 ("interim 2015") and the first nine months of 2016 ("interim 2016"). Commission staff also collected U.S. producers' shipment data for 2011 and 2012 in order to provide continuous estimates of apparent U.S. consumption and market shares for January 2011 to September 2016. CR at I-4 at n.11; PR at I-4 at n.11.

[9] In the original investigations, the Commission's report based imports from subject and nonsubject sources on official Commerce import statistics for the three primary U.S. Harmonized Tariff Schedule ("HTSUS") subheadings for aluminum extrusions identified in the petitions and by Commerce (subheadings 7604.11, 7604.29, and 7608.20). U.S. importers reported that over 90 percent of their imports of subject merchandise fell under these three primary subheadings, and they reported that other subheadings under which subject merchandise might enter the U.S. market included large amounts of out-of-scope merchandise. USITC Pub. 4229 at I-8 at n.8. In the current reviews, Commission staff relied on official statistics for U.S. imports for the same three primary statistical reporting numbers that were used in the original investigations. CR at I-59; PR at I-42.

[10] CR at I-4 to I-5, I-11; PR at I-4.

[11] CR at I-5, I-11, IV-6; PR at I-4, I-9; CR/PR at Table IV-4.

[12] CR at I-60; PR at I-43.

[13] 19 U.S.C. § 1677(4)(A).

[14] 19 U.S.C. § 1677(10); *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); *Timken Co. v. United States*, 913 F. Supp. 580, 584 (Ct. Int'l Trade 1996); *Torrington Co. v. United States*, 747 F. Supp. 744, 748-49 (Ct. Int'l Trade 1990), *aff'd*, 938 F.2d 1278 (Fed. Cir. 1991); *see also* S. Rep. No. 249, 96th Cong., 1st Sess. 90-91 (1979). The Commission generally considers a number of factors (herein "traditional domestic like product 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*, 913 F. Supp. at 584. In a semifinished products domestic like product analysis, the (Continued…)

practice in five-year reviews is to examine the domestic like product definition from the original investigations and to consider whether the record indicates any reason to revisit the prior findings.[15] Moreover, the existence of significant domestic like product issues is a factor that the Commission may take into account when deciding whether to conduct full reviews,[16] as three Commissioners did in this case.[17]

A. Scope of Imported Subject Merchandise and Related Background

As of February 2, 2017, Commerce had issued 99 final scope rulings and conducted one changed circumstances review concerning aluminum extrusions since its final determinations in the original investigations.[18] As a result of these scope rulings, Commerce has modified the scope to clarify additional HTSUS statistical reporting numbers under which the subject merchandise may be imported.[19] Commerce also modified the scope in two additional

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Commission examines the following: (1) the significance and extent of the processes used to transform the upstream into the downstream articles; (2) whether the upstream article is dedicated to the production of the downstream article or has independent uses; (3) differences in the physical characteristics and functions of the upstream and downstream articles; (4) whether there are perceived to be separate markets for the upstream and downstream articles; and (5) differences in the costs or value of the vertically differentiated articles. *See*, *e.g.*, *Glycine from India*, *Japan*, *and Korea*, Inv. Nos. 731-TA-1111 to 1113 (Preliminary), USITC Pub. 3921 at 7 (May 2007); *Artists' Canvas from China*, Inv. No. 731-TA-1091 (Final), USITC Pub. 3853 at 6 (May 2006); *Live Swine from Canada*, Inv. No. 731-TA-1076 (Final), USITC Pub. 3766 at 8 n.40 (Apr. 2005); *Certain Frozen Fish Fillets from Vietnam*, Inv. No. 731-TA-1012 (Preliminary), USITC Pub. 3533 at 7 (Aug. 2002).

[15] *See*, *e.g.*, *Internal Combustion Industrial Forklift Trucks from Japan*, Inv. No. 731-TA-377 (Second Review), USITC Pub. 3831 at 8-9 (Dec. 2005); *Crawfish Tail Meat from China*, Inv. No. 731-TA-752 (Review), USITC Pub. 3614 at 4 (Jul. 2003); *Steel Concrete Reinforcing Bar from Turkey*, Inv. No. 731-TA-745 (Review), USITC Pub. 3577 at 4 (Feb. 2003).

[16] *See, e.g.*, *Notice of Final Rulemaking*, 63 Fed. Reg. 30599, 30602 (June 5, 1998).

[17] *See, e.g.*, Explanation of Commission Determination on Adequacy in *Certain Aluminum Extrusions from China*, Inv. Nos. 701-TA-475 and 731-TA-1177 (Review).

[18] *Aluminum Extrusions from the People's Republic of China* (A-570-967, C-570-968), Final Scope Rulings, http://enforcement.trade.gov/download/prc-ae/scope/prc-ae-scope-index.html, retrieved on Feb. 10, 2017. In approximately two-thirds of the inquiries, Commerce determined that the product in question was outside the scope of the orders; several of the final scope rulings have been or are being litigated. *See, e.g.*, Issues and Decision Memorandum for the Final Results of the Expedited First Sunset Review of the Antidumping Duty Order on *Aluminum Extrusions from the People's Republic of China* (Jul. 29, 2016) ("Expedited AD I&D Memo"), EDIS Doc. 603219, file 1154718 at Attachment 2 (summarizing scope rulings and related litigation); Issues and Decision Memorandum for the Final Results of the Expedited First Sunset Review of the Countervailing Duty Order on *Aluminum Extrusions from the People's Republic of China* (Aug. 1, 2016) ("Expedited CVD I&D Memo"), EDIS Doc. 603219, file 1154719 at Attachment 2 (summarizing scope rulings and related litigation); AEFTC's Posthearing Brief at Exhibit 9 (summarizing and updating scope rulings and related litigation).

[19] Although the written scope of the orders is dispositive, in the original investigations, Commerce observed that the subject merchandise may be imported under HTS statistical reporting (Continued…)

respects: (1) to exclude imports of certain FHS, as a result of the Commission's negative determinations in the original investigations regarding those products; and (2) to exclude imports of certain rectangular wire produced from continuously cast rolled aluminum wire rod, as a result of a changed circumstances review.[20] Commerce defined the scope of the orders in these five-year reviews as follows:

> … aluminum extrusions which are shapes and forms, produced by an extrusion process, made from aluminum alloys having metallic elements corresponding to the alloy series designations published by The Aluminum Association commencing with the numbers 1, 3, and 6 (or proprietary equivalents or other certifying body equivalents). Specifically, the subject merchandise made from aluminum alloy with an Aluminum Association series designation commencing with the number 1 contains not less than 99 percent aluminum by weight. The subject merchandise made from aluminum alloy with an Aluminum Association series designation commencing with the number 3 contains manganese as the major alloying element, with manganese accounting for not more than 3.0 percent of total materials by weight. The subject merchandise made from an aluminum alloy with an Aluminum Association series designation commencing with the number 6 contains magnesium and silicon as the major alloying elements, with magnesium accounting for at least 0.1 percent but not more than 2.0 percent of total materials by weight, and silicon accounting for at least 0.1 percent but not more than 3.0 percent of total materials by weight. The subject aluminum extrusions are properly identified by a four-digit alloy series without either a decimal point or leading letter. Illustrative examples from among the

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numbers 7604.21.0000, 7604.29.1000, 7604.29.3010, 7604.29.3050, 7604.5030, 7604.29.5060, 7608.20.0030, 7608.20.0090, or as parts of other aluminum products under HTS subheadings 7610.10, 7610.90, 7615.19, 7615.20, and 7615.19, 7615.20, and 7616.99. It explained that fin evaporator coils may be classifiable under HTSUS statistical reporting numbers 8418.99.8050 and 8418.99.8060. 76 Fed. Reg. 18524 (Apr. 4, 2011); 76 Fed. Reg. 18521 (Apr. 4, 2011). By the time of its expedited five-year review determinations, Commerce identified 128 statistical reporting numbers under which subject merchandise may be imported, listed five chapter 76 subheadings under which subject merchandise may be entered as parts of other aluminum products in addition to other HTSUS chapters, and explained that fin evaporator coils may be classifiable under HTSUS statistical reporting numbers 8418.99.80.50 and 8418.99.80.60. Expedited AD I&D Memo, EDIS Doc. 603219, file 1154718 at 2-4; Expedited CVD I&D Memo, EDIS Doc. 603219, file 1154719 at 4-6.

[20] 79 Fed. Reg. 634 (Jan. 6, 2014) (effective September 7, 2010 for the countervailing duty order and effective November 12, 2010 for the antidumping duty order, revoking in part with respect to certain rectangular wire). This exclusion was referenced in the scope language in Commerce's December 12, 2016 Issues and Decision Memorandum for Final Results of the Fourth Countervailing Duty Administrative Review (2014) on *Aluminum Extrusions from the People's Republic of China* (Dec. 12, 2016) ("CVD Fourth Annual Review I&D Memo"), EDIS Doc. 603219, file 1154721 at 5-7, but not in the scope language in the Issues and Decision memoranda for Commerce's expedited five-year reviews.

approximately 160 registered alloys that may characterize the subject merchandise are as follows: 1350, 3003, and 6060.

Aluminum extrusions are produced and imported in a wide variety of shapes and forms, including, but not limited to, hollow profiles, other solid profiles, pipes, tubes, bars, and rods. Aluminum extrusions that are drawn subsequent to extrusion (drawn aluminum) are also included in the scope.

Aluminum extrusions are produced and imported with a variety of finishes (both coatings and surface treatments), and types of fabrication. The types of coatings and treatments applied to subject aluminum extrusions include, but are not limited to, extrusions that are mill finished (*i.e.*, without any coating or further finishing), brushed, buffed, polished, anodized (including bright-dip anodized), liquid painted, or powder coated. Aluminum extrusions may also be fabricated, *i.e.*, prepared for assembly. Such operations would include, but are not limited to, extrusions that are cut-to-length, machined, drilled, punched, notched, bent, stretched, knurled, swedged, mitered, chamfered, threaded, and spun. The subject merchandise includes aluminum extrusions that are finished (coated, painted, etc.), fabricated, or any combination thereof.

Subject aluminum extrusions may be described at the time of importation as parts for final finished products that are assembled after importation, including, but not limited to, window frames, door frames, solar panels, curtain walls, or furniture. Such parts that otherwise meet the definition of aluminum extrusions are included in the scope. The scope includes the aluminum extrusion components that are attached (*e.g.*, by welding or fasteners) to form subassemblies, *i.e.*, partially assembled merchandise, unless imported as part of the finished goods 'kit' defined further below. The scope does not include the non-aluminum extrusion components of subassemblies or subject kits.

Subject extrusions may be identified with reference to their end use, such as fence posts, electrical conduits, door thresholds, carpet trim, or heat sinks (that do not meet the finished heat sink exclusionary language below). Such goods are subject merchandise if they otherwise meet the scope definition, regardless of whether they are ready for use at the time of importation.

The following aluminum extrusion products are excluded: aluminum extrusions made from aluminum alloy with an Aluminum Association series designation commencing with the number 2 and containing in excess of 1.5 percent copper by weight; aluminum extrusions made from aluminum alloy with an Aluminum Association series designation commencing with the number 5 and containing in excess of 1.0 percent magnesium by weight; and aluminum extrusions made from aluminum alloy with an Aluminum Association series designation

commencing with the number 7 and containing in excess of 2.0 percent zinc by weight.

The scope also excludes finished merchandise containing aluminum extrusions as parts that are fully and permanently assembled and completed at the time of entry, such as finished windows with glass, doors with glass or vinyl, picture frames with glass pane and backing material, and solar panels. The scope also excludes finished goods containing aluminum extrusions that are entered unassembled in a "finished goods kit." A finished goods kit is understood to mean a packaged combination of parts that contains, at the time of importation, all of the necessary parts to fully assemble a final finished good and requires no further finishing or fabrication, such as cutting or punching, and is assembled "as is" into a finished product. An imported product will not be considered a "finished goods kit" and therefore excluded from the scope of the investigation merely by including fasteners such as screws, bolts, etc. in the packaging with an aluminum extrusion product.

The scope also excludes aluminum alloy sheet or plates produced by other than the extrusion process, such as aluminum products produced by a method of casting. Cast aluminum products are properly identified by four digits with a decimal point between the third and fourth digit. A letter may also precede the four digits. The following Aluminum Association designations are representative of aluminum alloys for casting: 208.0, 295.0, 308.0, 355.0, C355.0, 356.0, A356.0, A357.0, 360.0, 366.0, 380.0, A380.0, 413.0, 443.0, 514.0, 518.1, and 712.0. The scope also excludes pure, unwrought aluminum in any form.

The scope also excludes collapsible tubular containers composed of metallic elements corresponding to alloy code 1080A as designated by the Aluminum Association where the tubular container (excluding the nozzle) meets each of the following dimensional characteristics: (1) length of 37 millimeters ("mm") or 62 mm, (2) outer diameter of 11.0 mm or 12.7 mm, and (3) wall thickness not exceeding 0.13 mm.

Also excluded from the scope of this order are finished heat sinks. Finished heat sinks are fabricated heat sinks made from aluminum extrusions the design and production of which are organized around meeting certain specified thermal performance requirements and which have been fully, albeit not necessarily individually, tested to comply with such requirements.

{Also excluded from the scope of the order is certain rectangular wire produced from continuously cast rolled aluminum wire rod, which is subsequently extruded to dimension to form rectangular wire. The product is made from aluminum alloy grade 1070 or 1370, with no recycled metal content allowed. The dimensions of the wire are 5 mm (+/- 0.05 mm) in width and 1.0 mm (+/-

0.02 mm) in thickness. Imports of rectangular wire are provided for HTSUS category 7605.19.0000.}[21]

Thus, the scope of these investigations includes various shapes and forms of aluminum extrusions that may be produced and imported with various finishes (coatings, surface treatments) and/or types of fabrication (including but not limited to cutting to length, machining, drilling, punching, notching, bending, stretching, knurling, swedging, mitering, chamfering, threading, and spinning), except as otherwise specified. The scope also includes aluminum extrusion components that are attached in some way to form subassemblies, but the scope does not cover the non-aluminum extrusion components of those subassemblies.

B. The Commission's Findings in the Original Investigations

In its domestic like product analysis in the original investigations, the Commission considered whether to define the following four domestic like products separately from other aluminum extrusions corresponding to the scope: (1) FHS; (2) shower knock-down units; (3) jewelry-grade shower door extrusions; and (4) organic photoreceptor/photoconductor tubes.[22] Based on the traditional domestic like product factors, the Commission defined FHS as a separate domestic like product, but it found no basis to define shower knock-down units, jewelry-grade shower door extrusions, or organic photoreceptor/photoconductor tubes as separate domestic like products.[23]

C. Analysis of the Parties' Threshold Arguments

In the current reviews, AEFTC and Brazeway asked the Commission to define a single domestic like product corresponding to the aluminum extrusions in the scope of these reviews based on the traditional domestic like product factors, although they argued that application of the semifinished domestic like product factors yields the same conclusion.[24] Importer Electrolux asked the Commission to find a separate domestic like product for kitchen appliance components (or certain kitchen appliance door handles) based on the traditional domestic like

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[21] Expedited AD I&D Memo, EDIS Doc. 603219, file 1154718 at 2-4; Expedited CVD I&D Memo, EDIS Doc. 603219, file 1154719 at 4-6. The language contained in the specially bracketed final paragraph ("{ }") appears to have been inadvertently omitted from Commerce's scope; this exclusion for certain rectangular wire appeared in prior and subsequent scope language for the aluminum extrusion orders. *See, e.g.*, 79 Fed. Reg. 634 (Jan. 6, 2014) (revoking the orders in part as a result of changed circumstances review); Fourth Annual Review CVD I&D Memo, EDIS Doc. 603219, file 1154721.

[22] Confidential Original Views, EDIS Doc. 582660 at 2-12; USITC Pub. 4229 at 7-11.

[23] Confidential Original Views, EDIS Doc. 582660 at 2-12; USITC Pub. 4229 at 7-11.

[24] *See, e.g.*, AEFTC's Final Comments at 1-15; AEFTC's Posthearing Brief at 3-11, Exhibit 1 at 1-49, Exhibit 2; Hearing Tr. at 14-15 (Price), 65 (DeFrancesco); AEFTC's Prehearing Brief at 7-19, Exhibit 8.

product factors;[25] it also asked the Commission to find a separate domestic like product for fin evaporator coil systems (or the aluminum extrusions components thereof) based on both the traditional and semifinished domestic like product factors.[26] Importer Adams Thermal asked the Commission to find that fittings for engine cooling systems are a separate domestic like product, preferably using the semifinished factors, although it asserted that the results are the same under the traditional domestic like product factors.[27] For the reasons discussed below, we define a single domestic like product consisting of the aluminum extrusions corresponding to the scope of these reviews, including kitchen appliance components, aluminum extrusions components for fin evaporator coil systems, and fittings for engine cooling systems.

1. Kitchen Appliance Components/Certain Kitchen Appliance Door Handles

Based on an analysis under the traditional domestic like product factors, Electrolux asked that the Commission find that kitchen appliance components (or certain kitchen appliance door handles) are a separate domestic like product.[28] We decline to do so for several reasons.

On September 27, 2016, Commission staff asked the parties to comment on the questionnaires that would be used to collect data in these reviews. The draft questionnaires included domestic like product questions that compared kitchen appliance components with other aluminum extrusions and included separate trade and financial data tables on kitchen appliance components.[29] Even though Electrolux had asked the Commission in its response to the notice of institution and comments on adequacy to define a separate domestic like product for kitchen appliance door handles and kitchen appliance trim kits (collectively "kitchen appliance components"),[30] it also reported that "there are no U.S. producers of kitchen appliance components."[31] Electrolux failed to identify by the time of its comments on the draft questionnaires what domestically manufactured products other than aluminum extrusions are

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[25] *See, e.g.*, Electrolux's Final Comments at 14-15; Electrolux's Posthearing Brief at 10-13, Exhibit 1 at 39-49; Hearing Tr. at 151-54 (Hicks); Electrolux's Prehearing Brief at 2, 26-37; Electrolux's Comments on Adequacy at 6-9, 13; Electrolux's Response to the Notice of Institution at 3, 5, 8-11.

[26] *See, e.g.*, Electrolux's Final Comments at 1-8; Electrolux's Posthearing Brief at 3-5, Exhibit 1 at 3-30; Hearing Tr. at 130-36 (Mata), 189 (Caryl); Electrolux's Prehearing Brief at 2-14; Electrolux's Comments on Adequacy at 6, 9-13; Electrolux's Response to the Notice of Institution at 3, 5, 7-8, 11-14.

[27] *See, e.g.*, Adams Thermal's Posthearing Brief at 1-13, Answers to Commissioners' Questions at 3-9, 16-26; Hearing Tr. at 156-65 (Heffner, Johnson), 189-91 (Heffner, Ferrin); Adams Thermal's Prehearing Brief at 2-21; Adams Thermal's Comments on Draft Questionnaires at 2-3.

[28] *See, e.g.*, Electrolux's Final Comments at 14-15; Electrolux's Posthearing Brief at 10-13, Exhibit 1 at 39-49; Hearing Tr. at 151-54 (Hicks); Electrolux's Prehearing Brief at 2, 26-37; Electrolux's Comments on Adequacy at 6-9, 13; Electrolux's Response to the Notice of Institution at 3, 5, 8-11.

[29] EDIS Doc. 591460 (e-mail to parties); EDIS Doc. 591461 (draft questionnaires).

[30] Electrolux's Comments on Adequacy at 6-9, 13; Electrolux's Response to the Notice of Institution at 3, 5, 8-11.

[31] Electrolux's Comments on Adequacy at 13; Electrolux's Response to the Notice of Institution at 3, 5, 6.

"most similar in characteristics and uses with" the imported kitchen appliance components in the scope of the reviews.[32] Nevertheless, Electrolux continued to assert that, even if there is no domestic production of an article corresponding to the subject merchandise within the scope of the reviews, the Commission is still "authorized to find like products that are not domestically produced" and issue negative determinations since no U.S. firm would be injured from revoking the orders on kitchen appliance components that are not manufactured domestically.[33]

The statute, however, defines the "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."[34] Thus, if the scope of imported subject merchandise in these reviews includes kitchen appliance components, in "the absence of like" (*i.e.*, in the absence of any domestic production of kitchen appliance components, as stated by Electrolux),[35] the statute defines the *domestic* like product as the domestically manufactured product that is "most similar in

[32] Electrolux's Comments on Draft Questionnaires, EDIS Doc. 592429.

[33] Electrolux's Posthearing Brief at 10-11, Exhibit 1 at 42-46. Electrolux cautioned against interpreting the statute to permit the inclusion of products in the scope of the orders without any corresponding domestic production of the articles, which it argued directly conflicts with the overarching purpose of U.S. antidumping and countervailing duty laws – to provide relief to a domestic industry from unfair competition from "like, or … most similar" imports. Electrolux's Prehearing Brief at 31-32; Hearing Tr. at 146-49 (Schaefer); Electrolux's Posthearing Brief at 10-11, Exhibit 1 at 42-46. As we explain below, the language of the statute concerning this matter is plain.

[34] 19 U.S.C. § 1677(10).

[35] The record does not provide definitive information that any U.S. firm manufactures kitchen appliance components. On January 24, 2017, well after the November 29, 2016, deadline, *** submitted a U.S. producer questionnaire response in which the firm reported that it produces, among others, "appliance handles and appliance trim kits." CR at I-38 at n.60; PR at I-30 at n.60. Electrolux argued that *** does not supply Electrolux, and it asserted that it was unaware of any other U.S. producer of kitchen appliance handles. Electrolux's Posthearing Brief at 4, 12-13, Exhibit 1 at 40-42, Exhibit 3, Exhibit 8; Hearing Tr. at 152-54 (Hicks); Electrolux's Final Comments at 14. In contrast, AEFTC argued that domestic producers *** supplied Electrolux with kitchen appliance components during the original investigations but were apparently replaced by subject imports from China. AEFTC submitted a ***. AEFTC argued that two additional domestic producers (***) continue to manufacture kitchen appliance components in the United States. AEFTC's Final Comments at 4-7; AEFTC's Posthearing Brief at 2, 7-8, Exhibit 1 at 13-16, Exhibit 3 (***), Exhibit 19 (***), Exhibit 21 (Declaration from ***), Exhibit 22 (Declaration from ***), (Declaration from ***); Hearing Tr. at 217 (DeFrancesco). *** and ***, however, did not submit U.S. producer questionnaire responses in these reviews. Moreover, Commission staff attempted to contact *** numerous times, but the calls were not returned, preventing confirmation that *** produces kitchen appliance components or any other items. CR at I-38 at n.60; PR at I-30 at n.60. We note that *** submitted a purchaser questionnaire response after the hearing in which it reported purchases of ***, and it reported *** as one of its top suppliers ***. Purchaser Questionnaire Response at II-6, III-3. Thus, the record does not definitively indicate that any U.S. firm currently manufactures kitchen appliance components (or certain kitchen appliance handles).

characteristics and uses with the article subject to an investigation."[36] Although the Commission has defined a domestic like product as a product that was "most similar in characteristics and uses with" an article subject to investigation in situations where there was no domestic production of a "like" product,[37] by the time of its comments on the draft questionnaires, Electrolux failed to identify any domestically manufactured product "most similar in characteristics and uses with" subject kitchen appliance components other than the domestically produced aluminum extrusions corresponding to the scope.[38] The Commission's rules require parties to identify "{a}ll requests for collecting new information," such as requests to collect data on proposed domestic like products, at the time they submit their comments on the draft questionnaires.[39] Electrolux failed to identify any possible product manufactured

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[36] In other cases where respondents sought to define a product that was not manufactured domestically as a separate domestic like product, the Commission has rejected such requests. *See, e.g.*, *Certain Lined Paper School Supplies from China, India, and Indonesia*, Inv. Nos. 701-TA-442 to 443 and 731-TA-1095 to 1097 (Preliminary), USITC Pub. 3811 at 12 n.50 (Oct. 2005) (fashion notebooks and certain lined paper school supplies); *Extruded Rubber Thread from Malaysia*, Inv. No. 753-TA-34, USITC Pub. 3112 at 5 n.14 (June 1998) (food-grade extruded rubber thread and non-food-grade extruded rubber thread); *Certain Cold-Rolled Steel Products from Australia, India, Japan, Sweden, and Thailand*, Inv. Nos. 731-TA-965, 971 to 972, 979, and 981 (Final), USITC Pub. 3536 at 10 n.30 (Sept. 2001) (texture-rolled carbon steel used in seat-belt retractors); *see also Large Residential Washers from China*, Inv. No. 731-TA-1306 (Preliminary), USITC Pub. 4591 at 10 (Feb. 2016) (declining to include types of out-of-scope washers not produced in the United States in the domestic like product without a basis to ascertain whether there was a clear dividing line between such washers and domestic production of articles corresponding to the scope).

[37] *See, e.g.*, *Nepheline Syenite from Canada*, Inv. No. 731-TA-525 (Final), USITC Pub. 2502 at 5-11 (Apr. 1992) (where the scope included imports of nepheline syenite and there was no domestic production of nepheline syenite (a primary source of alumina for glassmaking), defining the domestic like product as the products manufactured in the United States most similar in characteristics and uses, glass-grade feldspar and aplite), *aff'd*, *Feldspar Corp. v. United States*, 825 F. Supp. 1095 (Ct. Int'l Trade 1993); *Certain Frozen Fish Fillets from Vietnam*, Inv. No. 731-TA-1095 to 1097 (Preliminary), USITC Pub. 3533 at 5 (Aug. 2002) (where the scope included frozen "basa" and "tra" fillets, finding corresponding domestic like product was frozen catfish fillets); *Ferrovanadium and Nitrided Vanadium from Russia*, Inv. No. 731-TA-702 (Review), USITC Pub. 3420 at 5 (May 2001) (where the scope included ferrovanadium and nitrided vanadium and nitrided vanadium was no longer produced in United States, defining corresponding domestic like product as ferrovanadium); *Artists' Canvas from China*, Inv. No. 731-TA-1091 (Preliminary), USITC Pub. 3777 at 5-6 (May 2005) (even if there were no domestic production of kits or bleached canvas, the next most similar items manufactured domestically were other domestically produced artists' canvas corresponding to the scope). Although a divided Commission took a divergent approach in a review in which all production of the domestic like product defined in the original investigation had ceased by the time of the five-year review, see *Synthetic Indigo from China*, Inv. No. 731-TA-851 (Review), USITC Pub. 3846 (Apr. 2006), this is not the case in these reviews.

[38] Electrolux's Comments on Draft Questionnaires, EDIS Doc. 592429.

[39] 19 C.F.R. § 207.63(b); *see also 53-Foot Domestic Dry Containers from China*, Inv. Nos. 701-TA-514, 731-TA-1250 (Final), USITC Pub. 4357 at 7-8 (June 2015) (declining to address domestic (Continued…)

domestically that was "most similar in characteristics and uses" with the subject kitchen appliance components, let alone make such an argument on a timely basis by the time of its comments on the draft questionnaires. After reviewing the parties' comments and staff recommendations, the Commission approved the issuance of questionnaires on October 31, 2016 that did not include domestic like product questions or separate trade or financial data tables for kitchen appliance components.[40] Thus, we reject Electrolux's request to define kitchen appliance components as a separate domestic like product based on Electrolux's own statements that there is no domestic production of kitchen appliance components and Electrolux's failure to identify on a timely basis any "most similar" merchandise manufactured domestically on which the Commission could base its data collection efforts.

In its prehearing brief, Electrolux attempted to revise its domestic like product argument. It proposed, based on the traditional domestic like product factors, that the Commission define an even narrower domestic like product consisting of only those kitchen appliance handles that it asserted are still covered by the orders, which it identified as kitchen appliance handles without end caps or "certain kitchen appliance door handles."[41] According to Electrolux, there "is no indication that there are any U.S. producers of kitchen appliance handles and, thus, no domestic industry. If there are U.S. producers of kitchen appliance handles, then such producers constitute the domestic industry, which has not participated in the investigation or any subsequent proceedings … ."[42] Once again, there are several problems with Electrolux's arguments.

As AEFTC observed,[43] Electrolux's argument relies on a mistaken assumption – that Commerce has excluded certain kitchen appliance components from the scope of the orders. On remand from the CIT, Commerce determined under protest that specific kitchen appliance door handles and refrigerator/freezer trim kits are outside the scope of the orders, but those remand determinations made by Commerce under protest are subject to ongoing appeals at the U.S. Court of Appeals for the Federal Circuit ("Federal Circuit").[44] Commerce instructed U.S.

(…Continued)
like product argument raised initially in the prehearing brief for failure to comply with a similar provision in the Commission's rules pertaining to the final phase of original investigations).

[40] EDIS Doc. 594169 (blank questionnaires issued in these reviews that included domestic like product questions and sought separate trade and financial data for fin evaporator coil systems and for fittings for engine cooling systems); EDIS Doc. 593765 (public version of privileged vote sheet for questionnaire action jacket).

[41] Electrolux's Prehearing Brief at 2, 26-37; Electrolux's Posthearing Brief at 4, 10-13, Exhibit 1 at 39-49; Hearing Tr. at 151-54 (Hicks), 198-99 (Schaefer); Electrolux's Final Comments at 14-15.

[42] Electrolux's Prehearing Brief at 36-37; *see also* Electrolux's Posthearing Brief at 4, 11-13; Hearing Tr. at 128-29 (Dorris), 148 (Schaefer), 150 (Hicks), 203 (Schaefer).

[43] *See, e.g.*, AEFTC's Posthearing Brief at 8.

[44] *See, e.g.*, Final Scope Ruling on Kitchen Appliance Door Handles With Plastic End Caps and Kitchen Appliance Door Handles Without Plastic End Caps (Aug. 4, 2014), *aff'd in part and remanded in part* in *Whirlpool Corp. v. United States*, Ct. No. 14-199, Slip Op. 16-8 (Ct. Int'l Trade Feb. 1, 2016), *aff'g remand determination under protest* in *Whirlpool Corp. v. United States*, Slip Op. 16-81 (Ct. Int'l Trade
(Continued…)

Customs and Border Control ("Customs") to revise the cash deposit rate to zero for those kitchen appliance components as result of the adverse *Meridian* and *Whirlpool* CIT decisions, but Commerce has not revoked the orders with respect to any kitchen appliance components.[45] Moreover, in its expedited five-year reviews regarding aluminum extrusions, Commerce did not revise the scope language to exclude any kitchen appliance components.[46] The Commission is bound by Commerce's definition of the scope of imported subject merchandise, which includes kitchen appliance components.[47]

Electrolux's domestic like product argument regarding certain kitchen appliance door handles that it raised in its prehearing brief also fails for the same reason as its other argument – Electrolux argued that certain kitchen appliance door handles are not manufactured domestically although it had not identified by the time it submitted comments on the draft questionnaires the "most similar merchandise" on which it wanted the Commission

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(…Continued)
Aug. 26, 2016) (one-piece handles are within scope but assembled handles are outside the scope), appeal docketed as 17-1117 (Fed. Cir.); Final Scope Ruling on Meridian Kitchen Appliance Door Handles (June 21, 2013), *aff'd in part and remanded in part* in *Meridian Products LLC v. United States*, Ct. No. 13-246, Slip Op. 15-135 (Ct. Int'l Trade Dec. 7, 2015), *aff'g remand determination under protest* in *Meridian Products LLC v. United States*, Slip Op. 16-71 (Ct. Int'l Trade Jul. 18, 2016) (types A and C kitchen handles are within the scope but type B kitchen handles are outside the scope), appeal docketed as 16-2657 (Fed. Cir.); Final Scope Ruling on Refrigerator/Freezer Trim Kits (Dec. 17, 2012), *remanded* in *Meridian Products LLC v. United States*, Ct. No. 13-00018, Slip Op. 13-75 (Ct. Int'l Trade June 17, 2013), *remanded* in *Meridian Products LLC v. United States*, Slip Op. 14-32 (Ct. Int'l Trade Mar. 26, 2014), *aff'd* in *Meridian Products LLC v. United States*, Slip Op. 14-158 (Ct. Int'l Trade Dec. 29, 2014), *vacated and remanded for third time* in *Meridian Products LLC v. United States*, Slip Op. 15-67 (Ct. Int'l Trade Jun. 23, 2015), *aff'd third remand determination issued under protest* in *Meridian Products LLC v. United States*, Slip Op. 16-5 (Ct. Int'l Trade Jan. 20, 2015) (trim kits outside the scope of the orders as finished goods kits because they contained all parts necessary to assemble a final finished good), docketed as Ct. No. 16-1730 (Fed. Cir.), and for which oral argument was held on February 13, 2017; *see also, e.g.*, Electrolux's Prehearing Brief at Exhibit 9 (final results of redetermination pursuant to court remand).

[45] The revised cash deposit rates became effective late in the period for which data were collected in these reviews, and Commerce has not yet instructed Customs to liquidate the entries without regard to antidumping or countervailing duties or to lift the suspension of liquidation of duties on imports of these products. 81 Fed. Reg. 66259 (Sept. 27, 2016) (effective September 5, 2016 revising cash deposit rate to zero for Whirlpool's handles with end caps); 81 Fed. Reg. 52402 (Aug. 8, 2016) (effective July 28, 2016 revising cash deposit rate to zero for Meridian's Type B door handles); 81 Fed. Reg. 7749 (Feb. 16, 2016) (effective Jan. 30, 2016 revising cash deposit rate to zero for Meridian's refrigerator/freezer trim kits).

[46] Expedited AD I&D Memo, EDIS Doc. 603219, file 1154718 at 2-4; Expedited CVD I&D Memo, EDIS Doc. 603219, file 1154719 at 4-6.

[47] *See, e.g.*, *USEC Inc. v. United States*, 34 F. App'x 725, 730 (Fed. Cir. 2002) (concluding that, under 19 U.S.C. §§ 1673d(a)(1) and 1673d(b)(1), "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.2d 240 (Fed. Cir. 1989), *cert. denied*, 492 U.S. 919 (1989); *Torrington Co. v. United States*, 747 F. Supp. 744, 748-49 (Ct. Int'l Trade 1990), *aff'd*, 938 F.2d 1278 (Fed. Cir. 1991).

to collect questionnaire data.[48] In any event, the available information would not support finding that kitchen appliance components (or certain kitchen appliance door handles) are a separate domestic like product, as discussed in section II.D below.

2. Fin Evaporator Coil Systems/Aluminum Extrusions Components Thereof

Electrolux also asked the Commission to define fin evaporator coil systems (or at other times the aluminum extrusions components thereof) as a separate domestic like product.[49] AEFTC and Brazeway argued that the Commission should not define a separate domestic like product for fin evaporator coil systems (or the aluminum components thereof) because the scope of these reviews includes a continuum of aluminum extrusions.[50]

As with its argument on kitchen appliance components, Electrolux vacillated about how to frame its request for a separate domestic like product concerning fin evaporator coil systems (or the aluminum extrusions components thereof). In its response to the notice of institution and in its comments on adequacy, Electrolux asked the Commission to define a separate domestic like product for "fin evaporator coils contained in complete/finished heat exchange systems ('heat exchange system components')" based on an analysis under the six traditional domestic like product factors.[51] "Upon further reflection," in its comments on the draft questionnaires, Electrolux instead asked the Commission to collect data on what it referred to as "fin evaporator coil systems."[52] At Electrolux's request, the Commission's questionnaires for

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[48] Electrolux's Comments on Draft Questionnaires, EDIS Doc. 592429. It is not clear why Electrolux waited until its prehearing brief to argue for an even narrower domestic like product. At the time of Electrolux's Response to the notice of institution, Electrolux already knew that Commerce had determined on remand from the CIT (under protest) that specific kitchen appliance components were not covered by the scope. As Electrolux stated then, the scope rulings are in "various stages of remand and/or appeal." Electrolux's Response to the Notice of Institution at 8.

[49] *See, e.g.*, Electrolux's Final Comments at 1-8; Electrolux's Posthearing Brief at 3-5, Exhibit 1 at 3-30; Hearing Tr. at 130-36 (Mata), 189 (Caryl); Electrolux's Prehearing Brief at 2-14; Electrolux's Comments on Adequacy at 6, 9-13; Electrolux's Response to the Notice of Institution at 3, 5, 7-8, 11-15.

[50] AEFTC's Final Comments at 7-9; AEFTC's Posthearing Brief at 8-11, Exhibit 1 at 21-24, 38-44, Exhibit 2; AEFTC's Prehearing Brief at 7-9, 18-19, Exhibit 8.

[51] Electrolux's Response to the Notice of Institution at 3, 11-14; Electrolux's Comments on Adequacy at 2, 9-13.

[52] Electrolux's Comments on Draft Questionnaires at 3 ("Upon further reflection, Electrolux believes that the name 'heat exchange system' is overly broad, as it covers any equipment used to transfer heat between one or more fluids, such as space heating, refrigeration, air conditioning, power stations, chemical plants, petrochemical plants, petroleum refineries, natural gas processing, and sewage treatment. {Commerce} has determined that the aluminum extrusion components of fin evaporator coil systems are within the scope of the orders. These products are primarily used for refrigeration applications and are likewise different in many fundamental respects from other heat exchange systems. Further, Electrolux proposes refining the definition of the proposed separate like product in several ways to elicit more meaningful and useful data to enable the Commission to fully examine the domestic like product issues. Thus, Electrolux proposes that the Commission's definition of (Continued…)

these five-year reviews collected domestic like product, trade, and financial data for fin evaporator coil systems.[53] Even though Electrolux continued to assert in its prehearing brief[54] and during the hearing[55] that fin evaporator coil systems are a separate domestic like product, Electrolux modified its request in its posthearing brief, instead arguing that the Commission should use both its traditional and semifinished domestic like product factors to analyze whether the following two products are separate domestic like products: (1) fin evaporator coil systems and (2) the aluminum extrusions components of the fin evaporator coil systems.[56] The second item (aluminum extrusions components of the fin evaporator coil systems)[57] resembles how Electrolux initially framed the request in its response to the notice of institution ("fin evaporator coils contained in complete/finished heat exchange systems ('heat exchange system components')"),[58] a request that it then modified in its comments on the draft questionnaires. The Commission did not seek separate domestic like product, trade, or financial data on aluminum extrusions components of fin evaporator coil systems since Electrolux had abandoned that argument.[59]

The only argument that Electrolux presented on a timely basis – whether to define fin evaporator coil systems as a separate domestic like product – is nevertheless flawed in other

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(…Continued)
'heat exchange systems' in its draft questionnaires at page 4 should instead be for 'fin evaporator coil systems' and include the below definition: …") (footnote and definition omitted).

[53] EDIS Doc. 594169 (blank questionnaires issued in these reviews that asked domestic like product questions and sought separate trade and financial data on fin evaporator coil systems).

[54] Electrolux's Prehearing Brief at 1-14.

[55] *See, e.g.*, Hearing Transcript at 139 (Caryl) ("To reiterate, we are not arguing the aluminum extrusion tubes used to produce fin evaporators are separate domestic like products. We are arguing that a finished, complete, fin evaporator coil system, the products that Electrolux purchases, are separate like products from aluminum extrusions."); *see also, e.g.*, Hearing Tr. at 129-38 (Mata), 188 (Caryl), 191-92 (Caryl).

[56] Electrolux's Posthearing Brief at 4-5, Exhibit 1 at 6-30. In its Final Comments, Electrolux rephrased its argument. *See, e.g.,* Electrolux's Final Comments at 3 ("Throughout AEFTC's posthearing brief, the like product analysis is of fin evaporator coils – the aluminum extruded serpentine tubing – *not* the complete fin evaporator coil system ("FECS," what is actually sold and imported) or the aluminum extruded component contained in the FECS, the alternate subjects of Electrolux's like product arguments. To reiterate, Electrolux is not arguing that aluminum extruded serpentine tubing that is not part of a FECS is a separate like product; it is arguing that the complete FECS is a separate like product.") (emphasis in original) (footnote omitted).

[57] Fin evaporator coil systems include one or more aluminum extrusions components (*e.g.*, fin evaporator coils, stamped aluminum fins, aluminum "stub" fittings, and aluminum "u-bends"). *See, e.g.*, Electrolux's Posthearing Brief at Exhibit 1 at 10, 14, 25.

[58] Electrolux's Response to the Notice of Institution at 3, 11-14; Electrolux's Comments on Adequacy at 2, 9-13.

[59] As the Federal Circuit explained in *Allegheny Ludlum v. United States*, 287 F.3d 1365, 1370-1373 (Fed. Cir. 2002), the Commission should not find a separate domestic like product for a product for which it does not have separate data in reliance on the product line provision of the statute, if the Commission did not seek to collect such data in the first instance.

respects. As Electrolux recognized,[60] fin evaporator coil systems are not in the scope of the reviews; Commerce ruled during the original investigations and in response to a request for a scope ruling that the aluminum extrusions components of fin evaporator coil systems are within the scope and therefore dutiable, and Commerce identified statistical reporting numbers under which fin evaporator coil systems might be entered into the U.S. market.[61] Stated differently, the imported subject merchandise within the scope of these reviews includes the aluminum extrusions components of fin evaporator coil systems, but it does not include the entire fin evaporator coil system.[62]

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[60] *See, e.g.*, Electrolux's Posthearing Brief at 2; Electrolux's Prehearing Brief at 3; Electrolux's Response to the Notice of Institution at 11.

[61] Final Scope Ruling on Electrolux's Fin Evaporator Systems (Jul. 13, 2012); Issues and Decision Memorandum for the Final Determination in the Less-Than-Fair Value Investigation of *Aluminum Extrusions from the People's Republic of China* at 29-30 (Mar. 28, 2011).

[62] We note that Electrolux incorrectly asserted that fin evaporator coil systems are "the only product as to which Commerce has explicitly found that only the aluminum extrusion component of the imported product falls within the scope," and that this results in a "highly unusual situation in which only part of an imported product is covered by {the} orders." Electrolux's Posthearing Brief at 2, Exhibit 1 at 3, 5. Contrary to Electrolux's suggestion, from the outset, the scope in the original investigations included aluminum extrusions that may be finished and/or further fabricated and the aluminum extrusions components that are partially assembled into subassemblies. *See, e.g.*, Excerpt from petitions' requested scope language in original investigations in Exhibit I-1 of Electrolux's Response to Notice of Institution. As noted above, covered imports may be described at time of importation "as parts for final finished products that are assembled after importation, including, but not limited to, window frames, door frames, solar panels, curtain walls, or furniture. Such parts that otherwise meet the definition of aluminum extrusions are included in the scope. The scope includes the aluminum extrusion components that are attached (*e.g.*, by welding or fasteners) to form subassemblies, *i.e.*, partially assembled merchandise unless imported as part of the finished goods 'kit' defined further below. The scope does not include the non-aluminum extrusion components of subassemblies or subject kits." In some of its final scope rulings, Commerce concluded that other subassemblies are within the scope of the orders (subparts for metal bushings; tube and block assemblies; and silver spring network enclosure kits), as even Electrolux conceded. Electrolux's Posthearing Brief at Exhibit 1 at 2-3 (asserting that those subassemblies consist of only aluminum extrusions, not non-aluminum extrusion components), Exhibit 4 (summarizing Commerce's final scope rulings). Moreover, this is not the first instance in which Commerce defined the scope of an investigation that provided for the assessment of duties on only the covered portions of a subassembly (such as the aluminum extrusions components of a fin evaporator coil system). *See, e.g.*, *Certain Steel Wheels from China*, Inv. Nos. 701-TA-478 and 731-TA-1182 (Final), USITC Pub. 4319 at 5 (May 2012) (scope includes "steel wheels, whether or not attached to tires or axles" but if imported as an assembly, "the tire or axle is not covered by the scope"); *Certain New Pneumatic Off-the-Road Tires from China, India, and Sri Lanka*, Inv. Nos. 701-TA-551 to 553 and 731-TA-1307 to 1308 (Final), USITC Pub. 4669 at 7 (Mar. 2017) (scope includes "certain off road tires, whether or not mounted on wheels or rims" although "if a subject tire is imported mounted on a wheel or rim, only the tire is covered by the scope" and if the tires are attached to a vehicle, they are "not covered by the scope"); *DRAMs and DRAM Modules from Korea*, Inv. 701-TA-431 (Final), USITC Pub. 3616 (Aug. 2003) (scope included removable memory modules on motherboards).

The starting point for the Commission's analysis of the domestic like product is the imported subject merchandise within the scope of the reviews. Fin evaporator coil systems are not within the scope of imported subject merchandise, rather the aluminum extrusions components of such systems are within the scope and dutiable. Thus, the Commission could not define fin evaporator coil systems as a separate domestic like product.[63] Instead, at most, (1) the Commission could define a single domestic like product broader than the scope of the reviews that includes fin evaporator coil systems,[64] which Electrolux has never argued, or (2) the Commission could define more than one domestic like product corresponding to the universe of imported subject merchandise,[65] one of which is the aluminum extrusions

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[63] Electrolux wrongly suggests that the Commission's decision in *New Pneumatic Off-the-Road Tires* serves as an example where the Commission has defined a separate domestic like product for a product that is outside the scope of an order where the order covered only components of a subassembly. *See, e.g*., Electrolux's Posthearing Brief at 4, Exhibit 1 at 19-20, 37-39; Electrolux's Prehearing Brief at 3. In fact, such an issue was not presented in those investigations. In *Certain New Pneumatic Off-the-Road Tires from China, India, and Sri Lanka*, Inv. Nos. 701-TA-551 to 553 and 731-TA-1307 to 1308 (Preliminary), USITC Pub. 4594 at 7, 11-15 (Mar. 2016), the scope included "certain off road tires, whether or not mounted on wheels or rims," although "if a subject tire is imported mounted on a wheel or rim, only the tire is covered by the scope." The Commission considered two issues: (1) whether the unmounted tires and the tire portion of the mounted subassembly should be part of the same domestic like product (*i.e.*, whether there should be two distinct like products corresponding to the in-scope merchandise) and (2) whether the domestic like product should include the entire wheel assembly (*i.e.*, whether the domestic like product should include articles outside the scope, such as wheels and rims). The Commission did not examine whether out-of-scope mounted tire assemblies were a separate domestic like product from the unmounted tires and mounted tires corresponding to the scope of those investigations.

[64] *See, e.g.*, *Large Residential Washers from China*, Inv. No. 731-TA-1306 (Preliminary), USITC Pub. 4591 at 9-10 (Feb. 2016) (where scope included large residential washers but excluded low-tech front-load washers, defining domestic like product that included both large residential washers and low-tech front-load washers where only physical difference between them was the combination of a controlled induction motor and a belt drive system in low-tech front-load washers which some consumers/producers perceived as less advantageous than the direct-drive system found in many in-scope large residential washers and where available evidence on other factors indicated similarities).

[65] *See, e.g.*, *Torrington Co. v. United States*, 747 F. Supp. 744 (Ct. Int'l Trade 1990) (where Commerce defined five classes of subject merchandise in the scope, it was not unreasonable for the Commission to define six corresponding domestic like products); *Certain Sodium and Potassium Phosphate Salts from China*, Invs. Nos. 701-TA-473 and 731-TA-1173 (Preliminary), USITC Pub. 4110 (Nov. 2009) (four phosphate salt chemical compounds (STPP, TKPP, MKP, and DKP) were four separate domestic like products because each was a different chemical compound with distinct chemical formulas and physical characteristics and different end uses with minimal overlap, even though there was some overlap in manufacturing facilities/processes/employees and channels of distribution); *Certain Kitchen Appliance Shelving and Racks*, Inv. Nos. 701-TA-458 and 731-TA-1154 (Final), USITC Pub. 4098 (Aug. 2009) (finding refrigeration shelving and racks were a separate domestic like product than oven racks, where they had similar characteristics but different coatings and different uses, were made in separate manufacturing facilities, and were not interchangeable).

components of fin evaporator coil systems, an argument that Electrolux initially raised but did not pursue until well after the deadline for raising arguments that implicate data collection.

In any event, the available information does not support defining the aluminum extrusions components of fin evaporator coil systems as a separate domestic like product, as discussed in section II.D below.

