Aluminum Foil from China

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

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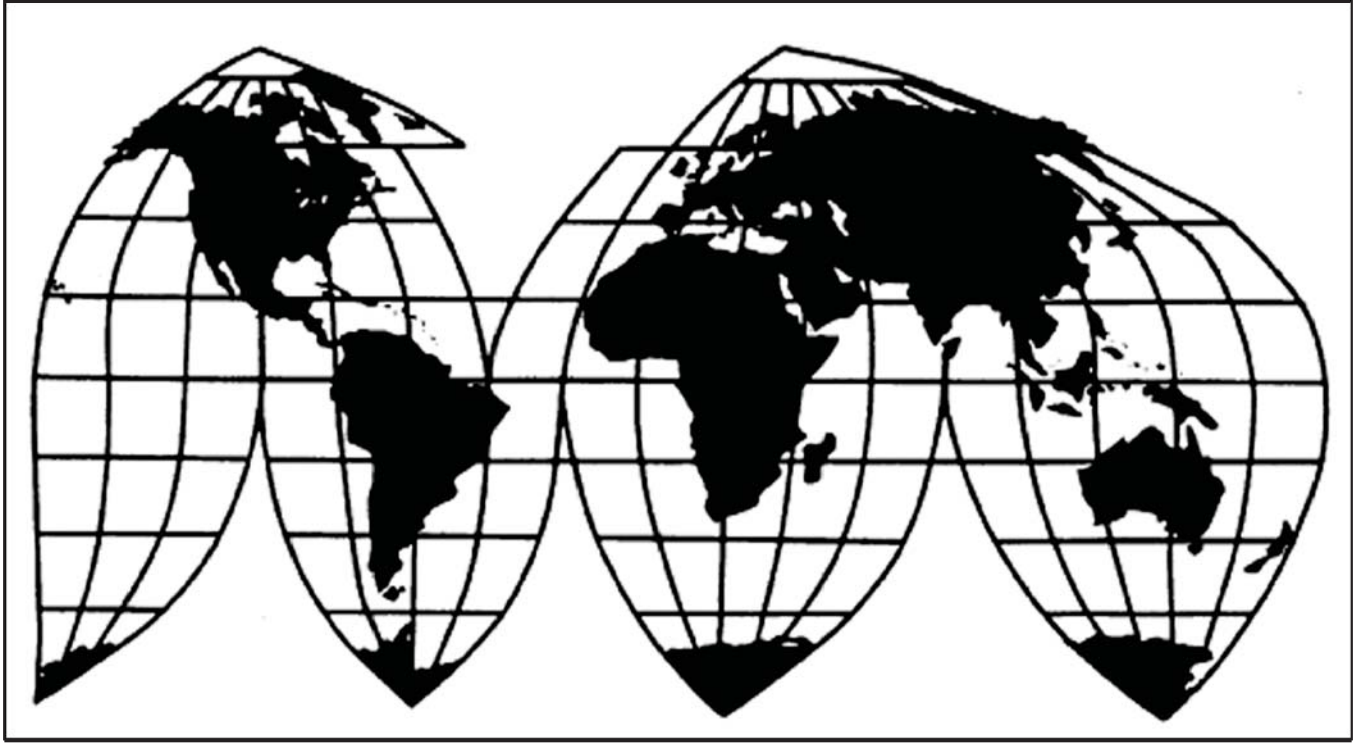
U.S. International Trade Commission



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UNITED STATES INTERNATIONAL TRADE COMMISSION

Investigation Nos. 701-TA-570 and 731-TA-1346 (Final)
Aluminum Foil from China

DETERMINATIONS

On the basis of the record[1] developed in the subject investigations, the United States International Trade Commission ("Commission") determines, pursuant to the Tariff Act of 1930 ("the Act"), that an industry in the United States is materially injured by reason of imports of aluminum foil from China that have been found by the U.S. Department of Commerce ("Commerce") to be sold in the United States at less than fair value ("LTFV") and to be subsidized by the government of China.[2]

BACKGROUND

The Commission, pursuant to sections 705(b) and 735(b) of the Act (19 U.S.C. 1671d(b) and 19 U.S.C. 1673d(b)), instituted these investigations effective March 9, 2017, following receipt of a petition filed with the Commission and Commerce by The Aluminum Association Trade Enforcement Working Group and its individual members. The final phase of the investigations was scheduled by the Commission following notification of preliminary determinations by Commerce that imports of aluminum foil from China were subsidized within the meaning of section 703(b) of the Act (19 U.S.C. 1671b(b)) and sold at LTFV within the meaning of 733(b) of the Act (19 U.S.C. 1673b(b)). Notice of the scheduling of the final phase of the Commission's investigations 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 November 22, 2017 (82 FR 55633). The hearing was held in Washington, DC, on February 8, 2018, 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)).

[2] 83 FR 9274 and 83 FR 9282 (March 5, 2018).

Views of the Commission

Based on the record in the final phase of these investigations, we determine that an industry in the United States is materially injured by reason of imports of aluminum foil from China found by the U.S. Department of Commerce ("Commerce") to be sold in the United States at less than fair value and to be subsidized by the government of China.

I. Background

On March 9, 2017, The Aluminum Association Trade Enforcement Working Group and its individual members[1] (collectively "Petitioners"), all of which are domestic producers of aluminum foil, filed antidumping duty and countervailing duty petitions with Commerce and the Commission. Representatives for the Petitioners appeared at the hearing accompanied by counsel and submitted prehearing and posthearing briefs and final comments.

Several Respondent groups participated in the final phase of these investigations. The China Nonferrous Metals Industry Association and its member companies (collectively "Chinese Respondents"), all of whom are foreign producers and exporters of subject merchandise, appeared at the hearing and submitted prehearing and posthearing briefs and final comments. The Flexible Packaging Association's U.S. Aluminum Foil Converters Committee ("FPA"), an organization representing industrial users and consumers of subject merchandise, foreign producers and exporters Jiangsu Zhongji Lamination Materials Co., (HK) Ltd., Jiangsu Zhongji Lamination Materials Co., and Jiangsu Zhongji Lamination Materials Stock Co., Ltd., and U.S. importer Manakin Industries, LLC, Ltd. (collectively "FPA Respondents") appeared at the hearing and submitted prehearing and posthearing briefs and final comments.[2] U.S. importers ProAmpac Intermediate, Inc., Ampac Holdings, LLC, and Jen-Coat, Inc., d.b.a. Prolamina (collectively "ProAmpac");[3] Trinidad Benham Corporation ("Trinidad"); and Valeo North America, Inc. ("Valeo")[4] also appeared at the hearing represented by separate counsel and filed prehearing and posthearing briefs and final comments. MAHLE Behr Troy, Inc. and MAHLE Behr

[1] The individual members of The Aluminum Association Trade Enforcement Working Group are JW Aluminum Company, Novelis Corporation, and Reynolds Consumer Products. *Certain Aluminum Foil From the People's Republic of China – Petitions for Imposition of Antidumping and Countervailing Duties* (Mar. 9, 2017) at 1 n.1.

[2] FPA Respondents incorporate by reference the arguments presented by other parties regarding attenuated competition in the household segment. *Flexible Packaging Association Prehearing Br.* (Feb. 1, 2018) ("FPA Prehearing Br.") at 43-44.

[3] ProAmpac endorses the analysis presented by other respondents that the domestic industry is not materially injured or threatened with material injury by reason of subject imports. *Prehearing Brief of ProAmpac Intermediate, Inc., Ampac Holdings, LLC, and Jen-Coat, Inc., d.b.a. Prolamina* (Feb. 1, 2018) ("ProAmpac Prehearing Br.") at 35.

[4] Valeo adopts and incorporates by reference the arguments made by the other respondents in these investigations that the domestic industry is not materially injured, or threatened with injury, due to subject imports. *Prehearing Brief on Behalf of Valeo North America, Inc.* (Feb. 1, 2018) ("Valeo Prehearing Br.") at 7.

USA, Inc. (collectible "MAHLE Behr"), a U.S. importer of aluminum foil, submitted a letter in lieu of a postconference brief and final comments.[5]

U.S. industry data are based on the questionnaire responses from six domestic producers that accounted for the vast majority of domestic production of aluminum foil in 2016.[6] U.S. import data are based on official Commerce import statistics and from questionnaire responses of 28 U.S. importers of subject merchandise from China from January 2014 to September 2017 (the "period of investigation"), which accounted for 79 percent of subject imports from China in 2016, and 12 foreign producers that accounted for 76.4 percent of production of subject merchandise from China in 2016.[7]

II. Domestic Like Product

A. In General

In determining whether an industry in the United States is materially injured or threatened with material injury by reason of imports of subject merchandise, the Commission first defines the "domestic like product" and the "industry."[8] Section 771(4)(A) of the Tariff Act of 1930, as amended ("the Tariff Act"), defines the relevant domestic industry as the "producers as a whole of a domestic like product, or those producers whose collective output of a domestic like product constitutes a major proportion of the total domestic production of the product."[9] In turn, the Tariff Act defines "domestic like product" as "a product which is like, or in the absence of like, most similar in characteristics and uses with, the article subject to an investigation."[10]

The decision regarding the appropriate domestic like product in an investigation is a factual determination, and the Commission has applied the statutory standard of "like" or "most similar in characteristics and uses" on a case-by-case basis.[11] No single factor is

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[5] *Letter in Lieu of Posthearing Brief on Behalf of MAHLE Behr Troy, Inc. and MAHLE Behr USA, Inc.*, EDIS Doc. 636654 (Feb. 15, 2018)("MAHLE Behr Posthearing Letter"); *Final Comments on Behalf of MAHLE Behr Troy, Inc. and MAHLE Behr USA, Inc.*, EDIS Doc. 638840 (Mar. 13, 2018) ("MAHLE Behr Final Comments"). MAHLE Behr incorporates by reference the arguments made during the Commission's hearing and in the posthearing briefs and final comments submitted by other respondents. MAHLE Behr Posthearing Letter at 1-2; MAHLE Behr Final Comments at 1.

[6] Confidential Report, INV-QQ-028 (Mar. 6, 2018) ("CR") at I-5, Public Report ("PR") at I-3.

[7] CR at I-6, IV-1, VII-3, PR at I-IV-1, VII-3.

[8] 19 U.S.C. § 1677(4)(A).

[9] 19 U.S.C. § 1677(4)(A).

[10] 19 U.S.C. § 1677(10).

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

dispositive, and the Commission may consider other factors it deems relevant based on the facts of a particular investigation.[12] The Commission looks for clear dividing lines among possible like products and disregards minor variations.[13] Although the Commission must accept Commerce's determination as to the scope of the imported merchandise that is subsidized or sold at less than fair value,[14] the Commission determines what domestic product is like the imported articles Commerce has identified.[15]

B. Product Description

Commerce defined the scope of the imported merchandise under investigation as follows:

> aluminum foil having a thickness of 0.2 mm or less, in reels exceeding 25 pounds, regardless of width. Aluminum foil is made from an aluminum alloy that contains more than 92 percent aluminum. Aluminum foil may be made to ASTM specification ASTM B479, but can also be made to other specifications. Regardless of specification, however, all aluminum foil meeting the scope description is included in the scope, including aluminum foil to which lubricant has been applied to one or both sides of the foil.
>
> Excluded from the scope of this investigation is aluminum foil that is backed with paper, paperboard, plastics, or similar backing materials on one side or both sides of the aluminum foil,

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(…Continued)
manufacturing facilities, production processes, and production employees; and, where appropriate, (6) price. *See Nippon*, 19 CIT at 455 n.4; *Timken Co. v. United States*, 913 F. Supp. 580, 584 (Ct. Int'l Trade 1996).

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

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

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

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

> as well as etched capacitor foil and aluminum foil that is cut to shape.
>
> Where the nominal and actual measurements vary, a product is within the scope if application of either the nominal or actual measurement would place it within the scope based on the definitions set forth above. The products under investigation are currently classifiable under Harmonized Tariff Schedule of the United States (HTSUS) subheadings 7607.11.3000, 7607.11.6000, 7607.11.9030, 7607.11.9060, 7607.11.9090, and 7607.19.6000. Further, merchandise that falls within the scope of this proceeding may also be entered into the United States under HTSUS subheadings 7606.11.3060, 7606.11.6000, 7606.12.3045, 7606.12.3055, 7606.12.3090, 7606.12.6000, 7606.91.3090, 7606.91.6080, 7606.92.3090, and 7606.92.6080.[16]

Aluminum foil is a thin wrought aluminum product that is produced via a rolling process. It is produced in a variety of gauges or levels of thickness and is commonly produced using 1XXX, 3XXX, and 8XXX series alloys. Aluminum foil is used extensively in food and pharmaceutical packaging because it provides protection against light, oxygen, moisture, and bacteria. It is also used in industrial applications such as thermal insulation, cables, and electronics where properties such as heat reflectivity and barrier protection are desired. Common products that use aluminum foil include pie pans, food and candy wrappers, and household foil.[17]

Fin stock is an extra-heavy type of aluminum foil which is produced in a variety of gauges or levels of thickness and is primarily produced using 1XXX, 3XXX, and 7XXX series alloys.[18] It is used in a variety of applications, including heating, ventilation, and air conditioning ("HVAC"), and other heat transfer products where properties such as light-weight, corrosion resistance, and formability are desired.

C. Arguments of the Parties

Petitioners' Arguments. Petitioners contend that the Commission should define a single domestic like product coextensive with Commerce's scope definition. They argue that there is not a clear dividing line between aluminum foil with a thickness of 0.0003 inches or less ("ultra-

[16] *Countervailing Duty Investigation of Certain Aluminum Foil From the People's Republic of China: Final Affirmative Determination,* 83 Fed. Reg. 9274 (Mar. 5, 2018); *Certain Aluminum Foil From the People's Republic of China: Final Determination of Sales at Less Than Fair Value*, 83 Fed. Reg. 9282 (Mar. 5, 2018).

[17] CR at I-13-17, PR at I-10-12.

[18] CR at I-18-19, PR at I-13-14.

thin") and thicker gauge aluminum foil and that "ultra-thin" aluminum foil is not a recognized product category among industry participants.[19]

Petitioners also assert that there is not a clear dividing line between flat-rolled aluminum with a thickness greater than 0.00177 inches and containing one percent or more (by weight) of manganese ("certain fin stock") and other aluminum foil including other in-scope fin stock.[20] According to Petitioners, all foil is characterized by its formability, light weight, and resistance to corrosion,[21] and that there is overlap in the gauges, alloys, and end-uses for certain fin stock and other in-scope aluminum foil.[22] They contend that certain fin stock may be produced using the same processes on the same equipment as other in-scope aluminum foil, and that fin stock and other aluminum foil are almost exclusively sold to end users.[23] According to Petitioners, customer perceptions of the higher strength and improved corrosion resistance of fin stock differ only by degree from other aluminum foil, and that virtually all aluminum foil is subject to qualification and testing processes.[24] With respect to price, they contend that fin stock has prices along a continuum of prices for the various pricing products on which the Commission collected data.[25]

Finally, Petitioners argue that the Commission should not expand the definition of the domestic like product to include an out-of-scope downstream finished article, foil in reels weighing less than 25 lbs. ("small reels").[26] They contend that this would in turn result in including entities whose interests, as customers of articles within the scope, are contrary to those of the domestic producers who produce those articles within the scope.[27]

Respondents' Arguments. Respondents raise several domestic like product arguments. FPA Respondents, ProAmpac, and Chinese Respondents argue that the Commission should

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[19] *Petitioners' Prehearing Brief* (Feb. 1, 2018) ("Petitioners' Prehearing Br.") at 4-6; *Petitioners' Posthearing Brief* (Feb. 15, 2018) ("Petitioners' Posthearing Br.") at 3, 5.

[20] Petitioners' Prehearing Br. at 7-14; Petitioners' Posthearing Br. at 4. According to Petitioners, a number of companies shipped significant volumes of aluminum foil used in fin stock applications that does not fall within the physical characteristics identified by the Respondents for certain fin stock. Petitioners contend that there is significant production of other in-scope fin stock that does not possess the physical characteristics of certain fin stock – because their alloys do not contain more than one percent manganese by weight – which are nevertheless used in fin stock applications. *Id.*

[21] Petitioners' Prehearing Br. at 8. They contend that higher strength is not a distinguishing factor because certain fin stock is generally a thicker gauge relative to other aluminum foil. *Id.*

[22] Petitioners' Prehearing Br. at 8-9. They assert that the HTS schedule as well as standards published by the Aluminum Association show an overlap in gauges for certain fin stock and other in-scope aluminum foil. Petitioners' Prehearing Br. at 9. According to Petitioners, some certain fin stock is used in packaging end-use applications. *Id*.

[23] Petitioners' Prehearing Br. at 10-13.

[24] Petitioners' Prehearing Br. at 12-13.

[25] Petitioners' Prehearing Br. at 13-14.

[26] Petitioners' Prehearing Br. at 14-15; Petitioners' Posthearing Br. at 5.

[27] Petitioners' Prehearing Br. at 14-15.

define ultra-thin gauge aluminum foil as a separate domestic like product.[28] FPA Respondents assert that ultra-thin gauge aluminum foil is used in different end uses and is priced higher than thicker gauges, and that differences in durability and formability limit their interchangeability.[29] They contend that the production of ultra-thin foil requires additional processes that include specialized equipment.[30] They also contend that ultra-thin foil is usually sold to converters for further processing, whereas standard gauges are ***, and heavier gauges are often sold to automotive and industrial manufacturers.[31] According to FPA Respondents, customers of ultra-thin foil have higher quality expectations than those of thicker-gauge foils.[32]

Chinese Respondents, MAHLE Behr, and Valeo argue that the Commission should define fin stock as a separate domestic like product.[33] Valeo proposed three different domestic like product definitions over the course of the final phase of these investigations, each more broad than the last. Valeo initially proposed the definition of certain fin stock in its comments on the draft questionnaires.[34] Valeo subsequently modified its proposed like product definition in its prehearing brief[35] and then again modified it in its posthearing brief.[36]

Valeo asserts that Aluminum Association standards as well as the use of proprietary alloys distinguish the physical characteristics and end-uses of certain fin stock from aluminum foil.[37] It argues that fin stock and aluminum foil have different manufacturing facilities and that

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[28] *Chinese Respondents' Prehearing Brief* (Feb. 1, 2018) (Chinese Respondents' Prehearing Br.") at 14-15; FPA Prehearing Br. at 6-17; *Flexible Packaging Association Posthearing Brief* (Feb. 15, 2018) ("FPA Posthearing Br.") at 4; ProAmpac Prehearing Br. at 2-3.

[29] FPA Prehearing Br. at 8-11 and 13-14. They point to thinner "converter foil" being integrated into products, while thicker "household" foil is used as durables for personal packaging and household applications. *Id.*

[30] FPA Prehearing Br. at 14-17.

[31] FPA Prehearing Br. at 14-17.

[32] FPA Prehearing Br. at 11-13.

[33] Chinese Respondents' Prehearing Br. at 19-20; MAHLE Behr Posthearing Letter at 1-2; MAHLE Behr Final Comments at 1-3. As observed above, MAHLE Behr incorporates by reference the arguments of Valeo and other Respondents.

[34] CR at I-28 n.80, PR at I-21 n.80. Certain fin stock was defined in the questionnaires as flat-rolled aluminum of greater than or equal to 45 microns (0.045 mm or 0.00177 inches) and less than or equal to 200 microns (0.2 mm or 0.00787 inches) in thickness, containing 1 percent or more, by weight, of manganese. *Id. See also Valeo's Draft Questionnaire Comments*, EDIS Doc. 625588 (Oct. 13, 2017) at 3.

[35] Valeo's Prehearing Br. at 5, 7. In its prehearing brief, Valeo defined fin stock as "flat-rolled aluminum of 45 microns (0.00177 inches) or more in thickness, containing 1 percent or more, by weight, of manganese *and meeting the specifications for fin stock as defined by the Aluminum Association*." *Id. (emphasis added).*

[36] *Posthearing Brief on Behalf of Valeo North America Inc.* (Feb. 15, 2018) ("Valeo Posthearing Br.") at 2. In its posthearing brief, Valeo defined fin stock as "coiled sheet or foil suitable and intended for the manufacture of fins for heat-exchanger applications and in accordance with the chemical, mechanical and tolerance specifications provided for by the Aluminum Association for fin stock." *Id.*

[37] Valeo Prehearing Br. at 9-13. It maintains that the Aluminum Association standards indicate that ***. *Id.* at 9-10.

(Continued...)

manufacturers use different production processes to impart different physical characteristics and mechanical properties to certain fin stock than aluminum foil.[38] It states that aluminum foil is not interchangeable with certain fin stock due to their different physical characteristics, chemical compositions, and mechanical properties.[39] According to Valeo, certain fin stock producers sell their product in limited runs to specific customers through long-term supply contracts and through a specialized distribution channel, whereas aluminum foil is produced in continuous and sizeable quantities for sale by less-specialized distributors as generally interchangeable products.[40] Valeo maintains that customers and producers view fin stock as a specialized product available from a few specialized producers, whereas they view aluminum foil as widely procurable high volume, low cost product.[41] It contends that certain fin stock is sold at higher prices than those for aluminum foil.[42]

Chinese Respondents and Trinidad urge the Commission to define the domestic like product more broadly than the scope of these investigations to include small reels.[43] They contend that there are no differences in physical characteristics, functionality, or interchangeability between aluminum foil of the same gauge in jumbo rolls or small reels.[44] According to Trinidad, small and large reels are produced using the same manufacturing

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(…Continued)

It asserts that there is no significant overlap in the end-uses for certain fin stock and aluminum foil. According to Valeo, Aluminum Association's different statistical reporting categories for fin stock and aluminum foil indicate that *** percent of total shipments of fin stock in the United States and Canada in 2017 were to *** and that by comparison *** percent of shipments of aluminum foil were used in the containers and packaging industry or in the manufacture of consumer durables. They state that the statistics do not suggest that aluminum foil could be used in the production of HEX/HVAC systems. Valeo Prehearing Br. at 14-15.

[38] Valeo Prehearing Br. at 13, 17-18; Valeo Posthearing Br. at 8-10. Valeo contends that certification is required for plants in the United States to supply various aluminum products to the automotive industry and that aluminum foil plants neither meet nor require this certification. Valeo Posthearing Br. at 8-9. According to Valeo, the differences in production which impart special physical characteristics and mechanical properties to fin stock are significant in terms of cost, complexity, and technical expertise. Valeo Prehearing Br. at 17; Valeo Posthearing Br. at 8-10.

[39] Valeo Prehearing Br. at 13, 22. They argue that no product within the continuum of foil products destined for food and pharmaceutical packaging applications is interchangeable with fin stock. Valeo Prehearing Br. at 22. According to Valeo, the fact that certain domestic producers import fin stock feed stock and produce fin stock at mills identified as sheet mills rather than foil mills illustrates the lack of interchangeability between fin stock and aluminum foil. Valeo Posthearing Br. at 10.

[40] Valeo Prehearing Br. at 18-19; Valeo Posthearing Br. at 6-7.

[41] Valeo Prehearing Br. at 19-21. It argues that fin stock customers purchase products produced with proprietary alloys, whereas aluminum foil customers do not. It contends that producers market fin stock and aluminum foil differently, particularly with respect to the development of proprietary alloys. Valeo Posthearing Br. at 7-8.

[42] Valeo Prehearing Br. at 21; Valeo Posthearing Br. at 10.

[43] Chinese Respondents' Prehearing Br. at 16-19; *Prehearing Brief on Behalf of Trinidad Benham Corporation* (Feb. 1, 2018) ("Trinidad Prehearing Br.") at 7-8.

[44] Chinese Respondents' Prehearing Br. at 18; Trinidad Prehearing Br. at 7.

facilities, production processes, and employees, with additional processing to produce small reels accounting for a relatively minor share of the end-use cost share for household foil.[45] Trinidad acknowledges that the channels of distribution for large and small reels may be different, with large reels sold to industrial customers and small reels sold to home or restaurant use, but argues that there is no clear dividing line at which foil is sold through a particular channel of distribution.[46]

D. Domestic Like Product Analysis

1. Ultra-Thin Gauge Aluminum Foil

In the preliminary determinations, the Commission considered whether ultra-thin gauge aluminum foil should be defined as a separate domestic like product.[47] The Commission found that there were similarities between ultra-thin aluminum foil and thicker aluminum foil in terms of physical characteristics and properties; manufacturing facilities, production processes, and employees; and the channels of distribution. It found that thinner and thicker foils had largely different end uses, but observed that varying uses are typical where a grouping of similar products is involved. It also found that although the interchangeability of ultra-thin gauge aluminum foil and thicker aluminum foil was limited or nonexistent, such limited interchangeability was true for other types of aluminum foil that serve a range of applications. In the preliminary determinations, the Commission found that, while customers perceived thinner-gauge foil as having qualities that the thicker-gauge foil lacks, there did not appear to be a clear understanding in the industry as to what constituted "ultra-thin" gauge foil. The Commission recognized that based on average unit value ("AUV") data, the price of ultra-thin foil was higher than that of all other domestically produced aluminum foil. In sum, the Commission found that there was not a clear dividing line separating ultra-thin aluminum foil from the other foil products described in the scope definition.[48]

While the record in the final phase of these investigations contains some additional information concerning the domestic like product factors, it does not suggest that modification of the finding in the preliminary determinations is warranted.[49] There is no new evidence of differences regarding physical characteristics, uses, interchangeability, and manufacturing facilities. In the final phase, information regarding channels of distribution indicates that there is overlap between ultra-thin aluminum foil and all other aluminum foil in the consumer

[45] Trinidad Prehearing Br. at 8.

[46] Trinidad Prehearing Br. at 8. It asserts that the exclusion of small reels obscures the data that indicate a lack of injury to the domestic industry and that the Commission must consider whether subject imports of jumbo rolls of household foil have volume or price effects or impacts on small reel producers. *Posthearing Brief on Behalf of Trinidad Benham Corporation* (Feb. 15, 2018) ("Trinidad Posthearing Br.") at 8-10.

[47] *See Aluminum Foil from China,* Inv. Nos. 701-TA-570 and 731-TA-1346 (Preliminary), USITC Pub. 4684 (May 2017) at 8-10.

[48] USITC Pub. 4684 at 7-10.

[49] *See generally* CR at I-13-28, PR at I-10-20.

packaging and industrial end uses.[50] A majority of domestic producers (6 of 8), U.S. importers (9 of 15), and U.S. purchasers (16 of 28) indicated that ultra-thin gauge aluminum foil was mostly or somewhat comparable with all other aluminum foil with respect to market perceptions.[51] Moreover, Respondents have made arguments similar to those raised and rejected by the Commission in the preliminary phase of these investigations.[52] Thus, we again find that ultra-thin gauge aluminum foil is not a separate domestic like product.

2. Certain Fin Stock

In the preliminary determinations, the Commission declined to define certain fin stock as a separate domestic like product. The Commission found that for the purposes of the preliminary determinations, certain fin stock had different uses, was not interchangeable with other types of aluminum foil, and could not be objectively defined in terms of physical characteristics (such as higher strength, improved corrosion resistance, increased fatigue strength, and enhanced formability). There also were some differences in producer perceptions between certain fin stock and other aluminum foil. It found that the record was less clear whether these distinctions reflected physical differences in the alloys used for fin stock and other types of aluminum foil. There was an overlap in the production processes and in the channels of distribution for certain fin stock and all other aluminum foil. In light of the fact that aluminum foil within the scope encompassed a variety of products with a range of distinct physical characteristics and uses, the Commission did not define certain fin stock as a separate domestic like product in the preliminary phase of these investigations but indicated that it would explore the issue further during the final investigation.[53]

As observed above, Valeo vacillated about how to frame its request for a separate domestic like product concerning fin stock, proposing three different domestic like product definitions over the course of the final phase of these investigations, each more broad than the last.[54] The Commission requested information on certain fin stock in its questionnaires on the

[50] CR/PR at Table I-8. Over the period of investigation, between *** and *** percent of ultra-thin aluminum went to the consumer packaging channel as compared to between *** percent and *** percent for all other aluminum foil and between *** and *** percent of ultra-thin aluminum foil went to the industrial channel as compared to between *** and *** percent of all other aluminum foil. *Id.* Questionnaire responses indicate that a majority of U.S. producers (7 of 8), U.S. importers (13 of 14), and U.S. purchasers (18 of 24) indicated that ultra-thin gauge aluminum foil was fully, mostly, or somewhat comparable with all other aluminum foil with respect to channels of distribution. CR/PR at Table I-7.

[51] CR/PR at Table I-7.

[52] We observe that certain Respondents raise the argument that the Commission should be guided by determinations regarding ultra-thin gauge foil made by the European Commission ("EC"). FPA Prehearing Br. at 9. As we stated in the preliminary phase, the EC's treatment of this issue has no bearing on the appropriate definition of the domestic like product in these investigations. USITC Pub. 4684 at 12 n.64.

[53] USITC Pub. 4684 at 10-12.

[54] Valeo's initial definition was appropriately proposed in its comments on the draft questionnaires but subsequent domestic like product definitions for fin stock were proposed in their (Continued...)

basis of the definition proposed by Valeo in its comments on the draft questionnaires.[55] The analysis that follows is also necessarily based on that definition and the data collected in those questionnaires.

Physical Characteristics and Uses. Certain fin stock typically has a gauge of 45 microns (or 0.00177 inches) or greater, is an "extra heavy" aluminum foil by thickness, and is thicker than most other aluminum foil.[56] Certain fin stock is characterized by higher strength, improved corrosion resistances, increased fatigue strength, enhanced formability, higher thermal conductivity, improved sagging resistance, and improved high temperature properties.[57] The record indicates that certain fin stock may be made with proprietary alloys and processes, which are used to impart specific physical characteristics to certain fin stock.[58] Nevertheless, because not all of the U.S. shipments of in-scope fin stock by U.S. producers met Valeo's proposed definition for certain fin stock, certain fin stock overlaps in thickness and in manganese content with other in-scope aluminum foil used as fin stock.[59] Substantial amounts of in-scope fin stock not covered by Valeo's proposed definition were produced by the U.S. industry.[60] The record indicates that domestic producers shipped a substantial quantity of thinner aluminum foil with a manganese content equivalent to that used in certain fin stock.[61] It also indicates that certain fin stock may be made with certain series alloys that overlap with those used to produce aluminum foil.[62]

Certain fin stock is used in the production of fins used in heat exchangers for automotive and HVAC applications, including air coolers, condensers, evaporators, heater cores, oil coolers,

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(…Continued)
prehearing and posthearing briefs, effectively too late for the Commission to collect data regarding the broader like product definitions they proposed.

[55] CR at I-28 n.80, PR at I-21 n.80. Certain fin stock was defined in the questionnaires as flat-rolled aluminum of greater than or equal to 45 microns (0.045 mm or 0.00177 inches) and less than or equal to 200 microns (0.2 mm or 0.00787 inches) in thickness, containing 1 percent or more, by weight, of manganese. *Id. See also Valeo's Draft Questionnaire Comments*, EDIS Doc. 625588 (Oct. 13, 2017) at 3.

[56] CR at I-16, 31, PR at I-12, 23. Extra heavy aluminum foil is classified as being greater than or equal to 0.00177 inch (45 microns) in thickness. CR at I-16, PR at I-12.

[57] CR at I-31, PR at I-23.

[58] CR at I-31, PR at I-23.

[59] CR/PR at Table III-9.

[60] CR/PR at Table III-9. Other in-scope fin stock encompasses any other types of fin stock that meet the definition of aluminum foil but not certain fin stock. *See* Blank U.S. Producers' Questionnaire, EDIS Doc. 629607 (Nov. 21, 2017) at 2. Domestic producers' shipments of certain fin stock were *** short tons in 2016, while their shipments of other in-scope fin stock were *** short tons and shipments of high manganese content foil were *** short tons. *Id.*

[61] CR/PR at Table III-9. High manganese content aluminum foil encompasses non-fin stock aluminum foil products with a manganese content similar to that provided for certain fin stock. *See id.* at 15.

[62] CR at I-33, PR at I-24. The 3000 series alloys commonly used in certain fin stock appear to also be used in the production of aluminum foil. *Id.*

and radiators.[63] By contrast thinner aluminum foil is used in a variety of end use applications such as flexible packaging, containers, and household foil products.[64] When rating the comparability of certain fin stock and all other aluminum foil on the basis of characteristics and uses, half of responding U.S. producers (3 of 6) and a majority of responding U.S. importers (10 of 11) and purchasers (18 of 21) indicated that they were not at all comparable with respect to characteristics and uses.[65]

Manufacturing Facilities, Production Processes, and Employees. The record is mixed as to whether certain fin stock is produced on the same equipment, using the same production processes, and the same employees as other in-scope aluminum foil. The record indicates that the production process for certain fin stock may include proprietary processes and a higher level of process controls.[66] There is also evidence that certain fin stock manufacturing facilities requiring industry certification are distinct from foil manufacturing facilities.[67] When asked to rate the comparability of certain fin stock and all other aluminum foil on the basis of manufacturing facilities and employees, a majority of responding domestic producers (3 of 5) indicated that they were fully or mostly comparable, while half of responding U.S. importers (5 of 10) and a majority of U.S. purchasers (11 of 17) indicated that they were fully, mostly, or somewhat comparable.[68]

Channels of Distribution. The record indicates that there is overlap in the channels of distribution between certain fin stock and all other aluminum foil with regard to end use channels into which they are sold, particularly for shipments for industrial use and consumer packaging.[69] While Respondents do not dispute that certain fin stock and aluminum foil are sold directly to household and industrial end users, they assert that certain fin stock differs from all other aluminum foil in that it is sold through restricted multi-tier channels of distribution.[70] When asked to rate the comparability of certain fin stock to all other aluminum foil on the basis of channels of distribution, all responding domestic producers (5 of 5) indicated that they were either fully, mostly, or somewhat comparable, while a majority of responding U.S. importers (6 of 10) and U.S. purchasers (9 of 15) indicated that they were fully, mostly, or somewhat comparable.[71]

Interchangeability. The record indicates that certain fin stock and other in-scope aluminum foil are limited in their interchangeability. When asked to rate the comparability of

[63] CR at I-29, PR at I-21.

[64] CR at I-16 nn.41-45, PR at I-12 nn.41-45.

[65] CR/PR at Table I-4.

[66] CR at I-32-33, PR at I-24; Valeo Prehearing Br. at 17. Petitioners contend that certain fin stock may be produced on the same equipment as other in-scope aluminum foil, using either the direct chill casting process or the continuous casting process. Petitioners' Prehearing Br. at 12; Petitioners' Posthearing Br. at 4.

[67] Valeo Posthearing Br. at 1, 8-9.

[68] CR/PR at Table I-4.

[69] More than *** percent of U.S. producers' certain fin stock were made to the *** channel in each year of the period of investigation. CR/PR at Table I-5.

[70] Valeo Prehearing Br. at 18-19

[71] CR/PR at Table I-4.

certain fin stock to all other aluminum foil on the basis of interchangeability, half of responding domestic producers (3 of 6), nearly all responding U.S. importers (10 of 11), and a large majority of U.S. purchasers (18 of 21), indicated that certain fin stock was not at all comparable with all other aluminum foil.[72]

Producer and Customer Perceptions. The record indicates that producers and customers do not perceive certain fin stock and other aluminum foil to be comparable. The Aluminum Association separately categorizes and collects data regarding fin stock and aluminum foil.[73] There also is evidence that certain fin stock producers work with customers to develop proprietary alloys.[74] When asked to rate the comparability of certain fin stock to all other aluminum foil on the basis of market perceptions, half of responding domestic producers (3 of 6), and a majority of responding U.S. importers (9 of 12) and responding U.S. purchasers (15 of 18) indicated that they were not at all comparable.[75]

Price. The Commission collected pricing data on a certain fin stock product (pricing product 8) for price comparisons.[76] In aggregate, the price per pound of products 3 through 7 was consistently lower than that of product 8 over the period of investigation.[77] When asked to rate the comparability of certain fin stock to all other aluminum foil on the basis of price, a majority of all responding U.S. producers (3 of 5), U.S. importers (7 of 9), and U.S. purchasers (7 of 11) indicated that they were not at all comparable.[78]

Conclusion. As we observed in the preliminary phase, in investigations such as these, where domestically manufactured merchandise is made up of a grouping of similar products or involves niche products, the Commission does not consider each item of merchandise to be a separate like product that is only "like" its identical counterpart in the scope, but considers the grouping itself to constitute the domestic like product[79] and "disregards minor variations,"[80] absent a "clear dividing line" between particular products in the group.

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[72] CR/PR at Table I-4.

[73] Valeo Prehearing Br. at 9-10. We observe that the Aluminum Association's definition of fin stock includes fin stock made with 1000 and 7000 series alloys that overlap with the alloys used to produce other in-scope aluminum foil. CR at I-32 & n.91, PR at I-23 & n.91.

[74] Valeo Posthearing Br. at 7-8.

[75] CR/PR at Table I-4.

[76] CR at I-38, PR at I-26.

[77] CR at I-38, PR at I-26; CR/PR at Table I-6. The weighted average price per pound over the period of investigation was $*** for product 8 and $1.49 for products 3 through 7 (the products closest in gauge to product 8). Derived from CR/PR at Table V-5-10.

[78] CR/PR at Table I-4.

[79] *See, e.g.*, *Certain Corrosion-Resistant Steel Products from China*, *India, Italy, Korea, and Taiwan*, Inv. Nos. 701-TA-534-538 and 731-TA-1274-1278 (Preliminary), USITC Pub. 4547 at 9 (July 2015); *Carbon and Certain Alloy Steel Wire Rod from China, Germany, and Turkey*, Inv. Nos. 731-TA-1099-1101 (Preliminary), USITC Pub. 3832 (January 2006) at 10 ("a lack of interchangeability among products comprising a continuum is not unexpected and not inconsistent with finding a single like product.

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

Certain fin stock overlaps with other in-scope fin stock and other aluminum foil with respect to certain physical characteristics such as gauge and manganese content. While certain fin stock and aluminum foil differ in their end uses, there is no evidence that certain fin stock and other in-scope fin stock do so. Moreover, varying uses are typical where a grouping of similar products is involved. While the manufacturing facilities for certain fin stock and other aluminum foil may themselves be different, the production processes used to produce both products are largely similar. Moreover, there is nothing on the record that indicates that the production process for other in-scope fin stock differs to a significant degree from that for certain fin stock. There is overlap with respect to the channels of distribution for both certain fin stock and other aluminum foil, particularly for shipments to industrial and consumer packaging end uses. Respondents' arguments with respect to the restricted channels of distribution for certain fin stock would appear to apply to other in-scope fin stock as well. While the interchangeability between certain fin stock and other aluminum foil is limited, such limited interchangeability is also true for other types of aluminum foil that serve a range of applications. Although customers perceive certain fin stock and other aluminum foil as different products, the record is unclear as to whether customers perceive certain fin stock and other in-scope fin stock to be different products. The record indicates that certain fin stock was priced consistently higher than other in-scope aluminum products throughout the period of investigation.

In sum, the record does not indicate that certain fin stock, as defined by Respondents, is distinguishable from all other in-scope aluminum products, particularly other in-scope fin stock. In light of this, the record in the final phase of these investigations does not indicate that there is a clear dividing line separating certain fin stock from other aluminum foil products described by the scope definition, and consequently we decline to treat certain fin stock as a separate domestic like product.

3. Small Reels

The Commission did not address the issue of whether to broaden the definition of the domestic like product to include small reels in the preliminary phase of these investigations, but did indicate that it intended to collect data on this product and encouraged parties to provide any information in comments on the draft questionnaires in any final phase of the investigations.[81] The evidence on the record does not indicate that there are other downstream aluminum foil products within the scope. The Commission generally uses a semi-finished like product analysis in determining whether articles within the scope at different stages of processing should be included in the same like product.[82] However, the Commission generally does not expand or broaden the definition of the domestic like product to include downstream articles when the scope does not encompass a corresponding subject product.[83]

[81] USITC Pub. 4684 at 4-13.

[82] We observe that no party has explicitly asked that the Commission apply a semi-finished like product analysis in these investigations.

[83] *See, e.g. Sodium Hexametaphosphate from China*, Inv. No. 731-TA-1110 (Preliminary), USITC Pub. 3912 (Apr. 2007) at 7, n.36; *Certain Frozen or Canned Warmwater Shrimp from Brazil, China,* (Continued...)

The Commission's reason for doing so is to avoid including in the domestic industry entities whose interests, as customers of articles within the scope, are contrary to those of domestic producers of those articles within the scope.[84] In light of the above considerations, we decline to broaden the definition of the domestic like product to include small reels of aluminum foil.

Based on the record, we define a single domestic like product coextensive with the scope of the investigations.

III. Domestic Industry

The domestic industry is defined as the domestic "producers as a whole of a domestic like product, or those producers whose collective output of a domestic like product constitutes a major proportion of the total domestic production of the product."[85] 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.

A. Related Parties

We must determine whether any producer of the domestic like product should be excluded from the domestic industry pursuant to section 771(4)(B) of the Tariff Act. This provision allows the Commission, if appropriate circumstances exist, to exclude from the domestic industry producers that are related to an exporter or importer of subject merchandise or which are themselves importers.[86] Exclusion of such a producer is within the Commission's discretion based upon the facts presented in each investigation.[87]

(…Continued)
Ecuador, India, Thailand, and Vietnam, Inv. Nos. 731-TA-1063-1068 (Preliminary), USITC Pub. 3672 (Feb. 2004) at 14-15; *Low Enriched Uranium from France, Germany, The Netherlands, and The United Kingdom*, USITC Pub. 3388 at 6; *Beryllium Metal and High-Beryllium Alloys from Kazakhstan*, Inv. No. 731-TA-746 (Final), USITC Pub. 3019 at 5 (Feb. 1997) at 5; *Fresh Garlic from the People's Republic of China*, Inv. No. 731-TA-683 (Final), USITC Pub. 2825 at I-14 & n.65 (Nov. 1994).

[84] *Certain Wax and Wax/Resin Thermal Transfer Ribbons From France and Japan,* Inv. Nos. 731-TA-1039-1040 (Final)(Remand), USITC Pub. 3854 (Apr. 2006) at 3-4. We observe that no party has explicitly asked that the Commission apply a semi-finished products analysis in these investigations.

[85] 19 U.S.C. § 1677(4)(A).

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

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

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

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

In its preliminary determinations, the Commission examined whether appropriate circumstances existed to exclude domestic producers *** pursuant to the related parties provision.[88] While it found that *** met the definition of a related party, it did not find that appropriate circumstances existed to exclude any of the producers from the domestic industry.[89] It defined the domestic industry to include all domestic producers of aluminum foil.[90]

In the final phase of these investigations, we first analyze whether any domestic producers are subject to potential exclusion from the domestic industry pursuant to the related parties provision. The record shows that three domestic producers, ***, imported subject aluminum foil during the period of investigation and thus are related parties.[91] The record also indicates that *** is related to an exporter of subject merchandise to the U.S. market, and therefore is a related party.[92]

****.* *** was the *** domestic producer over the period of investigation, accounting for *** percent of domestic production.[93] Imports of subject merchandise produced by *** were *** short tons in 2014 (equivalent to *** percent of *** domestic production), *** short tons in 2015 (equivalent to *** percent of *** domestic production), and *** short tons in 2016 (equivalent to *** percent of *** domestic production).[94] It takes *** with respect to the outcome of these investigations.[95]

(…Continued)

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

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

(5) whether the primary interest of the importing producer lies in domestic production or importation. *Changzhou Trina Solar Energy Co. v. USITC*, 100 F. Supp.3d 1314, 1326-31 (Ct. Int'l. Trade 2015); see *also Torrington Co. v. United States*, 790 F. Supp. at 1168.

