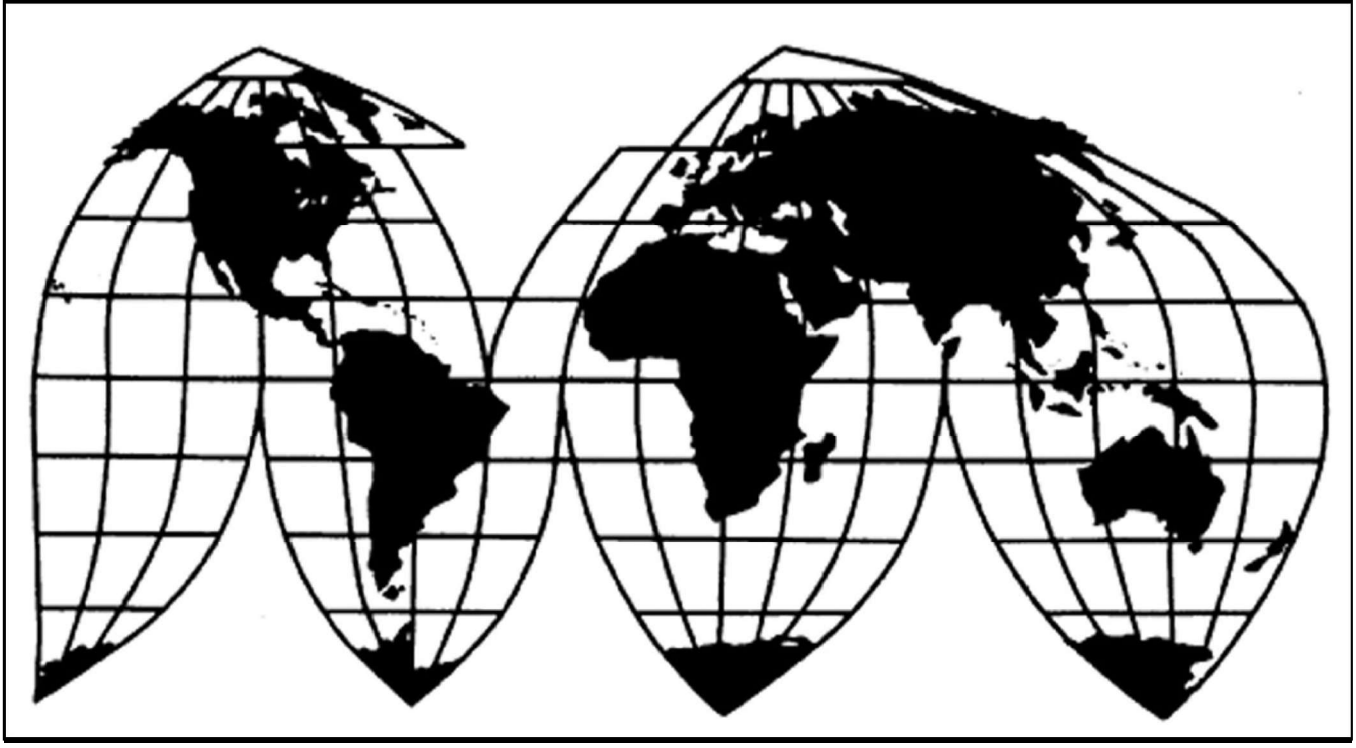
Steel Propane Cylinders from China and Thailand

Investigation Nos. 701-TA-607 and 731-TA-1417 and 1419 (Final)

Publication 4938 **August 2019**

U.S. International Trade Commission



Washington, DC 20436

U.S. International Trade Commission

COMMISSIONERS

David S. Johanson, Chairman
Irving A. Williamson
Meredith M. Broadbent
Rhonda K. Schmidtlein
Jason E. Kearns

Catherine DeFilippo
Director of Operations

Staff assigned

Abu B. Kanu, Investigator
Karl Tsuji, Industry Analyst
Amelia Preece, Economist
David Boyland, Accountant
KaDeadra McNealy, Statistician
Courtney McNamara, Attorney
Craig Thomsen, Supervisory Investigator

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

U.S. International Trade Commission

Washington, DC 20436
www.usitc.gov

Steel Propane Cylinders from China and Thailand

Investigation Nos. 701-TA-607 and 731-TA-1417 and 1419 (Final)

Publication 4938

August 2019

CONTENTS

Page

CONTENTS

Page

CONTENTS

Page

CONTENTS

Page

Note.—Information that would reveal confidential operations of individual concerns may not be published. Such information is identified (including by brackets or by parallel lines) in confidential reports and is deleted and replaced with asterisks (***) in public reports.

UNITED STATES INTERNATIONAL TRADE COMMISSION

Investigation Nos. 701-TA-607 and 731-TA-1417 and 1419 (Final)
Steel Propane Cylinders from China and Thailand

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 steel propane cylinders from China and Thailand, provided for in subheading 7311.00.00 of the Harmonized Tariff Schedule of the United States, 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 May 22, 2018, following receipt of a petition filed with the Commission and Commerce by Worthington Industries Inc. ("Worthington"), Columbus, Ohio, and Manchester Tank and Equipment ("Manchester"), Franklin, Tennessee. The final phase of the investigations was scheduled by the Commission following notification of preliminary determinations by Commerce that imports of steel propane cylinders from China were subsidized within the meaning of section 703(b) of the Act (19 U.S.C. 1671b(b)) and imports from China and Thailand were being 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 March 13, 2019 (84 FR 9135) and revised on April 29, 2019 (84 FR 18084). The hearing was held in Washington, DC, on June 5, 2019, 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] Commissioner Meredith M. Broadbent not participating.

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 steel propane cylinders from China and Thailand found by the U.S. Department of Commerce ("Commerce") to be sold in the United States at less than fair value and subsidized by the government of China.

I. Background

Petitioners Worthington Industries ("Worthington") and Manchester Tank & Equipment Co. ("Manchester") (collectively "petitioners"), domestic producers of steel propane cylinders, filed the petitions in these investigations on May 22, 2018.[1] Representatives appeared at the hearing accompanied by counsel and submitted prehearing and posthearing briefs, and final comments.

One respondent group participated in the final phase of these investigations. Representatives and counsel for Worldwide Distribution, LLP ("Worldwide"), an importer of subject merchandise from China, as well as Shandong Huanri Group Co. Ltd. ("Huanri") and Hong Kong GSBF Company Limited ("GSBF"), both producers and exporters of subject merchandise from China (collectively "respondents"), appeared at the hearing and jointly submitted prehearing and posthearing briefs, and final comments.

U.S. industry data are based on the questionnaire responses from two domestic producers that accounted for all domestic production of steel propane cylinders in 2018. U.S. import data are based on official Commerce import statistics and from questionnaire responses of eight U.S. importers of steel propane cylinders over the period of investigation (2016-2018), which accounted for *** percent of subject imports from China in 2018 and *** percent of subject imports from Thailand in 2018. Foreign industry data are based on the questionnaire responses of two firms in China, the exports of which accounted for *** percent of U.S. imports of steel propane cylinders from China in 2018, and one firm in Thailand, the exports of which accounted for *** of U.S. imports of steel propane cylinders from Thailand in 2018.[2]

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

[1] Confidential Report ("CR"), Public Report ("PR") at I-1. Petitioners also filed an antidumping duty petition covering imports of steel propane cylinders from Taiwan on May 22, 2018, but withdrew the petition on June 14, 2018. *Steel Propane Cylinders from Taiwan: Termination of Less-Than-Fair-Value Investigation*, 83 Fed. Reg. 29748 (June 26, 2018); *Steel Propane Cylinders from Taiwan: Termination of Investigation*, 83 Fed. Reg. 31174 (July 3, 2018).

[2] CR at I-6; PR at I-6.

first defines the "domestic like product" and the "industry."[3] 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."[4] 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."[5]

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.[6] No single factor is dispositive, and the Commission may consider other factors it deems relevant based on the facts of a particular investigation.[7] The Commission looks for clear dividing lines among possible like products and disregards minor variations.[8] 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,[9] the Commission determines what domestic product is like the imported articles Commerce has identified.[10]

---

[3] 19 U.S.C. § 1677(4)(A).

[4] 19 U.S.C. § 1677(4)(A).

[5] 19 U.S.C. § 1677(10).

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

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

[8] *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.").

[9] *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).

[10] *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 (Continued...)

B. Product Description

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

{S}teel cylinders for compressed or liquefied propane gas (steel propane cylinders) meeting the requirements of, or produced to meet the requirements of, U.S. Department of Transportation (USDOT) Specifications 4B, 4BA, or 4BW, or Transport Canada Specification 4BM, 4BAM, or 4BWM, or United Nations pressure receptacle standard ISO 4706. The scope includes steel propane cylinders regardless of whether they have been certified to these specifications before importation. Steel propane cylinders range from 2.5 pound nominal gas capacity (approximate 6 pound water capacity and approximate 4-6 pound tare weight) to 42 pound nominal gas capacity (approximate 100 pound water capacity and approximate 28-32 pound tare weight). Steel propane cylinders have two or fewer ports and may be imported assembled or unassembled (i.e., welded or brazed before or after importation), with or without all components (including collars, valves, gauges, tanks, foot rings, and overfill prevention devices), and coated or uncoated. Also included within the scope are drawn cylinder halves, unfinished propane cylinders, collars, and foot rings for steel propane cylinders.

An "unfinished" or "unassembled" propane cylinder includes drawn cylinder halves that have not been welded into a cylinder, cylinders that have not had flanges welded into the port hole(s), cylinders that are otherwise complete but have not had collars or foot rings welded to them, otherwise complete cylinders without a valve assembly attached, and cylinders that are otherwise complete except for testing, certification, and/or marking

These investigations also cover steel propane cylinders that meet, are produced to meet, or are certified as meeting, other U.S. or Canadian government, international, or industry standards (including, for example, American Society of Mechanical Engineers (ASME), or American National Standard Institute (ANSI)), if they also meet, are produced to meet, or are certified as meeting USDOT Specification 4B, 4BA, or 4BW, or Transport Canada Specification 4BM, 4BAM, or 4BWM, or a United Nations pressure receptacle standard ISO 4706.

Subject merchandise also includes steel propane cylinders that have been further processed in a third country, including but not limited to, attachment of collars, foot rings, or handles by welding or brazing, heat treatment, painting, testing, certification, or any other processing that would not otherwise remove the merchandise from the scope of the investigations if performed in the country of manufacture of the in-scope steel propane cylinders.

Specifically excluded are seamless steel propane cylinders and propane cylinders made from stainless steel (i.e., steel containing at least 10.5 percent chromium by weight and less than 1.2 percent carbon by weight), aluminum, or composite fiber material. Composite fiber material is material consisting of the mechanical combination of two components: Fiber

---

(…Continued)
determination defining six like products in investigations in which Commerce found five classes or kinds).

(typically glass, carbon, or aramid (synthetic polymer)) and a matrix material (typically polymer resin, ceramic, or metallic).

The merchandise subject to these investigations is properly classified under statistical reporting numbers 7311.00.0060 and 7311.00.0090 of the Harmonized Tariff Schedule of the United States (HTSUS). Although the HTSUS statistical reporting numbers are provided for convenience and customs purposes, the written description of the merchandise is dispositive.[11]

Steel propane cylinders are portable, low-pressure steel tanks for storing and transporting liquefied or compressed propane gas, and are used as a heat source for camping and barbeque grills, fire pits, outdoor heaters, and recreational vehicles ("RVs"), and as a temporary energy source for heating and cooking after natural disasters.[12] They generally consist of a tank, a single port, a horseshoe collar, a foot ring, a gauge, a valve, and an overfill preventer.[13] Sizes of steel propane cylinders, expressed in pounds of propane capacity, can range from 4.25 pounds to 40 pounds, although the most prevalent sizes are 20 pounds and 30 pounds.[14] Due to the hazardous nature of propane, all steel propane cylinders sold in the U.S. market must satisfy U.S. Department of Transportation ("USDOT") specifications 4B, 4BA, and 4BW, which govern the construction, testing, and marking of cylinders.[15] Moreover, all production facilities that produce steel propane cylinders for the U.S. market must be certified by the USDOT under specifications 4BA or 4BW after a rigorous inspection process performed by a USDOT auditor.[16]

C. Analysis and Conclusion

In the preliminary determinations, the Commission defined a single domestic like product coextensive with the scope definition. It found that all steel propane cylinders are produced from the same general components to USDOT specifications 4BA or 4BW, and all are used to transport and store liquefied or compressed propane for use as a heat source for grills, outdoor heaters, and RVs. It further found that most domestically produced cylinders are sold through the same channels of distribution, namely to retailers and gas exchangers. In addition, Manchester and Worthington each produce all sizes of steel propane cylinders in the same manufacturing facilities using the same production process and employees. The Commission also observed that steel propane cylinders were produced in a range of sizes, which are not always interchangeable in the same applications, and vary in terms of price based on size. The Commission found that certain customers perceived steel propane cylinders in particular sizes

[11] *Steel Propane Cylinders from the People's Republic of China: Final Determination of Sales at Less Than Fair Value*, 84 Fed. Reg. 29161 (June 21, 2019); *Steel Propane Cylinders from Thailand: Final Determination of Sales at Less Than Fair Value*, 84 Fed. Reg. 29168 (June 21, 2019); *Steel Propane Cylinders from the People's Republic of China: Final Affirmative Countervailing Determination*, 84 Fed. Reg. 29159 (June 21, 2019).

[12] CR at I-20; PR at I-20.

[13] CR at I-16; PR at I-16.

[14] CR at I-16; PR at I-16.

[15] CR at I-17; PR at I-17.

[16] CR at I-17 – I-21; PR at I-17 – I-19.

to be ideally suited for their end use applications, with gas exchangers preferring 20-pound cylinders and RV manufacturers purchasing 20- and 30-pound cylinders. Notwithstanding these differences, the Commission found that the preponderance of similarities supported defining a single domestic like product coextensive with the scope.[17]

The record in the final phase of these investigations does not contain any information concerning the domestic like product factors that is materially different from that in the preliminary phase,[18] and no party argues for a different definition.[19] Accordingly, for the reasons set forth in the Commission's preliminary determinations, we define a single domestic like product coextensive with the scope in these 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."[20] In defining the domestic industry, the Commission's general practice has been to include in the industry producers of all domestic production of the like product, whether toll-produced, captively consumed, or sold in the domestic merchant market.

We must determine whether any producer of the domestic like product should be excluded from the domestic industry pursuant to section 771(4)(B) of the Tariff Act. This provision allows the Commission, if appropriate circumstances exist, to exclude from the domestic industry producers that are related to an exporter or importer of subject merchandise or which are themselves importers.[21] Exclusion of such a producer is within the Commission's discretion based upon the facts presented in each investigation.[22]

---

[17] *Steel Propane Cylinders from China and Thailand*, Inv. Nos. 701-TA-607, 731-TA-1417 and -1419 (Preliminary) ("*Preliminary Determinations*"), USITC Pub. 4804 at 4-11 (July 2018).

[18] *See generally* CR at I-13 – I-24, PR at I-13 – I-24.

[19] Petitioners argue that the Commission should continue to define a single domestic like product coextensive with the scope, as it did in the preliminary phase of these investigations. Petitioners' Prehearing Br. at 4-6. Respondents do not argue for a different definition of the domestic like product.

[20] 19 U.S.C. § 1677(4)(A).

[21] *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).

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

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

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

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

(Continued...)

Manchester meets the statutory definition of a related party because it imported subject merchandise from *** during the period of investigation. Manchester was one of two known domestic producers in 2018, accounting for *** percent of domestic production of steel propane cylinders during that year.[23] It imported *** pounds of steel propane cylinders from *** in 2016, *** pounds in 2017, and *** pounds in 2018.[24] The ratio of these subject imports to Manchester's domestic production was *** percent in 2016, *** percent in 2017, and *** percent in 2018.[25] Manchester explained that it imported subject merchandise ***.[26] At the hearing, a representative from Manchester reported that it has stopped importing.[27] Manchester's operating income to net sales ratios were *** than the domestic industry average during the period of investigation.[28]

The record in these investigations indicates that Manchester's primary interest lies in domestic production rather than importation. Manchester is a petitioner, and its ratio of subject imports to domestic production remained relatively low throughout the period. Further, Manchester reported that it only imports steel propane cylinders *** and that it has ceased importing. For these reasons, we find that appropriate circumstances do not exist to exclude Manchester from the domestic industry as a related party.

In sum, we define the domestic industry to include all domestic producers of steel propane cylinders.

(…Continued)

(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.

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

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

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

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

[27] Petitioners' Posthearing Br. at 5 (*citing* Hearing Transcript ("Tr.") at 19 (Page)).

[28] CR/PR at Table VI-4. Manchester's ratio of operating income to net sales was *** percent in 2016, *** percent in 2017, and *** percent in 2018. *Id.*

IV. Cumulation[29]

For purposes of evaluating the volume and effects for a determination of material injury by reason of subject imports, section 771(7)(G)(i) of the Tariff Act requires the Commission to cumulate subject imports from all countries as to which petitions were filed and/or investigations self-initiated by Commerce on the same day, if such imports compete with each other and with the domestic like product in the U.S. market. In assessing whether subject imports compete with each other and with the domestic like product, the Commission generally has considered four factors:

(1) the degree of fungibility between subject imports from different countries and between subject imports and the domestic like product, including consideration of specific customer requirements and other quality related questions;

(2) the presence of sales or offers to sell in the same geographic markets of subject imports from different countries and the domestic like product;

(3) the existence of common or similar channels of distribution for subject imports from different countries and the domestic like product; and

(4) whether the subject imports are simultaneously present in the market.[30]

---

[29] Pursuant to Section 771(24) of the Tariff Act, imports from a subject country of merchandise corresponding to a domestic like product that account for less than 3 percent of all such merchandise imported into the United States during the most recent 12 months for which data are available preceding the filing of the petition shall be deemed negligible. 19 U.S.C. §§ 1671b(a), 1673b(a), 1677(24)(A)(i), 1677(24)(B); *see also* 15 C.F.R. § 2013.1 (developing countries for purposes of 19 U.S.C. § 1677(36)). The statute further provides that subject imports from a single country which comprise less than 3 percent of total such imports of the product may not be considered negligible if there are several countries subject to investigation with negligible imports and the sum of such imports from all those countries collectively accounts for more than 7 percent of the volume of all such merchandise imported into the United States. 19 U.S.C. § 1677(24)(A)(ii). In the case of countervailing duty investigations involving developing countries (as designated by the United States Trade Representative), the statute indicates that the negligibility limits are 4 percent and 9 percent, rather than 3 percent and 7 percent. 19 U.S.C. § 1677(24)(B).

During the most recent 12-month period preceding the filing of the petition in these investigations (May 2017 through April 2018), imports from China accounted for *** percent of total imports and imports from Thailand accounted for *** of total imports. CR/PR at Table IV-3. Because subject imports from both China and Thailand were well above the statutory threshold, we find that subject imports from each country are not negligible.

[30] *See Certain Cast-Iron Pipe Fittings from Brazil, the Republic of Korea, and Taiwan*, Inv. Nos. 731-TA-278-280 (Final), USITC Pub. 1845 (May 1986), *aff'd*, *Fundicao Tupy, S.A. v. United States*, 678 F. Supp. 898 (Ct. Int'l Trade), *aff'd*, 859 F.2d 915 (Fed. Cir. 1988).

While no single factor is necessarily determinative, and the list of factors is not exclusive, these factors are intended to provide the Commission with a framework for determining whether the subject imports compete with each other and with the domestic like product.[31] Only a "reasonable overlap" of competition is required.[32]

Petitioners argue that the Commission should cumulate subject imports from China and Thailand because the petitioners were filed on the same day and there is a reasonable overlap of competition between subject imports from China and Thailand and between subject imports from each source and the domestic like product.[33] Respondents do not disagree.

The statutory criteria for cumulation appear to be satisfied. As an initial matter, petitioners filed the antidumping and countervailing duty petitions with respect to both countries on the same day, May 22, 2018.[34] There also appears to be a reasonable overlap of competition between subject imports from China and Thailand, and between subject imports from each source and the domestic like product, as indicated below.

Fungibility. During the period of investigation, nearly all U.S. shipments of steel propane cylinders produced in China, Thailand, and the United States consisted of 20- and 30-pound steel propane cylinders.[35] The record also indicates that there is a moderate-to-high degree of substitutability between subject imports from China and Thailand, and subject imports from each source and the domestic like product.[36] Both responding domestic producers as well as the majority of responding importers and purchasers reported that subject imports from China and Thailand are always interchangeable with each other and with the domestic like product.[37]

---

[31] *See*, *e.g.*, *Wieland Werke, AG v. United State*s, 718 F. Supp. 50 (Ct. Int'l Trade 1989).

[32] The Statement of Administrative Action (SAA) to the Uruguay Round Agreements Act (URAA), expressly states that "the new section will not affect current Commission practice under which the statutory requirement is satisfied if there is a reasonable overlap of competition." H.R. Rep. No. 103-316, Vol. I at 848 (1994) (*citing Fundicao Tupy, S.A. v. United States*, 678 F. Supp. at 902; *see Goss Graphic Sys., Inc. v. United States*, 33 F. Supp. 2d 1082, 1087 (Ct. Int'l Trade 1998) ("cumulation does not require two products to be highly fungible"); *Wieland Werke, AG*, 718 F. Supp. at 52 ("Completely overlapping markets are not required.").