3. Fittings for Engine Cooling Systems

AEFTC argued that fittings for engine cooling systems are not a separate domestic like product under either the traditional or semifinished domestic like product factors.[66] Adams Thermal disagreed, arguing that fittings for engine cooling systems are a distinct domestic like product from aluminum extrusions regardless of which factors the Commission utilizes, although it preferred using the semifinished factors based on its assertion that precision machining fundamentally changes aluminum extrusions into fabricated parts for downstream products.[67]

Commerce has determined that the scope of these reviews includes fittings for engine cooling systems.[68] The scope also includes aluminum extrusions made from potentially thousands of dies and a myriad of downstream products when those semifinished aluminum extrusions are subjected to further finishing and/or fabrication processes, as Adams Thermal acknowledges.[69] Nonetheless, Adams Thermal argued, "comparing the full range of hypothetical further manufactured downstream parts made from the extruded aluminum bars and blanks does not make sense here because the Commission has collected specific information on only two of these downstream products" (fin evaporator coil systems and

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[66] *See, e.g.*, AEFTC's Prehearing Brief at 7-19; AEFTC's Final Comments at 12-15; AEFTC's Posthearing Brief at 4-7 (arguing that when confronted with whether a large number of products at different levels of processing fall on the same continuum, the Commission has consistently employed the traditional domestic like product factors).

[67] *See, e.g.*, Adams Thermal's Posthearing Brief at 1-13, Answers to Commissioners' Questions at 3-9, 16-26; Hearing Tr. at 156-65 (Heffner, Johnson), 189-91 (Heffner, Ferrin); Adams Thermal's Prehearing Brief at 2-21; Adams Thermal's Comments on Draft Questionnaires at 2-3.

[68] Final Scope Ruling on Adams Thermal Systems' Certain Fittings and Related Products for Engine Cooling Systems (Jul. 11, 2016), appeal docketed as 16-000128 (Ct. Int'l Trade).

[69] *See, e.g.*, Expedited AD I&D Memo, EDIS Doc. 603219, file 1154718 at 2-4; Expedited CVD I&D Memo, EDIS Doc. 603219, file 1154719 at 4-6; Confidential Original Views, EDIS Doc. 582660 at 5-12; USITC Pub. 4229 at 6-11; Hearing Tr. at 24-25 (Weber), 31-32 (Johnson), 35-36 (Merluzzi). Adams Thermal acknowledges that at least two other fabricated aluminum extrusion products are within the scope of the orders, based on Commerce's scope rulings – precision-machined parts principally used in chemical, biotechnical and pharmaceutical research applications (IDEX Health & Sciences, LLC) and a mass filter radiator part used to make gas chromatography mass spectroscopy instruments (Agilent Technologies, Inc.). Adams Thermal's Posthearing Brief at 2-5, Answers to Commissioners' Questions at 3-10 & n.10, Exhibit 1 (IDEX), Exhibit 2 (Agilent); Hearing Tr. at 190-91 (Ferrin).

fittings for engine cooling systems).[70] By suggesting that the Commission compare a specific further-processed domestic product to only those aluminum extrusions that have not been further finished or fabricated, Adams Thermal, and Electrolux in its arguments discussed above, overlook that the scope of imported subject merchandise and thus the universe of corresponding products manufactured domestically also includes other aluminum extrusions that have been subjected to one or more finishing and/or fabrication processes.

The Commission generally applies its semifinished product domestic like product factors to assess whether there is a clear dividing line between less-processed and further-processed articles. The semifinished products analysis, which typically examines distinctions between the universe of "upstream" products within the scope and the universe of "downstream" products within the scope,[71] fits poorly here where respondents have not compared upstream products (aluminum extrusions without finishing or fabrication) with the further downstream processed products in general, as opposed to select downstream products. Because respondents have not sought to define domestic like products on this basis and because the scope of these reviews includes a variety of articles at different stages of processing, we utilize the traditional domestic like product factors. Use of the traditional factors enables us to consider whether each claimed like product is clearly distinct from the broad universe of products corresponding to the scope of the reviews.[72] Available information does not support defining fittings for engine cooling systems as a separate domestic like product, as discussed in section II.D.

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[70] Adams Thermal's Posthearing Brief at Answers to Commissioners' Questions at 10-11. Adams Thermal stated that "other downstream products may share some of the same physical characteristics as fittings for engine cooling systems (or fin evaporator coil systems) because they too are fabricated by the machining process," but it took no position on whether other fabricated aluminum extrusions are a separate domestic like product. It further argued against defining all downstream products as part of the same domestic like product, asserting that "nothing exists on the record for the Commission to determine whether some additional downstream products may be part of the same like product as the two downstream products before the Commission." Even though the scope may include other fabricated aluminum extrusions, it contended that no parties other than Adams Thermal and Electrolux put forth any information about other possible domestic like product issues, and the Commission is constrained by what is on the record. It argued that the Commission should not examine whether other possible like products exist outside of those identified by Adams Thermal and Electrolux or attempt to define a domestic like product for fabricated products. Adams Thermal's Posthearing Brief at 5-9, Answers to Commissioners' Questions at 3-11, 15-16, 32; Hearing Tr. at 18-19 (Ferrin), 160-61 (Ferrin), 172-73 (Ferrin); Adams Thermal's Prehearing Brief at 2.

[71] *See, e.g.*, *Hydroflurocarbon Blends and Components from China*, Inv. No. 731-TA-1279 (Final), USITC Pub. 4629 at 6-13 (Aug. 2016).

[72] We note that this approach comports with the rationale articulated in the original investigations for using the traditional domestic like product factors. Confidential Original Views, EDIS Doc. 582660 at 5-6 at n.16; USITC Pub. 4229 at 7 at n.16.

D. Analysis of Facts Based on Traditional Domestic Like Product Factors

1. Physical Characteristics and Uses

Respondents argued that kitchen appliance components (or certain kitchen appliance door handles),[73] aluminum extrusions components of fin evaporator coil systems,[74] and fittings for engine cooling systems[75] have specialized physical characteristics that differentiate them from other aluminum extrusions that are profiles in simple shapes.[76] According to respondents, many aluminum extrusions are sold after being only mill finished (processed through aging, but no further finishing or fabrication) and constitute commodities "that are mass produced for distributors and many customers (*i.e.*, the same aluminum extrusion is sold to many different

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[73] Electrolux argued that kitchen appliance components/certain kitchen appliance door handles match the contours, colors, and finishes of a specific kitchen appliance (*i.e.*, oven or refrigerator). Electrolux's Posthearing Brief at Exhibit 1 at 47; Electrolux's Prehearing Brief at 34; Electrolux's Response to Notice of Institution at 8-9.

[74] As discussed above, Electrolux argued for a separate domestic like product for fin evaporator coil systems and sometimes argued for a separate domestic like product for aluminum components for fin evaporator coil systems, but it only presented factual arguments in terms of fin evaporator coil systems. According to Electrolux, fin evaporator coil systems consist of coiled aluminum extrusion tubes that include a number of aluminum "fins," two copper or aluminum "stub" fittings welded to the open ends of the coil, a "capillary" on the suction line, and in some instances ***. Fin evaporator coil systems are manufactured in several forms that vary in terms of cooling capacity, flow patterns, fin configurations, and fin densities. Electrolux's Prehearing Brief at 8-10; Hearing Tr. at 209-10 (Mata, Caryl); Electrolux's Posthearing Brief at Exhibit 1 at 13, 14, 28.

[75] Adams Thermal asserted that the computer numeric control ("CNC") machining process removes *** to *** percent of the blank feedstock to yield "more fabricated" fittings for engine cooling systems that no longer have a uniform cross-section and that are intricately crafted, finished parts with physical characteristics that meet the unique requirements for on- and off-highway vehicle parts manufacturers. It submitted photographs of six fittings for engine cooling systems and argued that each had special design features: (1) certain fittings for oil coolers provide a leak-free and structurally robust oil flow path that directs oil into and out of the oil cooler without imparting excessive flow resistance to the hydraulic system; (2) certain fittings for condensers provide a leak-free and structurally robust refrigerant flow path that directs refrigerant into and out of the condenser without imparting excessive flow resistance to the air conditioning system; (3) certain fittings for radiators provide a leak-free and structurally robust coolant flow path that directs coolant into and out of the condenser without imparting excessive flow resistance to the cooling system; (4) certain leak-free and structurally robust plugs for oil coolers that attach to a heat exchanger; (5) certain leak-free and structurally robust mounting pins for oil coolers for attaching a heat exchanger into the vehicle; and (6) certain leak-free and structurally robust fasteners for oil coolers that attach a heat exchanger into a vehicle. Adams Thermal's Prehearing Brief at 5-6, 9-14; Adams Thermal's Posthearing Brief at Answers to Commissioners' Questions at 13-14, 16-17, 33-34.

[76] Electrolux's Prehearing Brief at 10-11; Electrolux's Posthearing Brief at Exhibit 1 at 13, 15-16, 29.

customers)."[77] Respondents argued that kitchen appliance components (or certain kitchen appliance door handles),[78] aluminum extrusions for fin evaporator coil systems,[79] and fittings for engine cooling systems[80] have specific end uses, whereas other aluminum extrusions are used for more generic functions such as supporting, containing, and transferring in a variety of end-use applications.[81]

AEFTC and Brazeway disagreed that any of the proposed domestic like products has unique physical characteristics relative to other aluminum extrusions, and they argued that aluminum extrusions are used in a wide variety of applications, even though individual aluminum extrusions might have one specific use.[82]

Aluminum extrusions include profiles in simple shapes such as bars, rods, pipes, tubes, hollow profiles, angles, tees, I-beams, H-beams, channels, tracks, rails, mullions, stiles, and

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[77] Electrolux's Prehearing Brief at 6.

[78] Electrolux asserted that kitchen appliance components/certain kitchen appliance door handles are fully complete, finished, and ready to use as a door handle for a specific kitchen appliance (*i.e.*, oven or refrigerator). Electrolux's Posthearing Brief at Exhibit 1 at 47; Electrolux's Prehearing Brief at 34; Electrolux's Response to Notice of Institution at 8-9.

[79] Electrolux argued that fin evaporator coil systems are complex components of machines made to proprietary designs for one specific use in one specific refrigeration system. Fin evaporator coil systems evaporate a recirculating refrigerant/cooling chemical (such as freon) into a heat-absorbing gas that cools the air that passes over the fin evaporator coils; the attached fins improve the cooling system's efficiency by directing hot air close to the coils and expanding the evaporator system's surface area. Electrolux's Prehearing Brief at 5, 10; Electrolux's Posthearing Brief at Exhibit 1 at 15-16, 27-29.

[80] Adams Thermal contended that fittings for engine cooling systems meet the unique requirements for use in on- and off-highway vehicle parts of oil coolers, condensers, and radiators. Adams Thermal's Prehearing Brief at 5-6, 9-14; Adams Thermal's Posthearing Brief at Answers to Commissioners' Questions at 13-14, 16-17, 33-34.

[81] Electrolux's Prehearing Brief at 11; Electrolux's Posthearing Brief at Exhibit 1 at 13, 15-16, 29; Adams Thermal's Prehearing Brief at 9-14. Adams Thermal observed that the round, square, rectangular, or hex-shaped extruded aluminum bars that are the feedstock to manufacture fittings for engine cooling systems are generic aluminum extrusions that could be sold for a multitude of uses. Adams Thermal's Posthearing Brief at Answers to Commissioners' Questions at 13-14.

[82] AEFTC's Posthearing Brief at 4-6 (fittings for engine cooling systems), 7 (kitchen appliance components), 10 (fin evaporator coil systems), Exhibit 1 at 25-28 (fittings for engine cooling systems), 38-39 (fin evaporator coil systems), 45 (kitchen appliance components), Exhibits 5-8; AEFTC's Prehearing Brief at 11-13 (fittings for engine cooling systems), Exhibit 8 at 7 (fin evaporator coil systems). Brazeway argued that fin evaporator coil systems are extruded aluminum tubing, just like other aluminum extrusion tubing, except that fins are attached in the final step of manufacturing fin evaporator coil systems. With or without the fins, Brazeway argued, the aluminum tubing performs the same cooling function once charged by an original equipment manufacturer ("OEM") and placed in a refrigeration system component, because the fins merely improve capacity and efficiency; it pointed to evaporators for dehumidifier systems as another bent extruded tube that functions without the attachment of fins, serving the functions of containing the refrigerant, transferring/circulating the refrigerant throughout the sealed system, and supporting the formation of the refrigeration component. AEFTC's Posthearing Brief at Exhibit 2A at 7.

gutters that may be sold as mill finished without any further surface treatment or fabrication. Aluminum extrusions also include products that may be subjected to one or more finishing operations (such as anodizing, bright dipping, brushing with nickel, etching, or painting), or fabrication operations (such as cutting to precision lengths, machining, drilling, hole-punching, notching, bending, and stretching).[83] Their physical features accordingly range from simpler forms and shapes to kitchen appliance handles, drawer handles, towel racks, hairpins, fittings for engine cooling systems, engine manifolds, components for fin evaporator coils, or other finished and/or fabricated products. Being manufactured from aluminum, all share similar general physical characteristics and fall within a range of tolerances.[84]

Although aluminum extrusions that are subjected to few or no finishing or fabrication operations may be used in a variety of applications, many aluminum extrusions subjected to finishing and/or fabrication operations are used in specific applications. The alleged specialized uses that respondents claimed, such as tubes that permit the flow of liquids or gases, are common for aluminum extrusions components of fin evaporator coil systems and fittings for engine cooling systems. Likewise, kitchen appliance components (or certain kitchen appliance door handles) and aluminum components of fin evaporator coil systems are both sold for use as parts of appliances.[85]

2. Manufacturing Facilities, Processes, and Employees

Although it does not believe that there are any U.S. firms that manufacture kitchen appliance components, Electrolux argued that such producers add value to purchased aluminum extrusions by subjecting them to finishing and fabrication processes such as sawing,

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[83] CR at I-25 to I-28, I-43; PR at I-20 to I-22, I-33; AEFTC's Prehearing Brief at 7, Exhibit 5 (citing Commerce's Final Scope Ruling on Adams Thermal's imports); AEFTC's Final Comments at 13; Confidential Original Views, EDIS Doc. 582660 at 5-12; USITC Pub. 4229 at 6-11 (other products that have been subjected to finishing operations include shower knock-down units, jewelry-grade shower door extrusions, and organic photoreceptor/photoconductor tubes); AEFTC's Posthearing Brief at Exhibit 1 at 2, 27, 45, 73-75, Exhibit 5, Exhibit 7, Exhibit 8, Exhibit 9, Exhibit 28, Exhibit 32, Exhibit 34 (products include retractable awning mechanisms, modular aluminum railing systems, fence sections, posts, and gates, cutting and marking straight edges, core heater tubes, disappearing door screens, cleats, scissor struts, towel racks, drawer handles, certain flag poles, tube and block assemblies, and kitchen appliance door handles as well as products that require more finishing and/or fabrication such as hairpins, aluminum heater core inlet and outlet tubes, auto trim kits, assembled motor cases, fully fabricated commercial aircraft cockpit locking mechanism, hydraulic manifold, engine HVAC fitting, master brake cylinder for autos, motor mount, cylinder head, motorcycle hub); Hearing Tr. at 24-25 (Weber), 31-33 (Johnson), 72-75 (Price, Johnson, DeFrancesco), 99-100 (Boyse), 110-11 (Weber), 218-19 (DeFrancesco).

[84] CR at I-28, I-43, I-48 to I-49; PR at I-22 to I-28, I-33, I-36; AEFTC's Prehearing Brief at 14 (chemical and physical properties are no different); AEFTC's Posthearing Brief at 6 (similarities between Futura's engine manifold and the fittings for engine cooling systems circulated by Adams Thermal); Hearing Tr. at 72-75 (Price, Johnson, DeFrancesco), 218 (DeFrancesco).

[85] CR at I-27 to I-28, I-43, I-48 to I-49; PR at I-21 to I-22, I-33, I-36.

drilling, tapping, brushing/polishing, chamfering, inspection, anodizing, and assembly.[86] Electrolux also asserted that *** reported manufacturing fin evaporator coil systems in the United States,[87] and it emphasized that fin evaporator coil systems require additional manufacturing facilities, namely a ***, beyond the extrusion equipment.[88] Adams Thermal contended that fittings for engine cooling systems require additional production steps that begin with inserting the extruded aluminum blank into a CNC machine for rough-turning, drilling of holes, further shaping through boring and threading, possibly further flattening of the top, and boring of an inner thread in the drill hole; it maintained that these CNC machine steps fundamentally shape the fitting's form and remove between *** and *** percent of the feedstock.[89] In contrast, AEFTC argued that all aluminum extrusions are manufactured in overlapping facilities, with overlapping production processes and production workers; it emphasized that numerous U.S. producers manufacture, used to manufacture, or are willing to manufacture each of the items for which respondents seek separate domestic like products.[90]

The record reflects overlap in manufacturing plants, processes, and employees for the extrusion stage. At the extrusion stage, manufacturers heat aluminum alloy billets and force them under pressure through a metal die using a hydraulic extrusion press; the size of the extrusion depends on the pressure capacity of the extrusion press, and the profile shape of the resulting aluminum extrusions depends on which one of hundreds or thousands of dies the manufacturer utilizes.[91] The record indicates that the manufacturing facilities, production processes, and production employees overlap at the extrusion stage for aluminum extrusions used to make fin evaporator coil systems, fittings for engine cooling systems, kitchen appliance components, and other aluminum extrusions.[92] Similarly, there is an overlap at the finishing

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[86] Electrolux's Prehearing Brief at 35; Hearing Tr. at 153 (Hicks); Electrolux's Posthearing Brief at Exhibit 1 at 40, 48 (basing its argument on activities of producers in Canada and China instead of U.S. manufacturers).

[87] Electrolux's Prehearing Brief at 1, 15; Electrolux's Posthearing Brief at Exhibit 1 at 12-13, 26-27.

[88] Elelectrolux's Prehearing Brief at 13-14; Electrolux's Posthearing Brief at 8, Exhibit 1 at 13, 27.

[89] Adams Thermal's Posthearing Brief at Answers to Commissioners' Questions at 17-19; Adams Thermal's Prehearing Brief at 18-19 (reporting that each CNC machine costs $100,000 to $300,000, whereas typical extrusion presses start at about $100,000 and each die costs up to $2,000).

[90] AEFTC's Posthearing Brief at 7-8, 10, Exhibit 1 at 24, 31-33, 36-37, 41, 44, 46, 48-49, Exhibit 2, Exhibit 21; AEFTC's Prehearing Brief at 8-9, 13-15, Exhibit 8 at 2 (observing that Brazeway and at least two other U.S. firms (***) manufacture fin evaporator coils); AEFTC's Final Comments at 14-15 (observing that the U.S. aluminum extrusions industry includes many small, local, one-location producers that extrude and further fabricate the aluminum in the same plant).

[91] CR at I-27; PR at I-22; AEFTC's Prehearing Brief at 10, 14, 15-16 (explaining that each die is uniquely created for a specific type of extrusion, often designed to proprietary standards by and for the customers, with only a small portion of extrusions created to a standard size and specification for sale through distribution); Hearing Tr. at 24 (Weber), 35-37 (Merluzzi), 90 (Hamilton), 225 (Ferrin).

[92] CR at I-27 to I-28, I-32 to I-36, I-40 to I-41, I-44 to I-45, I-50, I-53 to I-54; PR at I-21 to I-22, I-25 to I-28, I-31, I-33, I-36 to I-37, I-39; Hearing Tr. at 24-25 (Weber), 31 (Johnson), 35 (Merluzzi), 45-47 (Adams), 72-76 (Price, Johnson, DeFrancesco), 91 (Dinan), 196-97 (Heffner, Schaefer), (Continued…)

and fabrication stage, with domestic producers utilizing CNC machines to manufacture other aluminum extrusions, not just fittings for engine cooling systems.[93] Although there are some differences in terms of individual firms' machinery and thus ability to manufacture specific products with particular finishes and/or fabrication processes, no clear line divides the manufacturing facilities, processes, and employees for kitchen appliance components (or certain kitchen appliance door handles), aluminum extrusions components of fin evaporator coil systems, and fittings for engine cooling systems from other aluminum extrusions.[94]

3. Interchangeability

Respondents argued that kitchen appliance components (or certain kitchen appliance door handles),[95] aluminum extrusions components for fin evaporator coils,[96] and fittings for engine cooling systems[97] have customized designs and, being dedicated to specific users and applications, they are not interchangeable with other aluminum extrusions. AEFTC and Brazeway argued that it is not unexpected that individual aluminum extrusions are not interchangeable with other aluminum extrusions because they are designed for special

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(…Continued)
218 (DeFrancesco); AEFTC's Prehearing Brief at Exhibit 8 at 7-8; AEFTC's Posthearing Brief at Exhibit 1 at 41, Exhibit 2 at 5 (indicating that Brazeway utilizes overlapping facilities, processes, and employees to manufacture fin evaporator coils and other tubing products, such as extruded aluminum round tube, microchannel tubes, coated and uncoated fabricated cut-to-length tubes, and hair pins).

[93] *See, e.g.*, Hearing Tr. at 24-25 (Weber), 31-32, 35-36 (Johnson), 46-47 (Adams), 72-78 (Price, McEvoy, Merluzzi, Adams, Johnson, Hamilton, Weber), 84 (Adams), 84-85 (DeFrancesco, Price), 90 (Hamilton), 91 (Dinan), 99-100 (Boyse), 218 (DeFrancesco); AEFTC's Posthearing Brief at 4-5, Exhibit 4 (finding HD Precision machine parts that were CNC machined are in the scope), Exhibit 26 at 184 (indicating that during the original investigations, domestic shower door manufacturer Basco used a CNC machine for drilling, punching, and knocking); Confidential Original Views, EDIS Doc. 582660 at 5-12; USITC Pub. 4229 at 6-11.

[94] CR at I-32 to I-36, I-40 to I-41, I-44 to I-45; PR at I-31, I-33, I-36 to I-37, I-39; Hearing Tr. at 24-25 (Weber), 31 (Johnson), 35-37 (Merluzzi), 46-47 (Adams), 72-78 (Price, McEvoy, Merluzzi, Adams, Johnson, Hamilton, Weber), 84 (Adams), 84 (DeFrancesco), 90 (Hamilton); AEFTC's Prehearing Brief at 13-15.

[95] Electrolux asserted that kitchen appliance components (or certain kitchen appliance door handles) are not interchangeable with other aluminum extrusions and are perceived as distinct products by consumers and producers due to their enhanced and customized appearance and their proprietary custom shapes and sizes that are dedicated to specific users and applications. Electrolux's Prehearing Brief at 34; Electrolux's Posthearing Brief at Exhibit 1 at 47.

[96] Because fin evaporator coil systems are manufactured in custom shapes and sizes that are proprietary and dedicated to specific users and applications, Electrolux argued that fin evaporator coil systems are not interchangeable with one another, much less with other aluminum extrusions. Electrolux's Prehearing Brief at 11; Electrolux's Posthearing Brief at Exhibit 1 at 16-17, 29-30.

[97] Adams Thermal argued that aluminum extrusions feedstock lack pathways for coolant flow, formed tubing, etched threads, or other such final shape features of fittings for engine cooling systems. Adams Thermal Posthearing Brief at Answers to Commissioners' Questions at 20; Adams Thermal Prehearing Brief at 14.

applications or end users, but this is true of many products, not just those identified by respondents.[98]

Aluminum extrusions are manufactured for a number of distinct end uses based on sector and specific end users' requirements, but these differences do not differentiate kitchen appliance components (or certain kitchen appliance door handles), aluminum components of fin evaporator coil systems, and fittings for engine cooling systems from other aluminum extrusions.[99]

4. Channels of Distribution

Respondents argued that kitchen appliance components (or certain kitchen appliance door handles),[100] aluminum extrusions components of fin evaporator coil systems,[101] and fittings for engine cooling systems are sold to specific channels of distribution,[102] whereas other aluminum extrusions require further finishing or fabrication and are sold to a range of end users or distributors. AEFTC and Brazeway disagreed, arguing that aluminum extrusions other than those named by Electrolux and Adams Thermal also are sold to end users and distributors for further finishing and/or fabrication or for incorporation into downstream products, including appliances or automotive vehicles.[103]

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[98] AEFTC's Posthearing Brief at Exhibit 1 at 28-29 (fittings for engine cooling systems), 39 (fin evaporator coil systems), 45-46 (kitchen appliance components); AEFTC's Prehearing Brief at 15-16 (fittings for engine cooling systems), Exhibit 8 at 8-9 (fin evaporator coil systems).

[99] CR at I-28, I-41, I-45; PR at I-22 to I-23, I-32 to I-34; AEFTC's Posthearing Brief at Exhibit 1 at 28-29.

[100] Electrolux argued that certain kitchen appliance components (or certain kitchen appliance door handles) are sold to kitchen appliance manufacturers, a distinct class of commercial users and consumers. Electrolux's Prehearing Brief at 35; Electrolux's Posthearing Brief at Exhibit 1 at 48.

[101] Electrolux argued that fin evaporator coil systems are finished merchandise produced to order for a distinct class of OEMs (refrigerated system manufacturers) and tailored to proprietary standards of a specific OEM. Electrolux's Posthearing Brief at Exhibit 1 at 7-8, 22-23; Electrolux's Prehearing Brief at 5.

[102] Adams Thermal contended that fittings for engine cooling systems must meet on- and/or off-highway vehicle industry requirements and are sold to purchasers that are end users of those fittings. Adams Thermal Posthearing Brief at Answers to Commissioners' Questions at 23-24; Adams Thermal Prehearing Brief at 14-15.

[103] AEFTC's Posthearing Brief at 8, Exhibit 1 at 29-30 (fittings for engine cooling systems), 39-40 (fin evaporator coil systems), 46 (kitchen appliance components); AEFTC's Prehearing Brief at 17-18 (fittings for engine cooling systems), Exhibit 8 at 10 (fin evaporator coil systems); Hearing Tr. at 25 (Weber), 47 (Adams), 92-93 (Adams, Price). For example, during the hearing, Futura circulated an engine manifold that it supplies to the automotive industry in addition to fittings for engine cooling systems. *See, e.g.*, AEFTC's Posthearing Brief at 6; Hearing Tr. at 32-33 (Johnson); *see also, e.g.*, AEFTC's Posthearing Brief at Exhibit 1 at 39-40 (engine fittings, brake manifolds, motor mounts, and manifolds are sold to automotive OEMs, whereas both fin evaporator coil systems and kitchen appliance components are sold to appliance OEMs).

The record indicates that aluminum extrusions manufactured in the United States are sold primarily to end users and to distributors, so the fact that kitchen appliance components (or certain kitchen appliance door handles), aluminum components of fin evaporator coil systems, and fittings for engine cooling systems are sold to end users does not differentiate them from other aluminum extrusions.[104]

5. Customer and Producer Perceptions

Respondents argued that customers and producers perceive kitchen appliance components (or certain kitchen appliance door handles),[105] aluminum components of fin evaporator coil systems,[106] and fittings for engine cooling systems[107] differently than other aluminum extrusions.

As AEFTC and Brazeway acknowledged, to the extent that types of aluminum extrusions have distinct intended end uses, specific customers will perceive them differently, but this is not unique to kitchen appliance components (or certain kitchen appliance door handles), aluminum extrusions components of fin evaporator coil systems, or fittings for engine cooling systems; indeed, some firms purchase one or more different types of aluminum extrusions.[108]

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[104] CR at I-42, I-46; PR at I-32, I-34; CR/PR at Table II-1.

[105] Electrolux argued that customers and producers expect kitchen appliance components (or certain kitchen appliance door handles) will enhance the function, usability, and appearance of their kitchen appliances without the need for further finishing and would not accept other aluminum extrusions for this purpose. Electrolux's Prehearing Brief at 36; Electrolux's Posthearing Brief at Exhibit 1 at 49.

[106] Electrolux contended that market participants do not consider fin evaporator coil systems to be aluminum extrusions, instead viewing them as downstream components of refrigerators that are used to evaporate cooling chemicals from liquid to gas; it argued that the website for Brazeway, the only responding U.S. producer, differentiates fin evaporators from other aluminum extrusions. Electrolux's Posthearing Brief at Exhibit 1 at 7-9, 22-24; Electrolux's Prehearing Brief at 6.

[107] According to Adams Thermal, producers and purchasers of fittings for engine cooling systems expect that the products will meet detailed specifications for final assembly into finished on- and off-highway vehicle heating and cooling systems and would find no value in an aluminum extrusion blank. Adams Thermal Posthearing Brief at Answers to Commissioners' Questions at 20-23; Adams Thermal's Prehearing Brief at 16-18.

[108] AEFTC's Posthearing Brief at Exhibit 1 at 30-31 (fittings for engine cooling systems), 40 (fin evaporator coil systems), 46 (kitchen appliance components), Exhibit 24 (***); AEFTC's Prehearing Brief at 16-17 (fittings for engine cooling systems), Exhibit 8 at 9-10 (fin evaporator coil systems); CR at I-41 to I-42, I-45; PR at I-32, I-34; CR/PR at Table I-4, Table I-5; Hearing Tr. at 25 (Weber), 32 (Johnson), 47 (Adams), 74-75 (Defrancesco), 83-85 (Adams, Price), 92-93 (Dinan, Price).

6. Price

Respondents contended that customers and producers price kitchen appliance components (or certain kitchen appliance door handles),[109] aluminum extrusions components of fin evaporator coil systems,[110] and fittings for engine cooling systems[111] differently than other aluminum extrusions. AEFTC and Brazeway asserted that all aluminum extrusions reflect the base metal price tied to an index (such as the London Metal Exchange), delivery fee, and a negotiated conversion margin, and they observe that aluminum extrusions are sold in a wide range of prices.[112]

As the Commission observed in the original investigations,[113] aluminum extrusions are sold in a range of prices. In the current reviews, domestic producers continue to report selling all types of aluminum extrusions on a similar basis that reflects the cost of the base metal and a conversion fee. The current record does not reflect that kitchen appliance components (or certain kitchen appliance door handles), aluminum extrusions components of fin evaporator coil systems, and fittings for engine cooling systems are priced differently than other aluminum extrusions.[114]

Conclusion: Aluminum extrusions include a variety of products of different shapes and forms that are subjected to varying amounts of finishing and fabrication processes, but are manufactured in overlapping plants using the same processes and employees at least at the extrusion stage and in some cases at additional stages of finishing and fabrication. Some have specialized physical characteristics to meet specific purchasers' needs and are not viewed as interchangeable with other aluminum extrusions. They are sold in a range of prices. All share

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[109] According to Electrolux, kitchen appliance components (and certain kitchen appliance door handles) are sold by the piece. Electrolux's Prehearing Brief at 36, Exhibit 11; Electrolux's Posthearing Brief at Exhibit 1 at 49.

[110] Electrolux asserted that fin evaporator coil systems are priced ***. Electrolux's Posthearing Brief at Exhibit 1 at 17.

[111] Adams Thermal contended that, for one particular part, the aluminum extrusion feedstock costs $***, whereas the finished fitting for engine cooling system sells for $***. It estimated that the cost of the aluminum extrusion feedstock constitutes approximately *** to *** percent of the price for the finished fittings for engine cooling systems. It noted that the value of the fittings for engine cooling systems reported by U.S. producer *** is *** the reported value for all other aluminum extrusions products. Adams Thermal's Posthearing Brief at Answers to Commissioners' Questions at 12-13, 24-26 (also arguing that the imported fittings for engine cooling systems that it purchases from machine shops in China are priced by the piece notwithstanding that the domestic like product analysis focuses on pricing of products manufactured in the United States); Hearing Tr. at 182 (Heffner); Adams Thermal's Prehearing Brief at 20-21.

[112] AEFTC's Posthearing Brief at Exhibit 1 at 33-34 (fittings for engine cooling systems), 41-42 (fin evaporator coil systems), 46-47 (kitchen appliance components); AEFTC's Prehearing Brief at 18 (fittings for engine cooling systems), Exhibit 8 at 10-11 (fin evaporator coil systems).

[113] Confidential Original Views, EDIS Doc. 582660 at 11-12; USITC Pub. 4229 at 9-10.

[114] CR at I-42, I-46, V-3; PR at I-32, I-34, V-2; CR/PR at Tables V-3 to V-5; Hearing Tr. at 32 (Johnson), 38 (Hamilton), 47-48 (Adams).

similar general features, and variances in physical characteristics do not differentiate any of the claimed products from other extrusions. Consequently, we define a single domestic like product consisting of the aluminum extrusions corresponding to the scope of these reviews, including kitchen appliance components (including certain kitchen appliance door handles), the aluminum components of fin evaporator coil systems, and fittings for engine cooling systems.

III. Domestic Industry

Section 771(4)(A) of the Tariff Act defines the relevant industry 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."[115] 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.

In the original investigations, the Commission defined the pertinent domestic industry as U.S. producers of aluminum extrusions other than FHS.[116] Based on our domestic like product definition, we define the domestic industry as U.S. producers of aluminum extrusions corresponding to the scope of the reviews.

In the current reviews, domestic producers reported engaging in extrusion, finishing, and fabrication operations.[117] We consider whether the firms that perform these finishing and fabrication operations engage in sufficient production-related activities to be included in the domestic industry as domestic producers of the domestic like product,[118] an issue that the parties did not contest.[119] The record does not indicate that the nature of the finishing and

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[115] 19 U.S.C. § 1677(4)(A). The definitions in 19 U.S.C. § 1677 apply to the entire subtitle containing the antidumping and countervailing duty laws, including 19 U.S.C. §§ 1675 and 1675a. *See* 19 U.S.C. § 1677.

[116] Confidential Original Views, EDIS Doc. 582660 at 13; USITC Pub. 4229 at 11.

[117] *See, e.g.*, Hearing Tr. at 40-41 (Hamilton), 76-78 (Price, McEvoy, Merluzzi, Adams, Johnson, Hamilton, Weber); AEFTC's Final Comments at 14-15.

[118] The Commission generally analyzes the overall nature of a firm's U.S. production-related activities, although production-related activity at minimum levels could be insufficient to constitute domestic production. The Commission generally considers six factors: (1) source and extent of the firm's capital investment; (2) technical expertise involved in U.S. production activities; (3) value added to the product in the United States; (4) employment levels; (5) quantity and type of parts sourced in the United States; and (6) any other costs and activities in the United States directly leading to production of the like product. No single factor is determinative and the Commission may consider any other factors it deems relevant in light of the specific facts of any investigation. *Crystalline Silicon Photovoltaic Cells and Modules from China*, Inv. Nos. 701-TA-481 and 731-TA-1190 (Final), USITC Pub. 4360 at 12-13 (Nov. 2012).

[119] In the current reviews, AEFTC asked the Commission to include the aluminum extrusion, finishing, and fabrication operations in the domestic industry. AEFTC's Prehearing Brief at 6-7; Hearing Tr. at 40-41 (Hamilton); AEFTC's Final Comments at 14. Adams Thermal did not argue otherwise, although it contended that the Commission lacks questionnaire responses from independent U.S. (Continued…)

fabrication activities has diminished since the original investigations,[120] nor has any party argued otherwise. Consequently, as in the original investigations,[121] we include extrusion, finishing, and fabrication operations in the domestic industry.

We also 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.[122] During the original investigations, twelve firms were related parties because they imported subject merchandise, but the Commission determined that appropriate circumstances existed to exclude only one of these firms from the domestic industry as a related party.[123] In the current

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(…Continued)
fabricators that manufacture purchased aluminum extrusions into fittings for engine cooling systems. Adams Thermal's Posthearing Brief at Answers to Commissioners' Questions at 1-2; Hearing Tr. at 165-66 (Heffner). Electrolux did not comment on this issue.

[120] *See, e.g.*, CR at I-27 to I-28, I-32 to I-36; PR at I-21 to I-22, I-25 to I-28 (describing the nature of extrusion, finishing, and fabrication operations); CR at I-49 to I-50 and I-53 to I-54; PR at I-36 to I-38 (describing value added and effects of finishing and fabricating extruded aluminum profiles); CR/PR at Table III-1 and Table III-2 (identifying production operations).

[121] In the original investigations, the Commission determined that members of the Shower Door Manufacturers Association ("SDMA") that fabricated and finished extrusions that they purchased from aluminum extruders were engaged in sufficient production-related activities to be included in the domestic industry. Uncontested information indicated that SDMA's members made significant investments in U.S. production operations, engaged in activities involving technical expertise, such as developing technical drawings, manufacturing extrusion dies, fabricating raw extrusions, and in some cases, coating the extrusions. SDMA members' production activities accounted for between *** percent and *** percent of the value added of the finished product. They sourced at least some of their parts from the United States, employed significant numbers of workers, and incurred other costs for activities directly leading to production of the domestic like product. Confidential Original Views, EDIS Doc. 582660 at 13 at n.56; USITC Pub. 4229 at 11-12 at n.56.

[122] 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. *See Torrington Co v. United States*, 790 F. Supp. 1161, 1168 (Ct. Int'l Trade 1992), *aff'd mem.*, 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). Exclusion of such a producer is within the Commission's discretion based upon the facts presented in each investigation. 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 less-than-fair-value 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*, 790 F. Supp. at 1168.

[123] The Commission determined that eight of these firms accounted for such a small share of domestic production that their inclusion or exclusion from the domestic industry would not significantly (Continued…)

reviews, AEFTC argued that the Commission should include all producers of the domestic like product in the domestic industry.[124] Electrolux argued that the Commission should exclude *** from the domestic industry as a related party.[125]

We determine that domestic producer *** is a related party because *** that exported subject merchandise to the United States during these reviews.[126] We find that appropriate circumstances do not exist to exclude *** from the domestic industry as a related party.[127] For these reasons, we define the domestic industry as all U.S. producers of the domestic like product.

(…Continued)
skew the domestic industry's data. In contrast, it determined that appropriate circumstances existed to exclude a ninth firm from the domestic industry (***) as a related party even though this firm also accounted for a small share of domestic production. The Commission found that *** accrued a substantial benefit from importing subject merchandise based on the firm's high ratio of subject imports to domestic production between 2008 and 2010, and its reporting that it imported subject merchandise ***. Confidential Original Views, EDIS Doc. 582660 at 14; USITC Pub. 4229 at 12-13. Three other firms accounted for a larger share of domestic production, but the Commission found that appropriate circumstances did not exist to exclude ***, ***, or *** from the domestic industry as related parties. Each of these firms had ratios of imports to domestic production that were ***, indicating that their interests were in domestic production, and there was no indication that they derived a significant benefit from their importation. The Commission also concluded that there was no evidence whether *** exported subject merchandise to the United States, and no evidence that the firm was shielded from any injury by virtue of its ***. Confidential Original Views, EDIS Doc. 582660 at 15-17; USITC Pub. 4229 at 13-14.

[124] AEFTC argued that the Commission should not exclude from the domestic industry firms that are affiliated with producers of subject merchandise in China as related parties because such firms support continuing the orders. AEFTC's Prehearing Brief at 6; AEFTC's Final Comments at 9.

[125] Electrolux argued that appropriate circumstances exist to exclude *** from the domestic industry as a related party based on the firm's ***; Electrolux argued that ***. Electrolux's Posthearing Brief at 3, 5-6, Exhibit 1 at 51-54, Exhibit 2. AEFTC and Brazeway disagree. Response to Investigator's Questions (Feb. 6, 2016), EDIS Doc. 603014; *see also* Hearing Tr. at 49-50 (Adams), 214-16 (Boyse); AEFTC's Final Comments at 9; AEFTC's Posthearing Brief at Exhibit 2.

*** is not subject to exclusion as a related party. Whereas this firm has an affiliate in nonsubject country ***, *** did not report any imports of subject or nonsubject merchandise, notwithstanding Electrolux's attempts to characterize ***. CR/PR at Table III-6. The firm does not import subject merchandise from China, CR at I-58; PR at I-41, does not have a direct or indirect control relationship with any exporter or importer of subject merchandise in China, CR/PR at Table I-7, and does not otherwise qualify as a related party under the statute. 19 U.S.C. § 1677(4)(B).

[126] CR/PR at Table I-7; *** Foreign Producer Questionnaire Responses, EDIS Docs. ***, ***.

[127] The firm *** continuation of the orders and operates production facilities *** accounted for *** percent of domestic aluminum extrusions production in 2015, ***. CR/PR at Table I-6. During these reviews, *** did not import subject merchandise, and ***. CR at I-58; PR at I-41; CR/PR at Table IV-4. The firm engaged in capital expenditures and research and development activities. CR/PR at Table E-1. These facts indicate that *** principal interest is in domestic production.

IV. Revocation of the Antidumping and Countervailing Duty Orders Would Likely Lead to Continuation or Recurrence of Material Injury Within a Reasonably Foreseeable Time

A. Legal Standards

In five-year reviews conducted under section 751(c) of the Tariff Act, Commerce will revoke an antidumping or countervailing duty order unless: (1) it makes a determination that dumping or subsidization is likely to continue or recur and (2) the Commission makes a determination that revocation of the antidumping or countervailing duty order "would be likely to lead to continuation or recurrence of material injury within a reasonably foreseeable time."[128] The Statement of Administrative Action to the Uruguay Round Agreements Act ("URAA SAA") states that "under the likelihood standard, the Commission will engage in a counterfactual analysis; it must decide the likely impact in the reasonably foreseeable future of an important change in the *status quo* – the revocation or termination of a proceeding and the elimination of its restraining effects on volumes and prices of imports."[129] Thus, the likelihood standard is prospective in nature.[130] The CIT has found that "likely," as used in the five-year review provisions of the Act, means "probable," and the Commission applies that standard in five-year reviews.[131]

The statute states that "the Commission shall consider that the effects of revocation or termination may not be imminent, but may manifest themselves only over a longer period of time."[132] According to the URAA SAA, a "'reasonably foreseeable time' will vary from case to

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[128] 19 U.S.C. § 1675a(a).

[129] URAA SAA, H.R. Rep. No. 103-316, Vol. I at 883-884 (1994). The URAA SAA states that "{t}he likelihood of injury standard applies regardless of the nature of the Commission's original determination (material injury, threat of material injury, or material retardation of an industry). Likewise, the standard applies to suspended investigations that were never completed." *Id*. at 883.

[130] While the URAA SAA states that "a separate determination regarding current material injury is not necessary," it indicates that "the Commission may consider relevant factors such as current and likely continued depressed shipment levels and current and likely continued {sic} prices for the domestic like product in the U.S. market in making its determination of the likelihood of continuation or recurrence of material injury if the order is revoked." URAA SAA at 884.

[131] *See NMB Singapore Ltd. v. United States*, 288 F. Supp. 2d 1306, 1352 (Ct. Int'l Trade 2003) ("'likely' means probable within the context of 19 U.S.C. § 1675(c) and 19 U.S.C. § 1675a(a)"), *aff'd mem.*, 140 Fed. Appx. 268 (Fed. Cir. 2005); *Nippon Steel Corp. v. United States*, 26 CIT 1416, 1419 (2002) (same); *Usinor Industeel, S.A. v. United States*, 26 CIT 1402, 1404 nn.3, 6 (2002) ("more likely than not" standard is "consistent with the court's opinion;" "the court has not interpreted 'likely' to imply any particular degree of 'certainty'"); *Indorama Chemicals (Thailand) Ltd. v. United States*, 26 CIT 1059, 1070 (2002) ("standard is based on a likelihood of continuation or recurrence of injury, not a certainty"); *Usinor v. United States*, 26 CIT 767, 794 (2002) ("'likely' is tantamount to 'probable,' not merely 'possible'").

[132] 19 U.S.C. § 1675a(a)(5).

case, but normally will exceed the 'imminent' timeframe applicable in a threat of injury analysis in original investigations."[133]

Although the standard in a five-year review is not the same as the standard applied in an original investigation, it contains some of the same fundamental elements. The statute provides that the Commission is to "consider the likely volume, price effect, and impact of imports of the subject merchandise on the industry if the orders are revoked or the suspended investigation is terminated."[134] It directs the Commission to take into account its prior injury determination, whether any improvement in the state of the industry is related to the order or the suspension agreement under review, whether the industry is vulnerable to material injury if an order is revoked or a suspension agreement is terminated, and any findings by Commerce regarding duty absorption pursuant to 19 U.S.C. § 1675(a)(4).[135] The statute further provides that the presence or absence of any factor that the Commission is required to consider shall not necessarily give decisive guidance with respect to the Commission's determination.[136]

In evaluating the likely volume of imports of subject merchandise if an order under review is revoked and/or a suspended investigation is terminated, the Commission is directed to consider whether the likely volume of imports would be significant either in absolute terms or relative to production or consumption in the United States.[137] In doing so, the Commission must consider "all relevant economic factors," including four enumerated factors: (1) any likely increase in production capacity or existing unused production capacity in the exporting country; (2) existing inventories of the subject merchandise, or likely increases in inventories; (3) the existence of barriers to the importation of the subject merchandise into countries other than the United States; and (4) 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.[138]

In evaluating the likely price effects of subject imports if an order under review is revoked and/or a suspended investigation is terminated, the Commission is directed to consider whether there is likely to be significant underselling by the subject imports as compared to the domestic like product and whether the subject imports are likely to enter the

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[133] URAA SAA at 887. Among the factors that the Commission should consider in this regard are "the fungibility or differentiation within the product in question, the level of substitutability between the imported and domestic products, the channels of distribution used, the methods of contracting (such as spot sales or long-term contracts), and lead times for delivery of goods, as well as other factors that may only manifest themselves in the longer term, such as planned investment and the shifting of production facilities." *Id*.

[134] 19 U.S.C. § 1675a(a)(1).

[135] 19 U.S.C. § 1675a(a)(1). Commerce has not made any duty absorption findings in the four administrative reviews that it has conducted of the antidumping and countervailing duty orders. CR at I-12; PR at I-9 to I-10.

[136] 19 U.S.C. § 1675a(a)(5). Although the Commission must consider all factors, no one factor is necessarily dispositive. URAA SAA at 886.

[137] 19 U.S.C. § 1675a(a)(2).

[138] 19 U.S.C. § 1675a(a)(2)(A)-(D).

United States at prices that otherwise would have a significant depressing or suppressing effect on the price of the domestic like product.[139]

In evaluating the likely impact of imports of subject merchandise if an order under review is revoked and/or a suspended investigation is terminated, the Commission is directed to consider all relevant economic factors that are likely to have a bearing on the state of the industry in the United States, including but not limited to the following: (1) likely declines in output, sales, market share, profits, productivity, return on investments, and utilization of capacity; (2) likely negative effects on cash flow, inventories, employment, wages, growth, ability to raise capital, and investment; and (3) likely negative effects on the existing development and production efforts of the industry, including efforts to develop a derivative or more advanced version of the domestic like product.[140] All relevant economic factors are to be considered within the context of the business cycle and the conditions of competition that are distinctive to the industry.[141] As instructed by the statute, we have considered the extent to which any improvement in the state of the domestic industry is related to the orders under review and whether the industry is vulnerable to material injury upon revocation.[142]

B. Conditions of Competition and the Business Cycle

In evaluating the likely impact of the subject imports on the domestic industry if an order were revoked, the statute directs the Commission to consider all relevant economic factors "within the context of the business cycle and conditions of competition that are distinctive to the affected industry."[143] Many of the conditions of competition that were relevant in the original investigations remain pertinent in the current reviews.

1. Demand Conditions

Aluminum extrusions continue to be used in a wide variety of applications, including in building and construction (*e.g.*, windows, doors, railings, high-rise curtainwall, highway and bridge construction, framing members), transportation (*e.g.*, automotive, rail and other mass transit vehicles, recreational vehicles, aircraft, aerospace, marine), and engineered product applications (*e.g.*, air conditioners, appliances, furniture, lighting, sports equipment, personal

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[139] *See* 19 U.S.C. § 1675a(a)(3). The SAA states that "{c}onsistent with its practice in investigations, in considering the likely price effects of imports in the event of revocation and termination, the Commission may rely on circumstantial, as well as direct, evidence of the adverse effects of unfairly traded imports on domestic prices." URAA SAA at 886.

[140] 19 U.S.C. § 1675a(a)(4).

[141] 19 U.S.C. § 1675a(a)(4).

[142] The URAA SAA states that in assessing whether the domestic industry is vulnerable to injury if the order is revoked, the Commission "considers, in addition to imports, other factors that may be contributing to overall injury. While these factors, in some cases, may account for the injury to the domestic industry, they may also demonstrate that an industry is facing difficulties from a variety of sources and is vulnerable to dumped or subsidized imports." URAA SAA at 885.