[88] Confidential Preliminary Determinations, EDIS Doc. 610316 at 19-23.

[89] Confidential Preliminary Determinations, EDIS Doc. 610316 at 19-23.

[90] USITC Pub. 4684 at 15.

[91] CR at III-18, PR at III-7.

[92] CR/PR at Table III-2. *** is related to ***, an exporter of subject merchandise, through common ownership by ***. *Id.* According to *** since 2014. CR at III-4 n.3, PR at III-2 n.3.

*** also is *** CR/PR at Table III-2. *** through common ownership. CR at III-18, PR at III-7. It is unclear whether a requisite control relationship exists with *** that would make *** a related party pursuant to 19 U.S.C. § 1677(4)(B)(ii).

The *** imported *** short tons of aluminum foil from China in 2014 (the equivalent of *** percent of *** domestic production), *** short tons in 2015 (the equivalent of *** percent of *** domestic production, and *** short tons in 2016 (the equivalent of *** percent of *** domestic production). CR/PR at III-11.

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

[94] Derived from CR/PR at Table III-11. Imports of subject merchandise produced by *** were *** short tons in interim 2016 (equivalent to *** percent of *** domestic production) and *** short tons in interim 2017 (equivalent to *** percent of *** domestic production). *Id.*

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

*** indicating that its principal interest lies in domestic production. There is no indication that its *** shielded it from subject imports to any significant degree.[96] We also observe that no party has argued for the exclusion of *** as a related party. Accordingly, we find that appropriate circumstances do not exist to exclude *** from the domestic industry.

***. *** is *** and the *** domestic producer over the period of investigation, accounting for *** percent of domestic production.[97] *** imported *** short tons of aluminum foil from China in 2014 (the equivalent of *** percent of its domestic production) and *** short tons in 2015 (the equivalent of *** percent of its domestic production.[98] *** indicated that its reason for these imports was that ***.[99]

The ***. There is no indication that its limited quantity of imports of the subject merchandise shielded it from subject imports to any significant degree.[100] Also, no party has argued that *** be excluded from the definition of the domestic industry. Accordingly, we find that appropriate circumstances do not exist to exclude *** from the domestic industry.

***. *** was the *** domestic producer in 2014 and 2015, ***.[101] The record indicates that ***.[102] *** imported *** short tons of aluminum foil from China in 2014 (the equivalent of *** percent of its domestic production), *** short tons in 2015 (the equivalent of *** percent of its domestic production), and *** short tons in 2016 ***.[103] *** indicated that the reason for its imports was that ***.[104] It *** the investigations.[105]

We recognized that while *** was a domestic producer for the first two years, it ceased domestic production and shifted to importing relatively small volumes of subject merchandise. It does not appear, however, to have benefitted from its imports of subject merchandise in ***.[106] On balance, and in the absence of any argument to the contrary, we find that appropriate circumstances do not exist to exclude *** from the domestic industry.

***. *** was the *** domestic producer over the period of investigation, accounting for *** percent of domestic production.[107] *** imported *** short tons of aluminum foil from China in 2014 (the equivalent of *** percent of its domestic production), *** short tons in 2015 (the equivalent of *** percent of its domestic production), and *** short tons in 2016 (the

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[96] CR/PR at Tables III-1, VI-5. *** operating income to net sales ratio for the merchant market was *** throughout the period of investigation. CR at Table VI-5.

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

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

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

[100] CR/PR at Table VI-5. *** operating income to net sales ratio for the merchant market was *** throughout the period of investigation. *Id.*

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

[102] CR at III-7 n.6, PR at III-4 n.6.

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

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

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

[106] CR/PR at Table VI-5. *** ratio of operating income to net sales was *** the industry average for those years. *Id.*

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

equivalent of *** percent of its domestic production.[108] *** indicated that its reason for these imports was ***.[109] *** supports the petitions.[110]

The ***. There is no indication that its imports of the subject merchandise shielded it from subject imports to any significant degree.[111] We find that appropriate circumstances do not exist to exclude *** from the domestic industry.

In light of our definition of the domestic like product, we define a single domestic industry, consisting of all domestic producers of in-scope aluminum foil.

IV. Material Injury by Reason of Subject Imports

Based on the record in the final phase of these investigations, we find that an industry in the United States is materially injured by reason of imports of aluminum foil from China that Commerce has found to be sold in the United States at less than fair value and to be subsidized by the government of China.

A. Legal Standards

In the final phase of antidumping and countervailing duty investigations, the Commission determines whether an industry in the United States is materially injured or threatened with material injury by reason of the imports under investigation.[112] In making this determination, the Commission must consider the volume of subject imports, their effect on prices for the domestic like product, and their impact on domestic producers of the domestic like product, but only in the context of U.S. production operations.[113] The statute defines "material injury" as "harm which is not inconsequential, immaterial, or unimportant."[114] In assessing whether the domestic industry is materially injured by reason of subject imports, we consider all relevant economic factors that bear on the state of the industry in the United States.[115] No single factor is dispositive, and all relevant factors are considered "within the

[108] CR/PR at Table III-11. Its imports of aluminum foil from China were *** short tons in interim 2016 (the equivalent of *** percent of its domestic production) and *** short tons in interim 2017 (the equivalent of *** percent of its domestic production). *Id.*

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

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

[111] CR/PR at Tables III-1, ***. *** operating income to net sales ratio for the total market was ***.

[112] 19 U.S.C. §§ 1671d(b), 1673d(b). The Trade Preferences Extension Act of 2015, Pub. L. 114-27, amended the provisions of the Tariff Act pertaining to Commission determinations of material injury and threat of material injury by reason of subject imports in certain respects. We have applied these amendments here.

[113] 19 U.S.C. § 1677(7)(B). The Commission "may consider such other economic factors as are relevant to the determination" but shall "identify each {such} factor ... and explain in full its relevance to the determination." 19 U.S.C. § 1677(7)(B).

[114] 19 U.S.C. § 1677(7)(A).

[115] 19 U.S.C. § 1677(7)(C)(iii).

context of the business cycle and conditions of competition that are distinctive to the affected industry."[116]

Although the statute requires the Commission to determine whether the domestic industry is "materially injured or threatened with material injury by reason of" unfairly traded imports,[117] it does not define the phrase "by reason of," indicating that this aspect of the injury analysis is left to the Commission's reasonable exercise of its discretion.[118] In identifying a causal link, if any, between subject imports and material injury to the domestic industry, the Commission examines the facts of record that relate to the significance of the volume and price effects of the subject imports and any impact of those imports on the condition of the domestic industry. This evaluation under the "by reason of" standard must ensure that subject imports are more than a minimal or tangential cause of injury and that there is a sufficient causal, not merely a temporal, nexus between subject imports and material injury.[119]

In many investigations, there are other economic factors at work, some or all of which may also be having adverse effects on the domestic industry. Such economic factors might include nonsubject imports; changes in technology, demand, or consumer tastes; competition among domestic producers; or management decisions by domestic producers. The legislative history explains that the Commission must examine factors other than subject imports to ensure that it is not attributing injury from other factors to the subject imports, thereby inflating an otherwise tangential cause of injury into one that satisfies the statutory material injury threshold.[120] In performing its examination, however, the Commission need not isolate

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[116] 19 U.S.C. § 1677(7)(C)(iii).

[117] 19 U.S.C. §§ 1671d(a), 1673d(a).

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

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

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

the injury caused by other factors from injury caused by unfairly traded imports.[121] Nor does the "by reason of" standard require that unfairly traded imports be the "principal" cause of injury or contemplate that injury from unfairly traded imports be weighed against other factors, such as nonsubject imports, which may be contributing to overall injury to an industry.[122] It is clear that the existence of injury caused by other factors does not compel a negative determination.[123]

Assessment of whether material injury to the domestic industry is "by reason of" subject imports "does not require the Commission to address the causation issue in any particular way" as long as "the injury to the domestic industry can reasonably be attributed to the subject imports" and the Commission "ensure{s} that it is not attributing injury from other sources to the subject imports."[124] Indeed, the Federal Circuit has examined and affirmed various Commission methodologies and has disavowed "rigid adherence to a specific formula."[125]

(…Continued)
developments in technology and the export performance and productivity of the domestic industry"); *accord Mittal Steel*, 542 F.3d at 877.

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

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

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

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

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

The Federal Circuit's decisions in *Gerald Metals, Bratsk*, and *Mittal Steel* all involved cases where the relevant "other factor" was the presence in the market of significant volumes of price-competitive nonsubject imports. The Commission interpreted the Federal Circuit's guidance in *Bratsk* as requiring it to apply a particular additional methodology following its finding of material injury in cases involving commodity products and a significant market presence of price-competitive nonsubject imports.[126] The additional "replacement/benefit" test looked at whether nonsubject imports might have replaced subject imports without any benefit to the U.S. industry. The Commission applied that specific additional test in subsequent cases, including the *Carbon and Certain Alloy Steel Wire Rod from Trinidad and Tobago* determination that underlies the *Mittal Steel* litigation.

Mittal Steel clarifies that the Commission's interpretation of *Bratsk* was too rigid and makes clear that the Federal Circuit does not require the Commission to apply an additional test nor any one specific methodology; instead, the court requires the Commission to have "evidence in the record" to "show that the harm occurred 'by reason of' the LTFV imports," and requires that the Commission not attribute injury from nonsubject imports or other factors to subject imports.[127] Accordingly, we do not consider ourselves required to apply the replacement/benefit test that was included in Commission opinions subsequent to *Bratsk*.

The progression of *Gerald Metals, Bratsk*, and *Mittal Steel* clarifies that, in cases involving commodity products where price-competitive nonsubject imports are a significant factor in the U.S. market, the Court will require the Commission to give full consideration, with adequate explanation, to non-attribution issues when it performs its causation analysis.[128]

The question of whether the material injury threshold for subject imports is satisfied notwithstanding any injury from other factors is factual, subject to review under the substantial evidence standard.[129] Congress has delegated this factual finding to the Commission because of the agency's institutional expertise in resolving injury issues.[130]

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

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

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

[129] We provide in our discussions below a full analysis of other factors alleged to have caused any material injury experienced by the domestic industry.

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

B. Conditions of Competition and the Business Cycle

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

1. Captive Production

In considering the applicability of the statutory captive production provision,[131] we determine that the threshold criterion has been met. The captive production provision can be applied only if, as a threshold matter, significant production of the domestic like product is internally transferred and significant production is sold in the merchant market. In these investigations, internal consumption accounted for between *** percent and *** percent of domestic producers' U.S. shipments of aluminum foil over the period of investigation, and commercial shipments accounted for between *** percent and *** percent of domestic producers' U.S. shipments in this period.[132] In our view, both shares of the market constitute significant portions of the market.

We also determine that the first statutory criterion has been met. This criterion focuses on whether any of the domestic like product that is transferred internally for further processing is in fact sold on the merchant market.[133] ***, which accounted for most of the domestic industry's internal consumption, reported that ***.[134] For this reason, we conclude that very little, if any, aluminum foil that was to be ***. Thus, this criterion is satisfied.

In applying the second statutory criterion, we generally consider whether the domestic like product is the predominant material input into a downstream product by referring to its

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

> (iv) CAPTIVE PRODUCTION – If domestic producers internally transfer significant production of the domestic like product for the production of a downstream article and sell significant production of the domestic like product in the merchant market, and the Commission finds that-
>
> (I) the domestic like product produced that is internally transferred for processing into that downstream article does not enter the merchant market for the domestic like product, and
>
> (II) the domestic like product is the predominant material input in the production of that downstream article.

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

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

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

[134] CR at III-23, PR at III-9.

share of the raw material cost of the downstream product.[135] Aluminum foil reportedly comprises a significant majority of (between *** percent and ***) percent of the finished cost of household aluminum foil products.[136] Therefore, we find that the second criterion is met.

Accordingly, we focus primarily on the merchant market in analyzing the market share and financial performance of the domestic industry.

2. Demand Considerations

U.S. demand for aluminum foil depends on the demand for U.S.-produced downstream products and U.S. demand for aluminum foil is driven by overall economic growth.[137] The largest end-use markets for aluminum foil include household foil, semi-rigid food containers, durable goods (*e.g.*, air conditioners), other types of containers and packing (*e.g.*, flexible packaging, caps and closures, composite cans), and passenger cars.[138] The record indicates that aluminum foils of different gauge thicknesses have generally different, albeit overlapping, end uses.[139]

Most firms reported an increase in U.S. demand for aluminum foil since January 1, 2014.[140] Apparent U.S. consumption of aluminum foil fluctuated from year to year and increased by *** percent from 2014 to 2016; it was *** percent higher in interim 2017 than in interim 2016.[141] Based on shipment data, it appears that apparent U.S. consumption increased for all gauges of aluminum foil, except for extra heavy, from 2014 to 2016.[142]

3. Supply Considerations

Domestic shipments, subject imports, and nonsubject sources all supplied the U.S. market over the period of investigation. The domestic industry was the largest source of supply to the merchant market over the period of investigation. Its share of the merchant market, by

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[135] *See generally*, *e.g.*, *Polyethylene Terephthalate Film, Sheet and Strip from Brazil, China, Thailand, and the United Arab Emirates*, Inv. Nos. 731-TA-1131-1134 (Final), USITC Pub. 4040 at 17 n.103 (October 2008); *Polyethylene Terephthalate Film, Sheet, and Strip from India and Taiwan*, Inv. Nos. 701-TA-415 and 731-TA-933-934 (Final), USITC Pub. 3518 at 11 & n.51 (June 2002). The Commission has construed "predominant" material input to mean the main or strongest element, and not necessarily a majority, of the inputs by value. *See Polyvinyl Alcohol from Germany and Japan*, Inv. Nos. 731-TA-1015-16 (Final), USITC Pub. 3604 at 15 n.69 (June 2003).

[136] CR at III-24, PR at III-9.

[137] CR at II-13-14, PR at II-7-8.

[138] CR at II-1, PR at II-1.

[139] CR at I-16 nn.40-45, PR at I-12 nn.40-45. Ultra-thin and thin gauge aluminum foil generally correspond to aluminum foil used in flexible packaging. *Id.* at nn.40-41. Standard gauge aluminum foil generally corresponds to foil used for the production of household foil products. *Id.* at n.42. Heavy and extra-heavy gauge aluminum foils are also used for household foil products and extra-heavy gauge aluminum foil is used in some packaging applications as well as fin stock applications. *Id.* at nn.43-45.

[140] CR at II-15, PR at II-9.

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

[142] CR/PR at Table G-2.

quantity decreased from *** percent in 2014 to *** percent in 2015 and then to *** percent in 2016.[143] Its share of the merchant market was *** percent in interim 2016 and *** percent in interim 2017.[144] Domestic producers' combined annual capacity decreased from 2014 to 2016; it was the same in interim 2016 and interim 2017.[145] Domestic producers' combined annual capacity was higher than apparent U.S. consumption in the merchant market from 2014 to 2016.[146]

Two domestic producers reported closing or idling aluminum foil production during the period of investigation. ***.[147] It stated that ***.[148] ***.[149]

The record indicates that the domestic industry experienced supply constraints during the period of investigation, although the parties disagree as to the extent and the basis for these supply constraints. Two of five responding producers reported instances where they were unable to supply aluminum foil to purchasers since 2014.[150] Five of twenty-two responding importers reported that there were supply constraints in the U.S. market for aluminum foil.[151] Thirty-six of fifty purchasers indicated that they have experienced supply constraints from U.S. producers since 2014,[152] with constraints most frequently reported by purchasers of thin and ultra-thin gauge aluminum foil.

Subject imports were the second-largest source of supply to the merchant market over the period of investigation. Subject imports' share of the merchant market, by quantity, increased from *** percent in 2014 to *** percent in 2015 and then to *** percent in 2016. Their share of the merchant market was higher in interim 2017, at *** percent, than in interim 2016, at *** percent.[153]

Nonsubject imports were the smallest source of supply over the period of investigation. Their share of the merchant market by quantity decreased from *** percent in 2014 to *** percent in 2015 and then to *** percent in 2016.[154] Their share of the merchant market was

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[143] CR/PR at Table IV-8. The domestic industry's share of the total market decreased from *** percent in 2014 to *** percent in 2015 and then to *** percent in 2016. CR at Table IV-9.

[144] CR/PR at Table IV-8. The domestic industry's share of the total market was *** percent in interim 2016 and *** percent in interim 2017. CR/PR at Table IV-9.

[145] CR/PR at Table III-5. We observe that the decline in the domestic industry's capacity is largely accounted for by producer ***.

[146] *See* CR/PR at Tables III-5, IV-8.

[147] CR at III-6, PR at III-4; CR/PR at Tables III-3, III-4.

[148] CR at III-6, PR at III-4.

[149] CR at III-5-6, PR at III-4. ***. CR/PR at Table III-4.

[150] CR at II-10, PR at II-6. *** reported that it exited the ultra-thin and thin gauges due to low-priced Chinese imports. CR at II-10, PR at II-6; CR/PR at Table III-4.

[151] CR at II-10-11, PR at II-6.

[152] CR at II-10-12, PR at II-6-7.

[153] CR/PR at Table IV-8. Subject imports' share of the total market increased from *** percent in 2014 to *** percent in 2015 and then to *** percent in 2016. Their share of the total market was lower in interim 2016, at *** percent, than in interim 2017, at *** percent. CR/PR at Table IV-9.

[154] CR/PR at Table IV-8. Nonsubject imports' share of the total market, by quantity, decreased from *** percent in 2014 to *** percent in 2015 and then to *** percent in 2016. CR/PR at Table IV-9.

lower in interim 2016, at *** percent, than in interim 2017, at *** percent.[155] In 2016, Germany, Russia, and Armenia were the largest nonsubject sources of supply to the U.S. market, in order of size.[156]

4. Substitutability and Other Conditions[157]

Based on the record in the final phase of these investigations, we find that there is a moderate degree of substitutability between subject imports and the domestic like product that varies based on the gauge of the product. Purchasers most frequently cited price, quality, and availability as being among the three most important factors in purchasing decisions.[158] Moreover, a large majority of responding U.S. purchasers reported that price was a very important factor in purchasing decisions.[159] U.S. purchaser responses regarding domestic producers' lost sales allegations indicate that most purchasers purchased subject imports rather than the domestic like product when subject imports were the lower-priced product.[160] Accordingly, we find that price is an important factor in purchasing decisions.[161]

Market participants expressed mixed views as to the degree of interchangeability between subject imports and the domestic like product.[162] The majority of U.S. producers indicated that subject and domestic aluminum foil are always interchangeable, while a majority of U.S. importers and U.S. purchasers reported that they were always, frequently, or sometimes interchangeable.[163]

The record indicates that subject imports were present in substantial quantities in every gauge category.[164] While there is some evidence on the record that suggests certain alloys and widths may not be available from domestic producers, the record does not suggest that these factors limited the interchangeability between subject imports and the domestic like product to a significant degree.[165]

The parties disagree as to whether subject imports and the domestic like product are comparable in terms of quality. When asked to rate subject imports and the domestic like

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[155] CR/PR at Table IV-8. Their share of the total market, by quantity, was lower in interim 2016, at *** percent, than in interim 2017, at *** percent. CR/PR at Table IV-9.

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

[157] Commerce submitted the results of its Section 232 investigation on aluminum imports to the President on January 11, 2018. We recognize that on March 8, 2018, the President issued a proclamation imposing a 10 percent tariff on aluminum, including the aluminum foil subject to these investigations. However, this tariff was not in effect during the period of investigation.

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

[159] CR/PR at Table II-7.

[160] CR at V-32, PR at V-14; CR/PR at Table V-14. In comparing U.S. product to subject imports, the majority of purchasers (31 out of 45) reported U.S. prices were higher than prices of imports from China. CR/PR at Table II-9.

[161] CR at II-19, PR at II-11; CR/PR at Table II-6.

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

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

[164] CR/PR at Table G-2.

[165] CR at II-10-11, PR at II-6-7.

product in terms of their quality meeting industry standards, U.S. purchasers were almost evenly split on whether the domestically produced product is superior/comparable or inferior to subject imports.[166] The majority of responding purchasers (42 of 45) reported that domestically produced product always, usually, or sometimes met minimum quality specifications, whereas all responding purchasers (42) reported subject imports did.[167]

The primary raw material used to manufacture aluminum foil is unwrought aluminum.[168] Raw materials prices for domestic producers generally consist of three components: an indexed price of aluminum such as the London Metal Exchange ("LME") price, the Midwest premium,[169] and a fabrication fee.[170] The LME price of aluminum fluctuated over the period of investigation, decreasing from January 2014 to November 2015 and then increasing from November 2015 to September 2017, ending the period slightly higher than in January 2014.[171] The Midwest premium also fluctuated throughout the period of investigation, generally increasing in 2014, decreasing through mid-2016, and generally fluctuating but increasing through the remainder of the period of investigation.[172] The LME plus Midwest premium price of aluminum also fluctuated since 2014, increasing in 2014, decreasing in 2015, and then increasing through the end of the period of investigation.[173] Aluminum scrap is also a raw material input in the production of aluminum foil,[174] overall the price of aluminum scrap declined over the period of investigation.[175] U.S. producers and U.S. importers reported mixed experiences with raw material costs since January 1, 2014.[176] Raw materials costs, as a share of

[166] CR/PR at Table II-9.

[167] CR/PR at Table II-I2.

[168] CR/PR at V-1. The term "unwrought" refers to both primary and secondary unwrought aluminum. *See* CR/PR at I-20. Although unwrought aluminum is the primary raw material used in the production of aluminum foil, during the direct chill casting process, aluminum foil is produced by further rolling certain thicker gauge flat-rolled wrought products such as plate and sheet. *See* CR/PR at I-23-25.

[169] The Midwest premium is a daily premium to the LME price applicable to U.S. wrought aluminum producers; it is based on physical spot deals, bids, and offers reported through a daily survey of spot buyers and sellers, and uses a representative sample of producers, traders, and different types of end users. It reflects both deliveries to a typical freight consumer in a broad U.S. Midwest region via truck or rail as well as the transaction costs. CR at V-2 n.2, PR at V-1, n.2.

[170] CR/PR at V-1, PR at V-1.

[171] CR at V-1-2, PR at V-1. The LME price of aluminum decreased by *** percent from January 2014 to November 2015 and increased by *** percent from November 2015 to December 2017. Historically, the Midwest premium has been less than 10 cents per pound, but in 2014-15 the premium increased to a high of more than 24 cents. *Id.*

[172] CR at V-2, PR at V-1. The price of the Midwest premium decreased *** percent from January 2014 to October 2015 and then increased by *** percent from October 2015 to November 2017. *Id.*

[173] CR at V-2, PR at V-1. The LME plus Midwest premium price of aluminum decreased by *** percent from January 2014 to November 2015 and increased by *** percent from November 2015 to December 2017. *Id.*

[174] Some unwrought aluminum producers use a combination of primary and secondary (scrap) sources to produce unwrought aluminum. *See* CR/PR at I-20.

[175] CR at V-2, PR at V-1; CR/PR at Figure V-2.

[176] CR/PR at V-1.

U.S. producers' total cost of goods sold ("COGS") in the merchant market, decreased from 2014 to 2016 but were higher in interim 2017 than in interim 2016.[177]

Aluminum foil is sold primarily to end users.[178] Subject imports and the domestic like product overlapped with respect to their channels of distribution, particularly in the consumer packaging and industrial end use applications.[179] U.S. producers' shipments were sold primarily on the basis of annual and long-term contracts, with a small percentage being spot sales.[180] Shipments of subject imports occurred primarily on the spot market, followed by annual contracts.[181]

The record indicates that the vast majority of responding purchasers (48 of 50) indicated that they required their suppliers to be certified or qualified to sell aluminum foil to their firm.[182] Purchasers reported that the time required to certify a new supplier was highly variable, ranging from 60 days to 3 years, with most reporting times averaging at least 6 months.[183] The majority of purchasers reported that domestic producers and producers of subject merchandise in China had not failed in their attempts to qualify aluminum foil, or lost approved status since 2014.[184]

C. Volume of Subject Imports

Section 771(7)(C)(i) of the Tariff Act provides that the "Commission shall consider whether the volume of imports of the merchandise, or any increase in that volume, either in absolute terms or relative to production or consumption in the United States, is significant."[185]

The volume of subject imports increased from 109,266 short tons in 2014, to 130,855 short tons in 2015, and 151,598 short tons in 2016; they increased from 112,099 short tons in interim 2016 to 121,745 short tons in interim 2017.[186] Subject imports' share of the merchant

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[177] CR/PR at V-1. Raw materials prices, as a share of U.S. producers' COGS in the merchant market, decreased from *** percent in 2014 to *** percent in 2015 and *** percent in 2016; they were lower in interim 2016, at *** percent, than in interim 2017, at *** percent. *Id.*

Raw materials prices, as a share of U.S. producers' COGS for the total market, decreased from *** percent in 2014 to *** percent in 2015 and *** percent in 2016; they were *** percent in interim 2016 and *** percent in interim 2017. *Id.*

[178] CR at II-4, PR at II-2.

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

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

[181] CR/PR at Table V-2. A majority of purchasers (36 of 44) indicated that the domestic like product was superior or comparable to subject imports with respect to delivery time. CR/PR at Table II-9.

[182] CR at II-21, PR at II-13.

[183] CR at II-21, PR at II-13.

[184] CR at II-22, PR at II-13.

[185] 19 U.S.C. § 1677(7)(C)(i).

[186] CR/PR at Table IV-8. The volume of subject imports increased in every product thickness category over the period of investigation. CR/PR at Table G-2.

market increased from *** percent in 2014 to *** percent in 2015 and *** percent in 2016; it was higher in interim 2017, at *** percent, than in interim 2016, at *** percent.[187]

Respondents have argued that competition between the domestic like product and subject imports is attenuated and that subject imports gained market share in parts of the aluminum foil market in which the domestic industry had little or no presence.[188] We note, however, that the total volume of subject imports and the share of U.S. shipments accounted for by subject imports increased in all product thickness categories for which data were collected, and that the domestic industry participated in each of these segments.[189]

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

D. Price Effects of the Subject Imports

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

> (I) there has been significant price underselling by the imported merchandise as compared with the price of domestic like products of the United States, and
>
> (II) the effect of imports of such merchandise otherwise depresses prices to a significant degree or prevents price increases, which otherwise would have occurred, to a significant degree.[190]

As observed above, there is a moderate degree of substitutability between subject imports and the domestic like product and price is an important factor in purchasing decisions.

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[187] CR at Table IV-8. Subject imports' share of apparent U.S. consumption in the total market increased from *** percent in 2014 to *** percent in 2015 and then to *** percent in 2016, it was *** percent in interim 2016 and *** percent in interim 2017. CR/PR at Table IV-9.

[188] Chinese Respondents' Prehearing Br. at 35-36; FPA Prehearing Br. at 47-48; ProAmpac Prehearing Br. at 5-7; Trinidad Prehearing Br. at 18-19.

[189] CR/PR at G-2. For ultra-thin gauge aluminum foil, subject imports increased from *** short tons in 2014 to *** short tons in 2016, while U.S. producers' shipments decreased from *** short tons in 2014 to *** short tons in 2016. For thin gauge aluminum foil, subject imports increased from *** short tons in 2014 to *** short tons in 2016, while U.S. producers' shipments decreased from *** short tons in 2014 to *** short tons in 2016. For standard gauge aluminum foil, subject imports increased from *** short tons in 2014 to *** short tons in 2016; U.S. producers' shipments were *** short tons in 2014 and *** short tons in 2015. For heavy gauge aluminum foil, subject imports increased from *** short tons in 2014 to *** short tons in 2016; U.S. producers' shipments were *** short tons in 2014 and *** short tons in 2016. For extra-heavy gauge aluminum foil, subject imports increased from *** short tons in 2014 to *** short tons in 2016, while U.S. producers' shipments decreased from *** short tons in 2014 to *** short tons in 2016. *Id.*

[190] 19 U.S.C. § 1677(7)(C)(ii).

The Commission collected quarterly pricing data on eight pricing products.[191] Five U.S. producers and 12 importers provided usable pricing data for sales of the requested products, although not all firms reported pricing for all products for all quarters.[192] Pricing data reported by these firms accounted for approximately 12 percent of U.S. producers' shipments of aluminum foil and 22 percent of U.S. imports from China in 2016.[193]

The pricing data show that subject imports undersold the domestic like product in 40 of 77 instances, or 52 percent of comparisons, at margins ranging from 1.2 percent to 23.0 percent.[194] The volume of subject imports involved in quarters with underselling (233 million pounds) is substantially larger than the volume involved in the overselling comparisons (18 million pounds).[195]

A substantial share of subject imports entered the United States as direct imports by purchasers.[196] The Commission received import purchase cost data for six of the eight products from 15 importers that accounted for approximately 35 percent of imports from China in 2016, which was substantially greater than the 22 percent reported by importers for prices to unrelated customers.[197] The record shows that the direct import purchase cost of aluminum foil from China was lower than the prices for the domestically produced product in 65 of 84 instances, or 77.4 percent of instances.[198] The differences between direct import purchase costs and prices for the domestic like product were particularly noteworthy for pricing Products 1, 2, and 8,[199] in which subject imports were below the domestic like product in all instances, and for pricing Product 3 in which subject imports were below the domestic like product in all but one instance.[200] Moreover, on a volume basis, there were *** pounds of direct imports in quarters in which the purchase cost was lower than the price for the domestic like product, and

[191] CR at V-7-8, PR at V-4-5. The product specifications span the ultra-thin to extra heavy thickness specifications as follows: Product 1 – ultra-thin; Product 2 – thin and standard; Product 3 – standard; Products 4-7 – extra heavy; Product 8 – extra heavy (certain fin stock). CR at V-7 n.7, PR at V-4 n.7.

[192] CR at V-8, PR at V-5.

[193] CR at V-8, PR at V-5.

[194] CR/PR at Table V-12. A majority of the underselling was reported for products 1 (ultra-thin) and 2 (thin/standard). Subject imports oversold the domestic like product in 37 of 77 instances, at margins ranging from 0.8 to 51.6 percent. *Id.*

[195] CR/PR at Table V-12.

[196] CR at V-29, PR at V-13.

[197] CR at V-29, PR at V-13.

[198] Derived from CR/PR at Tables V-3-10.

[199] We also observe that the AUVs for imports of certain fin stock from China were below those for domestically produced certain fin stock throughout the period of investigation. CR/PR at Table C-3a. Although we generally view comparisons of AUVs from different sources with caution because differences in AUVs may reflect differences in product mix, we note that the AUVs for certain fin stock were based on a narrow product definition.

[200] Derived from CR/PR at Tables V-3-10.

only *** pounds of direct imports in quarters in which the purchase cost was higher than the prices for the domestic like product.[201]

Because the purchase cost of direct imports used for internal consumption may not accurately reflect the total cost of importing, we also requested that direct importers provide additional estimated costs above landed duty paid value associated with their importing activities. Seven importers reported logistical or supply chain costs ranging from 3.0 to 17.4 percent.[202] The average difference between direct import purchase costs and domestic prices for the 65 quarters in which direct import purchase costs were lower than domestic prices was 15.3 percent.[203] In addition, we observe that many importers reported saving by having directly imported.[204]

Considering all quarterly pricing data available, including traditional price comparison data and direct import purchase cost data, we find that subject import prices were generally lower than the prices for the domestic like product.[205] [206]

Lost sales data further support a finding that subject imports were often priced lower than the domestic like product and that subject imports gained sales as a result of lower prices. The record indicates a substantial number of purchasers purchased subject imports instead of

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[201] Derived from CR/PR at Tables V-3-10.

[202] CR at V-29, PR at V-13.

[203] Derived from CR/PR at Tables V-3-10. The average difference was only 8.2 percent for the 19 quarters in which direct import purchase costs were higher than domestic prices. *Id.*

[204] Of the 8 importers who reported saving by having directly imported, five reported saving between 10 and 15 percent, with the remaining importers estimating savings of three percent, three to five percent, and 30 percent. CR at V-29, PR at V-13.

[205] Given the significant volume of direct imports in this market, we find it appropriate to use this data set in our analysis; failure to do so would ignore a large part of the market. We note that, consistent with our practice in other investigations, we have collected data that enables us to assess the direct import purchase cost data in light of purchasers' costs for direct importing. Based on this record, the purchase cost data for direct imports demonstrates that subject imports were generally available at a lower cost to purchasers than the prices of the domestic like product, supporting a finding of significant underselling.

[206] The evidence does not support Respondents' claim that underselling by subject imports is accounted for by the Midwest premium. Chinese Respondents' Prehearing Br. at 58; FPA Prehearing Br. at 66; FPA Posthearing Br. at 4; ProAmpac Prehearing Br. at 20; Trinidad Prehearing Br. at 17. We observe that the price of the Midwest premium was constant from the second quarter of 2015 through the end of the period of investigation, while the margins by which subject imports undersold the domestic like product increased. CR/PR at Figure V-1, Tables V-3-10.

We also do not agree with Respondents' assertion that the manufacturing cost advantage of producers of subject merchandise accounts for subject imports underselling the domestic like product in ***. FPA Posthearing Br. at 7-9. We observe that the statute "requires the Commission to assess whether imports are being sold by importers in the U.S. market at lower prices than the domestic like product, not to compare the cost of production of foreign producers with the cost of production in the United States." *See Certain Polyester Staple Fiber from China*, Inv. No. 731-TA-1104 (Final), USITC Pub. 3922 (June 2007) at 9, n.119. *See also, Steel Wire Garment Hangers from China*, Inv. No. 731-TA-1123 (Final), USITC Pub. 4034 (Sept. 2008) at 19-20, n.133.

the domestic product.[207] Of 50 responding purchasers, 40 reported that they had purchased subject imports rather than the domestically produced product since 2014; 34 of these purchasers reported that subject imports were priced lower than the domestically produced product, 9 of which reported that price was a primary reason for their decision to purchase subject imports rather than the domestic like product.[208] Thus, a large majority of purchasers who purchased subject imports rather than the domestically produced product reported that subject imports were lower-priced.

In light of the fact that subject import prices were generally lower than the prices for the domestic like product and the substantial number of lost sales, we find that the underselling by subject imports was significant over the period of investigation.

We have also considered price trends during the period of investigation. Domestic prices increased for six products, with increases ranging from 0.1 percent to 6.8 percent, and decreased for two products, with decreases ranging from 0.4 percent to 17.1 percent.[209] Accordingly, we do not find that subject imports depressed U.S. producers' prices to a significant degree during the period of investigation.

We also do not find that subject imports prevented price increases for the domestic like product that otherwise would have occurred to a significant degree. As noted above, demand for aluminum foil increased only modestly over the period of investigation, while raw material costs fluctuated, with firms reporting mixed experiences with raw material costs since January 1, 2014.[210] In addition, domestic producers' merchant market COGS to net sales ratio fluctuated within a narrow band over the period of investigation.[211] In light of these facts, we do not find that subject imports suppressed domestic prices to a significant degree.

Given the significant volumes of low-priced subject imports, we find that significant underselling by subject imports resulted in the domestic industry losing sales it would otherwise have achieved, and such underselling resulted in the domestic industry losing market share to subject imports. We therefore conclude that subject imports had significant price effects.

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[207] CR at V-32, PR at V-14; CR/PR at Table V-14.

[208] CR at V-32, PR at V-14; CR/PR at Table V-14.

[209] CR at V-25, PR at V-10; CR/PR at Tables V-3-10. Domestic producers' prices for pricing products 1, 2, 3, 5, 7, and 8 increased over the period of investigation. *Id.*

With respect to lost revenues, the record indicates that four of fifty responding purchasers reported that U.S. producers had reduced prices in order to compete with lower-priced imports from China, with estimated price reductions ranging from 1.5 percent to 13.4 percent. CR at V-36, PR at V-15; CR/PR at Table V-15.

[210] CR at II-2, 15, V-1, PR at II-1, 9, V-1.

[211] CR/PR at Table VI-5. Domestic producers' total market COGS to net sales ratio also fluctuated within a narrow band. CR/PR at Table VI-3.

E. Impact of the Subject Imports[212]

Section 771(7)(C)(iii) of the Tariff Act provides that examining the impact of subject imports, the Commission "shall evaluate all relevant economic factors which have a bearing on the state of the industry."[213] These factors include output, sales, inventories, capacity utilization, market share, employment, wages, productivity, gross profits, net profits, operating profits, cash flow, return on investment, return on capital, ability to raise capital, ability to service debts, research and development, and factors affecting domestic prices. No single factor is dispositive and all relevant factors are considered "within the context of the business cycle and conditions of competition that are distinctive to the affected industry."[214]

All of the domestic industry's trade indicators in the merchant market declined from 2014 to 2016, while most indicators were higher in interim 2017 as compared to interim 2016. Production decreased from *** short tons in 2014 to *** short tons in 2015 and then increased to *** short tons in 2016; it was *** short tons in interim 2016 and *** short tons in interim 2017.[215] Capacity decreased from *** short tons in 2014 to *** short tons in 2015 and then to *** short tons in 2016; it was the same in interim 2016 as in interim 2017, at *** short tons.[216] Capacity utilization decreased from *** percent in 2014 to *** percent in 2015 and then increased to *** percent in 2016, it was *** percent in interim 2016 and *** percent in interim 2017.[217]

U.S. shipments in the merchant market declined from *** short tons in 2014 to *** short tons in 2015 and then increased to *** short tons in 2016 for an overall decrease of *** percent; they were *** short tons in interim 2016 and *** short tons in interim 2017.[218] The domestic industry's share of apparent U.S. consumption in the merchant market decreased

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[212] The statute instructs the Commission to consider the "magnitude of the dumping margin" in an antidumping proceeding as part of its consideration of the impact of imports. 19 U.S.C. § 1677(7)(C)(iii)(V). In its final determination of sales at less value Commerce found antidumping duty margins of 48.64 to 106.09 percent for imports from China. We take into account in our analysis the fact that Commerce has made final findings that all subject producers in China are selling subject imports in the United States at less than fair value. In addition to this consideration, our impact analysis has considered other factors affecting domestic prices. Our analysis of the significant underselling of subject imports, described in both the price effects discussion and below, is particularly probative to an assessment of the impact of the subject imports.

[213] 19 U.S.C. § 1677(7)(C)(iii); *see also* SAA at 851 and 885 ("In material injury determinations, 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 also may demonstrate that an industry is facing difficulties from a variety of sources and is vulnerable to dumped or subsidized imports.").

[214] 19 U.S.C. § 1677(7)(C)(iii). This provision was amended by the Trade Preferences Extension Act of 2015, Pub. L. 114-27.

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

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

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

[218] CR/PR at Table C-2. U.S. shipments in the total market followed the same trend as in the merchant market. CR/PR at Table III-7.

from *** percent in 2014 to *** percent in 2015 and then to *** percent in 2016; it was lower in interim 2017, at *** percent, than in interim 2016, at *** percent.[219] Domestic producers' end-of-period ("EOP") inventories decreased from *** short tons in 2014 to *** short tons in 2015 and then increased to *** short tons in 2016; they were higher in interim 2017, at *** short tons, than in interim 2016, at *** short tons.[220]

Most of the domestic industry's employment indicators declined from 2014 to 2016, while all but productivity were higher in interim 2017 as compared to interim 2016. The number of production and related workers ("PRWs") declined over the period of investigation.[221] Total hours worked and wages paid both declined from 2014 to 2016.[222] Hours worked per PRW fluctuated from 2014 to 2016, ending at roughly the same level in 2016 as in 2014.[223] Unit labor costs also fluctuated but decreased from 2014 to 2016; they were higher in interim 2017 than in interim 2016.[224] Hourly wages and productivity both increased from 2014 to 2016.[225]

Most of domestic industry's financial performance indicators declined from 2014 to 2016 and were mixed between interim periods. Gross profit and operating income in the merchant market decreased from 2014 to 2016; they were higher in interim 2017 as compared to interim 2016.[226] Net income increased from 2014 to 2016, but was lower in interim 2017 as

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[219] CR/PR at Table IV-8. The domestic industry's share of apparent U.S. consumption in the total market decreased from *** percent in 2014 to *** percent in 2015 and then to *** percent in 2016; it was lower in interim 2017, at *** percent, than in interim 2016, at *** percent. CR/PR at Table IV-9.

[220] CR/PR at Table III-10.

[221] CR/PR at Table III-13. The number of PRWs decreased from *** in 2014 to *** in 2015, and then to *** in 2016; it was higher in interim 2017 than in interim 2016. *Id.*

[222] CR/PR at Table III-13. Total hours worked decreased from *** in 2014 to *** in 2015, and then to *** in 2016; they were higher in interim 2017, at *** hours, than in interim 2016, at *** hours. Wages paid decreased from *** in 2014 to $*** in 2015 and then to $*** in 2016; they were higher in interim 2017, at $***, than in interim 2016, at $***. *Id.*

[223] CR/PR at Table III-13. Hours worked per PRW decreased from *** in 2014 to *** in 2015 and then increased to *** in 2016; they were higher in interim 2017, at *** hours, than in interim 2016, at *** hours. *Id.*

[224] CR/PR at Table III-13. Unit labor costs increased from $*** per short ton in 2014 to $*** per short ton in 2015 and then decreased to $*** per short ton in 2016; they were higher in interim 2017, at $*** per short ton, than in interim 2016, at $*** per short ton. *Id.*

[225] CR/PR at Table III-13. Hourly wages increased from $*** in 2014 to $*** in 2015 and then to $*** in 2016; they were higher in interim 2017, at $***, than in interim 2016, at $***. Productivity per 1,000 hours increased from *** short tons in 2014 to *** short tons in 2015 and then to *** in 2016; it was lower in interim 2017, at *** short tons, than in interim 2016, at *** short tons. *Id.*

[226] CR/PR at Table VI-1. Gross profit in the merchant market decreased from $*** in 2014 to $*** in 2015 and then increased to $*** in 2016. Operating income in the merchant market decreased from $*** in 2014 to $*** in 2015 and then increased to $*** in 2016. Gross profit in the merchant market was higher in interim 2017, at $*** than in interim 2016, at $***, as was operating income, at $*** in interim 2017, as compared to $*** in interim 2016. CR/PR at Table VI-1.