[33] Petitioners' Prehearing Br. at 9-13.

[34] CR at I-1; PR at I-1. None of the statutory exceptions to cumulation applies.

[35] CR/PR at Table IV-4.

[36] CR at II-17; PR at II-9.

[37] CR/PR at Table II-12. With respect to responding importers, *** reported that U.S. produced steel propane cylinders are always interchangeable with subject imports from China and *** reported that they are sometimes interchangeable. *** importers reported that U.S. produced steel propane cylinders are always interchangeable with subject imports from Thailand and *** reported that they are frequently or sometimes interchangeable. *** importers reported that subject imports from both sources are always interchangeable and *** reported that they are sometimes interchangeable. With respect to responding purchasers, *** reported that U.S. produced steel propane cylinders are always interchangeable with subject imports from China and *** reported that they are frequently or sometimes interchangeable. *** purchasers reported that U.S. produced steel propane cylinders are always interchangeable with subject imports from Thailand and *** reported that they are frequently (Continued...)

U.S. purchasers also reported that steel propane cylinders from all sources were comparable across the majority of factors.[38]

Channels of Distribution. During the period of investigation, subject imports from China and Thailand and the domestic like product shared overlapping channels of distribution, primarily through sales to distributors and retailers.[39] However, domestically produced steel propane cylinders were primarily sold to gas exchangers, subject imports from China were primarily sold to distributors, and subject imports from Thailand were relatively evenly split between distributors, retailers, and RV manufacturers.[40]

Geographic Overlap. The record indicates that steel propane cylinders from all sources served a nationwide market during the period of investigation.[41]

Simultaneous Presence in Market. Steel propane cylinders from all sources were simultaneously present in the U.S. market. Responding domestic producers and importers reported sales of domestically-produced steel propane cylinders and subject imports from both China and Thailand in every quarter of the period of investigation.[42]

(…Continued)
interchangeable. *** purchasers reported that subject imports from both sources are always interchangeable and *** reported that they are frequently interchangeable. *Id.*

[38] CR/PR at Table II-11. With respect to steel propane cylinders produced in the United States compared to subject imports from Thailand, the majority of purchasers reported cylinders from both sources to be comparable for 24 out of 25 factors, with the exception being price for which the majority of purchasers reported U.S. produced products to be inferior (higher priced) compared to subject imports from Thailand. *Id.* With respect to steel propane cylinders produced in the United States compared to subject imports from China, purchasers' responses were more mixed. The majority of purchasers reported cylinders from both sources to be comparable for 19 out of 25 factors. In terms of availability and delivery terms factors, one purchaser reported U.S. produced product to be superior to subject imports from China, three reported them to be comparable, and three reported U.S. produced product to be inferior. For the delivery time factor, two purchasers reported U.S. produced product to be superior to subject imports from China, three reported them to be comparable, and one reported U.S. produced product to be inferior. For the just in time delivery factor, three purchasers reported U.S. produced product to be superior to subject imports from China, two reported them to be comparable, and two reported U.S. produced product to be inferior. In terms of the price factor, two purchasers reported U.S. produced product to be superior (lower priced) to subject imports from China, two reported them to be comparable, and three reported U.S. produced product to be inferior (higher priced). For the reliability of supply factor, one purchaser reported U.S. produced product to be superior to subject imports from China, three reported them to be comparable, and three reported U.S. produced product to be inferior. *Id.* The majority of purchasers reported subject imports from both sources to be comparable for all 25 factors. *Id.*

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

[40] CR at II-5; PR at II-3; CR/PR at Table II-2, as revised by memorandum INV-RR-064. ***. CR at II-5 n.14; PR at II-3 n.14; *see also* Conference Tr. at 119 (Cancelosi) (stating that Worldwide sells subject imports to distributors for resale to RV manufacturers).

[41] CR/PR at Table II-4.

[42] CR/PR at Tables V-4 – V-11; *see also id.* at Table IV-7.

Conclusion. Based on the record, we find that there is a reasonable overlap of competition between and among subject imports and the domestic like product. Therefore, we analyze subject imports from China and Thailand on a cumulated basis for our analysis of material injury by reason of subject imports.

V. 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 steel propane cylinders from China and Thailand that Commerce has found to be sold in the United States at less than fair value, and 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.[43] 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.[44] The statute defines "material injury" as "harm which is not inconsequential, immaterial, or unimportant."[45] 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.[46] 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."[47]

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,[48] 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.[49] 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

[43] 19 U.S.C. §§ 1671d(b), 1673d(b).

[44] 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).

[45] 19 U.S.C. § 1677(7)(A).

[46] 19 U.S.C. § 1677(7)(C)(iii).

[47] 19 U.S.C. § 1677(7)(C)(iii).

[48] 19 U.S.C. §§ 1671d(b), 1673d(b).

[49] *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'd,* 944 F. Supp. 943, 951 (Ct. Int'l Trade 1996).

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.[50]

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.[51] In performing its examination, however, the Commission need not isolate the injury caused by other factors from injury caused by unfairly traded imports.[52] Nor does the

---

[50] 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).

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

[52] 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

(Continued...)

"by reason of" standard require that unfairly traded imports be the "principal" cause of injury or contemplate that injury from unfairly traded imports be weighed against other factors, such as nonsubject imports, which may be contributing to overall injury to an industry.[53] It is clear that the existence of injury caused by other factors does not compel a negative determination.[54]

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."[55] The Commission ensures that it has "evidence in the record" to "show that the harm occurred 'by reason of' the LTFV imports," and that it is "not attributing injury from other sources to the subject imports." [56] The Federal Circuit has examined and affirmed various Commission methodologies and has disavowed "rigid adherence to a specific formula."[57]

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

---

(…Continued)
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.").

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

[54] *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.").

[55] *Mittal Steel*, 542 F.3d at 876 &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*.

[56] *Mittal Steel*, 542 F.3d at 873 (quoting from *Gerald Metals*, 132 F.3d at 722), 877-79. We note that one relevant "other factor" may involve the presence of significant volumes of price-competitive nonsubject imports in the U.S. market, particularly when a commodity product is at issue. In appropriate cases, the Commission collects information regarding nonsubject imports and producers in nonsubject countries in order to conduct its analysis.

[57] *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.").

evidence standard.[58] Congress has delegated this factual finding to the Commission because of the agency's institutional expertise in resolving injury issues.[59]

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 cumulated subject imports.

1. Demand Considerations

U.S. demand for steel propane cylinders is derived from demand for the products using steel propane cylinders, including barbeque grills, camping stoves, outdoor heat lamps, and RVs, among other consumer-oriented and leisure activity end uses.[60] In addition, irregular and temporary needs can cause spikes in demand for steel propane cylinders, such as unusually cold weather or power outages caused by hurricanes or other natural disasters.[61] During the period of investigation, apparent U.S. consumption of steel propane cylinders increased from *** pounds in 2016 to *** pounds in 2017 and *** pounds in 2018, a level *** percent higher than in 2016.[62]

The U.S. market for steel propane cylinders can be divided into four segments, corresponding to retailers, gas exchangers, RV original equipment manufacturers ("RV manufacturers"), and distributors, which primarily serve RV manufacturers.[63] Retailers purchase steel propane cylinders for resale to consumers.[64] Gas exchangers purchase 20-pound steel propane cylinders, fill them with propane, and offer the filled cylinders to consumers in exchange for empty cylinders and a fee, typically from "cages" located outside retail establishments.[65] RV manufacturers purchase steel propane cylinders in 20- and 30-pound sizes either directly from importers and domestic producers or from distributors for assembly into RVs.[66] The largest responding purchasers were ***; combined, these two purchasers represented *** percent of apparent U.S. consumption in 2018.[67]

---

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

[59] *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.").

[60] CR at I-20, II-1; PR at I-14, II-1.

[61] CR at I-20, II-1; PR at I-15, II-1.

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

[63] CR/PR at Table II-2, CR at I-20, II-3; PR at I-20, II-2.

[64] CR at I-20; PR at I-20.

[65] CR at I-13, II-1, II-4; PR at I-20, II-1, II-2; *Preliminary Determinations*, USITC Pub. 4804 at 20.

[66] CR at I-20; PR at I-20; *Preliminary Determinations*, USITC Pub. 4804 at 20.

[67] CR at II-3; PR at II-2.

2. Supply Considerations

The three sources of supply in the U.S. market are domestic producers, importers of subject merchandise from China and Thailand, and importers of steel propane cylinders from nonsubject countries.

During the period of investigation, the domestic industry held the largest share of the U.S. market, although its market share by quantity decreased from *** percent of apparent U.S. consumption in 2016 to *** percent in 2017 and remained essentially flat at *** percent in 2018.[68] The domestic industry consists of Manchester and Worthington, which together accounted for all known domestic production in 2018.[69] Domestic producers reported few changes to their operations during the period of investigation, with the exception of ***.[70] Both producers reported substantial unused capacity throughout the period of investigation, although increasing production substantially would have entailed ***.[71]

Cumulated subject imports held the next largest share of the U.S. market, increasing from *** percent in 2016 to *** percent in 2017 and remaining essentially flat at *** percent in 2018.[72] The largest suppliers of subject imports to the U.S. market from China in 2018 were Huanri and GSBF; combined these firms accounted for approximately *** percent of subject imports from China in 2018.[73] Worldwide was *** in 2018.[74] Thai producer Sahamitr Pressure Container Plc. ("SMPC") accounted for *** subject imports from Thailand,[75] and YSN Imports Inc. DBA Flame King ("YSN") was *** in 2018.[76]

Nonsubject imports accounted for the smallest share of the U.S. steel propane cylinder market, accounting for *** percent in each year of the period of investigation.[77] Although USDOT reports that producers in Mexico, Korea, and Portugal are certified to manufacture steel propane cylinders to the 4BA and 4BW specifications, responding importers only reported nonsubject imports from Portugal during the period of investigation.[78]

3. Substitutability and Other Conditions

The record in the final phase of these investigations indicates that there is a moderate-to-high degree of substitutability between domestically produced steel propane cylinders and

[68] CR/PR at Table C-1.
[69] CR/PR at Table III-1.
[70] CR/PR at Table III-3.
[71] CR at II-9, II-13; PR at II-5 – II-7; CR/PR at Table III-4; Petitioners' Prehearing Br. at 16; Petitioners' Posthearing Br. at 14, Responses to Commission Questions at 7-8.; Tr. at 30-31 (Bowes), 88 (Page).
[72] CR/PR at Table C-1.
[73] CR at VII-3; PR at VII-3.
[74] CR/PR at Table IV-1.
[75] CR at VII-10; PR at VII-7
[76] CR/PR at Table IV-1.
[77] CR/PR at Table C-1.
[78] CR at II-12; PR at II-6.

subject imports.[79] As discussed above in section IV, both responding domestic producers as well as the majority of responding importers and purchasers reported that subject imports from China and Thailand are always interchangeable with each other and with the domestic like product,[80] and U.S. purchasers also reported that steel propane cylinders from all sources were comparable across the majority of factors.[81]

Although non-price factors are also important, we find that price is an important factor in purchasing decisions. Price was the most frequently cited factor to be included in purchasers' top three purchasing factors.[82] In addition, 16 out of 17 purchasers reported price to be a very important factor in purchasing decisions.[83] All domestic producers and the majority of importers reported that differences other than price are never significant in sales of steel propane cylinders produced in the United States and both subject countries.[84] A plurality of purchasers likewise reported that differences other than price are never significant in sales of steel propane cylinders produced in the United States and Thailand, while purchasers' responses comparing U.S.-produced product and subject imports from China were mixed.[85]

[79] CR at II-17; PR at II-9.

[80] CR/PR at Table II-12.

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

[82] CR/PR at Table II-8. Sixteen purchasers identified price as one of their top three purchasing factors. Other top three purchasing factors include quality/certification, reported by 13 purchasers, and availability (10 purchasers). Quality/certification was most frequently named as the top purchasing factor. *Id*. The majority of purchasers reported that steel propane cylinders produced in the United States, China, and Thailand always meet minimum quality specifications. CR/PR at Table II-13. In addition, all responding purchasers reported that the domestic like product and subject imports are comparable in terms of quality meets industry standards. CR/PR at Table II-11. Further, in terms of availability, the majority of purchasers reported the domestic like product and subject imports from Thailand to be comparable, while one purchaser reported U.S. produced product to be superior to subject imports from China, three reported them to be comparable, and three reported U.S. produced product to be inferior. CR/PR at Table II-11.

[83] CR/PR at Table II-9. All responding purchasers (17) reported that availability, product consistency, quality meets industry standards, and reliability of supply were very important. CR/PR at Table II-9. Again, in terms of In terms of availability and reliability of supply, the majority of purchasers reported the domestic like product and subject imports from Thailand to be comparable, and the majority of purchasers reported U.S. produced product to be superior or comparable to subject imports from China. CR/PR at Table II-11. The majority of responding purchasers also reported that the domestic like product and subject imports from both sources to be comparable in terms of product consistency and quality meets industry standards. *Id.*

[84] CR/PR at Table II-14.

[85] CR/PR at Table II-14. In comparing U.S. produced product and subject imports from China, four purchasers reported differences other than price to always be significant, one reported them to be frequently significant, and two each reported differences other than price to be only sometimes or never significant. *Id.*

Other record evidence submitted by the parties further demonstrates the importance of price in purchasing decisions.[86]

U.S. producers primarily sell steel propane cylinders out of inventory, while subject imports are primarily produced to order.[87] U.S. producers report that *** percent of their commercial shipments were sold from inventory, with lead times averaging *** days, and that the remaining *** percent of their commercial shipments were produced to order, with lead times averaging *** days.[88] Importers reported that 49.9 percent of their commercial shipments were produced to order, with lead times averaging 76 days; 41.0 percent of their commercial shipments were from inventory, with lead times averaging 8 days, and 9.1 percent came from overseas inventories, with lead times averaging *** days.[89] Purchasers were asked to report quoted versus actual lead times for sales of steel propane cylinders. Purchasers reported U.S. producers quoted lead times ranging from seven to 180 days, with actual lead times ranging from seven to 75 days.[90] Purchasers reported quoted lead times for imports ranging from seven to 90 days, with actual lead times also ranging seven to 90 days.[91] Nine of sixteen purchasers reported no change in the lead times for U.S. product during the period of investigation, while seven reported that U.S. producers' lead times had increased; no firms reported increased lead times for subject imports.[92] RV manufacturers reportedly place orders for steel propane cylinders four to six months in advance.[93]

U.S. producers reported selling most of their steel propane cylinders pursuant to ***, while importers reported selling subject imports mainly through short-term contracts.[94] One major purchaser, ***, has contracts that contain "most favored purchaser" clauses. ***.[95] In 2016, ***.[96]

---

[86] *See, e.g.,* Petitioners' Posthearing Br., Exhibit 3, paras. 4-33, Attachments 1-6 (describing and providing examples of the role of price in negotiations), Exhibit 4, paras. 5-7, 12-13, 16, Attachments 1-2 (describing and providing examples of the role of price in negotiations); Respondents' Posthearing Br., Exhibit 14, D-1, paras. 3-4, Attachment 1 (describing and providing examples of the role of price in negotiations), Tr. 200 (Simon).

[87] CR at II-18; PR at II-10.

[88] CR at II-18; PR at II-10.

[89] CR at II-18; PR at II-10.

[90] CR at II-18; PR at II-10. One purchaser reported a quoted lead time for U.S. product of seven days, but the actual lead time was 63 days, and another reported a quoted lead time of 35 days with an actual lead time of 34 days. *Id.*

[91] CR at II-18; PR at II-10. One purchaser reported a quoted lead time of 30 days for subject merchandise, but the actual lead time was 45 days. *Id.*

[92] CR at II-19; PR at II-10.

[93] Respondents' Posthearing Br., Exhibit 14, Attachment D-2 at 3-4.

[94] CR/PR at Table V-3. U.S. producers report selling *** percent of their cylinders by long term contracts, *** percent through annual contracts, *** percent through short term contracts, and *** percent in spot sales. *Id.* Importers reported selling 12.5 percent of subject imports by annual contracts, 65.3 percent through short term contracts, and 22.2 percent in spot sales. *Id.*

[95] CR at V-8; PR at V-5.

[96] Respondents' Posthearing Br., Exhibit 14, Exhibit D-2, Attachment 1 at 4.

Raw materials accounted for 69.8 percent of the cost of production for steel propane cylinders in the United States in 2018.[97] The main input for steel propane cylinders is flat rolled steel coils (grade 4130 steel).[98] Although no pricing index is available for this product, petitioners reported that they use the price of hot-rolled coil as an index of the price of grade 4130 steel, because the prices of both move in tandem.[99] During the period of investigation, the cost of hot-rolled coil more than doubled from January 2016 through December 2018.[100] The increase in the cost of hot-rolled coil may be, at least in part, due to antidumping and countervailing duties placed on hot-rolled steel in 2016 as well as additional duties under Section 232 of the Trade Expansion Act of 1962, 19 U.S.C. § 1862, as amended, ("Section 232") and Section 301 of the Trade Act of 1974, 19 U.S.C. § 2411, as amended, ("Section 301") that were implemented in 2018.[101]

Steel propane cylinders from China have been subject to Section 301 tariffs since September 2018.[102] Section 301 authorizes the office of the U.S. Trade Representative ("USTR"), at the direction of the President, to take appropriate action in response to a foreign country's unfair trade practices.[103] Following USTR's investigation into certain acts, policies, and practices of the government of China, certain products, including steel propane cylinders, were subject to an additional duty rate of 10 percent, which was subsequently increased to 25 percent in May 2019.[104] Twelve out of 15 responding market participants reported that the Section 301 tariffs had increased the price of U.S. steel propane cylinders, while five out of 12 reported that the Section 301 tariffs caused the cost of raw materials used in the production of steel propane cylinders to increase, and four reported that the Section 301 tariffs had no change on the cost of raw materials.[105]

In addition, raw materials used to produce steel propane cylinders have been subject to additional Section 232 duties.[106] Section 232 authorizes the President, on the advice of the Secretary of Commerce, to adjust the imports of an article and its derivatives that are being imported into the United States in such quantities or under such circumstances as to threaten to impair national security.[107] Pursuant to Section 232, the President issued various proclamations imposing an additional 25 percent *ad valorem* duty for certain steel mill products, including those used in the production of steel propane cylinders that are entered into the United States, or withdrawn from warehouse for consumption, as of June 1, 2018.[108] Twelve out of 15 responding market participants reported that the Section 232 tariffs caused

[97] CR/PR at V-1.
[98] CR/PR at V-1.
[99] CR/PR at V-1.
[100] CR/PR at V-1 and Figure V-1.
[101] CR at I-7, I-9; PR at I-7, I-9; CR/PR at V-1.
[102] CR at I-7; PR at I-7.
[103] CR at I-7; PR at I-7.
[104] CR at I-7 – I-9; PR at I-7 – I-9.
[105] CR at II-2; PR at II-1.
[106] CR at I-9; PR at I-8 – I-9.
[107] CR at I-9 – I-10; PR at I-10.
[108] CR at I-10 – I-11; PR at I-10 – I-11.

the price of steel propane cylinders to increase and eight out of 12 reported that it caused raw material costs to increase.[109]

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."[110]

Subject imports maintained a significant and increasing presence in the U.S. market throughout the period of investigation. In absolute terms, the volume of subject imports increased from *** pounds in 2016 to *** pounds in 2017 and *** pounds in 2018.[111] Cumulated subject imports also increased their share of the U.S. market from *** percent in 2016 to *** percent in 2017, then remained essentially flat at *** percent in 2018.[112] [113]

Based on the foregoing, we conclude that the volume of cumulated subject imports and the increase in that volume are significant both in absolute terms and relative to consumption in the United States.

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

[109] CR at V-3; PR at V-2.

[110] 19 U.S.C. § 1677(7)(C)(i).

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

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

[113] Respondents argue that, for purposes of analyzing market share, we should count Manchester's imports as domestic product and include them in U.S. producers' market share. Respondents' Prehearing Br. at 16-17, 19-21, 36; Respondents' Posthearing Br. at 2. We decline to do so. Consistent with the statute, our legislative directive, and prior determinations, we have assessed the significance of total subject imports. *See* S. Rep. No. 100-71, 1st Sess. 117 (1988); H. Rep. 100-40, 1st Sess. 128-29 (1988); *Polyethylene Retail Carrier Bags from Indonesia et al.*, Inv. Nos. 701-TA-462 and 731-TA-1156-1158, USITC Pub. 4144 (Final) (Apr. 2010) at 23 (declining to discount the volume of subject merchandise imported by domestic producers and observing that "when domestic producers import subject merchandise to remain competitive and avoid losing customers, this action may itself be evidence of the material injury the industry is sustaining"). As we observed in Section III, Manchester explained that it imported subject merchandise ***. CR/PR at Table III-7.

> (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.[114]

As addressed in section V.B.3 above, the record indicates that there is a moderate-to-high degree of substitutability between subject imports and the domestic like product and that price is an important consideration in purchasing decisions.