[143] 19 U.S.C. § 1675a(a)(4).

watercraft, electrical power units, food displays, refrigeration, medical equipment, display structures, and laboratory equipment).[144] Demand for aluminum extrusions, which is derived from demand for its various end uses, generally tracks U.S. gross domestic product.[145]

During the original investigations, producers, importers, and purchasers reported declining demand, and apparent U.S. consumption of aluminum extrusions declined from *** short tons in 2008 to *** short tons in 2009 and increased to *** short tons in 2010.[146] During the current reviews, the majority of U.S. producers and importers and at least half of purchasers and foreign producers reported an increase in demand for aluminum extrusions since January 1, 2011, and most responding firms anticipated that demand would increase or fluctuate in the next two years.[147] Apparent U.S. consumption increased from 1.3 million short tons in 2013 to 1.4 million short tons in 2014 and 1.5 million short tons in 2015; it was higher in interim 2016 (1.18 million short tons) than in interim 2015 (1.16 million short tons).[148]

2. Supply Conditions

During the original investigations, the 11 members of AEFTC identified 104 potential U.S. producers, and the Commission received questionnaire responses from 54 firms.[149] The domestic industry was moderately concentrated, with one producer (Sapa) accounting for more than *** of domestic production, the six leading domestic producers accounting for more than *** percent of reported production, and 38 of the responding producers individually accounting for less than one percent of reported domestic production.[150] Although some firms expanded or upgraded production facilities during the original investigations, nine firms reported closing a total of 20 plants.[151] The domestic industry was the largest supplier to the U.S. market throughout the original investigations, with its share of apparent U.S. consumption falling from *** percent in 2008 to *** percent in 2010.[152]

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[144] CR at I-28, II-8; PR at I-22, II-6; AEFTC's Prehearing Brief at 19; Confidential Original Views, EDIS Doc. 582660 at 23; USITC Pub. 4229 at 18. Questionnaire respondents reported some seasonality in aluminum extrusions purchases, at least for certain applications such as in heating, ventilation, air conditioning, and building uses. CR at II-9; PR at II-6.

[145] CR at II-8, II-9; PR at II-7; AEFTC's Prehearing Brief at 19; Hearing Tr. at 104-06 (Merluzzi, Adams); Confidential Original Views, EDIS Doc. 582660 at 23; USITC Pub. 4229 at 18.

[146] Confidential Original Views, EDIS Doc. 582660 at 23-24; USITC Pub. 4229 at 18.

[147] CR at II-9, III-18 to III-19 at n.8; PR at II-7, III-11 at n.8; CR/PR at Table II-3. AEFTC reported that demand for aluminum extrusions has improved somewhat since the original investigations, but it anticipated that demand for aluminum extrusions in the U.S. market would flatten or soften in the imminent future. AEFTC's Prehearing Brief at 21; AEFTC's Posthearing Brief at Exhibit 1 at 80-81.

[148] CR/PR at Table I-9.

[149] CR at I-54; PR at I-39; Confidential Original Views, EDIS Doc. 582660 at 24; USITC Pub. 4229 at 19.

[150] Confidential Original Views, EDIS Doc. 582660 at 24; USITC Pub. 4229 at 19.

[151] Confidential Original Views, EDIS Doc. 582660 at 24-25; USITC Pub. 4229 at 19.

[152] Confidential Original Views, EDIS Doc. 582660 at 25; USITC Pub. 4229 at 19.

In the current reviews, the Commission issued U.S. producer questionnaires to 68 firms, 25 of which provided the Commission with information on their aluminum extrusions operations.[153] Although fewer domestic producers submitted questionnaire responses in these reviews than in the original investigations, the domestic industry has continued to consolidate,[154] and all of the largest U.S. producers submitted questionnaire responses.[155] The 25 responding producers are believed to represent *** percent of U.S. production of aluminum extrusions in the United States.[156] As discussed earlier, domestic producer *** is related to producers of subject merchandise in China, and four domestic producers are related to one or more foreign producers of aluminum extrusions in nonsubject countries.[157] Since the orders were imposed, the domestic industry closed some facilities, and it also invested in production upgrades, capacity expansions, and new facilities.[158] The domestic industry was the largest supplier to the U.S. market, accounting for at least 86.0 percent of apparent U.S. consumption during each year and interim period between January 2013 and September 2016.[159]

The industry in China was the second largest supplier to the U.S. market during the original investigations, and its share of apparent U.S. consumption increased from *** percent in 2008 to *** percent in 2010.[160] After the orders were imposed in May 2011, subject imports from China held a smaller share of the U.S. market than during the original investigations (0.4 percent in 2011, 0.5 percent in 2012, 0.8 percent in 2013 and 2014, and 0.4 percent in 2015).[161]

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[153] In their responses to the notice of institution, domestic interested parties provided a list of 23 known U.S. producers of aluminum extrusions; Adams Thermal identified the members of the AEFTC and the Precision Machine Parts Association; and Electrolux reported that there are no U.S. producers of kitchen appliance components and that to the best of its knowledge only Brazeway manufactures heat exchange system components (aluminum extrusions components for fin evaporator coil systems). CR at I-54 to I-55; PR at I-39.

[154] CR/PR at Table III-1, Table III-2 (identifying mergers, acquisitions, and consolidations).

[155] Domestic producer Sapa accounted for *** percent of domestic production (or *** percent of sales) of aluminum extrusions in 2015, and the eight domestic producers that each accounted for more than *** percent of reported U.S. production of aluminum extrusions in 2015 collectively accounted for *** percent of reported U.S. production, with seventeen other firms each accounting for less than *** percent of reported production in that year. CR at I-5, III-14; PR at I-4, III-10; CR/PR at Table I-6.

[156] CR at I-5; PR at I-4.

[157] CR/PR at Table I-7 (indicating that ***); CR/PR at Table III-6 (indicating that *** imported aluminum extrusions from nonsubject countries between January 2013 and September 2016).

[158] *See, e.g.*, CR/PR Table III-1, Table III-2; AEFTC's Prehearing Brief at 23-24. The domestic industry's production capacity increased from 1,631,243 short tons in 2013 to 1,682,077 short tons in 2014 and 1,709,753 short tons in 2015, and it was higher in interim 2016 (1,332,941 short tons) than in interim 2017 (1,288,358 short tons). CR/PR at Table III-3.

[159] CR/PR at Table I-10.

[160] Confidential Original Views, EDIS Doc. 582660 at 25; USITC Pub. 4229 at 19.

[161] CR/PR at Table I-1.

In these reviews, Electrolux argued that the Commission should treat as nonsubject merchandise those imports of certain kitchen appliance components from China that Commerce found pursuant to litigation to be outside the scope of the antidumping and countervailing duty orders.[162] As indicated earlier, Commerce determined under protest that certain types of kitchen appliance door handles and refrigerator/freezer trim kits are outside the scope of the orders. Appeals of these scope rulings are pending at the Federal Circuit.[163] We do not treat imports of those products as out-of-scope merchandise in these reviews. Because the Commission is bound by Commerce's definition of the scope of imported subject merchandise,[164] which includes kitchen appliance components,[165] there is no legal basis to treat

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[162] Electrolux's Prehearing Brief at 2, 27; Hearing Tr. at 149-50 (Schaefer); Electrolux's Posthearing Brief at 4, 13-15 (noting that it separately reported its imports on kitchen appliance components that Commerce determined (under protest) are outside the scope of the orders); Electrolux's Final Comments at 15.

[163] Final Scope Ruling on Kitchen Appliance Door Handles With Plastic End Caps and Kitchen Appliance Door Handles Without Plastic End Caps (Aug. 4, 2014), Ct. No. 14-199, *aff'd in part and remanded in part* in *Whirlpool Corp. v. United States*, Slip Op. 16-8 (Ct. Int'l Trade Feb. 1, 2016), *aff'g remand determination under protest* in *Whirlpool Corp. v. United States*, Slip Op. 16-81 (Ct. Int'l Trade Aug. 26, 2016) (one-piece handles are within scope but assembled handles are outside the scope), appeal docketed as 17-1117 (Fed. Cir.); Final Scope Ruling on Meridian Kitchen Appliance Door Handles (June 21, 2013), Ct. No. 13-246, *aff'g in part and remanding in part* in *Meridian Products LLC v. United States*, Slip Op. 15-135 (Ct. Int'l Trade Dec. 7, 2015), *remand determination under protest aff'd* in *Meridian Products LLC v. United States*, Slip Op. 16-71 (Ct. Int'l Trade Jul. 18, 2016) (types A and C kitchen handles are within the scope but type B kitchen handles are outside the scope), appeal docketed as 16-2657 (Fed. Cir.); Final Scope Ruling on Refrigerator/Freezer Trim Kits (Dec. 17, 2012), in CIT Ct. No. 13-00018 *remanded* in *Meridian Products LLC v. United States*, Slip Op. 13-75 (Ct. Int'l Trade June 17, 2013); *remanded* in *Meridian Products LLC v. United States*, Slip Op. 14-32 (Ct. Int'l Trade Mar. 26, 2014), *aff'd* in *Meridian Products LLC v. United States*, Slip Op. 14-158 (Ct. Int'l Trade Dec. 29, 2014), *vacating and remanding for third time* in *Meridian Products LLC v. United States*, Slip Op. 15-67 (Ct. Int'l Trade June 23, 2015), *aff'g third remand determination issued under protest* in *Meridian Products LLC v. United States*, Slip Op. 16-5 (Ct. Int'l Trade Jan. 20, 2015) (trim kits outside the scope of the orders as finished goods kits because they contained all parts necessary to assemble a final finished good), docketed as Ct. No. 16-1730 (Fed. Cir.) and for which oral argument was held on February 13, 2017; *see also, e.g.*, Electrolux's Prehearing Brief at Exhibit 9 (final results of redetermination pursuant to court remand).

[164] *See, e.g*., *USEC Inc. v. United States*, 34 F. App'x 725, 730 (Fed. Cir. 2002) (concluding that, under 19 U.S.C. §§ 1673d(a)(1) and 1673d(b)(1), "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.2d 240 (Fed. Cir. 1989), *cert. denied*, 492 U.S. 919 (1989); *Torrington Co. v. United States*, 747 F. Supp. 744, 748-49 (Ct. Int'l Trade 1990), *aff'd*, 938 F.2d 1278 (Fed. Cir. 1991).

[165] Although Commerce instructed Customs to revise the cash deposit rate to zero for certain kitchen appliance components as result of the adverse *Meridian* and *Whirlpool* CIT decisions, Commerce has not revoked the orders with respect to certain kitchen appliance components. The revised cash deposit rates became effective late in the period for which data were collected in these reviews, and Commerce has not yet instructed Customs to liquidate the entries without regard to antidumping or (Continued…)

imports of those kitchen appliance handles or trim kits from China as imports of out-of-scope merchandise.

During the original investigations, imports of aluminum extrusions from nonsubject sources predominantly originated from Canada.[166] Their share of apparent U.S. consumption declined from *** percent in 2008 to *** percent in 2010.[167] In the current reviews, the primary nonsubject sources of imports were Canada, Mexico, Indonesia, and Vietnam; these four countries accounted for 69.9 percent of nonsubject imports in 2015.[168] Nonsubject imports accounted for 11.8 percent of apparent U.S. consumption, by quantity, in 2013, 12.5 percent in 2014, 13.3 percent in 2015, 13.1 percent in interim 2015, and 13.6 percent in interim 2016.[169]

3. Substitutability

Aluminum extrusions are made from among thousands of dies and subjected to one or more finishing and/or fabrication processes. As such, they vary widely in terms of profile shape, alloy, temper, length, fabrication, surface treatment, quality specification, and/or color treatment.[170] As was the case in the original investigations, most purchasers reported that quality and price were among the top three factors that they consider when making aluminum extrusions purchasing decisions.[171] When asked to rate the importance of 18 purchasing factors, purchasers reported that quality meeting industry standards, product consistency, price, availability, reliability, and delivery time were important.[172]

Aluminum extrusions imported from China and manufactured in the United States are sold to end users and to distributors,[173] and both are marketed throughout the United States.[174] The majority of purchasers reported that aluminum extrusions manufactured in the United

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(…Continued)
countervailing duties or to lift the suspension of liquidation of duties on imports of these products. 81 Fed. Reg. 66259 (Sept. 27, 2016) (effective September 5, 2016 revising cash deposit rate to zero for Whirlpool's handles with end caps); 81 Fed. Reg. 52402 (Aug. 8, 2016) (effective July 28, 2016 revising cash deposit rate to zero for Meridian's Type B door handles); 81 Fed. Reg. 7749 (Feb. 16, 2016) (effective Jan. 30, 2016 revising cash deposit rate to zero for Meridian's refrigerator/freezer trim kits). In its expedited five-year review determinations regarding aluminum extrusions, Commerce did not revise the scope language to exclude any of the kitchen appliance components at issue in the pending appeals. Expedited AD I&D Memo, EDIS Doc. 603219, file 1154718 at 2-4; Expedited CVD I&D Memo, EDIS Doc. 603219, file 1154719 at 4-6.

[166] Confidential Original Views, EDIS Doc. 582660 at 25; USITC Pub. 4229 at 19.

[167] Confidential Original Views, EDIS Doc. 582660 at 25; USITC Pub. 4229 at 19.

[168] CR at II-7, IV-17; PR at II-5, IV-11.

[169] CR/PR at Table I-10.

[170] *See, e.g.*, Hearing Tr. at 24 (Weber).

[171] CR/PR at Table II-5; Confidential Original Views, EDIS Doc. 582660 at 26; USITC Pub. 4229 at 20.

[172] CR/PR at Table II-6.

[173] CR/PR at Table II-1.

[174] CR/PR at Table II-2.

States and China always or usually meet minimum quality specifications.[175] Majorities of U.S. producers, importers, and purchasers reported that aluminum extrusions from the United States and China are always or frequently interchangeable.[176] When asked to compare aluminum extrusions manufactured in the United States and China with respect to 18 purchasing factors, most purchasers reported that the two products are comparable for most factors.[177] For price, the majority of purchasers reported that aluminum extrusions from the United States are "inferior," that is, priced higher than subject imports.[178] When asked how often differences other than price were significant in their purchasing decisions, a majority of U.S. producers reported that non-price factors are sometimes or never significant, whereas U.S. importers and purchasers were more evenly split on the question.[179] Based on the record, we find that subject imports from China and the domestic like product are moderately to highly substitutable and that price plays an important role in purchasing decisions.[180]

4. Other Conditions of Competition

Primary aluminum is the main raw material used to manufacture aluminum extrusions, and raw materials continued to account for approximately two-thirds of the domestic industry's total cost of goods sold ("COGS").[181] Globally traded prices for primary aluminum on the London Metal Exchange ("LME") fluctuated substantially during the original investigations and during the current reviews.[182] AEFTC asserted that the majority of the domestic industry utilizes

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[175] CR/PR at Table II-10.

[176] CR/PR at Table II-10. Market participants reached similar conclusions concerning interchangeability during the original investigations. Confidential Original Views, EDIS Doc. 582660 at 26; USITC Pub. 4229 at 20.

[177] CR/PR at Table II-8 (indicating that the domestic like product was superior for delivery terms, delivery time, distribution services, and minimum quantity requirements; the products were comparable for availability, discounts offered, extension of credit, finishing/anodization quality, manufacturing capabilities, packaging, product consistency, product range, quality exceeds or meets industry standards, reliability of supply, technical support/service, and U.S. transportation costs; and products from China were inferior for price (*i.e.*, lower priced)).

[178] CR/PR at Table II-8; *see also* Confidential Original Views, EDIS Doc. 582660 at 26; USITC Pub. 4229 at 20.

[179] CR/PR at Table II-11.

[180] CR at II-10; PR at II-7; CR/PR at Table II-1, Table II-2, Table II-8, Table II-9, and Table II-10.

[181] CR at V-1, III-20; PR at V-1, III-14 to III-15. Raw materials costs accounted for 66.2 percent of domestic producers' COGS during the original investigations. Confidential Original Views, EDIS Doc. 582660 at 25; USITC Pub. 4229 at 20.

[182] The LME price for primary aluminum declined 42.0 percent between January 2008 and January 2009, and increased by 81.0 percent between January 2009 and March 2010 to a level that was marginally higher than in January 2008. Confidential Original Views, EDIS Doc. 582660 at 25; USITC Pub. 4229 at 20. The LME price of aluminum continued to fluctuate in the current reviews, declining by *** percent from January 2013 to January 2014, increasing by *** percent from January 2014 to (Continued…)

a pricing formula for aluminum extrusions consisting of a base aluminum price that is indexed to the LME, a delivery charge to obtain the aluminum (*e.g.*, Midwest Premium), plus the cost to convert the aluminum billet into the desired extrusion.[183]

The domestic industry's commercial shipments were largely sold through spot sales or through annual contracts, while the majority of commercial shipments made by importers of subject merchandise from China were made through spot sales.[184]

C. Likely Volume of Subject Imports

During the original investigations, the Commission found that the volume of subject imports from China increased from *** short tons in 2008 to *** short tons in 2009 and fell somewhat to *** short tons in 2010; subject imports' share of apparent U.S. consumption increased from *** percent in 2008 to *** percent in 2009 and fell to *** percent in 2010, a level still *** above that of 2008.[185] As apparent U.S. consumption declined between 2008 and 2009, subject imports increased their market share mostly at the expense of the domestic industry, which lost *** percentage points of market share compared to *** percentage points lost by nonsubject imports.[186] Although subject imports held a lower market share in 2010 than in 2009, the Commission observed that subject imports *** preserved their 2009 market share gains.[187] The volume of subject imports from China was substantially higher in the first nine months of 2010, before Commerce announced its preliminary countervailing duty determination, than in the first nine months of 2009.[188] The Commission attributed the decline in the volume of subject imports in the final three months of 2010 to the pendency of the investigations.[189] The Commission concluded that the volume of subject imports and the increase in that volume relative to apparent U.S. consumption and production was significant.[190]

(…Continued)
November 2014, and declining by *** percent from November 2014 to December 2016. CR at V-1; PR at V-1; CR/PR at Figure V-1.

[183] AEFTC's Prehearing Brief at 36; Hearing Tr. at 38 (Hamilton).

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

[185] Confidential Original Views, EDIS Doc. 582660 at 26-27; USITC Pub. 4229 at 20. The petitions identified 114 potential producers of aluminum extrusions in China. USITC Pub. 4229 at VII-2. Eight firms submitted questionnaire responses, and their exports were equivalent to approximately six percent of U.S. imports of subject merchandise from China in 2010. CR at IV-5; PR at IV-5; USITC Pub. 4229 at VII-2.

[186] Confidential Original Views, EDIS Doc. 582660 at 27; USITC Pub. 4229 at 20-21.

[187] Confidential Original Views, EDIS Doc. 582661 at 27; USITC Pub. 4229 at 20-21.

[188] Confidential Original Views, EDIS Doc. 582660 at 26; USITC Pub. 4229 at 20-21.

[189] Confidential Original Views, EDIS Doc. 582660 at 26; USITC Pub. 4229 at 20-21.

[190] The Commission noted that the ratio of subject imports to domestic production increased from *** percent in 2008 to *** percent in 2009 and declined somewhat to *** percent in 2010. Confidential Original Views, EDIS Doc. 582660 at 27; USITC Pub. 4229 at 21.

In the current reviews, two foreign producers of subject merchandise submitted questionnaire responses.[191] They accounted for less than *** percent of total production in China in 2015, and ***.[192] In addition, the record also contains information from ***, various public industry sources, and the record in the original investigations.[193]

We determine that the volume of subject imports from China is likely to be significant in the event of revocation. Available information indicates that the subject industry in China produced significant volumes of aluminum extrusions between 2013 and 2015 that consistently exceeded consumption of aluminum extrusions in China.[194] Thus, the subject industry in China has the ability to export significant volumes of subject merchandise to the United States.[195]

The industry in China also possesses the incentive to do so. As discussed above, the volume of subject imports from China into the U.S. market rose overall during the original investigations, only falling in the final three months of 2010 after Commerce's preliminary countervailing duty determination.[196] The orders have had a restraining effect on imports of

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[191] CR at I-5, I-11, IV-6; PR at I-4, I-9; CR/PR at Table IV-4.

[192] CR at I-5, I-11, IV-6; PR at I-4, I-9; CR/PR at Table IV-4.

[193] CR at I-5, I-11, IV-6; PR at I-4, I-9; CR/PR at Table IV-4.

[194] The industry in China ***. Although China is the *** consumer of aluminum extrusions, and consumption of aluminum extrusions *** between 2013 and 2015, China consistently produced more than it consumed in each of those years. The aluminum extrusions industry in China produced *** short tons in 2013, *** short tons in 2014, and *** short tons in 2015, compared to consumption of aluminum extrusions in China of *** short tons in 2013, *** short tons in 2014, and *** short tons in 2015. CR/PR at Table IV-12, Table IV-13. The two responding producers of subject merchandise in China reported combined production capacity of *** short tons in 2013 and 2014, *** short tons in 2015, and *** short tons in interim 2015 and interim 2016, compared to production of *** short tons in 2013, *** short tons in 2014, *** short tons in 2015, *** short tons in interim 2015, and *** short tons in interim 2016. Thus, they had available capacity throughout this period, with capacity utilization of *** percent in 2013, *** percent in 2014, *** percent in 2015, *** percent in interim 2015, and *** percent in interim 2016. CR/PR at Table IV-6. AEFTC also submitted information indicating that individual producers have substantial production capacity and that the largest producer in China (China Zhongwang Holdings Limited) is in the process of replacing, optimizing, and expanding its 90 existing aluminum extrusions presses with 99 new presses. CR at IV-11 to IV-12; AEFTC's Prehearing Brief at 1, 5, 24-25, 39-42, Exhibit 15, Exhibit 27, 1U, 1V; AEFTC's Response to Notice of Institution at 22-23, Exhibit 6.

[195] As further evidence of the ability of producers in China to resume exporting aluminum extrusions to the United States in the event of revocation, AEFTC observed how quickly producers in China began exporting specific products to the United States after Commerce determined them to be outside the scope of the orders, such as solar panel mounting systems. AEFTC's Prehearing Brief at 61-62. U.S. importers reported some end-of-period inventories of aluminum extrusions from China, and they arranged for additional imports from China between October 2016 and September 2017. CR/PR at Table IV-2, Table IV-3. Only two foreign producers reported information on their inventories, and they collectively reported some available inventories in China. CR/PR at Table IV-6. Neither of them, however, reported the ability to shift production from other products to subject aluminum extrusions. CR at II-6; PR at II-5.

[196] Confidential Original Views, EDIS Doc. 582660 at 26; USITC Pub. 4229 at 20-21.

subject merchandise from China, which maintained a presence in the U.S. market, but at lower levels.[197] Available information indicates that demand for aluminum extrusions in China is softening.[198] Moreover, the aluminum extrusions industry in China already is highly export oriented. Exports of aluminum extrusions from China increased each year between 2013 and 2015, and the industry in China exported more aluminum extrusions than any other global source.[199] Although it faces barriers to its exports in several third-country markets,[200] the industry in China exports to a variety of global markets.[201] It has demonstrated an ability to redirect exports from one market to another and to increase exports substantially to individual markets from one year to the next.[202] After the orders were imposed on subject imports from China, most purchasers reported decreasing purchases of aluminum extrusions imported from China and increasing purchases from domestic producers,[203] but U.S. importers and purchasers anticipated that, if the orders were revoked, there would be additional imports of aluminum

[197] Subject imports' share of the U.S. market was 0.8 percent in 2013, 0.8 percent in 2014, 0.4 percent in 2015, 0.4 percent in interim 2015, and 0.5 percent in interim 2016. CR/PR at Table I-1, Table I-15.

[198] Hearing Tr. at 26 (Weber); AEFTC's Prehearing Brief at 1-2, 22-23 (reporting slowing demand for aluminum extrusions in China due to softening demand by the primary end user, the building and construction segment, as well as tax policies that favor exports of downstream aluminum production).

[199] The industry in China exported 773,722 short tons in 2013, 1,080,701 short tons in 2014, and 1,427,417 short tons in 2015, accounting for 20.6 percent of global aluminum extrusions exports in 2013, 25.4 percent in 2014, and 31.0 percent in 2015. CR/PR at Table IV-11. The two responding subject producers in China reported that exports accounted for at least *** of their total shipments between January 2013 and September 2016. CR/PR at Table IV-6.

[200] Australia and Canada have antidumping and countervailing duty orders in place on aluminum extrusions from China, and Colombia and Trinidad and Tobago have antidumping duty orders in place on aluminum extrusions from China. CR at IV-12, IV-15 to IV-16; PR at IV-7, IV-10 to IV-11; AEFTC's Prehearing Brief at 47-48.

[201] CR/PR at Table IV-7 (identifying eight export destinations between 2011 and 2015 that collectively accounted for between 25 and 60 percent of exports of aluminum extrusions from China, with other markets accounting for the remainder).

[202] For example, exports to Vietnam accounted for 0.8 percent of exports of aluminum extrusions from China in 2011, 1.2 percent in 2013, 7.3 percent in 2014, and 37.4 percent in 2015, and exports to Malaysia accounted for 2.5 percent of exports of aluminum extrusions from China in 2011, 5.9 percent in 2013, 22.6 percent in 2014, and 4.1 percent in 2015. CR/PR at Table IV-7. Neither Vietnam nor Malaysia ranks among the top global markets for consumption of aluminum extrusions. It is unclear why exports of aluminum extrusions from China experienced such large surges, CR/PR at Table IV-13, although AEFTC reported that the industry in China is transhipping aluminum extrusions to the United States through third countries such as Vietnam and Malaysia. AEFTC's Posthearing Brief at Exhibit 1 at 82; AEFTC's Prehearing Brief at 33-34, 44-45, Exhibit 26 (appending ***).

[203] CR/PR at Table II-7. Purchasers reported dropping or reducing purchases from several producers in China, including ***. CR at II-14; PR at II-10.

extrusions from China into the U.S. market.[204] As further evidence of the attractiveness of the U.S. market to the industry in China, Commerce preliminarily determined in November 2016 that producers in China circumvented the orders with "later-developed merchandise" by manipulating the chemistry of 5050 series aluminum, a series not intended for use in aluminum extrusions, in order to manufacture aluminum extrusions that would perform and function in a manner similar to the aluminum series that are covered by the scope of the orders.[205]

Accordingly, based on the demonstrated ability of the subject producers in China to increase exports to the U.S. market during the original investigations, their substantial production capacity and available unused capacity, their high degree of export orientation to a variety of markets, their willingness to shift substantial volumes among export markets from one period to the next, their continued albeit smaller presence in the U.S. market despite the orders, and the demonstrated attractiveness of the U.S. market to them, we find that the likely volume of subject imports from China, both absolutely and relative to both U.S. production and consumption, would be significant in the event of revocation.

D. Likely Price Effects

In the original investigations, the Commission found that subject imports were highly substitutable for the domestic like product and that price and quality were important factors in purchasing decisions.[206] It found that subject imports pervasively undersold the domestic like product in order to increase their share of the U.S. market at the domestic industry's expense.[207] The Commission also relied on evidence confirming that purchasers shifted

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[204] For example, *** reported that given ***; *** anticipated that ***; *** anticipated that ***; *** reported that domestic ***; *** anticipated ***; *** reported ***; *** reported ***; and *** stated that it ***. CR/PR at Appendix D; *see also, e.g.*, AEFTC's Prehearing Brief at 46-47.

[205] *See, e.g*., 81 Fed. Reg. 79444 (Nov. 14, 2016); CR at I-14; PR at I-11; AEFTC's Prehearing Brief at 30-31; Hearing Tr. at 43-44 (McEvoy); AEFTC's Posthearing Brief at Exhibit 1 at 83-84, Exhibit 37 (reporting that a U.S. purchaser and importer admitted during Commerce's proceedings having switched to 5050 alloy extrusions from China in order to avoid duties); *see also, e.g.*, Adams Thermal's Posthearing Brief at Answers to Commissioners' Questions at 35-36 (reporting that the anticircumvention inquiry involved one group of firms (China Zhongwang Holdings Ltd and its affiliates) but Commerce's preliminary determination covered all 5050-grade aluminum extrusions regardless of producer, exporter, or importer, noting that Commerce may issue its final determination later than the currently scheduled date of April 10, 2017, as necessary, and explaining that should Commerce uphold its circumvention decision in the final determination, Commerce will direct Customs to suspend liquidation of the merchandise on or after March 21, 2016, the date on which it published notice of its initiation of the anti-circumvention inquiry). AEFTC also reports that producers in China exported aluminum to the United States in the form of pallets as part of another attempt to evade the orders. AEFTC's Prehearing Brief at 30.

[206] Confidential Original Views at 28; USITC Pub. 4229 at 21.

[207] Twenty-six domestic producers and thirteen importers provided usable quarterly net U.S. f.o.b. selling price data for six pricing products. These data, which accounted for approximately 9.0 percent of the domestic industry's shipments and 4.0 percent of U.S. shipments of subject imports (Continued…)

$22.7 million in sales (15.4 million pounds) from the domestic industry to lower-priced subject imports.[208] On this basis, the Commission found that subject imports had a significant effect on the domestic industry's prices.[209]

As discussed above, subject imports from China are moderately to highly substitutable for the domestic like product and price remains an important consideration in purchasing decisions.[210] In these reviews, the Commission requested that U.S. producers and importers provide quarterly data for the total quantity and f.o.b. value of six aluminum extrusions products shipped to unrelated U.S. customers between January 2013 and September 2016.[211] In addition, firms that imported aluminum serpentine tubing for their own use were asked to provide import purchase cost data.[212] Eighteen U.S. producers provided usable pricing data for sales of the requested products, although not all firms reported data for all products for all quarters.[213] Importer *** provided only direct import purchase cost data for a single pricing product, aluminum serpentine tubing (product 6).[214] The data reported by these firms accounted for approximately 6.9 percent of the domestic industry's U.S. shipments of aluminum extrusions in 2015 and less than one percent of U.S. shipments of subject imports from China during this period.[215] Although direct import cost data are not directly comparable to U.S. producers' and importers' f.o.b. prices, we note that *** reported purchase costs for its imports of aluminum serpentine tubing (product 6) that were consistently lower by a wide differential than the domestic industry's sales values for this product. Additionally, various U.S. importers and purchasers anticipate lower prices for subject imports from China and more price competition in the U.S. market in the event of revocation.[216]

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from China, indicated that subject imports undersold the domestic like product in 43 of 58 quarterly comparisons (74.0 percent) at margins that ranged from 1.6 to 66.1 percent. Confidential Original Views at 28; USITC Pub. 4229 at 22.

[208] Confidential Original Views at 28-29; USITC Pub. 4229 at 22. The Commission found no clear evidence that subject imports depressed or suppressed prices of the domestic like product to a significant degree. The domestic industry's prices for three of the pricing products decreased between 2008 and 2010 and rose for the other three pricing products, whereas its ratio of cost of goods sold to the value of net sales declined from *** percent to *** percent during this period. Confidential Original Views at 28-29; USITC Pub. 4229 at 22.

[209] Confidential Original Views at 29; USITC Pub. 4229 at 22.

[210] CR at II-10; PR at II-7; CR/PR at Table II-1, Table II-2, Table II-8, Table II-9, and Table II-10. Purchasers reported that for this industry, purchasing aluminum extrusions manufactured in the United States is not important. CR at II-14; PR at II-11.

[211] CR at V-5 to V-6; PR at V-4.

[212] CR at V-6; PR at V-5.

[213] CR at V-6; PR at V-5; CR/PR at Table V-3 to Table V-5.

[214] CR at V-6; PR at V-4; CR/PR at Table V-3 to Table V-5. Commission staff had to estimate quantity data for *** using information from *** since *** reported only prices and not quantities. CR/PR at Table V-5 at note.

[215] CR at V-6 to V-7; PR at V-5.

[216] For example, *** reported that revocation of the orders ***; *** anticipated ***; *** anticipates ***; *** reported that the ***; and *** anticipated that ***.

In view of our finding of a likely significant volume of subject imports, the moderate to high degree of substitutability between subject imports and the domestic like product, the importance of price in purchasing decisions, and information about pricing behavior reported in these reviews, we find that underselling by subject imports is likely to be significant if the orders were revoked. Consequently, domestic producers would be required either to cut prices to meet subject import competition or lose sales. In the former event, subject imports likely would cause significant price depression as the domestic industry meets low prices of subject imports to maintain capacity utilization and/or significant price suppression, if the domestic industry is unable to realize price increases that would otherwise occur, depending on conditions of competition and changes in its costs.[217] If it were to lose sales, the domestic industry would likely incur a similar loss of market share to subject imports that it experienced during the original investigations.

Given subject imports' continued presence in the U.S. market and our finding of a likely significant volume of subject imports in the event of revocation, we conclude that the likely significant volume of subject imports from China would undersell the domestic like product to a significant degree to gain market share and enter the U.S. market at prices that otherwise would have a significant depressing and/or suppressing effect on prices of the domestic like product.

E. Likely Impact

In the original investigations, the Commission found that many of the performance indicators (including capacity, production, capacity utilization, U.S. shipments, and net sales quantities) for the domestic industry producing aluminum extrusions other than FHS declined between 2008 and 2009, during which time the domestic industry lost *** percentage points of market share to subject imports from China.[218] Although these performance indicators improved somewhat between 2009 and 2010, they remained at lower levels in 2010 than in 2008.[219] The domestic industry's employment indicators declined steeply,[220] and its financial performance also was poor during much of this period.[221] The Commission found that subject

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[217] During the original investigations, the Commission found that domestic producers had little ability to negotiate or change their costs of primary aluminum. Their price negotiations with purchasers tended to focus on the extrusion or "conversion" costs. Confidential Original Views, EDIS Doc. 582660 at 25; USITC Pub. 4229 at 20.

[218] Confidential Original Views at 29-30; USITC Pub. 4229 at 23.

[219] Confidential Original Views at 29-30; USITC Pub. 4229 at 23.

[220] The Commission noted that the average number of production and related workers declined *** percent between 2008 and 2010, while wages paid declined *** percent during this period. Confidential Original Views at 30; USITC Pub. 4229 at 23.

[221] Net sales fell *** percent between 2008 and 2010, and operating income declined from a loss of $*** in 2008 (or negative *** percent of sales) to a loss of $*** (or negative *** percent of sales) in 2009, before recovering to a positive $*** (or *** percent of sales) in 2010. Capital expenditures and (Continued…)

imports from China increased their market share substantially between 2008 and 2010 by pervasively underselling the domestic like product and had a significant impact on the domestic industry's condition.[222]

Although the general economic downturn played a role in the domestic industry's deteriorating performance, the Commission found that the magnitude of the domestic industry's declines exceeded the decline in apparent U.S. consumption.[223] The Commission also considered the role of nonsubject imports on the domestic industry's condition, but it observed that nonsubject imports, which generally were priced higher than the domestic like product and subject imports, held a small and declining share of the U.S. market, including in 2009, the worst year for the domestic industry's performance indicators.[224] Having considered the role of other factors to ensure that it was not attributing to subject imports any injury to the domestic industry from those factors, the Commission concluded that other factors did not sever the causal link between subject imports and the domestic industry's condition.[225]

In assessing the domestic industry's current condition, we observe that a number of its performance indicators improved overall since the last proceedings while the orders have been in place, including production,[226] U.S. shipments,[227] capacity utilization,[228] net sales,[229] market share,[230] and employment.[231] The domestic industry reported that imposition of the orders

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research and development expenditures declined overall between 2008 and 2010. Confidential Original Views at 30-31; USITC Pub. 4229 at 23.

[222] Confidential Original Views at 29-32; USITC Pub. 4229 at 23.

[223] Confidential Original Views at 32; USITC Pub. 4229 at 23.

[224] Confidential Original Views at 31; USITC Pub. 4229 at 23-24.

[225] Confidential Original Views at 31-32; USITC Pub. 4229 at 24.

[226] The domestic industry reported producing *** short tons in 2010, compared to 1,220,407 short tons in 2013, 1,326,825 short tons in 2014, 1,382,446 short tons in 2015, 1,054,863 short tons in interim 2015, and 1,074,316 short tons in interim 2016. CR/PR at Table III-1, Table C-1; Confidential Original Views, EDIS Doc. 582660 at 30; USITC Pub. 4229 at 23.

[227] The domestic industry reported U.S. shipments of *** short tons in 2010, compared to 1,140,254 short tons in 2013, 1,237,750 short tons in 2014, 1,310,914 short tons in 2015, 1,002,687 short tons in interim 2015, and 1,014,801 short tons in interim 2016. CR/PR at Table III-4, Table C-1; Confidential Original Views, EDIS Doc. 582660 at 30; USITC Pub. 4229 at 23.

[228] The domestic industry's capacity utilization was *** percent in 2010, compared to 74.8 percent in 2013, 78.9 percent in 2014, 80.9 percent in 2015, 81.9 percent in interim 2015, and 80.6 percent in interim 2016. Capacity rose from 2013 to 2015, and was higher in interim 2016 than in interim 2015. CR/PR at Table III-3, Table C-1; Confidential Original Views, EDIS Doc. 582660 at 30; USITC Pub. 4229 at 23.

[229] The domestic industry's net sales were *** short tons in 2010, compared to 1,155,666 short tons in 2013, 1,251,874 short tons in 2014, 1,319,322 short tons in 2015, 1,014,705 short tons in interim 2015, and 1,024,773 short tons in interim 2016. Inventories as a percentage of production or shipments fluctuated within a narrow range during these reviews. CR/PR at Table III-5, Table III-8, Table C-1; 2010 data derived from CR at C-11, C-12; PR at C-11, C-12.

[230] The domestic industry's share of apparent U.S. consumption was *** percent in 2010 and was 87.5 percent in 2013, 86.7 percent in 2014, 86.3 percent in 2015, 86.5 percent in interim 2015, and (Continued…)

stabilized the market and encouraged investments, expansions, and upgrades by domestic producers.[232] The domestic industry's financial indicators also improved,[233] although its operating margins remain modest.[234] While the domestic industry's improvement in output, capacity utilization, U.S. shipments, market share, net sales, and employment, which are to some extent related to the orders, reduce its vulnerability, its modest operating performance tends to increase it.

Given our findings in the original investigations and our finding based on the current record of a likely significant volume of subject imports that likely would undersell the domestic like product, leading to likely lost sales and depression and/or suppression of prices of the domestic like product to a significant degree, we find that revoking the orders would likely adversely impact the production, shipments, sales, market share, and revenues of the domestic industry. Reductions in these indicia would lead to declines in the domestic industry's profitability, employment, and ability to raise capital and maintain necessary capital investments.[235] We therefore conclude that, if the orders were revoked, subject imports from

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(…Continued)
86.0 percent in interim 2016. CR/PR at Table I-10, Table C-1; Confidential Original Views, EDIS Doc. 582660 at 30; USITC Pub. 4229 at 23.

[231] The domestic industry employed *** production and related workers ("PRWs") in 2010, compared to 13,677 PRWs in 2013, 14,526 PRWs in 2014, 15,201 PRWs in 2015, 15,248 PRWs in interim 2015, and 16,057 PRWs in interim 2016. Wages paid and hourly wages increased each year from 2013 to 2015 and were each higher in interim 2016 than in interim 2015. Productivity fluctuated within a narrow range from 2013 to 2015 and was lower in interim 2015 than in interim 2015. CR/PR at Table III-7, Table C-1; Confidential Original Views EDIS Doc. 582660 at 30; USITC Pub. 4229 at 23.

[232] CR/PR at Table III-1 and Table III-2; CR at III-6 to III-7; PR at III-4; Hearing Tr. at 12 (Price), 21 (Henderson), 30-31 (Johnson), 34-35 (Merluzzi), 41 (Hamilton), 48-49 (Adams); AEFTC's Prehearing Brief at 2, Exhibit 8 at 3-4. The domestic industry's capital expenditures and research and development expenses reached their highest levels in 2015. CR/PR at Table III-11 (capital expenditures were $124.2 million in 2013, $124.0 million in 2014, $174.6 million in 2015, $112.1 million in interim 2015, and $97.6 million in interim 2016, whereas research and development expenses were $34.7 million in 2013, $40.0 million in 2014, $43.1 million in 2015, $32.1 million in interim 2015, and $28.6 million in interim 2016).

[233] The domestic industry's net sales value was *** in 2010 and improved to $4.3 billion in 2013, $4.8 billion in 2014, $5.0 billion in 2015, $4.0 billion in interim 2015, and $3.6 billion in interim 2016. Its operating income was $79.9 million in 2010, $182.0 million in 2013, $187.0 million in 2014, $236.3 million in 2015, $224.6 million in interim 2015, and $197.0 million in interim 2016. Its COGS to net sales ratio was *** percent in 2010, 90.1 percent in 2013, 90.3 percent in 2014, 89.7 percent in 2015, 89.0 percent in interim 2015, and 88.7 percent in interim 2016. CR/PR at Table III-8, Table C-1; Confidential Original Views, EDIS Doc. 582660 at 29, 30; USITC Pub. 4229 at 22, 23.

[234] The domestic industry's operating income as a share of net sales was *** percent in 2010, compared to 4.2 percent in 2013, 3.9 percent in 2014, 4.7 percent in 2015, 5.2 percent in interim 2015, and 4.8 percent in interim 2016. CR/PR at Table C-1; Confidential Original Views, EDIS Doc. 582660 at 30-31; USITC Pub. 4229 at 23.

[235] *See, e.g.*, CR/PR at Table D-1.

China would likely have a significant impact on the domestic industry within a reasonably foreseeable time.[236]

We have considered whether there are other factors that likely would affect the domestic industry in the reasonably foreseeable future. As discussed above, nonsubject imports have had a substantial and increasing presence in the U.S. market.[237] Despite the growing presence of these imports in the U.S. market, the domestic industry's performance improved between January 2013 and September 2016. In the event of revocation, the continued presence of these nonsubject imports would not preclude subject imports from taking market share from and having a significant impact on the domestic industry. We find that the likely effects that we have attributed to subject imports are consequently distinguishable from any that could be attributed to nonsubject imports. Accordingly, we find that subject imports would likely have a significant impact on the domestic industry upon revocation notwithstanding nonsubject imports.

V. Conclusion

For the foregoing reasons, we determine that revocation of the antidumping and countervailing duty orders on aluminum extrusions from China would be likely to lead to continuation or recurrence of material injury to the domestic industry within a reasonably foreseeable time.

[236] Respondents took no position on continuation of the orders with respect to aluminum extrusions as a whole. *See, e.g.*, Hearing Tr. at 169 (Schaefer) (when asked whether respondents take any position with respect to continuation of the orders with respect to any of the products other than the ones they specifically mentioned, replying, "I think officially, we don't. For my part, frankly, to be perfectly truthful, I agree with Mr. Price's comment this morning that the recovery of the extrusions industry reflects the law working the way that it is supposed to.").

[237] Nonsubject imports accounted for 11.8 percent of apparent U.S. consumption, by quantity, in 2013, 12.5 percent in 2014, 13.3 percent in 2015, 13.1 percent in interim 2015, and 13.6 percent in interim 2016. CR/PR at Table I-10.

PART I: INTRODUCTION

BACKGROUND

On April 1, 2016, the U.S. International Trade Commission ("Commission" or "USITC") gave notice, pursuant to section 751(c) of the Tariff Act of 1930, as amended ("the Act"),[1] that it had instituted reviews to determine whether revocation of countervailing and antidumping duty orders on certain aluminum extrusions other than finished heat sinks ("aluminum extrusions") from China would likely lead to the continuation or recurrence of material injury to a domestic industry.[2] On July 5, 2016, the Commission determined that it would conduct full reviews pursuant to section 751(c)(5) of the Act.[3] The following tabulation presents information relating to the background and schedule of this proceeding:[4]

[1] 19 U.S.C. 1675(c).

[2] *Certain Aluminum Extrusions from China; Institution of Five-Year Reviews*, 81 FR 18884, April 1, 2016. In accordance with section 751(c) of the Act, the U.S. Department of Commerce ("Commerce") published a notice of initiation of a five-year review of the subject antidumping duty and countervailing duty orders concurrently with the Commission's notice of institution. *Initiation of Five-Year ("Sunset") Review*, 81 FR 18829, April 1, 2016. Pertinent *Federal Register* notices are referenced in appendix A, and may be found at the Commission's website (www.usitc.gov).

[3] *Certain Aluminum Extrusions from China; Notice of Commission Determination to Conduct Full Five-Year Reviews*, 81 FR 45304, July 13, 2016. The Commission found that the domestic interested party group response was adequate. Although the Commission received two responses to its notice of institution from respondent interested parties, it found the respondent interested party group responses to be inadequate. Vice Chairman Johanson and Commissioners Kieff and Broadbent found that other circumstances warranted conducting full reviews. Chairman Schmidtlein and Commissioners Pinkert and Williamson voted to conduct expedited reviews.

[4] The Commission's notice of institution, notice of determination to conduct full reviews, scheduling notice, and statement on adequacy are referenced in appendix A and may also be found at the Commission's web site (internet address *www.usitc.gov*). Commissioners' votes on whether to conduct expedited or full reviews may also be found at the web site. Appendix B presents the witnesses appearing at the Commission's hearing.

Effective date	Action
April 1, 2016	Commission's institution of five-year reviews (81 FR 18884)
April 1, 2016	Commerce's initiation of five-year reviews (81 FR 18829)
July 5, 2016	Commission's determination to conduct full five-year reviews (81 FR 45304, July 13, 2016)
August 5, 2016	Final results of Commerce's expedited five-year review of the antidumping duty order on aluminum extrusions from China (81 FR 51855)
August 5, 2016	Final results of Commerce's expedited five-year review of the countervailing duty order on aluminum extrusions from China (81 FR 51858)
September 29, 2016	Commission's scheduling of the full reviews (81 FR 69078, October 5, 2016)
January 26, 2017	Commission's hearing
March 10, 2017	Commission's vote
March 27, 2017	Commission's determinations and views

The original investigations

The original investigations were instituted in response to petitions filed on March 31, 2010, by the Aluminum Extrusions Fair Trade Committee ("Committee" or "AEFTC")[5] and the United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union ("USW") (collectively "petitioners") alleging that an industry in the United States was materially injured and threatened with material injury by reason of less-than-fair-value ("LTFV") imports of certain soft-alloy aluminum extrusions from China and by reason of imports of subsidized aluminum extrusions from China. In its determinations, the Commission found that an industry in the United States was materially injured by reason of imports of certain aluminum extrusions from China other than finished heat sinks, provided for in subheadings 7604.21, 7604.29, and 7608.20 of the Harmonized Tariff Schedule of the United

[5] The original members of the Committee included the following companies: Aerolite Extrusion Company ("Aerolite"); Alexandria Extrusion Company ("Alexandria"); Benada Aluminum of Florida, Inc. ("Benada"); William L. Bonnell Company, Inc. ("Bonnell"); Frontier Aluminum Corporation ("Frontier "); Futura Industries Corporation ("Futura"); Hydro Aluminum North America, Inc. ("Hydro"); Kaiser Aluminum Corporation ("Kaiser"); Profile Extrusion Company ("Profile Extrusion"); Sapa Extrusions, Inc. ("Sapa"); and Western Extrusions Corporation ("Western"), which accounted for a significant majority of U.S. production of soft alloy aluminum extrusions. In their response to the notice of institution in these reviews, the domestic interested parties noted that since the filing of the original petitions, the composition of the AEFTC has changed. First, they noted that Benada is no longer a member; they believe Benada ceased production of aluminum extrusions and is now only resells aluminum products. Second, they noted that Hydro and Sapa merged in late 2013. In the merger, Hydro's extrusion assets were organized under Sapa's ownership. Therefore, while Hydro remains a member of the AEFTC, it is no longer a producing member. *Domestic Interested Parties' Response to the Notice of Institution*, p. 3.

States, that Commerce had determined were subsidized and sold in the United States at LTFV.[6] The Commission further determined that an industry in the United States was not materially injured or threatened with material injury and the establishment of an industry in the United States was not materially retarded by reason of imports of finished heat sinks from China.[7] Commerce issued antidumping and countervailing duty orders with respect to certain aluminum extrusions from China other than finished heat sinks on May 26, 2011.[8]

RELATED INVESTIGATIONS

Aluminum extrusions have 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[9] and the Office of the United States Trade Representative recently requested WTO consultations with the government of China regarding overcapacity in its aluminum industry.[10]

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[6] All six Commissioners voted in the affirmative. *Certain Aluminum Extrusions from China: Determinations*, 76 FR 29007, May 19, 2011. The U.S. Court of International Trade affirmed the Commissions finding in the original investigations. Aluminum Extrusions Fair Trade Committee v. United States, 2012 WL5201218 (Oct. 11, 2012).