Gross profit in the total market decreased from $*** in 2014 to $*** in 2015 and then increased to $*** in 2016; it was lower in interim 2017, at $***, than in interim 2016, at $***. Operating income

(Continued...)

compared to interim 2016.[227] The domestic industry's ratio of operating income to net sales in the merchant market fluctuated from 2014 to 2016, ending higher in 2016 than in 2014; it was lower in interim 2017 than in interim 2016.[228] Total COGS in the merchant market and selling, general, and administrative ("SG&A") expenses declined from 2014 to 2016; total COGS was higher in interim 2017 than in interim 2016, while SG&A expenses were the same for both interim periods.[229] Capital expenditures for the merchant market fluctuated from 2014 to 2016, ending higher in 2016 than in 2014; they were lower in interim 2017 than in interim 2016.[230]

We find that the significant and increased volumes of subject imports that significantly undersold the domestic like product led to declines in the domestic industry's market share in the merchant market over the period of investigation. Because of its loss of market share, the domestic industry's indicia of output and financial performance were worse than they would have been in the absence of subject imports.[231]

(…Continued)
in the total market decreased from $*** in 2014 to $*** in 2015 and then to $*** in 2016; it was lower in interim 2017, at $***, than in interim 2016, at $***. CR/PR at Table VI-3.

[227] CR/PR at Table VI-1. Net income in the merchant market decreased from $*** in 2014 to *** in 2015 and then increased to $*** in 2016. *Id.* Net income in the merchant market was lower in interim 2017, at $***, than in interim 2016, at $***. *Id.*

Net income in the total market decreased from $*** in 2014 to *** in 2015 and then increased to $*** in 2016. CR/PR at Table VI-3. Net income in the total market was lower in interim 2017, at $***, than in interim 2016, at $***. *Id.*

[228] CR/PR at Table VI-I. The ratio of operating income to net sales in the merchant market decreased from *** percent in 2014 to *** percent in 2015 and then increased to *** percent in 2016; it was lower in interim 2017, at *** percent, than in interim 2016, at *** percent. *Id.*

The ratio of operating income to net sales in the total market followed a similar trend. It decreased from *** percent in 2014 to *** percent in 2015 and then increased to *** percent in 2016; it was lower in interim 2017, at *** percent, than in interim 2016, at *** percent. CR/PR at Table VI-3.

[229] CR/PR at Table VI-1. The domestic industry's total COGS in the merchant market decreased from $*** in 2014 to $*** in 2015 and then to $*** in 2016; it was higher in interim 2017, at $***, than in interim 2016, at $***. Its SG&A expenses decreased from $*** in 2014 to $*** in 2015 and then to $*** in 2016; they were $*** in interim 2016 and $*** in interim 2017. *Id.*

Total COGS in the total market decreased from $*** in 2014 to $*** in 2015 and then to $*** in 2016; it was higher in interim 2017, at $***, than in interim 2016, at $***. SG&A expenses in the total market decreased from $*** in 2014 to $*** in 2015 and then to $*** in 2016; they were higher in interim 2017, at $***, than in interim 2016, at $***. CR/PR at Table VI-3.

[230] CR/PR at Table VI-8. Capital expenditures for the merchant market decreased from $*** in 2014 to $*** in 2015 and then increased to $*** in 2016; they were lower in interim 2017, at $***, than in interim 2016, at $***. *Id.*

Capital expenditures for the total market followed a similar trend. They decreased from $*** in 2014 to $*** in 2015 and then increased to $*** in 2016; they were lower in interim 2017, at $***, than in interim 2016, at $***. *Id.*

[231] As we determined above, we found that the statutory captive production provisions apply in these investigations and accordingly focus primarily on the merchant market in analyzing the market (Continued...)

Respondents argue that there is no consistent relationship between the trends for subject imports' volume and market share and those for the domestic industry's operating income and operating income margin in the merchant market.[232] They contend that the domestic industry's merchant market profitability peaked in 2016, when subject imports' volume and market share were at their highest point over the period of investigation.[233] We are not persuaded by this argument. As explained above, the domestic industry lost sales and market share to the lower-priced subject imports, including in 2016.[234] The fact that the industry's profitability improved that year does not negate the injury incurred as a result of those lost sales.[235]

We have also examined the role of nonsubject imports, to ensure that we have not attributed to the subject imports injury caused by other factors. Nonsubject imports' share of apparent U.S. consumption in the merchant market decreased from 2014 to 2016.[236] We recognize that nonsubject imports' share of apparent U.S. consumption in the merchant market was higher in interim 2017 than in interim 2016, but the modest difference in market share between interim periods cannot explain the magnitude of the domestic industry's loss of market share we have attributed to subject imports throughout the period of investigation, including between interim periods.[237]

Respondents make multiple arguments regarding the degree of competition, or lack thereof, between subject imports and the domestic like product within specific product

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(…Continued)
share and financial performance of the domestic industry. Respondents' claims that *** are not relevant to our analysis of the merchant market since the data for the merchant market are not affected by ***. Chinese Respondents' Prehearing Br. at 72-75; FPA Prehearing Br. at 79-80; ProAmpac Prehearing Br. at 32-33; Trinidad Prehearing Br. at 30-31. With respect to the data for the total market, we note that *** complied with the Commission's normal methodology in reporting its financial performance.

[232] Chinese Respondents' Prehearing Br. at 69-71; FPA Respondents' Prehearing Br. at 77-79; ProAmpac Prehearing Br. at 30-32; Trinidad Prehearing Br. at 29-30.

[233] Chinese Respondents' Prehearing Br. at 69-71; FPA Respondents' Prehearing Br. at 77-79; Trinidad Prehearing Br. at 29-30.

[234] CR at Tables IV-8, C-1-2.

[235] The statute directs that the Commission "may not determine that there is no material injury or threat of material injury to an industry in the United States merely because that industry is profitable or because the performance of that industry has recently improved." 19 U.S.C. § 1677(7)(J).

[236] CR/PR at Table IV-8. Nonsubject imports' share of apparent U.S. consumption in the merchant market decreased from *** percent in 2014 to *** percent in 2015 and then to *** percent in 2016. *Id.*

Nonsubject imports' share of apparent U.S. consumption in the total market also declined from 2014 to 2016. It decreased from *** percent in 2014 to *** percent in 2015 and then to *** percent in 2016.

[237] CR/PR at Table IV-8. Nonsubject imports' share of apparent U.S. consumption in the merchant market was *** percent in interim 2016 and *** percent in interim 2017. *Id.*

Nonsubject imports' share of apparent U.S. consumption in the total market was *** percent in interim 2016 and *** percent in interim 2017. CR/PR at Table IV-9.

categories. As explained above, however, we have found that the subject imports and the domestic products competed throughout the market. With respect to ultra-thin and thin gauge aluminum foil, Respondents argue that declines in the domestic industry's production of these products are attributable to quality and other capability issues, rather than price competition from subject imports.[238] The record, however, indicates that *** ceased production of ultra-thin and thin gauge aluminum foil during the period of investigation due to competition from low-priced subject imports.[239] In addition, there were other domestic producers with excess capacity to produce ultra-thin and thin-gauge aluminum foil.[240]

Respondents also argue that subject imports of standard gauge aluminum foil did not significantly impact the domestic industry as domestic producers' shipments of standard gauge aluminum foil *** and their capacity utilization ***.[241] They also contend that the increase in subject imports' market share within this gauge category came at the expense of nonsubject imports.[242] The record indicates that while demand for standard gauge aluminum foil increased over the period of investigation, the domestic industry lost standard gauge market share from 2014 to 2016, as subject imports' market share almost tripled from *** percent in 2014 to *** percent in 2016.[243] Subject imports continued to gain standard gauge market share between interim periods, at the expense of the domestic industry whose market was lower in interim 2017 (*** percent) than in interim 2016 (*** percent).[244] Domestic producers that shipped standard gauge aluminum foil commercially had ample excess capacity during the period of investigation, and could have shipped additional quantities of standard gauge aluminum foil in the absence of subject imports.[245]

We are also not persuaded by Respondents' argument that subject imports had a limited presence in extra-heavy gauge foil and that the decline in *** shipments of extra-heavy gauge aluminum foil is attributable to factors other than subject imports.[246] The evidence does

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[238] FPA Posthearing Br. at 11.

[239] CR/PR at Table III-4. ***. *Id.* ***. CR/PR at Table III-3.

[240] CR/PR at Tables II-5, G-1.

[241] Trinidad Posthearing Br. at 11-12.

[242] Trinidad Posthearing Br. at 12.

[243] CR/PR at Table G-2.

[244] CR/PR at Table G-2.

[245] CR/PR at Table III-5. *** all shipped standard gauge foil during the period of investigation. *** had excess capacity and declining capacity utilization over the period of investigation. CR/PR at Table III-5. Moreover, ***. CR at III-5-6, PR at III-4; CR/PR at Tables III-3-4.

Respondents disagree as to whether the closure of this facility was attributable to subject imports. Trinidad Posthearing Br. at 6-8. Regardless, the ability of the facility to be brought back into production indicates that there was domestic capacity to supply the standard gauge foil market.

Respondents also argue that JW Aluminum is not interested in supplying demand for household foil because ***. Trinidad Posthearing Br. at 4; Trinidad Prehearing Br. at Ex.5. The record indicates that JW Aluminum has shipped standard gauge foil and is capable of supplying household foil. *** Questionnaire Rsp. at II-8, II-9a. ***. CR/PR at Table III-11.

[246] Chinese Respondents' Prehearing Br. at 46-49; FPA Respondents' Prehearing Br. at 57-60; ProAmpac Prehearing Br. at 11-14; Trinidad Prehearing Br. at 22-23.

not support claims of a "limited presence;" subject imports share of the market for extra-heavy gauge aluminum foil increased from *** percent in 2014 to *** percent in 2015 and then to *** percent in 2016; it was higher in interim 2017, at *** percent, than in interim 2016, at *** percent.[247] These increases were at the expense of the domestic industry, whose shipments declined from 2014 to 2016 and whose market share of extra-heavy gauge aluminum foil declined throughout the period of investigation.[248]

V. Conclusion

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

[247] CR/PR at Table G-2. The volume of subject imports of extra-heavy gauge foil increased by *** percent from 2014 to 2016 and was *** percent higher in interim 2017 than in interim 2016. Subject import volume of extra-heavy gauge aluminum foil increased from *** short tons in 2014 to *** short tons in 2016; they were higher in interim 2017, at *** short tons, than in interim 2016, at *** short tons. *Id.*

[248] CR/PR at Table G-2. The domestic industry's U.S. shipments of extra-heavy gauge aluminum foil decreased from *** short tons in 2014 to *** short tons in 2016. *Id.* Its market share of extra-heavy gauge aluminum foil declined from *** percent in 2014 to *** percent in 2015 and then to *** percent in 2016; it was lower in interim 2017, at *** percent, than in interim 2016, at *** percent. *Id.* These declines were also reflected on an individual producer level, with each domestic producer of extra-heavy gauge aluminum foil reporting higher shipments in 2014 than in 2016. *Id.*

PART I: INTRODUCTION

BACKGROUND

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

Effective date	Action
March 9, 2017	Petition filed with Commerce and the Commission; institution of Commission investigation (82 FR 13853, March 15, 2017)
March 28, 2017	Commerce's notice of initiation of less-than-fair-value and countervailing duty investigation (AD: 82 FR 15691; CVD 15688, March 30, 2017)
April 24, 2017	Commission's preliminary determination (82 FR 19751, April 28, 2017)
August 14, 2017	Commerce's preliminary CVD determination (82 FR 37844)
November 2, 2017	Commerce's preliminary AD determination (82 FR 50858)
November 2, 2017	Scheduling of final phase of Commission investigation (82 FR 55633, November 22, 2017)
February 8, 2018	Commission's hearing
March 5, 2018	Commerce's final determinations (AD: 83 FR 9282; CVD 83 FR 9274, March 5, 2018)
March 15, 2018	Commission's vote
April 9, 2018	Commission's views

[1] The members of the Working Group are ***. Letter from John Herrmann to Secretary Barton concerning request for proprietary treatment of membership of the Aluminum Association Trade Enforcement Working Group, April 3, 2017.

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

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

[4] A list of witnesses appearing at the hearing are presented in appendix B of the staff report.

STATUTORY CRITERIA AND ORGANIZATION OF THE REPORT

Statutory criteria

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

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

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

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

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

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

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

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

Organization of report

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

MARKET SUMMARY

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

The leading U.S. producers of aluminum foil are Gränges Americas, Inc. ("Gränges"); JW Aluminum; Novelis; and Reynolds, while leading producers of aluminum foil in China are Hunan Suntown Marketing Limited ("Suntown"); Jiangsu Alcha Aluminum Co., Ltd. ("Alcha"); Jiangsu Dingsheng New Materials Joint-Stock Co., Ltd ("Dingsheng New Materials"); Luoyang Longding Aluminum Industries Co., Ltd. ("Longding Aluminum"); and Xiamen Xiashun Aluminium Foil Co., Ltd. ("Xiashun Aluminium"). The leading U.S. importers of aluminum foil from China are Galex; LLFlex; Manakin Industries, LLC ("Manakin"); Proampac Intermediate Inc. ("Proampac"); and Trinidad Benham Corp. ("Trinidad Benham"). Leading importers of aluminum foil from

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

nonsubject countries include ***.[9] U.S. purchasers of aluminum foil are mostly firms that produce packaging or other consumer and industrial products for end users; leading purchasers include ***.

Apparent U.S. consumption of aluminum foil totaled *** short tons ($***) in 2016. U.S. producers' U.S. shipments of aluminum foil totaled *** short tons ($***) in 2016, and accounted for *** percent of apparent U.S. consumption by quantity and *** percent by value. U.S. imports from China totaled 151,598 short tons ($431 million) in 2016 and accounted for *** percent of apparent U.S. consumption by quantity and *** percent by value. U.S. imports from nonsubject sources totaled 62,997 short tons ($226 million) in 2016 and accounted for *** percent of apparent U.S. consumption by quantity and *** percent by value.

SUMMARY DATA AND DATA SOURCES

A summary of data collected in these investigations is presented in appendix C.[10] Except as noted, U.S. industry data are based on questionnaire responses of six firms that accounted for the vast majority of U.S. production of aluminum foil during 2016.[11] U.S. imports are based on official import statistics.[12] [13] The Commission received useable questionnaire responses from 25 U.S. importers and 12 foreign producers.

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[9] ***.

[10] Table C-1 presents summary data for the total market; table C-2 presents summary data for the merchant market (i.e., excluding production data reported by *** and ***); table C-3a presents summary data for certain fin stock aluminum foil; and table C-3b presents summary data for all aluminum foil other than certain fin stock.

[11] Petitioners estimated that total U.S. production in 2016 was *** short tons of aluminum foil. The six responding U.S. producers reported production of *** short tons of aluminum foil in 2016. Alpha Aluminum ("Alpha"); Golden Aluminum ("Golden"); Republic Foil Inc. ("Republic"); and United Aluminum Corporation ("United") are believed to have produced aluminum foil since January 2014, but did not provide questionnaire responses. Petition, Vol. 1, pp. 2-5. ***. Email from *** to Investigator, November 21, 2017. Alpha Aluminum suspended aluminum foil production activities at its plant in Winston-Salem, North Carolina on or about August 2016 and its assets remain in that facility. Email from *** to staff accountant and investigator, January 18, 2018.

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

[13] Official import statistics include aluminum foil in reels weighing less than 25 lbs. ("small reels"), which are outside of the scope of these investigations. Staff collected data regarding imports of these small reels in the questionnaires. According to the responses of 25 U.S. importers, *** short tons of small reels were imported from all sources between 2014 and September 2017.

PREVIOUS AND RELATED INVESTIGATIONS

Aluminum foil has not been the subject of any prior countervailing or antidumping duty investigations in the United States. The Commission conducted a section 332 investigation on factors affecting the global competitiveness of the U.S. aluminum industry,[14] and on January 12, 2017, the Office of the United States Trade Representative requested WTO consultations with the government of China regarding overcapacity in its primary unwrought aluminum industry.[15]

On April 27, 2017, the President issued a memorandum to the Secretary of Commerce instructing him to initiate an investigation under Section 232 of the Trade Expansion Act of 1962 into whether aluminum imports threaten to impair U.S. national security. Commerce delivered its findings to the President on January 19, 2018, at which point the President has 90 days to determine the nature and duration of any action with respect to imports of aluminum.[16] On February 16, 2018, Commerce released a public version of its findings. The scope of this investigation includes most aluminum products imported under chapter 76 of the Harmonized Tariff Schedule of the United States (HTSUS), including all aluminum foil imported under HTS subheading 7607.[17]

The Commission conducted preliminary antidumping and countervailing duty investigations on imports of common alloy aluminum sheet from China upon receiving notification of investigations self-initiated by Commerce.[18] The Commission reached affirmative

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[14] Following receipt of a request dated February 24, 2016 from the U.S. House of Representatives, Committee on Ways and Means under section 332(g) of the Tariff Act of 1930 (19 U.S.C. § 1332(g)), the Commission instituted an investigation. *Aluminum: Competitive Conditions Affecting the U.S. Industry*, Inv. No. 332-557, 81 FR 21591, April 12, 2016. The Commission released its findings on July 7, 2017. U.S. House of Representatives Committee on Ways and Means, "Brady & Reichert Statements on New ITC Report on the Competitiveness of the U.S. Aluminum Industry," July 7, 2017, https://waysandmeans.house.gov/brady-reichert-statements-new-itc-report-competitiveness-u-s-aluminum-industry/.

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

[16] *Section 232 Investigation on the Effect of Imports of Aluminum on U.S. National Security*, Department of Commerce website, https://www.commerce.gov/page/section-232-investigation-effect-imports-aluminum-us-national-security#change, retrieved January 18, 2018.

[17] U.S. Department of Commerce, "The Effect of Imports of Aluminum on the National Security: An Investigation Conducted Under Section 232 of the Trade Expansion Act of 1962, as Amended," January 17, 2018, https://www.commerce.gov/sites/commerce.gov/files/the_effect_of_imports_of_steel_on_the_national_security_-_with_redactions_-_20180111.pdf, (accessed March 5, 2018), p. 20.

[18] *Common Alloy Aluminum Sheet From the People's Republic of China: Initiation of Less-Than-Fair-Value and Countervailing Duty Investigations*, 82 FR 57214, December 4, 2017.

preliminary determinations on January 12, 2018.[19] Commerce is currently scheduled to make its preliminary CVD determination no later than April 9, 2018.[20]

NATURE AND EXTENT OF SUBSIDIES AND SALES AT LTFV

Subsidies

On August 14, 2017, Commerce published a notice in the *Federal Register* of its preliminary determination of countervailing subsidies for producers and exporters of aluminum foil from China.[21] On March 5, 2018 published a notice of its final determination of countervailing subsidies for producers and exporters of aluminum foil from China. Table I-1 presents Commerce's findings of subsidization of aluminum foil in China.[22]

Table I-1
Aluminum Foil: Commerce's preliminary and final subsidy determinations with respect to imports from China

Entity	Preliminary counteravailable subsidy margin (percent)	Final counteravailable subsidy margin (percent)
Dingsheng Aluminum Industries (Hong Kong) Trading Co. Ltd	28.33	19.98
Jiangsu Zhongji Lamination Materials Co., (HK) Ltd	16.56	17.14
Loften Aluminum (Hong Kong) Limited	80.97	80.97
Manakin Industries, LLC	80.97	80.97
All Others	22.45	18.56

Source: 82 FR 37844, August 14, 2017 and 83 FR 9274, March 5, 2018.

Sales at LTFV

On March 5, 2018, Commerce published a notice in the *Federal Register* of its final determination of sales at LTFV of aluminum foil from China.[23] Table I-2 presents Commerce's final dumping margins with respect to imports of product from China.

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[19] USITC, "USITC Votes to Continue Investigations on Common Alloy Aluminum Sheet from China," January 12, 2018, https://www.usitc.gov/press_room/news_release/2018/er0112ll891.htm.

[20] *Common Alloy Aluminum Sheet From the People's Republic of China: Postponement of Preliminary Determination in the Countervailing Duty Investigation*, 83 FR 2768, January 19, 2018.

[21] *Certain Aluminum Foil from the People's Republic of China: Preliminary Affirmative Countervailing Duty Determination*, 82 FR 37844, August 14, 2017

[22] *Countervailing Duty Investigation of Certain Aluminum Foil From the People's Republic of China: Final Affirmative Determination*, 83 FR 9274, March 5, 2018.

[23] *Certain Aluminum Foil From the People's Republic of China: Final Determination of Sales at Less Than Fair Value*, 83 FR 9282, March 5, 2018.

Table I-2
Aluminum foil: Commerce's final weighted-average LTFV margins with respect to imports from China

Exporter	Producer	Final weighted-average margin (percent)	Cash deposit adjusted for subsidy offset (percent)
Jiangsu Dingsheng New Materials Joint-Stock Co., Ltd./Hangzhou Teemful Aluminum Co., Ltd./Inner Mongolia Liansheng New Energy Material Joint-Stock Co., Ltd./Hangzhou Five Star Aluminum Co., Ltd./Dingsheng Aluminum Industries (Hong Kong)Trading Co. Ltd./Walson (HK) Trading Co., Limited/Hangzhou Dingsheng Import & Export Co., Ltd.	Jiangsu Dingsheng New Materials Joint-Stock Co.,Ltd./Hangzhou Teemful Aluminum Co., Ltd./Inner Mongolia Liansheng New Energy Material Joint-Stock Co., Ltd./Hangzhou Five Star Aluminum Co.,Ltd./Dingsheng Aluminum Industries (Hong Kong) Trading Co. Ltd./Walson (HK) Trading Co., Limited/Hangzhou Dingsheng Import & Export Co., Ltd.	106.09	94.73
Jiangsu Zhongji Lamination Materials Co., (HK) Ltd	Jiangsu Zhongji Lamination Materials Stock Co., Ltd./ Jiangsu Huafeng Aluminium Industry Co., Ltd.	48.64	37.99
Alcha International Holdings Limited	Jiangsu Alcha Aluminum Co., Ltd	84.94	73.84
Alcha International Holdings Limited	Baotou Alcha Aluminum Co., Ltd	84.94	73.84
Jiangyin Dolphin Pack Ltd. Co	Jiangyin Dolphin Pack Ltd. Co	84.94	73.84
Gränges Aluminum (Shanghai) Co., Ltd	Gränges Aluminum (Shanghai) Co., Ltd	84.94	73.84
Huafon Nikkei Aluminium Corporation	Huafon Nikkei Aluminium Corporation	84.94	73.84
Hunan Suntown Marketing Limited	Suntown Technology Group Limited	84.94	73.84
Luoyang Longding Aluminium Industries Co., Ltd	Luoyang Longding Aluminium Industries Co., Ltd	84.94	73.84
Shandong Yuanrui Metal Material Co., Ltd	Shandong Yuanrui Metal Material Co., Ltd	84.94	73.84
SNTO International Trade Limited	Suntown Technology Group Limited	84.94	73.84
Suzhou Manakin Aluminum Processing Technology Co., Ltd.	North China Aluminum Co., Ltd., Hunan Suntown Marketing Limited, and Guangxi Baise Xinghe Aluminum Industry Co., Ltd.	84.94	73.84
Xiamen Xiashun Aluminium Foil Co. Ltd	Xiamen Xiashun Aluminium Foil Co. Ltd	84.94	73.84
Yantai Donghai Aluminum Foil Co., Ltd	Yantai Donghai Aluminum Foil Co., Ltd	84.94	73.84
Yinbang Clad Material Co., Ltd	Yinbang Clad Material Co., Ltd	84.94	73.84
Zhejiang Zhongjin Aluminum Industry Co., Ltd	Zhejiang Zhongjin Aluminum Industry Co., Ltd	84.94	73.84
PRC–Wide Entity	PRC–Wide Entity	106.09	95.44

Source: 83 FR 9274, March 5, 2018.

COMMERCE'S NON-MARKET ECONOMY INQUIRY

On April 3, 2017, Commerce gave notice in the *Federal Register* that it is conducting an inquiry into its designation of China as a non-market economy (NME) as part of its antidumping duty investigation. This inquiry resulted from the December 11, 2016, change in the PRC's Protocol of Accession to the World Trade Organization. Commerce has sought public comment and information, with respect to the following factors that require consideration under the Tariff Act of 1930:

(i) the extent to which the currency of the foreign country is convertible into the currency of other countries;
(ii) the extent to which wage rates in the foreign country are determined by free bargaining between labor and management;
(iii) the extent to which joint ventures or other investments by firms of other foreign countries are permitted in the foreign country;
(iv) the extent of government ownership or control of the means of production;
(v) the extent of government control over allocation of resources and over price and output decisions of enterprises; and
(vi) such other factors as the administering authority considers appropriate.[24]

On October 26, 2017 Commerce approved a memorandum which concluded that China is a NME because it "does not operate sufficiently on market principles to permit the use of Chinese prices and costs for purposes of the Department's antidumping analysis." Commerce's conclusion relies on its conclusion that "the state's role in the economy and its relationship with markets and the private sector results in fundamental distortions in China's economy."[25]

THE SUBJECT MERCHANDISE

Commerce's scope

Commerce has defined the scope of these investigations as follows:

> The merchandise covered by this investigation is aluminum foil having a thickness of 0.2 mm or less, in reels exceeding 25 pounds, regardless of width. Aluminum foil is made from an aluminum alloy that contains more than 92 percent aluminum. Aluminum foil may be made to ASTM specification ASTM B479, but can also be made to other

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

[25] Memorandum for Gary Taverman from Office of Policy, Enforcement & Compliance, Commerce, regarding China's status as a non-market economy, October 26, 2017.

specifications. Regardless of specification, however, all aluminum foil meeting the scope description is included in the scope, including aluminum foil to which lubricant has been applied to one or both sides of the foil.

Excluded from the scope of this investigation is aluminum foil that is backed with paper, paperboard, plastics, or similar backing materials on one side or both sides of the aluminum foil, as well as etched capacitor foil and aluminum foil that is cut to shape.

Where the nominal and actual measurements vary, a product is within the scope if application of either the nominal or actual measurement would place it within the scope based on the definitions set forth above.[26]

Tariff treatment

Based upon the scope set forth by Commerce, information available to the Commission indicates that the merchandise subject to these investigations is imported under the following subheadings of the 2018 Harmonized Tariff Schedule of the United States ("HTS"): 7607.11.30, 7607.11.60, 7607.11.90, and 7607.19.60.[27] Aluminum foil imported under these subheadings is accorded a column-1 general duty rate of 5.8 percent, 5.3 percent, 3.0 percent, and 3.0 percent, *ad valorem*, respectively. Decisions on the tariff classification and treatment of imported goods are within the authority of U.S. Customs and Border Protection.

[26] *Certain Aluminum Foil from the People's Republic of China: Final Determination of Sales at Less Than Fair Value,* 83 FR 9282, March 5, 2018.

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

THE PRODUCT[28]

Description and applications

Aluminum foil is a thin wrought[29] aluminum product that is produced via a rolling process. The subject product is aluminum foil having a thickness of 0.2 mm or less, in reels exceeding 25 pounds, regardless of width. Also, it is made from an aluminum alloy that contains more than 92 percent aluminum.[30] Aluminum foil is commonly produced using 1XXX,[31] 3XXX,[32] and 8XXX[33] series alloys, which account for approximately 95 percent of the foil market.[34] Aluminum foil can be produced to meet the requirements of various international standard specifications, including: ASTM International Standard B-479[35] for annealed aluminum and aluminum alloy foil for flexible barrier, food contact, and other applications; ISO International Standard 7271:2011(E) for aluminum and aluminum alloy foil and thin strip for general purposes; in addition to other specifications.[36] One importer indicated that it purchases the subject product almost exclusively to EN Standards.[37] Among the major chemical and physical properties of aluminum, the alloy type, level of thickness, surface finish, temper, and width all

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[28] Unless otherwise noted, information presented in "Description and applications" and "Manufacturing processes" is based on *Aluminum Foil from China, Inv. Nos. 701-TA-570 and 731-TA-1346 (Preliminary)* USITC Publication 4684, May 2017, I-8 – I-17.

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

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

[31] 1XXX series contains 99 percent or more aluminum by weight. This is considered commercially pure by industry standards.

[32] The main alloying metal in 3XXX series alloys is manganese.

[33] 8XXX series alloys include metals such as tin and nickel.

[34] Preliminary conference transcript, p. 83 (Roush).

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

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

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

play an important role in meeting the specifications of end users.[38] Table I-3 presents information on aluminum foil by alloy series, properties, and end uses.

Table I-3
Aluminum alloys: Alloy series, properties, and end uses

Series	Alloying metal	Properties	End uses
1XXX	Pure aluminum (Al)	Commercially pure (99 percent or more Al by weight), non-heat-treatable, low strength, excellent formability, high thermal and electrical conductivity, high corrosion resistance, highly reflective	Aircraft frames, fuel filters, electric power grid lines, radiator tubing, lighting reflectors, decorative components, food packaging trays
3XXX	Manganese	Non-heat-treatable, medium strength, good formability, good corrosion resistance	Storage tanks, beverage cans, home appliances, heat exchangers, pressure vessels, siding, gutters
8XXX	Other elements, including lithium (Li), nickel (Ni), tin (Sn), and titanium (Ti)	Heat-treatable (Al-Li alloys) Very high strength, low density	Aircraft and aerospace structures, foil, heat exchangers (air conditioning)

Note.-- Not all 1XXX, 3XXX, and 8XXX series alloy are subject to these investigations. The properties and end uses described above may include product that is out of the scope of these investigations.

Source: Aluminum Association, "Aluminum Alloys 101," 2017; ASM International, "Subject Guide: Aluminum and Aluminum Alloys," 2017; Havrilla, "Joining Aluminum with Laser," July 12, 2013; *Aluminum: Competitive Conditions Affecting the U.S. Industry, Inv. No. 332-557*, USITC Publication 4703, June 2017, p. 530-31.

Aluminum foil is produced and imported in a variety of gauges, or levels of thickness, and is commonly denominated in inches, millimeters, and microns.[39] The major categories of aluminum foil by thickness include:

[38] Preliminary conference transcript, p. 23 (Rudisill).

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

Ultra-thin. -- Aluminum foil less than 0.000315 inch (8 microns) thickness.[40]

Thin. -- Aluminum foil greater than or equal to 0.000315 inch (8 microns) and less than 0.00039 inch (10 microns) thickness.[41]

Standard. -- Aluminum foil greater than or equal to 0.00039 inch (10 microns) and less than or equal to 0.001 inch (25 microns) thickness.[42] [43]

Heavy. -- Aluminum foil greater than 0.001 inch (25 microns) thickness and less than 0.00177 inch (45 microns) thickness.[44]

Extra heavy. -- Aluminum foil greater than or equal to 0.00177 inch (45 microns) thickness.[45]

The scope of these investigations currently excludes "aluminum foil that is backed with paper, paperboard, plastics, or similar backing materials of the aluminum foil, as well as etched capacitor foil and aluminum foil that is cut to shape."[46]

Aluminum foil is used extensively in food and pharmaceutical packaging because it provides protection against light, oxygen, moisture, and bacteria. It is also used in industrial applications such as thermal insulation, cables, and electronics where properties such as heat reflectivity and barrier protection are desired.[47] Common products that use aluminum foil include pie pans, food and candy wrappers, and household foil, among others.[48] Figure I-1 presents images of some common aluminum foil products.

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[40] Ultra-thin aluminum foil is primarily used as flexible packaging for food, medical device, pharmaceutical, and health care industries. Conference transcript, p. 112 (Higgins) and p. 115 (Dodrill).

[41] The thin category generally corresponds to aluminum foil used in flexible packaging.

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

[43] Counsel for Reynolds reported that Reynolds produces ***. Email from *** to investigator, October 25, 2017. Staff however, elected to use 0.001 inch thickness as the upper limit for this category because it believes that represents the majority of household foil.

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

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

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

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

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

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

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

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

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

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

Certain fin stock

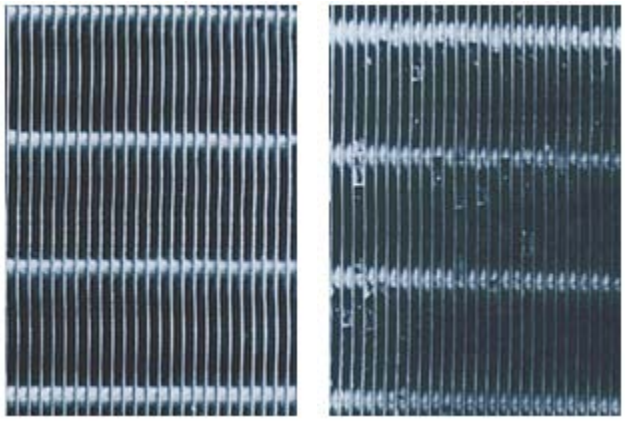
Certain fin stock is used in a variety of applications, including heating, ventilation and air conditioning (HVAC), and other heat transfer products where properties such as light-weight, corrosion resistance, and formability are desired. Certain fin stock is primarily produced using 1XXX, 3XXX, and 7XXX series alloys and produced to a variety of gauges;[49] however some certain fin stock is produced using 8XXX series alloys as well.[50] One domestic producer offers fin

[49] Almetals, Inc., "Fin Stock Suppliers," https://www.almetals.com/metals/fin-stock.aspx, (accessed January 13, 2018).

[50] Karay Metals, Inc., "Aluminum fin stock," https://www.karaymetals.com/aluminum-fin-stock, (accessed January 13, 2018).

stock with a thickness ranging from 0.0004 inches (0.01016 mm) to 0.03 inches (0.762 mm).[51] Figure I-2 presents an example of fin stock. For fin stock, a coating material is applied in order to further improve corrosion resistance and operating efficiency in applications such as cooling equipment (air conditioners).[52]

Figure I-2
Certain fin stock: Pre-coated fin stock and fin stock with no treatment (from left to right)



Source: Kobe Steel, Ltd., "Pre-coated Aluminum Fin Stock for Heat Exchangers," http://www.kobelco.co.jp/english/products/almi/precoat-aluminum-fin.html, (accessed January 13, 2018).

Manufacturing processes

The manufacturing processes for aluminum foil are summarized below. In general, there are three distinct stages that include: (1) melting and refining aluminum, (2) casting[53] aluminum into semi-finished forms, and (3) rolling semi-finished forms into flat rolled products such as aluminum foil.

Melting and refining

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

During the secondary smelting process, aluminum scrap (both old[54] and new[55]) is smelted and alloyed, producing molten aluminum. Some producers use a combination of

[51] JW Aluminum, HVAC –fin stock," http://www.jwaluminum.com/hvac, (accessed January 13, 2018).
[52] Alcom, "Fin Stock," http://alcom.com.my/main/products.php?cat=20, (accessed January 17, 2018).
[53] The two casting methods used in the production of aluminum foil are continuous and direct chill casting.
[54] Old scrap is post-consumer material derived from various end uses such as manufactured products and construction materials.

primary and secondary sources to produce molten aluminum. The desired metallurgical characteristics (e.g., hardness, strength, resistance to corrosion) of aluminum are determined prior to the casting stage.

Casting

Following the production of molten aluminum with the desired properties, the molten aluminum is then cast into a semi-finished form that can enter the rolling process. The most common casting methods used during the production of aluminum foil include continuous casting and direct chill casting.[56] Direct chill casting requires more energy than continuous casting, however both methods are commonly used amongst domestic[57] and subject country[58] producers.

Continuous casting

During the continuous casting process, molten aluminum is transferred to a holding hearth where it is stored at the correct level of purity and temperature until it is ready to be fed into a casting unit. As the molten aluminum is fed into the casting unit, it flows between water-cooled rollers[59] and emerges as a continuous solid strip of aluminum (figure I-3). The strip of aluminum is fed into a combination stand where it is cut into designated lengths by shears before it is wound into a coil of foil stock (figure I-4).[60] Strips produced during this process can be between 3 and 20 mm (0.11811 and 0.787402 inches) in thickness.[61] The foil stock is then transferred to a cold rolling mill where it is then further reduced in thickness to produce different gauges of aluminum foil.[62] One petitioner indicated that there are different versions of the continuous casting process that are equipment-specific.[63]

(…*continued*)

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

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

[57] Preliminary conference transcript, p. 84 (Rudisill).

[58] Preliminary conference transcript, p. 172 (Lu).

[59] The water-cooled rollers are labeled drum 1 and drum 2 in figure I-2.

[60] How Products are Made, "Aluminum Foil: Smelting," http://www.madehow.com/Volume-1/Aluminum-Foil.html, (accessed March 10, 2017).

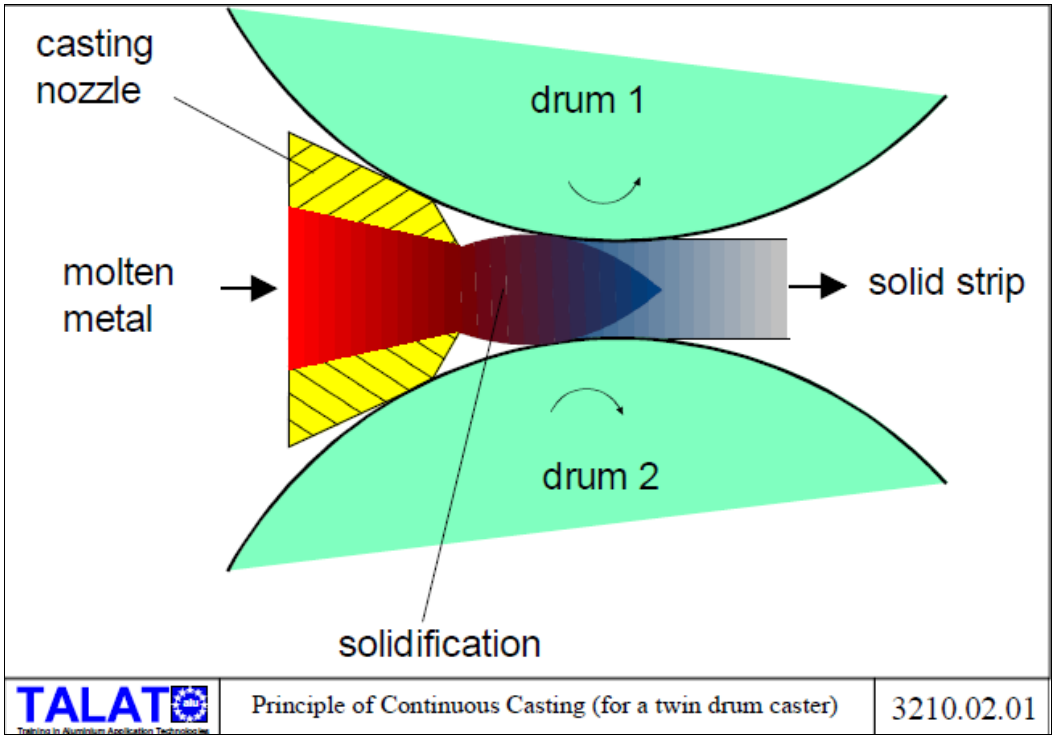
[61] Catrin Kammer, European Aluminum Association, "TALAT Lecture 3210, Continuous Casting of Aluminum", 1999, p. 3.

[62] Novelis, "Metal Production: CC Casting," http://novelis.com/about-us/metal-production/#1444742157266-1bded669-dec8, (accessed March 17, 2017).

[63] Preliminary conference transcript, p. 85 (Rudisill).

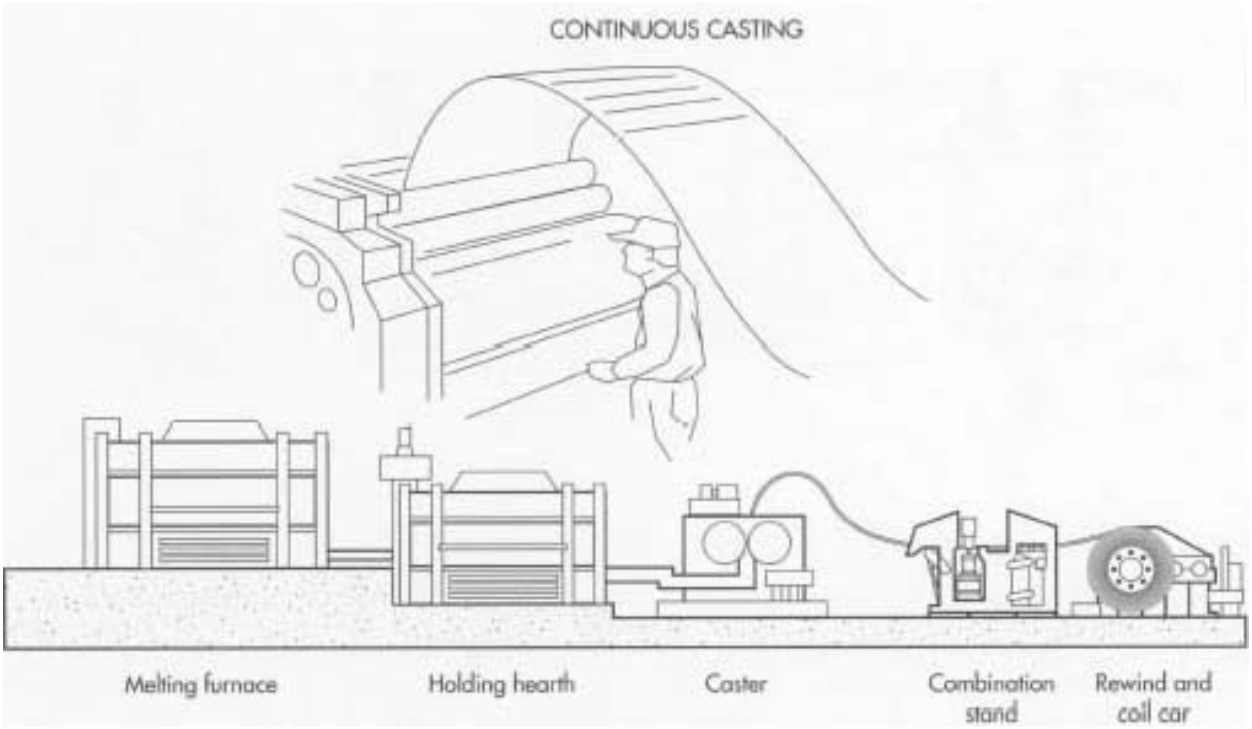
Figure I-3

Aluminum foil: Casting molten aluminum into solid strip (continuous casting process)



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

Figure I-4
Aluminum foil: Continuous casting process



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

Direct chill casting

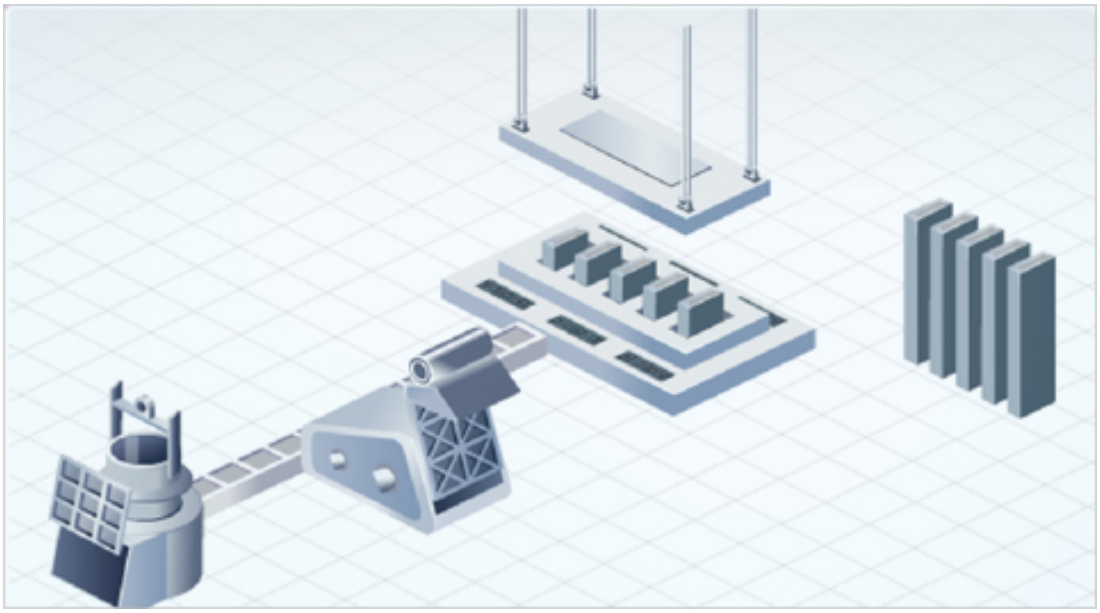
Another method of casting used in the production of aluminum foil is direct chill casting. During this process, molten aluminum is transferred to a holding hearth where it is stored at the correct level of purity and temperature until it is ready to be fed into a casting unit with a mold. As the molten aluminum flows into in the casting unit, cold water is pumped around the base of the mold. This cools the molten aluminum, solidifying it into the shape of the mold, producing a semi-finished product known as slab or sheet ingot (figure I-5). These semi-finished products are then removed from the casting unit and undergo a process known as scalping[64] before they are cooled to room temperature and transferred to a hot rolling mill for further processing.[65] According to respondent Valeo, ***.[66]

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

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

[66] Supplementary information submitted by Valeo in response to the Commission's U.S. importer questionnaire.