Both domestic producers and four importers provided usable quarterly net U.S. f.o.b. selling price data for seven steel propane cylinder products, although not all firms reported pricing for all products for all quarters.[115] Reported pricing data accounted for *** percent of the value of domestic producers' U.S. commercial shipments of steel propane cylinders in 2018, *** percent of the value of U.S. commercial shipments of subject imports from China, and *** percent of the value of U.S. commercial shipments of subject imports from Thailand.[116]

Subject imports undersold the domestic like product in 89 of 126 quarterly comparisons involving 3.1 million units and 87 percent of the volume of subject imports in pricing data, at an average margin of 17.6 percent.[117] Subject imports oversold the domestic like product in the

---

[114] 19 U.S.C. § 1677(7)(C)(ii).

[115] CR at V-9; PR at V-5 – V-6. The pricing products were as follows:

> Product 1. – 20-pound capacity steel cylinder for compressed or liquefied propane gas, without gage, meeting the requirements of U.S. Department of Transportation specification 4BA. – **Sold to RV manufacturers**.
> Product 2. – 20-pound capacity steel cylinder for compressed or liquefied propane gas, without gage, meeting the requirements of U.S. Department of Transportation specification 4BA. – **Sold to gas exchangers**.
> Product 3. – 20-pound capacity steel cylinder for compressed or liquefied propane gas, without gage, meeting the requirements of U.S. Department of Transportation specification 4BA. – **Sold to distributors**.
> Product 4. – 20-pound capacity steel cylinder for compressed or liquefied propane gas, without gage, meeting the requirements of U.S. Department of Transportation specification 4BA. – **Sold to retailers**.
> Product 5. – 30-pound capacity steel cylinder for compressed or liquefied propane gas, without gage, meeting the requirements of U.S. Department of Transportation specification 4BA. – **Sold to distributors**.
> Product 6. – 30-pound capacity steel cylinder for compressed or liquefied propane gas, without gage, meeting the requirements of U.S. Department of Transportation specification 4BA. – **Sold to RV manufacturers**.
> Product 7. – 30-pound capacity steel cylinder for compressed or liquefied propane gas, without gage, meeting the requirements of U.S. Department of Transportation specification 4BA. – **Sold to retailers**.

Id.

[116] CR at V-9 – V-10; PR at 6.

[117] CR/PR at Table V-13, as revised by memorandum INV-RR-064.

remaining 37 quarterly comparisons, involving 454,590 units, at an average margin of 6.3 percent.[118]

The extent to which subject imports undersold the domestic like product differed by pricing product. For products 1 (20-pound cylinders to RV manufacturers), 5 (30-pound cylinders to distributors), and 6 (30-pound cylinders to RV manufacturers), subject imports undersold the domestic like product 100 percent of the time, involving a total of *** units, at an average margin of *** percent, *** percent, and *** percent, respectively.[119] For product 2 (20-pound cylinders to gas exchangers), subject imports undersold the domestic like product in five out of six quarterly comparisons, involving *** units, at an average margin of *** percent.[120] For product 3 (20-pound cylinders to distributors), subject imports undersold the domestic like product in 19 out of 24 quarterly comparisons, involving *** units, at an average margin of *** percent.[121] For product 4 (20-pound cylinders to retailers), subject imports predominantly oversold the domestic like product, reporting higher prices than the domestic product in 16 out of 24 quarterly comparisons, involving *** units, at an average overselling margin of *** percent, and reporting lower prices in eight out of 24 comparisons, involving *** units, at an average of *** percent.[122] [123] Subject imports also oversold the domestic like product with respect to product 7 (30-pound cylinders to retailers), reporting higher prices than the domestic product in 15 out of 24 quarterly comparisons, involving *** units, at an average margin of *** percent, and reporting lower prices in nine out of 24 comparisons, involving *** units, at an average of *** percent.[124]

The record further indicates that underselling allowed subject imports to gain sales and market share at the expense of the domestic industry. Of the ten responding purchasers that reported purchasing subject imports instead of the domestic like product during the period of

---

[118] CR/PR at Table V-13, as revised by memorandum INV-RR-064.

[119] CR/PR at Table V-13, as revised by memorandum INV-RR-064.

[120] CR/PR at Table V-13, as revised by memorandum INV-RR-064. The domestic like product oversold subject imports in one comparison involving *** units at a margin of *** percent. *Id.*

[121] CR/PR at Table V-13, as revised by memorandum INV-RR-064. The domestic like product oversold subject imports in 5 comparisons involving *** units at a margin of *** percent. *Id.*

[122] CR/PR at Table V-13, as revised by memorandum INV-RR-064.

[123] We have also considered the direct import purchase cost data that were collected for product 4. *** provided quarterly purchase cost data that accounted for *** percent of the value of imports from Thailand reported by importers/retailers in 2018. CR at V-25; PR at V-8. ***, it reported ***. CR at V-25, PR at V-8; *** Importer Questionnaire at question III-3e(iii). In particular, ***. CR at V-25, PR at V-8; *** Importer Questionnaire at questions III-3d, III-3e(iii). Further, data from ***. Petitioners' Prehearing Br. at 21-22 n.11; Petitioners' Posthearing Br., Responses to Commission Questions at 30 (comparing ***). In addition, in its response to allegations regarding lost sales, *** also reported that it purchased imports rather than the domestic like product because the former was priced lower. CR/PR at Table V-15. We further observe that, although it did not provide usable purchase cost data, another importer reported that it estimated saving *** percent by importing directly rather than purchasing steel propane cylinders. CR at V-25; PR at V-8. In light of the foregoing, we accord greater weight to the quarterly f.o.b. price data collected in these investigations.

[124] CR/PR at Table V-13, as revised by memorandum INV-RR-064.

investigation, eight reported that subject import prices were lower than domestic producer prices, and six reported that price was the primary reason they purchased subject imports.[125] The volume of purchases shifted from domestic producers to subject imports for price reasons reported by purchasers, *** pounds, was significant relative to the total volume of subject import U.S. shipments during the period of investigation, which ranged from *** pounds in 2016 to *** pounds in 2018.[126] These factors, along with low-priced subject import competition, caused the shift in market share from the domestic industry to subject imports during the period of investigation, as subject imports gained *** percentage points in market share directly at the expense of the domestic industry.[127] Other record evidence corroborate these data and show subject imports being lower priced than the domestic like product and domestic producers losing sales during the period of investigation because of the higher domestic price.[128]

In light of the foregoing, we find that there has been significant underselling of the domestic like product by cumulated subject imports, which allowed subject imports to obtain a significant volume of sales from the domestic industry and to take market share from domestic producers.[129]

We have also considered the trends in U.S. prices during the period of investigation. U.S. prices for each of the pricing products increased overall from the first quarter of 2016 through the last quarter of 2018.[130] Accordingly, we do not find that subject imports depressed subject imports to a significant degree.

---

[125] CR/PR at Table V-15.

[126] CR/PR at Tables V-15, C-1.

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

[128] *See, e.g.,* Petitioners' Posthearing Br. at Exhibit 3, paras. 14-18, attachment 3 (providing examples of when Worthington lost sales in the RV industry to lower-priced subject imports), para. 27 (providing an example of Worthington losing retailer sales to lower-priced subject imports), para. 30 (providing examples of when Worthington lost sales to gas exchanger customers to lower-priced subject imports), Exhibit 4, paras. 6, 7, attachment 1 (providing examples of when Manchester lost sales in the RV industry to lower-priced subject imports), para. 16 (providing an example of Manchester losing a sale to a gas exchanger to lower-priced subject imports); *see also* Tr. 17-20 (Page), 24-25 (Komlosi), 67-68 (Rosenthal).

[129] Respondents argue that we should exclude Manchester's imports of subject merchandise from our underselling analysis. Respondents' Prehearing Br. at 58-62. For the reasons stated in footnote 113 above, we decline to do so. Moreover, we find that respondents' assertions that Manchester was responsible for most of the underselling during the period of investigation to be unsupported by the record. Respondents' Prehearing Br. at 58-62. Even if Manchester's import data is exclude for the purposes of our underselling analysis, subject imports undersold the domestic like product in *** quarterly comparisons, involving ***; subject imports oversold the domestic like product in the remaining *** quarterly comparisons, involving *** units. *Calculated from* Worthington's and Manchester's Domestic Producer Questionnaires at question IV-2b; Tarantin's, Worldwide's, Manchester's, and YSN Imports' Importer Questionnaires at question III-2a.

[130] For pricing product 1, the domestic industry's price increased irregularly from $*** per cylinder in the first quarter of 2016 to $*** per cylinder in the last quarter of 2018. CR/PR at Table V-4. For pricing product 2, the domestic industry's price increased irregularly from $*** per cylinder in the

(Continued...)

We find, however, that subject imports suppressed domestic prices during the period of investigation to a significant degree. As described above in Section V.B., demand in the U.S. market increased over the period of investigation as did the cost of raw materials that the domestic industry used to produce steel propane cylinders. Notwithstanding the rising demand and the fact that the domestic industry was able to raise prices to some degree, these price increases were not sufficient to cover domestic producers' rising costs. Specifically, the domestic industry's net sales unit value increased only *** percent over the period of investigation, while its unit cost of goods sold ("COGS") increased *** percent.[131] Therefore, the domestic industry's ratio of COGS to net sales increased *** percentage points from *** percent in 2016 to *** percent in 2017 and *** in 2018.[132]

We find that the record in the final phase of these investigations indicates that significant pricing pressure from low-priced subject imports prevented the domestic industry from raising its prices sufficiently to cover its increasing costs. Officials from Worthington and Manchester testified at the hearing and in post-hearing declarations that low-priced subject import competition forced them to reduce their prices or to forego price increases in order to preserve sales of steel propane cylinders.[133] Petitioners provided examples to illustrate how domestic producers faced considerable pressure to lower their prices to compete with low-priced subject imports in the RV industry.[134] The pricing data in the final phase of these investigations show that in parts of the market in which domestic producers' U.S. prices

---

(…Continued)
first quarter of 2016 to $*** per cylinder in the last quarter of 2018. CR/PR at Table V-5. For pricing product 3, the domestic industry's price increased irregularly from $*** per cylinder in the first quarter of 2016 to $*** per cylinder in the last quarter of 2018. CR/PR at Table V-6. For pricing product 4, the domestic industry's price increased irregularly from $*** per cylinder in the first quarter of 2016 to $*** per cylinder in the last quarter of 2018. CR/PR at Table V-7. For pricing product 5, the domestic industry's price increased irregularly from $*** per cylinder in the first quarter of 2016 to $*** per cylinder in the last quarter of 2018. CR/PR at Table V-8. For pricing product 6, the domestic industry's price increased irregularly from $*** per cylinder in the first quarter of 2016 to $*** per cylinder in the last quarter of 2018. CR/PR at Table V-9. For pricing product 7, the domestic industry's price increased irregularly from $*** per cylinder in the first quarter of 2016 to $*** per cylinder in the last quarter of 2018. CR/PR at Table V-10, as revised by memorandum INV-RR-064.

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

[132] CR/PR at Table C-1. We further observe that, while the average unit values ("AUVs") for cumulated subject imports increased by *** percent overall from 2016 to 2018, this increase was driven primarily by increased AUVs for subject imports from China. AUVs for subject imports from Thailand, the quantity of which increased substantially throughout the period of investigation, increased by only *** percent, as the domestic industry's net sales unit value increased by *** percent. *Id.* We recognize, however, that AUVs may be of limited value due to product mix differences and accord greater weight to the pricing data, which provide good coverage of the domestic like product and subject imports and are specific to the parts of the market in which the products are sold.

[133] Tr. at 19 (Page), 26 -27 (Komlosi), 28-30 (Bowes), 44-48, 72-73 (Rosenthal); Petitioners' Posthearing Br. at Exhibit 3 paras. 8-24, Attachment 3, Exhibit 4, paras. 3-7, Attachment 1.

[134] Petitioners' Posthearing Br. at Exhibit 3, paras. 8-24, Attachment 3, Exhibit 4, paras. 3-7, Attachments 1, 2.

increased to the greatest extent and subject import underselling generally intensified, the domestic industry's sales volume tended to decrease during the period of investigation.[135] Losing sales in the RV market and to distributors shaped how domestic producers conducted themselves, particularly with respect to their most significant customers and the largest purchasers in the steel propane cylinders market as a whole, the gas exchangers. As petitioners explained, the two companies opted to maintain their prices at the lowest levels to retain the significant sales volume represented by the gas exchanger market.[136]

Notwithstanding this strategy, domestic producers continued to face competitive pressure from subject imports in their sales to gas exchangers during the period of investigation. Notably, as discussed above, although domestic producers kept prices to gas exchangers at prices below the average prices to other types of purchasers, subject imports nonetheless undersold the domestic like product in the majority of comparisons, with subject imports being sold in some quarters at prices that were the lowest reported for steel propane cylinders in all pricing products for all channels.[137] In addition, *** as well as the smaller gas exchanger *** both reported purchasing subject imports instead of domestically produced product during the period of investigation, and each reported that price was the primary reason for purchasing subject imports.[138] Although *** stated that it did not purchase subject imports instead of the domestic like product,[139] it indicated that U.S. producers had reduced prices to

[135] With respect to pricing product 1 – sales of 20-pound cylinders to RV manufacturers, the domestic industry's price increased by *** percent overall during the period of investigation. The total volume of the domestic industry's sales increased from *** units in 2016 to *** units in 2017, driven primarily by a considerable increase in the volume of sales in the first quarter of 2017 when subject import underselling was at its lowest. As the levels of subject import underselling reached the highest levels in 2018, domestic sales fell to *** units in 2018. In contrast, the volume of subject imports increased each year from *** units in 2016 to *** units in 2017 and *** units in 2018. CR/PR at Tables V-4 & V-12, as revised by memorandum INV-RR-064. With respect to pricing product 3 – sales of 20-pound cylinders to distributors, the domestic industry's price increased by *** percent overall during the period of investigation, and as the level of subject import underselling generally increased, domestic sales fell from *** units in 2016 to *** units in 2017 and *** units in 2018. CR/PR at Tables V-6 & V-12, as revised by memorandum INV-RR-064. With respect to pricing product 6 – sales of 30-pound cylinders to RV manufacturers, the domestic industry's price increased by *** percent overall during the period of investigation. The total volume of the domestic industry's sales for this product initially increased from *** units in 2016 to *** units in 2017 before decreasing to *** units in 2018, as subject import reached their highest level of underselling that year. CR/PR at Tables V-9 & V-12, as revised by memorandum INV-RR-064.

[136] Petitioners' Prehearing Br. at 27-28; Petitioners' Posthearing Br. at 11-12, Responses to Commission Questions at 40-41; Tr. 18-19 (Page), 25-26 (Komlosi), 28-29 (Bowes).

[137] *Compare* CR/PR at Table V-5, as revised by memorandum INV-RR-064, *with* CR/PR at Tables V-4 – V-10, as revised by memorandum INV-RR-064. Specifically, in three quarterly comparisons, subject imports were priced at $*** per unit, $*** per unit, and $*** per unit, which are the lowest prices reported in any pricing product quarterly comparisons. *Id.*

[138] CR/PR at Table V-15.

[139] CR/PR at Table V-15.

compete with subject imports, and it purchased subject imports from China in 2016.[140] Furthermore, record evidence shows that *** reported ***.[141] In particular, *** continued to be in contact with *** throughout the period of investigation, and in rejecting *** bid in 2018, *** specifically indicated that *** prices were higher than *** other supplier,[142] namely domestic producers since *** reported only purchasing steel propane cylinders from domestic sources in 2018.[143] We further observe that ***, in comparing prices, reported that the domestic like product was superior to (*i.e.*, lower priced than) subject imports.[144] Accordingly, the record suggests that the domestic industry maintained its considerable sales volume with these customers by ensuring that domestic producers' prices continued to be lower than those of subject imports.[145] We find that this competitive pressure prevented the domestic industry from obtaining sufficient price increases during the period of investigation.[146]

In addition, although the pricing data indicate that the domestic like product oversold subject imports in the majority of comparisons with respect to sales of 20- and 30-pound cylinders to retailers, we observe that domestic producers' price increases were more modest than the increases for the pricing products and customers in which their sales volume declined during the period of investigation.[147] We further find that other record evidence shows that the domestic industry faced competitive pressure from subject imports in the retailer market. In particular, retailers *** and *** reported that they purchased lower priced subject imports

[140] CR/PR at Table V-16; *** Purchaser Questionnaire Response at II-1.

[141] CR at V-7 n.12; PR at V-4 n.12.

[142] Respondents' Posthearing Br., Exhibit 14, D-2, Attachment 5. We recognize that *** reported that it has not purchased subject imports from *** since 2016 due to quality issues. *** Purchaser Questionnaire Response at III-20. We observe, however, that the communications from *** in 2018 do not mention quality concerns with respect to *** cylinders; rather, *** sought quotes and provided feedback only with respect to pricing. Respondents' Posthearing Br., Exhibit 14, D-2, Attachment 5.

[143] *** Purchaser Questionnaire Response at II-1.

[144] *** Purchaser Questionnaire Response at IV-3. In addition, *** reported the domestic like product and subject imports were comparable in terms of quality meeting or exceeding industry standards. *Id*.

[145] At the hearing, a representative of Worldwide confirmed the intense pricing competition within the U.S. steel propane cylinders market, indicating that Worldwide expects to be approached to provide quotes on products when the domestic industry raises its prices. Tr. at 200-201 (Simon).

[146] Further illustrating the competitive pressure subject imports have placed on domestic producers is the fact that *** have resisted price increases and have declined to execute contracts that they otherwise typically would have during the pendency of these investigations. Petitioners' Posthearing Br., Exhibit 3, para. 34 and Attachment 7. We address respondents' argument that the domestic producers' contracts with gas exchangers explain the domestic industry's financial declines during the period of investigation below in our discussion of the impact of subject imports on the domestic industry.

[147] CR/PR at Table V-12. For pricing products 4 and 7 representing sales to retailers, domestic prices increased only *** percent and *** percent, respectively, compared to the *** percent overall increase for pricing product 1, the *** percent overall increase for pricing product 3, and the *** percent overall increase for pricing product 6, discussed above. CR/PR at Table V-12.

rather than the domestic like product and that price was the primary reason for purchasing subject imports.[148] In addition, retailer *** sent *** an email in 2017, in which it ***.[149] According to petitioners, other retailers have similarly indicated that subject imports were priced lower and attempted to use the lower prices of imports as leverage to achieve price reductions from domestic producers, and when domestic producers were unable to meet the lower price sought by the retailer, they reported losing the sale.[150] Petitioners also testified that the transparency in pricing at retailers from which other purchasers can identify the price at which subject imports are sold, as is illustrated in particular by the email from ***, shows how pricing pressure in one customer base can affect the price negotiations of customers in another base.[151]

In conclusion, given the degree of substitutability between the domestic like product and the importance of price in purchasing decisions, we find that subject imports undersold the domestic like product to a significant degree, which allowed subject imports to gain sales and market share at the expense of the domestic industry. We further find that competitive pressure from low-priced subject imports prevented the domestic industry from obtaining price increases, which otherwise would have occurred, to a significant degree.[152]

Therefore, we find that subject imports had significant adverse price effects on domestically produced steel propane cylinders.

[148] CR/PR at Table V-15.

[149] Petitioners' Posthearing Br., Exhibit 3, Attachment 4.

[150] Petitioners' Posthearing Br., Exhibit 3, paras. 27-28.

[151] Petitioners' Posthearing Br., Exhibit 3, paras. 4, 5, 7.

[152] Although we have found significant underselling by subject imports, we note that respondents' argument that significant underselling by subject imports is a necessary prerequisite to finding price suppression or depression is without merit and conflates two separate subsections of the statute. *See, e.g., Altx, Inc. v. United States*, 167 F. Supp. 2d 1353, 1365 (Ct. Int'l Trade 2001) (holding that section 1677(7)(C)(ii) requires the Commission to undergo two distinct analyses: (1) the significance of underselling and (2) the causal connection between subject imports and price depression and/or suppression; conflating the two analyses is contrary to the plain language of the statute).

E. Impact of the Subject Imports[153]

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."[154] 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."[155]

We have examined the domestic industry's performance with respect to a number of factors. During the period of investigation, several of the domestic industry's indicators improved. Domestic producers' capacity remained constant throughout the period of investigation.[156] Production increased each year as did capacity utilization, although it remained at low levels.[157] Domestic producers' ending inventories decreased overall during the

[153] 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 determinations, Commerce found antidumping duty margins of 25.52 to 108.60 percent for imports from China, and 10.77 percent for imports from Thailand. *Steel Propane Cylinders from the People's Republic of China: Final Determination of Sales at Less Than Fair Value*, 84 Fed. Reg. 29161 (June 21, 2019); *Steel Propane Cylinders from Thailand: Final Determination of Sales at Less Than Fair Value*, 84 Fed. Reg. 29168 (June 21, 2019). We take into account in our analysis the fact that Commerce has made final findings that all subject producers in China and Thailand 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/price effects} 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.

[154] 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.").

[155] 19 U.S.C. § 1677(7)(C)(iii). This provision was amended by the Trade Preferences Extension Act of 2015, Pub. L. 114-27.

[156] Capacity was *** pounds each year of the period of investigation. CR/PR at Table C-1.