[7] Finished heat sinks are fabricated heat sinks, sold to electronics manufacturers, the design and production of which are organized around meeting certain specified thermal performance requirements and which have been fully, albeit not necessarily individually, tested to comply with such requirements. Commissioners Williamson and Lane did not join in this determination because they did not find that finished heat sinks were a separate domestic like product. *Certain Aluminum Extrusions from China: Determinations*, 76 FR 29007, May 19, 2011.

[8] *Aluminum Extrusions from the People's Republic of China: Antidumping Duty Order*, 76 FR 30650, May 26, 2011. *Aluminum Extrusions from the People's Republic of China: Countervailing Duty Order*, 76 FR 30653, May 26, 2011. Commerce's imposition of countervailing duty measures on aluminum extrusion and other products is subject to ongoing WTO compliance proceedings in *U.S.-Countervailing measures*, DS437.

[9] 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.

[10] 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.

SUMMARY DATA

Table I-1 presents a summary of data from the original investigations and the current five-year reviews.[11] Staff relied on official statistics for U.S. imports for the same statistical reporting numbers in the current reviews that were used in the original investigations. Other data related to U.S. importers are based on questionnaire responses of 16 U.S. importers of aluminum extrusions and 5 firms that certified that they had not imported aluminum extrusions since January 2011. These responses are believed to have accounted for ***[12] percent of aluminum extrusion imports from China and *** percent of U.S. imports from nonsubject countries during 2015.[13]

During the original investigations, 54 U.S. producers, believed to represent the vast majority of U.S. production of aluminum extrusions during 2008-10, provided responses to the Commission's questionnaire. In these five-year reviews, 25 U.S. producers, representing *** percent of U.S. production in 2015, provided questionnaire responses.[14] Although fewer producers responded, the production data in these reviews are not dissimilar from those reported in the original investigations because of consolidation in the industry and because all of the largest U.S. producers provided questionnaire responses.[15]

Foreign industry data and related information are based on *** data, various public industry sources, and the questionnaire responses of two producers of aluminum extrusions that accounted for less than *** percent of total production in China during 2015.[16]

The quantity of apparent consumption in the United States increased by 19.9 percent from 2010 (the final year in the original investigations) to 2015. Over the same period, U.S. producers increased market share by 11.3 percentage points to 86.3 percent. U.S. imports of

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[11] Staff typically collects 5-6 years of data in full first five-year reviews. However, the shifting scope definition and the multiple like product issues complicated reporting for the many small producers and importers and reduced the comparability of data from the original investigations and the current reviews. Consequently, Staff collected three full years of data and January-September interim periods. Staff also collected U.S. producers' shipment data for 2011 and 2012 in order to provide continuous estimates of consumption and market shares.

[12] According to ***, responding firms accounted for *** short tons of a total of *** short tons of U.S. imports of aluminum extrusions from China in 2015. *** were used for this figure because some of the ***, certified that they had not imported aluminum extrusions since 2011.

[13] In their questionnaire responses, U.S. importers reported *** short tons of U.S. imports from nonsubject sources compared to 202,645 short tons according to official import statistics in 2015.

[14] The coverage estimate is based on the AEFTC's estimate of in-scope U.S. production during 2015, which was *** short tons. *Domestic Interested Parties' Response to the Notice of Institution*, p. 32 and exh. 8. *** estimates that *** short tons of aluminum extrusions were produced in the United States in 2015. That estimate indicates that production coverage for this report is *** percent, however *** production estimate overstates in-scope production because it includes series 2, 5, and 7 alloys. ***.

[15] Known U.S. producers *** did not submit U.S. producers' questionnaire responses.

[16] The two foreign producers collectively reported *** short tons compared to *** estimate of *** short tons of aluminum extrusions produced in China during 2015.

aluminum extrusions from China decreased by 96.9 percent from 2010 to 2015, while imports from nonsubject sources increased by 73.8 percent over the same period.

Table I-1
Aluminum extrusions: Comparative data for the original investigations and first reviews, 2008-15

Item	Original investigations			First reviews				
	Calendar year							
	2008	2009	2010	2011	2012	2013	2014	2015
	Quantity (short tons)							
U.S. consumption quantity	1,329,528	1,116,235	1,267,452	1,150,246	1,243,576	1,303,457	1,427,417	1,519,686
	Share of quantity (percent)							
Share of U.S. consumption: U.S. producers' share	83.7	73.1	75.0	87.6	87.4	87.5	86.7	86.3
U.S. imports share: China	6.7	19.0	15.8	0.4	0.5	0.8	0.8	0.4
Canada	6.0	5.2	5.5	5.9	6.0	5.4	5.4	5.4
All other sources	3.6	2.7	3.7	6.1	6.0	6.4	7.1	7.9
Subtotal, nonsubject sources	9.6	7.9	9.2	12.0	12.0	11.8	12.5	13.3
Total imports	16.3	26.9	25.0	12.4	12.6	12.5	13.3	13.7
	Value (1,000 dollars)							
U.S. consumption	5,706,626	3,796,295	4,606,386	4,966,937	5,078,191	5,277,626	5,858,787	6,176,090
	Share of value (percent)							
Share of U.S. consumption: U.S. producers' share	83.1	76.1	77.2	86.6	86.3	86.4	86.0	85.4
U.S. imports share: China	5.9	14.4	11.7	0.4	0.6	0.8	0.9	0.5
Canada	5.8	5.3	5.6	5.5	5.6	5.0	5.1	5.2
All other sources	5.2	4.1	5.5	7.4	7.5	7.8	8.1	8.8
Subtotal, nonsubject sources	11.0	9.5	11.1	13.0	13.1	12.8	13.2	14.1
Total imports	16.9	23.9	22.8	13.4	13.7	13.6	14.0	14.6
	Quantity (short tons); value (1,000 dollars); and unit value (dollars per short ton)							
U.S. import from China:								
Quantity	89,043	211,705	200,192	4,640	6,667	9,824	11,068	6,127
Value	335,530	547,968	537,498	22,131	28,795	41,709	50,196	31,100
Unit value	$3,768	$2,588	$2,685	$4,770	$4,319	$4,246	$4,535	$5,076
Canada:								
Quantity	79,885	58,457	69,802	67,800	74,924	70,139	77,739	81,988
Value	333,234	201,876	255,930	275,646	284,392	264,977	299,590	323,637
Unit value	$4,171	$3,453	$3,666	$4,066	$3,796	$3,778	$3,854	$3,947
All other sources:								
Quantity	48,283	29,625	46,819	69,734	74,503	83,241	100,861	120,657
Value	297,272	157,506	255,052	368,567	380,588	409,931	471,812	544,883
Unit value	$6,157	$5,317	$5,448	$5,285	$5,108	$4,925	$4,678	$4,516
Subtotal, nonsubject sources:								
Quantity	128,168	88,082	116,621	137,533	149,426	153,379	178,600	202,645
Value	630,506	359,382	510,982	644,212	664,980	674,908	771,402	868,520
Unit value	$4,919	$4,080	$4,382	$4,684	$4,450	$4,400	$4,319	$4,286
Total imports:								
Quantity	217,212	299,788	316,814	142,173	156,093	163,203	189,667	208,772
Value	966,036	907,350	1,048,479	666,343	693,775	716,617	821,598	899,619
Unit value	$4,447	$3,027	$3,309	$4,687	$4,445	$4,391	$4,332	$4,309

Table continued on next page.

Table I-1--Continued
Aluminum extrusions: Comparative data for the original investigations and first reviews, 2008-15

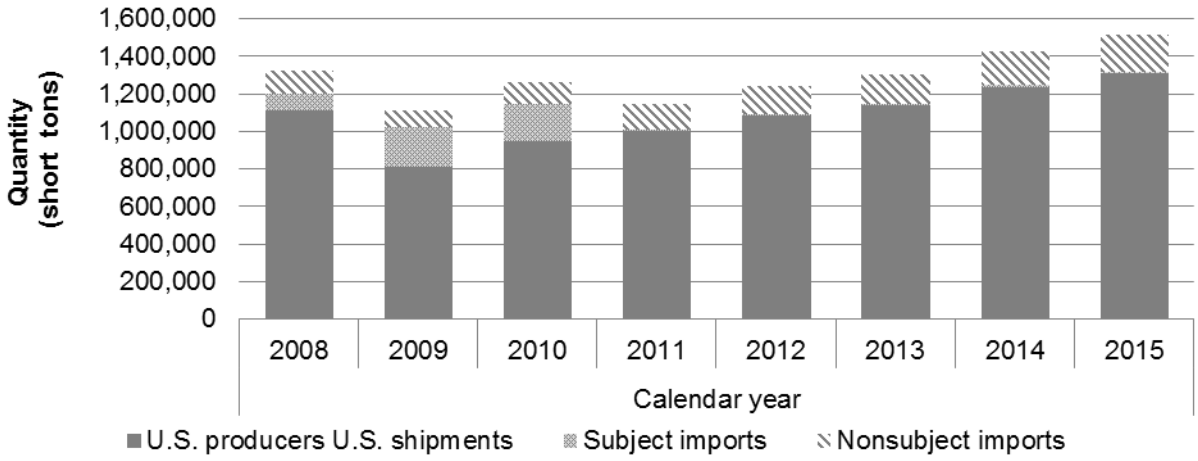
Item	Original investigations			First reviews				
	Calendar year							
	2008	2009	2010	2011	2012	2013	2014	2015
	Quantity (short tons); value (1,000 dollars); and unit value (dollars per short ton)							
U.S. industry:								
Capacity (quantity)	1,802,365	1,725,729	1,747,124	([1])	([1])	1,631,243	1,682,077	1,709,753
Production (quantity)	1,167,286	848,569	1,019,535	([1])	([1])	1,220,407	1,326,825	1,382,446
Capacity utilization (percent)	64.8	49.2	58.4	([1])	([1])	74.8	78.9	80.9
U.S. shipments:								
Quantity	1,112,316	816,447	950,638	1,008,073	1,087,483	1,140,254	1,237,750	1,310,914
Value	4,740,590	2,888,945	3,557,906	4,300,594	4,384,416	4,561,009	5,037,189	5,276,471
Unit value	$4,262	$3,538	$3,743	$4,266	$4,032	4,000	4,070	4,025
Ending inventory	48,689	39,224	51,059	([1])	([1])	63,623	77,151	73,510
Inventories/total shipments	4.2	4.6	5.2	([1])	([1])	5.3	5.9	5.3
Production workers	12,217	9,793	9,703	([1])	([1])	13,677	14,526	15,201
Hours worked (1,000)	25,740	20,085	20,371	([1])	([1])	27,764	29,938	31,573
Wages paid (1,000 dollars)	494,207	384,143	403,442	([1])	([1])	604,558	665,284	725,044
Hourly wages	$19.20	$19.12	$19.81	([1])	([1])	$21.77	$22.22	$22.96
Productivity (short tons per hour)	45.7	42.5	50.3	([1])	([1])	44.0	44.3	43.8
Financial data:								
Net sales:								
Quantity	1,134,788	824,773	955,696	([1])	([1])	1,155,666	1,251,874	1,319,322
Value	5,120,665	2,955,829	3,726,451	([1])	([1])	4,299,437	4,762,885	4,977,675
Unit value	$4,512	$3,584	$3,899	([1])	([1])	$3,720	$3,805	$3,773
Cost of goods sold	4,834,600	2,757,457	3,374,194	([1])	([1])	3,872,102	4,300,544	4,465,141
Gross profit or (loss)	286,065	198,370	352,257	([1])	([1])	427,335	462,341	512,534
SG&A expense	318,188	277,171	272,407	([1])	([1])	245,369	275,379	276,211
Operating income or (loss)	(32,123)	(78,802)	79,850	([1])	([1])	181,966	186,962	236,323
Unit COGS	$4,260	$3,343	$3,531	([1])	([1])	$3,351	$3,435	$3,384
Unit SG&A expenses	$280	$336	$285	([1])	([1])	$212	$220	$209
Unit operating income	$(28)	$(96)	$84	([1])	([1])	$157	$149	$179
COGS / sales (percent)	94.4	93.3	90.5	([1])	([1])	90.1	90.3	89.7
Operating income or (loss) / sales (percent)	(0.6)	(2.7)	2.1	([1])	([1])	4.2	3.9	4.7

[1] Not collected.

Note.—U.S. production data from the original investigations (2008-10) include a small number of firms (primarily shower door and finished heat sink manufacturers) that do not extrude aluminum. These firms accounted for less than *** percent of total U.S. production quantity reported in 2010.

Source: Compiled from *Investigation Nos. 701-TA-475 and 731-TA-1177 (Final): Certain Aluminum Extrusions from China-Staff Report, table C-1 (including finished heat sinks),* INV-JJ-038, April 15, 2011 and data submitted in response to Commission questionnaires and official import statistics using HTS statistical reporting numbers 7604.21.0000, 7604.29.1000, 7604.29.3010, 7604.29.3050, 7604.29.5030, 7604.29.5060, 7608.20.0030, 7608.20.0090, accessed November 28, 2016.

Figure I-1
Aluminum extrusions: Apparent U.S. consumption, 2008-15



Source: Compiled from table I-1.

STATUTORY CRITERIA AND ORGANIZATION OF THE REPORT

Statutory criteria

Section 751(c) of the Act requires Commerce and the Commission to conduct a review no later than five years after the issuance of an antidumping or countervailing duty order or the suspension of an investigation to determine whether revocation of the order or termination of the suspended investigation "would be likely to lead to continuation or recurrence of dumping or a countervailable subsidy (as the case may be) and of material injury."

Section 752(a) of the Act provides that in making its determination of likelihood of continuation or recurrence of material injury--

> *(1) IN GENERAL.-- . . . the Commission shall determine whether revocation of an order, or termination of a suspended investigation, would be likely to lead to continuation or recurrence of material injury within a reasonably foreseeable time. The Commission shall consider the likely volume, price effect, and impact of imports of the subject merchandise on the industry if the order is revoked or the suspended investigation is terminated. The Commission shall take into account--*
>
> *(A) its prior injury determinations, including the volume, price effect, and impact of imports of the subject merchandise on the industry before the order was issued or the suspension agreement was accepted,*
>
> *(B) whether any improvement in the state of the industry is related to the order or the suspension agreement,*
>
> *(C) whether the industry is vulnerable to material injury if the order is revoked or the suspension agreement is terminated, and*
>
> *(D) in an antidumping proceeding . . ., (Commerce's findings) regarding duty absorption . . ..*

(2) VOLUME.--In evaluating the likely volume of imports of the subject merchandise if the order is revoked or the suspended investigation is terminated, the Commission shall consider whether the likely volume of imports of the subject merchandise would be significant if the order is revoked or the suspended investigation is terminated, either in absolute terms or relative to production or consumption in the United States. In so doing, the Commission shall consider all relevant economic factors, including--

> *(A) any likely increase in production capacity or existing unused production capacity in the exporting country,*
> *(B) existing inventories of the subject merchandise, or likely increases in inventories,*
> *(C) the existence of barriers to the importation of such merchandise into countries other than the United States, and*
> *(D) 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.*

(3) PRICE.--In evaluating the likely price effects of imports of the subject merchandise if the order is revoked or the suspended investigation is terminated, the Commission shall consider whether--

> *(A) there is likely to be significant price underselling by imports of the subject merchandise as compared to domestic like products, and*
> *(B) imports of the subject merchandise are likely to enter the United States at prices that otherwise would have a significant depressing or suppressing effect on the price of domestic like products.*

(4) IMPACT ON THE INDUSTRY.--In evaluating the likely impact of imports of the subject merchandise on the industry if the order is revoked or the suspended investigation is terminated, the Commission shall consider all relevant economic factors which are likely to have a bearing on the state of the industry in the United States, including, but not limited to–

> *(A) likely declines in output, sales, market share, profits, productivity, return on investments, and utilization of capacity,*
> *(B) likely negative effects on cash flow, inventories, employment, wages, growth, ability to raise capital, and investment, and*
> *(C) likely negative effects on the existing development and production efforts of the industry, including efforts to develop a derivative or more advanced version of the domestic like product.*

The Commission shall evaluate all such relevant economic factors . . . within the context of the business cycle and the conditions of competition that are distinctive to the affected industry.

Section 752(a)(6) of the Act states further that in making its determination, "the Commission may consider the magnitude of the margin of dumping or the magnitude of the net

countervailable subsidy. If a countervailable subsidy is involved, the Commission shall consider information regarding the nature of the countervailable subsidy and whether the subsidy is a subsidy described in Article 3 or 6.1 of the Subsidies Agreement."

Organization of report

Information obtained during the course of these reviews that relates to the statutory criteria is presented throughout this report. A summary of trade and financial data for aluminum extrusions as collected in the reviews is presented in appendix C. U.S. industry data are based on the questionnaire responses of 25 U.S. producers of aluminum extrusions. Import data and related information are based on Commerce's official import statistics and the questionnaire responses of 16 U.S. importers of aluminum extrusions. Foreign industry data and related information are based on *** data, various public industry sources, and the questionnaire responses of two producers of aluminum extrusions in China. Responses by U.S. producers, importers, purchasers, and foreign producers of aluminum extrusions to a series of questions concerning the significance of the existing antidumping and countervailing duty orders and the likely effects of revocation of such orders are presented in appendix D.

COMMERCE'S REVIEWS

Administrative reviews

Since the issuance of the countervailing and antidumping duty orders concerning aluminum extrusions from China, Commerce has completed four administrative reviews. In the 2014-15 administrative review of the antidumping duty order, nine companies were eligible for a separate rate, which was 86.01 percent.[17] Commerce rescinded in part the 2014 countervailing duty administrative review and set the final net subsidy rates for mandatory respondent Jangho Group and 45 non-selected companies under review at 16.08 percent. Commerce set the final net subsidy rate for the other mandatory respondent, Zhongya Group, at 195.69 percent based on adverse facts available.[18]

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[17] The nine separate rate companies include: Allied Maker Limited; Birchwoods (Lin'an) Leisure Products Co., Ltd.; Changzhou Changzheng Evaporator Co., Ltd.; Dongguan Aoda Aluminum Co., Ltd.; JMA (HK) Company Limited (JMA); Kam Kiu Aluminium Products Sdn. Bhd.; Metaltek Group Co., Ltd.; Taishan City Kam Kiu Aluminium Extrusion Co., Ltd.; and Tianjin Jinmao Import & Export Corp., Ltd. *Aluminum Extrusions from the People's Republic of China: Final Results of Antidumping Duty Administrative Review; 2014-2015*, 81 FR 85516, November 28, 2016. In its first administrative review, Commerce calculated a zero dumping margin for Kromet International, Inc. *Aluminum Extrusions from the People's Republic of China: Final Results of Antidumping Duty Administrative Review and Rescission, in Part, 2010/12*, 79 FR 96, January 2, 2014.

[18] *Aluminum Extrusions from the People's Republic of China: Final Results and Partial Rescission of Countervailing Duty Administrative Review; 2014*, 81 FR 92778, December 20, 2016.

Changed circumstances review

Commerce has conducted one changed circumstances review with respect to aluminum extrusions from China. On June 20, 2013, Commerce received a request on behalf of 3M that it revoke the Orders with respect to certain extruded aluminum rectangular wire. The AEFTC submitted a letter to Commerce stating that it no longer had an interest in maintaining the orders with respect to this rectangular wire, whether 3M or any other party imports it. No other interested parties commented so the orders were revoked in part accordingly effective September 7, 2010 for the countervailing duty order and November 12, 2010 for the antidumping duty order.[19]

Scope inquiries

As of February 2, 2017, there have been 99 final scope rulings since the imposition of the countervailing and antidumping duty orders on aluminum extrusions from China. In approximately two-thirds of these instances, Commerce has found that the products under review were outside the scope of the antidumping and countervailing duty orders on aluminum extrusions from China.[20] Of all of the scope inquiries, only one was brought by a member of the AEFTC (Sapa). Sapa requested a ruling on shower door kits, which were found to be outside of the scope. Among the products Commerce found to be within the scope were: retractable awning mechanisms, various fencing and curtain wall products, motor cases, geodesic structures, precision machine parts, fin evaporator systems,[21] auto trim kits, pocket door tracks, and a number of others.[22]

Anti-circumvention findings

On November 14, 2016, Commerce published a notice of its preliminary determination of circumvention of the antidumping and countervailing duty orders with respect to heat-treated 5050-grade aluminum alloy extrusions, which Commerce defined as "later-developed merchandise."[23] According to an industry representative, the 5050 grade alloy was substituted

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[19] *Aluminum Extrusions From the People's Republic of China: Final Results of Changed Circumstances Reviews; Partial Revocation of Antidumping and Countervailing Duty Orders*, 79 FR 634, January 6, 2014.

[20] *Aluminum Extrusions from the People's Republic of China, Final Scope Rulings,* A-570-967 - C-570-968, Final Scope Rulings, http://enforcement.trade.gov/download/prc-ae/scope/prc-ae-scope-index.html, retrieved February 22, 2017.

[21] Commerce determined that the aluminum components of Electrolux's fin evaporator systems are within the scope of the AD and CVD orders. Electrolux's Prehearing Brief, exh. 1 (*Aluminum Extrusions from the People's Republic of China: Final Scope Ruling on Electrolux's Fin Evaporator Systems*, July 13, 2012).

[22] Electrolux provided a list of all scope inquiries to date and their outcomes or status. Electrolux's posthearing brief, exh. 4.

[23] *Aluminum Extrusions from the People's Republic of China: Affirmative Preliminary Determination*

(*continued*...)

in certain shower door enclosures previously made of 6XXX series alloy in order to circumvent the orders. The 5050 grade alloy was reportedly considered by some importers to be an acceptable replacement for in-scope alloys because shower door enclosures do not have demanding structural requirements.[24]

Five-year reviews

Commerce has issued the final results of its expedited five-year reviews with respect to imports from China.[25] Tables I-2 and I-3 present the dumping and countervailable subsidy margins calculated by Commerce in its original investigations and first five-year reviews.

Table I-2
Aluminum extrusions: Commerce's original and first five-year review dumping margins for producers/exporters in China

Producer/exporter	Original margin (*percent*)	First five-year review margin (*percent*)
All firms	32.79 or 33.28	33.28

Source: 76 FR 18524, April 4, 2011 and 81 FR 51856, August 5, 2016.

(…*continued*)
of Circumvention of the Antidumping and Countervailing Duty Orders and Intent To Rescind Minor Alterations Anti-Circumvention Inquiry: 81 FR 79444, November 14, 2016.

[24] Hearing transcript, pp. 42-44, 75-76 (McEvoy).

[25] *Aluminum Extrusions from the People's Republic of China: Final Results of Expedited First Sunset Review of the Antidumping Duty Order*, 81 FR 51855, August 5, 2016 and *Aluminum Extrusions from the People's Republic of China: Final Results of Expedited First Sunset Review of the Countervailing Duty Order*, 81 FR 51858, August 5, 2016.

Table I-3
Aluminum extrusions: Commerce's original and first five-year review countervailable subsidy margins for producers/exporters in China

Producer/exporter	Original margin (*percent*)	First five-year review margin (*percent*)
Dragonluxe Limited	374.15	374.15
Foshan Guangcheng Aluminum Co., Ltd., Guang Ya Aluminum Industries Co. Ltd., Guang Ya Aluminum Industries Hong Kong, and Yongji Guanghai Aluminum Industry Co., Ltd	9.94	12.05
Kong Ah International Company Limited	9.94	25.83
Karlton Aluminum Company Ltd., Zhaoqing New Zhongya Aluminum Co., Ltd., Zhongya Shaped Aluminum HK Holding Ltd	4.89[1]	20.78
Liaoyang Zhongwang Aluminum Profile Co. Ltd./Liaoning Zhongwang Group	374.15	374.15
Miland Luck Limited	374.15	374.15
All-Others	7.37[2]	23.26

[1] *Aluminum Extrusions From the People's Republic of China: Notice of Court Decision Not in Harmony With Final Affirmative Countervailing Duty Determination and Notice of Amended Final Affirmative Countervailing Duty Determination,* 79 FR 13039 (March 7, 2014).

[2] *Aluminum Extrusions from the People's Republic of China: Amended Final Affirmative Countervailing Duty Determination Pursuant to Court Decision,* 80 FR 69640 (November 10, 2015).

Source: 76 FR 18521, April 4, 2011 and 81 FR 51860, August 5, 2016.

Commerce found the following subsidy programs to be countervailable in its final determination for the first five-year review:

Policy Loans for LTAR—Trade Financing:

- Policy Loans to Chinese Aluminum Extrusion Producers (Trade Financing).

Grant Programs:

- Development Assistance Grants from the Zhaoqing New and High-Tech Industrial Development Zone (ZHTDZ) Local Authority,
- GOC and Sub-Central Government Grants, Loans, and Other Incentives for Development of Famous Brands and China World Top Brands (Famous Brands Program),
- International Market Exploration Fund (SME Fund),
- Export Rebate for Mechanic, Electronic and High-Tech Products,
- Expanding Production and Stabilizing Jobs Fund of Jiangsu Province Assistances for R&D Projects under Funds of Nanning Municipality for Foreign Trade Development,

Grant Programs--Continued:

- Import and Export Credit Insurance Supporting Development Fund for Changzhou Special Fund for External Economy,
- Export Increase Fund.

Policy Loans for LTAR:

- Policy Loans to Chinese Aluminum Extrusion Producers.

Provision of Goods and Services for LTAR:

- Provision of Land-Use Rights and Fee Exemptions To Enterprises Located in the ZHTDZ for LTAR,
- Provision of Land-Use Rights to Enterprises Located in the South Sanshui Science & Technology Industrial Park for LTAR,
- Provision of Primary Aluminum for LTAR,
- Provision of Aluminum Extrusions for LTAR,
- Provision of Glass for LTAR,

Tax Programs—Reduced Income Tax Rate:

- Preferential Tax Program for Foreign Invested Enterprises (FIEs) Recognized as High or New Technology Enterprises (HNTEs),
- Two Free, Three Half Tax Exemptions for FIEs,
- Preferential Tax Policies for the Development of Western Regions of China ("GoWest Campaign"),
- Preferential Tax Policies for the Opening and Development of Beibu Gulf Economic Zone of Guangxi Zhuang Autonomous Region (Local Income Tax Exemption),
- Preferential Tax Program for HTNEs.

Tax Programs—Tax Credit and Tax Rebate Programs:

- Tax Offset for Research & Development.

Tax Programs—Other Tax Programs:

- Exemption from City Construction Tax and Education Tax For (Foreign Invested Enterprises FIEs),
- Import Tariff and VAT Exemptions for FIEs and Certain Domestic Enterprises using Imported Equipment in Encouraged Industries,
- Refund of Land-Use Tax for Firms Located in the ZHTDZ,
- Refund of Value Added Tax on Products Made through Comprehensive Utilization of Resources.

Grant Programs:

- Fund for Economic, Scientific, and Technology Development,
- Fund for SME Bank-Enterprise Cooperation Projects,
- Provincial Fund for Fiscal and Technological Innovation,

Grant Programs-continued:

- Provincial Loan Discount Special Fund for SMEs,
- PGOG Science and Technology Bureau Project Fund (Guangdong Industry, Research, University Cooperating Fund),
- PGOG Special Fund for Energy Saving Technology Reform,
- Special Fund for Significant Science and Technology in Guangdong Province,
- Assistance for Science Research and Technology Development Planning Projects of Nanning Municipality,
- Awards of Guangxi Autonomous Region for Emission Reduction of Main Pollutants,
- Guangxi Awards for Private Enterprises designated as Pilot Innovation-Oriented Enterprises,
- Special Funds of Guangxi Autonomous Region for Small Highland of Talents,
- Special Funds of Nanning Municipality for Academic and Technical Leaders of the New Century,
- Special Funds of Nanning Municipality for Small Highland of Talents,
- State Key Technology Renovation Project Fund,
- Technical Standards Awards,
- Financial Supporting Funds of Nanning Municipality for Technology Renovation for Production Safety,
- Financial Assistance (interest subsidy) of Nanning Municipality for Key Technology Renovation,
- Funds for Projects of Science and Technology Professionals Serving the Enterprises,
- Funds of Guangxi Autonomous Region for Enterprises' Technology Renovation,
- Funds of Nanning Municipality for Technology Innovation,
- Guangxi Technology R&D Funds,
- National Funds for Construction of Ten "Key Energy Saving Projects," "Key Demonstration Bases for Recycling Economy and Resource Saving" and "Key Industrial Pollution Control Projects,"
- National Funds for the Industry Revitalization and Technology Renovation of the Key Fields,
- Special Funds of Guangxi Autonomous Region for Production Safety (Supporting Fund for Eliminating Potential and Seriously Dangerous Projects),
- Special Funds of Guangxi Beibu Gulf Economic Zone for the Development of Key Industries,
- Supporting Funds of Nanning Municipality for "Informatization-industrialization Integration" and Development of Information Industry,
- Award for Self-Innovation Brand/Grant for Self-Innovation Brand and Enterprise Listing "Income Tax Reward for Listed Enterprises,"
- Awards of Guangxi Autonomous Region for Advancement of Science and Technology,
- Awards of Guangxi Autonomous Region for New Products,
- Awards of Nanning Municipality for New Products,
- Awards to Key Enterprises for Large Consumption of Electricity,

Grant Programs-continued:

- Intellectual Property Reward,
- Special Reward Fund for Industrial Economy Transformation and Upgrading of the Whole District,
- Special Funds for the Development of Five Industries,
- Guangzhou Innovation Enterprise Fund from Guangzhou,
- Industrial Development Fund,
- Working Capital Loans Discount.[26]

THE SUBJECT MERCHANDISE

Commerce's scope

Commerce has defined the scope of this proceeding as follows:

> …aluminum extrusions which are shapes and forms, produced by an extrusion process, made from aluminum alloys having metallic elements corresponding to the alloy series designations published by The Aluminum Association commencing with the numbers 1, 3, and 6 (or proprietary equivalents or other certifying body equivalents). Specifically, the subject merchandise made from aluminum alloy with an Aluminum Association series designation commencing with the number 1 contains not less than 99 percent aluminum by weight. The subject merchandise made from aluminum alloy with an Aluminum Association series designation commencing with the number 3 contains manganese as the major alloying element, with manganese accounting for not more than 3.0 percent of total materials by weight. The subject merchandise is made from an aluminum alloy with an Aluminum Association series designation commencing with the number 6 contains magnesium and silicon as the major alloying elements, with magnesium accounting for at least 0.1 percent but not more than 2.0 percent of total materials by weight, and silicon accounting for at least 0.1 percent but not more than 3.0 percent of total materials by weight. The subject aluminum extrusions are properly identified by a four-digit alloy series without either a decimal point or leading letter. Illustrative examples from among the approximately 160 registered alloys that may characterize the subject merchandise are as follows: 1350, 3003, and 6060.
>
> Aluminum extrusions are produced and imported in a wide variety of shapes and forms, including, but not limited to, hollow profiles, other solid profiles,

[26] Issues and Decision Memorandum for the Final Results of the First Expedited Sunset Review of the Countervailing Duty Order: *Aluminum Extrusions from the People's Republic of China, (Sunset Review),* August 1, 2016.

pipes, tubes, bars, and rods. Aluminum extrusions that are drawn subsequent to extrusion (drawn aluminum) are also included in the scope.

Aluminum extrusions are produced and imported with a variety of finishes (both coatings and surface treatments), and types of fabrication. The types of coatings and treatments applied to subject aluminum extrusions include, but are not limited to, extrusions that are mill finished (*i.e.*, without any coating or further finishing), brushed, buffed, polished, anodized (including brightdip anodized), liquid painted, or powder coated. Aluminum extrusions may also be fabricated, *i.e.*, prepared for assembly. Such operations would include, but are not limited to, extrusions that are cut-to-length, machined, drilled, punched, notched, bent, stretched, knurled, swedged, mitered, chamfered, threaded, and spun. The subject merchandise includes aluminum extrusions that are finished (coated, painted, *etc.*), fabricated, or any combination thereof.

Subject aluminum extrusions may be described at the time of importation as parts for final finished products that are assembled after importation, including, but not limited to, window frames, door frames, solar panels, curtain walls, or furniture. Such parts that otherwise meet the definition of aluminum extrusions are included in the scope. The scope includes the aluminum extrusion components that are attached *(e.g.*, by welding or fasteners) to form subassemblies, *i.e.*, partially assembled merchandise unless imported as part of the finished goods 'kit' defined further below. The scope does not include the non-aluminum extrusion components of subassemblies or subject kits.

Subject extrusions may be identified with reference to their end use, such as fence posts, electrical conduits, door thresholds, carpet trim, or heat sinks (that do not meet the finished heat sink exclusionary language below). Such goods are subject merchandise if they otherwise meet the scope definition, regardless of whether they are ready for use at the time of importation.

The following aluminum extrusion products are excluded: aluminum extrusions made from aluminum alloy with an Aluminum Association series designations commencing with the number 2 and containing in excess of 1.5 percent copper by weight; aluminum extrusions made from aluminum alloy with an Aluminum Association series designation commencing with the number 5 and containing in excess of 1.0 percent magnesium by weight; and aluminum extrusions made from aluminum alloy with an Aluminum Association series designation commencing with the number 7 and containing in excess of 2.0 percent zinc by weight.

The scope also excludes finished merchandise containing aluminum extrusions as parts that are fully and permanently assembled and completed at the time of entry, such as finished windows with glass, doors with glass or vinyl, picture frames with glass pane and backing material, and solar panels. The scope also excludes finished goods containing aluminum extrusions that are entered unassembled in a "finished goods kit." A finished goods kit is understood to mean a packaged combination of parts that contains, at the time of importation, all of the necessary parts to fully assemble a final finished good and requires no further finishing or fabrication, such as cutting or punching, and is assembled "as is" into a finished product. An imported product will not be considered a "finished goods kit" and therefore excluded from the scope of the investigation merely by including fasteners such as screws, bolts, *etc.* in the packaging with an aluminum extrusion product.

The scope also excludes aluminum alloy sheet or plates produced by other than the extrusion process, such as aluminum products produced by a method of casting. Cast aluminum products are properly identified by four digits with a decimal point between the third and fourth digit. A letter may also precede the four digits. The following Aluminum Association designations are representative of aluminum alloys for casting: 208.0, 295.0, 308.0, 355.0, C355.0, 356.0, A356.0, A357.0, 360.0, 366.0, 380.0, A380.0, 413.0, 443.0, 514.0, 518.1, and 712.0. The scope also excludes pure, unwrought aluminum in any form.

The scope also excludes collapsible tubular containers composed of metallic elements corresponding to alloy code 1080A as designated by the Aluminum Association where the tubular container (excluding the nozzle) meets each of the following dimensional characteristics: (1) length of 37 millimeters ("mm") or 62 mm, (2) outer diameter of 11.0 mm or 12.7 mm, and (3) wall thickness not exceeding 0.13 mm.

Also excluded from the scope of this order are finished heat sinks. Finished heat sinks are fabricated heat sinks made from aluminum extrusions the design and production of which are organized around meeting certain specified thermal performance requirements and which have been fully, albeit not necessarily individually, tested to comply with such requirements.

Also excluded from the scope of the order is certain rectangular wire produced from continuously cast rolled aluminum wire rod, which is subsequently extruded to dimension to form rectangular wire. The product is made from aluminum alloy grade 1070 or 1370, with no recycled metal content allowed. The dimensions of the wire are 5 mm (+/- 0.05 mm) in width and 1.0 mm (+/- 0.02 mm) in thickness. Imports of rectangular wire are

provided for under Harmonized Tariff Schedule of the United States (HTSUS) category 7605.19.0000.

Imports of the subject merchandise are provided for under the following categories of the HTSUS: 7610.10.00, 7610.90.00, 7615.10.30, 7615.10.71, 7615.10.91, 7615.19.10, 7615.19.30, 7615.19.50, 7615.19.70, 7615.19.90,[27] 7615.20.00, 7616.99.10, 7616.99.50,[28] 8479.89.98, 8479.90.94, 8513.90.20, 9403.10.00, 9403.20.00, 7604.21.00.00, 7604.29.10.00, 7604.29.30.10, 7604.29.30.50, 7604.29.50.30, 7604.29.50.60, 7608.20.00.30, 7608.20.00.90, 8302.10.30.00, 8302.10.60.30, 8302.10.60.60, 8302.10.60.90, 8302.20.00.00, 8302.30.30.10, 8302.30.30.60, 8302.41.30.00, 8302.41.60.15, 8302.41.60.45, 8302.41.60.50, 8302.41.60.80, 8302.42.30.10, 8302.42.30.15, 8302.42.30.65, 8302.49.60.35, 8302.49.60.45, 8302.49.60.55, 8302.49.60.85, 8302.50.00.00, 8302.60.90.00, 8305.10.00.50, 8306.30.00.00, 8414.59.60.90, 8415.90.80.45, 8418.99.80.05, 8418.99.80.50, 8418.99.80.60, 8419.90.10.00, 8422.90.06.40, 8473.30.20.00, 8473.30.51.00, 8479.90.85.00, 8486.90.00.00, 8487.90.00.80, 8503.00.95.20, 8508.70.00.00, 8516.90.50.00, 8516.90.80.50, 8517.70.00.00, 8529.90.73.00, 8529.90.97.60, 8538.10.00.00, 8543.90.88.80, 8708.29.50.60, 8708.80.65.90, 8803.30.00.60, 9013.90.50.00, 9013.90.90.00, 9401.90.50.81, 9403.90.10.40, 9403.90.10.50, 9403.90.10.85, 9403.90.25.40, 9403.90.25.80, 9403.90.40.05, 9403.90.40.10, 9403.90.40.60, 9403.90.50.05, 9403.90.50.10, 9403.90.50.80, 9403.90.60.05, 9403.90.60.10, 9403.90.60.80, 9403.90.70.05, 9403.90.70.10, 9403.90.70.80, 9403.90.80.10, 9403.90.80.15, 9403.90.80.20, 9403.90.80.41, 9403.90.80.51, 9403.90.80.61, 9506.11.40.80, 9506.51.40.00, 9506.51.60.00, 9506.59.40.40, 9506.70.20.90, 9506.91.00.10, 9506.91.00.20, 9506.91.00.30, 9506.99.05.10, 9506.99.05.20, 9506.99.05.30, 9506.99.15.00, 9506.99.20.00, 9506.99.25.80, 9506.99.28.00, 9506.99.55.00, 9506.99.60.80, 9507.30.20.00, 9507.30.40.00, 9507.30.60.00, 9507.90.60.00, and 9603.90.80.50.[29]

The subject merchandise entered as parts of other aluminum products may be classifiable under the following additional Chapter 76 subheadings: 7610.10, 7610.90, 7615.19, 7615.20, and 7616.99, as well as under other HTSUS chapters. In addition, heat exchange systems may be classifiable under HTSUS numbers: 8418.99.80.50 and 8418.99.80.60. While HTSUS subheadings

[27] HTS subheading 7615.19 was discontinued and transferred to 7615.10. Pres. Proc. 8771, 77 FR 413, February 3, 2012.

[28] HTS number 7616.99.50 was renumbered to 7616.99.51 on January 1, 2017.

[29] The subject aluminum extrusions are not provided for by name or in any readily apparent way in the descriptions that correspond to all HTS numbers listed in Commerce's scope. Not all of these HTS numbers necessarily include aluminum extrusions.

are provided for convenience and customs purposes, the written description of the scope of the order is dispositive.[30]

Tariff treatment

In its notices issuing the antidumping and countervailing duty orders, Commerce indicated that the subject merchandise is imported under the following provisions of the Harmonized Tariff Schedule of the United States ("HTS"): 7604.21.0000, 7604.29.1000, 7604.29.3010, 7604.29.3050, 7604.29.5030, 7604.29.5060, 7608.20.0030, and 7608.20.0090. Commerce also noted that the subject merchandise imported as parts of other aluminum products may be imported under the following additional Chapter 76 subheadings: 7610.10, 7610.90, 7615.19, 7615.20, and 7616.99 as well as other HTS chapters. In addition, Commerce noted that fin evaporator coils may be imported under statistical reporting numbers 8418.99.8050 and 8418.99.8060.[31]

Since the issuance of the orders, imports listed under a number of other HTS provisions have been found to be within Commerce's scope. In its most recently completed administrative review of the countervailing duty order on aluminum extrusions from China, Commerce indicated that imports of the subject merchandise are imported under the following HTS Numbers: 9405.99.4020, 8424.90.9080, 9031.90.9095, 7616.10.9090, 7609.00.00, 7610.10.00, 7610.90.00, 7615.10.30, 7615.10.71, 7615.10.91, 7615.19.10, 7615.19.30, 7615.19.50, 7615.19.70, 7615.19.90, 7615.20.00, 7616.99.10, 7616.99.50, 8479.89.98, 8479.90.94, 8513.90.20, 9403.10.00, 9403.20.00, 7604.21.0000, 7604.29.1000, 7604.29.3010, 7604.29.3050, 7604.29.5030, 7604.29.5060, 7608.20.0030, 7608.20.0090, 8302.10.3000, 8302.10.6030, 8302.10.6060, 8302.10.6090, 8302.20.0000, 8302.30.3010, 8302.30.3060, 8302.41.3000, 8302.41.6015, 8302.41.6045, 8302.41.6050, 8302.41.6080, 8302.42.3010, 8302.42.3015, 8302.42.3065, 8302.49.6035, 8302.49.6045, 8302.49.6055, 8302.49.6085, 8302.50.0000, 8302.60.9000, 8305.10.0050, 8306.30.0000, 8414.59.6090, 8415.90.8045, 8418.99.8005, 8418.99.8050, 8418.99.8060, 8419.90.1000, 8422.90.0640, 8473.30.2000, 8473.30.5100, 8479.90.8500, 8486.90.0000, 8487.90.0080, 8503.00.9520, 8508.70.0000, 8515.90.2000, 8516.90.5000, 8516.90.8050, 8517.70.00.00, 8529.90.7300, 8529.90.9760, 8536.90.8085, 8538.10.0000, 8543.90.8880, 8708.29.5060, 8708.80.6590, 8803.30.0060, 9013.90.5000, 9013.90.9000, 9401.90.5081, 9403.90.1040, 9403.90.1050, 9403.90.1085, 9403.90.2540, 9403.90.2580, 9403.90.4005, 9403.90.4010, 9403.90.4060, 9403.90.5005, 9403.90.5010, 9403.90.5080, 9403.90.6005, 9403.90.6010, 9403.90.6080, 9403.90.7005, 9403.90.7010, 9403.90.7080, 9403.90.8010, 9403.90.8015, 9403.90.8020, 9403.90.8041, 9403.90.8051, 9403.90.8061, 9506.11.4080, 9506.51.4000, 9506.51.6000, 9506.59.4040,

[30] Decision Memorandum for the Final Results of the Countervailing Duty Administrative Review: *Aluminum Extrusions from the People's Republic of China, 2014 (Fourth Review),* December 12, 2016.

[31] *Aluminum Extrusions from the People's Republic of China: Antidumping Duty Order*, 76 FR 30650, May 26, 2011. *Aluminum Extrusions from the People's Republic of China: Countervailing Duty Order*, 76 FR 30653, May 26, 2011.

9506.70.2090, 9506.91.0010, 9506.91.0020, 9506.91.0030, 9506.99.0510, 9506.99.0520, 9506.99.0530, 9506.99.1500, 9506.99.2000, 9506.99.2580, 9506.99.2800, 9506.99.5500, 9506.99.6080, 9507.30.2000, 9507.30.4000, 9507.30.6000, 9507.90.6000, and 9603.90.8050.[32]

In the original investigations, the Commission's report based imports from subject and nonsubject sources on official Commerce statistics for three primary HTS subheadings (7604.21, 7604.29, and 7608.20) as defined in the petitions and by Commerce.[33] For the purposes of this report, U.S. import data are based on official Commerce statistics for the same three primary HTS subheadings 7604.21, 7604.29, and 7608.20. Aluminum extrusions imported under these subheadings are accorded a column-1 general duty rate of 1.5 percent, 5.0 percent, and 5.7 percent, *ad valorem*, respectively.[34]

THE PRODUCT

Description and applications

The products covered by these reviews, as defined by Commerce, are aluminum extrusions.[35] These products are shapes and forms, produced via an extrusion process, of

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[32] Commerce again noted that subject merchandise entering as parts of other aluminum products may be classifiable under the following additional Chapter 76 subheadings: 7610.10, 7610.90, 7615.19, 7615.20, and 7616.99 as well as under other HTSUS chapters. In addition, fin evaporator coils may be classifiable under statistical reporting numbers: 8418.99.8050 and 8418.99.8060. The *Federal Register* notice listed the following numbers that were not listed in the scope as it was written in the corresponding Issues and Decisions Memorandum: 7609.00.00, 7616.10.90.90, 8424.90.9080, 8515.90.2000, 8536.90.8085, 9031.90.9095, and 9405.99.4020. *Aluminum Extrusions from the People's Republic of China: Final Results and Partial Rescission of Countervailing Duty Administrative Review; 2014,* 81 FR 92778, December 20, 2016.

[33] In the original investigations, responding U.S. importers indicated that more than 90 percent of their imports of subject merchandise entered under these three primary HTS subheadings and approximately 6 percent of their imports of subject merchandise entered under the "secondary HTS" subheadings that were listed in Commerce's scope (i.e., 7610.10, 7610.90, 7615.19, 7615.20, and 7616.99). The remaining 4 percent of imports entered under "other HTS" subheadings not explicitly identified in Commerce's scope. U.S. importers indicated that the secondary and other HTS numbers represented residual or "basket" tariff categories that included large amounts of nonsubject merchandise, but nonetheless did involve some products that matched Commerce's scope. Because most U.S. importers indicated that only subject merchandise was imported under the three primary HTS subheadings, official Commerce import statistics for the three primary HTS subheadings were believed to largely represent the merchandise subject to the investigations. Petitioners did not disagree with staff's methodology for reporting imports of subject merchandise. *Certain Aluminum Extrusions from China, Inv. Nos. 701-TA-475 and 731-TA-1177 (Final),* USITC Publication 4229, May 2011, p. 9, p. I-8, fn. 8.

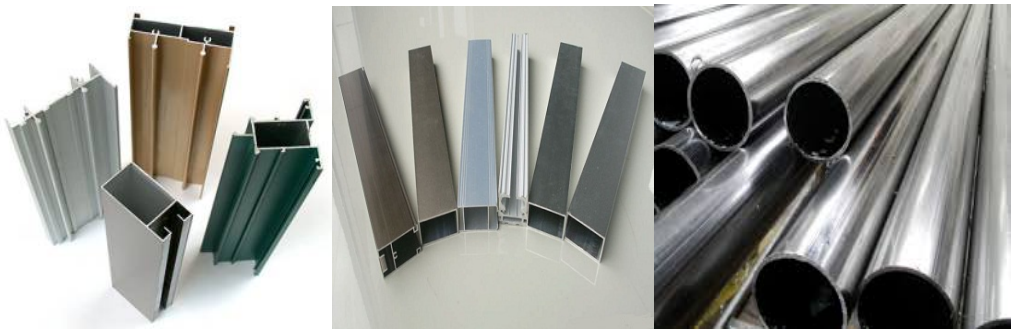
[34] Decisions on the tariff classification and treatment of imported goods are within the authority of U.S. Customs and Border Protection.

[35] Unless otherwise noted, information presented in "Description and Uses" and "Manufacturing

(*continued*...)

aluminum alloys having metallic elements falling within the alloy series designations published by the Aluminum Association commencing with the numbers 1, 3, and 6 (or proprietary equivalents or other certifying body equivalents). Aluminum extrusions are produced and imported in a wide variety of shapes and forms, including, but not limited to, hollow profiles, other solid profiles, pipes, tubes, bars, and rods. Aluminum extrusions that are subsequently drawn are also included in the scope, as are aluminum extrusions that have been subjected to one or more finishing or fabrication processes, as specified in the scope language. Figures I-2, I-5, and I-6 present examples of some of the aluminum extrusions subject to these reviews; Commerce determined that the aluminum components of the fin evaporator coil systems presented in Figures I-3 and I-4 are also aluminum extrusions subject to these reviews.