Figure I-5
Aluminum foil: Direct chill casting process



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

Rolling process

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

Slabs and sheet ingots

Slabs or sheet ingots are re-heated, or annealed, to approximately 500°C before they make successive passes through a hot-rolling mill line where steel rollers reduce the slab or sheet ingot to a desired gauge, usually between 4 and 6 mm (0.15748 and 0.23622 inches).[67] The sheet of aluminum produced during this process is then coiled and cooled to room temperature before it is sent to a cold-rolling mill for further processing. Once it arrives at the cold-rolling mill, the coil is then unrolled into a continuous sheet, or web, that is then fed into the cold-rolling mill line where it makes successive passes through a series of work rolls (figure I-6) that are paired with backup rolls that further reduce the foil sheet's gauge to less than 0.2 mm (0.00787 inches).[68] Rolling oils or rolling lubricants are used to control friction between the

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

[68] Preliminary conference transcript, p. 24-5 (Rudisill).

rollers and the foil, and to cool the rollers.[69] During the cold-rolling process, the aluminum foil must be annealed, or heat treated in order to enhance its workability. This can occur between passes on the cold-rolling mill line or after a final gauge has been produced.[70]

Cold rolling two coils at the same time, a process known as doubling, is used to avoid breakage that may occur as the foil is reduced in thickness.[71] This process is used to produce thinner gauges of aluminum foil. Doubling the foil sheet produces two natural finishes, bright[72] and matte.[73] As the two layers of aluminum foil are separated, they are coiled into large rolls of foil stock that are trimmed and slitted with circular and razor-like knives into rectangular pieces.[74] During the trimming stage, edges of the foil are cut, and during the slitting stage the foil is cut further into several sheets of designated widths and lengths.[75] Once inspected and packed, the finished rolls of aluminum foil are then shipped to customers for various end uses.[76]

Foil stock

The manufacturing process for rolling foil stock produced from continuous casting differs from semi-finished forms derived from the direct chill casting process. Unlike slabs or sheet ingots, foil stock produced using continuous casting technology does not require the annealing stage in the hot rolling process since this is achieved during the continuous casting phase.[77] For this reason, continuous casting has lower processing, investment, operating, and energy costs when compared to direct chill casting and hot-rolling of slabs or sheet ingots.[78] Following the continuous casting process, the foil stock is cooled down to room temperature before it is sent directly to a cold-rolling mill rather than a hot rolling mill. The cold-rolling process is similar for foil stock produced using the continuous casting process.[79]

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

[70] Preliminary conference transcript, pp. 24-25 (Rudisill).

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

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

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

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

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

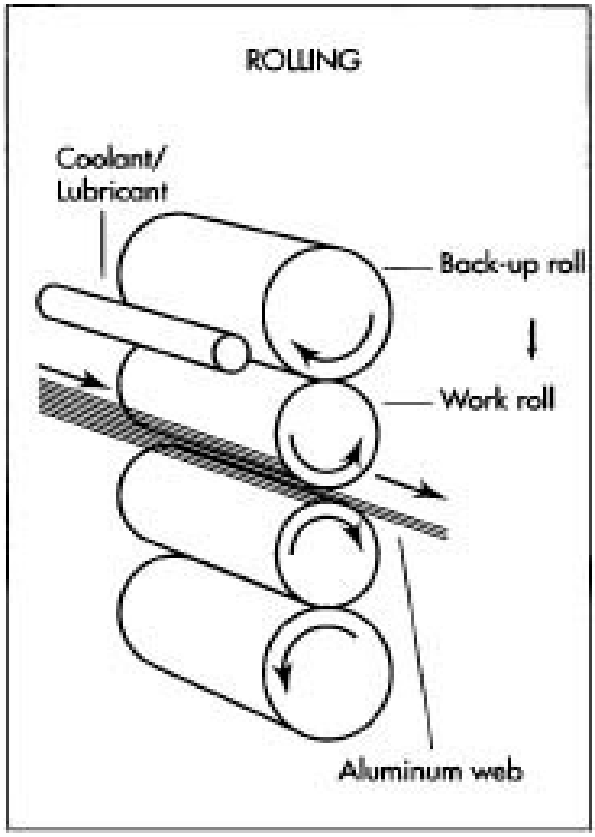
[76] Preliminary conference transcript, p. 25 (Rudisill).

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

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

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

Figure I-6
Aluminum foil: Rolling aluminum foil stock



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

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

DOMESTIC LIKE PRODUCT ISSUES

Certain respondents[80] argue that there is a clear dividing line between certain fin stock aluminum foil and other aluminum foil, and that certain fin stock should be considered a separate domestic like product.[81] In addition, certain respondents argue that ultra-thin gauge aluminum is a separate like product.[82] Petitioners oppose defining either certain fin stock or ultra-thin gauge aluminum as a separate like product.[83]

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

Certain fin stock

Certain fin stock is used in the production of fins used in heat exchangers for automotive and HVAC applications, including air coolers, condensers, evaporators, heater cores, oil coolers, and radiators (see the "Product" section in this part of the report for more detail). Table I-4 presents data regarding comparability of certain fin stock aluminum foil to all other aluminum foil on the six factors.

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

[81] Hearing transcript, p. 20 (Marshak) and pp. 157-158 (Cannistra), MAHLE Behr's posthearing letter, p. 1, and Valeo's posthearing brief, p. 1

[82] Hearing transcript, p. 273 (Grimson), ProAmpac's posthearing brief p.1, and Flexible Packaging Association's U.S. Aluminum Foil Converters Committee-, Manakin Industries, LLC, Ltd, Jiangsu Zhongji Lamination Materials Co., (HK) Ltd., and Jiangsu Zhongji Lamination Materials Co., Ltd. (collectively "Flexible Packaging"), p. 6.

[83] Hearing transcript, p. 49 (Hermann) and petitioners' posthearing brief, pp. 3-4 and 5.

Table I-4
Aluminum foil: Ratings of the comparability of certain fin stock to all other aluminum foil

Item	U.S. producers			
	Fully	**Mostly**	**Somewhat**	**Not at all**
U.S. producers	**Number of firms (count)**			
Certain fin stock vs. all other aluminum foil.-- Characteristics and uses	---	3	---	3
Interchangeability	---	3	---	3
Manufacturing facilities and employees	1	2	1	1
Channels of distribution	2	2	1	---
Market perceptions	1	2	---	3
Price	---	2	---	3
Item	**U.S. importers**			
	Fully	**Mostly**	**Somewhat**	**Not at all**
U.S. importers	**Number of firms (count)**			
Certain fin stock vs. all other aluminum foil.-- Characteristics and uses	1	1	---	10
Interchangeability	1	---	---	10
Manufacturing facilities and employees	1	3	1	5
Channels of distribution	1	2	3	4
Market perceptions	1	---	2	9
Price	---	1	1	7
Item	**U.S. purchasers**			
	Fully	**Mostly**	**Somewhat**	**Not at all**
U.S. purchasers	**Number of firms (count)**			
Certain fin stock vs. all other aluminum foil.-- Characteristics and uses	1	1	---	14
Interchangeability	1	1	1	18
Manufacturing facilities and employees	4	3	4	6
Channels of distribution	3	4	2	6
Market perceptions	1	1	1	15
Price	---	2	2	7

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

Physical characteristics and uses

Respondents listed certain fin stock's defining characteristics, in contrast to aluminum foil, as follows: "…higher strength, improved corrosion resistance, increased fatigue strength, enhanced formability, higher thermal conductivity, improved sagging resistance and improved high temperature properties."[84] Certain fin stock is composed of a thicker gauge of aluminum, usually above 45 microns (0.045 mm or 0.001771654 inches). Among the differences in chemical composition, Valeo asserted that proprietary alloys and processes are used to produce certain fin stock, while aluminum foil is produced with 11XX, 12XX, 3XXX, and 8XXX series alloys.[85] Proprietary alloys are used to ***. Proprietary processes include ***.[86] MAHLE Behr and Valeo contended that aluminum foil is purchased annealed while certain fin stock is purchased annealed and strain hardened, and that certain fin stock in its annealed state has additional alloying content that increases its strength compared to aluminum foil.[87] In the preliminary phase of these investigations, Hanon reported that petitioners referenced one standard specification for aluminum foil (ASTM B479), but those specifications do not meet the description of certain fin stock.[88] Hanon also noted that certain fin stock is permanently integrated into an end product unlike other packaging products for which the foil is removed from a product prior to use.[89]

The petitioners argued that certain fin stock is sold within the same gauge ranges as other aluminum foil products, and that 3000 series alloys commonly used in certain fin stock are also used in the production of aluminum foil.[90] In addition, there are other fin stock that are manufactured from 1000 and 7000 series alloys.[91] A representative from Reynolds argued that products covered under the scope of these investigations with different alloys can be produced using the same machinery, and that alloys used in direct chill casting and continuous casting are for the most part interchangeable.[92] Petitioners asserted that certain fin stock's ability to resist corrosion and that it is permanently integrated in an end product does not distinguish it from other aluminum foil products.[93] The petitioners note that ***.[94]

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[84] Valeo prehearing brief, p. 5, hearing transcript, p. 226 (Cannistra), MAHLE Behr and Valeo's postconference brief, p. 10 and Hanon's postconference brief, pp. 3-5.

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

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

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

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

[89] Hanon's postconference brief, p. 5.

[90] Petitioners' postconference brief, p. 11, and prehearing brief.

[91] Petitioners' posthearing brief, p. 4.

[92] Conference transcript, p. 53 (Rudisill).

[93] Petitioners' postconference brief, p. 11 and petitioners' prehearing brief, pp. 8 and 10.

[94] Petitioners' prehearing brief, p. 8.

Manufacturing facilities and production employees

Respondents argue that there are significant differences in production in terms of costs, complexity, and technical expertise.[95] Valeo reported that certain fin stock is produced using a 15-step manufacturing process, that includes direct chill casting.[96] Moreover, an ISO/TS 16949 certification is required for plants in the United States to supply aluminum products, such as fin stock, to the automotive industry. Valeo asserts that aluminum foil plants neither meet nor require this certification, and as a result, U.S. producers supply fin stock from separate plants with the certification.[97] The respondents contended that the production process for foil is simpler than for certain fin stock, and that due to the complexity of the certain fin stock production process, "most U.S. rolling mills have left the heat exchangers markets."[98]

Petitioners contended that certain fin stock uses the same equipment, same production processes, and same employees as other types of aluminum foil products.[99] ***.[100] A representative from Reynolds argued that the domestic industry uses a combination of continuous and direct chill casting to produce various aluminum foil products, including certain fin stock.[101]

Interchangeability

The respondents asserted that certain fin stock and aluminum foil are separate products that have separate end markets requiring distinct physical characteristic, chemical compositions and mechanical properties, and are therefore not interchangeable.[102] Certain fin stock is produced using direct chill casting and hot mill rolling, while aluminum foil has a simpler manufacturing process that uses continuous casting.[103] The respondents also argued that aluminum foil and certain fin stock are not interchangeable because aluminum foil is produced in large amounts, while certain fin stock is produced in smaller amounts according to the specifications of the end user.[104] A representative from Valeo argued that even different grades of certain fin stock are not interchangeable with each other. Each specific grade of certain fin stock has distinct corrosion resistance and grain orientation for designated end uses.[105]

The petitioners argued that in the past, the Commission has found that a single like product can involve a "continuum of merchandise" that can be used in the production of

[95] Valeo's prehearing brief, p. 17.
[96] MAHLE Behr and Valeo's postconference brief , exh. 3, Valeo PowerPoint Presentation, slide 6.
[97] Valeo posthearing brief, pp. 8-9.
[98] MAHLE Behr and Valeo's postconference brief, p. 14.
[99] Petitioners' postconference brief, p. 11.
[100] Petitioners' postconference brief, Exhibit 9, pp. 9-10.
[101] Conference transcript, 84-85 (Rudisill).
[102] Valeo's prehearing brief, p. 22 and hearing transcript, p. 158 (Cannistra).
[103] MAHLE Behr and Valeo's postconference brief, p. 13; and Hanon's postconference brief, p. 6.
[104] MAHLE Behr and Valeo's postconference brief, p. 13.
[105] Conference transcript, p. 135 (Garcia).

various downstream products.[106] The petitioners note that JW Aluminum produces aluminum foil that is used in fin stock applications using a continuous casting process.[107]

Figures I-7 and I-8 present data on North American fin stock and foil shipments, by end use application.

Figure I-7:
Aluminum fin stock: Shipments, by end use, 2017 (preliminary)

* * * * * * *

Figure I-8:
Aluminum foil: Shipments, by end use, 2017 (preliminary)

* * * * * * *

Customer and producer perceptions

The respondents argued that the perception amongst customers and producers is that certain fin stock and aluminum foil are different products. Tier 1 producers[108] of heat exchangers purchase certain fin stock according to specific chemical and mechanical properties as required by OEMs, such as vehicle and refrigeration system manufacturers. Suppliers of certain fin stock are expected by Tier 1 producers to have ISO certifications which require an extensive testing and validation process.[109]

The petitioners argued that certain fin stock used in heat exchangers is just one of multiple applications for aluminum foil and therefore certain fin stock should not be distinguished from other aluminum foil products.[110] Moreover, the characteristics of certain fin stock do not differ from physical characterizes of other aluminum foil and only vary by a matter of degree. In addition, the petitioners note that virtually all aluminum foil, not just certain fin stock is subject to a qualification and testing process.[111]

Channels of distribution

The respondents argued that certain fin stock uses different channels of distribution than other aluminum foil. They reported that channels of distribution for certain fin stock include three segments: Tier 1 producers, Tier 2 producers, and original equipment manufacturers (OEMs). Certain fin stock is sold by Tier 2 producers to Tier 1 producers. Tier 1

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

[107] Petitioners' prehearing brief, p. 11.

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

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

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

[111] Petitioners' prehearing brief, p. 13.

producers, such as the respondents, then use the certain fin stock to produce heat exchangers. The heat exchangers are then sold to OEMs such as vehicle and refrigeration system manufacturers.[112] The respondents argue that unlike certain fin stock, the channels of distribution for aluminum foil include other end users such as food and medical packaging producers.[113]

The petitioners argued that the respondents did not distinguish the channels of distribution for aluminum foil used as certain fin stock from other aluminum foil products that can be sold to both distributors and original equipment manufacturers (OEMs).[114]

Table I-5 presents U.S. producers' channels of distribution for shipments of certain fin stock and all other aluminum foil. ***. *** stated that ***.[115]

Table I-5
Aluminum foil: Channels of distribution of certain fin stock and all other aluminum foil, 2014-16, January to September 2016, and January to September 2017

* * * * * * *

Price

The respondents argue that certain fin stock is sold at higher prices than other aluminum foil reflecting the additional manufacturing required.[116] The petitioners contend that the price of certain fin stock falls along a continuum of prices for aluminum foil.[117]

The Commission collected pricing data on certain fin stock (pricing product number 8). The other 7 pricing products are other types of aluminum foil. Table I-6 presents price comparisons for pricing product 8 versus products 1 through 7 in aggregate. The price per pound of products 1 through 7 was consistently lower than that of product 8. The weighted average price per pound over the 2014–September 2017 period was $*** for product 8 and $*** for products 1 through 7.

Table I-6
Aluminum foil: Weighted-average f.o.b. prices and quantities of U.S. producers' U.S. shipments of certain fin stock and all other aluminum foil

* * * * * * *

[112] MAHLE Behr and Valeo's postconference brief , exh. 3, Valeo PowerPoint Presentation, slide 4.
[113] MAHLE Behr and Valeo's postconference brief, pp. 13-14; Hanon's postconference brief, pp. 7-8.
[114] Petitioners' postconference brief, p. 11.
[115] Revision to ***.
[116] Valeo prehearing brief, p.21.
[117] Petitioners' prehearing brief, p. 14.

Ultra-thin gauge aluminum

Ultra-thin gauge aluminum foil is primarily used as flexible packaging for food, and in the medical device, pharmaceutical, and health care industries.[118] Table I-7 presents data regarding comparability of certain fin stock aluminum foil to all other aluminum foil on the six factors.

Table I-7
Aluminum foil: Ratings of the comparability of ultra-thin gauge aluminum foil to all other aluminum foil

Item	U.S. producers			
	Fully	Mostly	Somewhat	Not at all
U.S. producers	Number of firms (count)			
Ultra-thin aluminum vs. all other aluminum foil.--				
Characteristics and uses	---	4	2	---
Interchangeability	---	2	3	1
Manufacturing facilities and employees	---	4	3	1
Channels of distribution	2	3	2	1
Market perceptions	---	2	4	2
Price	---	3	2	3
Item	**U.S. importers**			
	Fully	**Mostly**	**Somewhat**	**Not at all**
U.S. importers	**Number of firms (count)**			
Ultra-thin aluminum vs. all other aluminum foil.--				
Characteristics and uses	1	5	2	7
Interchangeability	1	3	4	7
Manufacturing facilities and employees	---	5	3	6
Channels of distribution	1	5	7	1
Market perceptions	---	1	8	6
Price	---	1	4	10
Item	**U.S. purchasers**			
	Fully	**Mostly**	**Somewhat**	**Not at all**
U.S. purchasers	**Number of firms (count)**			
Ultra-thin aluminum vs. all other aluminum foil.--				
Characteristics and uses	2	4	7	16
Interchangeability	---	4	8	17
Manufacturing facilities and employees	---	3	12	10
Channels of distribution	3	5	10	6
Market perceptions	---	5	11	12
Price	---	2	11	11

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

[118] Conference transcript, p. 112 (Higgins) and p. 115 (Dodrill).

Physical characteristics and uses

Respondents argue that ultra-thin gauge aluminum foil is more flexible, formable, and has a smoother surface than thicker gauges which are more durable. Moreover, these physical characteristics make ultra-thin gauge aluminum foil suitable for specific end uses, such as in flexible packaging. [119]

Petitioners state that there is no clear dividing line between ultra-thin gauge aluminum foil and other aluminum foils as they both share physical characteristics and are used in common flexible packaging applications.[120]

Manufacturing facilities and production employees

Respondents argue that ultra-thin gauge aluminum foil requires additional equipment and production steps to ensure the strict specifications, including special rollers and different final annealing stage.[121]

Petitioners note that JW Aluminum, *** U.S. producer of ultra-thin gauge aluminum foil, produces ultra-thin gauge aluminum foil in the same facilities and using the same production equipment and employees as the firm's production of thicker gauge aluminum foil. [122]

Interchangeability

Respondents argue that ultra-thin gauge aluminum foil and thicker aluminum foils are not interchangeable due to its physical properties, end uses, and the tighter tolerances and higher quality required.[123]

Petitioners contend that while ultra-thin gauge aluminum foil and thicker aluminum foils are generally not interchangeable, there is limited interchangeability in some end-uses consistent with a wide range of products comprising a continuum.[124]

Customer and producer perceptions

Respondents contend that ultra-thin gauge aluminum foil is perceived as markedly different from other aluminum foil, given the importance of gauge and precision of product requirements in purchasing decisions for ultra-thin gauge aluminum foil.[125]

Petitioners argue that producers and customers perceive ultra-thin gauge aluminum foil as part of a continuum of aluminum foil, albeit with a thinner gauge than other aluminum foil.[126]

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[119] ProAmpac's prehearing brief, p. 3 and Flexible Packaging's prehearing brief, pp. 8-9.

[120] Hearing transcript, p. 48 (Herrman), Petitioners' prehearing brief, p. 5, and Petitioners' posthearing brief, p. 5.

[121] ProAmpac's prehearing brief, p. 3 and Flexible Packaging's prehearing brief, p. 14.

[122] Hearing transcript, pp. 48-49 (Herrman) and Petitioners' posthearing brief, p. 5.

[123] ProAmpac's prehearing brief, p. 3 and Flexible Packaging's prehearing brief, pp. 10-11.

[124] Petitioners' posthearing brief, pp. 5-6.

[125] ProAmpac's prehearing brief, p. 3 and Flexible Packaging's prehearing brief, pp. 11-13.

[126] Petitioners' posthearing brief, p. 6.

Channels of distribution

Respondents argue that ultra-thin gauge aluminum foil is usually sold to converters for further processing, while thicker gauge aluminum foil is usually consumed internally or sold to automotive and industrial manufacturers.[127]

The petitioners state that both ultra-thin gauge aluminum foil and thicker gauge aluminum foil are sold to entities that further process the product.[128]

Table I-8 presents U.S. producers' channels of distribution for shipments of ultra-thin gauge aluminum foil and all other aluminum foil. *** had shipments of ultra-thin gauge aluminum foil during the period of investigation.

Table I-8
Aluminum foil: Channels of distribution of ultra-thin gauge aluminum and all other aluminum foil, 2014-16, January to September 2016, and January to September 2017

* * * * * * *

Price

Respondents argue that the price of ultra-thin gauge aluminum foil is significantly higher than other thicker aluminum foil.[129]

Petitioners contend that ultra-thin gauge aluminum foil prices fall along a continuum of prices for aluminum foil, albeit on the higher end of the pricing spectrum, due to costs associated with the additional number of rolling passes.[130]

The Commission collected pricing data on ultra-thin gauge aluminum foil (pricing product number 1). The other 7 pricing products are other types of aluminum foil. Table I-9 presents price comparisons for pricing product 1 versus products 2 through 8 in aggregate. The price per pound of products 2 through 8 was consistently lower than that of product 1. The weighted average price per pound over the 2014–September 2017 period was $*** for product 1 and $*** for products 2 through 8.

Table I-9
Aluminum foil: Weighted-average f.o.b. prices and quantities of domestic shipments of ultra-thin gauge aluminum foil and all other aluminum foil

* * * * * * *

[127] Flexible Packaging prehearing brief, pp. 16-17.
[128] Hearing transcript, p. 49 (Herrman) and Petitioners' posthearing brief, p. 5.
[129] ProAmpac prehearing brief, p. 3 and Flexible Packaging prehearing brief, pp. 13-14.
[130] Petitioners' posthearing brief, p. 6 and Petitioners' postconference brief, p. 9.

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

U.S. MARKET CHARACTERISTICS

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

Included within the scope of the investigations is certain fin stock aluminum foil. This type of aluminum foil consists of a slightly different chemical makeup, is greater than 0.045 mm in thickness, and is mainly used in the manufacture of heat exchangers used in items such as air conditioner condenser/evaporators, refrigerator condenser/evaporator, and automobile radiators.

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

* * * * * * *

Apparent U.S. consumption of aluminum foil increased by *** percent during 2014-16, and was *** percent higher in January-September 2017 than in January-September 2016.

U.S. PURCHASERS

The Commission received 50 usable questionnaire responses from firms that bought aluminum foil during January 2014-September 2017.[4] Twenty-two responding purchasers are producers of consumer products, 19 are producers of industrial products, 6 are flexible packaging manufacturers, 4 are distributors, 2 are processing distributors which slit aluminum into smaller format coils, 2 are automotive components manufacturers, 1 produces aerospace products, and 1 produces high-end visual decorative products. Three purchasers produce small reel (less than 25 lbs.) of aluminum foil for consumer/household uses and 14 purchasers

[1] The U.S. end users of thin-gauge and ultra-thin gauge aluminum foil are converters, who laminate and/or print aluminum foil to make flexible packaging. This flexible packaging is used for a variety of purposes including food packaging, tobacco, pharmaceutical applications, and others. Conference transcript, p. 99 (Dewar) and hearing transcript pp. 136-137 (Casey).

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

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

[4] Of the 50 responding purchasers, 44 purchased the domestic product, 41 purchased imports of the subject merchandise from China, and 19 purchased imports of aluminum foil from other sources.

produce single-backed aluminum foil products[5] in the United States from their purchases and/or imports of aluminum foil. Ten purchasers reported purchasing certain fin stock aluminum foil. The largest purchasers of certain fin stock aluminum foil in 2016 are ***. Forty-four purchasers reported purchasing aluminum foil other than fin stock. Total purchase quantities of aluminum foil were widely distributed among these 43 purchasers. The largest purchasers of aluminum foil other than fin stock are ***.[6]

Purchasers reported purchasing various aluminum foil thicknesses during January 2014-September 2017. Twenty-seven purchasers purchased ultra-thin aluminum foil, 25 purchased thin, 29 purchased standard, 20 purchased heavy, and 31 purchased extra heavy aluminum foil. The majority of purchasers indicated that they did not purchase aluminum foil that has been backed with paper, paperboard plastics, or similar backing materials on both sides since January 2014. Four purchasers reported purchasing double-backed aluminum foil from the United States and three purchased double-backed aluminum foil from nonsubject countries.[7]

CHANNELS OF DISTRIBUTION

Aluminum foil is sold primarily to end users.[8] U.S. shipments across various channels were relatively stable during 2014-16, with most going to either consumer packaging/ converters or industrial applications. A slight shift moved the plurality of U.S. producers commercial shipments from consumer packaging/converters to industrial application end users in 2016 (table II-1). Imports from China saw an increasing share of shipments sold to distributors and away from industrial application end users. With this shift, the largest share of imports from China in 2016 were sold to consumer packaging/converters. Importers of aluminum foil from Armenia sold more than three-quarters of their shipments to distributors. Importers of aluminum foil from Germany and Russia sold primarily to end users in consumer packaging (although there was a large increase in the share sold to household use/spoolers from Russia in 2014-16), while importers of aluminum foil from all other sources sold primarily to end users in industrial applications.

Table II-1
Aluminum foil: U.S. producers' and importers' U.S. commercial shipments, by sources and channels of distribution, 2014-16, January to September 2016, and January to September 2017

* * * * * * *

GEOGRAPHIC DISTRIBUTION

U.S. producers and importers reported selling aluminum foil to all regions in the contiguous United States (table II-2). For U.S. producers, 4.2 percent of sales were within 100 miles of their production facility, 92.9 percent were between 101 and 1,000 miles, and 2.9

[5] Single-backed aluminum foil products include food wrappers (e.g., gum wrappers), cigarette paper, etc.

[6] ***.

[7] No purchaser reported purchases of double-backed aluminum foil from China since January 2014.

[8] Petition, vol. 1, p. 10. In the case of standard gauge aluminum foil, ***.

percent were over 1,000 miles. Importers sold 34.6 percent within 100 miles of their U.S. point of shipment, 58.0 percent between 101 and 1,000 miles, and 7.4 percent over 1,000 miles.

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

Region	U.S. producers	Importers
Northeast	5	12
Midwest	6	11
Southeast	5	11
Central Southwest	6	8
Mountain	3	5
Pacific Coast	6	6
Other[1]	---	1
All regions (except Other)	3	4
Reporting firms	6	14

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

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

SUPPLY AND DEMAND CONSIDERATIONS

U.S. supply

Domestic production

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

Industry capacity

Domestic capacity utilization decreased irregularly from *** percent in 2014 to *** percent in 2016, as a result of decreased industry production, but was higher in January to September ("interim") 2017, at *** percent, than in interim 2016 (*** percent). Capacity decreased by *** percent over 2014-16, but production decreased by *** percent to slightly more than *** short tons. As shown in Part III, most capacity in the United States is focused on the thicker gauges of aluminum foil. As of 2016, only one U.S. producer reported being capable of producing thin gauge or ultra-thin gauge aluminum foil.[9] This moderate level of capacity utilization suggests that U.S. producers may have a moderate ability to increase production of

[9] ***.

aluminum foil in response to an increase in prices, although the ability to increase production may be influenced by the type of gauge of aluminum foil.[10]

Alternative markets

U.S. producers' exports, as a percentage of total shipments, decreased from *** percent in 2014 to ***percent in 2016, and were ***percent in interim 2017 compared with *** percent in interim 2016. This level of exports indicates that U.S. producers may have limited ability to shift shipments between the U.S. market and other markets in response to price changes.

Inventory levels

All domestically produced aluminum foil is produced-to-order. U.S. producers' inventories, as a ratio to total shipments, have remained relatively stable and below ***, on an annualized basis, since 2014. These inventory levels suggest that U.S. producers may have a limited ability to respond to changes in demand with changes in the quantity shipped from inventories.

Production alternatives

Three of eight U.S. producers stated that they could switch production from aluminum foil to other products.[11] Other products that producers reportedly can produce on the same equipment as aluminum foil are aluminum coil and aluminum sheet. Factors affecting U.S. producers' ability to shift production include available machine time and product contract requirements.

Subject imports from China[12]

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

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

[11] This includes firms with spooling and backing operations such as ***.

[12] 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."

Industry capacity

China capacity utilization increased from 81.3 percent in 2014 to 89.2 percent in 2016, despite production capacity increasing from 1.41 million to 1.54 million short tons (9.0 percent). Capacity utilization in interim 2017 was slightly higher than in interim 2016, at *** percent. This moderately high level of capacity utilization suggests that China producers may have somewhat limited ability to increase production of aluminum foil in response to an increase in prices.

Alternative markets

China's exports to markets other than the United States, as a percentage of total shipments, increased from 30.3 percent of total shipments in 2014 to 34.2 percent in 2016, but were slightly lower in the first three quarters of 2017 (33.9 percent) compared with that period in 2016 (35.3 percent). Shipments to its domestic market decreased from *** percent of total shipments to *** percent in 2014-16. Export shipments to the United States accounted for 8.5 percent of their total shipments in both 2014 and 2016, but were 7.9 percent in interim 2017, compared with 8.6 percent in interim 2016. China's exports indicate that producers may have a substantial ability to shift shipments between domestic or other markets and the U.S. market in response to price changes.

Inventory levels

Chinese responding foreign firms' inventories decreased relative to total shipments, from 7.0 percent in 2014 to 5.9 percent in 2016, and were 5.0 percent in interim 2017 compared with 6.1 percent in interim 2016. These inventory levels suggest that responding foreign firms may have limited ability to respond to changes in demand with changes in the quantity shipped from inventories.

Production alternatives

Four of 12 responding foreign producers stated that they could switch production from aluminum foil to other products. Other products that responding foreign producers reportedly can produce on the same equipment as aluminum foil are aluminum plate, aluminum sheet, and aluminum coil. One foreign producer (***), however, stated that it has never changed production due to high costs and time requirements of switching. In addition, *** reported it is unwilling to change production from coils to foil because this would include ***.

Nonsubject imports

Nonsubject imports accounted for 33.9 percent of total U.S. imports in January 2014-September 2017. The largest sources of nonsubject imports, by quantity, during this period were Armenia, Germany, and Russia. Combined, these countries accounted for 59.2 percent of nonsubject imports.

Supply constraints

Two of five responding producers reported instances where they were unable to supply aluminum foil to purchasers since 2014. *** stated that it exited the .000X business (i.e., thin and ultra-thin gauges), and that there have been instances when seasonal demand exceeded its production capacity. *** stated that its coater capacity has limited its supply. In addition, 5 of 22 responding importers reported that there were supply constraints in the U.S. market for aluminum foil. Importer *** reported that U.S. mills have been at capacity/overbooked since the second quarter of 2017. Importer *** stated that it cannot fulfill all its customer requirements from sources outside of China since these investigations began. Similarly, importer *** noted that there have been constraints due to the pendency of these investigations. Importer *** reported that there is "limited capacity" outside China to meet increased demands due to these investigations, adding that one major specification required by U.S. customers (1235 alloy) is "very limited" outside China. It notes that it has "begged and pleaded with every US source to acquire and obtain these key inputs and they cannot manufacture them," which has meant that it is "sustaining heavy cash losses and will be eliminating jobs and potentially closing facilities."[13] Importer Trinidad Benham has reported that it is responsible for much of the increase in imports from China, which it had previously sourced from nonsubject sources, and it cannot buy large reels of foil from Reynolds, as it is the main competitor to Reynolds for downstream small reel aluminum foil.[14]

Purchasers were asked about supply constraints from the United States, China, and nonsubject countries. In all, a strong majority (36 of 50) purchasers indicated that they have experienced supply constraints from U.S. producers since 2014. Purchasers reported domestic producers putting them on allocation, declining orders, delivering late, lengthening lead times, limiting supplies to the amount included in contracts, not supplying ultra-light gauge foil under .003 that the producer had previously supplied, rationalization, and an inability or unwillingness to meet certain specifications such as brightness, gauge, or width.[15] Purchasers of thin gauge and ultra-thin gauge aluminum foil most frequently reported the supply constraints. Multiple purchasers of thin gauge and ultra-thin gauge aluminum foil, which is typically used in flexible packaging applications such as food and pharmaceuticals, along with a representative of the Flexible Packaging Association, presented testimony regarding the inability to source the needed foil domestically due to gauge, width, quality or other reasons.[16] Respondent Flexible Packaging Association submitted ***.[17]

Fewer firms, 7 of 43 responding purchasers, reported supply constraints with respect to imported aluminum foil from China since 2014 and 15 of 38 for aluminum foil from nonsubject countries. Three purchasers noted late shipments from China, two reported an inability to ship to the United States, one indicated that Chinese sources are unwilling to ship to the United States, and one stated that it is unable to purchase aluminum foil from China because of the "countervailing tariffs." Purchasers that reported constraints from nonsubject countries

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[13] E-mail from ***.

[14] Hearing transcript, p. 153 (Walters).

[15] In two letters following up to its purchaser questionnaire response, ***.

[16] Hearing transcript pp. 135-150, 164-166 (Casey, Keane, Nelson, Dodrill, Squatrito, French, and Gallagher).

[17] Respondent Flexible Packaging Association's posthearing brief, exh. 6.

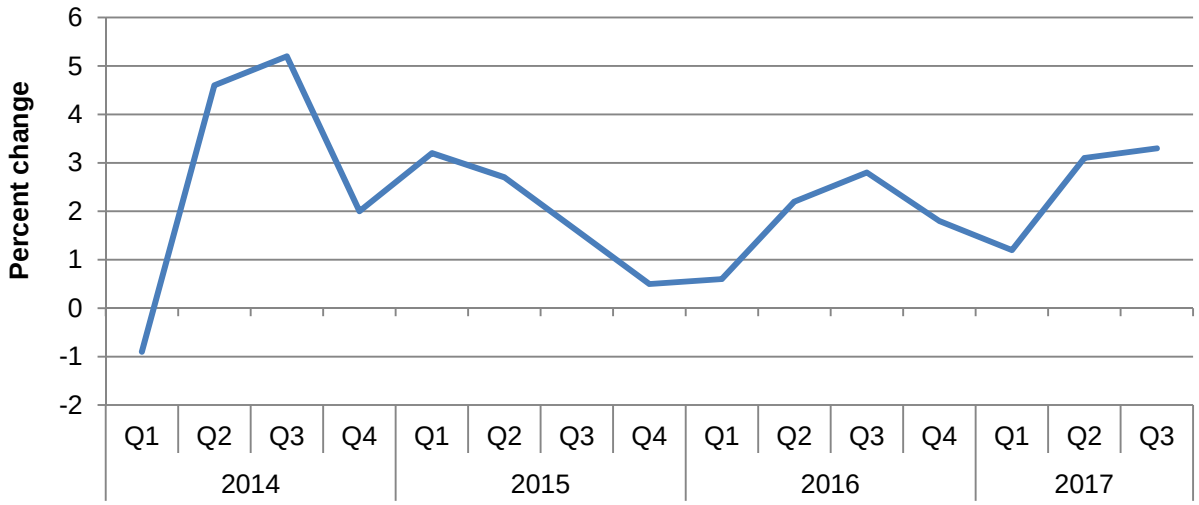
indicated that there is a lack of capacity to manufacture the needed specifications, resulting in declined orders, extended delivery dates, late deliveries, limitations on quantities purchased, and turning away new customers.

U.S. demand

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

Demand for aluminum foil is driven by overall economic growth. Overall GDP growth slowed over 2014-15, but increased overall (figure II-1). Demand for packaging foil has remained relatively stable; however demand for fin stock which is driven by the automotive industry has increased faster than the general economy.[18] [19]

Figure II-1
Real U.S. GDP growth: Percentage change from the previous quarter, quarterly, seasonally adjusted, January 2014-September 2017



Source: National Income and Product Accounts-Table 1.1.1, Percent Change from Preceding Period in Real Gross Domestic Product, Bureau of Economic Analysis, http://www.bea.gov/iTable/index_nipa.cfm, retrieved January 9, 2017.

[18] Conference transcript, pp. 173-174 (Garcia and Lutterbein).

[19] According to industry sources, U.S. and Canadian producers' shipments of aluminum foil to major end-use segments which include household foil, semi-rigid containers, and consumer durable goods (e.g. air conditioners), have remained relatively stable during 2010-15, while shipments to the transportation market (e.g. passenger cars) has increased. Petitioners' postconference brief, exhibit 8, attachment 1; The Aluminum Association, Inc., *Net Shipments by Major Market*, accessed April 3, 2017.

End uses and cost share

U.S. demand for aluminum foil depends on the demand for U.S.-produced downstream products. Reported end uses include household foil, semi-rigid containers, flexible packaging, and durable goods such as fin stock used in air conditioners and radiators.[20]

End-use cost shares accounted for by aluminum foil vary greatly depending on the final product. Aluminum foil accounts for a large cost share of household aluminum and disposable aluminum containers, a moderate cost share of flexible packaging end uses (e.g., labels, cartons, wrappers, bags, pouches, etc.), and for a relatively small cost share of heat exchangers, humidifiers, and baseboard space heaters.[21] Reported cost shares for some end uses were:

- Automotive radiators (7-30 percent)
- Automotive condensers (4-20 percent)
- Caps & closures (25 percent)
- Confectionary foil (16-70 percent)
- Composite laminates/foil laminates (24-50 percent)
- Disposable aluminum containers (60-80 percent)
- Evaporator coil (25-27 percent)
- Flexible packaging (13-50 percent)
- Food or beverage pouches (35-50 percent)
- Household aluminum (63-100 percent)
- HVAC/air conditioning units (3-15 percent)
- Insulation (20-80 percent)
- Lidding (15-79 percent)
- Medical/pharmaceutical packaging (17-90 percent)
- Printing plates (45-47 percent)
- Tobacco innerlining (50 percent)

Business cycles

Four of five U.S. producers, 10 of 21 importers, and 21 of 48 purchasers indicated that the market was subject to business cycles or conditions of competition. U.S. producers and importers reported that demand for aluminum foil was seasonal, with some firms noting specifically that the demand for confectionary foil and container foil increases around the holidays including Easter, Independence Day, Thanksgiving, and Christmas. Two U.S. producers reported that fin stock was cyclical, following weather patterns, and was influenced by trends in the construction sector. Five purchasers reported that demand for aluminum foil tapes and fins stock used in HVAC applications was higher during spring and summer months. One purchaser reported seasonal demand during Thanksgiving and Christmas, as well as during summer grilling season.

[20] Hearing, pp. 24-25 (Rudisill).
[21] Petitioners' postconference brief, exhibit 1, p. 9.

Demand trends

Most firms reported an increase in U.S. demand for aluminum foil since January 1, 2014 (table II-3). Four U.S. producers reported that it was driven by general economic growth. Three importers and two purchasers attributed the increased demand to a switch from steel to lighter aluminum components and additional heat exchangers in the automotive industry.[22] The use of aluminum in heat exchangers in automobiles means that auto demand can affect demand for extra heavy aluminum foil. Novelis reported that consumption of aluminum by the auto industry is expected to increase from 9 percent of aluminum consumption in 2015 to 16 percent by 2025.[23]

Two importers attributed increased demand for aluminum foil to an increase in single-serve food applications as well as the stand-up pouches. Two purchasers that cited decreasing demand noted that end users are reducing their purchases of aluminum foil in favor of lower cost materials, such as clear barrier packages.

Table II-3
Aluminum foil: Firms' responses regarding U.S. demand and demand outside the United States

Item	Increase	No change	Decrease	Fluctuate
Demand in the United States				
U.S. producers	5	---	---	---
Importers	10	4	3	1
Purchasers	10	8	7	5
Demand outside the United States				
U.S. producers	5	---	---	---
Importers	7	2	1	2
Purchasers	12	4	3	2
Demand for purchasers' final products				
Purchasers	20	6	10	11

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

Most firms reported an increase in demand for aluminum foil outside of the United States. The majority of firms cited similar drivers for demand outside the United States including general economic trends, population growth, and automotive production.

A plurality of responding purchasers (20 of 47) reported that demand for their firms' final products incorporating aluminum foil had increased since January 1, 2014, with 11 reporting that final product demand had fluctuated, 10 reporting decreases, and 6 reporting no change. Most purchasers that reported some sort of change indicated that the change affected their demand for aluminum foil. The end uses in which purchasers reported using aluminum foil are presented in table II-4.

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

[23] Respondent Valeo's posthearing brief, p. 5.