[157] The domestic industry's production increased from *** pounds in 2016 to *** pounds in 2017 and *** pounds in 2018. CR/PR at Table C-1. Capacity utilization increased from *** percent in 2016 to *** percent in 2017 to *** percent in 2018. CR/PR at Table C-1. Respondents argue that domestic producers' capacity is overstated and that it did not have the available production capacity that its reported capacity utilization rates indicate because *** was running three rather than four shifts during the period of investigation. Respondents' Final Comments at 3-4; Respondents' Posthearing Br., Responses to Commission Questions at 26-27; Respondents' Prehearing Br. at 31. We do not find that the fact that reaching full capacity would entail adding a shift to call into question the validity of *** reported capacity. CR at II-9 & n.15; PR at II-4 – II-5 n.15 (finding that domestic producers could respond to changes in demand with moderate-to-high changes in the quantity of shipments of U.S. produced (Continued...)

period of investigation.[158] The domestic industry was able to increase its U.S. shipments each year of the period of investigation.[159] The rate at which these shipments increased, however, lagged behind the growth in apparent U.S. consumption,[160] and the domestic industry lost market share to subject imports.[161]

The domestic industry's employment indicia were mixed during the period of investigation. The number of production related workers ("PRWs") and hours worked increased, although productivity declined and wages paid and unit labor costs increased overall.[162]

As the significant volume of low-priced subject imports placed competitive pressure on domestic producers during the period of investigation, U.S. producers were unable to increase their prices on U.S. shipments sufficient to cover their increasing costs. The domestic industry's net sales, by total value, increased *** percent during the period of investigation,[163] and its average net sales unit value increased by *** percent.[164] In contrast, the domestic industry's COGS increased *** percent,[165] and its unit COGS increased *** percent.[166] As a result, the domestic industry's ratio of COGS to net sales, which was already at high levels, increased *** percentage points.[167] Consequently, the domestic industry's profitability declined substantially

---

(…Continued)
steel propane cylinders by adding shifts or increasing overtime). Nor do we find the fact that domestic producers imported steel propane cylinders during the period of investigation to suggest that the domestic industry did not have available capacity, given that the volume of domestic producers' imports was very small compared to their U.S. production. CR/PR at Table III-7.

[158] The domestic industry's ending inventory was *** pounds in 2016 to *** pounds in 2017 and *** pounds in 2018. CR/PR at Table C-1.

[159] Domestic producers' U.S. shipments increased from *** pounds in 2016 to *** pounds in 2017 and *** pounds in 2018. CR/PR at Table C-1.

[160] The domestic industry's U.S. shipments increased *** percent during the period of investigation, while apparent U.S. consumption increased *** percent. CR/PR at Table C-1.

[161] Over the period of investigation, subject imports gained *** percentage points of market share directly at the expense of the domestic industry. CR/PR at Table C-1.

[162] PRWs were *** in 2016, *** in 2017, and *** in 2018. Hours worked initially decreased from *** hours in 2016 to *** hours in 2017 before increasing to *** hours in 2018. Productivity initially increased from *** pounds per hour in 2016 to *** pounds per hour in 2017 before declining to *** pounds per hour in 2018. Wages paid were $*** in 2016, $*** in 2017, and $*** in 2018. Unit labor costs were $*** in 2016, $*** in 2017, and $*** in 2018. CR/PR at Table C-1.

[163] Net sales by value increased from $*** in 2016 to $*** in 2017 and $*** in 2018. CR/PR at Table C-1.

[164] The domestic industry's average unit net sales value was $*** in 2016, $*** in 2017, and $*** in 2018. CR/PR at Table C-1.

[165] The domestic industry's COGS increased from $*** in 2016 to $*** in 2017 and $*** in 2018. CR/PR at Table C-1.

[166] The domestic industry's unit COGS were $*** in 2016, $*** in 2017, and $*** in 2018. CR/PR at Table C-1.

[167] The domestic industry's ratio of COGS to net sales increased from *** percent in 2016 to *** percent in 2017 and *** percent in 2018. CR/PR at Table C-1.

during the period of investigation by all measures,[168] and its ratio of operating and net incomes to net sales declined significantly.[169] Domestic producers reported increased capital expenditures during the period of investigation.[170]

We therefore find the significant volume of cumulated subject imports, which were good substitutes for the domestic like product and sold in the same channels and customer market segments (albeit at different levels of participation), undersold the domestic like product to a significant degree. This underselling allowed subject imports to take sales from domestic producers and gain market share directly at the expense of the domestic industry. Furthermore, the low-priced subject imports put competitive pressure on domestic producers to forego price increases necessary to sufficiently cover the domestic industry's rising costs, resulting in a cost-price squeeze. Consequently, even as demand grew, and the domestic industry increased its production and U.S. shipments, the subject imports prevented the domestic industry from increasing prices as it otherwise would have to cover its increasing costs, causing the domestic industry's profitability and margins to decline by every measure. For these reasons, we conclude that subject imports from China and Thailand had a significant adverse impact on the domestic industry during the period of investigation.

Respondents argue that there is no causal link between subject import trends and the financial performance of domestic producers. In particular, they assert that the domestic industry's financial performance worsened from 2017 to 2018, even though the U.S. producers increased U.S. shipments and maintained market share.[171] We find, however, that these trends are consistent with our findings above that, due to competitive pressure from subject imports, domestic producers had to forego price increases to maintain sales to their key customers.

We have also considered whether factors other than subject imports from China and Thailand have had an impact on the domestic industry during the period of investigation so as not to attribute to subject imports any injury caused by the other factors.

We recognize that raw material costs increased over the period of investigation and that this along with other increasing costs contributed to the cost-price squeeze experienced by the domestic industry. Respondents argue that domestic producers' contracts, particularly with gas exchangers, injured domestic producers because these contracts prevented U.S. producers from raising prices as raw material costs increased.[172] We find these allegations to be rebutted

---

[168] The domestic industry's gross profits fell from $*** in 2016 to $*** in 2017 to $*** in 2018. Its operating income fell from $*** in 2016 to $*** in 2017 to $*** in 2018. Net income fell from $*** in 2016 to $*** in 2017 to $*** in 2018. CR/PR at Table C-1.

[169] The domestic industry's ratio of operating income to net sales fell from *** percent in 2016 to *** percent in 2017 and *** percent in 2018. Its ratio of net income to net sales fell from *** percent in 2016 to *** percent in 2017 and *** percent in 2018. CR/PR at Table C-1.

[170] The domestic industry's capital expenditures were $*** in 2016, $*** in 2017, and $*** in 2018. ***, and ***. CR at VI-15 nn.23, 24; PR at VI-15 nn. 23, 24; Petitioners' Posthearing Br. at Exhibits 3 at para. 39.

[171] Respondents' Prehearing Br. at 65-66.

[172] Respondents' Posthearing Br. at 6-7, Answers to Commission Questions 8, 9; Respondents' Prehearing Br. at 45-54.

by record evidence. ***.[173] In the same vein, ***.[174] Domestic producers, therefore, had in place mechanisms to address potential *** for the duration of these contracts, and the structure of the contracts do not account for the price suppression we found.[175] Rather, it was competitive pressure from low-priced subject imports at the time the contracts were executed that prevented U.S. producers from increasing prices sufficiently to cover rising costs.[176]

We also find the fact that domestic producers were identified as price leaders does not detract from our conclusion that subject import competition suppressed U.S. prices, particularly because in that context domestic producers were reported to be attempting to increase prices.[177] Likewise, the existence of intra-industry competition does not detract from our analysis in light of the significant underselling by subject imports as well as the evidence of competitive pressure that subject imports placed on domestic producers, discussed in section V.D.[178]

We also find unpersuasive respondents' assertions that the volume and underselling of subject imports to the RV industry was not injurious to the domestic industry because it abandoned that segment of the market. As discussed above in section V.D., the record indicates that domestic producers lost sales to the lower priced subject imports when they declined to match or beat import prices for RV customers.[179] Moreover, record evidence indicates that domestic producers continued to sell steel propane cylinders to the RV industry throughout the period of investigation.[180] In fact, both petitioners and respondents confirm that *** was able to regain sales from *** to a distributor, ***, that serves RV and other customers as a result of these investigations and the imposition of provisional duties.[181]

---

[173] Petitioners' Posthearing Br., Exhibit 3 at para. 36-38. ***. *Id.* at para. 37.

[174] Petitioners' Posthearing Br., Exhibit 4, paras. 17-18. Respondents argue that ***. Respondents' Posthearing Br. at 6-7, Answers to Commission Questions 8, 9. We find, however, that even if true, this does not fully explain the injury to the domestic industry as a whole nor does it negate the significant price effects by subject imports and the causal nexus of those to the domestic industry's condition, detailed above.

[175] Moreover, we observe that, contrary to respondents' assertions, the most favored customer provision in ***. Respondents' Prehearing Br. at 38-39. Domestic producers could ***. Petitioners' Posthearing Br. at 12 n.10. However, as detailed above in Section V.D., subject imports suppressed U.S. prices and put competitive pressure on domestic producers with respect to these customers.

[176] Tr. at 103-4 (Page), 105 (Bowes).

[177] Respondents' Prehearing Br. at 62-64.

[178] *See also* Petitioners' Posthearing Br. at 13; Tr. 83-84 (Rosenthal), 84 (Kerwin).

[179] Petitioners' Posthearing Br. at Exhibit 3, paras. 8-24, Attachments, 1-3, Exhibit 4, 3-15, Attachments 1, 2. Indeed, respondents' own evidence indicates that subject imports ***. Respondents' Posthearing Br., Exhibit 14, Exhibit D-2, Attachment 6.

[180] Petitioners' Posthearing Br., Exhibits 3, paras. 13-20, Attachments 2, 3, Exhibit 4, paras. 6-7, Attachment 1; CR/PR at Tables V-4 – V-10, as revised by INV-RR-064.

[181] Petitioners' Posthearing Br., Exhibit 4; Respondents' Posthearing Br., Exhibit D-1, Attachment 1. Respondents' evidence tends to refute its assertion that it was Section 301 duties rather than antidumping and countervailing duties that caused the volume of subject imports to slow in 2018. The customer that switched from *** to *** specifically identified the antidumping and countervailing (Continued...)

We are also not persuaded that the prices at which domestic producers offered steel propane cylinders to the RV industry suggest that they were uninterested in serving that market.[182] As petitioners explained, the relatively higher prices at which steel propane cylinders tend to be sold to RV manufacturers and distributors reflect the fact that sales to these customers tend to be spot sales.[183] Consequently, these spot purchases do not qualify for the volume discounts that contract purchasers, such as gas exchangers, may be eligible to receive.[184] In the same vein, as discussed above, contracts enable domestic producers to plan for and manage steel costs for the duration of the contract, whereas spot purchases do not have that same protection and are subject to the prevailing cost of steel at the time of the purchase.[185] Moreover, spot purchases often require just in time delivery, and therefore, pay higher prices.[186]

We further find unpersuasive respondents' assertions that increased lead times and supply constraints were the cause of injury to the domestic industry rather than subject imports.[187] We recognize, as discussed in Section V.B.3., that some purchasers reported that the domestic industry's lead times increased during the period of investigation, and that, although most purchasers (ten out of 17) reported no supply constraints with respect to the domestic industry, five reported that they had experienced supply constraints with U.S. producers.[188] We observe, however, that most purchasers also described domestically produced steel propane cylinders to be superior or comparable to subject imports in terms of availability, delivery times, just in time delivery, and reliability of supply, as discussed above in Section V.B.3.[189] We also find that increased lead times and the fact that some purchasers reported supply constraints does not suggest that domestic producers were unwilling or unable to supply additional steel propane cylinders. Petitioners explained that, due to hurricanes that hit the United States in late 2017 and early 2018, they experienced temporary spikes in demand for their products, including from at least one purchaser that typically purchased subject imports but was experiencing supply shortages.[190] As discussed above, although domestic producers have the ability to increase production by using overtime or adding shifts, it is not

---

(…Continued)
duties, as opposed to Section 301 tariffs, as the reason for shifting purchases to the domestic like product. Respondents' Posthearing Br., Exhibit D-1, Attachment 1.

[182] Respondents' Final Comments at 1-3.

[183] Petitioners' Posthearing Br., Responses to Commission Questions at 10, 12, 38-39, Exhibit 3 at paras. 3, 22.

[184] Petitioners' Posthearing Br., Responses to Commission Questions at 10, Exhibit 3 at paras. 3, 22.

[185] Petitioners' Posthearing Br., Responses to Commission Questions at 10, 12, 33, 38, Exhibit 3 at paras. 22.

[186] Petitioners' Posthearing Br., Responses to Commission Questions at 10.

[187] Respondents' Prehearing Br. at 32-36.

[188] CR at II-12; PR at II-6.

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

[190] Tr. at 32 (Bowes), 51 (Komlosi), (Viebranz), 51-52 (Rosenthal); Petitioners' Prehearing Br. at 40-41, Petitioners' Posthearing Br., Responses to Commission Questions at 9, Exhibit 3, para. 27.

economically feasible to do so to serve temporary spikes in demand or to serve as a temporary backstop for customers that will later return to the lower priced subject imports.[191] We find that the domestic industry had the capacity to increase production and shipments, when it was economically feasible to do so, and in fact, it did in anticipation of increased sales as a result of these investigations.[192] We also observe that ***,[193] which is significantly greater than any increase in lead times reported by the domestic industry or purchasers.[194]

Finally, as discussed above in section V.B.2., nonsubject imports accounted for a small and stable share of the U.S. steel propane cylinder market in each year of the period of investigation.[195] In addition, available evidence indicates that nonsubject imports tended to be considerably higher priced than subject imports.[196]

Consequently, we find that the adverse effects that the domestic industry experienced in terms of lost sales and market share as well as the suppression of domestic prices to a significant degree due to the competitive pressure from low-priced subject imports. Therefore, we find that cumulated subject imports have had a significant adverse impact on the domestic industry. Accordingly, we determine that the domestic industry is materially injured by reason of subject imports from China and Thailand.

VI. Conclusion

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

[191] Petitioners' Posthearing Br., Responses to Commission Questions at 7-8, Exhibit 3, para. 22 (explaining that ***).

[192] Petitioners' Posthearing Br., Exhibit 4, para. 9.

[193] Respondents' Posthearing Br., Exhibit D-2, Attachment 1.

[194] As discussed above, the longest lead time reported by purchasers was the quoted lead time of 180 days. CR at II-18; PR at II-10. *See also* Tr. at 231 (reporting increased lead times of 8 or 9 weeks); Respondents' Posthearing Br., Exhibit D-4 (***).

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

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

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 Worthington Industries Inc. ("Worthington"), Columbus, Ohio, and Manchester Tank and Equipment ("Manchester"), Franklin, Tennessee, on May 22, 2018, alleging that an industry in the United States is materially injured and threatened with material injury by reason of less-than-fair-value ("LTFV") imports of imports of steel propane cylinders[1] from China, Taiwan, and Thailand, and subsidized imports from China. On June 14, 2018, the petitioners withdrew the petition regarding imports from Taiwan, leading Commerce and the Commission to terminate their respective investigations on steel propane cylinders from Taiwan.[2] The following tabulation provides information relating to the background of these investigations.[3] [4]

[1] See the section entitled "The Subject Merchandise" in Part I of this report for a complete description of the merchandise subject in this proceeding.

[2] Steel Propane Cylinders from the People's Republic of China, Taiwan, and Thailand—Withdrawal of Taiwan Antidumping Duty Petition, June 14, 2018.

[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 is presented in appendix B of this report.

Effective date	Action
May 22, 2018	Petitions filed with Commerce and the Commission; institution of Commission investigations (83 FR 24491, May 29, 2018)
June 11, 2018	Commerce's notices of initiation (83 FR 28189 and 83 FR 28196, June 18, 2018)
June 20, 2018	Commerce's termination of antidumping investigation (Taiwan) (83 FR 29748, June 26, 2018)
July 3, 2018	Commission's termination of antidumping duty investigation (Taiwan) (83 FR 31174, July 3, 2018)
July 6, 2018	Commission's preliminary determinations (83 FR 32329, July 12, 2018)
October 26, 2018	Commerce's preliminary countervailing duty determinations on imports from China (83 FR 54086, October 26, 2018)
December 27, 2018	Commerce's preliminary antidumping duty determination on imports from China (83 FR 66675, December 27, 2018) and Thailand (83 FR 66678, December 27, 2018)
March 13, 2019[1]	Scheduling of final phase of Commission investigations (84 FR 9135, March 13, 2019)[1]
June 5, 2019	Commission's hearing
June 21, 2019	Steel Propane Cylinders From the People's Republic of China: Final Affirmative Countervailing Duty Determination (84 FR 29159, June 21, 2019)
June 21, 2019	Steel Propane Cylinders From Thailand and the People's Republic of China: Final Determination of Sales at Less Than Fair Value (84 FR 29168 and 84 FR 29161, June 21, 2019)
July 17, 2019	Scheduled date for Commission's vote
July 29, 2019	Scheduled date for Commission's views

[1] Due to the lapse in appropriations and ensuing cessation of Commission operations, all import injury investigations conducted under authority of Title VII of the Tariff Act of 1930 accordingly were tolled pursuant to 19 U.S.C. §§ 1671d(b)(2), 1673d(b)(2).

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*

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

domestic industry, including efforts to develop a derivative or more 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/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

Steel propane cylinders are portable, low-pressure steel vessels designed to store, transport, and deliver compressed or liquefied propane gas to camping and barbeque grills, outdoor heaters, and recreational vehicles, among other uses. The only U.S. producers of steel propane cylinders are Manchester and Worthington, while leading producers of steel propane cylinders outside the United States include Shandong Huanri Group Co., Ltd ("Huanri") of China and Sahamitr Pressure Container Public Company Limited ("SMPC") of Thailand. The leading U.S. importer of steel propane cylinders from China is ***, while the leading importer of steel propane cylinders from Thailand is ***. U.S. purchasers include gas exchangers, RV manufacturers, retailers, and distributors. Leading purchasers include ***. Combined, these *** purchasers represented *** percent of apparent consumption in 2018 and *** percent of all purchases and imports reported by the purchasers in 2018.

Apparent U.S. consumption of steel propane cylinders totaled approximately *** pounds ($***) in 2018. Currently, two firms are known to produce steel propane cylinders in the United States. U.S. producers' U.S. shipments of steel propane cylinders totaled *** pounds ($***) in 2018, and accounted for *** percent of apparent U.S. consumption by quantity and *** percent by value. U.S. shipments of imports from subject sources totaled *** pounds

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

($***) in 2018 and accounted for *** percent of apparent U.S. consumption by quantity and *** percent by value. U.S. shipments of imports from nonsubject sources totaled *** pounds ($***) in 2018 and accounted for *** percent of apparent U.S. consumption by both quantity and value.

SUMMARY DATA AND DATA SOURCES

A summary of data collected in these investigations is presented in appendix C, table C-1. Except as noted, U.S. industry data are based on questionnaire responses of the two firms that accounted for all known production of steel propane cylinders in the United States during 2018. U.S. imports are based on official import statistics[7] and eight questionnaire responses that are believed to account for at least *** of steel propane cylinder imports from China, *** of steel propane cylinder imports from Thailand, and *** of combined subject imports during 2018. Foreign industry data are based on the questionnaire responses of two firms in China whose exports accounted for *** of U.S. imports of steel propane cylinders from China in 2018, and one firm in Thailand whose exports accounted for *** U.S. imports of steel propane cylinders from Thailand in 2018.

PREVIOUS AND RELATED INVESTIGATIONS

Steel propane cylinders have not been the subject of any prior countervailing/ antidumping duty investigations in the United States.

Section 301 proceedings

Steel propane cylinders from China under the relevant HTS subheadings have been subject to additional duties from September 2018 to the present. Initially, the additional duty rate was 10 percent. This rate was increased to 25 percent in May 2019.

Section 301 of the Trade Act of 1974, as amended ("Trade Act"),[8] authorizes the Office of the U.S. Trade Representative ("USTR"), at the direction of the President, to take appropriate action to respond to a foreign country's unfair trade practices. On August 18, 2017, USTR initiated an investigation into certain acts, policies, and practices of the Government of China

[7] The coverage estimates presented are based on usable questionnaire responses and official import statistics. Official import statistics are based on statistical reporting numbers 7311.00.0060 (other) and 7311.00.0090, both mixed HTS statistical reporting numbers with imports that fall within the scope of these investigations, and account for a minority of imports in those categories. Based on a review of data provided by ***, staff received U.S. importer questionnaire responses that accounted for approximately *** pounds of the approximately *** pounds imported under HTS statistical numbers 7311.00.0060 and 7311.00.0090.

[8] 19 U.S.C. § 2411.

related to technology transfer, intellectual property, and innovation.[9] On April 6, 2018, USTR published its determination that the acts, policies, and practices of China under investigation are unreasonable or discriminatory and burden or restrict U.S. commerce, and are thus actionable under Section 301(b) of the Trade Act.[10] USTR further determined that it was appropriate and feasible to take action and proposed the imposition of an additional 25 percent duty on products of China with an annual trade value of approximately $50 billion. The additional 25 percent duty was issued in two tranches. Tranche 1 covered 818 tariff subheadings, with an approximate annual trade value of $34 billion.[11] Tranche 2 covered 279 tariff subheadings, with an approximate annual trade value of $16 billion.[12]

On September 21, 2018, USTR published a notice in the *Federal Register* modifying its prior action in accordance with the specific direction of the President under his authority pursuant to Section 307(a)(1) of the Trade Act, determining to include 5,745 full and partial tariff subheadings with an approximate annual trade value of $200 billion, while maintaining the prior action (i.e., Tranche 3). At that time, USTR determined that the rate of additional duty to be initially 10 percent ad valorem, effective September 24, 2018, and that the rate of additional duty was to increase to 25 percent ad valorem on January 1, 2019. Steel propane cylinders under relevant HTS subheadings have been subject to these 10 percent duties since that time.[13] In December 2018 USTR determined, in accordance with the direction of the President, to postpone the date on which the rate of the additional duties will increase to 25 percent for the products of China covered by the September 2018 Section 301 action. The rate of additional duty for the products covered by the September 2018 Section 301 action was scheduled to increase to 25 percent on March 2, 2019, but was temporarily postponed until further notice.[14] On May 9, 2019, USTR published a notice in the *Federal Register* modifying its prior action in accordance with the specific direction of the President to escalate this duty rate

---

[9] *Initiation of Section 301 Investigation; Hearing; and Request for Public Comments: China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation*, 82 FR 40213, August 24, 2017.