Figure I-2
Aluminum extrusions: Images



Images from left to right: window profiles, hollow profiles, and extruded aluminum tubing

Source: Machine Spares, http://www.machinesspares.com/aluminum-extruded-extrusion-profiles-manufacturers.html (accessed December 28, 2016); Global Aluminum Private Limited, http://www.indiamart.com/global-aluminium/aluminium-profiles.html (accessed December 28, 2016); Global Metals, http://www.globalmetals.com/aluminum-tubestubing.html (accessed December 28, 2016).

The scope excludes final finished goods containing aluminum extrusions that are imported in finished form, which is, fully and permanently assembled, such as finished window frames, doorframes, picture frames, and solar panels. The scope also excludes unassembled final finished goods containing aluminum extrusions. Additionally, the scope excludes aluminum alloy sheet or plates produced by methods other than the extrusion process; aluminum products produced by the casting method; pure, unwrought aluminum in any form; and aluminum extrusions falling within alloy series designations of the Aluminum Association

(…*continued*)
Processes" is based on *Certain Aluminum Extrusions from China*, *Inv. Nos. 701-TA-475 and 731-TA- 1177 (Final),* USITC Publication 4229, May 2011, pp. I-8 - I-12.

commencing with the numbers 2, 5, and 7.[36] Also excluded from the scope are finished heat sinks, in light of the Commission's negative determination in the original investigations.[37]

Extrusion is one the most widely used aluminum forming processes. Aluminum is one of the easiest materials to process through an extrusion press due to the relatively low temperatures (600-700 degrees Celsius) at which aluminum extrudes. Manufacturers produce aluminum extrusions from heated aluminum alloy billets forced under pressure through a metal die by a hydraulic extrusion press. The pressure capacity of the extrusion press determines the size of the extrusion it can produce, and the die inserted in the press matches precisely the profile of the shape produced. Common extrusion shapes include bar, rod, pipe, and tube, hollow profiles and solid profiles such as angles, tees, I-beams, H-beams, channels, tracks, rails, mullions, stiles, gutters, and other shapes. After the extrusion process, the aluminum extrusion can be sold as "mill finished," without any further surface treatment or it can be further fabricated, that is, cut-to-length, machined, drilled, punched, notched, bent, stretched, and assembled into a finished product by welding or fastening. Surface finishes for extrusions include mechanical finishes such as brushing, buffing, polishing, sanding, anodizing,[38] and other chemical and paint finishes.

Aluminum extrusions have a wide variety of finished goods applications. Major end-use applications for aluminum extrusions as defined by the Aluminum Extruders Council[39] include:

- Building and Construction**.** Windows, doors, railings, high-rise curtainwall, highway and bridge construction, framing members, other various structures;
- Transportation. Automotive (cars, buses, trucks, trailer/van/container vehicles), heavy rail, light rail and other mass transit vehicles, recreational vehicles, aircraft, aerospace, marine; and
- Engineered Products. Consumer and commercial products - air conditioners, appliances, furniture, lighting, sports equipment, personal watercraft; electrical power units, heat sinks, coaxial cables, bus bars; machinery and equipment, food displays, refrigeration, medical equipment, display structures, laboratory equipment and apparatus.

[36] Also known as "hard alloys," these extrusions possess high strength over a wide range of temperatures and are used in aerospace, aircraft, and competitive sporting equipment applications.

[37] *Certain Aluminum Extrusions from China: Determinations*, 76 FR 29007, May 19, 2011.

[38] Anodizing is an electrochemical process that enhances aluminum's natural oxide surface layer by forming an even more durable oxide film that can accept a variety of largely translucent colors. "Bright dipping" is a specialized anodizing process that yields a bright, mirror-like finish.

[39] Aluminum Extruders Council (AEC), "Applications," http://www.aec.org/ (accessed December 12, 2016).

While there are a variety of soft alloy extrusions with differences in physical characteristics[40] and distinct end uses based on sector and specific end user requirements,[41] all subject extrusions share general physical characteristics and a range of tolerances and are all used as inputs (i.e., an intermediate product) in the production of downstream products.

In response to the notice of institution of the five-year reviews, Crowell Moring on behalf of Electrolux Home Products, Inc. and Electrolux Home Care Products, Inc. ("Electrolux") and Drinker Biddle on behalf of Adams Thermal Systems, Inc. ("Adams Thermal") suggested that certain subject products may be considered separate like domestic products.[42] These products are: fin evaporator coil systems (or "FECS"); fittings for engine cooling systems (or "fittings"); and kitchen appliance door handles and kitchen appliance trim kits ("kitchen appliance components").

FECS are major components of refrigerators and air-conditioning/HVAC units. Extruded evaporator coils evaporate a recirculating cooling chemical liquid into a gas, which absorbs heat in the process and cools the air that passes over the coil system. Fins attached to the extruded coils improve the efficiency of the cooling system by directing hot air closer to the coils and expanding the surface area of the evaporator system.[43] Figures I-3 and I-4 present images of fin evaporator coil systems.

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[40] Examples of physical characteristics of soft alloy extrusions include different metal strengths (based on the length of the baking process used), appearances (based on the customer's preference of finish), extrusion shapes (as required by the specific purchaser), and specific fabrications (provided for end users).

[41] For example, product used for automotive applications may be more "engineered" than commodity type extrusions used as building and construction materials.

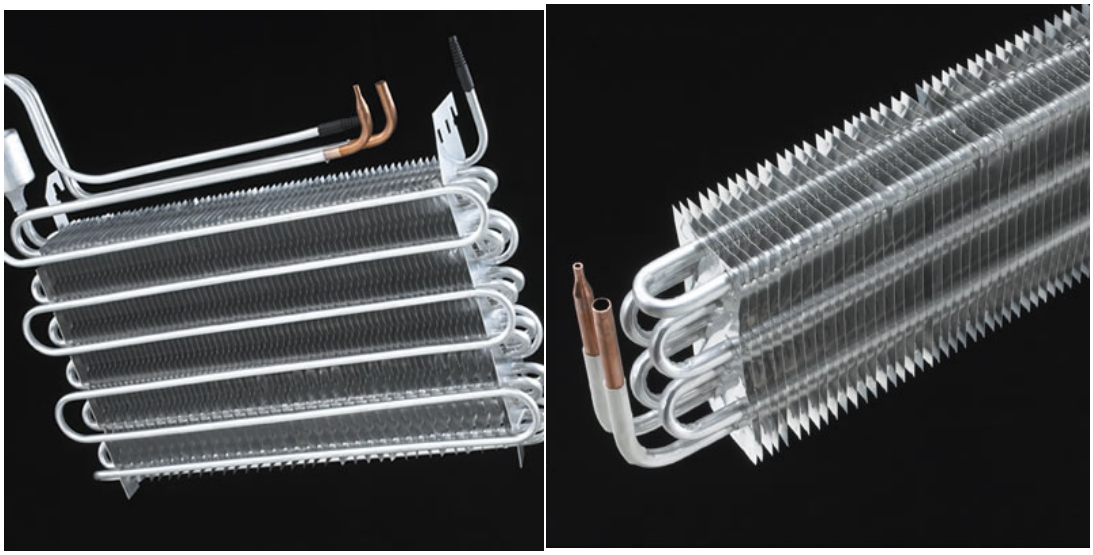
[42] *Electrolux's Response to Notice of Institution*, p. 3; *Adams Thermal's Response to Notice of Institution*, p. 2.

[43] Air Experts, "What Are Evaporator and Condenser Coils and How Do They Help Cool Your Home?" April 17, 2015, http://yourairexperts.com/article/what-are-evaporator-and-condenser-coils-and-how-do-they-help-cool-your-home (accessed December 13, 2016); Frigidaire, "What is an evaporator coil?" 2016, https://www.frigidaire.net/buying-guides/hvac-basics/what-is-an-evaporator-coil-a/365.htm (accessed December 13, 2016).

Figure I-3
Aluminum extrusions: Fin evaporator coil system for HVAC

Source: Electrolux's prehearing brief, p. 9.

Figure I-4
Aluminum extrusions: Fin evaporator coil systems for refrigeration with copper fittings



Source: Brazeway, https://brazeway.com/evaporators.php, accessed February 9, 2017.

Fittings for engine cooling systems are engine parts used for on- and-off-highway vehicles with properties that allow for leak free and structurally robust flow of oil or refrigerant fluids or mounting of heat exchangers.[44] These fittings include, (1) aluminum fittings for oil coolers; (2) aluminum fittings for condensers; (3) aluminum fittings for radiators; (4) aluminum plugs for oil coolers; (5) aluminum mounting pins for oil coolers; and (6) aluminum fasteners for oil coolers. Images of examples of these fittings are shown in figures I-5 and I-6.

Figure 1-5
Aluminum extrusions: Aluminum fittings for a condenser, oil cooler, and radiator

* * * * * * *

Figure 1-6
Aluminum extrusions: Aluminum mounting pin, plug, and fastener for oil cooler

* * * * * * *

Kitchen appliance components are aluminum extrusions used as door handles or trim kits for kitchen appliances (i.e., ovens, freezers, and refrigerators). The door handles are brushed and anodized aluminum extrusions with holes drilled to attach the handles to an appliance. Some door handles include plastic injection molded caps at each end.[45] Trim kits consist of an aesthetic frame of extruded 6XXX series alloy aluminum forms for the perimeter of a refrigerator or freezer and a hexagonal wrench and fasteners for installation.[46] [47]

Manufacturing processes

Aluminum extrusions are principally produced from an aluminum billet in a heating furnace that softens the billet to the necessary temperature before extrusion (figure I-7). Under the direct extrusion process, the heated billet enters a hydraulic extrusion press where a ram pushes a dummy block to force the softened metal through a precision opening, or die, to produce the desired shape. As pressure is applied against the die, the billet becomes shorter and wider until its expansion is restricted by full contact with the container walls. As the pressure increases, the softened metal begins to squeeze out through the shaped orifice of the die and emerges as a fully formed profile. Under indirect extrusion, the die is contained within the hollow ram, which moves into the stationary billet forcing the metal to flow into the ram,

[44] Adams Thermal's prehearing brief, pp. 10-12.

[45] Electrolux's prehearing brief, exh. 1; Final Scope Ruling on Meridian Kitchen Appliance Door Handles, June 21, 2013.

[46] Electrolux's prehearing brief, exh. 1; Final Scope Ruling on Refrigerator/Freezer Trim Kits, December 17, 2012.

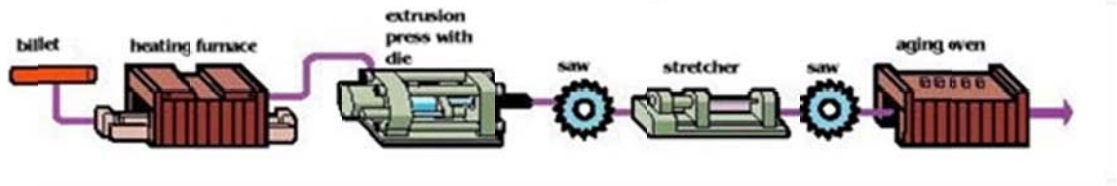
[47] Electrolux stated that there are "no U.S. producers of kitchen appliance components" as it defined them. Electrolux's Response to the Notice of Institution, p. 3 and Electrolux's prehearing brief, pp. 36-37.

acquiring the shape of the die as it proceeds. In either process, the aluminum exiting the die acquires the same cross-sectional shape as the die.

After emerging from the die, the extrusion cools, either naturally or through air or water quenching. The following steps usually occur after cooling:

- Stretching. A stretcher and/or straightener may be used to straighten the extrusion and correct any twisting that may have occurred during and after the extrusion process.
- Cutting. The profile is cut in order to reduce it to the specified commercial length.
- Aging. Certain extrusion alloys reach optimal strength through the process of aging, or, age-hardening. The aging process ensures the uniform precipitation of fine particles through the metal, producing an alloy with maximum strength, hardness, and elasticity. Natural aging occurs at room temperature and artificial aging occurs through controlled heating in an aging oven. Non-heat-treatable aluminum alloys, including 3000 series alloys utilizing manganese, are subject to natural aging. Artificial aging, also known as precipitation heat-treating, occurs through controlled heating in an aging oven.

Figure I-7
Aluminum extrusions: Aluminum extrusion manufacturing process



Source: Aluminum Extruders Council (AEC), "Extrusion Design: Process," 2015, http://www.aec.org/?page=basics_basics, accessed December 28, 2016.

In the case of drawn aluminum tubing (also included within the scope of these investigations), an extruded hollow shape, after cooling, is subsequently drawn over a mandrel to create a hollow profile and this hollow profile may then be subject to natural aging or artificial age-hardening to improve strength characteristics.

After an extrusion is aged, it is considered a mill-finished product. Mill-finished products can be sold as is, but the extruded profiles are typically further finished (e.g., painted or anodized) or further fabricated (e.g., drilled, cut-to-length, crimped, welded, etc.).

As Commerce has explained, the subject aluminum extrusions may undergo one or more of the following finishing and fabricating processes and unless otherwise specifically excluded from the scope of the investigations are considered subject merchandise:

- Mechanical finishes. These processes include buffing and burnishing to achieve a smooth finish and blasting or scoring to achieve a rough finish. Mechanical finishes are accomplished using specific types of equipment. Other mechanical finishes include sanding, polishing, and tumbling.
- Anodizing. This process involves the use of electrolysis to encourage oxygen ions to combine with aluminum to form a hard aluminum oxide film or seal, thus

enhancing the durability and appearance of the profile. Pretreatment steps to the anodizing process may include alkaline cleaning to remove organic contaminants and acid cleaning to remove inorganic contaminants. The extrusion profile is immersed in a tank containing an acid-based electrolyte solution. Electric current is passed through the solution while the temperature is carefully controlled. The electric current releases oxygen ions from the electrolyte solution and draws the ions to the surface of the aluminum profile, which serves as an anode.

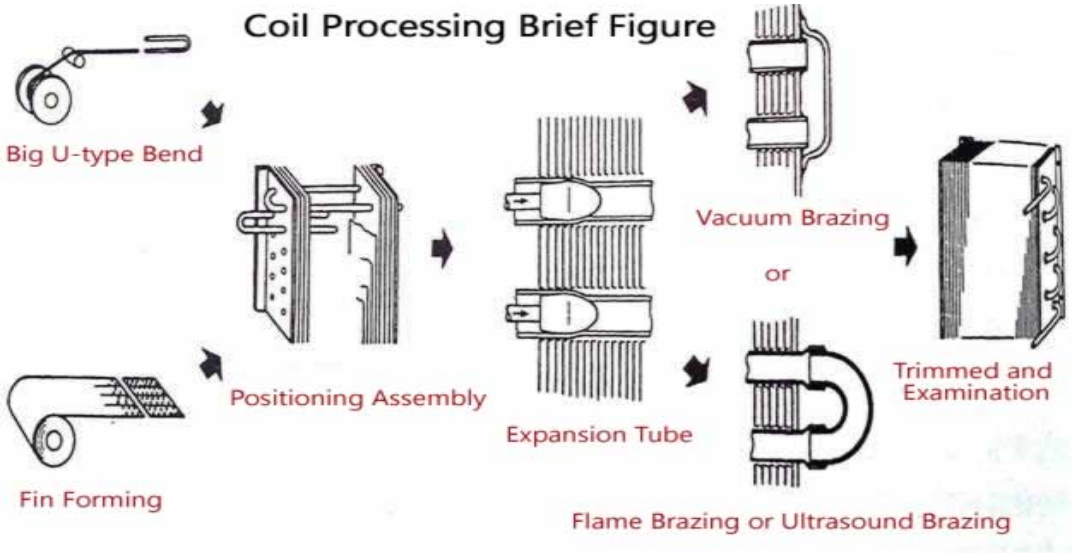
- Bright dipping. This is a type of anodizing process. The aluminum extrusion is first polished to remove fine scratches and then submerged typically in a phosphoric acid and nitric acid bath and heated to an elevated temperature. It is then anodized to protect the surface finish and to apply color to the profile.
- Brushed nickel. This describes the finishing process that provides a unique aesthetic appearance to an extrusion (such as extrusions used in shower doors). The extruded profile or aluminum extrusion is run through a mechanical brushing machine that etches specific brush patterns into the face of the extruded surface. A customer normally determines the brush pattern and depth of etching. Brush pads applied to the metal under controlled process pressure and speeds facilitate etching and brushing patterns. The metal is then cleaned and anodized with a "nickel" color to match the customer's color specification.
- Etching. Under chemical etching, the aluminum profile passes through a caustic solution bath, rinses, and then immerses in another bath to dissolve unwanted alloy surface impurities.
- Painting. Both specialty liquid paints and powder coatings may be applied to the aluminum profile. Thermoplastic or thermoset, polymer powder-coatings are applied using an electrostatic gun to impart a positive electric charge to the powder. The powder is accelerated toward and adheres to the negatively charged aluminum profile. After the powder is applied, the profile is baked in an oven where the powder particles are melted to a liquid state, which then fuses with the profile to form a homogeneous surface finish. The surface is then cooled to form a hard coating.
- Fabrication. Fabrication processes generally include machine-tooling operations such as cutting to precision lengths, machining, drilling, hole-punching, notching, bending, and stretching to prepare the profile for its final use.[48]

With respect to FECS, the manufacturing process starts with an aluminum billet extruded into a tube of a designated diameter, wall thickness and length, then shaped into a bent or "hairpin" profile. Next, producers insert the bent tubing into a stack of fins stamped from rolled aluminum sheet. Once inserted into the fins, the bent tubes expand in order to

[48] For example, some producers report utilizing robotic computer numerical control ("CNC") machines. See, e.g., Hearing transcript, pp. 31-32 (Johnson), 34-35 (Merluzzi), and 77 (McEvoy).

secure thermal contact with the fin. Aluminum or copper u-bends connect the unbent ends of the tubes to each other and the fins through different brazing techniques.[49] Figure I-8 presents a diagram of this process.

Figure I-8
Aluminum extrusions: Fin evaporator coil system (FECS) production process (post-extrusion)



Source: Zhengzhou Gushen Industry Co., http://www.guchen.com/company-news/bus-airconditioning-coil-technology.html, accessed December 13, 2016.

Finally, some producers of FECS ***.[50]

Fittings for engine cooling systems start as extruded blanks. These blanks pass through CNC machines to change the shape of the blanks.[51] Some producers ***.[52]

Kitchen appliance components begin with an extruded aluminum profile, which is subject to multiple sawing, drilling, tapping, brushing/polishing, and chamfering processes. After those processes are complete, the kitchen appliance component is inspected for appearance, anodized, and assembled.[53]

[49] Polestar, *Aluminum Heat Exchanger,* http://www.polestarind.com/Aluminium_Heat_Exchanger.html, accessed December 13, 2016.
[50] *Electrolux's Response to the Notice of Institution,* p. 12.
[51] *Adams Thermal's Response to the Notice of Institution*, p. 10.
[52] ***.
[53] Electrolux's prehearing brief, p. 35 and exh. 11.

DOMESTIC LIKE PRODUCT ISSUES

In its original determinations, the Commission found that there were two domestic like products: (1) finished heat sinks ("FHS") and (2) all other aluminum extrusions corresponding to the scope of the investigations. The Commission based its conclusions on the "customized thermal resistance properties of FHS; the unique aspects of the design, testing and production of FHS; differences between FHS and other aluminum extrusions in the channels of trade through which they are sold; evidence that the thermal management industry is perceived by producers and customers as being different from the general aluminum extrusions industry; and the fact that FHS are sold at much higher prices because of high value-added than most other aluminum extrusions." Based on its definition of the domestic like product, the Commission defined two domestic industries: all domestic producers of FHS; and domestic producers of certain aluminum extrusions other than FHS.[54]

In its notice of institution for these reviews, the Commission solicited comments from interested parties regarding the appropriate domestic like product and domestic industry.[55] In their response to the notice of institution, the domestic interested parties agreed with the domestic like product and domestic industry definitions used by the Commission in the original investigations.[56]

In its response to the notice of institution, Adams Thermal stated that the Commission should determine that precision-machined parts made from extruded blanks constitute a separate like product. Adams Thermal stated that "precision machining that changes the uniform cross section of the original extrusion fundamentally changes the nature of the product such that it is no longer merely an 'extrusion,' but becomes a fabricated part for a downstream product and becomes a separate like product."[57] With regard to the definition of the domestic industry, Adams Thermal stated that domestic producers of precision-machined parts that fabricate aluminum extrusions by altering the original cross section of the extrusions should constitute a separate domestic industry.[58] Adams Thermal later specified that its request for a

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[54] *Certain Aluminum Extrusions from China, Inv. Nos. 701-TA-475 and 731-TA- 1177 (Final):* USITC Publication 4229, May 2011, p. 11. The Commission excluded as a related party one domestic producer, ***, from the domestic industry producing certain aluminum extrusions other than FHS. *Certain Aluminum Extrusions from China, Inv. Nos. 701-TA-475 and 731-TA- 1177 (Final):* USITC Publication 4229, May 2011, p. 17. Chairman Williamson and Commissioner Lane defined the domestic industry as all domestic producers of certain aluminum extrusions including FHS. *Certain Aluminum Extrusions from China, Inv. Nos. 701-TA-475 and 731-TA- 1177 (Final):* USITC Publication 4229, May 2011, p. 12 fn. 57.

[55] *Certain Aluminum Extrusions from China; Institution of Five-Year Reviews,* 81 FR 18884, April 1, 2016.

[56] *Domestic Interested Parties' Response to the Notice of Institution*, p. 33.

[57] *Adams Thermal's Response to the Notice of Institution*, p. 11.

[58] Ibid.

separate like product finding related to "fittings for engine cooling systems" and suggested that staff collect data specific to these products in its questionnaires.[59]

In its response to the notice of institution, Electrolux stated that it disagrees with the Commission's definition of the domestic like product and domestic industry from the original investigations. Electrolux argues that "as a result of Commerce's scope ruling expanding the scope of the aluminum extrusion orders to cover products neither considered nor investigated in the Commission's original investigations, in addition to finished heat sinks, there are at least two additional domestic like products that are separate from other aluminum extrusions: 1) kitchen appliance door handles and kitchen appliance trim kits ("kitchen appliance components")[60] and 2) fin evaporator coils contained in complete heat exchange systems ("fin evaporator coil systems or FECS"). Electrolux suggested that staff collect data specific to these products in its questionnaires.[61] In its prehearing brief Electrolux modified its argument and instead, asked the Commission to find kitchen appliance handles are a separate domestic like product; it argues that there is not domestic production of kitchen appliance handles.[62]

The Commission's decision regarding the appropriate domestic product(s) 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 and responses from U.S. producers and purchasers regarding these factors are presented in tables I-4 and I-5.

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[59] According to Adams Thermal, fittings for engine cooling systems consist of the following: (1) aluminum fittings for oil coolers; (2) aluminum fittings for condensers; (3) aluminum fittings for radiators; (4) aluminum plugs for oil coolers; (5) aluminum mounting pins for oil coolers; and (6) aluminum fasteners for oil coolers. All of these fittings begin with rough blanks of extruded aluminum. The rough blanks then undergo several complex processes in numerically controlled CNC machines, which change the shape of the blanks. *Adams Thermal's Comments on Draft Questionnaires*, October 11, 2016, p. 3.

[60] Electrolux stated that there are "no U.S. producers of kitchen appliance components," as it defined them. *Electrolux's Response to the Notice of Institution*, p. 3. The domestic interested parties provided no information to the contrary at the time. Because there is no domestic industry, the Commission did not request separate data on these products in its questionnaires. ***, a U.S. producer, ***. Commission staff ***. USITC Investigator's running phone notes from January 11 through February 21, 2017.

[61] In its response, Electrolux addressed the Commission's six-factor like product analysis to argue that there is a clear dividing line separating: 1) kitchen appliance components and 2) FECS from other aluminum extrusions. *Electrolux's Response to the Notice of Institution*, pp. 8-14.

[62] Electrolux's prehearing brief, pp. 33-37.

Fin evaporator coil systems (FECS)

Table I-4
Aluminum extrusions: U.S. producers' and U.S. purchasers' responses to the domestic like product comparisons all other extrusions vs fin evaporator coil systems

* * * * * * *

Physical characteristics and uses

A representative for Electrolux argued that FECS are plainly different from typical aluminum extrusion profiles, citing the multi-step manufacturing operations that take place after the extrusion process and the non-extrusion componentry.[63] As discussed in the product section of this part of the report (*see supra* Figures I-3, I-4, and I-6), the extruded tube and non-extrusion parts are further-worked and assembled to create an FECS. Brazeway reported that fin evaporator coils have essentially the same physical characteristics and uses as all other extruded aluminum products.[64] The AEFTC argued that knock-down units ("KDs"), found by the Commission to be part of the domestic industry in the original investigations, also include non-extrusions.[65]

Manufacturing facilities and production employees

Brazeway is the only U.S. producer to report production of FECS.[66] Brazeway produces ***.[67] Brazeway reported that fin evaporator coils are made by the same coiling machinery, extrusion presses, and production employees as Brazeway's other aluminum extruded products.[68] A representative for Electrolux argued that the extrusion process is just one part in the multi-step production process related to FECS and requires unique knowledge, capabilities, and employees for tube bending, attaching stamped fins, leakage testing, and brazing copper tube.[69]

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[63] Hearing transcript, pp. 130-33 (Mata).

[64] AEFTC's prehearing brief, exh. 8, p. 7.

[65] AEFTC's posthearing brief, exh. 1, p. 39 citing, *Certain Aluminum Extrusions from China, Inv. Nos. 701-TA-475 and 731-TA-1177 (Final),* USITC Publication 4229, May 2011, p. 9. "Knock-Down Units or 'KDs' are shower enclosure assemblies containing highly fabricated aluminum extrusions and a variety of parts, but not the shower glass." Ibid., p. 6, fn. 15.

[66] *** does not currently produce FECS in the United States. but ***.

[67] ***.

[68] AEFTC's prehearing brief, exh. 8, p. 8.

[69] Hearing transcript, pp. 131-132 (Mata).

Interchangeability

Purchaser Electrolux reported that FECS are produced in custom shapes and sizes dedicated to end user specifications and are not interchangeable with other FECS, much less other aluminum extrusions.[70] The AEFTC acknowledges that FECS have a specific functionality and are not interchangeable with other extrusions, however, they argue that many other aluminum extrusions are customized to the point that they are not interchangeable.[71] Brazeway argues that fin evaporator coils are substantially identical in their basic configuration and that differences in customer specifications are minor and have to do with the size of the appliance and positioning of the connectors.[72] ***.

Customer and producer perceptions

Purchaser Electrolux reported that customers, end users, and producers do not consider FECS aluminum extrusions; instead they consider them downstream components of refrigerators whose end-use is allowing compressed cooling chemicals to evaporate, absorbing the heat in the process.[73] Brazeway reported that its customers identify fin evaporator coils as an extruded aluminum product and that the fin evaporator coils it produces are all substantially similar in design, manufacturing and function.[74]

Channels of distribution

Producer Brazeway.[75] A Brazeway representative reported that FECS are shipped to the domestic appliance and commercial refrigeration industries.[76] ***.[77] In its questionnaire responses, purchaser Electrolux reported ***.

Price

The average unit value of U.S. producers' U.S. commercial shipments of FECS was *** per short ton during 2015 (table C-2), while it was $*** per short ton for all other extrusions (table C-4).

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[70] *Electrolux's Response to the Notice of Institution*, p. 13.
[71] AEFTC's posthearing brief,exh. 1, p. 39.
[72] AEFTC's prehearing brief, exh. 8, p. 9.
[73] *Electrolux's Response to the Notice of Institution*, p. 14.
[74] AEFTC's prehearing brief, exh. 8, pp. 9-10.
[75] ***.
[76] Hearing transcript, p. 84 (Adams).
[77] ***.

Fittings for engine cooling systems

Table I-5
Aluminum extrusions: U.S. producers' and U.S. purchasers' responses to the domestic like product comparisons all other extrusions vs fittings for engine cooling systems

* * * * * * *

Physical characteristics and uses

Importer Adams Thermal cites images included in the staff report from the original investigations, arguing that aluminum extrusions have one thing in common: a uniform cross-section. It argues that precision machining that changes the uniform cross-section, fundamentally alters the nature of the fittings. It further argues that such products should be considered separate from other products that are shaped only by the extrusion process.[78] Adams Thermal reported that the various machining processes applied to fittings remove *** percent of the material from the feedstock (i.e., the extrusion or blank).[79] In its questionnaire response, producer ***.

Manufacturing facilities and production employees

Futura and Sapa were the only U.S. producers to provide production data on completed fittings. At its production facility in ***.[80] In their questionnaire responses, ***. A representative for Sapa reported that downstream processing is not unique to fittings; rather it produces hundreds of thousands of aluminum extrusion products to a specific shape, alloy, temper, length, fabrication, surface treatment, quality specification, color treatment, and packaging specification.[81] A representative for Futura argued that fittings are not unique, by virtue of further fabrication, because it produces many other products on the same CNC machines.[82] Purchaser ***. Adams Thermal reported that the extrusion is just the beginning of the production process which involves shaping in a CNC machine, drilling, and/or threading, all of which removes *** percent of the aluminum feedstock from the completed fitting.[83] Adams Thermal noted that CNC machines cost between $100,000 and $300,000 and require additional manpower to operate.[84]

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[78] *Adams Thermal's Response to the Notice of Institution*, p. 10.
[79] Adams Thermal prehearing brief, p. 18.
[80] ***.
[81] Hearing transcript, pp. 23-25 (Weber).
[82] Hearing transcript, p. 31 (Johnson).
[83] Adams Thermal prehearing brief, p. 18.
[84] Ibid., p. 19.

Interchangeability

In its questionnaire response, purchaser ***. The AEFTC acknowledges that fittings may not be interchangeable with other aluminum extrusion products but they argue that once any extrusion passes through a die, it has a particular end use and cannot be substituted by an extrusion dedicated for a different end use.[85]

Customer and producer perceptions

In its questionnaire response, producer ***. Purchaser ***.

Channels of distribution

Purchaser ***. From 2011 to September 2016, *** percent of all U.S. producers' reported shipments of extrusions intended for fittings for engine cooling systems were to end users while the remainder were shipped to distributors.[86] As indicated in Table II-1, the majority of U.S. producers reported shipments of all aluminum extrusions were to end users.

Price

The average unit value of U.S. producers' U.S. commercial shipments of fittings was $*** per short ton during 2015 (table C-3), while it was $*** per short ton for all other extrusions (table C-5).

SEMIFINISHED PRODUCT ANALYSIS

The extruded aluminum tube used to manufacture FECS[87] and the feedstock extrusions used to manufacture fittings are all products found by Commerce to be in-scope, but at different stages of production. Therefore, in addressing whether aluminum extrusions, FECS, and fittings constitute a single domestic like product, Electrolux and Adams Thermal have suggested that the Commission apply the following semifinished product analysis.

[85] AEFTC's prehearing brief, p. 16.

[86] *** of *** commercial shipments of fittings were to end users and *** of *** commercial shipments were to distributors.

[87] The scope of these reviews covers aluminum extrusions and the aluminum components of FECS, which include extruded serpentine tubing and the stamped fins made of rolled aluminum sheet.

Fin evaporator coil systems (FECS)

Dedication for use

In 2015, U.S. producers reported production of 1.4 million short tons of aluminum extrusions and *** short tons of FECS. However, some of the 1.4 million short tons of aluminum extrusions produced in 2015 were dedicated for later use in production of at least *** short tons of FECS.[88] According to a representative of Electrolux, FECS are produced in custom shapes and sizes dedicated to specific end-users.[89] The Electrolux representative stated that, "many aluminum extrusions are mass produced for distributors or for many customers and are standardized commodities, with the same exact aluminum extrusion sold to many different customers."[90] According to *** FECS are typically ***.[91] The AEFTC noted that once the tubular aluminum extrusion is bent into a serpentine shape, it is dedicated to the production of FECS;[92] however, before the tubular aluminum extrusion is bent, FECS are only one potential end-use of that product.[93]

Separate markets

As discussed in the product section of this report, FECS are components of air-conditioning units, refrigerators, and other consumer appliances that require cooled air, while aluminum extrusions have dozens of applications in transportation, building and construction, and engineered product markets. Electrolux argues that FECS are sold to a distinct class of refrigerated system original equipment manufacturers ("OEM") and produced-to-order for a specific OEM.[94] Brazeway acknowledges that its FECS are typically ***;[95] however, it noted that the FECS it manufactures for its customers are all substantially similar in design.[96] Brazeway also noted that it sells completed FECS as well as intermediate parts of FECS (e.g., extruded tubular aluminum coils and extruded tubular aluminum bent into serpentine shapes).[97]

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[88] Brazeway reported that it produced *** of FECS at its fabrication plant in Mexico using tubular extrusions and stamped aluminum fins produced domestically in 2015. *Brazeway's response to investigator inquiry sent on January 31, 2017* (EDIS doc. No. 603014), February 6, 2017.

[89] Hearing transcript, p. 133 (Mata).

[90] Hearing transcript, p. 134 (Mata).

[91] ***.

[92] AEFTC's posthearing brief, exh. 1, pp. 42-43.

[93] Hearing transcript, p. 91 (Dinan).

[94] Electrolux's prehearing brief, p. 5.

[95] ***.

[96] AEFTC prehearing brief, exh. 8, p. 10. Brazeway provided a list of its ten largest FECS customers, which includes *** in order of share of sales in 2016. AEFTC prehearing brief, exh. 8, attachment 2.

[97] Hearing transcript, p. 91 (Dinan) and pp. 92-93 (Adams).

Differences in characteristics and functions

FECS are designed to "evaporate a recirculating refrigerant or cooling chemical into a gas, which absorbs heat in the process and cools the air that passes over fin evaporator."[98] As noted previously in this report, aluminum extrusions have dozens of end-use functions and applications. Electrolux argues that, though aluminum extrusions have many end-use applications (e.g., windows, doors, railings, construction, framing, structures, automotive, rail, aircraft, aerospace, marine, furniture, lighting, sports equipment, food displays, and medical equipment), their essential functions are "support, contain, and transfer," whereas, they do not have "specific cooling capacity, flow patterns (other {sic} through a tube/hollow profile), or fins."[99]

Differences in value

Purchaser Electrolux stated that FECS are sold by unit, as opposed to other aluminum extrusions, which are sold based on a formula that includes metal price plus a per-pound fabrication charge.[100] Electrolux estimated that the value of non-extrusion componentry (i.e., the fins and fittings) and post-coil manufacturing are in excess of *** percent.[101] For the FECS that Electrolux ***.[102] In its questionnaire response, ***." In 2015, the cost of labor per ton of production in the United States was $*** for FECS and $*** for all other extrusions (*see infra,* tables C-2 and C-4). Brazeway reported that "{a}ll of our fabricated extrusions including FECs are priced in the same manner although FECs are sold by the piece they are priced on a floating LME metal base which passes directly through to the customer and a per unit conversion or fabrication charge."[103] Brazeway estimated that the value of non-extrusion componentry in a FECS is generally less than *** percent, though there was no mention of additional manufacturing cost in this estimate.[104] The average unit value of U.S. producers' U.S. commercial shipments of FECS was *** per short ton during 2015 (table C-2), while it was $*** per short ton for all other extrusions (table C-4).

Transformation process

The AEFTC and Electrolux agree that the aluminum extrusion component of FECS begins as an aluminum ingot that is heated and pushed through a die to create a tubular aluminum extrusion.[105] Electrolux stated that this extruded aluminum tube is distinct from other

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[98] Hearing transcript, p. 133 (Mata).
[99] Electrolux's posthearing brief, exh. 1, p. 16
[100] *Electrolux's Response to the Notice of Institution*, p. 14.
[101] Electrolux's prehearing brief, p. 11.
[102] Electrolux's prehearing brief, p. 12 and Electrolux's poshearing brief, exh. 9.
[103] Hearing transcript, pp. 47-48 (Adams).
[104] AEFTC's prehearing brief, exh. 8, p. 7.
[105] AEFTC's prehearing brief, exh. 8; hearing transcript, pp. 130-31 (Mata).

aluminum extrusions in that it is sold to FECS manufacturers in coils, not pieces.[106] The transformation from the extruded aluminum tube to an FECS begins with shaping the extruded aluminum into a bent or "hairpin" profile. Next, producers insert the bent tubing into a stack of fins stamped from rolled aluminum sheet. Once inserted into the fins, the bent tubes expand in order to secure thermal contact with the fin (*see supra*, figure I-8). Aluminum or copper u-bends connect the unbent ends of the tubes to each other and the fins through different brazing techniques.[107] A representative from Electrolux explained that the FECS manufacturing process also involves heat treatment, surface decontamination, and burst and leakage testing.[108]

Fittings for engine cooling systems (fittings)

Dedication for use

A representative for Pennex reported that the extrusions used to produce fittings and other aluminum extrusions are made to customer specifications with respect to the die shape, the alloy, and the press speed.[109] The Pennex representative also explained that it does not sell aluminum extrusions made with the die used for fittings to customers for any other purpose than to make fittings.[110] U.S. producer Western, reported that 95 percent of its aluminum extrusions are dedicated to a particular end use at the time of extrusion.[111] Futura reported that its fittings are "***" and that it does not "***."[112]Adams Thermal argues that the aluminum extrusion feedstock has none of the essential characteristics of the fittings prior to the complex machining process and that such extruded aluminum rods, hexes, and bars could be used to produce thousands of other products.[113]

Separate markets

According to the AEFTC, fittings are "…part of a continuum of extruded products produced for the automotive and other industries..."[114] AEFTC stated that, "…U.S. producers that produce fittings, such as Sapa, Pennex, Futura Industries, Western, and Bonnell, all produce fittings as well as a number of other extruded aluminum products and they sell fittings

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[106] Electrolux's posthearing brief, exh. 1, p. 24.
[107] Polestar, *Aluminum Heat Exchanger,* http://www.polestarind.com/Aluminium_Heat_Exchanger.html , accessed December 13, 2016.
[108] Hearing transcript, pp. 131-32 (Mata).
[109] Hearing transcript, p. 36 (Merluzzi).
[110] Ibid.
[111] AEFTC's posthearing brief, exh. 7.
[112] AEFTC's posthearing brief, exh. 1, p. 35; exh. 6.
[113] Adams Thermal posthearing brief, p. 9.
[114] AEFTC's posthearing brief, exh. 1, p. 35.

as a package of products to transportation customers..."[115] *** are the only U.S. producers that reported data on their fittings operations in these reviews. Other firms, such as Pennex, produce the aluminum extrusion feedstock for fittings that are fabricated into fittings by other firms. Adams Thermal reported that it does not purchase fittings from extruders in China, instead, it purchases fittings from machine shops that purchase the extrusion.[116] Staff sent U.S. producers' questionnaires to a number of fabricators of fitting identified by Adams Thermal but none of these fabricators provided a useable response.[117] Purchaser ***.

Differences in characteristics and functions

AEFTC argues that fittings share the same basic physical characteristics as other aluminum extrusions and that any difference is a function of customer preference with respect to finish and shape.[118] An Adams Thermal representative stated that fittings are "…specially designed and processed to have physical characteristics that meet unique requirements of on- and off-highway vehicle parts manufacturers.[119] Adams Thermal reported that fittings are designed specifically for use in oil coolers, condensers, and radiators and that there is no secondary market for the fittings.[120]

Differences in value

The AEFTC argues that there is no special pricing system for fittings and that CNC machines cost only a small fraction of what some extrusion presses cost.[121] Adams Thermal reports that a typical extrusion press is roughly the same price as a CNC machine.[122] Adams Thermal estimates that the cost of the aluminum feed stock constitutes approximately *** to *** percent of the price for a finished fitting.[123] In 2015, the cost of labor per ton of production in the United States was $*** for fittings and $*** for all other extrusions. The average unit value of U.S. producers' U.S. commercial shipments of fittings was $*** per short ton during 2015 while it was $*** per short ton for all other extrusions (*see infra*, tables C-3 and C-5).

[115] AEFTC's posthearing brief, exh. 1, p. 36.
[116] Adams Thermal posthearing brief, p. 10.
[117] Email from Heffner to USITC investigator, October 18, 2016.
[118] AEFTC's posthearing brief, exh. 1, p. 36.
[119] Hearing transcript, p. 157 (Johnson).
[120] Hearing transcript, p. 159 (Johnson).
[121] AEFTC's posthearing brief, exh. 1, p. 36.
[122] Adams Thermal's posthearing brief, p. 13.
[123] Adams Thermal's posthearing brief, p. 12.

Transformation process

Fittings start as extruded blanks or feedstock, which pass through CNC machines to change their shape.[124] Much of the material from the feedstock aluminum extrusion is removed when holes are bored to allow fluid to pass through the fitting.[125] Adams Thermal reported that *** percent of the feedstock material is removed from the completed fitting.[126] U.S. producer ***.[127]

U.S. MARKET PARTICIPANTS

U.S. producers

At the time of the original investigations, 54 firms provided responses to the Commission's questionnaire, and they were believed to represent the vast majority of U.S. production of aluminum extrusions during 2008-10.[128]

In response to the Commission's notice of institution in the current five-year reviews, the domestic interested parties provided a list of 23 U.S. producers of aluminum extrusions known to the AEFTC and its members.[129] In its submission, Adams Thermal included a list of the members of the AEFTC, as well as a list of the members of the Precision Machine Parts Association.[130] In its submission, Electrolux stated that it is unaware of any U.S. producers of kitchen appliance components and that to the best of its knowledge ***.[131]

In these current reviews, the Commission issued U.S. producers' questionnaires to 68 firms, 25 of which provided the Commission with information on their aluminum extrusions operations. Presented in table I-6 is a list of current domestic producers of aluminum extrusions

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[124] *Adams Thermal's Response to the Notice of Institution*, p. 10.

[125] Hearing transcript, p. 157 (Johnson).

[126] Adams Thermal's Prehearing brief, p. 9.

[127] ***.

[128] The Commission received responses from a small number of firms that did not extrude aluminum, but rather further processed purchased or imported aluminum extrusions into downstream products, including members of the Shower Door Manufacturer's Alliance, which produced shower doors, and Aavid, a producer of finished heat sinks. *Certain Aluminum Extrusions from China*, *Inv. Nos. 701-TA-475 and 731-TA-1177 (Final), USITC Publication 4229*, May 2011, p. III-1, note 2.

[129] As noted earlier, nine of these firms are members of the AEFTC that produce aluminum extrusions and 14 of these firms are non-AEFTC members that produce aluminum extrusions that support the continuation of the antidumping and countervailing duty orders. The 14 non-AEFTC members include: Vitex Extrusions, LLC ("Vitex"); Extrudex Aluminum ("Extrudex"); Mi Metals; Mid-States Aluminum Corp. ("Mid-States"); Tower Extrusions ("Tower"); Tri City Extrusion ("Tri City"); APEL Extrusion Incorporated ("APEL"); Sierra Aluminum Company ("Sierra"); Pennex Aluminum ("Pennex"); Cardinal Aluminum ("Cardinal"); International Extrusion ("International"); Briteline; Jordan Aluminum ("Jordan"); Brazeway, Inc. ("Brazeway"). *Domestic Interested Parties' Response to the Notice of Institution*, exh. 1.

[130] *Adams Thermal's Response to the Notice of Institution*, pp. 2-4.

[131] *Electrolux's Response to the Notice of Institution*, p. 5.

and each company's position on continuation of the orders, production locations(s), and share of reported production of aluminum extrusions in 2015.

Table I-6
Aluminum extrusions: U.S. producers, their positions on orders, U.S. production locations, and share of reported U.S. production, 2015

Firm	Position on orders	Production location(s)	Share of production (percent)
Aerolite	Support	Youngstown, OH	***
Alexandria	Support	Alexandria, MN	***
Aluminum Shapes	***	Delair, NJ	***
APEL	***	Coburg, OR	***
Astro	***	Struthers, OH	***
Bonnell	Support	Newnan, GA Carthage, TN Niles, MI Elkhart, IN	***
Brazeway	***	Hopkinsville, KY Shelbyville, IN	***
Briteline	***	Denver, CO	***
Cardinal	***	Louisville, KY	***
Custom Aluminum	***	South Elgin, IL Genoa, IL	***
Extrudex	***	North Jackson, OH	***
Frontier	Support	Corona, CA (2 facilities)	***
Futura	Support	Clearfield, UT	***
International Extrusions	***	Garden City, MI (2 facilities)	***
Jordan	***	Memphis, TN	***
Kaiser	Support	Foothill Ranch, CA Kalamazoo, MI Bellwood, VA Sherman, TX Los Angeles, CA Richland, WA	***
Kawneer	***	Bloomsburg, PA Cranberry, PA Springdale, AR	***
Keymark	***	Fonda, NY Lakeland, FL (2 facilities)	***
Light Metals	***	Wyoming, MI	***
MI Metals	***	Millersburg, PA Millen, GA Oldsmar, FL Smyrna, TN Prescott Valley, AZ	***
Mid-States	***	Fond du Lac, WI	***
PCE	Support	Rome, GA	***

Table continued on next page.

Table I-6--Continued
Aluminum extrusions: U.S. producers, their positions on orders, U.S. production locations, and share of reported U.S. production, 2015

Firm	Position on petition	Production location(s)	Share of production (percent)
Pennex	***	Wellsville, PA Leetonia, OH	***
Sapa	Support	Belton, SC Burlington, NC Chicago, IL City of Industry, CA Connersville, IN Cressona, PA	***
Sierra	***	Riverside, CA Fontana, CA (4 facilities)	***
Tower	***	Olney, TX Wylie, TX	***
Tri City	***	Bristol, TN	***
Vitex	***	Franklin, NH	***
Wakefield-Vette	***	Pelham, NH Withee, WI	***
Western	Support	Carrollton, TX	***
YKK	***	Dublin, GA Coppell, TX	***
Total			***

[1] These U.S. producers did not provide a U.S. producers' questionnaire response.

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

As indicated in table I-7, one U.S. producer (***) is related to foreign producers of aluminum extrusions in China. In addition, as discussed in detail in Part III, no U.S. producers directly import the subject merchandise, three U.S. producers import aluminum extrusions from nonsubject countries, and none purchase the subject merchandise from U.S. importers.

Table I-7
Aluminum extrusions: U.S. producers' ownership, related and/or affiliated firms, since January 2013

* * * * * * *

U.S. importers

In the original investigations, 45 U.S. firms, accounting for 93.3 percent of subject imports from China and 25.0 percent of imports from nonsubject sources during 2010, supplied the Commission with usable information on their operations involving the importation of

aluminum extrusions.[132] In the current proceedings, the Commission issued U.S. importers' questionnaires to 70 firms believed to be importers of aluminum extrusions, as well as to all U.S. producers of aluminum extrusions.[133] Usable questionnaire responses were received from 16 firms. Of the responding U.S. importers, three were domestic producers: ***. Table I-8 lists all responding U.S. importers of aluminum extrusions from China and other sources, their locations, and their shares of U.S. imports in 2015.

Table I-8
Aluminum extrusions: U.S. importers, U.S. headquarters, and shares of imports by source in 2015

Firm	Headquarters	Share of imports by source (percent)		
		China	All other sources	Total
Adams Thermal	Canton, SD	***	***	***
Baja de Aluminio	Tijuana, BC	***	***	***
Electrolux	Charlotte, NC	***	***	***
Eural USA	Chicago, IL	***	***	***
Haier	Louisville, KY	***	***	***
Impol	Schenectady, NY	***	***	***
Kawneer	Norcross, GA	***	***	***
Keymark	Fonda, NY	***	***	***
MiniTec Framing Systems	Victor, NY	***	***	***
Modine	Racine, WI	***	***	***
Press Metal NA	Cumming, GA	***	***	***
Primrose	Burlingame, CA	***	***	***
Sapa Extrusions	Rosemont, IL	***	***	***
Sinobec	Boca Raton, FL	***	***	***
Whirlpool	Benton Harbor, MI	***	***	***
YKK	Dublin, GA	***	***	***
Total		***	***	***

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

[132] In the original investigations, the Commission's report based imports from subject and nonsubject sources on official Commerce import statistics for the primary three HTS subheadings for aluminum extrusions as defined in the petitions and by Commerce (HTS subheadings 7604.21, 7604.29, and 7608.20). *Certain Aluminum Extrusions from China,* Investigation Nos. 701-TA-475 and 731-TA-1177 (Final), p. IV-1. Official import statistics do not include reported imports of FECS and fittings which combined, accounted for less than *** percent of imports from China and less than *** percent of imports from nonsubject sources.