Table II-4
Aluminum foil: Purchasers' end uses

End Use	Number of purchasers	End Use	Number of purchasers
Aluminum foil in small reels (< 25 lbs.)	6	Food packaging (pouches, wrappers, cartons)	17
Aluminum foil (household)	3	Single-backed	11
Automotive radiators	3	Double-backed	8
Automotive condensers	4	HVAC items	9
Caps & closures	3	Insulation	4
Cigarette packaging	1	Labels	3
Composite laminates/foil laminates	15	Medical device items	4
Confectionary foil	10	Pharmaceutical use items	10
Disposable aluminum containers	5	Other	17

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

Substitute products

Substitutes for aluminum foil are limited. Most U.S. producers (5 of 6), importers (22 of 24), and purchasers (35 of 49) reported that there were no substitutes. Substitute products include plastic in food containers and sandwich wraps, caps and closures, and converter coils; foam in food containers; paper (including wax paper) in food packaging and tobacco; and metalized films in composite lamination. Most firms that identified substitutes reported that the price of these substitutes do not affect the price of aluminum foil.

SUBSTITUTABILITY ISSUES

The degree of substitution between domestic and imported aluminum foil depends upon such factors as relative prices, quality (e.g., grade standards, defect rates, etc.), and conditions of sale (e.g., price discounts/rebates, lead times between order and delivery dates, reliability of supply, product services, etc.). Based on available data, staff believes that there are varying degrees of substitutability between domestically produced aluminum foil and aluminum foil imported from subject sources, based upon the thickness (gauge) of the foil. For ultra-thin aluminum foil, there is much lower substitutability than for all other gauges.

Lead times

Aluminum foil is primarily produced-to-order. U.S. producers reported that 100.0 percent of their commercial shipments were produced-to-order, with lead times averaging 38 days. Importers reported that 91.7 percent of their commercial shipments were produced-to-order, with lead times averaging 86 days. Importers reported that 2.8 percent of subject import shipments were shipped from a foreign manufacturer's inventory, with lead times averaging 43 days. The remaining 5.5 percent of importers' commercial shipments came from U.S. inventories, with lead times averaging 3 days.[24]

[24] ***.

Knowledge of country sources

Forty-seven purchasers indicated they had marketing/pricing knowledge of domestic product, 43 of aluminum foil imported from China, 19 from Germany, 5 from Armenia, 4 from Russia, and 23 of aluminum product from other nonsubject countries.

As shown in table II-5, a plurality of purchasers indicated that they "always" make purchasing decisions based on the producer, while a majority of purchasers' customers "never" make purchasing decisions based on the producer. The country of origin was less of a factor in purchasing decisions than the specific producer. The majority of purchasers and their customers "never" make purchasing decisions based on the country of origin. Of the 17 purchasers that reported that they "always" make decisions based the manufacturer, 8 firms cited quality as a reason;[25] other reasons cited include minimum brightness, preference for domestic source, lead time, thickness specifications (ultra-thin), and price.

Table II-5
Aluminum foil: Purchasing decisions based on producer and country of origin

Purchaser/Customer Decision	Always	Usually	Sometimes	Never
Purchaser makes decision based on producer	17	7	13	13
Purchaser's customers make decision based on producer	3	1	13	23
Purchaser makes decision based on country	9	6	11	24
Purchaser's customers make decision based on country	2	2	13	23

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 foil were quality (45 firms), price (37 firms), and availability/supply (23 firms) as shown in table II-6. Quality was the most frequently cited first-most important factor (cited by 28 firms), followed by technical specifications/gauge (9 firms); quality and availability/supply were the most frequently reported second-most important factors (14 firms each); and price was the most frequently reported third-most important factor (19 firms).

The majority of purchasers (27 of 50) reported that they "sometimes" purchase aluminum foil offered at the lowest price, 13 reported "usually," 8 reported "never,"[26] and 2 reported "always."

[25] ***.

[26] One of these reported purchasing ultra-thin foil, three reported purchasing extra-heavy foil, three reported purchasing both, and one reported purchasing neither (it only purchased thin foil).

Table II-6
Aluminum foil: Ranking of factors used in purchasing decisions as reported by U.S. purchasers, by factor

Factor	First	Second	Third	Total
Quality	28	14	3	45
Price / Cost	6	12	19	37
Availability / Supply	5	14	4	23
Specification/Gauge	9	---	1	10
Lead time/delivery	2	4	12	18
Other[1]	1	6	10	NA

[1] Other factors include range of offered products, service, payment terms, reputation of supplier, delivery time, available capacity, and traditional supplier.

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

When asked if they purchased aluminum foil from one source although a comparable product was available at a lower price from another source, 43 purchasers reported reasons including quality, lead times, customer preference, supply reliability, meeting technical specifications, minimum order requirements, supplier diversification, and availability. A majority (33 of 50) of purchasers reported that certain types of aluminum foil were only available from a single source. Fifteen purchasers reported that most ultra-thin aluminum foil is only available from China and Europe and is not produced in the United States. Three purchasers reported that foil wider than 71 inches is also only available from China and/or Germany; an additional three specified width as a factor but did not specify a country. Two purchasers stated that supply is limited for certain alloys produced in Brazil, Korea, Taiwan, and Europe. One purchaser stated that high-end bright ultra-thin foil is only available from China and that all other aluminum foil mills, including those in the United States, produce lower brightness foil. One firm reported that certain fin stock was only available from domestic mills.

Importance of specified purchase factors

Purchasers were asked to rate the importance of 17 factors in their purchasing decisions (table II-7). The factors rated as very important by more than half of responding purchasers were availability (50 purchasers), product consistency (50), reliability of supply (50), quality meets industry standards (45), thickness specifications (44), price (41), delivery time (37), and quality exceeds industry standards (33).

Table II-7
Aluminum foil: Importance of purchase factors, as reported by U.S. purchasers, by factor

Factor	Very important	Somewhat important	Not important
Availability	50	---	---
Product consistency	50	---	---
Reliability of supply	50	---	---
Quality meets industry standards[1]	45	5	---
Thickness specifications	44	6	---
Price	41	8	1
Delivery time	37	13	---
Quality exceeds industry standards[1]	33	16	1
Packaging	23	22	5
Product range	19	23	8
Technical support/service	19	25	6
Delivery terms	18	28	4
Extension of credit	15	23	12
Manganese content	10	15	24
U.S. transportation costs	10	31	8
Discounts offered	9	27	14
Minimum quantity requirements	7	30	13

[1] Three of the five purchasers rating "Quality meets industry standards" as somewhat important rated "Quality exceeds industry standards" as very important.

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

Supplier certification

The vast majority of responding purchasers (48 of 50) require their suppliers to become certified or qualified to sell aluminum foil to their firm. Purchasers reported that the time to qualify a new supplier was highly variable, ranging from 60 days to 3 years, with most reporting times averaging at least 6 months. One purchaser noted that aluminum foil used in pharmaceutical and medical applications requires a longer certification period, averaging 2 to 3 years. A Rollprint representative testified that pharmaceutical certification takes two years and is a significant expense.[27] Purchasers described their process to certify new suppliers as based on material samples, FDA certifications, on-site supplier audits, trial orders, and verification of regulatory compliance. Nine of 44 responding purchasers reported that domestic producers JW Aluminum, Gränges, and/or Oracle had failed in their attempt to qualify aluminum foil (other than certain fin stock), or had lost its approved status since 2014. Six purchasers stated that JW Aluminum and Gränges could not produce to required specifications and two purchasers reported that U.S. producers had lost their approved status because of poor unwinding quality. Nine of 44 responding purchasers reported that Chinese producers had failed in their attempt to qualify aluminum foil or had lost their approved status since 2014. Purchasers listed poor quality and the inability to meet technical specifications as reasons for not certifying Chinese suppliers. All 17 responding purchasers reported that no domestic or foreign producer had failed in their attempt to qualify certain fin stock or had lost their approved status since 2014.

[27] Hearing transcript, p. 145 (Dodrill).

Changes in purchasing patterns

Purchasers were asked about changes in their purchasing patterns from different sources since 2014 (table II-8). Those describing decreased or fluctuating purchases from the United States cited reduced availability of gauges lighter than .0003 inches, poor quality for ultra-thin foil, and limited or no domestic capacity for ultra-thin foil. More than half of responding purchasers (26 of 47) reported increased purchases from China, citing betterquality, available capacity, competitive prices, and limited availability of ultra-thin gauges in the United States. A plurality of purchasers reported increased purchases from nonsubject countries, citing the need for supplier diversification, high quality, and increased downstream production.

Table II-8
Aluminum foil: Changes in purchase patterns from U.S., subject, and nonsubject countries

Source of purchases	Did not purchase	Decreased	Increased	Constant	Fluctuated
United States	5	20	7	11	8
China	4	6	26	8	3
All other sources	14	3	12	8	4
Sources unknown	25	2	---	1	1

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

Thirty-five of 50 purchasers reported that they had changed suppliers since January 1, 2014. Specifically, firms dropped or reduced purchases from Norandal because it stopped producing ultra-thin, thin, and standard gauge aluminum foil; from Oracle and Gränges because of poor quality; and from JW Aluminum due to quality issues and limited capacity. Firms reported adding or increasing purchases from foreign producers (including ***) because of product availability, supplier diversification, price, and available/increased capacity. Nine of 50 purchasers indicated that new suppliers entered the U.S. market since January 1, 2014. Three of these purchasers (***) cited sources from China generally. *** remarked that Alcoa is importing foil from Brazil, and Sysmetal Aluminum Foil Industry is supplying out of Greece. *** reported that Gränges purchased the assets of Norandal. *** stated that Ta Chen is a new U.S. supplier of aluminum foil. Lastly, *** listed Hulamin in South Africa as a new supplier, but remarked that the possible decision on or before April 19th by the United States to impose quotas and tariffs on aluminum products due to other trade investigations also has had an effect: it has "been informed by at least one foreign mill *** that because of the potential for quotas, they WILL NOT honor orders *** for delivery after April 19."[28]

Importance of purchasing domestic product

Most purchasers (47 of 49) reported that purchasing U.S.-produced product was not an important factor in their purchasing decisions. Three reported that domestic product was required by law (for 5 to 20 percent of their purchases), seven reported it was required by their customers (for 3 to 80 percent of their purchases), and five reported other preferences for domestic product. Reasons cited for preferring domestic product included: shorter lead times,

[28] E-mail from ***.

minimum quantity purchases, and a specific aluminum coating not available outside of the United States.

Comparisons of domestic products, subject imports, and nonsubject imports

Purchasers were asked a number of questions comparing aluminum foil produced in the United States, China, and nonsubject countries. First, purchasers were asked for a country-by-country comparison on the same 17 factors (table II-9) for which they were asked to rate the importance.

Table II-9
Aluminum foil: Purchasers' comparisons between U.S.-produced and imported product

Factor	U.S. vs. China			U.S. vs. nonsubject			China vs. nonsubject		
	S	C	I	S	C	I	S	C	I
Availability	6	11	28	3	9	20	9	21	0
Delivery terms	8	27	8	2	21	7	2	27	0
Delivery time	22	14	8	14	10	7	6	21	3
Discounts offered	1	25	12	1	20	7	3	24	0
Extension of credit	8	26	8	3	20	7	4	25	0
Manganese content	1	28	2	1	19	2	0	24	0
Minimum quantity requirements	12	22	10	6	17	8	4	25	1
Packaging	4	31	8	2	24	5	0	29	1
Price[1]	4	10	31	3	7	22	12	15	3
Product consistency	5	12	28	2	12	18	7	23	0
Product range	6	12	27	2	12	19	10	19	1
Quality meets industry standards	5	18	22	2	14	16	4	25	0
Quality exceeds industry standards	5	12	27	1	12	18	6	23	0
Reliability of supply	6	24	15	3	16	13	8	21	0
Technical support/service	11	30	4	3	26	3	2	26	1
Thickness specifications	6	15	24	4	11	18	5	24	0
U.S. transportation costs	11	30	4	6	22	4	1	28	0

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

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

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

At least half of responding purchasers reported that U.S. aluminum foil and aluminum foil from China were comparable on nine factors, U.S. aluminum foil was superior on one (delivery time), and inferior on six factors (availability, price, product consistency, product range, quality exceeds industry standards, and thickness specifications). Of the factors in which the U.S. product was considered to be inferior two were rated "very important" by all 50 purchasers: availability and product consistency, and at least 45 purchasers[29] rated "quality meets industry standard" as very important. In comparing U.S. product to that from nonsubject

[29] See note in table II-7.

countries purchasers provided the same pattern of responses. At least half of purchasers rated aluminum foil imported from China and nonsubject countries as comparable across all 17 factors.

Ten of 13 responding purchasers reported that aluminum foil wound onto reels weighing 25 pounds or less was available from the United States, 12 reported that it was available from China, and 9 reported that it was available from nonsubject countries. All 18 responding purchasers reported that single-backed aluminum foil (e.g., backed with paper, paperboard plastics or similar backing materials on one side) was generally available from the United States, 13 from China, and 11 reported that it was available from nonsubject countries. Thirteen of 15 purchasers reported that double backed aluminum foil (e.g., backed with paper, paperboard plastics or similar backing materials on both sides) was generally available from the United States, China, and nonsubject countries.

Purchasers were asked whether aluminum foil of different thicknesses was available from different sources. A majority of responding purchasers reported that each thickness was available from each source, except for ultra-thin from the United States (table II-10).

Table II-10
Aluminum foil: Purchase patterns from U.S., subject, and nonsubject countries, by thickness

Source	Ultra-thin	Thin	Standard	Heavy	Extra heavy	Number of responses
United States	14	26	31	26	38	46
China	31	29	31	22	33	44
All other sources	22	22	24	17	22	34
Thickness available from both U.S. and China	14	24	29	22	33	50

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

In their purchaser's questionnaire responses, 22 purchasers remarked that various specifications of ultra-thin aluminum foil were not available from U.S. producers. Multiple purchasers indicated that ultra-thin aluminum foil of less than .0003 inches was not available domestically, with some stating which thicknesses were not available (***).[30] In addition, two purchasers' responses (*** indicated that aluminum foil below .00035 is in high demand the domestic industry, causing long delays or an inability to order that product, with *** stating that "JW {Aluminum} is the only producer remaining that supplies packaging foil to us but cannot/does not supply the majority of our demand which is < .0003. *** added that "U.S. producers can only support 25 - 30 percent of North American demand for light gauge (less than .001) foil. There is only one domestic supplier left that manufactures light gauge (<.001) {aluminum foil}." A number of purchasers observed that domestic capacity for ultra-thin aluminum foil has been declining, pointing to closures from producers such as Norandal and Oracle, some of which occurred years prior to 2014, and that remaining capacity has an increased focus on heavier gauge foils. Purchaser *** added that domestic production has exited not just the market for ultra-thin aluminum foil, but also thin aluminum foil. Three purchasers stated that wide widths of ultra-thin were not available, and one stated that ultra-bright, ultra-thin aluminum foil was not domestically available. Two U.S. producers reported a

[30] One purchaser, ***, stated that the U.S. producer does not offers gauges under .000285 and its alloys for light gauge forming applications are limited.

reduction in their production of light gauge foil; *** reported a *** percent decrease in its light weight foil shipments from 2013 to 2016 and *** reported that ***.

Some purchasers also noted quality issues with domestic ultra-thin aluminum foil. Purchaser *** described this issue: "Ultra-thin foil is only available in very limited quantities from the United States and quality is poor (i.e. gauge variation, tear outs, excessive pin holes). There is only one supplier in the US capable of producing the grades of foil we use and their total capacity is barely enough just to supply {our} requirements. Their assets are more than 50 years old and are incapable of producing quality ultra-thin foil. Availability of all foil thicknesses, including ultra-thin foil is abundant from most other countries and quality is typically very good." A Bemis representative stated that "Domestic ultra-thin foil frequently has an unacceptably high rate of tearing, bagginess, variations in thickness and overall poor quality."[31] Rollprint testified that in addition to tearing, domestic ultra-thin material has poor sheet flatness.[32] In stating that it purchases based on the manufacturer's quality, purchaser *** stated that it sources domestically if thickness is .001 or greater; otherwise it will look to China. It also added that there are times when the domestic mills are not able to supply a product on time. Purchaser All-Foils Inc. stated that there is a U.S. mill that he regularly rejects "in the neighborhood of 15 to 20 percent" for really light gauges.[33] Petitioner JW Aluminum testified that its return rate is very low, with one customer accepting 99.6 percent of the volume of light gauge foil it shipped in the fourth quarter of 2017, and that it would not survive if it had return rates higher than one-half or one percent.[34] Respondent ProAmpac stated that ***, and included an internal report showing its rejection rates by supplier, noting that ***.[35] ***.[36]

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

In order to determine whether U.S.-produced aluminum foil can generally be used in the same applications as imports from China and nonsubject countries, 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-11, four of six responding producers indicated that domestic and Chinese aluminum foil are "always" interchangeable. In contrast, a plurality of importers and purchaser indicated that aluminum foil from these sources is "sometimes" interchangeable. Four producers also reported that domestic and other imported aluminum foil are "always" interchangeable. Importer and purchaser responses comparing domestic aluminum foil to that of nonsubject countries more frequently indicated that they have similar or slightly greater interchangeability than when comparing Chinese foil to U.S. foil. All purchasers but one reporting "sometimes" or "never" when comparing U.S. and Chinese foil were purchasers of ultra-thin foil, extra heavy foil, or both.

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[31] Hearing transcript, p. 138 (Casey).

[32] Ibid., p. 143 (Dodrill).

[33] "Aluminum Foil Duties Won't Make America Great Again," Bloomberg.com, Nov. 10, 2017, included as exh. 2 to Respondent ProAmpac's posthearing brief.

[34] Hearing transcript, pp. 39 and 78 (Roush and McCarter).

[35] Respondent ProAmpac's posthearing brief, p. 6 and exhs. 4 and 5.

[36] Respondent Flexible Packaging Association's posthearing brief, p. 6 and exhs. 2-4.

Table II-11
Aluminum foil: Interchangeability between aluminum foil 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
United States vs. China	4	1	1	---	4	8	9	3	8	13	20	4
United States vs. Armenia	4	---	---	---	2	2	---	---	2	3	2	---
United States vs. Germany	4	---	1	---	3	3	4	---	3	7	9	3
United States vs. Russia	4	---	---	---	3	3	---	1	3	2	2	---
United States vs. Other	4	1	1	---	3	4	10	2	3	9	15	1
China vs. Armenia	4	---	---	---	2	2	---	---	2	3	1	---
China vs. Germany	4	1	---	---	4	6	1	---	5	9	7	---
China vs. Russia	4	---	---	---	3	3	1	---	3	2	1	---
China vs. Other	4	1	---	---	3	11	3	1	7	12	5	---
Armenia vs. Germany	4	---	---	---	3	---	---	---	2	2	1	---
Armenia vs. Russia	4	---	---	---	3	2	---	---	3	2	---	---
Armenia vs. Other	4	---	---	---	3	2	---	---	2	3	1	---
Germany vs. Russia	4	---	---	---	3	---	1	1	2	---	1	---
Germany vs. Other	4	1	---	---	3	5	---	---	2	6	4	1
Russia vs. Other	4	---	---	---	3	2	1	---	2	3	1	---

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-12, nine responding purchasers reported that domestically produced product "always" met minimum quality specifications, compared with 21 responding purchasers which reported that the aluminum foil imported from China "always" met minimum quality specifications. Aluminum foil from China was rated as "always" or "usually" meeting minimum quality specifications by 41 of 42 purchasers, whereas domestic aluminum foil was appraised to meet minimum quality specifications "usually" or "sometimes" by 33 of 48 purchasers.

Table II-12
Aluminum foil: Ability to meet minimum quality specifications, by source[1]

Source	Always	Usually	Sometimes	Rarely or never
United States	9	18	15	6
China	21	20	1	---
Nonsubject sources	18	18	5	1

[1] Purchasers were asked how often domestically produced or imported aluminum foil meets 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 foil from the United States, China, or nonsubject countries. When comparing domestic aluminum foil to that imported from China, five of six responding producers indicated that there were "never" any factors other than price that are important in their sales of aluminum foil (table II-13). Producers' responses were similar when comparing to all other countries' aluminum foil as well. In contrast, a majority of purchasers, and a near-majority of importers indicated that factors other than price were

"always" important in their aluminum foil sales or purchases. At least a plurality of responding purchasers also described that there are "always" non-price factors that distinguish domestic aluminum foil from the product imported from Armenia, Germany, and all other nonsubject countries. Importers' responses were more mixed.

Table II-13
Aluminum foil: Significance of differences other than price between aluminum foil 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
United States vs. China	---	---	1	5	11	5	5	2	26	10	7	3
United States vs. Armenia	---	---	---	4	2	---	---	2	4	1	1	1
United States vs. Germany	---	---	1	4	1	5	2	2	12	5	4	---
United States vs. Russia	---	---	---	4	2	1	1	3	3	1	2	2
United States vs. Other	---	---	1	5	6	4	5	2	14	7	7	1
China vs. Armenia	---	---	---	4	1	---	---	3	3	---	1	2
China vs. Germany	---	1	---	4	---	2	5	3	3	7	6	3
China vs. Russia	---	---	---	4	1	1	1	4	2	1	2	2
China vs. Other	---	1	---	4	3	3	7	5	8	7	7	3
Armenia vs. Germany	---	---	---	4	---	1	---	2	3	2	1	---
Armenia vs. Russia	---	---	---	4	1	1	---	3	2	1	1	2
Armenia vs. Other	---	---	---	4	1	1	---	3	2	2	1	1
Germany vs. Russia	---	---	---	4	---	1	1	2	1	1	4	---
Germany vs. Other	---	1	---	4	---	2	3	2	2	6	5	---
Russia vs. Other	---	---	---	4	1	1	1	4	2	2	---	1

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

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

ELASTICITY ESTIMATES

This section discusses elasticity estimates; parties were encouraged to comment on these estimates in their prehearing or posthearing brief. However, no party made any meaningful comments.

U.S. supply elasticity

The domestic supply elasticity[37] for aluminum foil measures the sensitivity of the quantity supplied by U.S. producers to changes in the U.S. market price of aluminum foil. 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 foil. Analysis of these factors above indicates that the U.S. industry has the ability to moderately increase or decrease shipments to the U.S. market; an estimate in the

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

range of 2 to 5 is suggested.[38] The estimate for certain portions of the market may vary based on available capacity. For example, as there is only one U.S. producer of thin and ultra-thin gauge aluminum foil, the estimate is likely in the lower portion of this range, and possibly below.

U.S. demand elasticity

The U.S. demand elasticity for aluminum foil measures the sensitivity of the overall quantity demanded to a change in the U.S. market price of aluminum foil. 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 foil in the production of any downstream products. Aluminum foil accounts for a fairly substantial share of many of the end uses into which it is incorporated, although those end uses may be a small part of a larger consumer product and there are few viable substitutes for aluminum foil. Based on available information, the aggregate demand for aluminum foil is likely to be moderately to highly inelastic; a range of -0.25 to -0.6 is suggested.[39]

Substitution elasticity

The elasticity of substitution depends upon the extent of product differentiation between the domestic and imported products.[40] 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 foil and imported aluminum foil is likely to vary based on the thickness of the foil. For ultra-thin (less than .0003 gauge) aluminum foil, the elasticity of substitution is lower than that of other gauges. For ultra-thin, the substitution elasticity is likely to be low, in the range of 1.5 to 2.5; for other thicknesses, it is likely to be moderate to high, in the range of 3 to 6.

[38] A 1998 EPA study estimated the supply elasticity for the secondary aluminum industry to be 2.33. "Economic Impact Analysis for the Proposed Secondary Aluminum Industry NESHAP," United States Environmental Protection Agency, November 1998. Found at https://nepis.epa.gov/Exe/ZyPDF.cgi/91011CLZ.PDF?Dockey=91011CLZ.PDF, retrieved January 17, 2018.

[39] The same EPA study references a 1979 study which estimated that the price elasticity of demand for aluminum more broadly to be -0.13 in the short run and -0.80 in the long run.

[40] 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. product to the subject products (or vice versa) when prices change.

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

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

U.S. PRODUCERS

The Commission issued a U.S. producer questionnaire to nine firms based on information contained in the petition. Six firms provided usable data on their productive operations. Staff believes that these responses represent the vast majority of U.S. production of aluminum foil.[1] Staff also instructed importers and purchasers of aluminum foil with spooling and backing operations to complete a portion of the U.S. producers' questionnaire regarding those operations. Six companies provided usable data regarding spooling and backing operations.[2]

Table III-1 lists U.S. production, spooling, and backing operations on aluminum foil, their production locations, positions on the petition, and shares of total production from January 2014 to September 2017.

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

The petition listed an additional 3 firms (Alpha, Golden, and United) believed to produce aluminum foil but these firms did not provide a questionnaire response. The petitioners estimated that Alpha produced *** pounds (*** short tons), Golden produced *** pounds (*** short tons), and United produced *** pounds (*** short tons) during 2016. These three firms combined produced *** short tons of aluminum foil in 2016, which is equal to *** percent of the petitioners' estimate of total U.S. production. The petitioners believe that *** after being acquired by Garmco USA, Inc. ("Garmco") on October 19, 2015. Petition, Vol. 1, pp. 2-5. Staff ***. Email from *** to Investigator, November 21, 2017.

[2] Select data regarding U.S. operations on small reel and backed aluminum foil are presented in appendix D.

Table III-1
Aluminum foil: U.S. production, spooling, and backing operations, their position on the petition, location of production, and shares of reported production, January 2014 to September 2017

Firm	Position on petition	Production location(s)	Within scope			Downstream out-of-scope
			All aluminum foil	Certain fin stock	Aluminum foil other than fin stock	Small reels
Aleris	***	Clayton, NJ	***	***	***	***
Gränges	***	Huntingdon, TN Salisbury, NC Newport, AR	***	***	***	***
Handi Foil	***	Wheeling IL	***	***	***	***
JW Aluminum	Support	Goose Creek, SC St. Louis, MO Russellville, AR Williamsport, PA	***	***	***	***
Novelis	Support	Fairmont, WV Terre Haute, IN	***	***	***	***
Oracle	***	Winston-Salem, NC	***	***	***	***
Reynolds	Support	Louisville, KY	***	***	***	***
Trinidad Benham	***	LaGrange, GA	***	***	***	***
Total			***	***	***	***

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

Table III-2 presents information on U.S. operations, ownership, related and/or affiliated firms.

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

* * * * * * *

As indicated in table III-2, *** is related to a foreign producer of the subject merchandise[3] and *** are related to producers of nonsubject merchandise. *** are related to U.S. importers of the subject merchandise. In addition, as discussed in greater detail below, three U.S. producers (***) directly imported subject merchandise and *** purchased the subject merchandise from a related U.S. importer (***).

Table III-3 presents important industry events since 2014.

[3] According to *** since 2014.

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

Year	Company	Description of event
2014	Reynolds, Novelis	**Acquisition**: Reynolds Consumer Products acquired Novelis Inc.'s North American foil products division. The acquisition included a U.S. sales office in LaGrange, Georgia but no U.S. production.
	Noranda (now Gränges)	**Layoff**: Noranda announced that it would lay off 40 employees (40 percent of workforce) at its foil facility in Newport, Arkansas.
	Novelis	***.
2015	Noranda (now Gränges)	**Layoff:** Noranda laid off 70 percent of the workers at its Newport, Arkansas facility prior to filing for bankruptcy in 2016.
	Aluminum Source LLC (Alpha Aluminum)	**Acquisition:** Aluminum Source LLC acquired Oracle Flexible Packaging's aluminum rolling assets. **Name change**: Aluminum Source LLC changed its name to Alpha Aluminum.
	Republic Foil Inc., Garmco (USA) Inc.	**Acquisition:** Republic Foil Inc. acquired by Garmco (USA) Inc., a subsidiary of Bahrain-based producer Garmco.
		Closure: Republic Foil Inc. closed its Danbury, Connecticut foil mill.
2016	Alpha Aluminum	**Production suspension and layoff**: Alpha Aluminum suspended production and laid off 100 employees at its foil facility in Winston-Salem, North Carolina.
	Gränges	**Acquisition**: Gränges acquired Noranda Aluminum Holding Corporation's downstream aluminum rolling assets (including foil) in the United States.
	Aleris	**Acquisition:** Aleris announced that it entered into a definitive agreement to be acquired by Zhongwang USA LLC, a subsidiary of China Zhongwang Holdings Limited, the parent company of China Zhongwang.
	JW Aluminum	***.
	Reynolds	**Expansion:** Reynolds Consumer Products announced that it will expand its west Louisville, Kentucky foil plant and add up to 50 new jobs. The State of Kentucky also approved a $650,000 development subsidy to be paid out over 10 years that is conditional on the plant's expansion.
2017	Gränges	**Expansion:** Gränges announced that it will invest $110 million to expand its aluminum rolling operations in Huntingdon, Tennessee in order to meet growing demand for light gauge foil and heat exchangers for automotive and HVAC applications. The expansion is expected to create 85 permanent positions.
	***	***.

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

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

Source: Various company websites, news articles, and hearing transcript (p. 54).

Table III-4 presents U.S. producers' reported changes in operations since 2014. Two U.S. producers reported closing or idling aluminum foil production during January 2014-September 2017. ***.[4] ***.[5]

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

* * * * * * *

U.S. PRODUCTION, CAPACITY, AND CAPACITY UTILIZATION

Table III-5 and figure III-1 present U.S. producers' production, capacity, and capacity utilization. U.S. producers' production capacity decreased by *** percent from 2014 to 2016[6] and remained the same in January–September 2017 as in January–September 2016.[7] U.S. producers' production quantity decreased by *** percent from 2014 to 2016 but was *** percent higher in interim 2017 than in interim 2016. Capacity utilization decreased by *** percentage points from 2014 to 2016 but was *** percentage points higher in interim 2017 than in interim 2016.

Aleris reported that its ***.[8] Gränges reported that it ***. Novelis reported that ***.

Table III-5
Aluminum foil: U.S. producers' capacity, production, and capacity utilization, 2014-16, January to September 2016, and January to September 2017

* * * * * * *

Figure III-1
Aluminum foil: U.S. producers' capacity, production, and capacity utilization, 2014-16, January to September 2016, and January to September 2017

* * * * * * *

Alternative products

As shown in table III-6, aluminum foil accounted for roughly three-quarters of production on shared equipment and machinery from 2014 to September 2017. Three firms (***) reported producing *** products on the same machinery as aluminum foil.[9]

---

[4] Email from ***, February 13, 2018.

[5] Email from ***, February 16, 2018.

[6] This decrease is ***. Email from ***, February 16, 2018.

[7] In its preliminary phase U.S. producers' questionnaire response, ***. Email from *** to Investigator, January 18, 2018.

[8] Aleris' capacity calculation is based on the ***.

Table III-6
Aluminum foil: U.S. producers' overall capacity and production on the same equipment as subject production, 2014-16, January to September 2016, and January to September 2017

* * * * * * *

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

Table III-7 presents U.S. producers' U.S. shipments, export shipments, and total shipments. The quantity of U.S. producers' U.S. shipments decreased by *** percent from 2014 to 2016, but was *** percent higher in January–September 2017 than in January–September 2016. The value U.S. producers' U.S. shipments decreased by *** percent from 2014 to 2016, but was *** percent higher in interim 2017 than in interim 2016. The average unit value of U.S. producers' U.S. shipments decreased by *** percent from 2014 to 2016, but was *** percent higher in interim 2017 than in interim 2016.

The quantity of U.S. producers' export shipments decreased by *** percent from 2014 to 2016, but was *** percent higher in interim 2017 than in interim 2016. The value of U.S. producers' export shipments decreased by *** percent from 2014 to 2016, but was *** percent higher in interim 2017 than in interim 2016. The average unit value of U.S. producers' export shipments decreased by *** percent from 2014 to 2016, but was *** percent higher in interim 2017 than in interim 2016. U.S. producers reported that *** were their primary export markets.

Table III-7
Aluminum foil: U.S. producers' U.S. shipments, export shipments, and total shipments, 2014-16, January to September 2016, and January to September 2017

* * * * * * *

Table III-8 presents U.S. producers' U.S. shipments by thickness. The thickness categories defined by staff in the questionnaires are as follows:[10] [11]

Ultra-thin.-- Aluminum foil less than 0.000315 inch (8 microns) thickness.

Thin.-- Aluminum foil greater than or equal to 0.000315 inch (8 microns) and less than 0.00039 inch (10 microns) thickness.

Standard.-- Aluminum foil greater than or equal to 0.00039 inch (10 microns) and less than or equal to 0.001 inch (25 microns) thickness.

Heavy.-- Aluminum foil greater than 0.001 inch (25 microns) thickness and less than 0.00177 inch (45 microns) thickness.

Extra heavy.-- Aluminum foil greater than or equal to 0.00177 inch (45 microns) thickness.

(…*continued*)

[9] *** reported that ***.

[10] See part I for further information on thickness categories.

[11] The largest U.S. producers' U.S. shipments by thickness and apparent U.S. consumption by thickness are presented in appendix G.

The largest share of U.S. producers' U.S. shipments was extra heavy aluminum foil followed by heavy aluminum foil, together accounting for approximately *** percent, by quantity and value, in any period during January 2014 to September 2017.

The quantity of U.S. producers' U.S. shipments of ultra-thin aluminum foil decreased by *** percent from 2014 to 2016 but remained essentially unchanged in interim 2017 as in interim 2016. Three producers (***) reported U.S. shipments of ultra-thin aluminum foil since January 2014. ***. ***.[12]

Table III-8
Aluminum foil: U.S. producers' U.S. shipments by product thickness, 2014-16, January to September 2016, and January to September 2017

* * * * * * *

Table III-9 presents U.S. producers' U.S. shipments by product type. High manganese content foil (i.e., one percent or greater) was defined as that similar to certain fin stock.

Table III-9
Aluminum foil: U.S. producers' U.S. shipments by product type, 2014-16, January to September 2016, and January to September 2017

* * * * * * *

Three U.S. producers, ***, produced other in-scope fin stock. *** stated that the other in-scope fin stock is composed of ***.[13] *** reported that ***.[14] *** noted that the other in-scope fin stock is ***.[15]

Four U.S. producers, ***, produced other non-fin stock aluminum foil products with a high manganese content similar to certain fin stock. *** stated that the high manganese content aluminum foil is composed of ***.[16] ***.[17] *** reported that the high manganese content aluminum foil consists of ***.[18] *** stated that the high manganese content aluminum foil is primarily used in container applications.[19]

[12] ***.
[13] Email from ***, February 2, 2018.
[14] Email from ***, February 4, 2018.
[15] Email from ***, February 5, 2018.
[16] Email from ***, February 2, 2018.
[17] Email from ***, February 5, 2018.
[18] Email from ***, February 4, 2018.
[19] *** response to the U.S. producers' questionnaire, section II-10.

U.S. PRODUCERS' INVENTORIES

Table III-10 presents U.S. producers' end-of-period inventories and the ratio of these inventories to U.S. producers' production, U.S. shipments, and total shipments**.** The ratio of inventories to production and shipments remained unchanged from 2014 to 2016, but inventories were relatively lower in both January–September interim periods.

Table III-10
Aluminum foil: U.S. producers' inventories, 2014-16, January to September 2016, and January to September 2017

* * * * * * *

U.S. PRODUCERS' IMPORTS AND PURCHASES

U.S. producers' subject imports of aluminum foil are presented in table III-11. Reynolds began importing *** and imported *** short tons of aluminum foil from that source in ***.[20] JW Aluminum began importing ***. JW Aluminum imported ***. According to ***.[21] Oracle has imported aluminum foil since ***. Oracle imports aluminum foil for its *** since January 2014.[22] ***.

Table III-11
Aluminum foil: U.S. producers' imports, 2014-16, January to September 2016, and January to September 2017

* * * * * * *

Table III-12
Aluminum foil: U.S. producers' purchases of subject imports, 2014-16, January to September 2016, and January to September 2017

* * * * * * *

U.S. EMPLOYMENT, WAGES, AND PRODUCTIVITY

Table III-13 presents U.S. producers' employment-related data. All U.S. producers, except ***, reported fewer production and related workers ("PRWs") in 2016 than in 2014. The industry reported that the average number of PRWs decreased by *** percent from 2014 to 2016 but was *** percent higher in January–September 2017 than in January–September 2016.

[20] ***.
[21] ***.
[22] ***.

Hourly wages and productivity increased by *** and *** percent, respectively, from 2014 to 2016. Additionally, hourly wages were *** percent higher in interim 2017 than in interim 2016, but productivity was *** percent lower in interim 2017 than in interim 2016.

Table III-13
Aluminum foil: U.S. producers' employment related data, 2014-16, January to September 2016, and January to September 2017

* * * * * * *

CAPTIVE CONSUMPTION

Section 771(7)(C)(iv) of the Act states that–[23]

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

Transfers and sales

As reported in table III-7 above, internal consumption accounted for between *** and *** percent of U.S. producers' U.S. shipments of aluminum foil during January 2014–September 2017. *** accounted for most of the industry's internal consumption. It produces household foil primarily from its own aluminum foil rolling operations.[24] ***.

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

[24] Petitioner's postconference brief, exh. 11, conference transcript, pp. 131-132 (Walters), and hearing transcript, p. 28 (Rudisill).

First statutory criterion in captive consumption

The first requirement for application of the captive consumption provision is that the domestic like product that is internally transferred for processing into that downstream article not enter the merchant market for the domestic like product. ***. *** reported that ***[25] ***.[26]

Second statutory criterion in captive consumption

The second criterion of the captive consumption provision concerns whether the domestic like product is the predominant material input in the production of the downstream article that is captively produced. With respect to the downstream articles resulting from captive production, aluminum foil reportedly comprises a majority or between 70[27] and ***[28] percent of the finished cost of household aluminum foil products. ***.[29]

[25] ***. Email from *** to staff accountant and investigator, January 18, 2018.
[26] ***.
[27] Conference transcript, p. 132 (Walters).
[28] ***.
[29] ***.

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

U.S. IMPORTERS

The Commission issued importer questionnaires to 61 firms believed to account for a large share of U.S. imports of aluminum foil, as well as to all U.S. producers of aluminum foil.[1] Usable questionnaire responses were received from 28 firms, representing 79 percent of U.S. imports of aluminum foil from China during 2016 and 76 percent of U.S. imports from China between January 2014 and September 2017 under HTS subheadings 7607.11.30, 7607.11.60, 7607.11.90, and 7607.19.60.[2] Table IV-1 lists all responding U.S. importers of aluminum foil from China and other sources, their locations, and their shares of U.S. imports in 2016.

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

Firm	Headquarters	Share of imports by source (percent)						
		China	Armenia	Germany	Russia	All other sources	Nonsubject sources	All import sources
Adams Thermal	Canton, SD	***	***	***	***	***	***	***
All Foils	Strongsville, OH	***	***	***	***	***	***	***
American Packaging	Rochester, NY	***	***	***	***	***	***	***
Chase	Westwood, MA	***	***	***	***	***	***	***
Commodity Foil	Richmond, VA	***	***	***	***	***	***	***
Electrolux	Charlotte, NC	***	***	***	***	***	***	***
FujiFilm	Greenwood, SC	***	***	***	***	***	***	***
Galex	Monsey, NY	***	***	***	***	***	***	***
Global Foils	Isle Of Palms, SC	***	***	***	***	***	***	***
Handi Foil	Wheeling, IL	***	***	***	***	***	***	***
Hanon Netherlands	6417 Bj Heerlen, Netherlands,	***	***	***	***	***	***	***
Hanon Systems	Shorter, AL	***	***	***	***	***	***	***
Hanover	Ashland, VA	***	***	***	***	***	***	***
JW Aluminum	Goose Creek, SC	***	***	***	***	***	***	***
LLFLex	Louisville, KY	***	***	***	***	***	***	***
Mahle Behr	Troy, MI	***	***	***	***	***	***	***
Manakin	Manakin Sabot, VA	***	***	***	***	***	***	***
Medalco	South Hadley, MA	***	***	***	***	***	***	***

Table continued on next page.

[1] The Commission issued questionnaires to firms that may have accounted for more than one percent of total imports in 2016 or in total during January 2014–September 2017. The Commission relied on data provided by ***, for U.S. imports under HTS subheadings 7607.11.30, 7607.11.60, 7607.11.90, and 7607.19.60. *** provided certification that they had not imported aluminum foil since January 2014. U.S. importer ***. ***.

[2] Importer responses represented 50 percent of U.S. imports from nonsubject countries during 2016 and 57 percent of U.S. imports from nonsubject countries from January 2014 through September 2017.

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

Firm	Headquarters	Share of imports by source (percent)						
		China	Armenia	Germany	Russia	All other sources	Nonsubject sources	All import sources
Multifilm	Elgin, IL	***	***	***	***	***	***	***
Norca Foil	Lake Success, NY	***	***	***	***	***	***	***
Norca Heat Transfer	Lake Success, NY	***	***	***	***	***	***	***
Oracle	Winston-Salem, NC	***	***	***	***	***	***	***
ProAmpac	Cincinnati, OH	***	***	***	***	***	***	***
Reynolds	Lake Forest, IL	***	***	***	***	***	***	***
Sonoco	Hartsville, SC	***	***	***	***	***	***	***
Tetra Pak	Denton, TX	***	***	***	***	***	***	***
Trinidad Benham	Denver, CO	***	***	***	***	***	***	***
Valeo	Troy, MI	***	***	***	***	***	***	***
Total		***	***	***	***	***	***	***

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

U.S. IMPORTS

Table IV-2 and figure IV-1 present data for U.S. imports of aluminum foil from China and nonsubject sources. The quantity of U.S. imports from China increased by 38.7 percent from 2014 to 2016, while over the same period, the quantity from nonsubject sources decreased by 17.1 percent. The quantity of U.S. imports from China was 8.6 percent higher in January–September 2017 than in January–September 2016 and the quantity from nonsubject sources was 19.2 percent higher in January–September 2017 than in January–September 2016. The average unit value of U.S. imports from China decreased by 13.1 percent from 2014 to 2016 while over the same period, the average unit value of imports from nonsubject sources decreased by 27.8 percent. The average unit value of U.S. imports from China was 6.2 percent higher in January–September 2017 than in January–September 2016 and the average unit value of nonsubject sources was 3.9 percent higher in January–September 2017 than in January–September 2016. The average unit value of U.S. imports from China were higher than those of imports from Armenia and Russia, but lower than those of imports from Germany and all other sources during January 2014-September 2017.