[10] *Notice of Determination and Request for Public Comment Concerning Proposed Determination of Action Pursuant to Section 301: China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation*, 83 FR 14906, April 6, 2018.

[11] *Notice of Action and Request for Public Comment Concerning Proposed Determination of Action Pursuant to Section 301: China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation*, 83 FR 28710, June 20, 2018.

[12] *Notice of Action and Request for Public Comment Concerning Proposed Determination of Action Pursuant to Section 301: China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation*, 83 FR 40823, August 16, 2018.

[13] Relevant HTS subheading for steel propane cylinders included in Tranche 3 include the following: 7311.00.00. *Notice of Modification of Section 301 Action: China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation*, 83 FR 47974, September 21, 2018.

[14] *Notice of Modification of Section 301 Action: China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation*, 83 FR 65198, December 19, 2018; *Notice of Modification of Section 301 Action: China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation*, 84 FR 7966, March 5, 2019.

from 10 percent to 25 percent on May 10, 2019.[15] A subsequent modification was provided for subject goods exported from China prior to May 10, 2019, but still in transit, to be subject to the 10 percent duty as long as such goods entered into the United States prior to June 1, 2019.[16]

On May 17, 2019, USTR published a notice in the *Federal Register* modifying its prior action in accordance with the specific direction of the President proposing further action in the form of additional duties up to 25 percent ad valorem on products of China with an annual trade value of approximately $300 billion included in 3,805 full and partial tariff subheadings (i.e., Tranche-4 products), while maintaining the prior action.[17]

Section 232 proclamations

As noted later in this Part, as well as in Part V, hot-rolled alloy steel is a key raw material input in the production of steel propane cylinders subject to these investigations, and is subject to additional national-security import (Section 232) tariffs.[18] Section 232 of the Trade Expansion Act of 1962, as amended (19 U.S.C. 1862), authorizes the President, on advice of the Secretary of Commerce, to adjust the imports of an article and its derivatives that are being imported into the United States in such quantities or under such circumstances as to threaten to impair the national security. On March 8, 2018, the President issued Proclamation 9705 on Adjusting Imports of Steel into the United States, under Section 232 of the Trade Expansion Act of 1962, as amended, providing for additional import duties for steel mill products, effective March 23, 2018.[19] On March 22, 2018, April 30, 2018, May 31, 2018, August 10, 2018, and August 29, 2018, the President issued Proclamations 9711, 9740, 9759, 9772, and 9777 on Adjusting Imports of Steel and Aluminum into the United States.[20] Under these Presidential Proclamations, in addition to reporting the regular Chapters 72 and 73 of the Harmonized Tariff Schedule ("HTS") classification for the imported steel merchandise, importers shall report the following HTS classification for imported merchandise subject to the additional duty:

---

[15] *Notice of Modification of Section 301 Action: China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation*, 84 FR 20459, May 9, 2019.

[16] *Implementing Modification to Section 301 Action: China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation*, 84 FR 21892, May 15, 2019.

[17] *Request for Comments Concerning Proposed Modification of Action Pursuant to Section 301: China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation*, 84 FR 22564, May 17, 2019.

[18] Hot-rolled flat alloy steel in coils but not coated or plated (the raw material for manufacturing steel propane cylinders) is classifiable under HTS headings 7225 and 7226 that were included in the enumeration of iron and steel articles, imported on or after March 23, 2018, that became subject to the additional 25 percent ad valorem Section 232 duties. *Adjusting Imports of Steel into the United States*, Presidential Proclamation 9705, March 8, 2018, 83 FR 11625, March 15, 2018. See also U.S. notes 16(a) and 16(b), subchapter III of HTS chapter 99. *HTSUS (2019) Revision 7*, USITC Publication No. 4899, June 2019, pp. 99-III-5 to 99-III-6, 99-III-67 to 99-III-68.

[19] 83 FR 11625, March 15, 2018.

[20] 83 FR 13361, March 28, 2018; 83 FR 20683, May 7, 2018; 83 FR 25857, June 5, 2018; 83 FR 40429, August 15, 2018; and 83 FR 45025, September 4, 2018.

9903.80.01 (25 percent ad valorem additional duty for steel mill products from all countries of origin except Argentina, Australia, Brazil, and South Korea); and 9902.80.01 (50 percent ad valorem additional duty for steel mill products originating from Turkey. These duty requirements are effective with respect to goods entered, or withdrawn from warehouse for consumption, as of June 1, 2018.[21] Subsequent Presidential Proclamations reduced the additional duty on steel mill products originating from Turkey back to the original 25 percent, effective May 21, 2019;[22] and restored the duty exemptions for steel mill products originating from Canada and Mexico, effective May 20, 2019.[23]

NATURE AND EXTENT OF SUBSIDIES AND SALES AT LTFV

Subsidies

On June 21, 2019, Commerce published a notice in the *Federal Register* of its final determination of countervailable subsidies for producers and exporters of product from China.[24] Table I-1 presents Commerce's findings of subsidization of steel propane cylinders in China.

Table I-1
Steel propane cylinders: Commerce's final subsidy determination with respect to imports from China

Entity	Countervailable subsidy margin (*percent*)
Guangzhou Lion Cylinders Co. Ltd	142.37
Hubei Daly LPG Cylinder Manufacturer Co. Ltd	142.37
Shandong Huanri Group Co. Ltd	37.91
Taishan Machinery Factory Ltd	142.37
TPA Metals and Machinery Co. Ltd.	142.37
Wuyi Xilinde Machinery Manufacture Co., Ltd	142.37
Zhejiang Jucheng Steel Cylinder Co., Ltd	142.37
All others	37.91

Source: 84 FR 29159, June 21, 2019.

[21] Section 232 Tariffs on Aluminum and Steel Duty on Imports of Steel and Aluminum Articles Under Section 232 of the Trade Expansion Act of 1962, April 2, 2019, https://www.cbp.gov/trade/remedies/232-tariffs-aluminum-and-steel, retrieved May 15, 2019.

[22] *Adjusting Imports of Steel Into the United States*, Presidential Proclamation 9886, May 16, 2019, 84 FR 23421, May 21, 2019.

[23] Executive Office of the President, *Adjusting Imports of Steel Into the United States*, Presidential Proclamation 9886, May 16, 2019.

[24] *Steel Propane Cylinders From the People's Republic of China: Final Determination of Sales at Less Than Fair Value*, 84 FR 29161, June 21, 2019.

Sales at LTFV

On June 21, 2019, Commerce published a notice in the *Federal Register* of its preliminary determination of sales at LTFV with respect to imports from China [25] and Thailand[26] Table I-2 presents Commerce's dumping margins with respect to imports of product from China and Thailand.

Table I-2
Steel propane cylinders: Commerce's Final weighted-average LTFV margins with respect to imports from China and Thailand

Producer	Exporter	Final dumping margin (*percent*)
China		
GSBF Tank Inc.	Hong Kong GSBF Company Limited	37.41
Shandong Huanri Group Co. Ltd	Shandong Huanri Group Co. Ltd	25.52
Jiaxing Pressure Vessel Factory	Jiaxing Pressure Vessel Factory	26.28
All others		108.60
Thailand		
Sahamitr Pressure Container Plc	Sahamitr Pressure Container Plc	10.77
All others		10.77

Source: 84 FR 29161 (China) and 84 FR 29168 (Thailand), June 21, 2019.

THE SUBJECT MERCHANDISE

Commerce's scope

In the current proceeding, Commerce has defined the scope as follows:

> *The merchandise covered by this investigation is steel cylinders for compressed or liquefied propane gas (steel propane cylinders) meeting the requirements of, or produced to meet the requirements of, U.S. Department of Transportation (USDOT) Specifications 4B, 4BA, or 4BW, or Transport Canada Specification 4BM, 4BAM, or 4BWM, or United Nations pressure receptacle standard ISO 4706. The scope includes steel propane cylinders regardless of whether they have been certified to these specifications before importation. Steel propane cylinders range from 2.5 pound nominal gas capacity (approximate 6 pound water capacity and approximate 4-6 pound tare weight) to 42 pound nominal gas capacity (approximate 100 pound water capacity and approximate 28-32 pound*

[25] *Steel Propane Cylinders From the People's Republic of China: Preliminary Affirmative Determination of Sales at Less Than Fair Value and Postponement of Final Determination Measures*, 83 FR 66675, December 27, 2018.

[26] *Steel Propane Cylinders From Thailand: Preliminary Affirmative Determination of Sales at Less Than Fair Value and Postponement of Final Determination*, 83 FR 66678, December 27, 2018.

tare weight). Steel propane cylinders have two or fewer ports and may be imported assembled or unassembled (i.e., welded or brazed before or after importation), with or without all components (including collars, valves, gauges, tanks, foot rings, and overfill prevention devices), and coated or uncoated. Also included within the scope are drawn cylinder halves, unfinished propane cylinders, collars, and foot rings for steel propane cylinders.

An "unfinished" or "unassembled" propane cylinder includes drawn cylinder halves that have not been welded into a cylinder, cylinders that have not had flanges welded into the port hole(s), cylinders that are otherwise complete but have not had collars or foot rings welded to them, otherwise complete cylinders without a valve assembly attached, and cylinders that are otherwise complete except for testing, certification, and/or marking.

This investigation also covers steel propane cylinders that meet, are produced to meet, or are certified as meeting, other U.S. or Canadian government, international, or industry standards (including, for example, American Society of Mechanical Engineers (ASME), or American National Standard Institute (ANSI)), if they also meet, are produced to meet, or are certified as meeting USDOT Specification 4B, 4BA, or 4BW, or Transport Canada Specification 4BM, 4BAM, or 4BWM, or a United Nations pressure receptacle standard ISO 4706.

Subject merchandise also includes steel propane cylinders that have been further processed in a third country, including but not limited to, attachment of collars, foot rings, or handles by welding or brazing, heat treatment, painting, testing, certification, or any other processing that would not otherwise remove the merchandise from the scope of the investigation if performed in the country of manufacture of the in-scope steel propane cylinders.

Specifically excluded are seamless steel propane cylinders and propane cylinders made from stainless steel (i.e., steel containing at least 10.5 percent chromium by weight and less than 1.2 percent carbon by weight), aluminum, or composite fiber material. Composite fiber material is material consisting of the mechanical combination of two components: fiber (typically glass, carbon, or aramid (synthetic polymer)) and a matrix material (typically polymer resin, ceramic, or metallic).

The merchandise subject to this investigation is properly classified under statistical reporting numbers 7311.00.0060 and 7311.00.0090 of the Harmonized Tariff Schedule of the United States (HTSUS). Although the HTSUS statistical reporting numbers are provided for convenience and

customs purposes, the written description of the merchandise is dispositive.[27]

Tariff treatment

Based upon the scope set forth by the Department of Commerce, information available to the Commission indicates that the merchandise subject to these investigations are imported under Harmonized Tariff Schedule of the United States ("HTSUS" or "HTS") statistical reporting numbers 7311.00.0060 and 7311.00.0090. The 2019 general rate of duty is "Free" for subheading 7311.00.00.[28] As noted earlier, products from China entering the United States under HTS subheading 7311.00.00 had been subject to an additional duty of 10 percent ad valorem effective September 24, 2018,[29] but are currently subject to an additional duty of 25 percent ad valorem, since May 10, 2019, pursuant to Section 301 of the Trade Act of 1974.[30] See the section of this report entitled "Section 301 proceeding" for further information on the USTR determinations. See also U.S. notes 20(e), 20(f), and 20(l) to subchapter III of HTS chapter 99.[31] Decisions on the tariff classification and treatment of imported goods are within the authority of U.S. Customs and Border Protection.

THE PRODUCT

Description and applications

The steel propane cylinders covered in these investigations are portable, low-pressure (of up to 240 pounds per square inch)[32] steel tanks designed to contain propane in a compressed or liquefied state. These cylinders are typically composed of a tank with a single port[33] that is sealed with a valve, gauge, collar, and foot ring (figure I-1).[34] For safety reasons,

---

[27] *Steel Propane Cylinders from the People's Republic of China: Final Determination of Sales at Less Than Fair Value and Postponement of Final Determination Measures*, 84 FR 29161, June 21, 2019.

[28] *HTSUS (2019) Revision 7*, USITC Publication No. 4899, June 2019, ch. 73, p. 24.

[29] *Notice of Modification of Section 301 Action: China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation*, 83 FR 47974, September 21, 2018.

[30] *Notice of Action Pursuant to Section 301: China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation*, 83 FR 65918, December 19, 2018; *Notice of Modification of Section 301 Action: China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation*, 84 FR 7966, March 5, 2019; *Notice of Modification of Section 301 Action: China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation*, 84 FR 20459, May 9, 2019.

[31] *HTSUS (2019) Revision 7*, USITC Publication No. 4899, June 2019, pp. 99-III-21 to 99-III-22, 99-III-40, 99-III-52, 99-III-75 to 99-III-76.

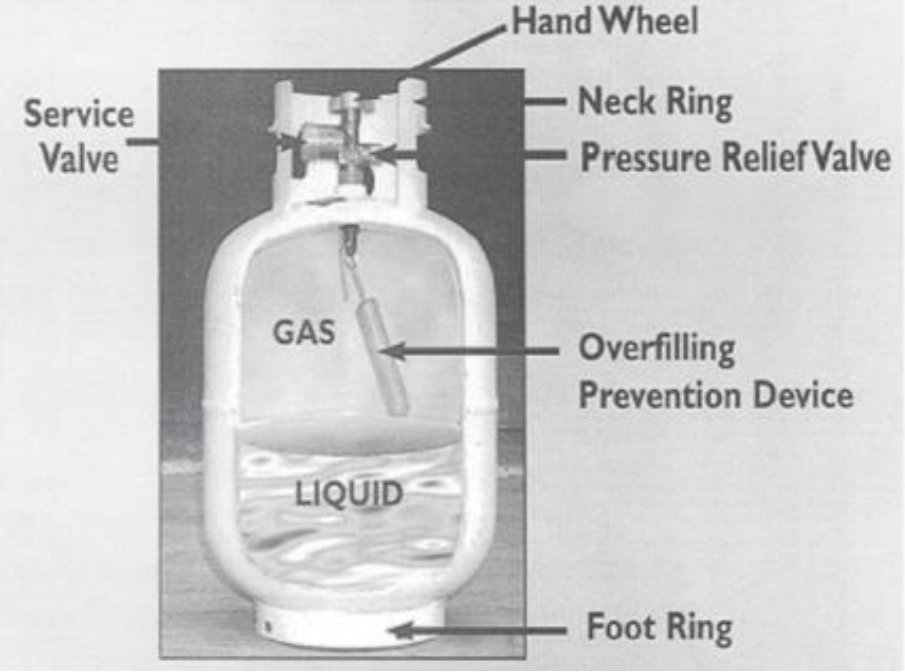
[32] Petitioners' postconference brief, "Answers to Staff Questions," No. 13, pp. 12-13.

[33] According to counsel for Petitioners, occasionally a steel propane cylinder may have a second port, e.g., for a pressure gauge separate from the valve, or merely for a plug. Reportedly, multiple ports are more common for out-of-scope gas cylinders. Conference transcript, p. 84 (Luberda).

[34] Petition, p. 4.

the valve includes a required overfill-prevention device since 2001.[35] The horseshoe-shaped collar (also referred to as the "neck ring") protects the valve from damage, provides a convenient handle for carrying the cylinder, and is where the U.S. Department of Transportation ("USDOT") specification, manufacturer's emblem, date of manufacture, and tare (empty) weight are marked.[36] The country of origin of the cylinder can be found on either the neck or foot ring.[37] The foot ring stabilizes the bottom of the cylinder and prevents the cylinder tank from being in direct contact with the ground.[38] Cylinders meeting the scope of these investigations range in size from 4.25 pounds of propane capacity to 40 pounds of propane capacity, with 20-pound and 30-pound cylinders the most common sizes.[39]

Figure I-1
Steel propane cylinders: Cut-away view showing principal components



Source: Petition, exhibit GEN-5.

Steel propane cylinders are used as a portable and refillable source of propane storage and are therefore required to meet the USDOT's Pipeline and Hazardous Materials Safety

[35] Conference transcript, pp. 126-128 (Newman).
[36] Conference transcript, p. 89 (Komlosi).
[37] Conference transcript, p. 89 (Graumann).
[38] *Propane Cylinder Requirements*, http://www.propane101.com/propanecylinderrequirements.htm, retrieved May 15, 2019.
[39] Petition, p. 5.

Administration ("PHMSA") specifications 4B,[40] 4BA,[41] or 4BW[42] for cylinders used in hazardous-material packaging in the United States. These specifications dictate the grade of steel, welding or brazing requirements, wall thickness, design features, and markings (figure I-2), in addition to other technical specifications.[43] The cylinders must also undergo requalification testing within 10 years of the manufacture date and every 5 years thereafter in order to remain in service.[44] [45] The independent inspection agencies, identified by the Respondents Huanri, Worldwide, and Hong Kong GSBF, test steel propane cylinders manufactured by both domestic and foreign producers for USDOT certification.[46]

[40] Specification 4B includes welded or brazed steel cylinders. 49 CFR Ch. I (10-1-11 Edition), § 178.50.

[41] Specification 4BA includes welded or brazed steel cylinders. 49 CFR Ch. I (10-1-11 Edition), § 178.51.

[42] Specification 4BW includes welded steel cylinders with an electric-arc welded longitudinal seam. 49 CFR Ch. I (10-1-11 Edition), § 178.61.

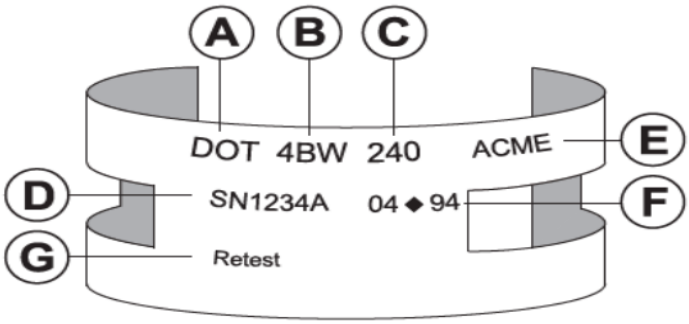
[43] Petitioners' postconference brief, pp. 4-5.

[44] Conference transcript, pp. 73-75 (Komlosi).

[45] The industry is reportedly still in transition away from the previous retesting requirement of within 12 years of the manufacturing date. Although the PHMSA issued the FR notice with the change to a within-10-years retest period on January 21, 2016, it subsequently announced on March 17, 2017 that it would not seek to enforce action against those who still follow the older within-12-years requirement while it reviews the "Petition for Rulemaking & Emergency Stay of Cylinder Requalification Requirements," submitted by the National Propane Gas Association ("NPGA"). For more information, see: PHMSA, "Hazardous Materials: Adoption of Special permits (MAP-21) (RRR), 81 FR 3636, January 21, 2016, https://www.federalregister.gov/documents/2016/01/21/2016-00780/hazardous-materials-adoption-of-special-permits-map-21-rrr; PHMSA, "PHMSA Notice Regarding the Requalification Period for DOT Specification Cylinders," March 17, 2017, https://www.phmsa.dot.gov/training/hazmat/phmsa-notice-regarding-requalification-period-dot-specification-cylinders; NPGA, "DOT Halts 10-Year Cylinder Requalification Enforcement Pending Further Review," Press Release, March 17, 2017, https://www.npga.org/dot-halts-10-year-cylinder-requalification-enforcement-pending-review/; Megan Smalley, "DOT Cylinder Requalification Rule to Impact Propane Marketers," *LPGas Magazine*, January 19, 2017, http://www.lpgasmagazine.com/dot-cylinder-requalification-rule-to-impact-propane-marketers/, all retrieved June 21, 2018.

[46] Huanri, Worldwide, and Hong Kong GSBF's posthearing brief, exh. 12, "Independent Inspection Agencies & ATI Intro;" exh. 13, "ATI Updates."

Figure I-2
Steel propane cylinders: Required markings on the cylinder neck ring (collar) or cylinder shoulder



A. Manufactured to U.S. DOT specifications
B. Cylinder specification type (e.g. 4B, 4BA, 4BW, and 4E)
C. Cylinder service pressure (psig)
D. Cylinder serial number
E. Manufacturer's name or registered symbol
F. Original manufacture/test date, month and year, and inspector's mark, as required (i.e., this diagram indicates April 1994 and inspector's mark)
G. Area for date requalified/retested (no date is shown indicating that the 10-year requalification is overdue)

Source: USDOT, PHMSA, "Requalification Guidance for Propane Cylinders," no date, https://www.phmsa.dot.gov/hazmat/pressure-vessels-approvals/requalification-guidance-propane-cylinders, retrieved April 29, 2019.