[133] The Commission issued questionnaires to importers that accounted for more than one percent of U.S. imports under the primary three HTS subheadings in 2015 or in total from 2011 to September 2016. In order to account for U.S. imports of fin evaporator coil systems, the Commission also issued questionnaires to all importers that accounted for more than one percent of U.S. imports under HTS numbers 8418.99.80.50 and 8418.99.80.60 from 2011 to 2015. In order to account for importers of engine cooling fittings the Commission sent questionnaires to companies identified by Adams Thermal that filed scope ruling requests regarding those products or similar machined extrusion products.

U.S. purchasers

The Commission received 27 usable questionnaire responses from firms that have purchased aluminum extrusions since January 1, 2011.[134] Eight responding purchasers are distributors, 13 are end users, and eight are other (i.e., manufacturers using aluminum extrusions in finished products). In general, responding U.S. purchasers were located in the Midwest and Southeast. The responding purchasers represented firms in a variety of domestic industries, including construction, automobile, and glass or door shops. The largest purchasers of aluminum extrusions are ***.

APPARENT U.S. CONSUMPTION AND MARKET SHARES

Data concerning apparent U.S. consumption of aluminum extrusions and corresponding market shares are shown in table I-9, table I-10, and figure I-9. The quantity of apparent U.S. consumption increased by 16.6 percent from 2013 to 2015 and was 1.8 percent greater in January-September 2016 than in January-September 2015. U.S. producers' shipments, imports from Canada, and imports from other nonsubject sources have all increased in quantity from 2013 to 2015, but of those sources, only imports from other (non-Canadian) nonsubject sources have increased market share (from 11.8 percent in 2013 to 13.3 percent 2015). The market share of imports from China by quantity, decreased from 0.8 percent in 2013 to 0.4 percent in 2015.

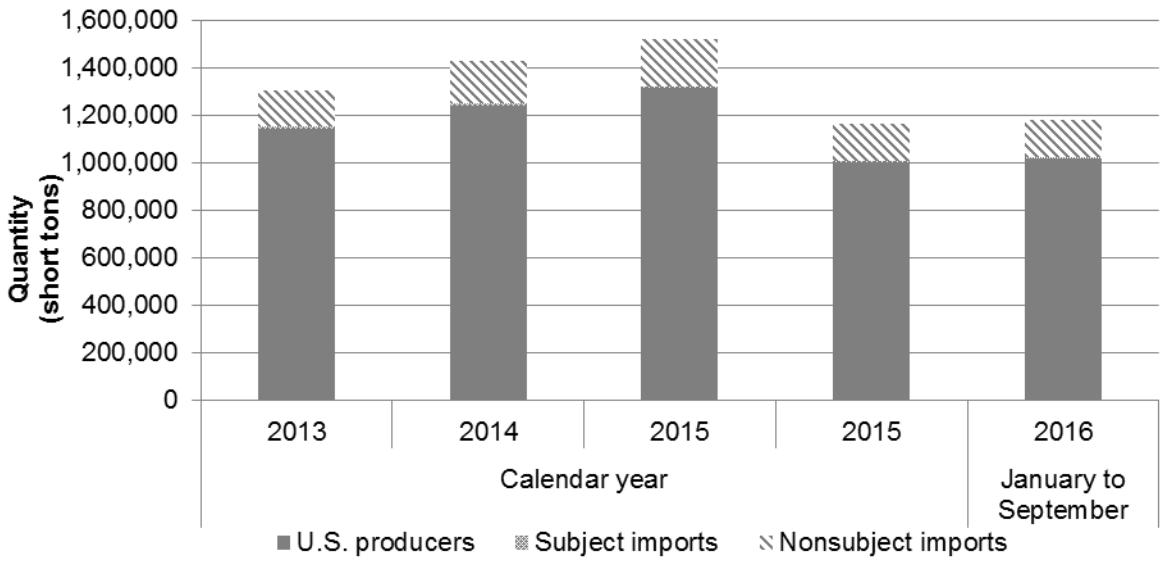
[134] Of the 27 responding purchasers, 24 purchased the domestic aluminum extrusions, 6 purchased imports of the subject merchandise from China, 18 purchased imports of aluminum extrusions from other sources, and 2 purchased imports from unknown sources.

Table I-9
Aluminum extrusions: U.S. shipments of domestic product, U.S. imports, and apparent U.S. consumption, 2013-15, January to September 2015, and January to September 2016

Item	Calendar year			January to September	
	2013	2014	2015	2015	2016
	Quantity (short tons)				
U.S. producers' U.S. shipments	1,140,254	1,237,750	1,310,914	1,002,687	1,014,801
U.S. imports from.--					
China	9,824	11,068	6,127	4,772	5,343
Canada	70,139	77,739	81,988	61,720	57,739
All other sources	83,241	100,861	120,657	90,414	102,575
Subtotal, nonsubject sources	153,379	178,600	202,645	152,134	160,314
Total U.S. imports	163,203	189,667	208,772	156,906	165,658
Apparent U.S. consumption	1,303,457	1,427,417	1,519,686	1,159,593	1,180,459
	Value (1,000 dollars)				
U.S. producers' U.S. shipments	4,561,009	5,037,189	5,276,471	4,101,895	3,836,011
U.S. importers' U.S. shipments from.--					
China	41,709	50,196	31,100	24,988	25,958
Canada	264,977	299,590	323,637	247,876	229,906
All other sources	409,931	471,812	544,883	412,576	424,129
Subtotal, nonsubject sources	674,908	771,402	868,520	660,452	654,035
Total U.S. imports	716,617	821,598	899,619	685,441	679,993
Apparent U.S. consumption	5,277,626	5,858,787	6,176,090	4,787,336	4,516,004

Source: Compiled from data submitted in response to Commission questionnaires and official import statistics using HTS statistical reporting numbers 7604.21.0000, 7604.29.1000, 7604.29.3010, 7604.29.3050, 7604.29.5030, 7604.29.5060, 7608.20.0030, 7608.20.0090, accessed November 28, 2016.

Figure I-9
Aluminum extrusions: U.S. shipments of domestic product and U.S. imports, 2013-15, January to September 2015, and January to September 2016



Source: Compiled from table I-9.

Table I-10
Aluminum extrusions: U.S. consumption and market shares, 2013-15, January to September 2015 and January to September 2016

Item	Calendar year			January to September	
	2013	2014	2015	2015	2016
	Quantity (short tons)				
Apparent U.S. consumption	1,303,457	1,427,417	1,519,686	1,159,593	1,180,459
	Share of quantity (percent)				
U.S. producers' U.S. shipments	87.5	86.7	86.3	86.5	86.0
U.S. importers' U.S. shipments from.--					
China	0.8	0.8	0.4	0.4	0.5
Canada	5.4	5.4	5.4	5.3	4.9
All other sources	6.4	7.1	7.9	7.8	8.7
Subtotal, nonsubject sources	11.8	12.5	13.3	13.1	13.6
Total U.S. imports	12.5	13.3	13.7	13.5	14.0
	Value (1,000 dollars)				
Apparent U.S. consumption	5,277,626	5,858,787	6,176,090	4,787,336	4,516,004
	Share of value (percent)				
U.S. producers' U.S. shipments	86.4	86.0	85.4	85.7	84.9
U.S. importers' U.S. shipments from.--					
China	0.8	0.9	0.5	0.5	0.6
Canada	5.0	5.1	5.2	5.2	5.1
All other sources	7.8	8.1	8.8	8.6	9.4
Subtotal, nonsubject sources	12.8	13.2	14.1	13.8	14.5
Total U.S. imports	13.6	14.0	14.6	14.3	15.1

Source: Compiled from data submitted in response to Commission questionnaires and official import statistics, accessed November 28, 2016.

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

U.S. MARKET CHARACTERISTICS

Aluminum extrusions are produced, marketed, and distributed throughout the United States by U.S. producers and importers. Since the original investigations, the U.S. industry has seen a number of expansions (11) relative to plant closings (3) and acquisitions (8).[1] The five largest U.S. producers accounted for *** percent of U.S. production in 2015 (compared to *** percent by the top five producers in 2010). Since 2011, demand for aluminum extrusions has increased due to the resurgence in the building, construction, and automobile industries. Aluminum extrusions are sold to a variety of markets (e.g., building, transportation, and engineering) and are used to make many products, including doors and windows, commercial and consumer products, and trailers.[2] Apparent U.S. consumption of aluminum extrusions increased by 13.3 percent during 2011-13, from 1,150,246 short tons to 1,303,457 short tons. During 2013-15, apparent U.S. consumption increased by 16.6 percent from 1,303,457 short tons (2013) to 1,519,686 short tons (2015).[3]

CHANNELS OF DISTRIBUTION

U.S. producers sold mainly to end users while importers sold mainly to distributors, as shown in table II-1. Respondents argue that aluminum extrusions are "massed produced" for distributors and end users, or as an input for further fabrication.[4] In contrast, AEFTC reports that manufacturers select from thousands of different individual dies for the extrusion machines[5] and then perform various finishing or fabrication operations depending on the end user's intended application.[6]

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[1] *See* table III-1.

[2] *See* Part I for further information regarding markets and products.

[3] Apparent U.S. consumption for January-September 2016 was 1.8 percent higher than during the same period in 2015.

[4] Hearing transcript, p. 134 (Mata) and p. 163 (Johnson).

[5] Hearing transcript, p. 90 (Hamilton).

[6] Hearing transcript, pp. 77-78 (McEvoy, Merluzzi, Adams, Johnson, Hamilton, Weber).

Table II-1
Aluminum extrusions: U.S. producers' and importers' share of reported U.S. commercial shipments, by sources and channels of distribution, 2013-15, January-September 2015, and January-September 2016

Item	Period				
	Calendar year			January to September	
	2013	2014	2015	2015	2016
	Share of reported shipments (percent)				
U.S. producers' U.S. commercial shipments of aluminum extrusions:					
Distributors	29.8	29.6	27.1	27.3	27.7
End users	70.2	70.4	72.9	72.7	72.3
U.S. importers' U.S. commercial shipments of aluminum extrusions from China:					
Distributors	***	***	***	***	***
End users	***	***	***	***	***
U.S. importers' U.S. commercial shipments of aluminum extrusions from all other countries:					
Distributors	***	***	***	***	***
End users	***	***	***	***	***

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

GEOGRAPHIC DISTRIBUTION

U.S. producers and importers reported selling aluminum extrusions to all regions in the contiguous United States (table II-2). For U.S. producers, 19.6 percent of sales were within 100 miles of their production facility, 66.7 percent were between 101 and 1,000 miles, and 13.7 percent were over 1,000 miles. Importers sold 2.7 percent of their aluminum extrusions within 100 miles of their U.S. point of shipment, 62.7 percent between 101 and 1,000 miles, and 34.5 percent over 1,000 miles. U.S. producer *** reported that the market for aluminum extrusions is generally regional due to shipping expenses.

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

Region	U.S. producers	Importers
Northeast	22	3
Midwest	24	3
Southeast	23	2
Central Southwest	17	3
Mountain	17	2
Pacific Coast	20	3
Other[1]	7	2
All regions (except Other)	13	2

[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 extrusions have the ability to respond to changes in demand with moderate changes in the quantity of shipments of U.S.-produced aluminum extrusions 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 shipments from alternate markets. Factors mitigating the responsiveness of supply include limited availability of inventories and limited ability to shift production to or from alternate products.

Industry capacity

Domestic producers' capacity to manufacture aluminum extrusions increased by less than 5 percent during 2013-15. Despite this increase in capacity, domestic capacity utilization increased from 74.8 percent in 2013 to 80.9 in 2015 because of an increase in production of 13.3 percent during the same time period. This relatively moderate and decreasing level of capacity utilization suggests that U.S. producers may have some ability to increase production of aluminum extrusions in response to an increase in prices.

Alternative markets

U.S. producers' exports, as a share of total shipments, decreased from 5.7 percent in 2013 (68,551 short tons) to 4.8 percent in 2015 (66,309 short tons). U.S. producers stated that it would be difficult to shift their shipments to other markets. *** stated it cannot shift sales to alternative markets as it cannot match the prices offered by China and in other non-U.S. markets. *** reported that, while it is possible to sell aluminum extrusions in other markets, it would be unprofitable for U.S. firms due to lower prices in those markets. Given these export levels and conditions, U.S. producers may have a limited ability to shift shipments between the U.S. market and other markets in response to price changes.

Inventory levels

U.S. producers' inventories remained relatively unchanged. Relative to total shipments, U.S. producers' inventory levels were at 5.3 percent in 2013 and 2015. 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

Two of 25 responding U.S. producers stated that they could switch production from aluminum extrusions to other products. Other products that producers reportedly can produce on the same equipment as aluminum extrusions are *** and ***. Factors affecting U.S. producers' ability to shift production include ***.

Subject imports from China[7]

Based on information reported by the only two responding Chinese producers, producers of aluminum extrusions from China have the ability to respond to changes in demand with moderate to large changes in the quantity of shipments of aluminum extrusions to the U.S. market. The main contributing factors to this degree of responsiveness of supply are the availability of unused capacity and the ability to shift shipments from alternate markets. Factors mitigating responsiveness of supply include limited availability of unused inventories and an inability to shift production to or from alternate products.

Industry capacity

The capacity to produce aluminum extrusions for the two responding Chinese producers decreased by *** percent during 2013-15.[8] Despite *** in capacity, Chinese capacity utilization increased from *** percent in 2013 to *** percent in 2015 because of an increase in production of *** percent during the same time period.[9] This relatively moderate level of capacity utilization suggests that producers in China may have some ability to increase production of aluminum extrusions in response to an increase in prices.

Alternative markets

Shipments from the two responding Chinese producers to markets other than the United States, as a percentage of total shipments, decreased from *** percent in 2013 to *** percent in 2015, although the composition of these shipments fluctuated.[10][11] Shipments to

[7] For data on the number of responding foreign firms and their share of U.S. imports from China, please refer to Part I, "Summary Data and Data Sources."

[8] *** estimates production at *** short tons in 2015. *See* table IV-12.

[9] Data based on responses by two foreign producers to Commission questionnaires.

[10] Responding Chinese producers reported exporting *** of aluminum extrusions to the United States between 2013 and 2015. According to official export data, Chinese exports of aluminum extrusions to the United States decreased by 26.7 percent from 2013 to 2015. Official exports statistics under HTS subheading 7604.21, 7604.29, and 7608.20 as reported by China Customs in the IHS/GTA database, accessed January 4, 2017.

domestic markets increased from *** percent of total shipments in 2013 to *** percent of total shipments in 2015. Chinese exports indicate that producers may have moderate ability to shift shipments between domestic or other markets and the U.S. market in response to price changes.

Inventory levels

Inventories from responding producers in China declined from 2013 to 2015. Relative to total shipments, inventory levels decreased from *** percent in 2013 to *** percent in 2015. These inventory levels suggest that responding foreign firms may have some ability to respond to changes in demand with changes in the quantity shipped from inventories.

Production alternatives

No responding foreign producers stated they could switch production from other products to aluminum extrusions.

Nonsubject imports

Nonsubject imports accounted for 97.1 percent of total U.S. imports in 2015. The largest sources of nonsubject imports during 2013-15 were Canada, Mexico, Indonesia, and Vietnam. Combined, these countries accounted for 69.9 percent of nonsubject imports in 2015.

Supply constraints

Six of 25 U.S. producers reported supply constraints. *** reported reaching full capacity in 2015, and *** reported an issue with equipment installation during a brief period in the summer of 2016. *** stated that the recovery of the automobile industry and the HVAC industry's conversion from copper to aluminum rapidly increased demand. It further noted that this created some supply constraints, but the domestic aluminum extrusions industry has continued to increase capacity since 2011. Importers did not report any supply constraints since 2011.

New suppliers

Eleven of 27 purchasers indicated that new suppliers entered the U.S. market since January 1, 2011, and six expect additional entrants. Purchasers cited ***.

(…*continued*)

[11] Chinese exports to markets other than the United States increased from 756,134 short tons in 2013 to 1,414,533 shorts tons in 2015. Official exports statistics under HTS subheading 7604.21, 7604.29, and 7608.20 as reported by China Customs in the IHS/GTA database, accessed January 4, 2017.

U.S. demand

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

End uses and cost share

U.S. demand for aluminum extrusions depends on the demand for U.S.-produced downstream products. Reported end uses include doors and windows, trailers, building and construction components, condensers, radiators, and handrails. During production, "thousands of individual dies" are "geared to specific end uses."[12] Fifteen responding U.S. producers, 9 importers, and 17 purchasers reported no changes in end uses. Ten firms noted an increase in aluminum extrusion consumption in certain applications, particularly, ***.

Given the wide variety of end uses for aluminum extrusions, U.S. producers, importers and purchasers reported a wide range of cost shares, depending on the end-use products, including: [13]

- *** percent for doors and windows,
- *** percent for trailers,
- *** percent for building and construction components,
- *** percent for condensers,
- *** percent for radiators, and
- *** percent for handrails.

Business cycles

Nineteen of 25 U.S. producers, 3 of 14 importers, and 8 of 26 purchasers indicated that the market was subject to business cycles or conditions of competition that are distinct to this industry. Specifically, market participants identified seasonality in the HVAC and construction market, increased demand by the solar market during the winter, and increases in the automobile and transportation industries since 2011. U.S. producer *** stated its peak production occurred between April and September due to the seasonality in the HVAC market.[14]

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[12] Hearing transcript, p. 90 (Hamilton).

[13] Some firms reported that aluminum extrusions make up *** percent of the costs of building and construction components.

[14] ***.

Demand trends

Most firms reported an increase in U.S. demand for aluminum extrusions since January 1, 2011 (table II-3). Demand generally tracks that of U.S. GDP and growth is currently considered to be "low to moderate",[15] however, responding firms expect demand to increase over the next two years.

Table II-3
Aluminum extrusions: Firms' responses regarding U.S. demand

Item	Increase	No change	Decrease	Fluctuate
Demand in the United States				
U.S. producers	21	0	1	2
Importers	6	1	1	2
Purchasers	14	5	3	2
Foreign producers	***	***	***	***
Anticipated future demand in the United States				
U.S. producers	17	3	1	4
Importers	4	1	1	4
Purchasers	9	6	1	7
Foreign producers	***	***	***	***
Demand for purchasers' final products				
Purchasers	12	4	2	3

Substitutes for aluminum extrusions

Substitutes for aluminum extrusions include vinyl, steel, fiberglass, wood, and various other metals. Most U.S. producers and importers reported that there were substitutes while a majority of purchasers reported there were no substitutes. Most firms did not anticipate any future changes in substitutes.

SUBSTITUTABILITY ISSUES

The degree of substitution between domestic and imported aluminum extrusions 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, aluminum extrusions services, etc.). Based on available data, staff believes that there is a moderate-to-high degree of substitutability between domestically produced aluminum extrusions and aluminum extrusions imported from China.

[15] Hearing transcript, p. 102 (Weber) and p. 103 (McEvoy).

Lead times

Aluminum extrusions are primarily produced to order by U.S. producers and completely sold from inventory by importers. U.S. producers reported that 84.0 percent of their commercial shipments were sold on a produced-to-order basis, with lead times averaging 30 days. The remaining 16.0 percent of their commercial shipments came from inventories, with lead times averaging 3 days. U.S. importers reported 100 percent of their commercial shipments were from inventories, with lead times averaging 6 days.

Knowledge of country sources

Twenty-six purchasers indicated they had marketing/pricing knowledge of domestic aluminum extrusions, 13 of Chinese aluminum extrusions, and 15 of nonsubject countries.

As shown in table II-4, most purchasers either "always" or "never" make purchasing decisions based on the producer or country of origin, while the majority of their customers "never" make purchasing decisions based on the producer or country of origin. Of the eight purchasers that reported that they "always" make decisions based the manufacturer, five firms cited quality, pricing, and/or lead times as reasons for doing so. Other reasons cited include die specifications and the location of the manufacturer.

Table II-4
Aluminum extrusions: Purchasing decisions based on producer and country of origin

Purchaser/customer decision	Always	Usually	Sometimes	Never
Purchaser makes decision based on producer	8	5	5	8
Purchaser's customers make decision based on producer	1	3	5	14
Purchaser makes decision based on country	4	7	5	10
Purchaser's customers make decision based on country	0	0	9	13

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

Factors affecting purchasing decisions

The most often cited top-three factors firms consider in their purchasing decisions for aluminum extrusions were quality (24 firms), price (23 firms), and other factors (17 firms) as shown in table II-5. Quality was the most frequently cited first-most important factor (cited by 16 firms), followed by price (6 firms); price was the most frequently reported second-most important factor (8 firms); and price and other factors were the most frequently reported third-most important factor (9 firms).

Table II-5
Aluminum extrusions: Ranking of factors used in purchasing decisions as reported by U.S. purchasers, by factor

Factor	First	Second	Third	Total
Quality	16	7	1	24
Price	6	8	9	23
Availability/Supply	1	3	3	7
Delivery	1	0	5	6
Lead times	0	3	0	3
Other[1]	3	5	9	17

[1] Other factors include reasons such as contracts, supplier relationship, range of product line, and location.

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

The majority of purchasers (25 of 27) reported that they "usually" or "sometimes" purchase the lowest-priced aluminum extrusions.

When asked if they purchased aluminum extrusions from one source although comparable aluminum extrusions were available at a lower price from another source, 23 of 25 purchasers did so. Among the reasons cited by purchasers were: capacity and supply concerns, lead times, proximity to manufacturing plants, and quality. Five of 26 purchasers reported that certain types of aluminum extrusions were only available from a single source.

Importance of specified purchase factors

Purchasers were asked to rate the importance of 18 factors in their purchasing decisions (table II-6). The factors rated as "very important" by more than half of responding purchasers were product consistency (27 purchasers), reliability of supply (26 purchasers), availability (25 purchasers), quality meets industry standards and price (24 purchasers each), delivery time (23 purchasers), manufacturing capabilities (21 purchasers), finishing (19 purchasers), and delivery terms (15 purchasers).

Table II-6
Aluminum extrusions: Importance of purchase factors, as reported by U.S. purchasers, by factor

Factor	Number of firms reporting		
	Very	Somewhat	Not
Availability	25	2	0
Delivery terms	15	10	2
Delivery time	23	4	0
Discounts offered	7	14	6
Distribution services	1	6	20
Extension of credit	10	5	12
Finishing/ anodization quality	19	7	1
Manufacturing capabilities (i.e., size range)	21	4	1
Minimum quantity requirements	6	17	4
Packaging	9	17	1
Price	24	3	0
Product consistency	27	0	0
Product range	12	13	1
Quality exceeds industry standards	12	11	4
Quality meets industry standards	24	2	0
Reliability of supply	26	1	0
Technical support/service	12	14	1
U.S. transportation costs	8	12	6

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

Supplier certification

The large majority (24 of 27) of responding purchasers require their suppliers to become certified or qualified to sell aluminum extrusions to their firm. Most purchasers reported that the time to qualify a new supplier ranged from 60 to 180 days. In addition, five purchasers reported that a domestic or foreign supplier had failed in its attempt to qualify aluminum extrusions, or had lost its approved status since January 1, 2011.

Changes in purchasing patterns

Purchasers were asked about changes in their purchasing patterns from different sources since 2011 (table II-7). Most purchasers reported increasing purchases from U.S. producers and decreasing purchases from China. Reasons reported by purchasers for changes in domestic and foreign sourcing included firm growth, partnerships with foreign suppliers, improvements by foreign suppliers, and changing materials. Fifteen of 27 responding purchasers reported that they had changed suppliers since January 1, 2011. Specifically, purchasers indicated that they had dropped or reduced purchases from Chinese firms *** because of antidumping and countervailing duties and quality and delivery concerns. Firms added or increased purchases from *** because of competitive advantages and increased demand.

Table II-7
Aluminum extrusions: Changes in purchase patterns from U.S., subject, and nonsubject countries

Source of purchases	Did not purchase	Decreased	Increased	Constant	Fluctuated
United States	1	2	11	9	4
China	8	9	1	1	4
All other countries	7	3	11	5	0
Other	14	0	1	2	0

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

Importance of purchasing domestic aluminum extrusions

Twenty-five of 27 responding purchasers reported that purchasing U.S.-produced aluminum extrusions was not an important factor in their purchasing decisions. Eight purchasers reported that domestic sourcing of aluminum extrusions was required by law (for 1 to 20 percent of their purchases), seven reported it was required by their customers (for 1 to 98 percent of their purchases), and four reported other preferences for domestic aluminum extrusions. Reasons cited for preferring domestic aluminum extrusions included quality and supporting domestic mills.

Comparisons of domestic aluminum extrusions, subject imports, and nonsubject imports

Purchasers were asked a number of questions comparing aluminum extrusions produced in the United States, subject countries, and nonsubject countries. First, purchasers were asked for a country-by-country comparison on the same 18 factors for which they were asked to rate the importance (table II-8).

For the 19 responding purchasers that compared U.S. and Chinese aluminum extrusions, most indicated that U.S. and Chinese product were comparable on all factors, except for delivery terms, delivery time, distribution services, minimum quantity requirements, and technical support/service, for which U.S. product is considered superior to that of Chinese product. Purchasers reported that Chinese product is comparable to U.S. product on seven of the 10 factors that they consider "very important" when purchasing aluminum extrusions.[16] Most purchasers reported that U.S. and nonsubject aluminum extrusions were comparable on availability, discounts, extension of credit, finishing, manufacturing, minimum quantity requirements, packaging, product consistency and range, quality exceeding and meeting industry standards, reliability of supply, technical support, and U.S. transportation costs. Ten purchasers compared aluminum extrusions from China with those from nonsubject countries, and the majority reported that aluminum extrusions were comparable on all the factors.

[16] Purchasers considered Chinese product comparable to U.S. product based on availability, finishing and anodization quality, manufacturing capabilities, product consistency, quality exceeding industry standards, quality meeting industry standards, and reliability of supply. Purchasers considered U.S. product superior to Chinese product based on delivery terms and times, while U.S. product was inferior to Chinese product based on price.

Table II-8
Aluminum extrusions: Purchasers' comparisons between U.S.-produced and imported aluminum extrusions

Factor	U.S. vs. China			U.S. vs. Nonsubject			China vs. Nonsubject		
	S	C	I	S	C	I	S	C	I
Availability	6	8	5	6	8	2	1	9	0
Delivery terms	9	8	2	8	6	2	2	6	2
Delivery time	13	4	2	10	6	0	3	5	2
Discounts offered	2	10	4	3	8	3	2	8	0
Distribution services	9	8	0	7	4	2	2	6	2
Extension of credit	7	8	1	6	6	1	1	8	0
Finishing/ anodization quality	4	9	5	2	13	0	1	8	1
Manufacturing capabilities (i.e., size range)	5	9	5	4	9	2	1	9	0
Minimum quantity requirements	8	7	4	3	8	3	1	8	1
Packaging	3	14	2	1	13	1	1	9	0
Price[1]	1	5	11	2	5	8	4	6	0
Product consistency	6	8	4	4	11	0	1	6	3
Product range	5	10	3	1	10	3	1	9	0
Quality exceeds industry standards	6	7	4	3	9	1	1	5	3
Quality meets industry standards	5	11	2	1	13	1	0	8	2
Reliability of supply	7	8	4	4	9	2	2	6	2
Technical support/service	9	9	1	5	9	1	2	6	2
U.S. transportation costs[1]	8	11	0	6	7	1	2	7	1

[1] A rating of superior means that price/U.S. transportation costs is generally lower. For example, if a firm reported "U.S. superior," it meant that the U.S. aluminum extrusions was generally priced lower than the imported aluminum extrusions.

Note.--S=first listed country's aluminum extrusions is superior; C=both countries' product are comparable; I=first list country's aluminum extrusions is inferior.

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

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

In order to determine whether U.S.-produced aluminum extrusions can generally be used in the same applications as imports from China, U.S. producers, importers, and purchasers were asked whether the products can "always", "frequently", "sometimes", or "never" be used interchangeably. As shown in table II-9, the majority of U.S. producers stated that aluminum extrusions are "always" interchangeable regardless of country of origin. Most importers stated that aluminum extrusions are "always" or "frequently" interchangeable, while most purchasers stated U.S. aluminum extrusions and Chinese aluminum extrusions are "sometimes" interchangeable.

Table II-9
Aluminum extrusions: Interchangeability aluminum extrusions produced in the United States and in other countries, by country pair

Country pair	Number of U.S. producers reporting				Number of U.S. importers reporting				Number of purchasers reporting			
	A	F	S	N	A	F	S	N	A	F	S	N
U.S. vs. subject countries:												
U.S. vs. China	19	5	1	0	5	4	1	1	6	6	8	0
U.S. vs. Other	19	5	1	0	5	5	2	1	7	8	4	1
Subject country comparisons:												
China vs. Other	18	3	1	0	6	4	1	0	7	7	3	0

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

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

As can be seen from table II-10, ten responding purchasers reported that domestically produced aluminum extrusions "always" met minimum quality specifications while a plurality of purchasers (15 firms) stated that domestically produced product "usually" met minimum specifications. Six responding purchasers reported that the Chinese aluminum extrusions "always" met minimum quality specifications, compared with five purchasers who noted they "usually" meet minimum quality specifications.

Table II-10
Aluminum extrusions: Ability to meet minimum quality specifications, by source[1]

Source	Always	Usually	Sometimes	Rarely or never
United States	10	15	0	0
China	6	5	2	1
Other	8	9	3	0

[1] Purchasers were asked how often domestically produced or imported aluminum extrusions meet minimum quality specifications for their own or their customers' uses.

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

In addition, producers, importers, and purchasers were asked to assess how often differences other than price were significant in sales of aluminum extrusions from the United States, subject, or nonsubject countries. As seen in table II-11, a majority of U.S. producers indicated that factors other than price are "sometimes" or "never" significant for comparisons between domestic and imported aluminum extrusions.

Table II-11

Aluminum extrusions: Significance of differences other than price between aluminum extrusions produced in the United States and in other countries, by country pair

Country pair	Number of U.S. producers reporting				Number of U.S. importers reporting				Number of purchasers reporting			
	A	F	S	N	A	F	S	N	A	F	S	N
U.S. vs. subject countries:												
U.S. vs. China	1	3	10	11	3	1	4	2	7	3	7	3
U.S. vs. Other	2	3	10	10	3	2	5	3	4	5	8	3
Subject countries comparisons:												
China vs. Other	0	2	10	11	2	1	5	2	4	0	9	3

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

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

A majority of importers reported that factors other than price were "sometimes" or "never" significant between U.S.-produced and imported aluminum extrusions, whereas purchasers were evenly split on this question with 10 reporting that factors other than price were "sometimes" or "never" and 10 reporting that non-price factors are "always" or "frequently" significant.

ELASTICITY ESTIMATES

This section discusses elasticity estimates in the aluminum extrusions market. Parties were encouraged to comment on these estimates in their posthearing briefs, but no party submitted comments on these estimates.

U.S. supply elasticity

The domestic supply elasticity[17] for aluminum extrusions measures the sensitivity of the quantity supplied by U.S. producers to changes in the U.S. market price of aluminum extrusions. The elasticity of domestic supply depends on several factors including the level of excess capacity, the ease with which producers can alter capacity, producers' ability to shift to production of other products, the existence of inventories, and the availability of alternate markets for U.S.-produced aluminum extrusions. Analysis of these factors above indicates that the U.S. industry is likely to be able to somewhat increase or decrease shipments to the U.S. market; an estimate in the range of 3 to 5 is suggested.

[17] A supply function is not defined in the case of a non-competitive market.

U.S. demand elasticity

The U.S. demand elasticity for aluminum extrusions measures the sensitivity of the overall quantity demanded to a change in the U.S. market price of aluminum extrusions. This estimate depends on factors discussed above such as the existence, availability, and commercial viability of substitute products, as well as the component share of the aluminum extrusions in the production of any downstream products. Based on the available information, the aggregate demand for aluminum extrusions is likely to be inelastic; a range of -0.25 to -0.5 is suggested.

Substitution elasticity

The elasticity of substitution depends upon the extent of aluminum extrusions differentiation between the domestic and imported products.[18] Product differentiation, in turn, depends upon such factors as quality (e.g., chemistry, appearance, etc.) and conditions of sale (e.g., availability, sales terms/ discounts/ promotions, etc.). Based on available information, the elasticity of substitution between U.S.-produced aluminum extrusions and imported aluminum extrusions is likely to be in the range of 4 to 6.

[18] The substitution elasticity measures the responsiveness of the relative U.S. consumption levels of the subject imports and the domestic like products to changes in their relative prices. This reflects how easily purchasers switch from the U.S. aluminum extrusions to the subject products (or vice versa) when prices change.

PART III: CONDITION OF THE U.S. INDUSTRY

OVERVIEW

The information in this section of the report was compiled from responses to the Commission's questionnaires. Twenty-five firms that accounted for *** percent of U.S. production of aluminum extrusions during 2015 supplied information on their operations in these reviews.[1] Table III-1 presents developments in the aluminum extrusions industry from January 2011 to the present.

Table III-1
Aluminum extrusions: Important industry events, since January 1, 2011

Year	Company	Description of event
2011	M&M Metals (now Alexandria Industries South)	**Name change**: M&M Metals announced it will operate as a division of Alexandria Industries and changed its name to Alexandria Industries South (the companies merged in 2008).
	Wakefield	**Capacity increase**: Wakefield solutions announced the addition of a 500 ton, 4-inch extrusion press to its Pelham, NH production facility.
	Keymark	**Facility upgrades**: Keymark upgraded the billet-heating furnace on its extrusion press at its Lakeland, FL facility.
	Extrusion Technology (now CBT Technology)	**Name change**: Extrusion Technology changed its name to CBT Technology.
	Non-Ferrous Extrusions	**Capacity increase**: Non-Ferrous Extrusions added an extrusion press to its Caldwell, TX facility.
	Kaiser	**Acquisitions:** Acquired Alexco, LLC. **Closure:** Closed Plainfield, IL warehouse.
	Western	**Expansion:** Western Extrusions added a new 14-inch press to its facility in Carrollton, TX. Also increased capacity in anodizing, mechanical finishing, and fabrication.

Table continued on next page.

[1] The coverage estimate is based on the AEFTC's estimate of in-scope U.S. production during 2015, which was *** short tons. *Domestic Interested Parties' Response to the Notice of Institution,* p. 32 and exh. 8. *** estimates that *** short tons of aluminum extrusions were produced in the United States in 2015. That estimate indicates that production coverage for this report is *** percent; however *** production estimate overstates in-scope production because they include series 2, 5, and 7 alloys. ***.

Table III-1--Continued
Aluminum extrusions: Important industry events, since January 1, 2011

Year	Company	Description of event
2012	Bonnell (Tredegar)	**Closure**: Bonnell announced the closure of its facility in Kentland, IN, which employed 146 people.
	Vitex	**Capacity increase**: Vitex announced the installation of a $7 million production line that added 12 million lbs. of capacity per year.
	PSI	**Changed location**: PSI moved its production facility to Irving, TX.
	Alexandria	**Acquisition**: Alexandria Industries acquired MidAmerica Extrusions in Indianapolis, IN.
	Hydro (Norsk Hydro)	**Closure:** Hydro Aluminum announced the closure of its Monett, MO facility (Sapa now operates this facility).
	Wakefield-Vette (formerly Wakefield Solutions)	**Merger:** Wakefield Solutions announced its merger with Vette Corporation; the new company changed its name to Wakefield-Vette.
	Bonnell Aluminum	**Acquisition:** Bonnell Aluminum acquired AACOA, a manufacturer of aluminum extrusions with operations in Niles, MI, and Elkhart, IN.
	Sapa Extrusions	**Expansion:** Sapa Extrusions installed a new extrusion press at its Cressona, PA facility.
2013	M-D Building Products	**Acquisition:** M-D Building Products headquartered in Oklahoma City, OK acquired Loxcreen.
	Sapa	**Acquisition and name change:** Norsk Hydro's Extruded Products business and Orkla ASA's Sapa combined into a 50/50 joint venture under the name Sapa AS.
	Profile Extrusions	***.
2014	Profile Extrusions (now Profile Custom Extrusions)	**Acquisition and name change:** Highlander Partners, L.P. acquired Profile Extrusions' Rome, GA facility and renamed it Profile Custom Extrusions.
	Bonnell	**Expansion:** Bonnell Aluminum to add two extrusion lines; one at facility in Newnan, GA in 2014, and one at facility in Niles, MI, set to begin production in 2017. *******.
	Astro Shapes	**Acquisition:** NMLP purchases a 70-percent stake in Astro Shapes, with Strong Newco, Inc. acquiring the remaining 30 percent. **New labor agreement:** New Labor agreement is in place as of December 15, 2014 and expires December 15, 2020.
	Keymark	**Facility upgrades:** Keymark announced $2.6 million in upgrades to the extrusion press at its Lakeland, FL facility.
	Futura	**Capacity increase:** Futura installed a 9-inch extrusion press at its facility in Clearfield, UT. ***.
	Pries Enterprises	**Capacity increase:** Pries Enterprises installed a 9-inch extrusion press.
	APEL	**Changed location and capacity increase:** APEL moved to a new facility in Coburg, OR and installed a 9-inch press.

Table continued on next page.

Table III-1--Continued
Aluminum extrusions: Important industry events, since January 1, 2011

Year	Company	Description of event
2014	Kaiser	**Upgrades:** $5.8 million upgrade, expected to add 7 new jobs at its aluminum extrusion facility in Sherman, TX.
	Sapa	**Closure:** Sapa closed its Miami, FL plant. *******. **Expansion:** Sapa installed a new extrusion press at its Elkhart, IN facility.
2015	Brazeway	**Capacity increase:** Brazeway added a new extrusion press at its Shelbyville, IN facility and added 27 jobs.
	C.R. Laurence	**Acquisition:** CRH acquired C.R. Laurence Inc. for $1.3 billion.
	Pennex	**Capacity increase:** Pennex completed a $38 million expansion of its Leetonia, OH extrusion facility. Pennex added two extrusion presses and 65 jobs to the facility.
	Keymark	**Upgrades:** Keymark completed extrusion press upgrades to its Fonda, NY and Lakeland, FL facilities. Keymark installed a new PLC control system in Lakeland, FL and a new log shear and billet loader in Fonda, NY.
	MI Metals	**Planned expansion:** MI Metals announced a $2 million expansion of its Millen, GA facility over the next 3 years. MI Metals expects to add 100 jobs.
2016	Sapa	**Investment:** Sapa opened a $3 million research and development center in Troy, Michigan expected to employ ten people.
	Vitex	**Upgrade**: Announced $1.5 million investment in a Presezzi HECS high-efficiency air and water cooling system, provides VITEX with advanced aluminum extrusion quenching capability.
	Bonnell	**Planned expansion:** Bonnell announced plans to add a new extrusion line at its Niles, MI AACOA facility over the next year. The new line will add 16 million lbs. of production capacity, and will feature a 3,600-ton extrusion press.
	Jordan Aluminum	**Planned expansion:** Jordan Aluminum announced plans to install an 8-inch extrusion press at its facility in Memphis, TN. Jordan Aluminum expected it to be operational by December 2016.[1]
	Shoals Extrusion	**New facility:** Shoals Extrusion expected the facility to be operational July 2016.[1] The new facility will have a monthly capacity of 1.2 to 1.4 million lbs. and will be located in Florence, AL.
	Kobe Steel USA, Inc.	**New facility:** Kobe Steel announced plans to establish a new aluminum extrusion and fabrication facility located in Bowling Green, KY. The facility will have a monthly capacity of 1 million lbs. and will operate under the name Kobelco Aluminum Products & Extrusions Inc.
	Vitex	**Upgrade**: Vitex Extrusion announced the installation of new Belco extrusion aging oven, which has capacity for 100,000 lbs. of profiles per day. Vitex expected the oven to be operational by mid-August 2016.[1]

Note.-- Brackets indicate business proprietary information revealed in surveys for which no public source found.
[1] Expected completion date has passed, but no public announcement of completion was found.

Source: Various company websites and news articles.

Changes experienced by the industry

Domestic producers were asked to indicate whether their firm had experienced any plant openings, relocations, expansions, acquisitions, consolidations, closures, or prolonged shutdowns because of strikes or equipment failure; curtailment of production because of shortages of materials or other reasons, including revision of labor agreements; or any other change in the character of their operations or organization relating to the production of aluminum extrusions since 2011. Nearly every one of the 25 domestic producers that provided responses in these reviews indicated that they had experienced such changes; their responses are presented in table III-2.

Table III-2
Aluminum extrusions: Reported changes in the character of U.S. operations, since January 1, 2011

* * * * * * *

Anticipated changes in operations

The Commission asked domestic producers to report anticipated changes in the character of their operations relating to the production of aluminum extrusions. Their responses appear in appendix D.

U.S. PRODUCTION, CAPACITY, AND CAPACITY UTILIZATION

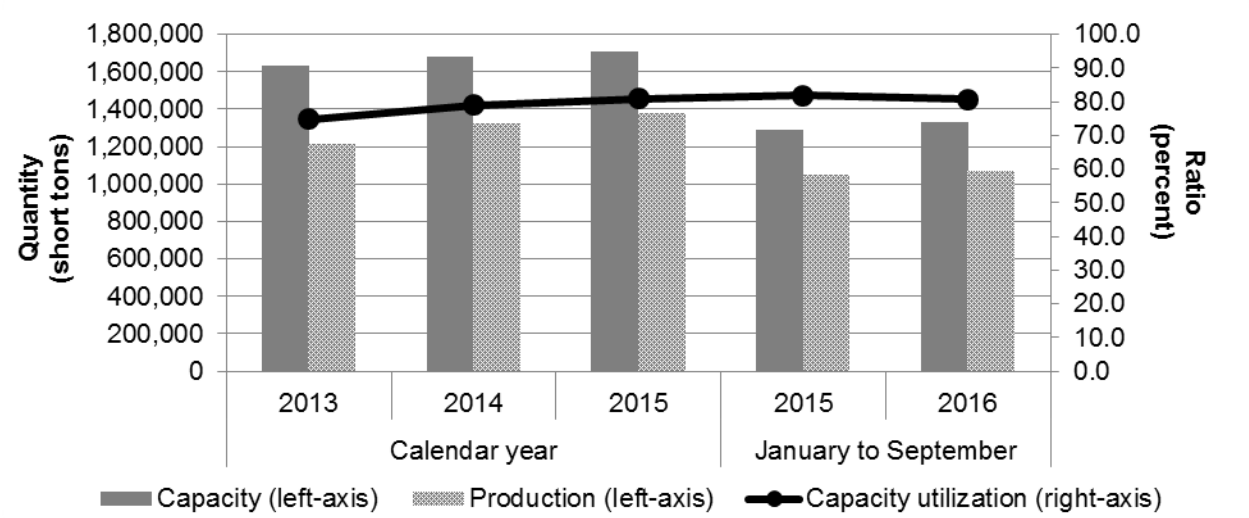
Table III-3 and figure III-1 present U.S. producers' production, capacity, and capacity utilization. U.S. producers' aggregate production capacity increased by 4.8 percent from 2013 to 2015 and was 3.5 percent higher in January-September 2016 than in January-September 2015. The large majority of the observed increase in capacity is attributable to upgrades and expansions by *** (*see supra*, tables III-1 and III-2). Increased production during this period pushed capacity utilization above 80 percent in 2015 and 2016. No U.S. producer reported production of out-of-scope products on the same machinery but *** reported that they had the ability to switch to such products. *** reported that it could switch production to *** products on the same machinery. *** reported that it could switch production to *** products on the same machinery.

Table III-3
Aluminum extrusions: U.S. producers' capacity, production, and capacity utilization, 2013-15, January to September 2015, and January to September 2016

Item	Calendar year			January to September	
	2013	2014	2015	2015	2016
	Capacity (short tons)				
Bonnell	***	***	***	***	***
Kaiser	***	***	***	***	***
Keymark	***	***	***	***	***
Sapa	***	***	***	***	***
Western	***	***	***	***	***
All other firms	***	***	***	***	***
Total capacity	1,631,243	1,682,077	1,709,753	1,288,358	1,332,941
	Production (short tons)				
Bonnell	***	***	***	***	***
Kaiser	***	***	***	***	***
Keymark	***	***	***	***	***
Sapa	***	***	***	***	***
Western	***	***	***	***	***
All other firms	***	***	***	***	***
Total production	1,220,407	1,326,825	1,382,446	1,054,863	1,074,316
	Capacity utilization (percent)				
Bonnell	***	***	***	***	***
Kaiser	***	***	***	***	***
Keymark	***	***	***	***	***
Sapa	***	***	***	***	***
Western	***	***	***	***	***
All other firms	***	***	***	***	***
Average capacity utilization	74.8	78.9	80.9	81.9	80.6

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

Figure III-1
Aluminum extrusions: U.S. producers' capacity, production, and capacity utilization, 2013-15, January to September 2015, and January to September 2016



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

Constraints on capacity

Nearly every one of the 25 responding U.S. producers reported constraints in the manufacturing process. The production restraints reported include: downtime for maintenance, equipment, labor, product mix, and demand. A number of U.S. producers reported that a lack of available skilled labor was a constraint on production. ***.

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

Table III-4 presents U.S. producers' U.S. shipments, export shipments, and total shipments. U.S. producers' U.S. shipments of aluminum extrusions, by quantity, increased by 15.0 percent from 2013 to 2015, and were 1.2 percent higher in January-September 2016 than in January-September 2015. U.S. producers' export shipments of aluminum extrusions, by quantity, decreased by 3.3 percent from 2013 to 2015, but were 3.8 percent higher in January-September 2016 than in January-September 2015. U.S. and export shipment values increased during 2013-15, but were lower in January-September 2016, reflecting lower average unit values during the most recent period.

Table III-4
Aluminum extrusions: U.S. producers' U.S. shipments, exports shipments, and total shipments, 2013-15, January to September 2015, and January to September 2016

Item	Calendar year			January to September	
	2013	2014	2015	2015	2016
	Quantity (short tons)				
U.S. shipments	1,140,254	1,237,750	1,310,914	1,002,687	1,014,801
Export shipments	68,551	69,224	66,309	51,439	53,411
Total shipments	1,208,805	1,306,974	1,377,223	1,054,126	1,068,212
	Value (1,000 dollars)				
U.S. shipments	4,561,009	5,037,189	5,276,471	4,101,895	3,836,011
Export shipments	258,585	265,767	259,652	207,069	188,343
Total shipments	4,819,594	5,302,956	5,536,123	4,308,964	4,024,354
	Unit value (dollars per short ton)				
U.S. shipments	4,000	4,070	4,025	4,091	3,780
Export shipments	3,772	3,839	3,916	4,026	3,526
Total shipments	3,987	4,057	4,020	4,088	3,767
	Share of quantity (percent)				
U.S. shipments	94.3	94.7	95.2	95.1	95.0
Export shipments	5.7	5.3	4.8	4.9	5.0
Total shipments	100.0	100.0	100.0	100.0	100.0
	Share of value (percent)				
U.S. shipments	94.6	95.0	95.3	95.2	95.3
Export shipments	5.4	5.0	4.7	4.8	4.7
Total shipments	100.0	100.0	100.0	100.0	100.0

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

U.S. PRODUCERS' INVENTORIES

Table III-5 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**.** U.S. producers' end-of-period inventories of aluminum extrusions, by quantity, increased by 15.5 percent from 2013 to 2015, and were 5.3 percent greater in January-September 2016 than in January-September 2015. Because inventory growth was generally consistent with rising production and shipment levels, inventory ratios remained relatively stable during this period.

Table III-5

Aluminum extrusions: U.S. producers' inventories, 2013-15, January to September 2015, and January to September 2016

Item	Calendar year			January to September	
	2013	2014	2015	2015	2016
	Quantity (short tons)				
U.S. producers' end-of-period inventories	63,623	77,151	73,510	72,485	76,307
	Ratio (percent)				
Ratio of inventories to.--					
U.S. production	5.2	5.8	5.3	5.2	5.3
U.S. shipments	5.6	6.2	5.6	5.4	5.6
Total shipments	5.3	5.9	5.3	5.2	5.4

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

U.S. PRODUCERS' IMPORTS AND PURCHASES

Table III-6 presents data on individual U.S. producers' U.S. production and U.S imports of aluminum extrusions from nonsubject sources. No U.S. producer reported importing subject aluminum extrusions from China. *** reported in its questionnaire response that it imported aluminum extrusions because ***. *** imports never exceeded *** percent of its production and the company reported that it imports because ***. *** reported that it imports extrusions in order to ***. *** imports included *** short tons of ***[2] and *** short tons of *** in 2015.