Table IV-2
Aluminum foil: U.S. imports by source, 2014-16, January to September 2016, and January to September 2017

Item	Calendar year			January to September	
	2014	2015	2016	2016	2017
	Quantity (short tons)				
U.S. imports from.--					
China	109,266	130,855	151,598	112,099	121,745
Armenia	28,745	15,198	8,000	6,465	10,755
Germany	15,427	16,010	16,447	13,246	8,421
Russia	2,217	8,442	12,890	10,374	12,961
All other sources	29,589	24,672	25,660	19,896	27,450
Nonsubject sources	75,978	64,323	62,997	49,981	59,587
All import sources	185,244	195,177	214,595	162,080	181,332
	Value (1,000 dollars)				
U.S. imports from.--					
China	357,957	411,407	431,387	317,778	366,402
Armenia	83,025	45,505	20,829	16,905	28,821
Germany	74,962	71,046	63,140	48,895	37,159
Russia	6,221	24,159	31,740	25,459	34,524
All other sources	214,061	127,955	110,690	84,879	117,597
Nonsubject sources	378,269	268,665	226,398	176,137	218,101
All import sources	736,226	680,072	657,786	493,916	584,503
	Unit value (dollars per short ton)				
U.S. imports from.--					
China	3,276	3,144	2,846	2,835	3,010
Armenia	2,888	2,994	2,604	2,615	2,680
Germany	4,859	4,438	3,839	3,691	4,413
Russia	2,806	2,862	2,462	2,454	2,664
All other sources	7,234	5,186	4,314	4,266	4,284
Nonsubject sources	4,979	4,177	3,594	3,524	3,660
All import sources	3,974	3,484	3,065	3,047	3,223

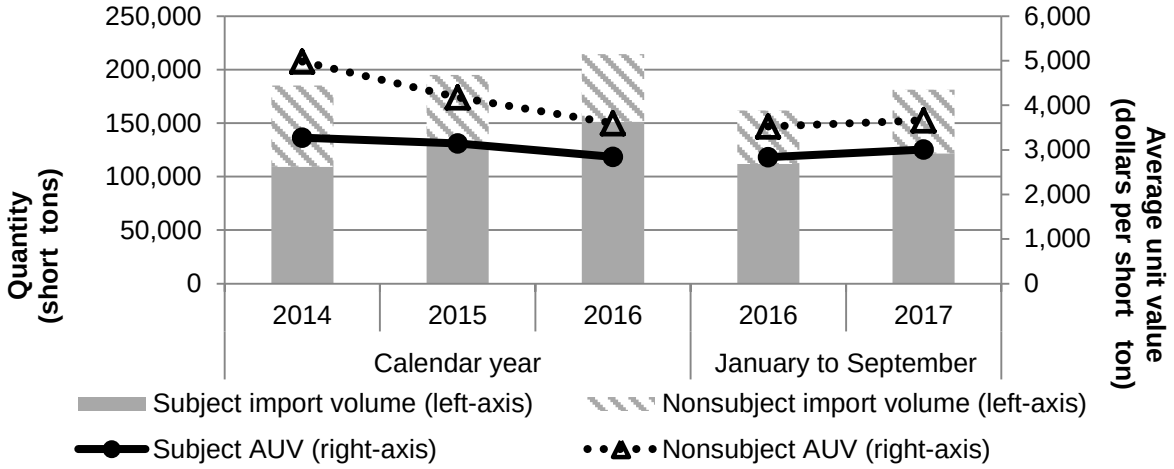
Table continued on next page.

Table IV-2--Continued
Aluminum foil: U.S. imports by source, 2014-16, January to September 2016, and January to September 2017

Item	Calendar year			January to September	
	2014	2015	2016	2016	2017
	Share of quantity (percent)				
U.S. imports from.--					
China	59.0	67.0	70.6	69.2	67.1
Armenia	15.5	7.8	3.7	4.0	5.9
Germany	8.3	8.2	7.7	8.2	4.6
Russia	1.2	4.3	6.0	6.4	7.1
All other sources	16.0	12.6	12.0	12.3	15.1
Nonsubject sources	41.0	33.0	29.4	30.8	32.9
All import sources	100.0	100.0	100.0	100.0	100.0
	Share of value (percent)				
U.S. imports from.--					
China	48.6	60.5	65.6	64.3	62.7
Armenia	11.3	6.7	3.2	3.4	4.9
Germany	10.2	10.4	9.6	9.9	6.4
Russia	0.8	3.6	4.8	5.2	5.9
All other sources	29.1	18.8	16.8	17.2	20.1
Nonsubject sources	51.4	39.5	34.4	35.7	37.3
All import sources	100.0	100.0	100.0	100.0	100.0
	Ratio to U.S. production				
U.S. imports from.--					
China	21.5	27.6	31.5	30.7	32.5
Armenia	5.7	3.2	1.7	1.8	2.9
Germany	3.0	3.4	3.4	3.6	2.2
Russia	0.4	1.8	2.7	2.8	3.5
All other sources	5.8	5.2	5.3	5.5	7.3
Nonsubject sources	15.0	13.5	13.1	13.7	15.9
All import sources	36.5	41.1	44.5	44.4	48.3

Source: Official U.S. import statistics using HTS statistical reporting numbers 7607.11.3000, 7607.11.6000, 7607.11.9030, 7607.11.9060, 7607.11.9090, and 7607.19.6000, accessed December 21, 2017.

Figure IV-1
Aluminum foil: U.S. imports by source, 2014-16, January to September 2016, and January to September 2017



Source: Table IV-2.

NEGLIGIBILITY

The statute requires that an investigation be terminated without an injury determination if imports of the subject merchandise are found to be negligible.[3] Negligible imports are generally defined in the Tariff Act of 1930, as amended, as imports from a country of merchandise corresponding to a domestic like product where such imports account for less than 3 percent of the volume of all such merchandise imported into the United States in the most recent 12-month period for which data are available that precedes the filing of the petition or the initiation of the investigation. However, if there are imports of such merchandise from a number of countries subject to investigations initiated on the same day that individually account for less than 3 percent of the total volume of the subject merchandise, and if the imports from those countries collectively account for more than 7 percent of the volume of all such merchandise imported into the United States during the applicable 12-month period, then imports from such countries are deemed not to be negligible.[4] Imports from China accounted for 71.4 percent of total U.S. imports of aluminum foil by quantity during the 12 months preceding the petition (March 2016 through February 2017). Table IV-3 presents U.S. imports of aluminum foil in the twelve month period preceding the filing of the petition.

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

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

Table IV-3
Aluminum foil: U.S. imports in the twelve month period preceding the filing of the petition,

Item	March 2016 through February 2017	
	Quantity (short tons)	Share of quantity (percent)
U.S. imports from.--		
China	154,374	71.4
Nonsubject sources	61,885	28.6
All import sources	216,258	100.0

Source: Official U.S. imports statistics using HTS statistical reporting numbers 7607.11.3000, 7607.11.6000, 7607.11.9030, 7607.11.9060, 7607.11.9090, and 7607.19.6000, accessed December 21, 2017.

Table IV-4 presents U.S. imports by type in the twelve month period preceding the filing of the petition.

Table IV-4
Aluminum foil: U.S. imports by type in the twelve month period preceding the filing of the petition, March 2016 through February 2017

* * * * * * *

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

Ultra-thin.-- Aluminum foil less than 0.000315 inch (8 microns) thickness.

Thin.-- Aluminum foil greater than or equal to 0.000315 inch (8 microns) and less than 0.00039 inch (10 microns) thickness.

Standard.-- Aluminum foil greater than or equal to 0.00039 inch (10 microns) and less than or equal to 0.001 inch (25 microns) thickness.

Heavy.-- Aluminum foil greater than 0.001 inch (25 microns) thickness and less than 0.00177 inch (45 microns) thickness.

Extra heavy.-- Aluminum foil greater than or equal to 0.00177 inch (45 microns) thickness.

[5] See Part I for further information on thickness categories.

U.S. importers' U.S. shipments of ultra-thin aluminum foil from China have increased by 17.1 percent from 2014 to 2016, but the share of ultra-thin of all aluminum foil from China shipments has decreased from 58.7 percent in 2014 to 40.8 percent in 2016.[6] U.S. importers' U.S. shipments of thin aluminum foil from China have increased by 262.2 percent from 2014 to 2016, and the share of thin of all aluminum foil from China shipments has increased from 3.3 percent in 2014 to 7.2 percent in 2016.[7] U.S. importers' U.S. shipments of standard thickness aluminum foil from China have increased by 215.2 percent from 2014 to 2016, and the share of shipments of aluminum foil from China for standard aluminum foil has increased from 16.1 percent in 2014 to 30.2 percent in 2016.[8]

U.S. importers' U.S. shipments of heavy and extra heavy aluminum foil from China have increased by 277.9 percent[9] and 50.6 percent, [10] respectively, from 2014 to 2016. The share of U.S. shipments of heavy aluminum foil from China increased from 1.7 percent in 2014 to 3.8 percent in 2016 (2.1 percentage points), while the share for extra heavy aluminum foil declined from 20.2 percent in 2014 to 18.1 percent in 2016 (2.1 percentage points).

[6] Seven U.S. importers reported U.S. shipments of ultra-thin aluminum foil imported from China (***). Many of these importers reported that they increased imports of ultra-thin aluminum foil from China because of ***.

[7] Fourteen firms had U.S. shipments of thin aluminum foil from China, with the majority of the increase attributable to ***.

[8] Fifteen firms had U.S. shipments of standard aluminum foil from China, with the majority of the increase attributable to ***.

[9] Eleven firms had U.S. shipments of heavy aluminum foil from China, with the majority of the increase attributable to ***.

[10] Fifteen firms U.S. shipments of extra heavy aluminum foil from China, with the majority of the increase attributable to ***.

Table IV-5
Aluminum foil: U.S. importers' U.S. shipments by product thickness, 2014-16, January to September 2016, and January to September 2017

Item	Calendar year			January to September	
	2014	2015	2016	2016	2017
	China				
	Quantity (short tons)				
U.S. shipments: China.--Ultra-thin	39,061	37,664	45,738	36,134	35,793
Thin	2,221	8,705	8,045	6,119	7,246
Standard	10,733	28,013	33,826	25,062	30,525
Heavy	1,126	2,930	4,255	3,314	5,503
Extra-heavy	13,440	16,787	20,241	13,305	16,507
All sizes	66,581	94,099	112,105	83,934	95,574
	Value (1,000 dollars)				
U.S. shipments: China.--Ultra-thin	136,504	130,413	148,987	118,179	121,692
Thin	10,884	30,493	25,672	19,554	24,022
Standard	33,079	83,851	87,486	65,467	83,736
Heavy	3,570	7,223	10,741	8,497	16,163
Extra-heavy	46,043	53,955	57,629	35,478	46,348
All sizes	230,080	305,935	330,515	247,175	291,961
	Unit value (dollars per short ton)				
U.S. shipments: China.--Ultra-thin	3,495	3,463	3,257	3,271	3,400
Thin	4,900	3,503	3,191	3,196	3,315
Standard	3,082	2,993	2,586	2,612	2,743
Heavy	3,171	2,465	2,524	2,564	2,937
Extra-heavy	3,426	3,214	2,847	2,667	2,808
All sizes	3,456	3,251	2,948	2,945	3,055
	Share of quantity (percent)				
U.S. shipments: China.--Ultra-thin	58.7	40.0	40.8	43.1	37.5
Thin	3.3	9.3	7.2	7.3	7.6
Standard	16.1	29.8	30.2	29.9	31.9
Heavy	1.7	3.1	3.8	3.9	5.8
Extra-heavy	20.2	17.8	18.1	15.9	17.3
All sizes	100.0	100.0	100.0	100.0	100.0

Table continued on next page.

Table IV-5--Continued
Aluminum foil: U.S. importers' U.S. shipments by product thickness, 2014-16, January to September 2016, and January to September 2017

Item	Calendar year			January to September	
	2014	2015	2016	2016	2017
	Nonsubject sources				
	Quantity (short tons)				
U.S. shipments: Nonsubject sources.--					
Ultra-thin	***	***	***	***	***
Thin	***	***	***	***	***
Standard	***	***	***	***	***
Heavy	***	***	***	***	***
Extra-heavy	***	***	***	***	***
All sizes	45,667	39,017	32,785	26,130	31,069
	Value (1,000 dollars)				
U.S. shipments: Nonsubject sources.--					
Ultra-thin	***	***	***	***	***
Thin	***	***	***	***	***
Standard	***	***	***	***	***
Heavy	***	***	***	***	***
Extra-heavy	***	***	***	***	***
All sizes	142,327	124,305	97,203	76,604	89,578
	Unit value (dollars per short ton)				
U.S. shipments: Nonsubject sources.--					
Ultra-thin	***	***	***	***	***
Thin	***	***	***	***	***
Standard	***	***	***	***	***
Heavy	***	***	***	***	***
Extra-heavy	***	***	***	***	***
All sizes	3,117	3,186	2,965	2,932	2,883
	Share of quantity (percent)				
U.S. shipments: Nonsubject sources.--					
Ultra-thin	***	***	***	***	***
Thin	***	***	***	***	***
Standard	***	***	***	***	***
Heavy	***	***	***	***	***
Extra-heavy	***	***	***	***	***
All sizes	100.0	100.0	100.0	100.0	100.0

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

Table IV-6 presents U.S. importers' U.S. shipments of aluminum foil from China by product type. High manganese content foil was defined as that similar to certain fin stock (i.e., one-percent or greater). Five importers (***) reported U.S. shipments of certain fin stock from China during January 2014-Septemeber 2017. One firm (***) reported U.S. shipments of other in-scope fin stock for use in non-heat exchanger applications including wire and cables. Four firms (***) reported U.S. shipments of high manganese content aluminum foil from China, with the vast majority reported by ***. Sixteen U.S. importers reported U.S. shipments of low manganese content aluminum from China, for use in products including packaging foil, household aluminum foil, disposable containers, and flexible converters.

Table IV-6
Aluminum foil: U.S. importers' U.S. shipments by product type, 2014-16, January to September 2016, and January to September 2017

Item	Calendar year			January to September	
	2014	2015	2016	2016	2017
	China				
	Quantity (short tons)				
U.S. shipments: China.--Certain fin stock	9,939	10,354	10,903	8,678	9,942
Other in-scope fin stock	***	***	***	***	***
High manganese content foil	***	***	***	***	***
Low manganese content foil	55,920	82,117	93,814	69,691	79,131
All types	66,582	94,099	112,062	83,934	95,574
	Value (1,000 dollars)				
U.S. shipments: China.--Certain fin stock	34,379	33,628	31,738	24,265	29,247
Other in-scope fin stock	***	***	***	***	***
High manganese content foil	***	***	***	***	***
Low manganese content foil	189,592	263,223	273,565	203,424	239,453
All types	230,079	305,934	330,380	247,176	291,961
	Unit value (dollars per short ton)				
U.S. shipments: China.--Certain fin stock	3,459	3,248	2,911	2,796	2,942
Other in-scope fin stock	***	***	***	***	***
High manganese content foil	***	***	***	***	***
Low manganese content foil	3,390	3,205	2,916	2,919	3,026
All types	3,456	3,251	2,948	2,945	3,055
	Share of quantity (percent)				
U.S. shipments: China.--Certain fin stock	14.9	11.0	9.7	10.3	10.4
Other in-scope fin stock	***	***	***	***	***
High manganese content foil	***	***	***	***	***
Low manganese content foil	84.0	87.3	83.7	83.0	82.8
All types	100.0	100.0	100.0	100.0	100.0

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

Table IV-7 presents monthly U.S. imports by source.

Table IV-7
Aluminum foil: Monthly U.S. imports, by source, January 2014 to October 2017

Month	Calendar year			
	2014	2015	2016	2017
	Quantity (short tons)			
U.S. imports: China.--				
January	7,782	9,136	11,769	12,873
February	7,597	9,009	10,289	11,961
March	8,411	11,803	12,594	15,014
April	8,502	12,226	12,068	14,694
May	8,840	9,741	14,182	17,479
June	8,331	12,256	14,207	19,987
July	9,426	12,106	12,481	15,888
August	8,703	11,966	13,708	5,897
September	10,702	11,652	10,802	7,953
October	10,360	10,787	12,985	6,854
November	10,191	9,850	13,680	
December	10,422	10,323	12,833	
	Quantity (short tons)			
U.S. imports: Nonsubject sources.--				
January	5,061	3,698	5,294	4,169
February	5,721	4,155	5,149	5,162
March	7,402	5,329	4,819	4,562
April	5,991	6,258	6,410	5,902
May	7,181	6,811	5,620	7,007
June	6,411	6,000	5,139	7,471
July	6,132	5,754	5,267	9,411
August	7,859	5,559	6,777	8,263
September	5,497	5,200	5,505	7,639
October	6,954	5,882	5,061	11,689
November	6,483	4,869	4,519	
December	5,287	4,807	3,437	

Source: Official U.S. import statistics using HTS statistical reporting numbers 7607.11.3000, 7607.11.6000, 7607.11.9030, 7607.11.9060, 7607.11.9090, and 7607.19.6000, accessed December 21, 2017.

APPARENT U.S. CONSUMPTION AND MARKET SHARES

Table IV-8 and figure IV-2 present data on apparent U.S. consumption and U.S. market shares for aluminum foil in the merchant market. The merchant market excludes internal consumption reported by *** and internal consumption and transfers reported by ***.

Table IV-8
Aluminum foil: Apparent U.S. consumption: Merchant market, 2014-16, January to September 2016, and January to September 2017

Item	Calendar year			January to September	
	2014	2015	2016	2016	2017
	Quantity (short tons)				
U.S. producers' commercial U.S. shipments	***	***	***	***	***
U.S. imports from.--					
China	109,266	130,855	151,598	112,099	121,745
Armenia	28,745	15,198	8,000	6,465	10,755
Germany	15,427	16,010	16,447	13,246	8,421
Russia	2,217	8,442	12,890	10,374	12,961
All other sources	29,589	24,672	25,660	19,896	27,450
Nonsubject sources	75,978	64,323	62,997	49,981	59,587
All import sources	185,244	195,177	214,595	162,080	181,332
Apparent U.S. consumption	***	***	***	***	***
	Value (1,000 dollars)				
U.S. producers' commercial U.S. shipments	***	***	***	***	***
U.S. imports from.--					
China	357,957	411,407	431,387	317,778	366,402
Armenia	83,025	45,505	20,829	16,905	28,821
Germany	74,962	71,046	63,140	48,895	37,159
Russia	6,221	24,159	31,740	25,459	34,524
All other sources	214,061	127,955	110,690	84,879	117,597
Nonsubject sources	378,269	268,665	226,398	176,137	218,101
All import sources	736,226	680,072	657,786	493,916	584,503
Apparent U.S. consumption	***	***	***	***	***

Table continued on next page.

Table IV-8--Continued
Aluminum foil: Apparent U.S. consumption: Merchant market, 2014-16, January to September 2016, and January to September 2017

Item	Calendar year			January to September	
	2014	2015	2016	2016	2017
	Quantity (short tons)				
Apparent U.S. consumption	***	***	***	***	***
	Share of quantity (percent)				
U.S. producers' commercial U.S. shipments	***	***	***	***	***
U.S. imports from.--					
China	***	***	***	***	***
Armenia	***	***	***	***	***
Germany	***	***	***	***	***
Russia	***	***	***	***	***
All other sources	***	***	***	***	***
Nonsubject sources	***	***	***	***	***
All import sources	***	***	***	***	***
	Value (1,000 dollars)				
Apparent U.S. consumption	***	***	***	***	***
	Share of value (percent)				
U.S. producers' commercial U.S. shipments	***	***	***	***	***
U.S. imports from.--					
China	***	***	***	***	***
Armenia	***	***	***	***	***
Germany	***	***	***	***	***
Russia	***	***	***	***	***
All other sources	***	***	***	***	***
Nonsubject sources	***	***	***	***	***
All import sources	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires and official U.S. imports statistics using HTS statistical reporting numbers 7607.11.3000, 7607.11.6000, 7607.11.9030, 7607.11.9060, 7607.11.9090, and 7607.19.6000, accessed December 21, 2017

Figure IV-2
Aluminum foil: Apparent U.S. consumption: Merchant market, 2014-16, January to September 2016, and January to September 2017

* * * * * * *

Table IV-9 and figure IV-3 present data on apparent U.S. consumption for the total market and U.S. market shares for aluminum foil. The quantity of apparent U.S. consumption increased by *** percent from 2014 to 2016, but value decreased by *** percent over the same period. The quantity of apparent U.S. consumption was *** percent higher in January–September 2017 than in January–September 2016 and the value was *** percent higher in January–September 2017 than in January–September 2016.

The quantity share of apparent U.S. consumption of U.S. imports from China increased by *** percentage points from 2014 to 2016, but the share of imports from nonsubject sources decreased by *** percentage points over the same period. The quantity share of apparent U.S. consumption of U.S. imports from China was *** percentage points higher in January–September 2017 than in January–September 2016 and the quantity share of nonsubject imports was *** percentage points higher in January–September 2017 than in January–September 2016.

Table IV-9
Aluminum foil: Apparent U.S. consumption: Total market, 2014-16, January to September 2016, and January to September 2017

Item	Calendar year			January to September	
	2014	2015	2016	2016	2017
	Quantity (short tons)				
U.S. producers' U.S. shipments	***	***	***	***	***
U.S. imports from.--					
China	109,266	130,855	151,598	112,099	121,745
Armenia	28,745	15,198	8,000	6,465	10,755
Germany	15,427	16,010	16,447	13,246	8,421
Russia	2,217	8,442	12,890	10,374	12,961
All other sources	29,589	24,672	25,660	19,896	27,450
Nonsubject sources	75,978	64,323	62,997	49,981	59,587
All import sources	185,244	195,177	214,595	162,080	181,332
Apparent U.S. consumption	***	***	***	***	***
	Value (1,000 dollars)				
U.S. producers' U.S. shipments	***	***	***	***	***
U.S. imports from.--					
China	357,957	411,407	431,387	317,778	366,402
Armenia	83,025	45,505	20,829	16,905	28,821
Germany	74,962	71,046	63,140	48,895	37,159
Russia	6,221	24,159	31,740	25,459	34,524
All other sources	214,061	127,955	110,690	84,879	117,597
Nonsubject sources	378,269	268,665	226,398	176,137	218,101
All import sources	736,226	680,072	657,786	493,916	584,503
Apparent U.S. consumption	***	***	***	***	***
	Share of quantity (percent)				
U.S. producers' U.S. shipments	***	***	***	***	***
U.S. imports from.--					
China	***	***	***	***	***
Armenia	***	***	***	***	***
Germany	***	***	***	***	***
Russia	***	***	***	***	***
All other sources	***	***	***	***	***
Nonsubject sources	***	***	***	***	***
All import sources	***	***	***	***	***
	Share of value (percent)				
U.S. producers' U.S. shipments	***	***	***	***	***
U.S. imports from.--					
China	***	***	***	***	***
Armenia	***	***	***	***	***
Germany	***	***	***	***	***
Russia	***	***	***	***	***
All other sources	***	***	***	***	***
Nonsubject sources	***	***	***	***	***
All import sources	***	***	***	***	***

Source: Official U.S. import statistics using HTS statistical reporting numbers 7607.11.3000, 7607.11.6000, 7607.11.9030, 7607.11.9060, 7607.11.9090, and 7607.19.6000, accessed December 21, 2017.

Figure IV-3
Aluminum foil: Apparent U.S. consumption: Total market, 2014-16, January to September 2016, and January to September 2017

* * * * * * *

PART V: PRICING DATA

FACTORS AFFECTING PRICES

Raw material costs

The primary raw material used to manufacture aluminum foil is wrought aluminum. Raw material costs, as a share of U.S. producers' total cost of goods sold (COGS), decreased from *** percent in 2014 to *** percent in 2015 and *** percent in 2016. In interim 2017, however, it was higher than in interim 2016: *** percent, compared with *** percent. Raw materials prices generally consist of three components: an indexed price of aluminum such as the London Metal Exchange ("LME") price, a Midwest premium, and a fabrication fee.[1]

U.S. producers and U.S. importers reported mixed experiences with raw material costs since January 1, 2014. Two of 5 responding producers and 7 of 20 responding importers reported that raw material prices had fluctuated since January 2014. Two responding producers and five responding importers reported that raw material prices had decreased, whereas one responding producer and seven responding importers reported that raw material prices had increased.

As seen in figure V-1, the LME price of aluminum has fluctuated since 2014, decreasing *** percent from January 2014 to November 2015 and increasing by *** percent from November 2015 to December 2017. The Midwest premium is a daily premium to the LME price applicable to U.S. wrought producers.[2] [3]

Historically, the Midwest premium has been less than ten cents per pound, but in 2014-15 the premium increased to a high of more than 24 cents.[4] During this period, aluminum end users attributed the increase to "aggressive queue-management schemes of LME warehouse operators" while aluminum producers and warehouse owners stated the increases were in part due to decreasing U.S. smelting capacity and increased demand for financing the warehousing of aluminum stocks.[5] As seen in figure V-1, the LME plus Midwest premium price of aluminum

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[1] Hearing transcript, p. 94 (McCarter).

[2] The Midwest Premium is based on physical spot deals, bids, and offers reported through a daily survey of spot buyers and sellers, and uses a representative sample of producers, traders, and different types of end users. It reflects both deliveries to a typical freight consumer in a broad U.S. Midwest region via truck or rail as well as the transaction costs. Source: S & P Global Platts, *Methodology and Specifications Guide: Nonferrous*, April 2017.

[3] The Midwest premium price of aluminum decreased *** percent from January 2014 to October 2015 and increased by *** percent from October 2015 to November 2017. Source: Platts Metals Week Price Notification Monthly Reports. The Midwest premium was highest in 2014, and increased slightly through 2014. In 2015, 2016, and 2017 was generally highest in the first quarter of the year and the lowest in late summer/early fall. The Midwest premium and LME HG cash prices did not generally move with each other; the correlation between the two series was 0.4.

[4] Conference transcript, pp. 110-111 (Casey).

[5] Reuters, *Aluminum Premiums Adjust to Life After the Queues*, June 15, 2016.

has fluctuated since 2014, decreasing *** percent from January 2014 to November 2015 and increasing by *** percent from November 2015 to December 2017.

Old aluminum sheet scrap (scrap from a recycled product such as used beverage cans or from recycled sheet) is also a raw material input in the production of aluminum foil. Overall, the price of old aluminum sheet scrap declined between January 2014 and September 2017. As seen in figure V-2, the price of old aluminum sheet scrap has fluctuated since 2014, decreasing *** percent from January 2014 to December 2015 and increasing by *** percent from December 2015 to December 2017.

Figure V-1
Aluminum price indices: LME (High Grade) and LME plus Midwest premium price index of aluminum, January 2014-December 2017

* * * * * * *

Figure V-2
Old aluminum sheet scrap: Aluminum sheet scrap prices, January 2014-December 2017

* * * * * * *

Raw material prices were reported to be important in this industry, especially for firms that sell aluminum foil on a contract basis. Four of 5 of these producers and 8 of 15 of these importers indicated that their selling prices for aluminum foil are indexed to raw material prices. The same number of producers and slightly more importers (11 of 18) that sell on the spot market indicated that their spot market sales prices for aluminum foil are indexed to raw material prices. Nearly 90 percent of purchasers (44 of 50) reported that their purchase prices are tied to raw material costs. Indexes reportedly used by purchasers included the LME price and/or the Midwest Premium. Although 40 of 50 purchasers reported negotiating with suppliers, most responding purchasers (32 of 48) reported that the raw material prices do not affect their purchase price negotiations.

U.S. inland transportation costs

All five responding U.S. producers and 10 of 13 responding importers reported that they typically arrange transportation to their customers. U.S. producers and importers reported similar U.S. inland transportation costs: 1.8 to 5.0 percent for U.S. producers and 1.0 to 5.0 percent for most importers. Fourteen importers reporting imports for internal consumption (not for resale) reported inland transportation costs ranging from 1 to 30 percent, and averaging 8 percent, for the cost of transportation and other logistics costs from the port of entry as a percent of the total cost of the aluminum foil imported from China.[6]

[6] Data for the nonsubject countries were highly variable due to few reporting importers. They were *** percent for *** importing from Armenia, between *** percent for *** importing from Germany, and *** percent for *** importing from Russia.

PRICING PRACTICES

Pricing methods

Equal numbers of U.S. producers (4) and importers (11) reported using both transaction-by-transaction negotiations and contracts to determine the price of the aluminum foil that they sell (table V-1).

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

Method	U.S. producers	Importers
Transaction-by-transaction	4	11
Contract	4	11
Set price list	1	---
Other	---	4
Responding firms	4	18

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

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

U.S. producers reported selling approximately 90 percent of their aluminum foil via annual and long-term contract, with the remainder sold on the spot market (table V-2). Their long-term contracts are typically two years in length, though they may be as long as five years. Importers indicated that the majority of their sales are on a spot basis (57.5 percent of 2016 sales), although a considerable proportion are sold via annual contracts (31.4 percent). Among the three importers that reported selling via long-term contracts, *** reported two-year contracts, and ***, reported three-year contracts. Among the importers using short-term contracts, *** reported 90-day contracts.

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

Type of sale	U.S. producers	Importers
Long-term contracts	42.9	5.6
Annual contracts	47.0	31.4
Short-term contracts	---	5.5
Spot sales	10.1	57.5

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

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

All U.S. producers indicated that prices are not renegotiable in their annual and long-term contracts, three of four reported that they fix both price and quantity, only one has a meet-or-release provision in its annual contracts, but two have them in their long-term contracts. Prices are also not renegotiable in any importers' contracts, most fix both price and quantity, and only *** contracts contain meet-or-release provisions.

Four purchasers reported that they purchase product daily, 25 purchase weekly, 14 purchase monthly, 4 purchase quarterly, and 4 purchase with some other frequency (typically on an "as needed" basis). Forty-five of 50 purchasers reported that their purchasing frequency had not changed since 2014. Most purchasers contact a few suppliers before making a purchase. Only 15 of 50 purchasers contact at least two suppliers and, on average, they reported contacting from 1 to 4 suppliers.

Sales terms and discounts

U.S. producers and importers typically quote prices on a delivered basis. Two of five responding producers reported offering no discounts, while two offer quantity discounts and one offers a total volume discount. Among responding importers, 11 reported having no discount policy, whereas one (***) offers a quantity discount and two (***) offer total volume discounts. All responding producers offer net 30 days for payments, with two of these also offer other terms such as an early payment discount. Most importers also offer 30 day payment terms, though three offer early payment discounts, and one (***) may adjust payment terms based on customer need.

Price leadership

Purchasers identified 15 aluminum suppliers as price leaders in the industry. U.S. producers reported by more than one purchaser were JW Aluminum (mentioned by 5 purchasers), Gränges (3 purchasers), and Novelis (2 purchasers). Three of the five purchasers reporting JW Aluminum as a price leader referred specifically to its supply of fin stock aluminum.

PRICE DATA

The Commission requested U.S. producers and importers to provide quarterly data for the total quantity and f.o.b. value of the following aluminum foil products shipped to unrelated U.S. customers during January 2014-September 2017.[7]

Product 1.-- Aluminum in the 1XXX series, standard tempers, 0.00025 inch to less than 0.000315 inch thickness, width 30-70", matte/bright.

Product 2.--Aluminum in the 1XXX series, standard tempers, 0.000315-0.0005 inch thickness, inclusive, width 30-70", matte/bright.

[7] The product specifications span the ultra-thin to extra heavy thickness specifications reported earlier in this report as follows: Product 1 – ultra-thin; Product 2 – thin and standard; Product 3 – standard; Products 4-7 – extra heavy; Product 8 – extra heavy (certain fin stock).

Product 3.--Aluminum in the 8XXX series, standard tempers, 0.00039-0.001 inch thickness, width 12-18", mill finish.

Product 4.--Aluminum in the 8XXX series, standard tempers, 0.002-0.0039 inch thickness, width 11" to 31.375", mill finish.

Product 5.--Aluminum in the 8XXX series, standard tempers, 0.004-0.0078 inch thickness, width 11" to 31.375", mill finish.

Product 6.--Aluminum in the 3XXX series, standard tempers, 0.002-0.0033 inch thickness, width 0.5-2", mill finish.

Product 7.--Aluminum in the 3XXX series, standard tempers, 0.0034-0.0078 inch thickness, width 0.5-10", mill finish.

Product 8.--Aluminum certain fin stock, 65 to 110 microns (0.00256 to 0.00433 inches) thick, 15 to 100 mm (0.59 to 3.94 inches) wide, and containing 1.2 to 2.0 percent, by weight, of manganese.[8]

Five U.S. producers[9] and 12 importers[10] provided usable pricing data for sales of the requested products, although not all firms reported pricing for all products for all quarters.[11] Pricing data reported by these firms accounted for approximately 12 percent of U.S. producers' shipments of aluminum foil and 22 percent of U.S. imports from China in 2016. Data was also requested from importers with respect to their landed duty paid costs of aluminum foil that was consumed internally. These data covered an additional 35 percent of imports from China in 2016.

Price data for products 1-8 are presented in tables V-3 to V-10 and figures V-3 to V-10. Landed duty paid cost data for imports from China are also included in tables V-3 to V-10. Nonsubject country prices and landed duty paid cost data are presented in Appendix E.

[8] This specification corresponds to aluminum in the 3XXX series. Firms were directed to exclude from products 6 and 7 any product that was classified in product 8 in order to control for double-counting.

[9] In addition, one producer (***) supplied pricing data that was not used, since it produces ***.

[10] In addition, three importers (***) supplied pricing data. However, ***.

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

Table V-3
Aluminum foil: Weighted-average f.o.b. prices, landed duty paid costs, and quantities of domestic and imported product 1[1] and margins of underselling/(overselling), by quarters, January 2014-September 2017

Period	United States		China pricing data			China LDP cost data	
	Price *(dollars per pound)*	Quantity *(pounds)*	Price *(dollars per pound)*	Quantity *(pounds)*	Margin *(percent)*	LDP *(dollars per pound)*	Quantity *(pounds)*
2014:							
Jan.-Mar.	1.92	5,277,769	1.79	11,566,347	6.6	***	***
Apr.-June	1.93	4,486,099	1.82	11,139,646	5.8	***	***
July-Sept.	2.01	3,651,977	1.79	13,315,737	11.1	***	***
Oct.-Dec.	2.07	3,444,100	1.85	11,308,522	10.7	***	***
2015:							
Jan.-Mar.	2.07	3,411,580	1.81	14,742,193	12.4	***	***
Apr.-June	2.04	2,924,294	1.76	14,326,170	13.5	***	***
July-Sept.	***	***	1.71	12,969,933	***	***	***
Oct.-Dec.	***	***	1.64	10,414,151	***	1.59	5,225,330
2016:							
Jan.-Mar.	***	***	1.59	11,966,110	***	1.52	8,975,993
Apr.-June	***	***	1.59	11,748,839	***	1.52	8,987,296
July-Sept.	***	***	1.63	13,697,216	***	1.53	8,733,770
Oct.-Dec.	***	***	1.64	9,123,696	***	1.52	8,723,368
2017:							
Jan.-Mar.	***	***	1.49	13,842,697	***	1.57	8,668,542
Apr.-June	***	***	1.53	13,495,817	***	1.60	8,547,016
July-Sept.	***	***	1.53	8,257,540	***	***	***

[1] Product 1: Aluminum in the 1000 series, standard tempers, 0.00025 inch to less than 0.000315 inch thickness, width 30-70", matte/bright.

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

Table V-4
Aluminum foil: Weighted-average f.o.b. prices, landed duty paid costs, and quantities of domestic and imported product 2[1] and margins of underselling/(overselling), by quarters, January 2014-September 2017

Period	United States[2]		China pricing data[2]			China LDP cost data	
	Price *(dollars per pound)*	Quantity *(pounds)*	Price *(dollars per pound)*	Quantity *(pounds)*	Margin *(percent)*	LDP *(dollars per pound)*	Quantity *(pounds)*
2014:							
Jan.-Mar.	***	***	1.77	1,346,231	***	***	***
Apr.-June	***	***	1.80	1,121,591	***	1.50	235,524
July-Sept.	***	***	1.81	1,642,237	***	1.67	502,950
Oct.-Dec.	***	***	1.82	1,346,008	***	***	***
2015:							
Jan.-Mar.	***	***	1.75	4,609,336	***	1.83	289,832
Apr.-June	***	***	1.66	6,098,969	***	1.64	735,454
July-Sept.	***	***	1.67	2,028,247	***	1.58	686,764
Oct.-Dec.	***	***	1.54	3,588,561	***	1.48	726,645
2016:							
Jan.-Mar.	***	***	***	***	***	1.47	379,721
Apr.-June	***	***	***	***	***	1.39	1,006,563
July-Sept.	***	***	1.54	3,109,056	***	1.39	1,089,114
Oct.-Dec.	***	***	***	***	***	***	***
2017:							
Jan.-Mar.	***	***	1.61	3,643,376	***	1.40	1,585,861
Apr.-June	***	***	1.69	4,037,188	***	1.43	1,332,466
July-Sept.	***	***	***	***	***	***	***

[1] Product 2: Aluminum in the 1000 series, standard tempers, 0.000315-0.0005 inch thickness, inclusive, width 30-70", matte/bright.
[2] Product 2 specifications include thin gauge aluminum foil as well as part of the range of standard gauge aluminum foil. Responding firms' data includes differing amounts of thin and standard gauge aluminum foil. ***.
***.

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

Table V-5
Aluminum foil: Weighted-average f.o.b. prices, landed duty paid costs, and quantities of domestic and imported product 3 and margins of underselling/(overselling), by quarters, January 2014-September 2017

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Table V-6
Aluminum foil: Weighted-average f.o.b. prices, landed duty paid costs, and quantities of domestic and imported product 4 and margins of underselling/(overselling), by quarters, January 2014-September 2017

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Table V-7
Aluminum foil: Weighted-average f.o.b. prices, landed duty paid costs, and quantities of domestic and imported product 5 and margins of underselling/(overselling), by quarters, January 2014-September 2017

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Table V-8
Aluminum foil: Weighted-average f.o.b. prices and quantities of domestic and imported product 6 and margins of underselling/(overselling), by quarters, January 2014-September 2017

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Table V-9
Aluminum foil: Weighted-average f.o.b. prices and quantities of domestic and imported product 7[1] and margins of underselling/(overselling), by quarters, January 2014-September 2017

Period	United States		China pricing data		
	Price *(dollars per pound)*	Quantity *(pounds)*	Price *(dollars per pound)*	Quantity *(pounds)*	Margin *(percent)*
2014: Jan.-Mar.	1.54	5,740,451	***	***	***
Apr.-June	1.58	5,748,964	***	***	***
July-Sept.	***	***	***	***	***
Oct.-Dec.	1.71	5,664,561	***	***	***
2015: Jan.-Mar.	1.67	5,253,916	***	***	***
Apr.-June	1.58	5,132,440	***	***	***
July-Sept.	1.43	5,587,309	***	***	***
Oct.-Dec.	1.35	5,853,274	***	***	***
2016: Jan.-Mar.	1.34	4,690,788	***	***	***
Apr.-June	***	***	***	***	***
July-Sept.	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***
2017: Jan.-Mar.	***	***	***	***	***
Apr.-June	***	***	***	***	***
July-Sept.	***	***	***	***	***

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

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

Table V-10
Aluminum foil: Weighted-average f.o.b. prices, landed duty paid costs, and quantities of domestic and imported product 8 and margins of underselling/(overselling), by quarters, January 2014-September 2017

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Figure V-3
Aluminum foil: Weighted-average prices and quantities of domestic and imported product 1, by quarters, January 2014-September 2017

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Figure V-4
Aluminum foil: Weighted-average prices and quantities of domestic and imported product 2, by quarters, January 2014-September 2017

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Figure V-5
Aluminum foil: Weighted-average prices and quantities of domestic and imported product 3, by quarters, January 2014-September 2017

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Figure V-6
Aluminum foil: Weighted-average prices and quantities of domestic and imported product 4, by quarters, January 2014-September 2017

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Figure V-7
Aluminum foil: Weighted-average prices and quantities of domestic and imported product 5, by quarters, January 2014-September 2017

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Figure V-8
Aluminum foil: Weighted-average prices and quantities of domestic and imported product 6, by quarters, January 2014-September 2017

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Figure V-9
Aluminum foil: Weighted-average prices and quantities of domestic and imported product 7, by quarters, January 2014-September 2017

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Figure V-10
Aluminum foil: Weighted-average prices and quantities of domestic and imported product 8, by quarters, January 2014-September 2017

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Price trends

In general, prices trends varied by product for U.S. producers and decreased for imports from China during January 2014-September 2017. Table V-11 summarizes the price trends, by country and by product. As shown in the table, domestic prices increased for six products, with increases ranging from 0.1 to 6.8 percent, and decreased for two products, with decreases ranging from 0.4 to 17.1 percent. Imports of aluminum foil from China decreased in price for four of the five products for which there were prices in both the first four quarters and last four quarters, with decreases ranging from 0.9 to 14.6 percent. Domestic prices generally followed the price of aluminum raw materials,[12] as did most prices for products imported from China. The difference between the pricing products prices and quarterly index raw material costs is presented in appendix F.

The volume of each domestically produced pricing product decreased between the first quarter of 2014 and the third quarter of 2017. ***.[13] ***.

***. Volumes of products 6 increased for domestic producers and decreased for shipments of imports from China, while volumes for product 7 decreased for both. Volumes of product 8 sold by domestic producers fluctuated mildly, while sales of product 8 imported from China increased slightly.

[12] The correlation coefficients between the prices of the domestic pricing products and the sum of the quarterly LME and Midwest premium ranged between 0.85 and 0.96 for products 1, 2, 3, 7 and 8. However, it was 0.57 for product 4 and 0.32 for product 5. No correlation was computed for product 6, since ***. As noted above, nearly 90 percent of U.S. product is sold via contracts, which often include prices that are indexed or linked to raw material prices.

[13] The largest volumes of products 1, 3, and 8 were reported in the purchase cost data for imports from China, and each increased between the first quarter of 2014 and the third quarter of 2017.

Table V-11
Aluminum foil: Summary of weighted-average f.o.b. prices for products 1-8 from the United States and China

Item	Number of quarters	Low price (per unit)	High price (per unit)	Change in price[1] (percent)
Product 1				
United States	15	***	***	***
China pricing data	15	***	***	***
China purchase cost data	15	***	***	***
Product 2				
United States	15	***	***	***
China pricing data	15	***	***	***
China purchase cost data	15	***	***	***
Product 3				
United States	15	***	***	***
China pricing data	8	***	***	---
China purchase cost data	15	***	***	***
Product 4				
United States	15	***	***	***
China pricing data	1	***	***	---
China purchase cost data	12	***	***	***
Product 5				
United States	15	***	***	***
China pricing data	2	***	***	---
China purchase cost data	12	***	***	***
Product 6				
United States	8	***	***	***
China pricing data	12	***	***	***
China purchase cost data	---	---	---	---
Product 7				
United States	15	***	***	***
China pricing data	15	***	***	***
China purchase cost data	---	---	---	---
Product 8				
United States	15	***	***	***
China pricing data	15	***	***	***
China purchase cost data	15	***	***	***

[1] Percentage change is calculated using data from the first quarter in which data were available in 2014 to the last quarter in which data were available if it is among the last four quarters of the period studied.

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

Price comparisons

As shown in table V-12, prices for product imported from China were below those for U.S.-produced product in 40 of 77 instances (233 million pounds); margins of underselling ranged from 1.2 to 23.0 percent. In the remaining 37 instances (18 million pounds), prices for product from China were between 0.8 and 51.6 percent above prices for the domestic product.

Nearly all of the underselling was reported for products 1 (ultra-thin) and 2 (thin/standard), whereas most of the overselling was reported in products 6, 7, and 8 (extra heavy products), including the product that is specifically designated as fin stock (product 8). Underselling in product 1 was higher in the second half of the period, as ***.