A producer's manufacturing facility and its products must receive USDOT certification before it can sell steel propane cylinders in the U.S. market.[47] During the preliminary phase of these investigations, Respondents Huanri and Worldwide noted that SMPC is the only USDOT-approved producer of steel propane cylinders in Thailand, while TPA, Huanri, and other producers in China have also received USDOT certification.[48] Consequently, steel propane cylinders produced in the United States and subject imports have a uniform basic design, although respondents state that imported cylinders with a 20-pound capacity have thicker cylinder walls and a heavier tare weight than domestically produced cylinders.[49]

Steel propane cylinders are used primarily as a heat source for various types of outdoor recreation. Common applications include use in recreation vehicles ("RVs") and barbecue grills,

[47] Conference transcript, p. 113 (Komlosi); SMPC and Flame King's Postconference Brief, "Answers to ITC Staff Questions," Question No. 1, pp. 1-2.

[48] Respondents Huanri and Worldwide claimed that other Chinese companies listed on the USDOT approval list do not export to the U.S. market. Huanri and Worldwide's postconference brief, p. 14.

[49] One of the respondents attributed this difference to U.S. producers having dedicated lines for manufacturing 20-pound cylinders, noting that the dedicated equipment lines could more precisely target a cylinder wall thickness just over the USDOT-specified minimum of 2 mm than equipment used to manufacture multiple cylinder designs for different markets and sizes. Likewise, domestic producers reportedly use lighter-gauge steel strip to produce the neck and foot rings as a cost-saving measure. SMPC and Flame King's postconference brief, "Answers to ITC Staff Questions," Question No. 2, p. 3.

but the cylinders are also used for fire pits, outdoor heat lamps, other various recreational uses, and as a temporary energy source for heating and cooking during natural disasters.[50] By contrast, the majority of food trucks rely on 100-pound propane cylinders—which are outside the scope of these investigations—to fuel the food-preparation equipment inside the truck. An increasing number of food trucks are using 20-pound or 30-pound steel propane cylinders, typically in pairs, but this has not resulted in appreciable growth in demand, according to the petitioners.[51]

Manufacturers sell RVs with one or more propane cylinders included, but steel propane cylinders generally are sold separately from the grills and other devices with which they are used.[52] Big-box retailers sell empty new steel propane cylinders, but consumers increasingly are buying pre-filled used cylinders from gas exchangers, by exchanging their cylinder for a different, pre-filled cylinder when it is empty rather than refilling it themselves.[53]

Manufacturing processes

Domestic and foreign producers generally use the same manufacturing processes and equipment to produce steel propane cylinders; however, one domestic producer noted that the level of automation may vary amongst producers,[54] and one foreign producer noted that there are minor differences during the assembly process.[55] In general, the principal manufacturing steps include: (1) stamping and trimming, (2) fabrication and assembly, (3) painting, and (4) valve assembly and final inspection.

Stamping and trimming

The production of steel propane cylinders starts with large coils of grade 4130[56] hot-rolled, flat steel.[57] The coils are unwound into a hydraulic press that press-punches circular-shaped disks out of the steel coil. These disks may vary in width—depending on the intended size of the final steel propane cylinder. A second press machine then clamps the disk as a

[50] Conference transcript, p. 14 (Rosenthal), pp. 42-43 (Graumann).
[51] Petitioners' posthearing brief, exh. 1, "Responses to ITC Commissioner Questions," p. 49.
[52] Conference transcript, pp. 70-71 (Graumann).
[53] Conference transcript, pp. 198-199 (Newman).
[54] Conference transcript, p. 86 (Graumann).
[55] SMPC and Flame King's postconference brief, p. 31.
[56] Grade 4130 steel is an alloy steel containing 0.80 to 1.10 percent chromium, which is primarily used as a strengthening agent. TW Metals, "4130 Steel Sheets," https://www.twmetals.com/products/coil-and-sheet/4130-alloy-steel-coil-and-sheet.html, retrieved May 15, 2019. USDOT regulations mandate that steel propane cylinders be manufactured from high-strength Grade 4130 steel by welding or brazing two seamless hemispheres (half cylinders) by a single circumferential seam. 49 CFR Ch. I (10–1–11 Edition). § 178.61.
[57] Conference transcript, p. 85 (Graumann).

cylinder-shaped die thrusts upward, transforming the disk into a hemispheric shell (or "half cylinder"). After this process, the half cylinders are then trimmed, producing a smooth finish.[58]

Fabrication and assembly

Following the stamping and trimming process, two half cylinders are nudged together on a pusher device before they are loaded onto a welding lathe. Automated welding guns follow the seam of the two half cylinders, melting and bonding them together into a final unit. A port is cut into the top shell of the unit, and a threaded steel flange[59] is then welded to the port (this is where the valve will be added later). Producers then use a die press to punch holes into steel strips and bend them into partially or fully closed rings that will be used for the collar and the foot rings, respectively. The collar, which is used to protect the valve area from damage and to provide a handle for transporting the unit, is welded to the area around the valve. The foot ring,[60] which serves as a pedestal for the unit and allows it to stand upright, is welded to the base of the unit.[61]

The assembled cylinder then undergoes a heat-treating (tempering) process[62] to ensure that the assembled cylinder can endure the expansion and contraction caused by pressurized fuel.[63] Following the tempering process, manufacturers conduct spot checks of the welded seam by removing sample cylinders from the production line, cutting a piece of the cylinder at the seam, and grinding this piece to expose the weld. The test piece is then bent at the seam using a jack.[64] Certain producers also hydrostatically test sample cylinders in order to ensure that the cylinders can expand under pressure without rupturing or leaking.[65]

There are certain differences between domestic and foreign producers during the final assembly process. One domestic producer noted that levels of automation may vary during the assembly process — particularly with how materials are handled — due to differences in labor costs.[66] One foreign producer noted that the walls of the steel propane cylinders it produces are generally thicker than those produced by the domestic industry because certain foreign producers "cannot control wall thickness with the same precision" as domestic producers. The same foreign producer also noted that domestic producers manufacture certain parts such as

---

[58] Propane.Pro, "Canned Heat: How are 5-Gallon Propane Tanks Made?" February 21, 2011, http://propanepro-blog.dreamhosters.com/2011/02/21/canned-heat-how-are-5-gallon-propane-tanks-made-0221/#, retrieved May 15, 2019.

[59] The flange is produced by cold forming of low-carbon cold-heading quality wire rod. Conference transcript, pp. 88-89 (Graumann).

[60] The steel ring used in the bottom half cylinder is formed from a strip of steel that has been rolled into a circular shape.

[61] Conference transcript, p. 24 (Komlosi).

[62] During the tempering process, the assembled cylinder is baked at a high temperature.

[63] Worthington, "How It's Made: 20 lb. Propane Tanks," April 6, 2015, https://www.youtube.com/watch?v=5lejosb11ek, retrieved May 15, 2019.

[64] Ibid.

[65] Petition, Part I, p. 6.

[66] Conference transcript, p. 86 (Graumann).

the collar and foot ring of the steel propane cylinder with lighter-gauge steel[67] to reduce their production costs.[68]

Painting

The assembled tanks are then sent through a row of paint machines that spray the tanks with electrostatically charged powder paint. This finishing technique improves the cylinder's ability to resist corrosion and provides an aesthetic appeal.[69] Following this process, the tanks are then sent to an inspection station where they are examined for possible contaminants.[70]

Valve assembly and final inspection

Once the cylinders are painted, valves are then dropped into the flange openings on the top of the cylinder and are screwed on tightly. According to one producer, these valves are a cold-formed steel product made from wire rod.[71] The cylinders are then filled with air and submerged into water-filled tanks to detect any leaks from the valve.[72]

DOMESTIC LIKE PRODUCT ISSUES

No issues with respect to domestic like product have been raised in these investigations. Petitioners argue that the Commission should find a single domestic like product coextensive with Commerce's scope, as "steel propane cylinders comprises a continuum single like product with no clear dividing lines."[73] During the preliminary phase of these investigations, Respondents Huanri and Worldwide stated that they accept, [74] and Respondents SMPC and YSN stated that they do not oppose,[75] the petitioners' definition of the domestic like product.[76] The Commission found a single domestic like product.[77] No party proposed the collection of

---

[67] Gauge refers to the level of thickness of flat-rolled products such as steel coils.

[68] In its postconference brief, SMPC noted that certain parts such as collars and foot rings are not subject to USDOT specifications for steel propane cylinders. SMPC and Flame King's postconference brief, "Answers to ITC Staff Questions," Question No. 2, p. 3.

[69] Petition, Part I, p. 6.

[70] Worthington, "How It's Made: 20 lb. Propane Tanks," April 6, 2015, https://www.youtube.com/watch?v=5lejosb11ek, retrieved May 15, 2019.

[71] This domestic producer indicated that a third-party supplier machines and threads valves into its steel propane cylinders. Conference transcript, p. 88 (Graumann).

[72] Worthington, "How It's Made: 20 lb. Propane Tanks," April 6, 2015, https://www.youtube.com/watch?v=5lejosb11ek, retrieved May 15, 2019.

[73] Petitioners' postconference brief, pp. 3-4.

[74] Huanri and Worldwide's postconference brief, p. 2.

[75] SMPC and Flame King's postconference brief, p. 2.

[76] Huanri and Worldwide's postconference brief, p. 2.

[77] *Steel Propane Cylinders from China and Thailand,* USITC Publication No. 4804, July 2018, pp. 10-11.

information or data necessary to re-assess the domestic like product in comments on the Commission's draft questionnaires.

`

CONDITIONS OF COMPETITION IN THE U.S. MARKET

U.S. MARKET CHARACTERISTICS

Steel propane cylinders are typically used for outdoor cooking, specifically with barbeque grills, camping stoves, heating and cooking in recreational vehicles (RVs), and outdoor heating. Overall demand driven by these end uses has grown since 2016. Irregular, event-specific needs can cause demand to spike as well, such as unusually cold weather or power outages caused by hurricanes or other natural disasters.[1] Apparent U.S. consumption of steel propane cylinders increased during 2016-18, and was *** percent higher in 2018 than in 2016.

Steel propane cylinders must be certified by the Department of Transportation to be sold in the United States. In order to maintain their certification, steel propane cylinders must be recertified 10 years after they are produced, and every 5 years thereafter.[2] Typically, steel propane cylinders are expected to be used for 20 years.[3]

Twenty-pound cylinders were *** percent (by weight) of reported combined U.S. production and imports in 2018, and 30-pound cylinders were *** percent (for more details, see table IV-4).

Impact of the implementation of Section 301 tariffs

Producers, importers, and purchasers were sent a supplementary questionnaire to determine the impact of the implementation of tariffs under Section 301 (see part I). Two U.S. producers, 2 importers, and 16 purchasers responded, although not all firms responded to all questions. Given the small number of producers and importers that responded, the responses of all firms have been combined in the discussions of the Section 301 tariffs.

Eleven of 13 responding firms reported that the Section 301 tariffs they had an impact on the market for steel propane cylinders.[4] Most firms (12 of 15 responding) reported that the Section 301 tariffs had increased the price of U.S. steel propane cylinders. Five of 12 responding firms reported that the Section 301 tariffs had caused the cost of raw materials used in steel propane cylinders to increase, four reported that the Section 301 tariffs had caused no change in the cost of raw materials. Most responding firms (9 of 15), however, reported that the Section 301 tariffs did not change overall U.S. demand (table II-1).[5] Almost half (7 of 15) of the

---

[1] Conference transcript, p. 41 (Komlosi).

[2] Hearing transcript, p. 22 (Komlosi).

[3] Hearing transcript, p. 85 (Komlosi).

[4] In addition, seven firms reported that they did not know.

[5] Firms reporting reduced demand reported that demand had either declined because of long lead times and poor services from U.S. producers or that the Section 301 tariffs had increased the cost of steel and other inputs used in RVs. In the RV channel demand is reported to be price sensitive, particularly for lower-priced models.

`

responding firms reported that the Section 301 tariffs had caused no change in U.S. supply but 4 each reported it had caused U.S. supply to decrease and to fluctuate.[6]

Table II-1
Impact of the Section 301 investigation and tariffs: U.S. producers', importers', and purchasers' responses regarding the impact of the Section 301 investigation and tariffs in the U.S. market, by number of responding firms (increase=Inc, no change =No, decrease=Dec, fluctuate= Flu)

	U.S. producers				U.S. importers				Purchasers			
Type of impact	Inc	No	Dec	Flu	Inc	No	Dec	Flu	Inc	No	Dec	Flu
Overall demand for steel propane cylinders	***	***	***	***	***	***	***	***	0	6	3	2
Overall supply of steel propane cylinders	***	***	***	***	***	***	***	***	0	4	3	4
Prices of steel propane cylinders	***	***	***	***	***	***	***	***	9	1	0	1
Raw material costs	***	***	***	***	***	***	***	***	4	1	1	2

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

U.S. PURCHASERS

The Commission received 17 usable questionnaire responses from firms that had purchased steel propane cylinders during 2016-18.[7] Six responding purchasers are retailers, six are gas exchangers (see below), three are RV manufacturers, three are distributors to RV manufacturers, and one is a distributor to firms other than RV manufactures.[8] Almost half of the responding U.S. purchasers (8 of 17) were headquartered in Wisconsin and Indiana, but others were headquartered in all regions except the Mountain region. The largest responding purchasers were ***. Combined, these two purchasers represented *** percent of apparent consumption in 2018 and *** percent of all purchases and imports reported by the purchasers in 2018.

Gas exchangers purchase cylinders, fill them, sell the full cylinders to consumers (usually in exchange for empty containers), and collect empty cylinders for refilling. Gas exchangers "focus solely on" 20-pound cylinders.[9] The largest purchasers of 20-pound cylinders were gas

[6] Changes reported in U.S. supply included: U.S. producers unable to keep up with demand, U.S. producers quoting six month lead times, U.S. producer importing from Thailand or offering product from Portugal, and lower inventories.

[7] Of the 17 responding purchasers, 11 purchased the domestic steel propane cylinders, 8 purchased imports of or imported the subject merchandise from China, 6 purchased imports of or imported the subject merchandise from Thailand, and none purchased imports of or imported steel propane cylinders from other sources.

[8] Two purchasers ***.

[9] Hearing transcript, p. 102 (Komlosi). If a purchaser does not have an empty cylinder to exchange for a filled cylinder, they may put down a deposit for the steel propane cylinder. Hearing transcript, p. 56 (Bowes).

`

exchangers Blue Rhino and Amerigas.[10] There are also smaller regional gas exchangers in the market.[11]

***. ***.

Respondents stated that the two largest gas exchangers (Blue Rhino and Amerigas) strongly prefer domestic over imported steel propane cylinders because the imported tanks were heavier (increasing freight costs), that imports had a valve which required more time to fill, and that the pallets used by importers required different storage plans in warehouses and trucks.[12]

CHANNELS OF DISTRIBUTION

U.S. producers sold mainly to gas exchangers, as shown in table II-2.[13] Sales using price data and purchase cost data are reported in table II-3. Importers of steel propane cylinders from China reported mainly selling to distributors during 2016-18.[14] Importers of steel propane cylinders from Thailand were less focused on a single channel, but the largest share was sold to retailers and RV manufacturers in 2018. Most imports from nonsubject sources were sold to retailers that sell empty cylinders.

Table II-2
Steel propane cylinders: U.S. producers' and importers' U.S. commercial shipments, by sources and channels of distribution, share of reported shipments (percent), by year, 2016-18

* * * * * * *

Table II-3
Steel propane cylinders: U.S. producers' and importers' share of price and purchase cost data by channel of distribution by quarter (percent of total volume from the pricing and purchase cost data)

* * * * * * *

GEOGRAPHIC DISTRIBUTION

U.S. producers and importers of steel propane cylinders from China and Thailand reported selling steel propane cylinders to all regions in the United States (table II-4). For U.S. producers, *** percent of sales were made within 100 miles, most sales (*** percent) were made between 101 and 1,000 miles, *** percent were made over 1,000 miles of their

---

[10] Conference transcript, p. 134 (Newman).

[11] Hearing transcript, p. 61 (Page).

[12] Hearing transcript, pp. 137-138 (Cancelosi).

[13] ***.

[14] Importer Worldwide reports selling to distributors and reported it did not have its own distribution facilities. Conference transcript, p. 172 (Cancelosi). ***. Importer YSN, in contrast, reports fulfilling its orders from a warehouse and making just-in-time deliveries to RV producers. Conference transcript, p. 129 (Newman).

`

production facilities. Importers sold 1.8 percent within 100 miles, 85.0 percent between 101 and 1,000 miles, and 13.2 percent over 1,000 miles of their U.S. point of shipment.

Table II-4
Steel propane cylinders: Geographic market areas in the United States served by U.S. producers and importers

Region	U.S. producers	Importers China	Importers Thailand
Northeast	***	2	4
Midwest	***	3	3
Southeast	***	2	4
Central Southwest	***	1	3
Mountain	***	1	3
Pacific Coast	***	2	3
Other[1]	***	1	2
All regions (except Other)	***	1	3
Reporting firms	2	3	4

[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

Table II-5 provides a summary of the supply factors regarding steel propane cylinders from U.S. producers and from subject countries. Producers in China and Thailand had lower capacity and higher capacity utilization than U.S. producers during 2016-18. The majority of Chinese and Thai producers' shipments were to non-U.S. markets.

Table II-5
Steel propane cylinders: Supply factors that affect the ability to increase shipments to the U.S. market

* * * * * * *

Domestic production

Based on available information, U.S. producers of steel propane cylinders have the ability to respond to changes in demand with moderate-to-high changes in the quantity of shipments of U.S.-produced steel propane cylinders to the U.S. market. The main contributing factor to this degree of responsiveness of supply is a moderate-to-low capacity utilization rate. U.S. producers could increase the number of steel propane cylinders they supply to the U.S. market by increasing the number of shifts operating in their facilities, and, to a lesser extent,

`

increasing overtime.[15] Factors mitigating responsiveness of supply include a limited ability to shift shipments from alternate markets, limited inventories, and no reported ability to shift production to or from alternate products.

U.S. producers' capacity utilization increased over the period for which data were collected, due to increased production while capacity was unchanged. U.S. producers' inventories declined during 2016-18. Export markets included Canada ***.

Petitioners report that they can increase overtime quickly and increase the number of production shifts within four months.[16] Respondents claim that the U.S. producers do not have the ability to greatly increase or decrease shipments to the U.S. market in the "near term"[17] and argue that the low unemployment rates in the production locations of the U.S. producers would make it more difficult to increase the number of shifts than the U.S. producers contend.[18] [19]

Subject imports from China

Based on available information, producers of steel propane cylinders from China have the ability to respond to changes in demand with moderate-to-high changes in the quantity of shipments of steel propane cylinders to the U.S. market. The main contributing factors to this degree of responsiveness of supply are a high ability to shift shipments from alternate markets, and the ability to shift production to or from alternate products. Factors mitigating responsiveness of supply include relatively high capacity utilization rates and limited inventories.

The increase in capacity utilization reflected both by increased production and reduced capacity between 2016 and 2018. Major non-U.S. export markets include ***. Responding Chinese producers reportedly can produce, on the same equipment used to produce steel propane cylinders, cylinders to contain material other than propane as well as larger cylinders. Factors affecting Chinese producers' ability to shift production to other products include the use of a specialized production line, and the additional time and cost of switching production between certain products.

Subject imports from Thailand

Based on available information, Thai producers of steel propane cylinders have the ability to respond to changes in demand with moderate-to-large changes in the quantity of

---

[15] Manchester reported that it is able to increase production by having workers work overtime, and if demand was high it would take about 3 months to add another shift. Hearing transcript, p. 88 (Page). Worthington reported that given its low profits, it did not want to pay the cost of overtime to increase its inventories. Hearing transcript, pp. 115-116 (Bowes).

[16] Hearing transcript, pp. 88, 115-116 (Page, Bowes).

[17] Hearing transcript, p. 126 (Dougan).

[18] Respondents' posthearing brief, Exhibit 1, p. 33.

[19] The Commission typically estimates elasticities as being the ability to change production within one year.

`

shipments of steel propane cylinders to the U.S. market. The main contributing factors to this degree of responsiveness of supply are the increasing availability of capacity, the high ability to shift production to or from alternate markets, and the ability to shift production to or from alternative products. Low inventories mitigating responsiveness of supply.

Thai producers of steel propane cylinders' capacity utilization rate decreased between 2016 and 2018 as production increased by less than capacity increased. Major non-U.S. export markets include Asian and African countries. Other products that responding Thai producers of steel propane cylinders reportedly can produce on the same equipment as steel propane cylinders are ***. Thai producers of steel propane cylinders reported that the required time to make such a shift and the demand for the other products had affected their ability to shift production from steel propane cylinders to other products.