Table III-6

Aluminum extrusions: U.S. producers' U.S. imports, 2013-15, January to September 2015, and January to September 2016

* * * * * * *

U.S. EMPLOYMENT, WAGES, AND PRODUCTIVITY

Table III-7 presents U.S. producers' employment-related data. U.S. producers employed 1,524 more production and related workers in 2015 than they did in 2013, an increase of 11.1 percent. *** accounted for roughly *** of the new hires during that period, while *** each added at least *** production and related workers. Hourly wages increased by 5.5 percent from 2013 to 2015 while productivity decreased slightly, resulting in rising unit labor costs.

[2] ***.

Table III-7
Aluminum extrusions: U.S. producers' employment related data, 2013-15, January to September 2015, and January to September 2016

Item	Calendar year			January to September	
	2013	2014	2015	2015	2016
Production and related workers (PRWs) (number)	13,677	14,526	15,201	15,248	16,057
Total hours worked (1,000 hours)	27,764	29,938	31,573	24,095	25,566
Hours worked per PRW (hours)	2,030	2,061	2,077	1,580	1,592
Wages paid ($1,000)	604,558	665,284	725,044	543,604	578,822
Hourly wages (dollars per hour)	$21.77	$22.22	$22.96	$22.56	$22.64
Productivity (short tons per 1,000 hours)	44.0	44.3	43.8	43.8	42.0
Unit labor costs (dollars per short ton)	$495.37	$501.41	$524.46	$515.33	$538.78

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

FINANCIAL EXPERIENCE OF U.S. PRODUCERS

Background

Twenty-five U.S. producers provided questionnaire responses to the Commission and 23 reported usable financial results on their aluminum extrusions operations.[3] With the exceptions noted below, annual financial results were reported for calendar-year periods and based on U.S. generally accepted accounting principles (GAAP).[4] As reported to the Commission, most U.S. producers manufacture aluminum extrusions at facilities dedicated, or primarily dedicated, to this product.

Aluminum extrusions revenue primarily reflects commercial sales (*** percent of total sales quantity, followed by transfers *** percent, and internal consumption *** percent).[5] ***, accounts for *** percent of total reported sales quantity. The remaining U.S. producers account for shares of total sales quantity ranging from *** percent (***) to *** percent (***).

Operations on aluminum extrusions

Table III-8 presents U.S. producers' financial results on aluminum extrusions. Table III-9 presents corresponding changes in average unit values. Table III-10 presents a variance analysis of U.S. producers' financial results on aluminum extrusions.[6] Appendix C presents subsets of financial results, specifically for fin evaporator coil systems and fittings for engine cooling systems. Appendix E presents financial results information by firm.

Aluminum extrusions revenue

The revenue section of the table III-10 variance analysis shows that aluminum extrusions revenue increased in 2014 due to a combination of positive volume and, to a lesser extent, price variances. In 2015, aluminum extrusions revenue increased due to a positive volume variance, which was partially offset by a negative price variance. In interim 2016, the pattern of increasing sales revenue was reversed when a large negative price variance was only partially offset by a positive volume variance.

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[3] ***. USITC auditor notes.

[4] ***.

[5] Given the predominance of commercial sales, a single line item for aluminum extrusions revenue is presented in this section of the report.

[6] The Commission's variance analysis is calculated in three parts: sales variance, cost of goods sold (COGS) variance, and sales, general and administrative (SG&A) expenses variance. Each part consists of a price variance (in the case of the sales variance) or a cost variance (in the case of the COGS and SG&A expenses variances) and a volume (quantity) variance. The price and cost variances are calculated as the change in unit price/cost times the new volume, while the volume variance is calculated as the change in volume times the old unit price/cost. Summarized at the bottom of table III-10, the price variance is from sales, the cost/expense variance is the sum of those items from COGS and SG&A, respectively, and the net volume variance is the sum of the price, COGS, and SG&A volume variances. The Commission's variance analysis is generally enhanced when product mix remains constant during the period.

Table III-8
Aluminum extrusions: Results of operations of U.S. producers, 2013-15, January-September 2015, and January-September 2016

Item	Calendar year			January to September	
	2013	2014	2015	2015	2016
	Quantity (short tons)				
Total net sales	1,155,666	1,251,874	1,319,322	1,014,705	1,024,773
	Value (1,000 dollars)				
Total net sales	4,299,437	4,762,885	4,977,675	3,900,072	3,575,975
Cost of goods sold.--					
Raw materials	2,584,564	2,897,208	2,951,045	2,331,767	1,970,720
Direct labor	439,692	473,820	529,045	400,757	421,564
Other factory costs	847,846	929,516	985,051	740,239	777,992
Total COGS	3,872,102	4,300,544	4,465,141	3,472,763	3,170,276
Gross profit	427,335	462,341	512,534	427,309	405,699
SG&A expense	245,369	275,379	276,211	202,722	208,812
Operating income or (loss)	181,966	186,962	236,323	224,587	196,887
Interest expense	9,561	10,702	11,090	8,046	7,858
All other expenses	25,407	28,448	32,049	19,947	20,606
All other income	4,542	5,853	10,031	5,616	4,164
Net income or (loss)	151,540	153,665	203,215	202,210	172,587
Depreciation/amortization	92,649	107,046	108,692	81,146	85,328
Cash flow	244,189	260,711	311,907	283,356	257,915
	Unit value (dollars per short ton)				
Total net sales	3,720	3,805	3,773	3,844	3,490
Cost of goods sold.--					
Raw materials	2,236	2,314	2,237	2,298	1,923
Direct labor	380	378	401	395	411
Other factory costs	734	742	747	730	759
Average COGS	3,351	3,435	3,384	3,422	3,094
Gross profit	370	369	388	421	396
SG&A expense	212	220	209	200	204
Operating income or (loss)	157	149	179	221	192
Net income or (loss)	131	123	154	199	168

Table continued on next page.

Table III-8--Continued
Aluminum extrusions: Results of operations of U.S. producers, 2013-15, January-September 2015, and January-September 2016

Item	Calendar year			January to September	
	2013	2014	2015	2015	2016
	Ratio to COGS (percent)				
Cost of goods sold.-- Raw materials	66.7	67.4	66.1	67.1	62.2
Direct labor	11.4	11.0	11.8	11.5	13.3
Other factory costs	21.9	21.6	22.1	21.3	24.5
Total COGS	100.0	100.0	100.0	100.0	100.0
	Ratio to net sales (percent)				
Cost of goods sold.-- Raw materials	60.1	60.8	59.3	59.8	55.1
Direct labor	10.2	9.9	10.6	10.3	11.8
Other factory costs	19.7	19.5	19.8	19.0	21.8
Total COGS	90.1	90.3	89.7	89.0	88.7
Gross profit	9.9	9.7	10.3	11.0	11.3
SG&A expense	5.7	5.8	5.5	5.2	5.8
Operating income or (loss)	4.2	3.9	4.7	5.8	5.5
Net income or (loss)	3.5	3.2	4.1	5.2	4.8
	Number of firms reporting				
Operating losses	4	3	3	3	2
Net losses	3	4	3	3	2
Data	23	23	23	23	23

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

Table III-9
Aluminum extrusions: Changes in average per short ton values, between calendar years and partial periods

Item	Between calendar years			January to September
	2013-15	2013-14	2014-15	2015-16
	Changes in unit values (dollars per short ton)			
Total net sales	53	84	(32)	(354)
Cost of goods sold.-- Raw materials	0	78	(78)	(375)
Direct labor	21	(2)	23	16
Other factory costs	13	9	4	30
Average COGS	34	85	(51)	(329)
Gross profit	19	(0)	19	(25)
SG&A expense	(3)	8	(11)	4
Operating income or (loss)	22	(8)	30	(29)
Net income or (loss)	23	(8)	31	(31)

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

Table III-10
Aluminum extrusions: Variance analysis on the operations of U.S. producers, 2013-15, January-September 2015, and January-September 2016

Item	Between calendar years			January to September
	2013-15	2013-14	2014-15	2015-16
Net sales:				
Price variance	69,387	105,524	(41,823)	(362,794)
Volume variance	608,851	357,924	256,613	38,697
Net sales variance	678,238	463,448	214,790	(324,097)
Cost of sales:				
Cost/expense variance	(44,703)	(106,094)	67,106	336,944
Volume variance	(548,336)	(322,348)	(231,703)	(34,457)
Total cost of sales variance	(593,039)	(428,442)	(164,597)	302,487
Gross profit variance	85,199	35,006	50,193	(21,610)
SG&A expenses:				
Cost/expense variance	3,905	(9,583)	14,005	(4,079)
Volume variance	(34,747)	(20,427)	(14,837)	(2,011)
Total SG&A expense variance	(30,842)	(30,010)	(832)	(6,090)
Operating income variance	54,357	4,996	49,361	(27,700)
Summarized as:				
Price variance	69,387	105,524	(41,823)	(362,794)
Net cost/expense variance	(40,798)	(115,677)	81,111	332,866
Net volume variance	25,769	15,148	10,073	2,228

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

As shown in table E-1, most U.S. producers reported higher sales volume in 2014. In contrast, company-specific sales volume was more directionally mixed in 2015 and between the interim periods. The pattern of company-specific sales volume reflects such factors as changes in product mix,[7] customer-mix, market share, and/or end-use demand.[8] In some instances, the absence of more substantial changes in sales volume reflected capacity constraints.[9]

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[7] ***. December 9, 2016 Wiley Rein submission on behalf of ***. ***. December 14, 2016 Wiley Rein submission on behalf of ***.

[8] *** both noted increases in the automotive market sales. December 9, 2016 Wiley Rein submission on behalf of ***. December 9, 2016 Wiley Rein submission on behalf of ***. Notwithstanding the company's lower interim 2016 sales volume compared to interim 2015, *** noted that the transportation market, specifically the truck and trailer market, increased during interim 2016. Ibid. ***. December 20, 2016 e-mail with attachment from *** to USITC auditor. ***, the company noted, in general, that there has been a modest increase in U.S. demand and more market available due to the absence of Chinese imports. December 14, 2016 Wiley Rein submission on behalf of ***. *** indicated that its lower interim 2016 sales volume was due to the start-up of a new extrusion line. December 23, 2016 *** narrative response to follow-up questions. *** all noted increases in the building and construction market. December 9, 2016 e-mail with attachment from *** to USITC auditor. December 9, 2016 Wiley Rein submission on behalf of ***. December 5, 2016 e-mail with attachment from *** to USITC auditor. December 9, 2016 e-mail with attachment from *** to USITC auditor. *** attributed increased sales volume to new customers, growth in pipe and tube market, electrical market, as well as

(*continued*...)

As shown in table III-9, the directional pattern of the U.S. industry's average sales value was consistent with changes in average raw material cost. With respect to this pattern, a number of U.S. producers confirmed that their sales values are adjusted using a pass through formula to incorporate changes in primary raw material inputs.[10] *** also noted that, while raw material costs are generally passed through, market conditions ultimately determine the spread over raw material costs reflected in the pass through.[11] [12]

Aluminum extrusions cost of goods sold

Raw material, the single largest component of COGS, reflects aluminum billets of varying grades generally purchased from unrelated parties. In some instances, operations also include the casting of billets such that company-specific costs reflect a combination of purchased billets and internally-produced billets.[13] With regard to the decline in the share of total COGS accounted for by raw material costs, from a high of 67.4 percent of total COGS in 2014 to a low of 62.2 percent in interim 2016, table E-1 shows that all U.S. producers reported lower average raw material costs of varying magnitudes in interim 2016 than in interim 2015.

Other factory costs and direct labor are the second and third largest components of COGS, respectively. Both followed similar patterns in terms of changes in share of total COGS and changes in per short ton cost (see table III-8). While average per short ton other factory costs were at their highest level in interim 2016, the increase in the share of total COGS accounted for by other factory costs, from a low of 21.3 percent of total COGS in interim 2015 to a high of 24.5 percent in interim 2016, primarily reflects the decline in corresponding average raw material costs noted above.

As shown in table E-1, average company-specific COGS covers a relatively wide range which, in general, reflects such differences as company-specific product mix and cost structure.

(…*continued*)
increased shares in fence and distribution markets. December 9, 2016 e-mail with attachment from *** to USITC auditor. While describing demand as generally stable, *** noted that it lost some sales volume in 2015 when a customer transitioned to a cast aluminum product. December 7, 2016 e-mail with attachment from *** to USITC auditor.

[9] December 9, 2016 e-mail with attachment from *** to USITC auditor. December 9, 2016 e-mail with attachment from *** to USITC auditor.

[10] ***. December 20, 2016 e-mail with attachment from *** to USITC auditor.

[11] December 9, 2016 Wiley Rein submission on behalf of ***.

[12] Notwithstanding the wide-spread use of raw material pass through formulas, there are periods when average raw material inventory cost and the pass through based on prevailing aluminum market prices are not effectively correlated. This presumably occurs during periods of rapid increases or decreases in the market price for aluminum. December 9, 2016 e-mail with attachment from *** to USITC auditor.

[13] ***. December 5, 2016 e-mail with attachment from *** to USITC auditor. ***. *** U.S. producer questionnaire response to question III-5. ***. December 14, 2016 Wiley Rein submission on behalf of ***.

During the period of review, with the exception of the decline in aluminum billet cost at the end of the period, most U.S. producers reported no substantial cost structure changes.[14]

Aluminum extrusions gross and operating profit

Table III-8 shows that overall gross profit ratio remained within a relatively narrow range during the full-year period and reached its highest level in interim 2016.[15] Table E-1 shows that company-specific SG&A expenses, while generally remaining within a narrow range, varied considerably. To the extent that the U.S. industry's overall SG&A ratio did not change substantially during the period (see table III-8), overall operating results generally followed the pattern established at the gross level.

The majority of U.S. producers reported operating profit throughout the period and, as shown in table E-1, company-specific operating profit ratios generally did not fluctuate substantially. ***.[16] ***, whose operating profit ratios remained within a narrow range throughout the period and were therefore more typical of the majority of U.S. producers, noted that ***.[17]

As indicated at the bottom of table III-8, and as shown on a company-specific basis in table E-1, four U.S. producers reported operating losses in 2013 (***),[18] three in 2014 and 2015 (***),[19] and two in interim 2016 (***).[20]

Capital expenditures and research and development expenses

Table III-11 presents U.S. producers' total aluminum extrusions capital expenditures and research and development (R&D) expenses. Appendix E presents this information by firm.

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[14] ***. Ibid. ***. December 23, 2016 *** narrative response to follow-up questions. ***. December 9, 2016 Wiley Rein submission on behalf of ***.

[15] The summary of changes in average unit values presented in table III-9 shows that in 2014 the modest decline in gross profit ratio was attributable to an increase in average COGS, principally the raw material component, which exceeded the corresponding increase in average sales value. In 2015, the modest increase in gross profit ratio reflects a decline in average COGS, again principally the raw material cost component, which exceeded the corresponding decline in average sales value. While interim 2016 gross profit was lower on a unit basis compared to interim 2015, interim 2016 gross profit ratio was higher due to the lower sales value denominator.

[16] December 9, 2016 e-mail with attachment from *** to USITC auditor.

[17] December 9, 2016 Wiley Rein submission on behalf of ***. ***. December 20, 2016 e-mail with attachment from *** to USITC auditor. ***. December 23, 2016 *** narrative response to follow-up questions.

[18] ***. January 17, 2017 e-mail from *** to USITC auditor.

***. December 9, 2016 e-mail with attachment from *** to USITC auditor. ***. December 9, 2016 Wiley Rein submission on behalf of ***.

[19] ***. January 10, 2017 e-mail with attachment from *** to USITC auditor.

[20] ***. December 9, 2016 Wiley Rein submission on behalf of ***. Regarding its cost structure, *** also noted the importance of changes in volume on its per unit costs which indicates a relatively high fixed cost structure. Ibid. ***.

Table III-11

Aluminum extrusions: Capital expenditures and research and development (R&D) expenses of U.S. producers, 2013-15, January-September 2015, and January-September 2016

Item	Calendar year			January to September	
	2013	2014	2015	2015	2016
	Capital expenditures (1,000 dollars)				
Total capital expenditures	124,171	124,028	174,557	112,127	97,554
	Research and development expenses (1,000 dollars)				
Total R&D expenses	34,743	39,708	43,069	32,096	28,613

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

On an overall basis, total capital expenditures were about the same in 2013 and 2014 and increased to their highest level in 2015. As shown in table E-2, *** (*** percent of total capital expenditures), *** (*** percent), *** (*** percent), and *** (*** percent) reported their highest capital expenditure levels in 2015.[21] ***, (*** percent of total capital expenditures) and *** (*** percent) reported their highest levels in 2014 and 2013, respectively.[22] The company-specific shares of the remaining U.S. producers that reported capital expenditures ranged from *** percent of total capital expenditures (***) to *** percent (***).[23]

Table III-11 shows that the level of the U.S. industry's R&D expenses increased during the full-year period and then was lower in interim 2016 compared to interim 2015. Seven U.S. producers reported R&D expenses, covering a range of activities/objectives, related to their aluminum extrusions operations. *** accounted for the largest company-specific share (*** percent of total R&D expenses).[24] The remaining R&D expenses were accounted for by *** (*** percent), *** (*** percent), *** (*** percent), *** (*** percent), *** (*** percent), and *** (*** percent).[25]

Assets and return on investment

Table III-12 presents data on the U.S. producers' aluminum extrusions total assets, asset turnover (sales divided by total assets), and return on assets, respectively.[26] Appendix E presents this information by firm.

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[21] ***. *** U.S. Producer questionnaire response to III-13 (note 1). ***. *** U.S. Producer questionnaire response to III-13 (note 1). ***. *** U.S. Producer questionnaire response to III-13 (note 1). ***. *** U.S. Producer questionnaire response to III-13 (note 1).

[22] ***. *** U.S. Producer questionnaire response to III-13 (note 1). ***. *** U.S. Producer questionnaire response to III-13 (note 1).

[23] ***. *** U.S. Producer questionnaire response to III-13 (note 1).

[24] ***. *** U.S. Producer questionnaire response to III-13 (note 2).

[25] ***. December 23, 2016 *** narrative response to follow-up questions. ***. *** U.S. Producer questionnaire response to III-13 (note 2). ***. December 20, 2016 e-mail with attachment from *** to USITC auditor. ***. *** U.S. Producer questionnaire response to III-13 (note 2). ***. *** U.S. Producer questionnaire response to III-13 (note 2). ***. *** U.S. Producer questionnaire response to III-13 (note 2).

Table III-12
Aluminum extrusions: U.S. producers' total assets, asset turnover, and return on assets, 2013-15, January-September 2015, and January-September 2016

Firm	Calendar year		
	2013	2014	2015
	Total net assets (1,000 dollars)		
Total net assets	2,007,563	2,310,479	2,451,345
	Asset turnover (multiple)		
Average asset turnover	2.1	2.1	2.0
	Operating return on assets (percent)		
Average operating return on assets	9.1	8.1	9.6

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

(…*continued*)

[26] With regard to a company's overall operations, staff notes that a total asset value (i.e., the bottom line value on the asset side of a company's balance sheet) reflects the aggregation of short-term and long-term assets that are not necessarily product specific in nature. As noted above, a number of U.S. producers reported that their operations are focused entirely on aluminum extrusions. As compared to other industries examined by the Commission in which the majority of responding companies produce and sell multiple products, the use of high-level allocation factors to report total product-specific assets is presumably less prevalent in this case.

PART IV: U.S. IMPORTS AND THE FOREIGN INDUSTRY

U.S. IMPORTS

Overview

The Commission issued questionnaires to 70 firms believed to have imported aluminum extrusions since 2011. Sixteen firms provided data and information in response to the questionnaires, while five firms indicated that they had not imported aluminum extrusions since 2011.[1] Responding firms accounted for *** percent of U.S. imports from nonsubject sources during 2015 and *** percent of total U.S. imports from China during 2015.[2] In light of the data coverage by the Commission's questionnaires, import data in this report are based on official Commerce statistics for aluminum extrusions.[3]

[1] The Commission issued questionnaires to importers that accounted for more than one percent of U.S. imports under the HTS statistical reporting numbers corresponding to official Commerce statistics used in this report during 2015 or in total from January 2011 to September 2016. To account for U.S. imports of fin evaporators, the Commission also issued questionnaires to all importers that accounted for more than one percent of U.S. imports under HTS statistical reporting numbers 8418.99.8050 and 8418.99.8060 during 2015 or in total from January 2011 to September 2016. To account for importers of engine cooling fittings the Commission sent questionnaires to companies identified by Adams Thermal that filed scope ruling requests regarding those products or similar machined extrusion products.

[2] According to ***, responding firms, including those that indicated they have not imported aluminum extrusions since January 2011, accounted for *** of a total of *** short tons of U.S. imports of aluminum extrusions from China in 2015. In their questionnaire responses, U.S. importers reported *** short tons of U.S. imports of aluminum extrusions from nonsubject sources in 2015.

***. According to *** was the importer of record for *** under the primary statistical reporting numbers in 2015. ***. The difference between the two sources may indicate that 2015 U.S. imports from China under the primary statistical reporting numbers contain a large share of out-of-scope alloys.

***, email message to USITC staff, December 29, 2016.

*** reported that they had not imported aluminum extrusions since January 2011.

[3] Official Commerce statistics in this report refer to imports that enter under HTS statistical reporting numbers 7604.21.0000, 7604.29.1000, 7604.29.3010, 7604.29.3050, 7604.29.5030, 7604.29.5060, 7608.20.0030, and 7608.20.0090. Official import statistics do not include reported imports of FECS and fittings which combined, were equivalent to less than *** percent of imports from China and less than *** percent of imports from nonsubject sources.

Imports from subject and nonsubject countries

Table IV-1 and figure IV-1 present information on U.S. imports of aluminum extrusions from China and all other sources. Import quantities from China decreased by 37.6 percent from 2013 to 2015, while imports from Canada increased by 16.9 percent and all nonsubject sources increased by 32.1 percent, during the same period. Though the quantity of U.S. producers' production of aluminum extrusions increased from 2013 to 2015, the ratio of imports to U.S. production increased by 1.7 percentage points, reflecting higher levels of imports from Canada and other nonsubject sources.

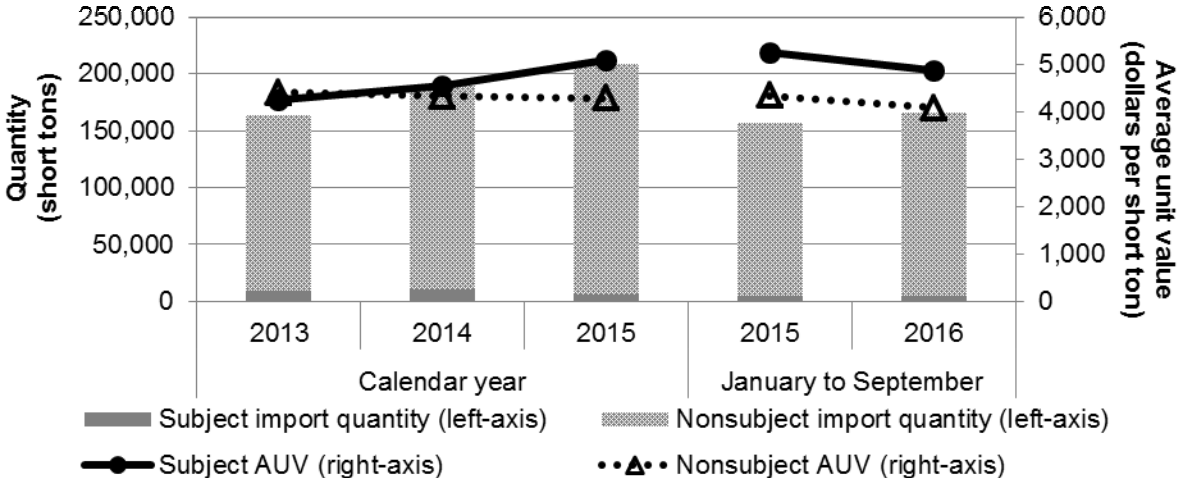
Table IV-1
Aluminum extrusions: U.S. imports, by source, 2013-15, January to September 2015, and January to September 2016

Item	Calendar year			January to September	
	2013	2014	2015	2015	2016
	Quantity (short tons)				
U.S. imports from.--					
China	9,824	11,068	6,127	4,772	5,343
Canada	70,139	77,739	81,988	61,720	57,739
All other sources	83,241	100,861	120,657	90,414	102,575
Subtotal, nonsubject sources	153,379	178,600	202,645	152,134	160,314
All sources	163,203	189,667	208,772	156,906	165,658
	Value (1,000 dollars)				
U.S. imports from.--					
China	41,709	50,196	31,100	24,988	25,958
Canada	264,977	299,590	323,637	247,876	229,906
All other sources	409,931	471,812	544,883	412,576	424,129
Subtotal, nonsubject sources	674,908	771,402	868,520	660,452	654,035
All sources	716,617	821,598	899,619	685,441	679,993
	Unit value (dollars per short ton)				
U.S. imports from.--					
China	4,246	4,535	5,076	5,236	4,858
Canada	3,778	3,854	3,947	4,016	3,982
All other sources	4,925	4,678	4,516	4,563	4,135
Subtotal, nonsubject sources	4,400	4,319	4,286	4,341	4,080
All sources	4,391	4,332	4,309	4,368	4,105
	Share of quantity (percent)				
U.S. imports from.--					
China	6.0	5.8	2.9	3.0	3.2
Canada	43.0	41.0	39.3	39.3	34.9
All other sources	51.0	53.2	57.8	57.6	61.9
Subtotal, nonsubject sources	94.0	94.2	97.1	97.0	96.8
All sources	100.0	100.0	100.0	100.0	100.0
	Share of value (percent)				
U.S. imports from.--					
China	5.8	6.1	3.5	3.6	3.8
Canada	37.0	36.5	36.0	36.2	33.8
All other sources	57.2	57.4	60.6	60.2	62.4
Subtotal, nonsubject sources	94.2	93.9	96.5	96.4	96.2
All sources	100.0	100.0	100.0	100.0	100.0
	Ratio to U.S. production (percent)				
U.S. imports from.--					
China	0.8	0.8	0.4	0.5	0.5
Canada	5.8	5.9	6.0	5.9	5.4
All other sources	6.9	7.7	8.8	8.6	9.6
Subtotal, nonsubject sources	12.7	13.6	14.8	14.6	15.1
All sources	13.5	14.4	15.2	15.0	15.6

Source: Official import statistics using HTS statistical reporting numbers 7604.21.0000, 7604.29.1000, 7604.29.3010, 7604.29.3050, 7604.29.5030, 7604.29.5060, 7608.20.0030, 7608.20.0090, accessed November 28, 2016.

Figure IV-1

Aluminum extrusions: U.S. import quantities and average unit values, 2013-15, January to September 2015, and January to September 2016



Source: Official import statistics using HTS statistical reporting numbers 7604.21.0000, 7604.29.1000, 7604.29.3010, 7604.29.3050, 7604.29.5030, 7604.29.5060, 7608.20.0030, 7608.20.0090, accessed November 28, 2016.

U.S. IMPORTERS' IMPORTS SUBSEQUENT TO SEPTEMBER 30, 2016

The Commission requested importers to indicate whether they had imported or arranged for the importation of aluminum extrusions from China for delivery after September 30, 2016. U.S. importers' arranged imports are presented in table IV-2.

Table IV-2

Aluminum extrusions: U.S. importers' arranged imports

* * * * * * *

U.S. IMPORTERS' INVENTORIES

Table IV-3 presents data for inventories of U.S. imports of aluminum extrusions from China and all other sources held in the United States. *** inventories of aluminum extrusions from China.

Table IV-3

Aluminum extrusions: U.S. importers' end-of-period inventories of imports, by source, 2013-15, January to September 2015, and January to September 2016

* * * * * * *

THE INDUSTRY IN CHINA

Overview

During the original investigations, data on the industry in China were based on the questionnaire responses of eight firms believed to account for approximately six percent of U.S. imports from China in 2010.

The Commission did not receive any responses to the notice of institution in these reviews from foreign producers or exporters in China. The domestic interested parties provided a list of 367 firms in China that they believe produce aluminum extrusions.[4] Electrolux provided a list of ten firms in China that it believes currently export or have exported kitchen appliance components and heat exchange system components to the United States or other countries since 2011.[5] Adams Thermal provided a list of 350 Chinese firms for which the domestic interested parties have filed administrative review requests.[6]

In the current reviews, the Commission issued questionnaires to 85 firms believed to be producers of aluminum extrusions in China since 2011.[7] Two firms provided data and information in response to the questionnaires.

Operations on aluminum extrusions

Table IV-4 presents summary data reported by the two responding producers in China and table IV-5 presents the reported change in operations in China.[8]

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[4] *Domestic Interested Parties Response to the Notice of Institution*, exh. 13.

[5] *Electrolux's Response to the Notice of Institution*, p. 6.

[6] *Adams Thermal's Response to the Notice of Institution*, p. 5.

[7] The Commission issued questionnaires to companies that accounted for more than one percent of exports to the United States {1} in 2015 or {2} since January 2011. The Commission also sent questionnaires to certain firms in China believed to produce fin evaporator coils and fittings for engine cooling systems.

[8] ***.

Table IV-4

Aluminum extrusions: Summary data on firms in China, 2015

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)
Sapa Group	***	***	***	***	***	***
Press Metal International	***	***	***	***	***	***
Total	***	***	***	***	***	***

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

Table IV-5

Aluminum extrusions: Reported changes in operations of firms in China, since January 1, 2011

* * * * * * *

Table IV-6 presents capacity, production, shipments, and inventories of the two responding firms in China. The responding firms' production capacity *** from 2013 to 2015 and production increased by *** percent during that time.[9] The home market accounted for no less than *** percent of the responding producers' shipments. Exports of responding two firms were ***.[10] Inventories reported by these firms were at or between *** percent and *** percent of production from 2013 to 2015; however, inventory levels dropped to *** percent of production during January-September 2016.[11]

Table IV-6

Aluminum extrusions: Capacity, production, shipments, and inventories of Chinese producers Sapa and Press Metal, 2013-15, January to September 2015, and January to September 2016

* * * * * * *

[9] Sapa reported that capacity constraints are *** and Press Metal reported ***. Both firms reported that they ***.

[10] Major export markets in ***. The only major export market in ***.

[11] The drawdown in inventories was ***.

Table IV-7 presents exports of aluminum extrusions from China as reported by the government of China Customs in the GTIS/GTA database. Exports of aluminum extrusions from China increased by 84.5 percent from 2013 to 2015.[12] Exports of aluminum extrusions from China to Vietnam increased by more than 5,000 percent from 2013 to 2015 making it, by far, China's largest export market.[13] Exports of aluminum extrusions from China to the United States decreased by 26.7 percent from 2013 to 2015.

According to *** China's aluminum smelting capacity (i.e., raw aluminum – not entirely for extrusion) in 2015 was *** short tons.[14] According to ***, (*see infra,* tables IV-12 and IV-13) the industry in China produced *** short tons of aluminum extrusions while China consumed *** short tons during 2015.[15]

According to a report by Sino East, which was provided by the domestic interested parties, the top seven publicly listed aluminum extrusions producers in China combined for annual production capacity of 1.9 million tons in 2015. China Zhongwang Holdings Limited ("Zhongwang"), the largest producer in China stated that it expected its capacity to reach 1.3 million short tons in 2015.[16] In 2016, Zhongwang, reported that it was in the process of replacing, optimizing and expanding its production capacity (which consisted of 90 extrusion presses at the time) with 99 new extrusion presses.[17] Two other companies were mentioned by the domestic interested parties: Fenglu Aluminum Company and Zhejiang Dongliang New Material Co., Ltd.[18] Fenglu Aluminum reported that it currently has 331,000 short tons of annual capacity and Zhejiang Dongliang currently has an annual production capacity of 88,000 short tons.[19] As discussed in detail later in this chapter, Australia, Canada, Colombia, and Trinidad and Tobago have orders in place on aluminum extrusions from China.

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[12] As reported in the global market section of this part of the report (*see infra,* table IV-12), production in China *** short tons in 2015.

[13] More information on the industry in Vietnam is presented later in this chapter.

[14] AEFTC's prehearing brief, exh. 12.

[15] According to the domestic interested party's source (a report from Sino East dated August 2015) aluminum extrusion production in China was projected to reach 20.3 million short tons in 2015, while Chinese consumption was estimated to be 16.5 million short tons. *Domestic Interested Parties Response to the Notice of Institution*, pp. 22-23 and exh. 6

[16] China Zhongwang Holdings Limited, *Annual Report*, 2015, p.6.

[17] AEFTC's prehearing brief, exh. 15.

[18] *Domestic Interested Parties Response to the Notice of Institution*, p. 25.

[19] Fenglu website, "About Us," http://www.fenglu-aluminium.com/about.html (accessed May 25, 2016); Dongliang website, "Address from President," http://www.dongliang.com.cn/english/en-president.htm (accessed May 25, 2016).

Table IV-7

Aluminum extrusions: Exports from China by destination market, 2011-15

Item	Calendar year				
	2011	2012	2013	2014	2015
	Quantity (short tons)				
China exports to the United States	11,698	15,155	17,588	18,973	12,884
China exports to other major destination markets.--					
Vietnam	7,952	9,343	8,965	78,897	533,168
Malaysia	24,697	26,720	45,668	244,714	58,091
Philippines	16,044	23,732	24,753	34,740	46,280
United Kingdom	30,731	29,750	30,125	35,298	41,379
Nigeria	43,581	48,551	63,276	49,598	39,631
Hong Kong	34,358	35,139	35,131	40,538	38,569
Australia	48,355	41,643	38,447	40,751	37,155
South Africa	12,771	17,241	21,661	28,961	34,597
All other destination markets	764,135	770,860	488,107	508,233	585,664
Total China exports	994,323	1,018,134	773,722	1,080,701	1,427,417
	Value (1,000 dollars)				
China exports to the United States	49,752	78,739	79,371	84,838	57,244
China exports to other major destination markets.--					
Vietnam	27,274	33,750	31,546	283,824	2,003,969
Malaysia	76,563	81,606	148,331	870,921	188,118
Philippines	49,814	75,371	76,901	103,067	124,488
United Kingdom	95,612	85,360	85,501	102,536	116,331
Nigeria	126,640	140,298	176,278	132,164	100,231
Hong Kong	106,775	120,331	122,095	146,514	132,623
Australia	164,633	132,354	119,286	127,592	113,678
South Africa	40,075	51,386	63,578	82,102	90,450
All other destination markets	2,601,318	2,649,666	1,580,001	1,544,432	1,684,631
Total China exports	3,338,457	3,448,862	2,482,888	3,477,990	4,611,763

Table continued on next page.

Table IV-7--Continued

Aluminum extrusions: Exports from China by destination market, 2011-15

Item	Calendar year				
	2011	2012	2013	2014	2015
	Unit value (dollars per short ton)				
China exports to the United States	4,253	5,195	4,513	4,472	4,443
China exports to other major destination markets.--					
Vietnam	3,430	3,612	3,519	3,597	3,759
Malaysia	3,100	3,054	3,248	3,559	3,238
Philippines	3,105	3,176	3,107	2,967	2,690
United Kingdom	3,111	2,869	2,838	2,905	2,811
Nigeria	2,906	2,890	2,786	2,665	2,529
Hong Kong	3,108	3,424	3,475	3,614	3,439
Australia	3,405	3,178	3,103	3,131	3,060
South Africa	3,138	2,980	2,935	2,835	2,614
All other destination markets	3,404	3,437	3,237	3,039	2,876
Total China exports	3,358	3,387	3,209	3,218	3,231
	Share of quantity (percent)				
China exports to the United States	1.2	1.5	2.3	1.8	0.9
China exports to other major destination markets.--					
Vietnam	0.8	0.9	1.2	7.3	37.4
Malaysia	2.5	2.6	5.9	22.6	4.1
Philippines	1.6	2.3	3.2	3.2	3.2
United Kingdom	3.1	2.9	3.9	3.3	2.9
Nigeria	4.4	4.8	8.2	4.6	2.8
Hong Kong	3.5	3.5	4.5	3.8	2.7
Australia	4.9	4.1	5.0	3.8	2.6
South Africa	1.3	1.7	2.8	2.7	2.4
All other destination markets	76.8	75.7	63.1	47.0	41.0
Total China exports	100.0	100.0	100.0	100.0	100.0

Source: Official exports statistics under HTS subheading 7604.21, 7604.29, and 7608.20 as reported by China Customs in the IHS/GTA database, accessed January 4, 2017. Data reported under subheadings likely includes some merchandise outside of the scope of these reviews.

ANTIDUMPING OR COUNTERVAILING DUTY ORDERS IN THIRD-COUNTRY MARKETS

Aluminum extrusions from China are currently subject to trade remedies in Australia, Canada, Colombia, and Trinidad & Tobago. In 2009, Canada issued antidumping and countervailing duties on subject and nonsubject aluminum extrusions from China. Canada reviewed and reissued the orders in 2014.[20] Duty rates on Canadian imports of aluminum extrusions from China range from 0-43 percent for specific companies and 102 percent for all others.[21] The scope for the Canadian order is both broader and narrower than the scope for these reviews and includes:

> "aluminum extrusions produced via an extrusion process, of alloys having metallic elements falling within the alloy designations published by The Aluminum Association commencing with 1, 2, 3, 5, 6 or 7 (or proprietary or other certifying body equivalents), with the finish being as extruded (mill), mechanical, anodized or painted or otherwise coated, whether or not worked, having a wall thickness greater than 0.5 mm., with a maximum weight per meter of 22 kilograms and a profile or cross-section which fits within a circle having a diameter of 254 mm., originating in/or exported from the People's Republic of China." [22]

In 2010, Australia issued antidumping and countervailing duty orders with duties of 2 to 26 percent on imports of aluminum extrusions from China.[23] In 2015, Australia reviewed and reissued the order.[24] The scope of the order includes the following HS 6-digit subheadings: 7604.10, 7604.21, 7604.29, 7608.10, 7608.20, 7610.10, and 7610.90.

In 2013, Colombia issued antidumping duty orders with duties, "equivalent to the difference between an f.o.b. base price of US$3.60/kg and the f.o.b. price declared by the importer, provided that the declared price is lower than the base price" on imports of aluminum extrusions from China.[25] In 2015, Columbia reviewed and maintained the duties. The

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[20] Canada Border Services Agency, "Measures in Force: Goods subject to antidumping or countervailing duties," last modified May 11, 2015. http://www.cbsa-asfc.gc.ca/sima-lmsi/mif-mev-eng.html; Committee on Antidumping Practices, Semi-Annual Report under Article 16.4 of the WTO Antidumping Agreement: Canada, G/ADP/N/259/CAN, September 22, 2014, p. 4.

[21] Committee on Antidumping Practices, Semi-Annual Report under Article 16.4 of the WTO Antidumping Agreement: Canada, G/ADP/N/188/CAN, September 18, 2009, p. 2.

[22] A list of products excluded from the Canadian order on aluminum extrusions can be found at the following link: http://www.cbsa-asfc.gc.ca/sima-lmsi/mif-mev-eng.html.

[23] Australian Government Customs and Border Protection Service, Australian Customs Dumping Notice No. 2010/40, October 28, 2010, p. 2-4.

[24] Australian Government Antidumping Commission, Antidumping Notice No. 2015/125.

[25] Committee on Antidumping Practices, Semi-Annual Report under Article 16.4 of the WTO Antidumping Agreement: Columbia, G/ADP/N/252/COL, March 21, 2014, p. 2.

scope of the order includes the following HS 6-digit subheadings: 7604.21, 7604.29, 7608.10 and 7608.20.[26]

In 2016, Trinidad & Tobago issued an antidumping duty order with duties on imports of aluminum extrusions from China.[27] The duty rate is 23 percent for imports of aluminum bars, rods and profiles from China; while the duty rate for aluminum tubes and pipes from China is 36 percent.[28] The scope of the order includes the following HS 6-digit subheadings: 7604.10; 7604.21; 7604.29, 7608.10, and 7608.20.

GLOBAL MARKET

Canada was the leading nonsubject source of U.S. imports of aluminum extrusions in 2015. The United States imported a total of 231,195 short tons of aluminum extrusions from Canada from 2013 to 2015.[29] Over the same period, Mexico and Vietnam were the second and third largest nonsubject sources of U.S. imports of aluminum extrusions, accounting for 96,073 and 69,502 short tons, respectively.[30] Since 2015, Vietnam has emerged as a leading export destination for aluminum extrusions from China and Mexico.[31] Vietnam has an emerging aluminum extrusions industry, and the United States is a growing market for its exports.

Canada

Canada's largest export market by quantity and value is the United States (table IV-8), which accounted for 97 percent of the volume of Canada's exports of aluminum extrusions in 2015. Outside of the United States, Canada's markets for aluminum extrusions are smaller and diverse, e.g., Germany, Mexico, and China.

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[26] Committee on Antidumping Practices, Semi-Annual Report under Article 16.4 of the WTO Antidumping Agreement: Columbia, G/ADP/N/280/COL, March 21, 2016, p. 10.

[27] Republic of Trinidad and Tobago, Legal Supplement Part B: Legal Notice 29, Vol. 55, No. 30, March 3, 2016, p. 115.

[28] Republic of Trinidad and Tobago, Legal Supplement Part B: Legal Notice 29, Vol. 55, No. 30, March 3, 2016, p. 115.

[29] See table IV-1.

[30] Ibid.

[31] Patterson, Mukherji , and Khanh, "Giant Aluminum Stockpile Was Shipped From Mexico to Vietnam," December 1, 2016; http://www.wsj.com/articles/giant-aluminum-stockpile-was-shipped-from-mexico-to-vietnam-1480588228; Patterson, Millerand Yap, "Chinese Billionaire Linked to Giant Aluminum Stockpile in Mexican Desert," September 9, 2016. http://www.wsj.com/articles/chinese-billionaire-linked-to-giant-aluminum-stockpile-in-mexican-desert-1473356054; Aluminum Insider, "EXCLUSIVE: Evidence Points to Much Larger Fake Semi Trade Relocating to Vietnam," October 21, 2016, http://aluminiuminsider.com/exclusive-evidence-points-to-much-larger-fake-semi-trade-relocating-to-vietnam/; Clemence, Christopher, "Exclusive-New Numbers Show China's Continuing Trade in Fake Semis," Aluminum Insider, April 6, 2016, http://aluminiuminsider.com/exclusive-new-numbers-show-chinas-continuing-trade-in-fake-semis/;

Table IV-8

Aluminum extrusions: Canada's global export markets, by quantity, share of quantity, value, and average unit value, 2011-15

Item	Calendar year				
	2011	2012	2013	2014	2015
	Quantity (short tons)				
Canada exports to the United States	68,015	75,289	70,443	78,086	82,666
Canada exports to other major destination markets.--					
Germany	1,184	757	698	534	531
Mexico	150	222	336	555	505
China	777	386	332	406	205
India	42	18	24	36	78
Korea South	22	20	29	69	66
Netherlands	57	46	47	28	56
Thailand	18	7	19	0	51
Brazil	44	72	126	66	39
All other destination markets	613	447	494	496	419
Total Canada exports	70,922	77,264	72,548	80,275	84,616
	Value (1,000 dollars)				
Canada exports to the United States	276,961	284,416	266,951	302,725	332,579
Canada exports to other major destination markets.--					
Germany	4,592	2,710	2,793	1,993	2,013
Mexico	1,242	1,789	2,598	4,615	3,712
China	5,161	3,091	2,943	3,567	1,362
India	238	111	148	179	500
Korea South	123	165	141	369	304
Netherlands	304	283	295	146	261
Thailand	115	48	122	0	300
Brazil	297	646	769	356	194
All other destination markets	4,279	3,303	3,230	3,340	2,452
Total Canada exports	293,311	296,561	279,990	317,290	343,677

Table continued on next page.

Table IV-8--Continued

Aluminum extrusions: Canada's global export markets, by quantity, share of quantity, value, and average unit value, 2011-15

Item	Calendar year				
	2011	2012	2013	2014	2015
	Unit value (dollars per short ton)				
Canada exports to the United States	4,072	3,778	3,790	3,877	4,023
Canada exports to other major destination markets.--					
Germany	3,879	3,579	3,999	3,736	3,789
Mexico	8,293	8,049	7,729	8,320	7,351
China	6,638	8,019	8,868	8,790	6,658
India	5,608	6,074	6,243	5,004	6,430
Korea South	5,651	8,389	4,929	5,320	4,618
Netherlands	5,357	6,096	6,217	5,197	4,695
Thailand	6,491	7,356	6,395	0	5,857
Brazil	6,809	8,978	6,101	5,392	4,919
All other destination markets	6,975	7,381	6,541	6,737	5,853
Total Canada exports	4,136	3,838	3,859	3,953	4,062
	Share of quantity (percent)				
Canada exports to the United States	95.9	97.4	97.1	97.3	97.7
Canada exports to other major destination markets.--					
Germany	1.7	1.0	1.0	0.7	0.6
Mexico	0.2	0.3	0.5	0.7	0.6
China	1.1	0.5	0.5	0.5	0.2
India	0.1	0.0	0.0	0.0	0.1
Korea South	0.0	0.0	0.0	0.1	0.1
Netherlands	0.1	0.1	0.1	0.0	0.1
Thailand	0.0	0.0	0.0	0.0	0.1
Brazil	0.1	0.1	0.2	0.1	0.0
All other destination markets	0.9	0.6	0.7	0.6	0.5
Total Canada exports	100.0	100.0	100.0	100.0	100.0

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

Source: Official exports statistics under HTS subheading 7604.21, 7604.29, and 7608.20 as reported by Statistics Canada in the IHS/GTA database, accessed January 4, 2017. Data reported under subheadings likely includes some merchandise outside of the scope of these reviews.

The Canadian International Trade Tribunal (CITT) identified 12 Canadian domestic manufacturers of aluminum extrusions in 2014.[32] According to the CITT, Canadian manufacturers of aluminum extrusions include Almag, APEL, Can Art, Dajcor (formerly

[32] Aluminum Extrusions, Expiry Review No. RR-2013-003, Canadian International Trade Tribunal, (Findings issued March 28, 2014), p. 9.

Daymond), Extrudex, Kaiser, Indalex (headquartered in the United States),[33] Kawneer Company (Kawneer),[34] Kromet International (Kromet), Metra, Signature Aluminum, and Spectra.[35]

All Canadian domestic producers manufactured aluminum extrusions in both custom shapes and standard shapes, except for APEL, Kromet, and Metra, which manufactured custom-shaped extrusions exclusively. A review of company websites revealed that most firms produced 1XXX, 3XXX, and 6XXX series alloy extrusions, with most firms concentrating their production within the 6XXX series of extrusions.[36] According to ***.[37]

Sapa North American Extrusions (headquartered in Oslo, Norway) and a number of other U.S. and Canadian manufacturers of aluminum extrusions, such as Kawneer and Almag, own facilities in both the United States and Canada and actively ship product between the two countries based on the extrusion and finishing capabilities of particular plants within each nation.[38] Over the past few years, some Canadian producers shifted capacity from Canada to the United States, while others acquired U.S.-based producers to export aluminum extrusions to supply customers in Canada.[39]

Mexico

Mexico's largest export market for extrusions by quantity and value is the United States (table IV-9), which accounted for 90 percent of the volume of Mexico's exports of aluminum extrusions in 2015. Besides the United States, a majority of Mexico's markets for aluminum extrusions are located in South and Central America. Based on production levels from 2011–15, Mexico has a smaller aluminum extrusions industry compared to the United States and Canada. In 2015, according to the ***.[40]

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[33] Currently owned by Sapa Extrusions. Sapa, "Sapa's Agreement with Indalex Complete," August 3, 2009, http://www.sapagroup.com/en/newswall/2009/sapas-agreement-with-indalex-complete/ (accessed December 14, 2016).

[34] Currently owned by Arconic. Kawneer website, http://www.kawneer.com/kawneer/en/info_page/kawneer_overview.asp, (accessed December 14, 2016).