Table V-12
Aluminum foil: Instances of underselling/overselling and the range and average of margins, by country, January 2014-September 2017

Product	Underselling					
	Number of quarters	Quantity[1] (pounds)		Average margin (percent)	Margin range (percent)	
		Subject	Domestic		Min	Max
Product 1	***	***	***	12.3	5.8	23.0
Product 2	***	***	***	7.6	1.2	11.7
Product 3	***	***	***	11.7	3.5	20.5
Product 4	***	***	***	***	***	***
Product 5	***	***	***	16.2	16.2	16.2
Product 6	***	***	***	1.5	1.4	1.7
Product 7	***	***	***	***	***	***
Product 8	***	***	***	***	***	***
Total	40	232,961,411	99,365,562	10.0	1.2	23.0
	(Overselling)					
Product	Number of quarters	Quantity[1] (pounds)		Average margin (percent)	Margin range (percent)	
		Subject	Domestic		Min	Max
Product 1	***	***	***	***	***	***
Product 2	***	***	***	***	***	***
Product 3	***	***	***	(5.7)	(5.7)	(5.7)
Product 4	***	***	***	(0.9)	(0.9)	(0.9)
Product 5	***	***	***	(2.3)	(2.3)	(2.3)
Product 6	***	***	***	(2.6)	(0.8)	(4.8)
Product 7	***	***	***	(37.9)	(29.9)	(51.6)
Product 8	***	***	***	(6.1)	(2.3)	(10.8)
Total	37	17,829,615	210,073,651	(18.4)	(0.8)	(51.6)

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

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

Tables III-8 and IV-5 presented data for domestic aluminum foil shipments and shipments of imports from China, respectively, across five thicknesses of aluminum foil. The eight pricing products cover varying percentages of the corresponding thicknesses. Pricing data for product 1 accounted for approximately 95 percent of reported domestic producer shipments of ultra-thin product, whereas they accounted for approximately 57 percent of shipments of ultra-thin aluminum foil from China. Product 2 spans both the thin and standard gauges definitions. Pricing data for product 2 includes a substantial amount of standard gauge aluminum foil, as the pricing data would account for approximately 159 percent of domestic shipments of thin aluminum foil and approximately 92 percent of shipments of thin aluminum foil imported from China. As noted in footnote 2 to table V-4, a great majority of the pricing data for importers that reported product 2 pricing data was for thin gauge aluminum foil. A

smaller percentage, yet still a majority of *** pricing data were of thin gauge aluminum foil. For the extra heavy products, the pricing data account for less than 15 percent of the shipment data of that thickness for domestic aluminum foil and that imported from China.

Import purchase cost data

Import purchase cost data for six of the eight products were supplied by 15 importers, and accounted for approximately 35 percent of imports from China in 2016. *** was the largest direct importer of these aluminum foil products from China (***), followed by ***, and ***.[14]

Importers reporting import purchase cost data were asked to provide additional information on costs beyond landed-duty paid costs incurred from directly importing aluminum foil. Seven importers reported that there were logistical or supply chain costs (ranging from 3 to 17.4 percent) compared to having purchased from U.S. producers and U.S. importers.

Sixteen importers identified benefits from importing directly instead of purchasing from U.S. producers or importers. Many firms reported that they imported rather than purchasing from domestic firms due to availability, limited domestic production capacity, continuity of supply, design specification, increased productivity, lower cost, longer contracts, no U.S. production of various types of light and ultra-light gauge foil, production planning, and reduced rejection rates, superior quality, and superior service. Relative to importers, cited benefits were the avoidance of brokerage fees and upcharges, and an overall lower price. When asked to estimate the margin saved by having directly imported, 8 of the 16 firms reported zero savings. Five of the other 8 reported saving between 10 and 15 percent, with the remaining importers estimating 3, 3 to 5, and 30 percent.

LOST SALES AND LOST REVENUE

In the preliminary phase of these investigations, the Commission requested that U.S. producers of aluminum foil report purchasers where they experienced instances of lost sales or revenue due to competition from imports of aluminum foil from China during 2014-16. All four responding U.S. producers reported that they had to either reduce prices or roll back announced price increases, and all four firms reported that they had lost sales. Three U.S. producers submitted lost sales and lost revenue allegations. The U.S. producers identified 29 firms to which they lost sales or revenue (28 consisting of only lost sales allegations and 1 consisting of both types of allegations). Allegations spanned from 2014 through 2016.

In the final phase of the investigation, all five responding U.S. producers reported that they had lost sales and reduced prices since January 1, 2014 due to competition from imports of aluminum foil from China. In addition, three firms reported that they had to roll back announced price increases.

[14] There were no imports from Germany for importers' own use.

Staff contacted 75 purchasers and received responses from 50 purchasers. Responding purchasers reported purchasing more than 678,000 short tons of aluminum foil during January 2014-December 2016, including 233,000 short tons in 2016. Including their imports, they sourced over 900,000 short tons in 2014-2016 (table V-13).

Table V-13
Aluminum foil: Purchasers' responses to purchasing patterns

* * * * * * *

Of 50 purchasers, 40 reported that, since 2014, they had purchased imported aluminum foil from China instead of U.S.-produced product.[15] Of these purchasers, 34 reported that the imported Chinese aluminum foil was priced lower than domestically produced aluminum foil. Of these, only 9 of these 34 purchasers reported that price was a primary reason for the decision to purchase imported product rather than U.S.-produced product. These nine purchasers estimated the quantity of aluminum foil from China purchased instead of domestic product; quantities ranged from *** (table V-14). The vast majority of non-fin stock aluminum foil imported from China that was purchased instead of domestic aluminum was ***. Most purchasers reported availability of ultra-thin (or "ultra-lightweight") aluminum foil and quality issues as non-price reasons for purchasing imported rather than U.S.-produced product.

Table V-14
Aluminum foil: Purchasers' responses to purchasing subject imports instead of domestic product

* * * * * * *

Of the 50 responding purchasers, 4 reported that U.S. producers had reduced prices in order to compete with lower-priced imports from China and 26 reported that they had not (table V-15; 20 reported that they did not know).[16] The reported estimated price reductions ranged from 1.5 to 13.4 percent.

[15] Of these firms, five purchased imported certain fin stock from China instead of certain fin stock from U.S. producers, compared with 37 that purchased all other aluminum foil.

[16] One purchaser reported these price reductions occurred with respect to certain fin stock and 2 with respect to all other aluminum foil.

Table V-15
Aluminum foil: Purchasers' responses to U.S. producer price reductions

Purchaser	U.S. producers reduced priced to compete with subject imports (Y/N)	If U.S. producers reduced prices	
		Estimated U.S. price reduction (percent)	Additional information, if available
***	Yes	13.4	All other aluminum foil: Global market conditions.
***	Yes	1.5	All other aluminum foil; 2017 supply.
***	Yes	10.0	Certain fin stock: Price reductions were made simply due to increasing competition.
***	Yes	6.0	All other aluminum foil: Container stock pricing was negotiated every two years, household foil price was negotiated every year.
Total/average	Yes--4; No--26	7.7	

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

PART VI: FINANCIAL EXPERIENCE OF U.S. PRODUCERS

BACKGROUND

The financial results presented in this section of the report reflect four U.S. producers whose operations primarily reflect commercial sales of aluminum foil and two producers, ***, who consume all or a majority, respectively, of their aluminum foil production. These producers, which account for the vast majority of U.S. production of aluminum foil, provided usable financial data on their aluminum foil operations. All U.S. producers reported financial data on a calendar year basis and five U.S. producers reported their financial results on the basis of generally accepted accounting principles ("GAAP").[1]

Staff verified the results of *** with its company records. The verification adjustments were incorporated into this report.[2] ***.

OPERATIONS ON ALUMINUM FOIL

Table VI-1 presents aggregated data on the U.S. producers' operations in relation to aluminum foil on the merchant market. This table includes commercial sales but does not include revenue or cost data for internal consumption or transfers to related firms. Table VI-2 presents the changes in average unit values ("AUVs") for the merchant market data presented in table VI-1. Table VI-3 presents aggregated data on U.S. producers' operations in relation to the total aluminum foil market (including commercial sales, internal consumption, and transfers to related firms).[3] Table VI-4 presents the changes in AUVs for the data presented in table VI-3. Tables VI-5 presents selected company-specific financial data for the merchant market.[4]

Commercial sales accounted for *** percent of net sales volume from January 1, 2014 through September 30, 2017. The remainder consisted of internal consumption by ***.[5] [6]

Table VI-1
Aluminum foil: Results of merchant market operations of U.S. producers, 2014-16, January to September 2016, and January to September 2017

* * * * * * *

[1] ***.

[2] Staff verification report, ***.

[3] The Commission's questionnaire instructs U.S. producers to value internal consumption and transfers to related firms at fair market value. ***. ***. Email from ***.

[4] Company-specific financial data for the total market can be found at appendix H.

[5] Email from *** and ***.

[6] ***. ***.

Winston-Salem Journal, http://www.journalnow.com/news/local/former-alpha-aluminum-employees-owed-k-in-back-wages-benefits/article_0ed584f9-e50e-57ec-8547-91a0e4c23177.html, retrieved January 16, 2018.

Table VI-2
Aluminum foil: merchant market changes in AUVs between yearly periods and between partial year periods

* * * * * * *

Table VI-3
Aluminum foil: Results of total market operations of U.S. producers, 2014-16, January to September 2016, and January to September 2017

* * * * * * *

Table VI-4
Aluminum foil: Total market changes in AUVs between yearly periods and between partial year periods

* * * * * * *

Table VI-5
Aluminum foil: Results of merchant market operations of U.S. producers, by firm, 2014-16, January to September 2016, and January to September 2017

* * * * * * *

Net sales quantity and value

As shown in table VI-1, merchant market sales on a quantity basis decreased from 2014 to 2015 before increasing slightly in 2016, but remained lower than 2014 levels. In the first three quarters of 2017 ("interim 2017"), merchant market sales volume was higher than in the same period in 2016 ("interim 2016"). The merchant market sales value decreased consistently from 2014 to 2016, but, like the sales volume, was higher in interim 2017 than interim 2016. On a per-short ton basis, merchant market sales decreased from $*** in 2014 to $*** in 2016; however it was higher in interim 2017 ($***) compared with the same period in 2016 ($***).

As shown in table VI-3, net sales in the total market of aluminum foil consisted of commercial sales (*** percent, by quantity), internal consumption (*** percent, by quantity), and transfers to related firms (*** percent, by quantity) during the period examined. As mentioned previously in this section, ***. Total market net sales by quantity and value followed the same trends as the merchant market.

Cost of goods sold and gross profit or (loss)

Raw materials accounted for the single largest component of overall COGS, accounting for between *** percent (2016) and *** percent (interim 2017) of total COGS in the merchant market and between *** percent (2016) and *** percent (2014) of total COGS in the total market. Raw material costs, which represented *** percent of sales value in the merchant market and *** percent in the total market in 2014, declined to *** percent of merchant

market sales and *** of total market sales in 2016. However, the ratio of raw materials to net sales was higher in interim 2017 compared to interim 2016 in both the merchant and total markets. ***.[7] [8] In the merchant market, the per-short ton cost of raw materials decreased from $*** in 2014 to $*** in 2016, but was higher in interim 2017 ($***) than in the same period in 2016 ($***). On a company-specific basis in the merchant market, *** responding producers reported decreasing per-unit raw material costs from 2014 to 2016 and higher per-unit raw material costs in interim 2017 compared to the same period in 2016. In the total market, ***.

Other factory costs, which are composed of both variable and fixed facility overhead costs, were the second largest component of total COGS, representing between *** percent (in interim 2017) and *** percent (in 2016) of total COGS in the merchant market and *** percent (in interim 2017) and *** percent (in 2016) in the total market. On a per-unit basis, the merchant market's other factory costs decreased irregularly from $*** per short ton in 2014 to $*** per short ton in 2016, and were lower in interim 2017 ($*** per short ton) than in the same period in 2016 (*** per short ton). On a company-specific basis, the results were mixed, with ***.[9] In the total market, ***.

The last component of COGS, direct labor, accounted for between *** percent (in 2014) and *** percent (in interim 2016) of total COGS in the merchant market and between *** percent (in 2014) and *** percent (in interim 2016) in the total market.[10] In both the merchant market and total market direct labor per-short ton increased from 2014 to 2016 and was higher in interim 2017 than in the same period in 2016. On a company-specific basis, the results were ***. ***.

The COGS to sales ratio for the merchant market increased from *** percent in 2014 to *** percent in 2015 and decreased to *** percent in 2016. It was higher in interim 2017 (*** percent) compared to the same period in 2016 (*** percent). The COGS to sales ratio in the total market followed a similar trend.

In the merchant market, gross profit decreased from $*** in 2014 to $*** in 2015, but increased to $*** in 2016. Merchant market gross profit was slightly higher in the first three quarters of 2017 ($***) than in the same period in 2016 ($***). The decrease in gross profit in 2015 is mostly attributable to ***. In the total market, gross profit decreased from $*** in 2014 to $*** in 2015 before increasing to $*** in 2016, but was lower in interim 2017 ($***) compared to interim 2016 ($***).

---

[7] In accordance with Commission practice, *** producers reported cost information associated with the input purchases from related suppliers in the manner in which this information is reported in the U.S. producers' own accounting books and records. For ***.

[8] ***. ***.

[9] ***.

[10] As can be seen in table H-1 in appendix H, ***. Email from ***.

SG&A expenses and operating income or (loss)

As shown in table VI-1, the merchant market's SG&A expense ratios (i.e., total SG&A expenses divided by total revenue) moved within a relatively narrow range during the period examined: *** percent (2014 and interim 2017) and *** percent (interim 2016). Similarly, the total market's SG&A expense ratio was between *** percent (interim 2017) and *** (interim 2016).

Operating income for the merchant market decreased from *** in 2014 to *** in 2015 before improving to *** in 2016. In interim 2017 operating income was *** higher ($***) than in the same period in 2016 ($***). As can be seen from table VI-5, ***. Operating income for the total market followed a similar trend as the merchant market. [11]

Other expenses and net income or (loss)

Classified below the operating income level are interest expense, other expense, and other income, which are usually allocated to the product line from high levels in the corporation. Combined interest and other expenses (net of other income) in the merchant market, increased from $*** in 2014 to $*** in 2015, before decreasing to $*** in 2016, but was higher in interim 2017 ($***) compared to interim 2016 ($***). Interest expense accounted for the majority of other expenses reported.[12]

By definition, items classified at this level in the income statement only affect net income or (loss). Merchant market net income decreased from *** million in 2014 to *** million in 2015 before improving to *** million in 2016. Merchant market net income was lower in the first three quarters of 2017 (***) than in the same period in 2016 (***). Net income for the total market followed a similar trend as the merchant market.

Variance analysis

A variance analysis for the merchant market operations of U.S. producers of aluminum foil is presented in table VI-6 and a variance analysis for the total market is presented in table VI-7.[13] The information for the merchant market variance analysis is derived from table VI-1 and

---

[11] ***.

[12] ***.

[13] The Commission's variance analysis is calculated in three parts: Sales variance, cost of sales variance (COGS variance), and SG&A expense variance. Each part consists of a price variance (in the case of the sales variance) or a cost or expense variance (in the case of the COGS and SG&A expense variance), and a volume variance. The sales or cost/expense variance is calculated as the change in unit price or per-unit cost/expense times the new volume, while the volume variance is calculated as the change in volume times the old unit price or per-unit cost/expense. Summarized at the bottom of the table, the price variance is from sales; the cost/expense variance is the sum of those items from COGS and SG&A variances, respectively, and the volume variance is the sum of the volume components of the net sales, COGS, and SG&A expense variances. The overall volume component of the variance analysis is generally small.

the total market variance analysis is derived from table VI-3. The analysis illustrates that from 2014 to 2016, the *** decrease in the merchant market's operating income is primarily attributable to the combination of unfavorable price and net volume variances being higher than the favorable net cost/expense (i.e., the decrease in the costs and expenses did not make up for the decrease in the net sales unit value and volume of sales). Between the comparable interim periods, the increase in operating income is primarily attributable to the combination of favorable price and net volume variances being higher than the unfavorable net cost/expense variance (i.e., the combination of the increase in net sales unit value and volume of sales positively affected operating income despite the increase in costs and expenses).

When looking at the total market, the analysis illustrates that from 2014 to 2016, the decrease in operating income is primarily attributable to a higher unfavorable price variance, despite a favorable cost/expense variance (i.e., net sales unit values decreased more than costs and expenses). Between the comparable interim periods, the decrease in operating income is primarily attributable to a higher unfavorable cost/expense variance despite a favorable price variance (i.e., cost and expenses increased more than the net sales unit values).

Table VI-6
Aluminum foil: Variance analysis on the merchant market operations of U.S. producers, 2014-16, January to September 2016, and January to September 2017

* * * * * * *

Table VI-7
Aluminum foil: Variance analysis on the total market operations of U.S. producers, 2014-16, January to September 2016, and January to September 2017

* * * * * * *

CAPITAL EXPENDITURES AND RESEARCH AND DEVELOPMENT EXPENSES

Table VI-8 presents capital expenditures by firm, with a subtotal for the merchant market total.[14] Capital expenditures for the merchant market increased from $*** in 2014 to $*** in 2016, and were *** lower in interim 2017 ($***) than during the same period in 2016 ($***). All of the U.S. producers ***. *** reported R&D expenses.

Table VI-8
Aluminum foil: Capital expenditures of U.S. producers, 2014-16, January to September 2016, and January to September 2017

* * * * * * *

[14] ***.

ASSETS, INVESTMENT, AND CAPITAL

Table VI-9 presents data on the U.S. producers' total assets and their return on assets ("ROA"), with a subtotal for the merchant market.[15] [16] Merchant market assets for the industry decreased from $*** in 2014 to $*** in 2016. While *** producers in the merchant market reported decreasing assets from 2014 to 2016, the *** of the decrease was due to ***.[17]

Table VI-9
Aluminum foil: U.S. producers' total assets and return on assets, 2014-16, January to September 2016, and January to September 2017

* * * * * * *

The Commission requested U.S. producers of aluminum foil to describe any actual or potential negative effects of imports of aluminum foil from China on their firms' growth, investment, ability to raise capital, development and production efforts, or the scale of capital investments. Table VI-10 presents a tally of U.S. producers' responses and table VI-11 provides the narrative responses.

Table VI-10
Aluminum foil: Actual and anticipated negative effects of imports on investment, growth, and development, since January 1, 2014

* * * * * * *

Table VI-11
Aluminum foil: Company narratives relating to actual and anticipated negative effects of imports on investment, growth, and development, since January 1, 2014

* * * * * * *

[15] With respect to a company's overall operations, staff notes that a total asset value (i.e., the bottom line number on the asset side of a company's balance sheet) reflects an aggregation of a number of assets which are generally not product-specific. Accordingly, high-level allocation factors and estimates may have been required in order to report a total asset value for aluminum foil.

[16] ***.

[17] ***.

PART VII: THREAT CONSIDERATIONS AND INFORMATION ON NONSUBJECT COUNTRIES

Section 771(7)(F)(i) of the Act (19 U.S.C. § 1677(7)(F)(i)) provides that—

> *In determining whether an industry in the United States is threatened with material injury by reason of imports (or sales for importation) of the subject merchandise, the Commission shall consider, among other relevant economic factors*[1]*--*
>
> *(I) if a countervailable subsidy is involved, such information as may be presented to it by the administering authority as to the nature of the subsidy (particularly as to whether the countervailable subsidy is a subsidy described in Article 3 or 6.1 of the Subsidies Agreement), and whether imports of the subject merchandise are likely to increase,*
>
> *(II) any existing unused production capacity or imminent, substantial increase in production capacity in the exporting country indicating the likelihood of substantially increased imports of the subject merchandise into the United States, taking into account the availability of other export markets to absorb any additional exports,*
>
> *(III) a significant rate of increase of the volume or market penetration of imports of the subject merchandise indicating the likelihood of substantially increased imports,*
>
> *(IV) whether imports of the subject merchandise are entering at prices that are likely to have a significant depressing or suppressing effect on domestic prices, and are likely to increase demand for further imports,*
>
> *(V) inventories of the subject merchandise,*

---

[1] Section 771(7)(F)(ii) of the Act (19 U.S.C. § 1677(7)(F)(ii)) provides that "The Commission shall consider {these factors} . . . as a whole in making a determination of whether further dumped or subsidized imports are imminent and whether material injury by reason of imports would occur unless an order is issued or a suspension agreement is accepted under this title. The presence or absence of any factor which the Commission is required to consider . . . shall not necessarily give decisive guidance with respect to the determination. Such a determination may not be made on the basis of mere conjecture or supposition."

(VI) the potential for product-shifting if production facilities in the foreign country, which can be used to produce the subject merchandise, are currently being used to produce other products,

(VII) in any investigation under this title which involves imports of both a raw agricultural product (within the meaning of paragraph (4)(E)(iv)) and any product processed from such raw agricultural product, the likelihood that there will be increased imports, by reason of product shifting, if there is an affirmative determination by the Commission under section 705(b)(1) or 735(b)(1) with respect to either the raw agricultural product or the processed agricultural product (but not both),

(VIII) the actual and potential negative effects on the existing development and production efforts of the domestic industry, including efforts to develop a derivative or more advanced version of the domestic like product, and

(IX) any other demonstrable adverse trends that indicate the probability that there is likely to be material injury by reason of imports (or sale for importation) of the subject merchandise (whether or not it is actually being imported at the time).[2]

Information on the nature of the subsidies was presented earlier in this report; information on the volume and pricing of imports of the subject merchandise is presented in *Parts IV* and *V*; and information on the effects of imports of the subject merchandise on U.S. producers' existing development and production efforts is presented in *Part VI*. Information on inventories of the subject merchandise; foreign producers' operations, including the potential for "product-shifting;" any other threat indicators, if applicable; and any dumping in third-country markets follows. Also presented in this section of the report is information obtained for consideration by the Commission on nonsubject countries.

[2] Section 771(7)(F)(iii) of the Act (19 U.S.C. § 1677(7)(F)(iii)) further provides that, in antidumping investigations, ". . . the Commission shall consider whether dumping in the markets of foreign countries (as evidenced by dumping findings or antidumping remedies in other WTO member markets against the same class or kind of merchandise manufactured or exported by the same party as under investigation) suggests a threat of material injury to the domestic industry."

THE INDUSTRY IN CHINA

The Commission issued foreign producers' or exporters' questionnaires to more than 100 firms believed to produce and/or export aluminum foil from China.[3] Usable responses to the Commission's questionnaire were received from 12 firms.[4] These firms' exports to the United States accounted for 76.4 percent of U.S. imports of aluminum foil from China in 2016 and 77.7 percent from January 2014 through September 2017.[5] According to estimates requested of the responding producers in China, they account for 27.9 percent of all production and 64.7 percent of exports of aluminum foil to the United States from China.[6] Table VII-1 presents information on the aluminum foil operations of the responding producers in China.

Table VII-1
Aluminum foil: Summary data for producers in China, 2016

Firm	Production (short tons)	Share of reported production (percent)	Exports to the United States (short tons)	Share of reported exports to the United States (percent)	Total shipments (short tons)	Share of firm's total shipments exported to the United States (percent)
Alcha Aluminum	***	***	***	***	***	***
Chinalco	***	***	***	***	***	***
Dingsheng New Materials	***	***	***	***	***	***
Donghai Aluminum	***	***	***	***	***	***
Kunshan Aluminum	***	***	***	***	***	***
Longding Aluminum	***	***	***	***	***	***
North China Aluminum	***	***	***	***	***	***
Shenhuo Aluminum	***	***	***	***	***	***
Suntown Marketing	***	***	***	***	***	***
Winbo Industrial	***	***	***	***	***	***
Xiashun Aluminum	***	***	***	***	***	***
Zhongii Lamination	***	***	***	***	***	***
Total	1,372,632	100.0	115,881	100.0	1,369,763	8.5

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

[3] These firms were identified through a review of information submitted in the petition and contained in *** records.

[4] A thirteenth response was submitted by *** which is an exporter of aluminum foil produced by ***.

[5] The responding firms in China reported 115,881 short tons of exports of aluminum foil to the United States in 2016 and 398,963 short tons from 2014 through September 2017.

[6] *** estimates that the industry in China produced *** short tons in 2016. This estimate is somewhat overstated because it includes some nonsubject backed aluminum foil. Petitioners' postconference brief, exh. 16.

Table VII-2 presents information on the aluminum foil operations of the responding resellers in China.

Table VII-2
Aluminum foil: Summary data for resellers in China, 2016

Firm	Resales exported to the United States (short tons)	Share of reported resales exported to the United States (percent)
Manakin	***	***
Xiashun Aluminum	***	***
Total	***	***

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

Changes in operations

As presented in table VII-3, producers in China reported several operational and organizational changes since January 1, 2014.

Table VII-3
Aluminum foil: Reported changes in operations by producers in China, since January 1, 2014

* * * * * * *

Operations on aluminum foil

Table VII-4 presents information on the aluminum foil operations of the responding producers and exporters in China.

Table VII-4
Aluminum foil: Data on industry in China, 2014-16, January to September 2016, and January to September 2017 and projections for calendar years 2017 and 2018

Item	Actual experience					Projections	
	Calendar year			January to September		Calendar year	
	2014	2015	2016	2016	2017	2017	2018
	Quantity (short tons)						
Capacity	1,411,401	1,477,601	1,539,101	1,150,201	1,185,570	1,580,759	1,592,773
Production	1,148,012	1,176,948	1,372,632	998,717	1,044,515	1,403,030	1,419,373
End-of-period inventories	80,337	76,292	80,559	80,855	77,037	81,121	82,001
Shipments:							
Home market shipments:							
Internal consumption/ transfers	***	***	***	***	***	***	***
Commercial home market shipments	***	***	***	***	***	***	***
Total home market shipments	700,159	679,857	786,044	558,643	610,693	828,741	854,858
Export shipments to:							
United States	96,525	103,944	115,881	85,669	82,613	92,046	52,687
All other markets	345,566	397,105	467,838	351,200	355,462	481,681	510,948
Total exports	442,091	501,049	583,719	436,869	438,075	573,727	563,635
Total shipments	1,142,250	1,180,906	1,369,763	995,512	1,048,768	1,402,468	1,418,493
	Ratios and shares (percent)						
Capacity utilization	81.3	79.7	89.2	86.8	88.1	88.8	89.1
Inventories/production	7.0	6.5	5.9	6.1	5.5	5.8	5.8
Inventories/total shipments	7.0	6.5	5.9	6.1	5.5	5.8	5.8
Share of shipments:							
Home market shipments:							
Internal consumption/ transfers	***	***	***	***	***	***	***
Commercial home market shipments	***	***	***	***	***	***	***
Total home market shipments	61.3	57.6	57.4	56.1	58.2	59.1	60.3
Export shipments to:							
United States	8.5	8.8	8.5	8.6	7.9	6.6	3.7
All other markets	30.3	33.6	34.2	35.3	33.9	34.3	36.0
Total exports	38.7	42.4	42.6	43.9	41.8	40.9	39.7
Total shipments	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Quantity (short tons)						
Resales exported to the United States	255	43	3,039	1,891	2,313	2,313	---
Total exports to the United States	96,780	103,987	118,920	87,560	84,926	94,359	52,687
	Ratios and shares (percent)						
Share of total exports to the United States.--							
Exported by producers	99.7	100.0	97.4	97.8	97.3	97.5	100.0
Exported by resellers	0.3	0.0	2.6	2.2	2.7	2.5	---
Adjusted share of total shipments exported to US	8.5	8.8	8.7	8.8	8.1	6.7	3.7

Note.--Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent.

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

Alternative products

As shown in table VII-5, responding firms in China manufactured other products on the same equipment and machinery used to produce aluminum foil. The other products reported by producers in China include: ***.

Table VII-5
Aluminum foil: Overall capacity and production on the same equipment as in-scope production by producers in China, 2014-16, January to September 2016, and January to September 2017

* * * * * * *

Exports

According to Global Trade Atlas ("GTA"), the leading export markets for aluminum foil from China are the United States, India,[7] the Middle East, East Asia, and Mexico (table VII-6). During 2016, the United States was the top export market for aluminum foil from China, accounting for 19.8 percent of shipments, followed by India, accounting for 13.1 percent.

Table VII-6
Aluminum foil: Exports from China by destination market, 2014-16

Destination market	Calendar year		
	2014	2015	2016
	Quantity (short tons)		
China exports to the United States	104,860	128,081	142,864
China exports to other major destination markets.--India	76,262	81,880	95,010
United Arab Emirates	27,899	29,308	31,387
Korea	16,307	18,972	30,270
Thailand	23,155	26,088	29,827
Indonesia	23,830	20,667	28,752
Mexico	20,919	22,748	28,054
Saudi Arabia	30,361	31,992	25,749
Japan	16,358	18,691	21,601
All other destination markets	243,242	266,233	289,263
Total China exports	583,191	644,659	722,775
	Value (1,000 dollars)		
China exports to the United States	308,564	355,787	360,226
China exports to other major destination markets.--India	215,188	212,782	221,609
United Arab Emirates	72,157	71,385	68,071
Korea	48,953	54,530	76,750
Thailand	70,301	75,605	78,270
Indonesia	72,926	57,916	70,182
Mexico	57,530	58,845	66,000
Saudi Arabia	82,314	80,455	59,215
Japan	54,684	59,419	63,031
All other destination markets	709,682	733,793	706,984
Total China exports	1,692,298	1,760,517	1,770,337

Table continued on next page.

[7] India issued antidumping orders on aluminum foil from China in May 2017.

Table VII-6--Continued
Aluminum foil: Exports from China by destination market, 2014-16

Destination market	Calendar year		
	2014	2015	2016
	Unit value (dollars per short ton)		
China exports to the United States	2,943	2,778	2,521
China exports to other major destination markets.--India	2,822	2,599	2,332
United Arab Emirates	2,586	2,436	2,169
Korea	3,002	2,874	2,536
Thailand	3,036	2,898	2,624
Indonesia	3,060	2,802	2,441
Mexico	2,750	2,587	2,353
Saudi Arabia	2,711	2,515	2,300
Japan	3,343	3,179	2,918
All other destination markets	2,918	2,756	2,444
Total China exports	2,902	2,731	2,449
	Share of quantity (percent)		
China exports to the United States	18.0	19.9	19.8
China exports to other major destination markets.--India	13.1	12.7	13.1
United Arab Emirates	4.8	4.5	4.3
Korea	2.8	2.9	4.2
Thailand	4.0	4.0	4.1
Indonesia	4.1	3.2	4.0
Mexico	3.6	3.5	3.9
Saudi Arabia	5.2	5.0	3.6
Japan	2.8	2.9	3.0
All other destination markets	41.7	41.3	40.0
Total China exports	100.0	100.0	100.0

Note.--Data reported in this table does not include in-scope merchandise (fin stock) imported under HS subheading 7607.19.

Source: Official exports statistics under HS subheading 7607.11 as reported by China Customs in the IHS/GTA database, accessed December 22, 2017.

U.S. INVENTORIES OF IMPORTED MERCHANDISE

Table VII-7 presents data on U.S. importers' reported inventories of aluminum foil. The ratio of inventories of imports from China to U.S. shipments of all imports has decreased by 1.0 percentage point from 2014 to 2016, and was 3.6 percentage points lower in January–September 2017 than in January–September 2016. The ratio of inventories of imports from nonsubject sources to U.S. shipments of all imports has decreased by *** percentage points from 2014 to 2016, but was *** percentage points higher in interim 2017 than in interim 2016. Importers reported various levels of inventory requirements based on the end-use products they produce or availability of aluminum foil stock. Importers Global, MAHLE Behr, and Multifilm reported that they ***. Trinidad Benham, a household foil converter cites ***. Norca Heat Transfer reported that it ***.

Table VII-7
Aluminum foil: U.S. importers' end-of-period inventories of imports by source, 2014-16, January to September 2016, and January to September 2017

Item	Calendar year			January to September	
	2014	2015	2016	2016	2017
	Inventories (short tons); Ratios (percent)				
Imports from China: Inventories	13,516	16,332	21,637	22,098	20,590
Ratio to U.S. imports	18.4	16.5	18.1	18.1	15.9
Ratio to U.S. shipments of imports	20.3	17.4	19.3	19.7	16.2
Ratio to total shipments of imports	19.6	16.9	18.9	19.3	15.8
Imports from Armenia: Inventories	***	***	***	***	***
Ratio to U.S. imports	***	***	***	***	***
Ratio to U.S. shipments of imports	***	***	***	***	***
Ratio to total shipments of imports	***	***	***	***	***
Imports from Germany: Inventories	***	***	***	***	***
Ratio to U.S. imports	***	***	***	***	***
Ratio to U.S. shipments of imports	***	***	***	***	***
Ratio to total shipments of imports	***	***	***	***	***
Imports from Russia: Inventories	***	***	***	***	***
Ratio to U.S. imports	***	***	***	***	***
Ratio to U.S. shipments of imports	***	***	***	***	***
Ratio to total shipments of imports	***	***	***	***	***
Imports from all other sources: Inventories	3,763	2,541	3,160	2,587	5,223
Ratio to U.S. imports	28.7	20.4	21.5	17.1	23.2
Ratio to U.S. shipments of imports	31.2	18.6	22.5	17.1	26.5
Ratio to total shipments of imports	31.2	18.6	22.5	17.1	26.5
Imports from nonsubject sources: Inventories	7,526	5,788	4,617	4,671	10,217
Ratio to U.S. imports	17.0	15.5	14.6	14.1	20.9
Ratio to U.S. shipments of imports	16.5	14.8	14.1	13.4	24.7
Ratio to total shipments of imports	16.5	14.8	14.1	13.4	24.7
Imports from all import sources: Inventories	21,042	22,120	26,254	26,769	30,807
Ratio to U.S. imports	17.9	16.3	17.4	17.2	17.3
Ratio to U.S. shipments of imports	18.7	16.6	18.1	18.2	18.2
Ratio to total shipments of imports	18.4	16.3	17.8	17.9	17.9

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

U.S. IMPORTERS' OUTSTANDING ORDERS

The Commission requested importers to indicate whether they imported or arranged for the importation of aluminum foil from China after September 30, 2017. These data are presented in table VII-8.

Table VII-8
Aluminum foil: Arranged imports, October 2017 through September 2018

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ANTIDUMPING OR COUNTERVAILING DUTY ORDERS IN THIRD-COUNTRY MARKETS

There have been three antidumping duty investigations in third country markets on aluminum foil from China. Aluminum foil from China is currently subject to antidumping duties in the European Union and Turkey, while an investigation is currently underway in India. As of April 2017, there are no countervailing duty orders in place on aluminum foil from China.

European Union

In 2009, the European Union issued antidumping duty orders with duties of 6.4 to 24.2 percent for specific companies and 30 percent for all others on aluminum foil from China.[8] The European Union reviewed and reissued the orders in December 2015. The scope of these orders include "aluminum foil of a thickness of not less than 0.008 mm and not more than 0.018 mm, not backed, not further worked than rolled, in rolls of a width not exceeding 650 mm and of a weight exceeding 10 kg from the People's Republic of China."[9] In May 2016, the European Union initiated an investigation into the possible circumvention of antidumping measures on aluminum foil from China.[10] The European Union determined that there was circumvention of the original order and extended antidumping duties to imports of slightly modified certain aluminum foil from China. The circumvention order covers products with the same physical characteristics as the previous scope, however whether or not annealed. The scope for this order includes:

> "aluminum foil of a thickness of not less than 0.007 mm and less than 0.008 mm, regardless of the width of the rolls, whether or not annealed; aluminum foil of a thickness of not less than 0.008 and not more than 0.018 mm and in rolls of a width exceeding 650 mm, whether or not annealed; aluminum foil of a thickness of more than 0.018 mm and less than 0.021 mm, regardless of the width of the rolls, whether or not annealed;

[8] Official Journal of the European Union, "Council Regulation (EC) No 925/2009," October 6, 2009, p. L 262/13.

[9] Official Journal of the European Union, "Council Regulation (EC) No 2017/271," February 17, 2017, p. L 40/51.

[10] Official Journal of the European Union, "Council Regulation (EC) No 2016/865," June 1, 2016, p. L 144/35.

aluminum foil of a thickness of not less than 0.021 mm and not more than 0.045 mm, when presented with at least two layers, regardless of the width of the rolls, whether or not annealed."[11]

India

In December 2015, India's Directorate General of Anti-Dumping and Allied Duties (DGAD) initiated an antidumping duty investigation into subject aluminum foil from China.[12] In March 2017, the DGAD found that aluminum foil imported from China to India was below its normal value, which resulted in dumping. The DGAD recommended duty rates on Indian imports of aluminum foil from China in the range of $0.69 to $1.63 per kilogram for specific companies and $1.63 per kilogram for all others.[13] The scope for India's investigation includes "aluminum foil whether or not printed or backed with paper, paper board, plastics or similar packing materials of a thickness ranging from 5.5 micron (0.000216535 inches) to 80 micron (0.00314961 inches) excluding AluAlu Laminate and Ultra-Light Gauge Converted and Capacitor."[14] Final antidumping orders were issued on May 16, 2017.[15]

Turkey

In 2014, Turkey issued antidumping duty orders of 22 percent on aluminum foil from China. The scope of Turkey's orders includes "aluminum foil of a thickness not exceeding 0.2 mm, not backed."[16]

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[11] Official Journal of the European Union, "Council Regulation (EC) No 2017/271," February 17, 2017, p. L 40/54. A list of products excluded from the European Union order is available on pages L 40/53 and L 40/54 of Council Regulation (EC) No 2017/271.

[12] Committee on Antidumping Practices, Semi-Annual Report under Article 116.4 of the WTO Antidumping Agreement: India, G/ADP/N/N/286, October 7, 2016, p. 4.

[13] Directorate General of Anti-Dumping and Allied Duties, "Final Finding," http://www.dgtr.gov.in/anti-dumping-cases/aluminium-foil-originating-or-exported-china-pr, March 10, 2017, p. 68-70.

[14] Directorate General of Anti-Dumping and Allied Duties, "Final Finding," http://www.dgtr.gov.in/anti-dumping-cases/aluminium-foil-originating-or-exported-china-pr, March 10, 2017, p. 7. A list of exclusion requests for this investigation can also be found at this link.

[15] Government of India – Ministry of Finance (Department of Revenue), "Notification No. 23/2017-Customs (ADD)," http://www.cbec.gov.in/resources//htdocs-cbec/customs/cs-act/notifications/notfns-2017/cs-add2017/csadd23-2017.pdf, (accessed January 25, 2018).

[16] Committee on Antidumping Practices, Semi-Annual Report under Article 116.4 of the WTO Antidumping Agreement, Turkey: G/ADP/N/265, March 11, 2015.

NONSUBJECT COUNTRIES

The industry in Armenia

Armenia was the third-largest nonsubject source of aluminum foil imports into the United States by quantity in 2016. The United States is the second-largest export destination for aluminum foil from Armenia and accounted for 25.9 percent of Armenia's exports in 2016. Other notable export destinations include Germany, Poland, and the Netherlands which accounted for 36.5 percent, 20.9 percent, and 7.1 percent of aluminum foil exports from Armenia, respectively. Armenia's exports to the United States declined 71.9 percent during 2014-16, while total exports of aluminum foil declined 6.0 percent. Information on Armenia's exports by destination is presented in table VII-9. ***. Trinidad Benham noted that it shifted imports from Russia and Armenia in 2014.[17]

[17] Hearing transcript, p. 152 (Walters).

Table VII-9
Aluminum foil: Exports from Armenia by destination market, 2014-16

Destination market	Calendar year		
	2014	2015	2016
	Quantity (short tons)		
Armenia exports to the United States	28,598	13,947	8,044
Armenia exports to other major destination markets.--			
Germany	2,491	7,343	11,335
Poland	670	5,058	6,471
Netherlands	---	2,013	2,212
Italy	74	1,584	803
Austria	410	698	471
France	95	1,101	461
Canada	---	---	420
United Kingdom	---	---	367
All other destination markets	669	683	450
Total Armenia exports	33,006	32,428	31,035
	Value (1,000 dollars)		
Armenia exports to the United States	76,358	35,857	19,757
Armenia exports to other major destination markets.--			
Germany	6,602	18,411	28,165
Poland	1,918	13,075	16,381
Netherlands	---	5,053	5,325
Italy	207	3,935	2,017
Austria	1,151	1,880	1,149
France	269	2,755	1,135
Canada	---	---	1,057
United Kingdom	---	---	947
All other destination markets	1,815	1,783	1,133
Total Armenia exports	88,320	82,748	77,065

Table continued on next page.

Table VII-9--Continued
Aluminum foil: Armenia exports by destination market, 2014-16

Exporter	Calendar year		
	2014	2015	2016
	Unit value (dollars per short ton)		
Armenia exports to the United States	2,670	2,571	2,456
Armenia exports to other major destination markets.--Germany	2,650	2,507	2,485
Poland	2,863	2,585	2,531
Netherlands	---	2,510	2,408
Italy	2,802	2,485	2,511
Austria	2,809	2,693	2,440
France	2,847	2,502	2,460
Canada	---	---	2,515
United Kingdom	---	---	2,576
All other destination markets	2,715	2,611	2,519
Total Armenia exports	2,676	2,552	2,483
	Share of quantity (percent)		
Armenia exports to the United States	86.6	43.0	25.9
Armenia exports to other major destination markets.--Germany	7.5	22.6	36.5
Poland	2.0	15.6	20.9
Netherlands	---	6.2	7.1
Italy	0.2	4.9	2.6
Austria	1.2	2.2	1.5
France	0.3	3.4	1.5
Canada	---	---	1.4
United Kingdom	---	---	1.2
All other destination markets	2.0	2.1	1.5
Total Armenia exports	100.0	100.0	100.0

Note.--Data reported in this table does not include in-scope merchandise (fin stock) imported under HS subheading 7607.19.

Source: Official exports statistics under HS subheading 7607.11 as reported by Armenia Customs in the IHS/GTA database, accessed December 27, 2017.

Armenia's sole producer of aluminum foil is ARMENAL, a wholly-owned subsidiary of RUSAL located in Yerevan, Armenia. The facility opened in 2000, and has been owned and operated by Russian producer RUSAL since 2003. RUSAL partnered with German aluminum flat-rolled products producer Achenbach Bushchhütten GmbH & Co. during 2004-06 to modernize and refurbish the facility with state-of-the-art equipment. The facility produces aluminum foil with a thickness between 0.007mm and 0.2mm (0.000275 inches to 0.007874 inches) for the

food, pharmaceutical, construction, and retail industries. ARMENAL has a production capacity of 30,000 metric tons (33,069 short tons) and employs 670 workers.[18]

The industry in Germany

Germany was the largest nonsubject source of aluminum foil imports into the United States by quantity in 2016. The United States is the fifth-largest export destination for aluminum foil from Germany and accounted for 6.8 percent of German exports in 2016. Other notable export destinations include Switzerland, France, Italy, and the Netherlands which accounted for 16.1 percent, 13.2 percent, 8.5 percent, and 7.3 percent of aluminum foil exports from Germany in 2016, respectively that year. Germany's exports to the United States increased less than 1 percent during 2014-16, while total exports of aluminum foil increased 3.0 percent. Information on Germany's exports by destination is presented in table VII-10. ***.