Imports from nonsubject sources

Because the HTS statistical reporting numbers which include steel propane cylinders are broad categories, it is difficult to determine the volume of U.S. nonsubject imports in 2018 solely based on import statistics. Imports entering the United States under these statistical reporting numbers were greatest from Mexico, Korea, Canada, and Italy. Responding importers, however, only reported nonsubject imports from Portugal during January 2016 to December 2018. These reported nonsubject imports made up *** percent of apparent U.S. consumption in 2018. The Department of Transportation reports that Mexico, Korea, and Portugal have producers certified to manufacture steel propane cylinders to the 4BA and 4BW specifications (the standards for steel propane cylinders) (see Part I).

Supply constraints

Both U.S. producers and six of seven responding importers reported no supply constraints. Most purchasers (10 of 17) reported no supply constraints. Five of the purchasers that reported supply constraints reported that a U.S. producer either would not sell to them, only offered product which had extended lead times, would have had difficulty meeting the purchaser's needs, or that U.S. producer had not tried to sell to them.[20]

Respondents allege that U.S. producers, despite their proximity to end users, can have long lead times that are the result of U.S. producers' supply constraints.[21] Respondents also allege that U.S. producers' supply constraints were not wholly attributed to temporary situations, that customers were unable to get adequate supply in the middle of the year,[22] long lead times were not limited to spot customers,[23] having longer lead times than those

[20] Of the two remaining purchasers reporting supply constraints, one reported extended lead times, but did not report if this was for U.S. or imported product, and one reported that *** steel propane cylinders had stopped selling steel propane cylinders to it.

[21] Conference transcript, p. 122 (Cancelosi).

[22] Respondents' posthearing brief exhibit 1, pp. 29-30.

[23] Respondents' posthearing brief exhibit 1, p. 31.

`

importers,[24] and that low levels of unemployment limit the ability of U.S. producers to add shifts.[25]

In contrast, U.S. producers report that they could increase capacity substantially; however, low prices make doing so unprofitable.[26] Manchester reported that it could increase production by using or increasing overtime or if demand warranted hiring a new shift.[27] Petitioners report that they must run the whole plant to be efficient, and in order to run at near capacity, each shift needs to employ a set number of people.[28] Petitioners report that long lead times are not the result of inadequate supply; rather, they are caused by sudden increases in demand which cause additional purchasers to purchase from U.S. producers because their lead times are shorter than those of imports.[29]

New suppliers

Most purchasers indicated that no new suppliers had entered the U.S. market since January 1, 2016. However, one purchaser cited two new factories in Mexico, and one cited a factory in Vietnam had "just got authorization to produce" for the U.S. market.

U.S. demand

Based on available information, the overall demand for steel propane cylinders is likely to experience moderate changes in response to changes in price. The main contributing factors are the limited range of substitute products, the varied cost share of steel propane cylinders in end-use products, and the purchasers' ability to use steel propane cylinders for many years.

End uses and cost share

U.S. demand for steel propane cylinders depends on the demand for their end uses. Reported end uses include the provision of fuel for heating, cooking, propane gas grills, propane storage, and recreational vehicles.[30] Unless damaged, cylinders are expected to last 20 years[31] but they must be tested to be re-certified periodically. After 10 years, steel propane cylinders must be re-certified and, after the initial 10 years, they must be re-certified every 5 years.[32]

---

[24] Respondents' posthearing brief exhibit 1, p. 32.
[25] Respondents' posthearing brief exhibit 1, pp. 32-33.
[26] Hearing transcript, p. 115 (Bowes).
[27] Hearing transcript, p. 88 (Page).
[28] Conference transcript, pp. 68-69 (Graumann, Bowes).
[29] Hearing transcript, pp. 31-32 (Bowes).
[30] Petitioners' posthearing brief, p. 5.
[31] Hearing transcript, pp. 84-85 (Komlosi).
[32] Hearing transcript, p. 84 (Komlosi).

`

Steel propane cylinders account for a small-to-moderate share of the cost of the end-use products in which they are used. Reported cost shares for some end uses were as follows: *** percent; recreational vehicles, 0.1 to 1 percent; cooking and grills, 3 to 10 percent;[33] outdoor heating, 5 percent; adhesive cylinder 10 percent; and industrial uses, 7 to 10 percent.

Respondents report that demand for steel propane cylinders can be price sensitive. They cited the tendency of customers to purchase new steel propane cylinders, rather than reuse a dirty one, when steel propane cylinder "prices are below the mid-20s."[34] Grills were reported to be replaced relatively frequently, and purchasers sometimes purchased a new steel propane cylinder to go with the new grill, keeping the old steel propane cylinder that had been used with the previous grill as a backup.[35]

Business cycles

Most firms - ***, 5 of 8 responding importers, and 12 of 16 responding purchasers - indicated that the market was subject to business cycles, mainly seasonal cycles with increased demand, particularly for 20-pound steel propane cylinders, in the spring and summer.[36] There were annual and other cycles in demand for recreational vehicles market which determined these purchasers need for steel propane cylinders.

In addition, *** two importers, and no purchasers reported that the market faced distinct conditions of competition. Firms reported distinctive conditions of competition to be demand increases during a severe weather. Thus, in addition to predictable demand for steel propane cylinders, short-term unpredictable demand increases after major hurricanes[37] and particularly cold winters that increase agricultural and other heating use.[38]

Demand trends

*** reported that U.S. demand for steel propane cylinders had *** since January 1, 2016 (table II-6). Most importers reported demand had increased or was unchanged, while most purchasers reported that demand had increased since January 1, 2016.

[33] Grills used to be equipped with steel propane cylinders but are now typically sold without steel propane cylinders. Hearing transcript, pp. 75-76 (Page).

[34] Conference transcript, p. 179 (Newman).

[35] Conference transcript, p. 180 (Newman).

[36] *** also reported that larger cylinders were more used in the fall and winter.

[37] Hearing transcript, p. 32 (Bowes).

[38] Conference transcript, p. 42 (Grauman).

`

Table II-6
Steel propane cylinders: 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	***	***	***	***
Importers	3	4	---	1
Purchasers	8	3	1	2
Demand outside the United States				
U.S. producers	---	---	---	---
Importers	1	1	---	1
Purchasers	1	---	---	---
Demand for end use products				
Purchasers	3	---	---	3

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

Substitute products

Most responding firms - ***, 6 of 7 responding importers, and 13 of 17 responding purchasers - reported that there were no substitutes for steel propane cylinders. The *** firms reported substitutes for steel propane cylinders include composite cylinders, ASME tanks, and 1-pound disposable tanks.[39] The end use for all these substitutes was to store propane.[40] However, in spite of reporting that these alternative products were substitutes, they also reported that these potential replacements are more expensive, not portable, and/or have limited capacity. As a result, none of the firms reported the substitutes influenced the price of steel propane cylinders.

SUBSTITUTABILITY ISSUES

The degree of substitution between domestic and imported steel propane cylinders 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 is a moderate-to-high degree of substitutability between domestically produced steel propane cylinders and steel propane cylinders imported from subject sources. The most

[39] Unlike steel propane cylinders, ASME tanks are permanently installed in a piece of equipment or a home. The use of composite cylinders is similar to that of steel propane cylinders, however, composite cylinders are more expensive, lighter, have a shorter test cycle, and have a different appearance than steel propane cylinders. Purchasers also mentioned fiberglass tanks as a substitute but the parties were not able to explain what these were. Conference transcript, pp. 79-81, and 186 (Graumann, Komlosi, Bowes, Newman).

[40] The importer listing three substitutes reported disadvantages for each of these substitutes. Fiberglass and 1-pound disposable tanks are made by only one producer (Worthington and its prices are not competitive); and that ASME tanks are not portable.

`

important factor that may limit substitutability is the relatively long lead time for U.S. product, alleged by the respondents. In addition, U.S. and imported steel propane cylinders differ in weight (U.S. produced cylinders tend to be lighter),[41] and speed at which they can be filled.[42] The parties disagree about the availability of U.S. product. U.S. producers reported that they are able to sell all product that purchasers are willing to purchase at a reasonable price. Some importers and purchasers, however, reported that U.S.-produced steel propane cylinders are not readily available. Some purchasers also report increasing lead times for U.S. product, possibly reflecting that U.S. producers' alleged difficulty increasing output in response to short-term increases in demand.

Lead times

Steel propane cylinders are sold primarily out of inventory by the U.S. producers, and primarily on a produced-to-order basis by the importers. U.S. producers reported that *** percent of their commercial shipments were sold from inventory, with lead times averaging *** days. The remaining *** percent of their commercial shipments were produced-to-order, with lead times averaging *** days. Importers reported that 49.9 percent of their commercial shipments were produced-to-order, with lead times averaging 76 days; 41.0 percent of their commercial shipments came from U.S. inventories, with lead times averaging 8 days; and 9.1 percent came from overseas inventories, with a lead time averaging *** days. ***.

Purchasers were asked to report both the quoted and actual lead times for both U.S. producers and importers. Thirteen purchasers responded, quoting lead times for U.S. product ranging from 7 to 180 days; 10 purchasers reported actual lead times for U.S. product, these ranged from 7 to 75 days. Two reported actual lead times that differed from those quoted by U.S. producers. One of these was quoted 7 days and the actual lead time was 63 days, and one was quoted a lead time of 35 days with the actual lead time of 34 days. Ten purchasers reported that they had received quotes for lead times from importers ranging from 7 to 90 days. Nine purchasers reported actual lead times from importers, these also ranging from 7 to 90 days. Four purchasers reported actual and quoted lead times given for imports differed. Three purchasers reported actual lead times for imports were shorter than the quoted 90 days, and one purchaser (***) reported the quoted lead time for imports was 30 days, while the actual lead time was 45 days.

Purchasers were also asked if there had been any changes in lead times of either U.S. or import suppliers between 2016 and 2018. Nine of 16 responding purchasers reported no changes in lead time, but seven reported that U.S. producers' lead times had increased.[43] No firms reported increased lead times from imports. One purchaser (***) reported that *** required controlled-order purchases and *** did not have enough tanks to sell. Another

[41] Hearing transcript, pp. 160-161 (Cancelosi).

[42] Hearing transcript, pp. 137-138 (Cancelosi).

[43] Purchasers were asked how lead times had changed since 2016. Three reported that domestic lead times had increased; responses ranged from 30 to 60 days. In addition, the purchaser that reported an actual lead time of 34 days, reported that domestic lead times had increased by 50 percent.

`

purchaser *** reported that increased domestic lead times resulted in empty shelves, and a shift to purchasing imports.[44] ***.[45]

One purchaser (***) reported that it purchased most of its steel propane cylinders from ***.[46] ***.

Respondents allege that U.S. producers, despite their proximity to end users, can have lead times as long as seven weeks, whereas imports from inventories in China are available in around 25 days.[47] In addition, one importer (YSN) maintains inventories in Elkhart, Indiana close to RV manufacturers.[48] Respondents also claim that major customers (not spot customers) could not get adequate supply during periods that were not hurricane season.[49]

Petitioners report that during periods of peak demand caused by hurricanes or other emergencies, firms that normally purchase imports request shipments from the U.S. producers. Their lead times will be longer than normal under these conditions but import lead times will also be longer than normal at these times.[50]

Knowledge of country sources

Fifteen purchasers indicated they had marketing/pricing knowledge of domestic product, eight had knowledge of product imported from China, nine had knowledge of product imported from Thailand, and two had knowledge of product imported from nonsubject countries.

As shown in table II-7, most purchasers and their customers sometimes or never make purchasing decisions based on the producer or country of origin. Of the seven purchasers that reported that they always make decisions based the manufacturer, firms cited quality, tensile strength, lead time; durability, ability to deliver on time; and "best value."[51]

Table II-7
Steel propane cylinders: Purchasing decisions based on producer and country of origin

Purchaser/customer decision	Always	Usually	Sometimes	Never
Purchaser makes decision based on producer	6	---	4	7
Purchaser's customers make decision based on producer	2	---	3	6
Purchaser makes decision based on country	2	1	2	11
Purchaser's customers make decision based on country	---	---	3	7

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

[44] In addition, three purchasers reported the impact of the increased lead time on their firm. One of these reported increased lead times had little impact, another reported that supply was limited and demand was higher, and the third reported lead times had increased 50 percent since 2017.

[45] ***.

[46] ***.

[47] Conference transcript, p. 122 (Cancelosi).

[48] Conference transcript, p. 129 (Newman).

[49] Respondents' posthearing briefs, exhibit 1, pp. 28-31.

[50] Hearing transcript, pp. 43-44 (Rosenthal).

[51] ***. ***.

`

Factors affecting purchasing decisions

The most often cited top three factors firms consider in their purchasing decisions for steel propane cylinders were price (16 firms), quality/certification (13 firms), and availability (10 firms), as shown in table II-8. However, quality/certification was the most frequently cited first-most important factor (cited by 10 firms), followed by price (3 firms). Availability was the most frequently reported second-most important factor (7 firms), followed by price (6 firms); and price was the most frequently reported third-most important factor (7 firms).

Table II-8
Steel propane cylinders: Ranking of factors used in purchasing decisions as reported by U.S. purchasers, by factor

Factor	First	Second	Third	Total
Price	3	6	7	16
Quality/certification[1]	10	1	2	13
Availability	2	7	1	10
Delivery/logistics	2	1	1	4
Supplier related factors[2]	0	0	5	5
Other[3]	0	2	1	3

[1] Most firms reporting certification also reported quality as the same factor.
[2] Supplier related factors include financial health of the supplier, partnership, service/inventory management, capacity, and ease of doing business.
[3] Other factors include features and value as second factors, and terms as third factor.

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

Purchasers were asked to report the factors that they considered in determining quality. Factors listed included: DOT approval (industry standards); appearance (color, paint quality, and no dents, blemishes, or rust); durability (reliability, able to "take some knocks" without denting or bending collars, wall thickness, weight, no leakage, corrosion resistance, and type of steel); valve (valve operation, overfilling prevention devise, and valve fill rate);[52] no debris in cylinder; tank and valve made at the same factory to decrease liability; country of origin; and brand recognition.

The majority of purchasers (15 of 17) reported that they either usually (7) or sometimes (8) purchased the lowest-priced product.

Purchasers were asked if their sourcing decisions were influenced by the availability of products outside the scope of these investigations from the same producer or importer. Most responding purchasers (15 of 17) reported they were not. Two purchasers reported they were: ***.[53]

[52] Overfilling prevention devices have been required on all propane cylinders between 4 pounds and 40 pounds since January 1, 2003.

[53] One purchaser (***) reported a U.S. producer had offered it product outside the scope of the investigation to encourage the purchaser to purchase from the supplier. ***.

`

Importance of specified purchase factors

Purchasers were asked to rate the importance of 25 factors in their purchasing decisions (table II-9). The factors rated as very important by more than half of responding purchasers were availability, product consistency, quality meets industry standards, and reliability of supply (17 each), price (16), customer services and delivery time (15 each), delivery terms (12), logistics, payment terms, and U.S. transportation costs (10 each), tanks manufactured to individual firm's specifications and technical support/service (9 each). Factors that more purchasers reported were not important than reported were very important included indicators for the level of propane (14), minimum quantity requirements (8), being able to purchase less than full truckloads, product range, and innovative features (6 each).

Table II-9
Steel propane cylinders: Importance of purchase factors, as reported by U.S. purchasers, by factor

Factor	Very important	Somewhat important	Not important
Availability	17	---	---
Able to purchase less than full truckloads	5	6	6
Customer service	15	2	---
Delivery terms	12	5	---
Delivery time	15	1	1
Discounts offered	8	5	4
Innovative features	3	8	6
Just in time delivery	8	4	5
Logistics	10	5	2
Minimum quantity requirements	3	6	8
Packaging (freight container)	4	9	4
Packaging (pallet packing configuration)	6	6	5
Payment terms	10	3	4
Price	16	1	---
Product consistency	17	---	---
Product range	5	6	6
Quality meets industry standards	17	---	---
Quality exceeds industry standards	8	7	2
Reliability of supply	17	---	---
Tanks have indicators for level of propane	2	1	14
Tanks manufactured to your specifications	9	4	4
Technical support/service	9	8	---
Thickness of cylinder walls	8	8	1
U.S. transportation costs	10	5	2
UV resistant paint	8	7	2

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

Take or pay requirements

***, which purchased both imported and domestic product from ***, reported different sales terms between U.S. and imported product. It stated that the U.S. producer requires that *** purchase using ***; it stated that importers do not require that type of

`

purchase commitment. *** stated that *** and thus its sales of steel propane cylinders can vary, and that an agreement to purchase all the product it may need from a domestic product into the future is "risky." In addition, *** stated that prices of imported steel propane cylinders fall "substantially" when the price of steel falls but U.S. prices do not. This allows *** to benefit from reductions in steel prices by purchasing from imports, but not from U.S. producers because of the "take or pay" requirement. Finally, *** reported that *** is not willing to take costs out of its supply chain. *** reported that *** marketing expenses, customer entertainment, and advertising are included in its cost structure it uses for its selling prices but these costs are unnecessary *** and its customers; import prices do not include these costs.

Supplier certification

Nine of 17 responding purchasers do not require that their suppliers become certified or qualified to sell steel propane cylinders to their firm (other than DOT certification). However, eight purchasers did, they reported that the time to qualify a new supplier ranged from 10 to 180 days. Some purchasers reported that steel propane cylinders must meet the National Fire Protection Association standards for recreational vehicles, and/or the Recreational Vehicle Industry Association standards. Other requirements for approving a vendor included financial soundness of supplier, product quality, reliability of supplier, customer acceptance, insurance, agreement on terms, and factory audits. ***.

None of the purchasers reported that any domestic or foreign supplier had failed in its attempt to qualify steel propane cylinders or had lost its approved status since 2016.

Changes in purchasing patterns

Purchasers were asked about changes in their purchasing patterns from different sources since January 1, 2016 (table II-10). Six of the 13 firms purchasing U.S. product reported their purchases had decreased, one purchaser (***) reported decreased purchases from China, and one purchaser (***) reported decreased purchases from Thailand. Firms decreased purchases from the United States because of increased costs; shipping delays (with lead times from Worthington increasing from 7 to 63 days); imports being a better value with better color, packaging, service and lead time; decreased demand by consumers; and adequate inventories. Three purchasers reported increasing purchases from the United States; one of these (***) reported its U.S. purchases increased because of tariff issues and the increase in metal costs, one (***) reported increased purchases of U.S. product because of price and preference for U.S. steel propane cylinders, and one (***) reported increased demand but added that the change was not material. Purchases of imports reportedly increased because of increased overall sales by the purchaser; lower costs; and imports were superior in color, packaging, customer service, and lead time.

`

Table II-10
Steel propane cylinders: Changes in purchase patterns from U.S., subject, and nonsubject countries

Source of purchases	Did not purchase	Decreased	Increased	Constant	Fluctuated
United States	3	6	3	2	2
China	6	1	4	2	1
Thailand	8	1	6	---	---
Other	11	---	1	---	---

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

Importance of purchasing domestic product

Most (16 of 17) responding purchasers reported that none of their purchases require purchasing U.S.-produced product. No purchaser reported that domestic product was required by law, or their customers. One purchaser (***) reported other preferences for domestic product, reporting that *** percent of its purchases were domestic because the source of the product it purchased was determined by its supplier.

Comparisons of domestic products, subject imports, and nonsubject imports

Purchasers were asked a number of questions comparing steel propane cylinders produced in the United States, subject countries, and nonsubject countries. First, purchasers were asked for a country-by-country comparison on the same 25 factors (table II-11) for which they were asked to rate the importance (table II-9).

Most responding purchasers reported that product from the U.S. and China were comparable for 19 factors. An equal number of purchasers (three) reported that the U.S. and China were comparable and the U.S. product was inferior on availability, delivery terms, and reliability of supply. A plurality of purchasers reported U.S. product was superior on just in time delivery, and a plurality of purchasers reported U.S. product was inferior on price.

Of the factors that all 17 responding purchasers reported as very important, all seven purchasers comparing U.S. and Chinese product reported that steel propane cylinders were comparable in quality meeting industry standards. Three firms each reported U.S. product was comparable or inferior to Chinese product for availability and reliability of supply. Five reported that the U.S. and Chinese product were comparable for product consistency, with one each reporting that the U.S. product was superior and inferior. With respect to price, a factor rated as very important by 16 of 17 responding purchasers, a plurality (3 of 7) the responding purchasers reported that the U.S. product was inferior, but 2 reported U.S. product was superior.

`

Table II-11
Steel propane cylinders: Purchasers' comparisons between U.S.-produced and imported product

Factor	U.S. vs. China			U.S. vs. Thailand			China vs. Thailand		
	S	C	I	S	C	I	S	C	I
Availability	1	3	3	---	5	2	1	2	---
Able to purchase less than full truckloads	1	5	1	---	6	---	---	3	---
Customer service	1	4	2	---	5	1	---	4	---
Delivery terms	1	3	3	1	4	1	---	4	---
Delivery time	2	3	1	1	3	1	---	4	---
Discounts offered	1	5	---	---	5	---	---	4	---
Innovative features	---	5	1	---	5	1	---	4	---
Just in time delivery	3	2	2	1	4	1	---	3	---
Logistics	2	4	1	1	6	---	---	3	---
Minimum quantity requirements	1	4	2	---	6	---	---	4	---
Packaging (freight container)	1	5	1	---	6	---	---	3	---
Packaging (pallet packing configuration)	2	4	---	1	5	---	---	3	---
Payment terms	2	5	---	1	4	---	---	4	---
Price[1]	2	2	3	---	2	5	1	3	---
Product consistency	1	5	1	1	5	---	---	4	---
Product range	---	6	1	1	5	---	---	2	1
Quality meets industry standards	---	7	---	---	7	---	---	4	---
Quality exceeds industry standards	---	4	3	1	6	---	---	3	---
Reliability of supply	1	3	3	---	4	2	1	2	---
Tanks have indicators for level of propane	---	6	---	---	5	1	---	4	---
Tanks manufactured to your specifications	---	4	3	---	6	---	---	4	---
Technical support/service	1	5	1	---	5	1	---	4	---
Thickness of cylinder walls	---	4	3	---	5	---	---	3	---
U.S. transportation costs	1	6	---	---	5	---	---	4	---
UV resistant paint	---	7	---	---	5	---	---	4	---

Table continued on next page.