[35] Aluminum Extrusions, Inquiry No. NQ-2008-003, Canadian International Trade Tribunal, (Findings issued March 17, 2009), pp. 5-7.

[36] Can Art, http://www.canart.com/extrusion.html; Dajcor, http://www.dajcor.com/extrusion; Kaiser Aluminum, https://www.kaiseraluminum.com/customers/products/soft-alloy-extrusions/; Kromet, http://www.kromet.com/index.php?content=c-2-1; Spectra Aluminum, http://www.spectraaluminum.com/Aluminum-Extrusion.html websites (accessed December 14, 2016).

[37] ***.

[38] Aluminum Extrusions-Custom Shapes and Aluminum Extrusions-Standard Shapes, Staff Report, Canadian International Trade Tribunal, p. 2.

[39] Aluminum Extrusions, Expiry Review No. RR-2013-003, Canadian International Trade Tribunal, (Findings issued March 28, 2014), p. 28.

[40] ***.

Table IV-9

Aluminum extrusions: Mexico's global export markets, by quantity, share of quantity, value, and average unit value, 2011-15

Item	Calendar year				
	2011	2012	2013	2014	2015
	Quantity (short tons)				
Mexico exports to the United States	22,285	24,266	26,862	34,962	34,249
Mexico exports to other major destination markets.--					
Puerto Rico	2	86	431	715	1,847
Cuba	283	519	391	373	412
Colombia	101	47	147	487	397
El Salvador	120	161	244	262	258
Guatemala	229	299	309	209	135
Panama	51	66	12	73	128
Canada	139	256	112	157	119
Nicaragua	3	11	26	30	64
All other destination markets	1,018	1,297	1,271	918	315
Total Mexico exports	24,231	27,008	29,803	38,187	37,924
	Value (1,000 dollars)				
Mexico exports to the United States	101,622	88,202	97,704	112,523	129,344
Mexico exports to other major destination markets.--					
Puerto Rico	17	297	1,467	2,338	5,880
Cuba	988	2,478	1,840	1,636	1,880
Colombia	2,076	205	479	1,529	1,339
El Salvador	518	665	824	860	936
Guatemala	1,207	1,460	1,441	1,053	693
Panama	188	382	132	320	544
Canada	599	1,096	626	871	576
Nicaragua	26	48	101	155	281
All other destination markets	3,841	5,624	6,350	4,692	1,897
Total Mexico exports	111,083	100,459	110,966	125,977	143,369

Table continued on next page.

Table IV-9

Aluminum extrusions: Mexico's global export markets, by quantity, share of quantity, value, and average unit value, 2011-15

Item	Calendar year				
	2011	2012	2013	2014	2015
	Unit value (dollars per short ton)				
Mexico exports to the United States	4,560	3,635	3,637	3,218	3,777
Mexico exports to other major destination markets.--					
Puerto Rico	8,368	3,456	3,408	3,272	3,184
Cuba	3,497	4,774	4,710	4,380	4,558
Colombia	20,597	4,367	3,255	3,138	3,369
El Salvador	4,329	4,131	3,380	3,279	3,635
Guatemala	5,259	4,889	4,662	5,026	5,120
Panama	3,673	5,784	10,754	4,394	4,255
Canada	4,322	4,288	5,615	5,536	4,843
Nicaragua	9,560	4,260	3,918	5,161	4,352
All other destination markets	3,772	4,335	4,997	5,114	6,028
Total Mexico exports	4,584	3,720	3,723	3,299	3,780
	Share of quantity (percent)				
Mexico exports to the United States	92.0	89.8	90.1	91.6	90.3
Mexico exports to other major destination markets.--					
Puerto Rico	0.0	0.3	1.4	1.9	4.9
Cuba	1.2	1.9	1.3	1.0	1.1
Colombia	0.4	0.2	0.5	1.3	1.0
El Salvador	0.5	0.6	0.8	0.7	0.7
Guatemala	0.9	1.1	1.0	0.5	0.4
Panama	0.2	0.2	0.0	0.2	0.3
Canada	0.6	0.9	0.4	0.4	0.3
Nicaragua	0.0	0.0	0.1	0.1	0.2
All other destination markets	4.2	4.8	4.3	2.4	0.8
Total Mexico exports	100.0	100.0	100.0	100.0	100.0

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

Source: Official Mexican exports statistics under HTS subheading 7604.21, 7604.29, and 7608.20 as reported by INEGI in the IHS/GTA database, accessed January 4, 2017. Data reported under subheadings likely includes some merchandise outside of the scope of these reviews.

Vietnam

The United States is Vietnam's largest export market (table IV-10). The U.S. market accounted for 36.8 percent of Vietnam's exports of aluminum extrusions by quantity in 2015. Export quantities of aluminum extrusions from Vietnam to the United States increased by more than 4,000 percent from 2011 to 2015 and increased by more than 300 percent from 2013 to 2015. The AEFTC alleges that Chinese producers are attempting to use Vietnam as a transshipment point in order to gain access to the U.S. market without paying duties.[41]

Table IV-10

Aluminum extrusions: Vietnam's global export markets, by quantity, share of quantity, value, and average unit value, 2011-15

Destination market	Calendar year				
	2011	2012	2013	2014	2015
	Quantity (short tons)				
Vietnam exports to the United States	220	846	2,321	4,278	10,430
Vietnam exports to other major destination markets.--					
Australia	115	129	2,541	4,774	7,851
Japan	1,099	2,266	3,377	3,752	3,051
Canada	496	735	1,333	2,628	2,715
Thailand	1,254	1,549	4,329	2,102	1,227
China	500	653	213	118	1,122
South Korea	4,034	5,398	3,745	1,211	544
Indonesia	745	548	574	542	539
Taiwan	328	841	542	586	349
All other destination markets	910	672	452	519	528
Total Vietnam exports	9,701	13,639	19,428	20,511	28,357
	Value (1,000 dollars)				
Vietnam exports to the United States	752	2,728	7,873	13,855	31,815
Vietnam exports to other major destination markets.--					
Australia	288	399	7,795	13,653	19,881
Japan	4,102	8,230	12,213	12,779	10,917
Canada	1,660	2,057	3,729	7,641	8,134
Thailand	5,001	6,337	14,340	7,021	4,935
China	1,647	2,763	1,012	616	2,794
South Korea	13,163	18,370	12,941	3,031	1,170
Indonesia	2,871	1,930	2,007	1,973	1,853
Taiwan	1,095	3,691	2,041	1,930	1,111
All other destination markets	4,254	3,860	2,403	2,292	1,946
Total Vietnam exports	34,832	50,366	66,354	64,790	84,557

Table continued on next page.

[41] The AEFTC provided email from Chinese producers offering transshipped aluminum extrusions to certain U.S. producers. AEFTC's prehearing brief, pp. 33-34.

Table IV-10--Continued

Aluminum extrusions: Vietnam's global export markets, by quantity, share of quantity, value, and average unit value, 2011-15

Item	Calendar year				
	2011	2012	2013	2014	2015
	Unit value (dollars per short ton)				
Vietnam exports to the United States	3,417	3,225	3,391	3,238	3,050
Vietnam exports to other major destination markets.--					
Australia	2,499	3,100	3,068	2,860	2,532
Japan	3,732	3,632	3,616	3,406	3,578
Canada	3,347	2,799	2,797	2,907	2,996
Thailand	3,989	4,090	3,313	3,339	4,021
China	3,294	4,231	4,752	5,231	2,490
South Korea	3,263	3,403	3,455	2,503	2,149
Indonesia	3,855	3,522	3,493	3,638	3,438
Taiwan	3,341	4,386	3,767	3,294	3,184
All other destination markets	4,672	5,743	5,320	4,413	3,689
Total Vietnam exports	3,591	3,693	3,415	3,159	2,982
	Share of quantity (percent)				
Vietnam exports to the United States	2.3	6.2	11.9	20.9	36.8
Vietnam exports to other major destination markets.--					
Australia	1.2	0.9	13.1	23.3	27.7
Japan	11.3	16.6	17.4	18.3	10.8
Canada	5.1	5.4	6.9	12.8	9.6
Thailand	12.9	11.4	22.3	10.3	4.3
China	5.2	4.8	1.1	0.6	4.0
South Korea	41.6	39.6	19.3	5.9	1.9
Indonesia	7.7	4.0	3.0	2.6	1.9
Taiwan	3.4	6.2	2.8	2.9	1.2
All other destination markets	9.4	4.9	2.3	2.5	1.9
Total Vietnam exports	100.0	100.0	100.0	100.0	100.0

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

Source: Official import statistics of imports from Vietnam under HTS subheadings 7604.21, 7604.29, and 7608.20 as reported by various countries' statistical authorities in the IHS/GTA database, accessed January 4, 2017. Data reported under subheadings likely includes some merchandise outside of the scope of these reviews.

In the past few decades, Vietnam attracted foreign investment from countries such as China, Japan, Taiwan, and Norway, which enabled the development of a competitive small to medium-scale aluminum extrusions industry. Global Vietnam Aluminum Co., Ltd. (GVA) is the largest extruder in Vietnam with a reported annual production capacity of 110,000 short tons. GVA does not serve Vietnam's extrusions market and operates under an export only

manufacturing license.[42] Other large extrusion companies include Yng Hua Vietnam Co., Ltd.[43] and Tung Kuang Industrial Joint Stock Co.; while Sapa Ben Thanh Group is a small-scale extruder that specializes in high-end construction applications.[44] In 2015, Vietnam had more than 364,000 short tons per year of production capacity for aluminum extrusions.[45] The production of aluminum extrusions reportedly increased by 24 percent from 72,752 short tons in 2014 to 90,389 short tons in 2015.[46] Domestic demand in Vietnam reportedly has an expected growth rate of 10 to 20 percent.[47]

Global export market

Table IV-11 presents information on trade in aluminum extrusions during 2011–15 as reported by the Global Trade Atlas. In 2015, China was the leading source of aluminum extrusions by quantity and value; while Germany and the United States were the second and third largest global sources, respectively.

[42] Metal Bulletin, Aluminum Grows in Southeast Asia," September 2016, p. 36.

[43] Ibid.

[44] Clemence, Christopher, "Exclusive-New Numbers Show China's Continuing Trade in Fake Semis," Aluminum Insider, April 6, 2016, http://aluminiuminsider.com/exclusive-new-numbers-show-chinas-continuing-trade-in-fake-semis/; Metal Bulletin, Aluminum Grows in Southeast Asia," September 2016, p. 36.

[45] Metal Bulletin, Aluminum Grows in Southeast Asia," September 2016, p. 36.

[46] Clemence, Christopher, "Exclusive-New Numbers Show China's Continuing Trade in Fake Semis," Aluminum Insider, April 6, 2016, http://aluminiuminsider.com/exclusive-new-numbers-show-chinas-continuing-trade-in-fake-semis/.

[47] Metal Bulletin, Aluminum Grows in Southeast Asia," September 2016, p. 36.

Table IV-11

Aluminum extrusions: Global exports by source, 2011–15

Item	Calendar year				
	2011	2012	2013	2014	2015
	Quantity (short tons)				
United States	152,549	188,933	203,214	208,911	221,292
China	994,323	1,018,134	773,722	1,080,701	1,427,417
All other major exporters.-- Germany	312,249	297,638	289,932	310,487	316,444
Italy	212,687	187,235	189,360	205,656	199,655
Spain	160,785	175,101	160,879	180,047	187,970
Bahrain	239,015	254,136	261,326	192,784	185,213
Turkey	153,253	164,723	161,029	172,177	166,787
Austria	169,400	148,835	143,652	132,980	137,451
Belgium	154,392	124,427	121,063	134,943	136,583
Netherlands	94,302	97,710	90,514	90,035	110,274
Iceland	3	17	33	76,028	89,757
Poland	62,326	61,027	72,052	78,167	85,928
All other exporters	2,096,285	1,205,596	1,285,224	1,387,005	1,332,806
Total global exports	4,801,570	3,923,512	3,752,001	4,249,922	4,597,575
	Value (1,000 dollars)				
United States	777,910	923,581	1,071,704	1,036,888	1,047,652
China	3,338,457	3,448,862	2,482,888	3,477,990	4,611,763
All other major exporters.-- Germany	2,036,438	1,843,588	1,839,627	1,926,599	1,777,763
Italy	973,389	750,505	767,440	827,846	742,709
Spain	689,457	677,945	630,178	710,205	684,295
Bahrain	579,590	530,385	554,073	416,568	403,270
Turkey	612,977	611,030	617,242	648,075	594,621
Austria	764,489	613,531	598,796	553,332	520,929
Belgium	730,399	553,412	539,666	595,903	545,445
Netherlands	505,971	484,490	463,094	468,784	484,900
Iceland	13	277	592	159,745	164,319
Poland	305,493	270,554	307,731	332,170	324,872
All other exporters	5,505,419	4,938,478	5,125,053	5,324,394	4,981,821
Total global exports	16,820,002	15,646,638	14,998,083	16,478,499	16,884,358

Table continued on next page.

Table IV-11--Continued

Aluminum extrusions: Global exports by source, 2011–15

Item	Calendar year				
	2011	2012	2013	2014	2015
	Unit value (dollars per short ton)				
United States	5,099	4,888	5,274	4,963	4,734
China	3,358	3,387	3,209	3,218	3,231
All other major exporters.-- Germany	6,522	6,194	6,345	6,205	5,618
Italy	4,577	4,008	4,053	4,025	3,720
Spain	4,288	3,872	3,917	3,945	3,640
Bahrain	2,425	2,087	2,120	2,161	2,177
Turkey	4,000	3,709	3,833	3,764	3,565
Austria	4,513	4,122	4,168	4,161	3,790
Belgium	4,731	4,448	4,458	4,416	3,994
Netherlands	5,365	4,958	5,116	5,207	4,397
Iceland	4,525	16,451	17,853	2,101	1,831
Poland	4,901	4,433	4,271	4,249	3,781
All other exporters	2,626	4,096	3,988	3,839	3,738
Total global exports	3,503	3,988	3,997	3,877	3,672
	Share of quantity (percent)				
United States	3.2	4.8	5.4	4.9	4.8
China	20.7	25.9	20.6	25.4	31.0
All other major exporters.-- Germany	6.5	7.6	7.7	7.3	6.9
Italy	4.4	4.8	5.0	4.8	4.3
Spain	3.3	4.5	4.3	4.2	4.1
Bahrain	5.0	6.5	7.0	4.5	4.0
Turkey	3.2	4.2	4.3	4.1	3.6
Austria	3.5	3.8	3.8	3.1	3.0
Belgium	3.2	3.2	3.2	3.2	3.0
Netherlands	2.0	2.5	2.4	2.1	2.4
Iceland	0.0	0.0	0.0	1.8	2.0
Poland	1.3	1.6	1.9	1.8	1.9
All other exporters	43.7	30.7	34.3	32.6	29.0
Total global exports	100.0	100.0	100.0	100.0	100.0

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

Source: Official global exports statistics under HTS subheading 7604.21, 7604.29, and 7608.20 as reported by each country's statistical authority in the IHS/GTA database, accessed January 4, 2017. Data reported under subheadings likely includes some merchandise outside of the scope of these reviews.

Production

Table IV-12 presents data on aluminum extrusions production. Global production of aluminum extrusions *** short tons in 2015 (rounded values). Globally, China has the ***. Production in China *** short tons in 2015. The United States is the *** short tons 2015.

Table IV-12
Aluminum extrusions: Production, by selected countries and regions, 2011–15

* * * * * * *

Consumption

U.S. producers, U.S. importers, and U.S. purchasers were asked to describe how foreign demand has changed since January 1, 2011, and how firms anticipate demand will change in the future. A majority of U.S. producers, importers, and purchasers reported that foreign demand has increased or fluctuated since January 1, 2011 and they anticipate demand to follow similar trends in the future, with new markets appearing in New Zealand, Australia, and BRIC countries (i.e., Brazil, Russia, India, and China). Producer *** states that foreign demand will increase as developing countries move their populations to cities, and *** believes as more manufacturers move operations to other countries, the need for aluminum in those countries will increase.

Producer and importer *** reported that foreign demand has decreased since 2011, with European and Japanese demand remaining flat. It stated that demand in China has slowed while demand in smaller Asian markets (e.g., Malaysia and Vietnam) appears to have increased, but *** attributes this increase to Chinese producers transshipping or relocating their extrusions assets to evade the antidumping and countervailing duty orders.

As shown in Table IV-13 global apparent consumption of aluminum extrusions *** short tons in 2015. China is the *** percent from 2011 to 2015. Consumption of aluminum extrusions in the United States ***.

Table IV-13
Aluminum extrusions: Consumption, by selected countries and regions, 2011–15

* * * * * * *

Prices

U.S. producers, U.S. importers, and foreign producers were asked to compare prices of aluminum extrusions in the U.S. market to non-U.S. markets. U.S. producer *** reported foreign prices being 20 percent lower than U.S. prices. Producer and importer *** stated that prices in the United States are higher than markets in Europe, South America, or Asia. Importer *** stated U.S. prices are lower for aluminum extrusions compared to European markets. ***, an importer, reports pricing from "an acceptable Mexican source" to be 10 to 20 percent higher than U.S. prices, Chinese being 20 to 30 percent lower, and Korean prices typically being 15 to 25 percent lower than in the U.S. market.

Table IV-14 presents available price information on aluminum extrusions from ***. The data indicate that, in general, ***.

Table IV-14
Aluminum extrusions: Prices, by available countries, 2011–15

* * * * * * *

PART V: PRICING DATA

FACTORS AFFECTING PRICES

Raw material costs

The primary raw material used to manufacture aluminum extrusions is aluminum. Raw materials accounted for approximately two-thirds of the cost of goods sold ("COGS") for aluminum extrusions during 2013-15.

Overall, the price of aluminum decreased between January 2013 and September 2016 (figure V-1). As seen in figure V-1, the London Metal Exchange (LME) price of aluminum has fluctuated since 2013, decreasing by *** percent from January 2013 to January 2014, increasing by *** percent from January 2014 to November 2014, and then decreasing by *** percent from November 2014 to December 2016. The Shanghai Metal Exchange (SHME) price of aluminum has declined between 2013 and 2016, *** percent from January 2013 to December 2016.

A majority of U.S. producers and U.S. importers reported raw material prices had decreased or fluctuated since January 2011. U.S. producer *** pointed to overcapacity in China's primary aluminum sector as a reason for declining aluminum prices. ***, a U.S. producer, reported that decreasing global demand and increased global production capacity have led to a decrease in aluminum prices.

Figure V-1
Aluminum extrusions: LME and SHFE price index of aluminum, January 2013-December 2016

* * * * * * *

U.S. inland transportation costs

Twenty of 25 responding U.S. producers and 4 of 5 responding importers reported that they typically arrange transportation to their customers. Most U.S. producers reported that their U.S. inland transportation costs ranged from one to five percent[1] while most responding importers reported costs of five to seven percent.[2]

[1] Five producers reported costs of *** percent.
[2] Three importers reported costs of *** percent.

PRICING PRACTICES

Pricing methods

Twenty-four of 25 U.S. producers and the majority of importers reported that changes in aluminum benchmarks affect overall prices and price lists. Most producers reported adjusting prices monthly based on the Midwest transaction average, which is based on LME prices, and "passing through" changes in metal costs to customers. Most importers reported adjusting prices monthly based on changes in LME prices. The vast majority of U.S. producers and three-quarters of importers reported using mechanisms to adjust prices to reflect changes in their primary aluminum costs. Some producers may have a fixed pricing structure selling from catalogues or annual pricing lists.[3] While most producers and importers pass through changes in primary aluminum costs to their customers, conversion margins (i.e., overhead, labor costs, and profit expectations) are generally negotiated ahead of time and built in to the final price.[4] Sixteen of 23 responding producers reported increases in conversion costs between 2013 to 2015.

Transaction-by-transaction negotiation was the most frequently used price setting method. Nineteen U.S. producers and 8 importers reported using transaction-by-transaction negotiations, 18 U.S. producers and 5 importers reported using contracts, 14 U.S. producers and 8 importers reported using price lists, and 4 U.S. producers and 1 importer reported using other pricing methods (table V-1).

[3] Hearing transcript, p. 125 (Hamilton).

[4] Hearing transcript, p. 25 (Weber), p. 32 (Johnson), and p. 38 (Hamilton).

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

Method	U.S. producers	U.S. importers
Transaction-by-transaction	19	8
Contract	18	5
Set price list	14	8
Other	4	1

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

U.S. producers reported selling most of their aluminum extrusions in the spot market while importers sold the majority of their aluminum extrusions through annual contracts. In the original investigation, the majority of responding U.S. producers and importers reported selling most of their extrusions in the spot market. As shown in table V-2, U.S. producers and importers reported their 2015 U.S. commercial shipments of aluminum extrusions by type of sale.

Table V-2
Aluminum extrusions: U.S. producers' and importers' shares of U.S. commercial shipments by type of sale, 2015

Type of sale	Share of commercial U.S. shipments (percent)	
	U.S. producers	U.S. importers (China)
Long-term contracts	13.8	***
Annual contracts	31.8	***
Short-term contracts	10.8	***
Spot sales	43.6	***

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

Eight purchasers reported that they purchase aluminum extrusions daily, 16 purchase weekly, and 1 purchases monthly. Twenty-two of 24 responding purchasers reported that they did not expect their purchasing patterns to change in the next two years. Nearly all (19 of 20) purchasers contact between 1 and 5 suppliers before making a purchase.

Sales terms and discounts

Most U.S. producers (16 of 25) typically quote prices on a delivered basis, while the majority of importers quote prices on an f.o.b. basis. Of responding U.S. producers, seven reported offering quantity discounts, eight reported offering annual discounts, and 10 reported offering no discounts. Seven U.S. producers reported offering various "other" discounts, including one that reported offering rebates for targeted quarterly and annual volumes and one that offers discounts if customers pick up product.

Among the 12 firms that reported imports, four reported offering quantity discounts and five reported having no discount policy. Three importers reported offering various "other"

discounts, including one that reported offering "graduated discount plans" to some customers. Nineteen of 25 U.S. producers reported sales terms of net 30 days, three reported sales terms of 2/10 net 30 days, one reported sales terms of net 60 days, and six reported "other" sales terms. Three of five importers reported sales terms of net 30 days and two reported "other" sales terms.

Price leadership

The majority of purchasers reported that Sapa and Bonnell were price leaders. Purchaser *** stated that Sapa is one of the largest extrusion companies and other companies watch its market price changes. *** reported that Sapa has the most capacity and price increases will not get the support unless Sapa leads the change.

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 extrusions shipped to unrelated U.S. customers during January 2013-September 2016. In addition, firms that imported aluminum serpentine tubing for their own use were requested to provide import purchase cost data.

Product 1.-- Mullions & Split-Mullions, Anodized Finish, Unworked, Alloy in the 6000 series – Size: 1.75" x 3" to 3" x 8", Weight: 0.6lb/ft to 7lb/ft

Product 2. -- Door/Window Frames and Sashes, Painted Finish, Unworked, Alloy in the 6000 series – Size: CCD: 0.75" to 6", Weight: 0.2lb/ft to 2lb/ft

Product 3.-- Hand Rails, Painted Finish, Unworked, Alloy in the 6000 series – Size: CCD: 0.5" to 6", Weight: 0.15lb/ft to 8.25 lb/ft

Product 4.-- Tub and shower components, Anodized and Bright Dip Finishes, Unworked, Alloys in the 6000 series – Size: CCD: 0.6" to 3", Weight: 0.1 lb/ft to 1 lb/ft

Product 5.-- Pipe, Mill Finish, Unworked, Alloy in the 6000 series – Size: 1" to 5" Schedule 40 @ 0.5 lb/ft to 5 lb/ft

Product 6.-- Aluminum serpentine tubing, Alloy 1235, in widths of 25 to 28 inches.

Eighteen U.S. producers and one importer provided usable pricing data for the requested products, although not all firms reported pricing for all products for all quarters.[5] Importer *** provided direct import purchase cost data for product 6, therefore, margins for overselling and underselling are not available for products 1-6 (tables V-3 to V-5). Pricing data reported by these firms accounted for approximately 6.9 percent of U.S. producers' shipments of aluminum extrusions and less than one percent of U.S. shipments of subject imports from China in 2015. Price data for products 1-6 are presented in tables V-3 to V-5 and figures V-2 to V-3.

Table V-3
Aluminum extrusions: Weighted-average f.o.b. prices and quantities of domestic products 1 to 3, January 2013-September 2016

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Table V-4
Aluminum extrusions: Weighted-average f.o.b. prices and quantities of domestic products 4 and 5, January 2013-September 2016

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Table V-5
Aluminum extrusions: Weighted-average f.o.b. prices and quantities of domestic and imported product 6, by quarters, January 2013-September 2016

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Figure V-2
Aluminum extrusions: Weighted-average f.o.b. prices and quantities of domestic product 1-5, by quarters, January 2013-September 2016

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Figure V-3
Aluminum extrusions: Weighted-average prices and quantities of domestic 6[1] and landed dutied values and quantities of imported product 6, by quarters, January 2013-September 2016

* * * * * * *

[5] 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.

Price trends

Price trends varied by product during 2013-16. Table V-6 summarizes the price trends, by country and by product. As shown in the table, domestic price increases ranged from *** to *** percent and domestic price decreases ranged from *** to *** percent during 2013-16, while purchase costs of Chinese-produced product 6 decreased by *** percent.

Table V-6
Aluminum extrusions: Summary of weighted-average f.o.b. prices for products 1-6 from the United States and China, and purchase cost for product 6

* * * * * * *

Price comparisons

In the original investigations, subject imports from China were priced lower than domestic product in 43 of 59 comparisons, with underselling margins ranging from 1.6 to 66.1 percent.[6] As noted above, there were no direct comparisons of selling prices of aluminum extrusions in the current reviews.

Purchasers' perceptions of relative price trends

Purchasers were asked how the prices of aluminum extrusions from the United States had changed relative to the prices of product from China since 2011. The majority of purchasers reported that there has been a change in the price of aluminum extrusions with eight purchasers reporting that U.S. prices and Chinese prices changed by the same amount. Most purchasers reported that the price of U.S.-produced aluminum extrusions changed relative to the price of Chinese aluminum extrusions, with 12 of 13[7] purchasers responding that the price of U.S.-produced aluminum extrusions was relatively higher than the price of Chinese aluminum extrusions.

[6] *Aluminum extrusions from China, Inv. Nos. 701-TA-475 and 731-TA-1177 (Final)*, USITC Publication 4229, May 2011, p. V-14.

[7] Some purchasers did not report whether U.S. prices changed relative to Chinese prices, but did report if the relative change in U.S. prices was higher or lower than Chinese prices.

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
81 FR 18829 April 1, 2016	*Initiation of Five-Year ("Sunset") Reviews*	http://www.gpo.gov/fdsys/pkg/FR-2016-04-01/pdf/2016-07452.pdf
81 FR 18884 April 1, 2016	*Certain Aluminum Extrusions From China; Institution of Five-Year Reviews*	http://www.gpo.gov/fdsys/pkg/FR-2016-04-01/pdf/2016-07257.pdf
81 FR 45304, July 13, 2016	*Certain Aluminum Extrusions from China; Notice of Commission Determination to Conduct Full Five-Year Reviews*	https://www.gpo.gov/fdsys/pkg/FR-2016-07-13/pdf/2016-16528.pdf
81 FR 51855, August 5, 2016	*Aluminum Extrusions From the People's Republic of China: Final Results of Expedited First Sunset Review of the Antidumping Duty Order*	https://www.gpo.gov/fdsys/pkg/FR-2016-08-05/pdf/2016-18649.pdf
81 FR 51858, August 5, 2016	*Aluminum Extrusions from the People's Republic of China: Final Results of Expedited First Sunset Review of the Countervailing Duty Order*	https://www.gpo.gov/fdsys/pkg/FR-2016-08-05/pdf/2016-18656.pdf
81 FR 69078, October 5, 2016	*Aluminum Extrusions From China; Scheduling of Full Five-Year Reviews*	https://www.gpo.gov/fdsys/pkg/FR-2016-10-05/pdf/2016-24059.pdf
Note.–The press release announcing the Commission's determinations concerning adequacy and the conduct of a full or expedited review can be found at https://usitc.gov/press_room/news_release/2016/er0705ll627.htm. A summary of the Commission's votes concerning adequacy and the conduct of a full or expedited review can be found at https://pubapps2.usitc.gov/sunset/caseProfSuppAttmnt/download/11846. The Commission's explanation of its determinations can be found at https://pubapps2.usitc.gov/sunset/caseProfSuppAttmnt/download/11848.		

APPENDIX B

LIST OF HEARING WITNESSES

CALENDAR OF PUBLIC HEARING

Those listed below appeared as witnesses at the United States International Trade Commission's hearing:

Subject: Aluminum Extrusions from China

Inv. Nos.: 701-TA-475 and 731-TA-1177 (Review)

Date and Time: January 26, 2017 - 9:30 a.m.

A session was held in connection with these reviews in the Main Hearing Room (room 101), 500 E Street, SW, Washington, DC.

OPENING REMARKS:

In Support of Continuation of Orders (**Alan H. Price**, Wiley Rein LLP)
In Opposition of Continuation of Orders (**Alexander H. Schaefer**, Crowell & Moring, LLP; *and* **Richard P. Ferrin**, Drinker Biddle & Reath LLP)

In Support of the Continuation of the Antidumping and Countervailing Duty Orders:

Wiley Rein LLP
Washington, DC
on behalf of

Aluminum Extrusions Fair Trade Committee ("AEFTC")

Jeff Henderson, President, AEFTC and Aluminum Extruders Council

Jason Weber, Director of International Market Intelligence and e-Business, Sapa Extrusions North America, U.S. Aluminum Extruder and Member of the AEFTC

In Support of the Continuation of
the Antidumping and Countervailing Duty Orders (continued):

Susan Johnson, President, Futura Industries Corporation, U.S. Aluminum Extruder and Member of the AEFTC

W. Brook Hamilton, President, The William L. Bonnell Company, U.S. Aluminum Extruder and Member of the AEFTC

Bennett McEvoy, Vice President of Sales & Marketing, Western Extrusions Corporation, U.S. Aluminum Extruder and Member of the AEFTC

Rick Merluzzi, President *and* Chief Operating Officer, Metal Exchange Corp. ("MEC"), Parent Company of Pennex Aluminum Company, LLC

Stephanie Hickman Boyse, President *and* Chief Executive Officer, Brazeway, Inc.

Michael B. Adams, Senior Vice President - Market and Product Development, Brazeway, Inc.

Donald R. Dinan, Partner, Goetz Fitzpatrick LLP, Counsel to Brazeway, Inc.

Jesse E. Gary, Executive Vice President, General Counsel and Secretary, Century Aluminum

Holly Hart, Assistant to the President, Legislative Director, United Steelworkers (USW)

Alan H. Price)
) – OF COUNSEL
Robert E. DeFrancesco)

In Opposition of the Continuation of
the Antidumping and Countervailing Duty Orders:

Crowell & Moring, LLP
Washington, DC
on behalf of

Electrolux Home Products, Inc.
Electrolux Home care Products, Inc.
(collectively "Electrolux")

Jeremiah Dorris, Senior Manager, Trade Compliance North America, Electrolux

Hernando Hicks, Commodity Manager, Stainless Steel, Electrolux

Erik Mata, Commodity Manager, Compressors & Cooling Systems, Electrolux

Alexander H. Schaefer)
) – OF COUNSEL
Benjamin Caryl)

Drinker Biddle & Reath LLP
Washington, DC
on behalf of

Adams Thermal Systems, Inc.

Rick Johnson, Senior International Trade Analyst, Drinker Biddle & Reath LLP

Douglas J. Heffner)
) – OF COUNSEL
Richard P. Ferrin)

REBUTTAL/CLOSING REMARKS:

In Support of Continuation of Orders (**Robert E. DeFrancesco**, Wiley Rein LLP and **Stephanie Hickman Boyse,** Brazeway, Inc.)
In Opposition of Continuation of Orders (**Alexander H. Schaefer**, Crowell & Moring, LLP; and **Richard P. Ferrin**, Drinker Biddle & Reath LLP))

-END-

APPENDIX C

SUMMARY DATA

CONTENTS

Page

Table C-1
Aluminum extrusions: Summary data concerning the U.S. market, 2013-15, January to September 2015, and January to September 2016
(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			January to September		Calendar year			Jan-Sept
	2013	2014	2015	2015	2016	2013-15	2013-14	2014-15	2015-16
U.S. consumption quantity:									
Amount	1,303,457	1,427,417	1,519,686	1,159,593	1,180,459	16.6	9.5	6.5	1.8
Producers' share (fn1)	87.5	86.7	86.3	86.5	86.0	(1.2)	(0.8)	(0.5)	(0.5)
Importers' share (fn1):									
China	0.8	0.8	0.4	0.4	0.5	(0.4)	0.0	(0.4)	0.0
Canada	5.4	5.4	5.4	5.3	4.9	0.0	0.1	(0.1)	(0.4)
All others sources	6.4	7.1	7.9	7.8	8.7	1.6	0.7	0.9	0.9
Nonsubject sources	11.8	12.5	13.3	13.1	13.6	1.6	0.7	0.8	0.5
All import sources	12.5	13.3	13.7	13.5	14.0	1.2	0.8	0.5	0.5
U.S. consumption value:									
Amount	5,277,626	5,858,787	6,176,090	4,787,336	4,516,004	17.0	11.0	5.4	(5.7)
Producers' share (fn1)	86.4	86.0	85.4	85.7	84.9	(1.0)	(0.4)	(0.5)	(0.7)
Importers' share (fn1):									
China	0.8	0.9	0.5	0.5	0.6	(0.3)	0.1	(0.4)	0.1
Canada	5.0	5.1	5.2	5.2	5.1	0.2	0.1	0.1	(0.1)
All others sources	7.8	8.1	8.8	8.6	9.4	1.1	0.3	0.8	0.8
Nonsubject sources	12.8	13.2	14.1	13.8	14.5	1.3	0.4	0.9	0.7
All import sources	13.6	14.0	14.6	14.3	15.1	1.0	0.4	0.5	0.7
U.S. imports from (fn3):									
China:									
Quantity	9,824	11,068	6,127	4,772	5,343	(37.6)	12.7	(44.6)	12.0
Value	41,709	50,196	31,100	24,988	25,958	(25.4)	20.3	(38.0)	3.9
Unit value	$4,246	$4,535	$5,076	$5,236	$4,858	19.5	6.8	11.9	(7.2)
Ending inventory quantity	***	***	***	***	***	***	***	***	***
Canada									
Quantity	70,139	77,739	81,988	61,720	57,739	16.9	10.8	5.5	(6.4)
Value	264,977	299,590	323,637	247,876	229,906	22.1	13.1	8.0	(7.2)
Unit value	$3,778	$3,854	$3,947	$4,016	$3,982	4.5	2.0	2.4	(0.9)
All other sources:									
Quantity	83,241	100,861	120,657	90,414	102,575	44.9	21.2	19.6	13.5
Value	409,931	471,812	544,883	412,576	424,129	32.9	15.1	15.5	2.8
Unit value	$4,925	$4,678	$4,516	$4,563	$4,135	(8.3)	(5.0)	(3.5)	(9.4)
Nonsubject sources:									
Quantity	153,379	178,600	202,645	152,134	160,314	32.1	16.4	13.5	5.4
Value	674,908	771,402	868,520	660,452	654,035	28.7	14.3	12.6	(1.0)
Unit value	$4,400	$4,319	$4,286	$4,341	$4,080	(2.6)	(1.8)	(0.8)	(6.0)
Ending inventory quantity	***	***	***	***	***	***	***	***	***
All import sources:									
Quantity	163,203	189,667	208,772	156,906	165,658	27.9	16.2	10.1	5.6
Value	716,617	821,598	899,619	685,441	679,993	25.5	14.6	9.5	(0.8)
Unit value	$4,391	$4,332	$4,309	$4,368	$4,105	(1.9)	(1.3)	(0.5)	(6.0)
Ending inventory quantity	***	***	***	***	***	***	***	***	***
U.S. producers':									
Average capacity quantity	1,631,243	1,682,077	1,709,753	1,288,358	1,332,941	4.8	3.1	1.6	3.5
Production quantity	1,220,407	1,326,825	1,382,446	1,054,863	1,074,316	13.3	8.7	4.2	1.8
Capacity utilization (fn1)	74.8	78.9	80.9	81.9	80.6	6.0	4.1	2.0	(1.3)
U.S. shipments:									
Quantity	1,140,254	1,237,750	1,310,914	1,002,687	1,014,801	15.0	8.6	5.9	1.2
Value	4,561,009	5,037,189	5,276,471	4,101,895	3,836,011	15.7	10.4	4.8	(6.5)
Unit value	$4,000	$4,070	$4,025	$4,091	$3,780	0.6	1.7	(1.1)	(7.6)
Export shipments:									
Quantity	68,551	69,224	66,309	51,439	53,411	(3.3)	1.0	(4.2)	3.8
Value	258,585	265,767	259,652	207,069	188,343	0.4	2.8	(2.3)	(9.0)
Unit value	$3,772	$3,839	$3,916	$4,026	$3,526	3.8	1.8	2.0	(12.4)
Ending inventory quantity	63,623	77,151	73,510	72,485	76,307	15.5	21.3	(4.7)	5.3
Inventories/total shipments (fn1)	5.3	5.9	5.3	5.2	5.4	0.1	0.6	(0.6)	0.2
Production workers	13,677	14,526	15,201	15,248	16,057	11.1	6.2	4.6	5.3
Hours worked (1,000s)	27,764	29,938	31,573	24,095	25,566	13.7	7.8	5.5	6.1
Wages paid ($1,000)	604,558	665,284	725,044	543,604	578,822	19.9	10.0	9.0	6.5
Hourly wages (dollars)	$21.77	$22.22	$22.96	$22.56	$22.64	5.5	2.1	3.3	0.4
Productivity (short tons per 1,000 hours)	44.0	44.3	43.8	43.8	42.0	(0.4)	0.8	(1.2)	(4.0)
Unit labor costs	$495.37	$501.41	$524.46	$515.33	$538.78	5.9	1.2	4.6	4.6
Net sales:									
Quantity	1,155,666	1,251,874	1,319,322	1,014,705	1,024,773	14.2	8.3	5.4	1.0
Value	4,299,437	4,762,885	4,977,675	3,900,072	3,575,975	15.8	10.8	4.5	(8.3)
Unit value	$3,720	$3,805	$3,773	$3,844	$3,490	1.4	2.3	(0.8)	(9.2)
Cost of goods sold (COGS)	3,872,102	4,300,544	4,465,141	3,472,763	3,170,276	15.3	11.1	3.8	(8.7)
Gross profit or (loss)	427,335	462,341	512,534	427,309	405,699	19.9	8.2	10.9	(5.1)
SG&A expenses	245,369	275,379	276,211	202,722	208,812	12.6	12.2	0.3	3.0
Operating income or (loss)	181,966	186,962	236,323	224,587	196,887	29.9	2.7	26.4	(12.3)
Net income or (loss)	151,540	153,665	203,215	202,210	172,587	34.1	1.4	32.2	(14.6)
Capital expenditures	124,171	124,028	174,557	112,127	97,554	40.6	(0.1)	40.7	(13.0)
Unit COGS	$3,351	$3,435	$3,384	$3,422	$3,094	1.0	2.5	(1.5)	(9.6)
Unit SG&A expenses	$212	$220	$209	$200	$204	(1.4)	3.6	(4.8)	2.0
Unit operating income or (loss)	$157	$149	$179	$221	$192	13.8	(5.2)	19.9	(13.2)
Unit net income or (loss)	$131	$123	$154	$199	$168	17.5	(6.4)	25.5	(15.5)
COGS/sales (fn1)	90.1	90.3	89.7	89.0	88.7	(0.4)	0.2	(0.6)	(0.4)
Operating income or (loss)/sales (fn1)	4.2	3.9	4.7	5.8	5.5	0.5	(0.3)	0.8	(0.3)
Net income or (loss)/sales (fn1)	3.5	3.2	4.1	5.2	4.8	0.6	(0.3)	0.9	(0.4)

Notes:

fn1.--Reported data are in percent and period changes are in percentage points.
fn2.--Undefined or not meaningful.
fn3.--Imports are likely slightly understated because they may not include all fin evaporator coil systems or fittings for engine cooling systems.

Source: Compiled from data submitted in response to Commission questionnaires and official import statistics using HTS statistical reporting numbers 7604.21.0000, 7604.29.1000, 7604.29.3010, 7604.29.3050, 7604.29.5030, 7604.29.5060, 7608.20.0030, 7608.20.0090, accessed November 28, 2016.

Table C-2
Fin evaporator coil systems: Summary data concerning the U.S. market, 2013-15, January to September 2015, and January to September 2016

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Table C-3
Fittings for engine cooling systems: Summary data concerning the U.S. market, 2013-15, January to September 2015, and January to September 2016

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Table C-4
Aluminum extrusions less fin evaporator coil systems: Summary data concerning the U.S. market, 2013-15, January to September 2015, and January to September 2016

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Table C-5
Aluminum extrusions less fittings for engine cooling systems: Summary data concerning the U.S. market, 2013-15, January to September 2015, and January to September 2016

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Table C-6
Aluminum extrusions less fin evaporator coil systems and less fittings for engine cooling systems: Summary data concerning the U.S. market, 2013-15, January to September 2015, and January to September 2016

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APPENDIX C

HISTORICAL SUMMARY DATA

Table C-1
Aluminum extrusions: Summary data concerning the U.S. market, 2008-10

(Quantity=short tons, value=1,000 dollars, unit values, unit labor costs, and unit expenses are per short ton; period changes=percent, except where noted)

	Reported data			Period changes		
Item	2008	2009	2010	2008-10	2008-09	2009-10
U.S. consumption quantity:						
Amount	1,329,528	1,116,235	1,267,452	-4.7	-16.0	13.5
Producers' share (1)	83.7	73.1	75.0	-8.7	-10.5	1.9
Importers' share (1):						
China	6.7	19.0	15.8	9.1	12.3	-3.2
Canada	6.0	5.2	5.5	-0.5	-0.8	0.3
All other sources	3.6	2.7	3.7	0.1	-1.0	1.0
Total imports	16.3	26.9	25.0	8.7	10.5	-1.9
U.S. consumption value:						
Amount	5,706,626	3,796,295	4,606,386	-19.3	-33.5	21.3
Producers' share (1)	83.1	76.1	77.2	-5.8	-7.0	1.1
Importers' share (1):						
China	5.9	14.4	11.7	5.8	8.6	-2.8
Canada	5.8	5.3	5.6	-0.3	-0.5	0.2
All other sources	5.2	4.1	5.5	0.3	-1.1	1.4
Total imports	16.9	23.9	22.8	5.8	7.0	-1.1
U.S. imports from:						
China:						
Quantity	89,043	211,705	200,192	124.8	137.8	-5.4
Value	335,530	547,968	537,498	60.2	63.3	-1.9
Unit value	$3,768	$2,588	$2,685	-28.7	-31.3	3.7
Ending inventory quantity	***	***	***	***	***	***
Canada:						
Quantity	79,885	58,457	69,802	-12.6	-26.8	19.4
Value	333,234	201,876	255,930	-23.2	-39.4	26.8
Unit value	$4,171	$3,453	$3,666	-12.1	-17.2	6.2
Ending inventory quantity	***	***	***	***	***	***
All other sources:						
Quantity	48,283	29,625	46,819	-3.0	-38.6	58.0
Value	297,272	157,506	255,052	-14.2	-47.0	61.9
Unit value	$6,157	$5,317	$5,448	-11.5	-13.6	2.5
Ending inventory quantity	***	***	***	***	***	***
All sources:						
Quantity	217,212	299,788	316,814	45.9	38.0	5.7
Value	966,036	907,350	1,048,479	8.5	-6.1	15.6
Unit value	$4,447	$3,027	$3,309	-25.6	-31.9	9.3
Ending inventory quantity	***	***	***	***	***	***

Table continued on next page.

Table C-1--Continued
Aluminum extrusions: Summary data concerning the U.S. market, 2008-10

(Quantity=short tons, value=1,000 dollars, unit values, unit labor costs, and unit expenses are per short ton; period changes=percent, except where noted)

	Reported data			Period changes		
Item	2008	2009	2010	2008-10	2008-09	2009-10
U.S. producers':						
Average capacity quantity	1,802,365	1,725,729	1,747,124	-3.1	-4.3	1.2
Production quantity	1,167,286	848,569	1,019,535	-12.7	-27.3	20.1
Capacity utilization (1)	64.8	49.2	58.4	-6.4	-15.6	9.2
U.S. shipments:						
Quantity	1,112,316	816,447	950,638	-14.5	-26.6	16.4
Value	4,740,590	2,888,945	3,557,906	-24.9	-39.1	23.2
Unit value	$4,262	$3,538	$3,743	-12.2	-17.0	5.8
Export shipments:						
Quantity	36,965	30,493	40,052	8.4	-17.5	31.3
Value	142,483	109,350	156,376	9.8	-23.3	43.0
Unit value	$3,855	$3,586	$3,904	1.3	-7.0	8.9
Ending inventory quantity	48,689	39,224	51,059	4.9	-19.4	30.2
Inventories/total shipments (1)	4.2	4.6	5.2	0.9	0.4	0.5
Production workers	12,217	9,793	9,703	-20.6	-19.8	-0.9
Hours worked (1,000s)	25,740	20,085	20,371	-20.9	-22.0	1.4
Wages paid ($1,000s)	494,207	384,143	403,442	-18.4	-22.3	5.0
Hourly wages	$19.20	$19.12	$19.81	3.2	-0.4	3.6
Productivity (tons/1,000 hours)	45.7	42.5	50.3	10.2	-7.0	18.4
Unit labor costs	$421.10	$450.37	$394.05	-6.4	7.0	-12.5
Net sales:						
Quantity	1,134,788	824,773	955,696	-15.8	-27.3	15.9
Value	5,120,665	2,955,826	3,726,451	-27.2	-42.3	26.1
Unit value	$4,512	$3,584	$3,899	-13.6	-20.6	8.8
Cost of goods sold (COGS)	4,834,600	2,757,457	3,374,194	-30.2	-43.0	22.4
Gross profit or (loss)	286,065	198,370	352,257	23.1	-30.7	77.6
SG&A expenses	318,188	277,171	272,407	-14.4	-12.9	-1.7
Operating income or (loss)	(32,123)	(78,802)	79,850	(2)	-145.3	(2)
Capital expenditures	187,452	111,313	100,812	-46.2	-40.6	-9.4
Unit COGS	$4,260	$3,343	$3,531	-17.1	-21.5	5.6
Unit SG&A expenses	$280	$336	$285	1.7	19.9	-15.2
Unit operating income or (loss)	($28)	($96)	$84	(2)	-237.5	(2)
COGS/sales (1)	94.4	93.3	90.5	-3.9	-1.1	-2.7
Operating income or (loss)/ sales (1)	(0.6)	(2.7)	2.1	2.8	-2.0	4.8

(1) "Reported data" are in percent and "period changes" are in percentage points.
(2) Undefined.

Note.--Financial data are reported on a fiscal year basis and may not necessarily be comparable to data reported on a calendar year basis. Because of rounding, figures may not add to the totals shown. Unit values and shares are calculated from the unrounded figures.

Source: Compiled from data submitted in response to Commission questionnaires and from official Commerce statistics.

Table E-1
Finished heat sinks: U.S. producers' summary data, 2008-10

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APPENDIX D

ANTICIPATED CHANGES IN OPERATIONS

Table D-1
Aluminum extrusions: U.S. producers' anticipated changes in operations

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Table D-2
Aluminum extrusions: U.S. importers' anticipated changes in operations

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Table D-3
Aluminum extrusions: Foreign producers’ anticipated changes in operations

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Table D-4
Aluminum extrusions: Purchasers’ anticipated changes in industry

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APPENDIX E

SELECTED FINANCIAL INFORMATION BY FIRM

Table E-1
Aluminum extrusions: Results of operations of U.S. producers, by firm, 2013-15, January-September 2015, and January-September 2016

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Table E-2
Aluminum extrusions: Capital expenditures and research and development (R&D) expenses of U.S. producers, by firm, 2013-15, January-September 2015, and January-September 2016

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Table E-3
Aluminum extrusions: U.S. producers' total assets, asset turnover, and return on assets, by firm, 2013-15, January-September 2015, January-September 2016

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