[18] UC RUSAL, "ARMENAL," https://rusal.ru/en/about/9/, (accessed January 11, 2018).

Table VII-10
Aluminum foil: Exports from Germany by destination market, 2014-16

Destination market	Calendar year		
	2014	2015	2016
	Quantity (short tons)		
Germany exports to the United States	13,450	14,499	13,512
Germany exports to other major destination markets.--			
Switzerland	32,706	32,048	32,027
France	19,346	21,455	26,261
Italy	19,282	16,612	16,941
Netherlands	17,649	13,920	14,541
Austria	9,547	10,449	13,418
Croatia	4,204	10,377	10,691
Spain	9,213	9,910	10,426
Mexico	5,088	5,515	6,069
All other destination markets	63,064	58,620	55,475
Total Germany exports	193,549	193,406	199,362
	Value (1,000 dollars)		
Germany exports to the United States	50,977	50,149	41,501
Germany exports to other major destination markets.--			
Switzerland	113,915	96,609	89,387
France	66,223	63,284	72,066
Italy	70,710	52,767	47,225
Netherlands	61,281	45,561	43,650
Austria	38,624	37,235	42,803
Croatia	13,698	28,219	26,888
Spain	31,642	28,344	25,849
Mexico	19,511	20,220	19,429
All other destination markets	217,229	184,417	160,061
Total Germany exports	683,811	606,805	568,860

Table continued on next page.

Table VII-10--Continued
Aluminum foil: Germany exports by destination market, 2014-16

Exporter	Calendar year		
	2014	2015	2016
	Unit value (dollars per short ton)		
Germany exports to the United States	3,790	3,459	3,071
Germany exports to other major destination markets.--Switzerland	3,483	3,015	2,791
France	3,423	2,950	2,744
Italy	3,667	3,176	2,788
Netherlands	3,472	3,273	3,002
Austria	4,046	3,564	3,190
Croatia	3,258	2,719	2,515
Spain	3,435	2,860	2,479
Mexico	3,834	3,666	3,202
All other destination markets	3,445	3,146	2,885
Total Germany exports	3,533	3,137	2,853
	Share of quantity (percent)		
Germany exports to the United States	6.9	7.5	6.8
Germany exports to other major destination markets.--Switzerland	16.9	16.6	16.1
France	10.0	11.1	13.2
Italy	10.0	8.6	8.5
Netherlands	9.1	7.2	7.3
Austria	4.9	5.4	6.7
Croatia	2.2	5.4	5.4
Spain	4.8	5.1	5.2
Mexico	2.6	2.9	3.0
All other destination markets	32.6	30.3	27.8
Total Germany exports	100.0	100.0	100.0

Note.--Data reported in this table does not include in-scope merchandise (fin stock) imported under HS subheading 7607.19.

Source: Official exports statistics under HS subheading 7607.11 as reported by EUROSTAT in the IHS/GTA database, accessed December 27, 2017.

Major producers of aluminum foil in Germany include Constellium, Norsk Hydro, and Novelis. Constellium owns a facility in Singen, Germany that produces foil stock used in the packaging industry. The facility has an integrated hot/cold rolling line and employs over 1,600 workers.[19] Norsk Hydro operates facilities in Grevenbroich and Hamburg, in addition to a joint venture with Novelis in Neuss. The facility in Grevenbroich produces 440,000 metric tons

[19] Constellium, "Singen aluminum plant, Germany," http://www.constellium.com/aluminium-company/manufacturing-recycling-plants/singen-germany, (accessed April 4, 2017).

(485,000 short tons) of various products per year, including aluminum foil, and employs 2,000 workers.[20] Norsk Hydro's Hamburg operations include a casthouse and rolling mill that is used to produce coil and sheet for foil re-rolling.[21] Norsk Hydro's Alunorf joint venture with Novelis in Neuss is the world's largest aluminum rolling mill and employs over 2,000 workers.[22] Novelis operates facilities in Lüdenscheid and Ohle, in addition to the Alunorf joint venture with Norsk Hydro. The facility in Lüdenscheid supplies converted aluminum foil for various end markets and applications, including electronics and packaging. Novelis' facility in Ohle, Germany produces foil for various applications, including foil trays used in the food industry.[23]

The industry in Russia

Russia was the second-largest nonsubject source of aluminum foil imports into the United States by quantity in 2016. The United States is the largest export destination for aluminum foil from Russia and accounted for 61.6 percent of Russia's exports in 2016. Other notable export destinations include Canada, Kazakhstan, and Germany which accounted for 16.1 percent, 9.1 percent, and 4.2 percent of aluminum foil exports from Russia in 2016, respectively. Russia's exports to the United States increased 496.7 percent during 2014-16, while total exports of aluminum foil declined 42.9 percent. Information on Russia's exports by destination is presented in table VII-11. ***.

[20] Norsk Hydro, "Grevenbroich," http://www.hydro.com/en/about-hydro/hydro-worldwide/germany/grevenbroich/, (accessed April 4, 2017).

[21] Norsk Hydro, "Hydro Aluminium Rolled Products GmbH, Hamburg," http://www.hydro.com/en/about-hydro/hydro-worldwide/germany/hamburg/hydro-aluminium-rolled-products-gmbh-hamburg/, (accessed April 4, 2017).

[22] Norsk Hydro, "Neuss," http://www.hydro.com/en/about-hydro/hydro-worldwide/germany/neuss/, (accessed April 4, 2017).

[23] Novelis, "Geographic Locations (Europe), http://novelis.com/about-us/locations/, (accessed April 4, 2017).

Table VII-11
Aluminum foil: Exports from Russia by destination market, 2014-16

Destination market	Calendar year		
	2014	2015	2016
	Quantity (short tons)		
Russia exports to the United States	2,186	11,237	13,046
Russia exports to other major destination markets.--			
Canada	726	196	3,410
Kazakhstan	201	256	1,935
Germany	15,289	7,042	879
Italy	1,572	1,033	803
Belarus	245	245	290
Ukraine	289	332	267
Poland	9,108	1,764	184
Gabon	---	183	129
All other destination markets	7,496	3,768	240
Total Russia exports	37,111	26,057	21,183
	Value (1,000 dollars)		
Russia exports to the United States	5,839	26,025	27,084
Russia exports to other major destination markets.--			
Canada	2,041	432	7,713
Kazakhstan	739	641	827
Germany	40,681	18,081	1,857
Italy	4,334	2,581	1,807
Belarus	961	943	983
Ukraine	852	916	832
Poland	25,884	4,745	461
Gabon	---	455	325
All other destination markets	21,178	9,879	782
Total Russia exports	102,509	64,698	42,671

Table continued on next page.

Table VII-11--Continued
Aluminum foil: Russia exports by destination market, 2014-16

Exporter	Calendar year		
	2014	2015	2016
	Unit value (dollars per short ton)		
Russia exports to the United States	2,671	2,316	2,076
Russia exports to other major destination markets.--			
Canada	2,813	2,198	2,262
Kazakhstan	3,679	2,506	427
Germany	2,661	2,568	2,113
Italy	2,758	2,498	2,250
Belarus	3,929	3,858	3,395
Ukraine	2,944	2,757	3,117
Poland	2,842	2,689	2,514
Gabon	---	2,480	2,516
All other destination markets	2,825	2,622	3,255
Total Russia exports	2,762	2,483	2,014
	Share of quantity (percent)		
Russia exports to the United States	5.9	43.1	61.6
Russia exports to other major destination markets.--			
Canada	2.0	0.8	16.1
Kazakhstan	0.5	1.0	9.1
Germany	41.2	27.0	4.2
Italy	4.2	4.0	3.8
Belarus	0.7	0.9	1.4
Ukraine	0.8	1.3	1.3
Poland	24.5	6.8	0.9
Gabon	---	0.7	0.6
All other destination markets	20.2	14.5	1.1
Total Russia exports	100.0	100.0	100.0

Note.--Data reported in this table does not include in-scope merchandise (fin stock) imported under HS subheading 7607.19.

Source: Official exports statistics under HS subheading 7607.11 as reported by Customs Committee of Russia in the IHS/GTA database, accessed December 27, 2017.

UC RUSAL is the largest producer of aluminum foil in Russia, with production facilities in Dmitrov and Sayanogorsk, Russia. RUSAL's Sayanogorsk facility (SAYANAL) started operations in 1993 as a joint venture between U.S.-based Reynolds Metal Company, Italian Engineering firm FATA, and Russia's Sayanogorsk primary aluminum smelter. The facility produces foil used in food packaging, the pharmaceutical industry, tobacco packaging, and the automobile industries. The facility employs 798 workers and has an annual production capacity of 41,000 metric tons (45,195 short tons). During 2010-12, RUSAL's Sayanogorsk started producing 4.5

micron (0.000177165 inches) foil for capacitor production, double layer composite foil, and foil used in tobacco packaging.[24]

UC RUSAL's foil facility in Dmitrov, Russia (known as Sayana) was established in 1997 and is the sole producer of household aluminum foil in Russia. Major products produced at Sayana include household foil and aluminum food containers, in addition to sparkling wine bottle hoods. The facility employs 56 workers and has an annual production capacity of 3,000 metric tons (3,307 short tons). [25]

GLOBAL MARKETS

Table VII-12 presents the largest global export sources of aluminum foil during 2014-16. Exports from China accounted for 42.2 percent of global exports of aluminum foil in 2016. The next largest source in 2016 was Germany (11.6 percent) followed by Turkey, Italy, and the United States (4.8 percent, 4.6 percent, and 4.1 percent of global exports, respectively).

[24] UC RUSAL, "SAYANAL," https://rusal.ru/en/about/13/, (accessed January 12, 2018).
[25] UC RUSAL, "Sayana Foil," https://rusal.ru/en/about/17/, (accessed January 12, 2018).

Table VII-12
Aluminum foil: Global exports by exporter, 2014-16

Exporter	Calendar year		
	2014	2015	2016
	Quantity (short tons)		
United States	63,173	61,561	70,515
China	583,191	644,659	722,775
All other major reporting exporters.-- Germany	193,549	193,406	199,362
Turkey	8,169	62,785	81,773
Italy	74,543	81,566	78,564
Greece	48,273	53,515	61,924
Korea	43,115	43,332	44,303
Japan	41,488	38,056	42,075
Luxembourg	42,244	43,368	41,487
Slovenia	31,800	33,966	33,285
Bulgaria	25,495	28,258	31,947
Sweden	34,168	32,124	31,655
All other exporters	393,046	375,880	271,771
Total global exports	1,582,254	1,692,476	1,711,437
	Value (1,000 dollars)		
United States	251,751	248,065	249,907
China	1,692,298	1,760,517	1,770,337
All other major reporting exporters.-- Germany	683,811	606,805	568,860
Turkey	25,675	168,901	206,778
Italy	261,835	255,963	221,322
Greece	170,613	169,687	176,780
Korea	156,788	151,155	141,606
Japan	181,238	154,488	159,019
Luxembourg	149,676	132,754	115,703
Slovenia	105,338	101,973	90,000
Bulgaria	77,543	76,831	82,182
Sweden	135,629	111,841	102,833
All other exporters	1,403,109	1,207,763	812,046
Total global exports	5,295,305	5,146,745	4,697,374

Table continued on next page.

Table VII-12--Continued
Aluminum foil: Global exports by exporter, 2014-16

Exporter	Calendar year		
	2014	2015	2016
	Unit value (dollars per short ton)		
United States	3,985	4,030	3,544
China	2,902	2,731	2,449
All other major reporting exporters.-- Germany	3,533	3,137	2,853
Turkey	3,143	2,690	2,529
Italy	3,513	3,138	2,817
Greece	3,534	3,171	2,855
Korea	3,637	3,488	3,196
Japan	4,368	4,059	3,779
Luxembourg	3,543	3,061	2,789
Slovenia	3,312	3,002	2,704
Bulgaria	3,041	2,719	2,572
Sweden	3,969	3,482	3,249
All other exporters	3,570	3,213	2,988
Total global exports	3,347	3,041	2,745
	Share of quantity (percent)		
United States	4.0	3.6	4.1
China	36.9	38.1	42.2
All other major reporting exporters.-- Germany	12.2	11.4	11.6
Turkey	0.5	3.7	4.8
Italy	4.7	4.8	4.6
Greece	3.1	3.2	3.6
Korea	2.7	2.6	2.6
Japan	2.6	2.2	2.5
Luxembourg	2.7	2.6	2.4
Slovenia	2.0	2.0	1.9
Bulgaria	1.6	1.7	1.9
Sweden	2.2	1.9	1.8
All other exporters	24.8	22.2	15.9
Total global exports	100.0	100.0	100.0

Note.--Data reported in this table does not include in-scope merchandise (fin stock) imported under HS subheading 7607.19.

Source: Official export statistics under HS subheading 7607.11 as reported by various national statistical authorities in the IHS/GTA database, accessed December 27, 2017.

APPENDIX A

FEDERAL REGISTER NOTICES

The Commission makes available notices relevant to its investigations and reviews on its website, www.usitc.gov. In addition, the following tabulation presents, in chronological order, *Federal Register* notices issued by the Commission and Commerce during the current proceeding.

Citation	Title	Link
82 FR 13853, March 15, 2017	*Aluminum Foil from China; Institution of Antidumping and Countervailing Duty Investigations and Scheduling of Preliminary Phase Investigations*	https://www.gpo.gov/fdsys/pkg/FR-2017-03-15/pdf/2017-05149.pdf
82 FR 15688, March 30, 2017	*International Trade Administration, Certain Aluminum Foil From the People's Republic of China (C–570–054): Initiation of Countervailing Duty Investigation*	https://www.gpo.gov/fdsys/pkg/FR-2017-03-30/pdf/2017-06390.pdf
82 FR 15691, March 30, 2017	*International Trade Administration, Certain Aluminum Foil From the People's Republic of China (A–570–053): Initiation of Less-Than-Fair-Value Investigation*	https://www.gpo.gov/fdsys/pkg/FR-2017-03-30/pdf/2017-06389.pdf
82 FR 16162, April 3, 2017	*Certain Aluminum Foil From the People's Republic of China: Notice of Initiation of Inquiry Into the Status of the People's Republic of China as a Nonmarket Economy Country Under the Antidumping and Countervailing Duty Laws*	https://www.gpo.gov/fdsys/pkg/FR-2017-04-03/pdf/2017-06535.pdf
82 FR 22646 May 17, 2017	*Certain Aluminum Foil From the People's Republic of China: Postponement of Preliminary Determination of Countervailing Duty Investigation*	https://www.gpo.gov/fdsys/pkg/FR-2017-05-17/pdf/2017-09975.pdf

Citation	Title	Link
82 FR 41935 September 5, 2017	*Certain Aluminum Foil From the People's Republic of China: Alignment of Final Countervailing Duty Determination With Final Antidumping Duty Determination*	https://www.gpo.gov/fdsys/pkg/FR-2017-09-05/pdf/2017-18642.pdf
82 FR 47481 October 12, 2017	*Certain Aluminum Foil From the People's Republic of China: Deferral of Preliminary Determination of the Less-Than-Fair-Value Investigation*	https://www.gpo.gov/fdsys/pkg/FR-2017-10-12/pdf/2017-22070.pdf
82 FR 48485 October 18, 2017	*Certain Aluminum Foil From the People's Republic of China: Deferral of Preliminary Determination of the Less-Than-Fair-Value Investigation—Correction Notice*	https://www.gpo.gov/fdsys/pkg/FR-2017-10-18/pdf/2017-22599.pdf
82 FR 50858 November 2, 2017	*Antidumping Duty Investigation of Certain Aluminum Foil From the People's Republic of China: Affirmative Preliminary Determination of Sales at Less-Than-Fair Value and Postponement of Final Determination*	https://www.gpo.gov/fdsys/pkg/FR-2017-11-02/pdf/2017-23866.pdf
82 FR 55633 November 22, 2017	*Aluminum Foil From China; Scheduling of the Final Phase of Countervailing Duty and Antidumping Duty Investigations*	https://www.gpo.gov/fdsys/pkg/FR-2017-11-22/pdf/2017-25240.pdf
83 FR 9274 March 5, 2018	*Countervailing Duty Investigation of Certain Aluminum Foil From the People's Republic of China: Final Affirmative Determination*	https://www.gpo.gov/fdsys/pkg/FR-2018-03-05/pdf/2018-04402.pdf
83 FR 9282 March 5, 2018	*Certain Aluminum Foil From the People's Republic of China: Final Determination of Sales at Less Than Fair Value*	https://www.gpo.gov/fdsys/pkg/FR-2018-03-05/pdf/2018-04401.pdf

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 Foil from China

Inv. Nos.: 701-TA-570 and 731-TA-1346 (Final)

Date and Time: February 8, 2018 - 9:30 a.m.

Sessions were held in connection with these investigations in the Main Hearing Room (Room 101), 500 E Street, SW., Washington, DC.

OPENING REMARKS:

Petitioners (**John M. Herrmann**, Kelley Drye & Warren LLP)
Respondents (**Ned H. Marshak**, Grunfeld, Desiderio, Lebowitz, Silverman & Klestadt LLP)

In Support of the Imposition of
Antidumping and Countervailing Duty Orders:

Kelley Drye & Warren LLP
Washington, DC
on behalf of

The Aluminum Association Trade Enforcement
Working Group and its individual members

Lee McCarter, Chief Executive Officer, JW Aluminum Company

Chester Roush, Chief Strategy Officer, JW Aluminum Company

John Mucci, Sales Manager – Foil, JW Aluminum Company

Beatriz Landa, Vice President and General Manager – Specialties Products, Novelis Corporation

James D'Amico, Senior Account Manager, Novelis Corporation

In Support of the Imposition of
Antidumping and Countervailing Duty Orders (continued):

Murray Rudisill, Vice President – Operations, Reynolds Consumer Products

Heidi Brock, President and Chief Executive Officer, The Aluminum Association

Holly Hart, Legislative Director and Assistant to the President, United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union

Brad Hudgens, Economist, Georgetown Economic Services, LLC

John M. Herrmann)
Paul C. Rosenthal)
) – OF COUNSEL
Grace W. Kim)
Joshua R. Morey)

In Opposition to the Imposition of
Antidumping and Countervailing Duty Orders:

Grunfeld, Desiderio, Lebowitz, Silverman & Klestadt LLP
Washington, DC
on behalf of

China Nonferrous Metals Industry Association, et. al
("Chinese Respondents")

Xinda Mo, Director of Light NonFerrous Metals Department, China Nonferrous Metals Industry Association

Raymond Xu, Director, Global Sales, Dingsheng Aluminum Industries Co., Ltd.

James P. Dougan, Vice President, Economic Consulting Services

Parker R. Sultzer, Staff Economist, Economic Consulting Services

Chen Yang, Counsel, Jincheng, Tongda & Neal

Zheng Xu, Counsel, Jincheng, Tongda & Neal

In Opposition to the Imposition of
Antidumping and Countervailing Duty Orders (continued):

Sean J. Gallagher, Chief Executive Officer, Commodity Foil & Paper Inc.

Ned H. Marshak)
Andrew T. Schutz) -- OF COUNSEL
Joseph M. Spraragen)

Mowry & Grimson, PLLC
Washington, DC
on behalf of

Flexible Packaging Association's U.S. Aluminum Foil Converters Committee; Makakin Industries, LLC, Ltd.; Jiangsu Zhongji Lamination Materials Co., (HK) Ltd.; Jiangsu Zhongji Lamination Materials Co., Ltd.

Alison Keane, President and Chief Executive Officer, Flexible Packaging Association

Todd Lutterbein, President, Manakin Industries

Steve Casey, Senior Director – Procurement, Bemis Company, Inc.

Gary Michalkiewicz, Global Category Manager – Barrier Products, Bemis Company, Inc.

Dhuanne Dodrill, President, Rollprint Packaging Products, Inc.

Brian Nelson, Senior Category Manager, Sonoco Products Company

Kristin H. Mowry)
) -- OF COUNSEL
Jeffrey S. Grimson)

In Opposition to the Imposition of
Antidumping and Countervailing Duty Orders (continued):

Akerman LLP
Washington, DC
on behalf of

Oracle
LLFLEX

Jim Squatrito, Chief Executive Officer, Oracle and LLFLEX

Felicia Leborgne Nowels) – OF COUNSEL

Clark Hill
Washington, DC
on behalf of

ProAmpac Intermediate, Inc.; Ampac Holdings, LLC
and Jen-Coat, Inc., d.b.a. Prolamina
(collectively "ProAmpac")

Tim French, Chief Operating Officer, ProAmpac

Paul Schabow, Vice President of Procurement, ProAmpac

Mark Ludwikowski) – OF COUNSEL

Arnold & Porter Kaye Scholer
Washington, DC
on behalf of

Trinidad Benham Corporation ("Trinidad")

Linda Walmsley, President, Trinidad

Donna Walters, Director of Aluminum Risk, Trinidad

Lynn M. Fischer Fox) – OF COUNSEL

In Opposition to the Imposition of
Antidumping and Countervailing Duty Orders (continued):

Crowell & Moring LLP
Washington, DC
on behalf of

Valeo North America Inc., ("Valeo")
Yinbang Clad Material Co., Ltd. ("Yingbang")

Rogelio Garcia, Site Purchasing Manager, Valeo Thermal Systems, North America

Albert Wang, Sales and Marketing Director, Yinbang

Daniel Cannistra) – OF COUNSEL

REBUTTAL/CLOSING REMARKS:

Petitioners (**Paul C. Rosenthal**, Kelley Drye & Warren LLP)
Respondents (**Jeffrey S. Grimson**, Mowry & Grimson, PLLC)

APPENDIX C

SUMMARY DATA

Total market

Table C-1

Aluminum foil: Summary data concerning the U.S. total market, 2014-16, January to September 2016, and January to September 2017

(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-Sep
	2014	2015	2016	2016	2017	2014-16	2014-15	2015-16	2016-17
U.S. consumption quantity:									
Amount	***	***	***	***	***	***	***	***	***
Producers' share (fn1)	***	***	***	***	***	***	***	***	***
Importers' share (fn1):									
China	***	***	***	***	***	***	***	***	***
Armenia	***	***	***	***	***	***	***	***	***
Germany	***	***	***	***	***	***	***	***	***
Russia	***	***	***	***	***	***	***	***	***
All other sources	***	***	***	***	***	***	***	***	***
Nonsubject sources	***	***	***	***	***	***	***	***	***
All import sources	***	***	***	***	***	***	***	***	***
U.S. consumption value:									
Amount	***	***	***	***	***	***	***	***	***
Producers' share (fn1)	***	***	***	***	***	***	***	***	***
Importers' share (fn1):									
China	***	***	***	***	***	***	***	***	***
Armenia	***	***	***	***	***	***	***	***	***
Germany	***	***	***	***	***	***	***	***	***
Russia	***	***	***	***	***	***	***	***	***
All other sources	***	***	***	***	***	***	***	***	***
Nonsubject sources	***	***	***	***	***	***	***	***	***
All import sources	***	***	***	***	***	***	***	***	***
U.S. imports from:									
China:									
Quantity	109,266	130,855	151,598	112,099	121,745	38.7	19.8	15.9	8.6
Value	357,957	411,407	431,387	317,778	366,402	20.5	14.9	4.9	15.3
Unit value	$3,276	$3,144	$2,846	$2,835	$3,010	(13.1)	(4.0)	(9.5)	6.2
Ending inventory quantity	13,516	16,332	21,637	22,098	20,590	60.1	20.8	32.5	(6.8)
Armenia:									
Quantity	28,745	15,198	8,000	6,465	10,755	(72.2)	(47.1)	(47.4)	66.4
Value	83,025	45,505	20,829	16,905	28,821	(74.9)	(45.2)	(54.2)	70.5
Unit value	$2,888	$2,994	$2,604	$2,615	$2,680	(9.9)	3.7	(13.0)	2.5
Ending inventory quantity	***	***	***	***	***	***	***	***	***
Germany:									
Quantity	15,427	16,010	16,447	13,246	8,421	6.6	3.8	2.7	(36.4)
Value	74,962	71,046	63,140	48,895	37,159	(15.8)	(5.2)	(11.1)	(24.0)
Unit value	$4,859	$4,438	$3,839	$3,691	$4,413	(21.0)	(8.7)	(13.5)	19.5
Ending inventory quantity	***	***	***	***	***	***	***	***	***
Russia:									
Quantity	2,217	8,442	12,890	10,374	12,961	481.4	280.8	52.7	24.9
Value	6,221	24,159	31,740	25,459	34,524	410.2	288.3	31.4	35.6
Unit value	$2,806	$2,862	$2,462	$2,454	$2,664	(12.2)	2.0	(14.0)	8.5
Ending inventory quantity	***	***	***	***	***	***	***	***	***
All other sources:									
Quantity	29,589	24,672	25,660	19,896	27,450	(13.3)	(16.6)	4.0	38.0
Value	214,061	127,955	110,690	84,879	117,597	(48.3)	(40.2)	(13.5)	38.5
Unit value	$7,234	$5,186	$4,314	$4,266	$4,284	(40.4)	(28.3)	(16.8)	0.4
Ending inventory quantity	3,763	2,541	3,160	2,587	5,223	(16.0)	(32.5)	24.4	101.9
Nonsubject sources:									
Quantity	75,978	64,323	62,997	49,981	59,587	(17.1)	(15.3)	(2.1)	19.2
Value	378,269	268,665	226,398	176,137	218,101	(40.1)	(29.0)	(15.7)	23.8
Unit value	$4,979	$4,177	$3,594	$3,524	$3,660	(27.8)	(16.1)	(14.0)	3.9
Ending inventory quantity	7,526	5,788	4,617	4,671	10,217	(38.7)	(23.1)	(20.2)	118.7
All import sources:									
Quantity	185,244	195,177	214,595	162,080	181,332	15.8	5.4	9.9	11.9
Value	736,226	680,072	657,786	493,916	584,503	(10.7)	(7.6)	(3.3)	18.3
Unit value	$3,974	$3,484	$3,065	$3,047	$3,223	(22.9)	(12.3)	(12.0)	5.8
Ending inventory quantity	21,042	22,120	26,254	26,769	30,807	24.8	5.1	18.7	15.1

Table continued on next page.

Table C-1--Continued
Aluminum foil: Summary data concerning the U.S. total market, 2014-16, January to September 2016, and January to September 2017
(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-Sep
	2014	2015	2016	2016	2017	2014-16	2014-15	2015-16	2016-17
U.S. producers':									
Average capacity quantity	***	***	***	***	***	***	***	***	***
Production quantity	***	***	***	***	***	***	***	***	***
Capacity utilization (fn1)	***	***	***	***	***	***	***	***	***
U.S. shipments:									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Export shipments:									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***	***
Inventories/total shipments (fn1)	***	***	***	***	***	***	***	***	***
Production workers	***	***	***	***	***	***	***	***	***
Hours worked (1,000s)	***	***	***	***	***	***	***	***	***
Wages paid ($1,000)	***	***	***	***	***	***	***	***	***
Hourly wages (dollars)	***	***	***	***	***	***	***	***	***
Productivity (short tons per 1,000 hours)	***	***	***	***	***	***	***	***	***
Unit labor costs	***	***	***	***	***	***	***	***	***
Net sales:									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Cost of goods sold (COGS)	***	***	***	***	***	***	***	***	***
Gross profit or (loss)	***	***	***	***	***	***	***	***	***
SG&A expenses	***	***	***	***	***	***	***	***	***
Operating income or (loss)	***	***	***	***	***	***	***	***	***
Net income or (loss)	***	***	***	***	***	***	***	***	***
Capital expenditures	***	***	***	***	***	***	***	***	***
Unit COGS	***	***	***	***	***	***	***	***	***
Unit SG&A expenses	***	***	***	***	***	***	***	***	***
Unit operating income or (loss)	***	***	***	***	***	***	***	***	***
Unit net income or (loss)	***	***	***	***	***	***	***	***	***
COGS/sales (fn1)	***	***	***	***	***	***	***	***	***
Operating income or (loss)/sales (fn1)	***	***	***	***	***	***	***	***	***
Net income or (loss)/sales (fn1)	***	***	***	***	***	***	***	***	***

Notes:

fn1.--Reported data are in percent and period changes are in percentage points.
fn2.--Undefined.

Source: Compiled from data submitted in response to Commission questionnaires and official U.S. import statistics using HTS statistical reporting numbers 7607.11.3000, 7607.11.6000, 7607.11.9030, 7607.11.9060, 7607.11.9090, and 7607.19.6000, accessed December 21, 2017.

Merchant market

Table C-2

Aluminum foil: Summary data concerning the U.S. merchant market, 2014-16, January to September 2016, and January to September 2017

(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-Sep
	2014	2015	2016	2016	2017	2014-16	2014-15	2015-16	2016-17
U.S. consumption quantity:									
Amount	***	***	***	***	***	***	***	***	***
Producers' share (fn1)	***	***	***	***	***	***	***	***	***
Importers' share (fn1):									
China	***	***	***	***	***	***	***	***	***
Armenia	***	***	***	***	***	***	***	***	***
Germany	***	***	***	***	***	***	***	***	***
Russia	***	***	***	***	***	***	***	***	***
All other sources	***	***	***	***	***	***	***	***	***
Nonsubject sources	***	***	***	***	***	***	***	***	***
All import sources	***	***	***	***	***	***	***	***	***
U.S. consumption value:									
Amount	***	***	***	***	***	***	***	***	***
Producers' share (fn1)	***	***	***	***	***	***	***	***	***
Importers' share (fn1):									
China	***	***	***	***	***	***	***	***	***
Armenia	***	***	***	***	***	***	***	***	***
Germany	***	***	***	***	***	***	***	***	***
Russia	***	***	***	***	***	***	***	***	***
All other sources	***	***	***	***	***	***	***	***	***
Nonsubject sources	***	***	***	***	***	***	***	***	***
All import sources	***	***	***	***	***	***	***	***	***
U.S. producers':									
Commercial U.S. shipments:									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Commercial sales:									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Cost of goods sold (COGS)	***	***	***	***	***	***	***	***	***
Gross profit or (loss)	***	***	***	***	***	***	***	***	***
SG&A expenses	***	***	***	***	***	***	***	***	***
Operating income or (loss)	***	***	***	***	***	***	***	***	***
Net income or (loss)	***	***	***	***	***	***	***	***	***
Unit COGS	***	***	***	***	***	***	***	***	***
Unit SG&A expenses	***	***	***	***	***	***	***	***	***
Unit operating income or (loss)	***	***	***	***	***	***	***	***	***
Unit net income or (loss)	***	***	***	***	***	***	***	***	***
COGS/sales (fn1)	***	***	***	***	***	***	***	***	***
Operating income or (loss)/sales (fn1)	***	***	***	***	***	***	***	***	***
Net income or (loss)/sales (fn1)	***	***	***	***	***	***	***	***	***

Notes:

fn1.--Reported data are in percent and period changes are in percentage points.
fn2.--Undefined.

Source: Compiled from data submitted in response to Commission questionnaires and official U.S. import statistics using HTS statistical reporting numbers 7607.11.3000, 7607.11.6000, 7607.11.9030, 7607.11.9060, 7607.11.9090, and 7607.19.6000, accessed December 21, 2017.

Table C-3a

Certain fin stock: Summary data concerning the U.S. market, 2014-16, January to September 2016, and January to September 2017

(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-Sep
	2014	2015	2016	2016	2017	2014-16	2014-15	2015-16	2016-17
U.S. consumption quantity:									
Amount	***	***	***	***	***	***	***	***	***
Producers' share (fn1)	***	***	***	***	***	***	***	***	***
Importers' share (fn1):									
China	***	***	***	***	***	***	***	***	***
Nonsubject sources	***	***	***	***	***	***	***	***	***
All import sources	***	***	***	***	***	***	***	***	***
U.S. consumption value:									
Amount	***	***	***	***	***	***	***	***	***
Producers' share (fn1)	***	***	***	***	***	***	***	***	***
Importers' share (fn1):									
China	***	***	***	***	***	***	***	***	***
Nonsubject sources	***	***	***	***	***	***	***	***	***
All import sources	***	***	***	***	***	***	***	***	***
U.S. imports from:									
China:									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***	***
Nonsubject sources:									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***	***
All import sources:									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***	***
U.S. producers':									
Average capacity quantity	***	***	***	***	***	***	***	***	***
Production quantity	***	***	***	***	***	***	***	***	***
Capacity utilization (fn1)	***	***	***	***	***	***	***	***	***
U.S. shipments:									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Export shipments:									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***	***
Inventories/total shipments (fn1)	***	***	***	***	***	***	***	***	***
Production workers	***	***	***	***	***	***	***	***	***
Hours worked (1,000s)	***	***	***	***	***	***	***	***	***
Wages paid ($1,000)	***	***	***	***	***	***	***	***	***
Hourly wages (dollars)	***	***	***	***	***	***	***	***	***
Productivity (short tons per 1,000 hours)	***	***	***	***	***	***	***	***	***
Unit labor costs	***	***	***	***	***	***	***	***	***
Net sales:									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Cost of goods sold (COGS)	***	***	***	***	***	***	***	***	***
Gross profit or (loss)	***	***	***	***	***	***	***	***	***
SG&A expenses	***	***	***	***	***	***	***	***	***
Operating income or (loss)	***	***	***	***	***	***	***	***	***
Net income or (loss)	***	***	***	***	***	***	***	***	***
Capital expenditures	***	***	***	***	***	***	***	***	***
Unit COGS	***	***	***	***	***	***	***	***	***
Unit SG&A expenses	***	***	***	***	***	***	***	***	***
Unit operating income or (loss)	***	***	***	***	***	***	***	***	***
Unit net income or (loss)	***	***	***	***	***	***	***	***	***
COGS/sales (fn1)	***	***	***	***	***	***	***	***	***
Operating income or (loss)/sales (fn1)	***	***	***	***	***	***	***	***	***
Net income or (loss)/sales (fn1)	***	***	***	***	***	***	***	***	***

Notes:

fn1.--Reported data are in percent and period changes are in percentage points.
fn2.--Undefined.

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

All aluminum foil other than certain fin stock

Table C-3b

All other foil: Summary data concerning the U.S. total market, 2014-16, January to September 2016, and January to September 2017

(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-Sep
	2014	2015	2016	2016	2017	2014-16	2014-15	2015-16	2016-17
U.S. consumption quantity:									
Amount	***	***	***	***	***	***	***	***	***
Producers' share (fn1)	***	***	***	***	***	***	***	***	***
Importers' share (fn1):									
China	***	***	***	***	***	***	***	***	***
Nonsubject sources	***	***	***	***	***	***	***	***	***
All import sources	***	***	***	***	***	***	***	***	***
U.S. consumption value:									
Amount	***	***	***	***	***	***	***	***	***
Producers' share (fn1)	***	***	***	***	***	***	***	***	***
Importers' share (fn1):									
China	***	***	***	***	***	***	***	***	***
Nonsubject sources	***	***	***	***	***	***	***	***	***
All import sources	***	***	***	***	***	***	***	***	***
U.S. imports from:									
China:									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***	***
Nonsubject sources:									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***	***
All import sources:									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***	***
U.S. producers':									
Average capacity quantity	***	***	***	***	***	***	***	***	***
Production quantity	***	***	***	***	***	***	***	***	***
Capacity utilization (fn1)	***	***	***	***	***	***	***	***	***
U.S. shipments:									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Export shipments:									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***	***
Inventories/total shipments (fn1)	***	***	***	***	***	***	***	***	***
Production workers	***	***	***	***	***	***	***	***	***
Hours worked (1,000s)	***	***	***	***	***	***	***	***	***
Wages paid ($1,000)	***	***	***	***	***	***	***	***	***
Hourly wages (dollars)	***	***	***	***	***	***	***	***	***
Productivity (short tons per 1,000 hours)	***	***	***	***	***	***	***	***	***
Unit labor costs	***	***	***	***	***	***	***	***	***
Net sales:									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Cost of goods sold (COGS)	***	***	***	***	***	***	***	***	***
Gross profit or (loss)	***	***	***	***	***	***	***	***	***
SG&A expenses	***	***	***	***	***	***	***	***	***
Operating income or (loss)	***	***	***	***	***	***	***	***	***
Net income or (loss)	***	***	***	***	***	***	***	***	***
Capital expenditures	***	***	***	***	***	***	***	***	***
Unit COGS	***	***	***	***	***	***	***	***	***
Unit SG&A expenses	***	***	***	***	***	***	***	***	***
Unit operating income or (loss)	***	***	***	***	***	***	***	***	***
Unit net income or (loss)	***	***	***	***	***	***	***	***	***
COGS/sales (fn1)	***	***	***	***	***	***	***	***	***
Operating income or (loss)/sales (fn1)	***	***	***	***	***	***	***	***	***
Net income or (loss)/sales (fn1)	***	***	***	***	***	***	***	***	***

Notes:

fn1.--Reported data are in percent and period changes are in percentage points.
fn2.--Undefined.

Source: Compiled from data submitted in response to Commission questionnaires and official U.S. import statistics using HTS statistical reporting numbers 7607.11.3000, 7607.11.6000, 7607.11.9030, 7607.11.9060, 7607.11.9090, and 7607.19.6000, accessed December 21, 2017.

APPENDIX D

SELECT DATA RELATING TO SMALL REEL AND BACKING ALUMINUM FOIL OPERATIONS

Table D-1 presents select data from firms with operations involving production of small reels (weighing 25 pounds or fewer) of aluminum foil.

Table D-1
Small reels of aluminum foil: Select data relating to small reel operations of U.S. entities, 2014-16, January to September 2016, and January to September 2017

* * * * * * *

Table D-2 presents select data from firms with operations involving production of aluminum foil backed on only one side.

Table D-2
Aluminum foil: Select data relating to single backed operations of U.S. entities, 2014-16, January to September 2016, and January to September 2017

* * * * * * *

APPENDIX E

NONSUBJECT PRICE AND PURCHASE COST DATA

One importer (***) reported price data for Germany for product 4. Price data reported by this firm accounted for *** percent of U.S. imports from Germany in 2016. ***. These price items and accompanying data are comparable to those presented in table V-6. Price and quantity data for Germany are shown in tables E-1 and figure E-1 (with domestic and subject sources).

In comparing nonsubject country pricing data with U.S. producer pricing data, prices for product imported from Germany were higher than prices for U.S.-produced product in all 15 instances and higher than the price for China in the one comparable instance.

Table E-1
Aluminum foil: Weighted-average f.o.b. price prices and quantities of product 4 imported from Germany, by quarter, January 2014-September 2017

* * * * * * *

Figure E-1
Aluminum foil: Weighted-average f.o.b. price prices and quantities of domestic and imported product 4, by quarter, January 2014-September 2017

* * * * * * *

In addition to nonsubject price data, importers were requested to provide data regarding the purchase cost of the eight aluminum foil pricing product that they imported for their own use. Three importers provided data for their imports from Armenia, and four provided data for their imports from Russia. *** was the largest direct importer of these aluminum foil products from Armenia and Russia (***), followed by ***, and ***. Nearly all data provided were for pricing product 3, which is a standard gauge product. The data reported by these firms accounted for approximately *** percent of U.S. imports from Armenia and *** percent of imports from Russia in 2016. These price items and accompanying data are analogous to those presented in tables V-5 and V-7. Price and quantity data for Armenia and Russia are shown in tables E-2 and E-3 as well as figures E-2 and E-3, along with purchase cost data for imports from China.

Table E-2
Aluminum foil: Weighted-average f.o.b. landed duty paid costs and quantities of domestic and imported product 3, by quarters, January 2014-September 2017

* * * * * * *

Table E-3
Aluminum foil: Weighted-average f.o.b. landed duty paid costs and quantities of domestic and imported product 5, by quarters, January 2014-September 2017

* * * * * * *

Figure E-2
Aluminum foil: Weighted-average f.o.b. landed duty paid costs and quantities of domestic and imported product 3, by quarter, January 2014-September 2017

* * * * * * *

Figure E-3
Aluminum foil: Weighted-average f.o.b. landed duty paid costs and quantities of domestic and imported product 5, by quarter, January 2014-September 2017

* * * * * * *

APPENDIX F

DIFFERENCES IN DOMESTIC PRICES AND RAW MATERIAL INDICES

As noted in Part V and at the hearing, domestic prices for aluminum foil typically consist of three elements: a London Metals Exchange (LME) price for aluminum, a Midwest Premium ("MP") that is applied to U.S. purchases of aluminum, and a fabrication fee. The LME and MP prices are passed through to the consumer.[1] Petitioners stated that, because of this, the fluctuations in fabrication fees, rather than the raw material costs, impacts the domestic industry's profitability.[2] The fabrication fees are intended to cover the cost of production, such as energy and other costs, as well as margin for profit.

Subtracting the sum of the quarterly average LME and MP indices from the quarterly pricing product data contained in tables V-3 to V-10 provides additional information on the trends in these differences.[3] As seen in figure F-1, these differences were higher for products 1 and 2, the ultra-light and light/standard gauge products, as well as for product 8, the certain fin stock product, and product 6, which had extremely small volumes compared to the other products. As noted at the hearing, fabrication fees are typically higher in the lighter gauges.[4] Also, the differences for all products have declined since 2015,[5] although they were lower in the first quarter of 2014 than they were in the third quarter of 2017 for three of the products. Figure F-1 also displays the quarterly average LME and MP (indexed to 100). Generally, the raw materials price index moves in the opposite direction of the fabrication fee through the 15 quarters.

Figure F-1
Aluminum foil: Differences between pricing products 1-8 and the sum of the quarterly average LME and MP price indices, by quarter, January 2014-September 2017

* * * * * * *

[1] Hearing transcript, pp. 93-94 (McCarter).

[2] Hearing transcript, pp. 95, 100 (McCarter) and 100 (Rudisill).

[3] It should be noted that this difference is not an exact measure of the fabrication fee that is charged by the domestic producers to their customers. For example, contracts for aluminum foil products do not typically use quarterly average LME or MP index prices. Nevertheless, the data presented in the figure is an approximation to examine trends across time and across pricing products.

[4] Hearing transcript, p. 68 (Rudisill).

[5] Petitioners state that fabrication fees have been declining since 2014. Petitioners' posthearing brief, exhs. 1, 5, and 10.

APPENDIX G

U.S. PRODUCERS' U.S. SHIPMENTS AND APPARENT U.S. CONSUMPTION BY THICKNESS

Table G-1 presents the largest U.S. producers' U.S. shipments of aluminum foil by thickness.

Table G-1
Aluminum foil: Largest U.S. producers' U.S. shipments, by product thickness, 2014-16, September 2016, January to September 2017

* * * * * * *

Table G-2 presents data on apparent U.S. consumption for aluminum foil by thickness.

Table G-2
Aluminum foil: Apparent U.S. consumption, by product thickness, 2014-16, January to September 2016, January to September 2017

* * * * * * *