`

Table II-11-Continued
Steel propane cylinders: Purchasers' comparisons between U.S.-produced and imported product

Factor	U.S. vs. nonsubject			China vs. nonsubject			Thailand vs. nonsubject		
	S	C	I	S	C	I	S	C	I
Availability	---	1	---	---	1	---	1	1	---
Able to purchase less than full truckloads	---	1	---	---	1	---	---	1	---
Customer service	---	---	1	---	1	---	---	2	---
Delivery terms	---	1	---	---	1	---	---	2	---
Delivery time	---	1	---	---	1	---	---	2	---
Discounts offered	---	---	1	---	1	---	---	2	---
Innovative features	---	1	---	---	1	---	---	2	---
Just in time delivery	---	1	---	---	1	---	---	1	---
Logistics	---	1	---	---	1	---	---	1	---
Minimum quantity requirements	---	1	---	---	1	---	---	2	---
Packaging (freight container)	---	1	---	---	1	---	---	1	---
Packaging (pallet packing configuration)	---	1	---	---	1	---	---	1	---
Payment terms	---	1	---	---	1	---	---	2	---
Price[1]	---	---	1	---	1	---	---	2	---
Product consistency	---	1	---	---	1	---	---	2	---
Product range	---	1	---	---	1	---	---	1	---
Quality meets industry standards	---	1	---	---	1	---	---	2	---
Quality exceeds industry standards	---	1	---	---	1	---	---	1	---
Reliability of supply	---	1	---	---	1	---	---	1	---
Tanks have indicators for level of propane	---	1	---	---	1	---	---	2	---
Tanks manufactured to your specifications	---	---	---	---	---	---	---	---	---
Technical support/service	---	---	1	---	1	---	---	2	---
Thickness of cylinder walls	---	1	---	---	1	---	---	1	---
U.S. transportation costs	---	1	---	---	1	---	---	2	---
UV resistant paint	---	1	---	---	1	---	---	2	---

[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.

Most responding purchasers reported that the U.S. and Thai products were comparable on 24 of the 25 factors. Most purchasers, however, reported that the U.S. product was inferior on price. Of the firms comparing U.S. and Thai product on the same factors that were rated very important by all or all but 1 of the 17 responding purchasers,[54] 2 of 7 rated the U.S. product as inferior in availability, 1 of 6 rated the U.S. product as superior on product consistency, 2 of 6 rated the U.S. product as inferior in reliability of supply, and 5 of 7 rated the U.S. product as inferior on price. All other responding purchasers rated U.S. and Thai products as comparable on these factors.

[54] All 7 responding purchasers reported U.S. produced and imports from Thailand were comparable in quality meets industry standards.

`

Most responding purchases reported that Chinese and Thai product were comparable for all 25 factors.

Comparison of U.S.-produced and imported steel propane cylinders

In order to determine whether U.S.-produced steel propane cylinders can generally be used in the same applications as imports from China and Thailand, 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-12, most responding firms reported that product was always interchangeable for all country pairs.[55]

Table II-12
Steel propane cylinders: Interchangeability between steel propane cylinders produced in the United States and in other countries, by country pair

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

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

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

As can be seen from table II-13, the majority (9 of 13) of the responding purchasers reported that domestically produced product always met minimum quality specifications. Six of nine responding purchasers reported that the steel propane cylinders imported from China always met minimum quality specifications. All seven responding purchasers reported that Thai product always met minimum quality specifications. No purchasers responded for other sources.

Table II-13
Steel propane cylinders: Ability to meet minimum quality specifications, by source[1]

Source	Always	Usually	Sometimes	Rarely or never
United States	9	2	1	1
China	6	2	1	---

[55] *** reported that U.S. and Chinese product was *** interchangeable because "***." Nonsubject imports were *** interchangeable with U.S. and Chinese products. ***.

`

Source	Always	Usually	Sometimes	Rarely or never
Thailand	7	---	---	---
All other sources	---	---	---	---

[1] Purchasers were asked how often domestically produced or imported steel propane cylinders 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 steel propane cylinders from the United States, subject, or nonsubject countries. As seen in table II-14, *** responding producers reported there were *** differences other than price between steel propane cylinders from all country pairs. Most importers reported that there were never differences other than price between U.S. steel propane cylinders and steel propane cylinders from China, Thailand, and other countries. For product from China compared to that from Thailand, half the responding importers reported there were always or frequently differences other than price and half reporting that were never any differences other than price. For nonsubject product compared to product from China and Thailand, two importers responded: one reported there were always differences other than price, and one reported there were never differences other than price. Purchaser responses were less uniform. Most responding purchasers (5 of 9) reported that there were always differences in factors other than price between U.S. and Chinese steel propane cylinders, while most (4 of 6) reported there were sometimes or never differences in factors other than price between U.S. and Thai steel propane cylinders.[56] Six purchaser responded regarding differences other than price for steel propane cylinders from China and Thailand: two each responded there were always or never differences other than price, and one each reported there were frequently or sometimes differences other than price. Two purchasers compared steel propane cylinders from nonsubject countries with those from China, Thailand, or the United States, with one reporting that there were sometimes and one reporting that there were never differences other than price for each pair.[57]

[56] Examples of such differences included quality, availability, and ability to fill just-in-time orders.
[57] ***.

`

Table II-14
Steel propane cylinders: Significance of differences other than price between steel propane cylinders produced in the United States and in other countries, by country pair

Country pair	Number of U.S. producers reporting				Number of U.S. importers reporting				Number of purchasers reporting			
	A	F	S	N	A	F	S	N	A	F	S	N
U.S. vs. subject countries: U.S. vs. China	***	***	***	***	1	1	0	4	4	1	2	2
U.S. vs. Thailand	***	***	***	***	1	1	0	4	1	1	1	3
Subject countries comparisons: China vs. Thailand	***	***	***	***	1	1	0	2	2	1	1	2
Nonsubject countries comparisons: U.S. vs. nonsubject	***	***	***	***	1	0	0	2	0	0	1	1
China vs. nonsubject	***	***	***	***	1	0	0	1	0	0	1	1
Thailand vs. nonsubject	***	***	***	***	1	0	0	1	0	0	1	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. At the hearing, respondents stated that the U.S. supply elasticity was less than estimated below,[58] the rationale for the supply elasticity is explained above in the discussion of U.S. supply. If the respondents' rationale is accepted, then the U.S. supply elasticity would be lower than estimated below. The briefs provided no discussions of the elasticities.

U.S. supply elasticity

The domestic supply elasticity[59] for steel propane cylinders measures the sensitivity of the quantity supplied by U.S. producers to changes in the U.S. market price of steel propane cylinders. 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 or add labor to increase production, inventory levels, and the availability of alternate markets for U.S.-produced steel propane cylinders. Analysis of these factors above indicates that the U.S. industry has the ability to greatly increase or decrease shipments to the U.S. market an estimate in the range of 4 to 7 is suggested.

U.S. demand elasticity

The U.S. demand elasticity for steel propane cylinders measures the sensitivity of the overall quantity demanded to a change in the U.S. market price of steel propane cylinders. This estimate depends on factors discussed above such as the existence, availability, and

[58] Hearing transcript, p. 126 (Dougan).

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

`

commercial viability of substitute products, as well as the component share of the steel propane cylinders in the production of any downstream products. Based on the available information, the aggregate demand for steel propane cylinders is likely to be very to moderately inelastic; a range of -0.3 to -0.8 is suggested.

Substitution elasticity

The elasticity of substitution depends upon the extent of product differentiation between the domestic and imported products.[60] 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, lead times, etc.). Based on available information, the elasticity of substitution between U.S.-produced steel propane cylinders and imported steel propane cylinders is likely to be in the range of 3 to 7.

[60] 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 two firms that accounted for the vast majority of U.S. production of steel propane cylinders during 2018.

U.S. PRODUCERS

The Commission issued a U.S. producer questionnaire to three firms based on information contained in the petition. Two firms provided usable data on their productive operations. Staff believes that these responses represent the vast majority of U.S. production of steel propane cylinders.[1]

Table III-1 lists U.S. producers of steel propane cylinders, their production locations, positions on the petition, and shares of total production.

Table III-1
Steel propane cylinders: U.S. producers, their positions on the petition, production locations, and shares of reported production, 2018

Firm	Position on petition	Production location(s)	Share of production (percent)
Manchester	***	Franklin, TN Crossville, TN Elkhart, IN Carrollton, TX Walnut, CA	***
Worthington	***	Westerville, OH Jefferson, OH	***
Total			***

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

Table III-2 presents information on U.S. producers' ownership, related and/or affiliated firms of steel propane cylinders. *** is related to a foreign producer of steel propane cylinders in a nonsubject country.

[1] The third firm, *** did not provide a response.

Table III-2
Steel propane cylinders: U.S. producers' ownership, related and/or affiliated firms

* * * * * * *

Table III-3 presents U.S. producers' reported changes in operations since January 1, 2016. *** was the only producer that reported operational changes: ***.

Table III-3
Steel propane cylinders: U.S. producers' reported changes in operations, since January 1, 2016

* * * * * * *

U.S. PRODUCTION, CAPACITY, AND CAPACITY UTILIZATION

Table III-4 and figure III-1 present data regarding U.S. producers' production, capacity, and capacity utilization. From 2016 to 2018, U.S. producers' capacity remain unchanged. Within this same period, production increased by *** percent. From 2016 to 2018, *** production increased relatively more, by *** percent; while *** production increased by *** percent. Capacity utilization increased by *** percentage points from 2016 to 2018.

Table III-4
Steel propane cylinders: U.S. producers' production, capacity, and capacity utilization, 2016-18

* * * * * * *

Figure III-1
Steel propane cylinders: U.S. producers' production, capacity, and capacity utilization, 2016-18

* * * * * * *

Alternative products

Based on the two U.S. producers' questionnaire responses in the preliminary phase of these investigations, *** other products were produced using the same equipment that was used to produce steel propane cylinders.

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

Table III-5 presents U.S. producers' U.S. shipments, export shipments, and total shipments. During 2016-18, U.S. producers' U.S. shipments consistently accounted for the substantial majority of all shipments. From 2016 to 2018, U.S. shipments increased by both quantity and value, by *** percent and *** percent, respectively. The unit value for U.S.

producers' U.S. shipments remained at *** per pound between 2016 and 2017, but increased by *** to *** per pound between 2017 and 2018. The quantity and value of exports increased between 2016 and 2018, although the average unit value of such shipments declined.

Table III-5
Steel propane cylinders: U.S. producers' U.S. shipments, exports shipments, and total shipments, 2016-18

* * * * * * *

U.S. PRODUCERS' INVENTORIES

Table III-6 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**.** From 2016 to 2018, end-of-period inventories decreased by *** percent. The ratio of inventories to production, U.S. shipments, and total shipments decreased from 2016 to 2018.

Table III-6
Steel propane cylinders: U.S. producers' inventories, 2016-18

* * * * * * *

U.S. PRODUCERS' IMPORTS AND PURCHASES

U.S. producers' direct imports of steel propane cylinders are presented in table III-7. *** reported directly imported steel propane cylinders from subject country Thailand, while *** reported directly imported steel propane cylinders from nonsubject country ***.

Table III-7
Steel propane cylinders: U.S. producers' direct imports, 2016-18

*** * * * * * ***

U.S. EMPLOYMENT, WAGES, AND PRODUCTIVITY

Table III-8 shows U.S. producers' employment-related data. The number of production and related workers increased from 2016 to 2018; it rose by *** percent from 2016 to 2017 and by *** percent from 2017 to 2018. Hours worked and wages paid increased by *** percent and *** percent, respectively, over the entire period. Unit labor costs fluctuated between 2016 and 2018, as hourly wages fluctuated upwards. During the same period, productivity trended downwards.

Table III-8
Steel propane cylinders: Average number of production and related workers, hours worked, wages paid to such employees, hourly wages, productivity, and unit labor costs, 2016-18

* * * * * * *

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

U.S. IMPORTERS

The Commission issued importer questionnaires to 85 potential importers of subject steel propane cylinders, as well as to all U.S. producers of steel propane cylinders.[1] Usable questionnaire responses were received from eight companies, representing approximately *** percent of U.S. imports from China, *** percent of U.S. imports from Thailand, and *** percent of combined subject imports between January 1, 2016 and December 31, 2018 under HTS statistical reporting numbers 7311.00.0060 and 7311.00.0090.[2] With respect to nonsubject imports, only *** reported such imports and staff believes that nonsubject imports were not a significant factor in the market. Table IV-1 lists all responding U.S. importers of steel propane cylinders from China and Thailand and other sources, their locations, and their shares of U.S. imports in 2018.

Table IV-1
Steel propane cylinders: U.S. importers, their headquarters, and share of total imports by source, 2018

Firm	Headquarters	Share of imports by source (percent)				
		China	Thailand	Subject sources	Nonsubject sources	All import sources
Amazon	Seattle, WA	***	***	***	***	***
Costco	Issaquah, WA	***	***	***	***	***
Manchester	Franklin, TN	***	***	***	***	***
Tarantin	Freehold, NJ	***	***	***	***	***
Westech	Suquamish, WA	***	***	***	***	***
Worldwide Distribution	Jacksonville, FL	***	***	***	***	***
Worthington	Columbus, OH	***	***	***	***	***
YSN Imports	Gardena, CA	***	***	***	***	***
Total		***	***	***	***	***

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.

[1] The Commission issued questionnaires to those firms identified in the petition, along with firms that, based on a review of data provided by U.S. Customs and Border Protection ("Customs"), may have accounted for more than one percent of total imports under HTS subheading 7311.00.0060 and 7311.00.0090, during 2016 through 2018.

[2] The coverage estimates presented are based on usable questionnaire responses and *** data. *** statistics are based on statistical reporting numbers 7311.00.0060 (other) and 7311.00.0090 (other), both mixed HTS statistical reporting numbers with a majority of imports that fall outside the scope of these investigations. Based on a review of data provided by ***, staff received U.S. importer questionnaire responses that accounted for approximately *** pounds of the approximately *** pounds imported under HTS statistical numbers 7311.00.0060 and 7311.00.0090.

U.S. IMPORTS

Table IV-2 presents data for U.S. imports of steel propane cylinders from China, Thailand, and all other sources.

In aggregate, the quantity of steel propane cylinders imported from both subject countries increased by *** percent from 2016 to 2018. Within this same period, the imports from China decreased by *** percent, while steel propane cylinders imported from Thailand increased by *** percent. Part of this increase (*** percent) was due to ***. As a share of total imports, imports from the subject countries increased by *** percentage points from 2016 to 2017 but decreased by *** percentage points from 2017 to 2018. The quantity of imports from nonsubject countries were the same in 2016 and 2017 but increased by more than *** percent from 2017 to 2018, increasing from *** percent of total imports for steel propane cylinders in 2016 to *** percent in 2018.

The value of steel propane cylinder imports from subject countries increased by *** percent from 2016 to 2018. The average unit values ("AUVs") of imports from subject and nonsubject countries increased by *** percent and *** percent, respectively, during this time. The AUVs of imports from nonsubject countries were considerably higher than those of imports from China and Thailand throughout the period.

Table IV-2
Steel propane cylinders: U.S. imports by source, 2016-18

* * * * * * *

Figure IV-1
Steel propane cylinders: U.S. import volumes and prices, 2016-18

* * * * * * *

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 Act, 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

[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)).

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]

Table IV-3 is based on questionnaire responses and presents the quantity of U.S. imports in the twelve-month period preceding the filing of the petitions (May 2017 through April 2018) and the share of quantity of total U.S. imports attributed to each subject country and nonsubject sources. U.S. imports from China accounted for 54.2 percent and Thailand accounted for 45.8 percent of total imports of steel propane cylinders by quantity from May 2017 to April 2018.

Table IV-3
Steel propane cylinders: U.S. imports in the twelve months preceding the filing of the petition, May 2017 through April 2018

* * * * * * *

CUMULATION CONSIDERATIONS

In assessing whether imports should be cumulated, the Commission determines whether U.S. imports from the subject countries compete with each other and with the domestic like product and has generally considered four factors: (1) fungibility, (2) presence of sales or offers to sell in the same geographical markets, (3) common or similar channels of distribution, and (4) simultaneous presence in the market. Information regarding channels of distribution, market areas, and interchangeability appear in Part II. Additional information concerning fungibility, geographical markets, and simultaneous presence in the market is presented below.

Fungibility

Table IV-4 and figure IV-2 present data for U.S. producers' and U.S. importers' U.S. shipments by product type for 2018. These data are categorized by 20-pound cylinders, 30-pound cylinders, and all other sizes. For U.S. producers and importers of Thai product, the 20-pound cylinders accounted for the large majority of U.S. shipments; for importers of the Chinese product, shipment were relatively balanced between 20 – and 30-pound cylinders.

Table IV-4
Steel propane cylinders: U.S. producers' and U.S. importers' U.S. shipments, by type, 2018

* * * * * * *

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

Figure IV-2
Steel propane cylinders: U.S. producers' and U.S. importers' U.S. shipments, by item, 2018

* * * * * * *

Table IV-5 present U.S. shipments in from 2016 to 2018 by size of cylinders.

Table IV-5
Steel propane cylinders: U.S. producers' and U.S. importers' U.S. shipments by size, 2016-18

* * * * * * *

Geographical markets

As illustrated in table IV-6, U.S. Customs districts located in the North[5] accounted for the largest share of the imports of "other containers for compressed or liquefied gas, of iron or steel" from the subject countries (29.2 percent by share of quantity) during 2018, followed by districts located in the West[6] (accounting for 27.2 percent), then districts in the South[7] (accounting for 24.2 percent), and the districts in the East[8] (accounting for 19.3 percent) based on quantities of imports.

[5] The "North" includes the following Customs entry districts: Chicago, Illinois; Cleveland, Ohio; Detroit, Michigan; Duluth, Minnesota; Great Falls, Montana; Milwaukee, Wisconsin; Minneapolis, Minnesota; and Pembina, North Dakota.

[6] The "West" includes the following Customs entry districts: Columbia-Snake, Oregon; Honolulu, Hawaii; Los Angeles, California; Nogales, Arizona; San Diego, California; San Francisco, California; and Seattle, Washington.

[7] The "South" includes the following Customs entry districts: Dallas-Fort Worth, Texas; El Paso, Texas; Houston-Galveston, Texas; Laredo, Texas; Miami, Florida; Mobile, Alabama; New Orleans, Louisiana; and Tampa, Florida.

[8] The "East" includes the following Customs entry districts: Baltimore, Maryland; Boston, Massachusetts; Buffalo, New York; Charleston, South Carolina; Charlotte, North Carolina; New York, New York; Norfolk, Virginia; Ogdensburg, New York; Philadelphia, Pennsylvania; Portland, Maine; San Juan, Puerto Rico; Savannah, Georgia; St. Albans, Vermont; and Washington, District of Columbia.

Table IV-6
Other containers for compressed or liquefied gas, of iron or steel: U.S. imports, by border of entry, 2018

Item	Border of entry				
	East	North	South	West	All borders
	Quantity (1,000 pounds tare weight)				
U.S. imports from.-					
China	17,534	25,983	23,734	12,139	79,391
Thailand	2,186	3,876	970	15,662	22,694
Subject sources	19,721	29,859	24,705	27,801	102,086
Nonsubject sources	19,596	29,041	80,528	4,526	133,691
All import sources	39,317	58,900	105,232	32,327	235,776
	Share across (percent)				
U.S. imports from.-					
China	22.1	32.7	29.9	15.3	100.0
Thailand	9.6	17.1	4.3	69.0	100.0
Subject sources	19.3	29.2	24.2	27.2	100.0
Nonsubject sources	14.7	21.7	60.2	3.4	100.0
All import sources	16.7	25.0	44.6	13.7	100.0
	Share down (percent)				
U.S. imports from.-					
China	44.6	44.1	22.6	37.6	33.7
Thailand	5.6	6.6	0.9	48.4	9.6
Subject sources	50.2	50.7	23.5	86.0	43.3
Nonsubject sources	49.8	49.3	76.5	14.0	56.7
All import sources	100.0	100.0	100.0	100.0	100.0

Note.--Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent.

Note.--These include data for nonsubject cylinders included in the relevant HTS statistical reporting numbers.

Source: Official U.S. import statistics using HTS reporting numbers 7311.00.0060 and 7311.00.0090, accessed April 10, 2019. Totals are sums of data presented.

Presence in the market

Table IV-7, as well as figures IV-3 and IV-4, present monthly import statistics for other containers for compressed or liquefied gas, of iron or steel from January 2016 through December 2018.

Table IV-7
Other containers for compressed or liquefied gas, of iron or steel: U.S. imports by source and month of entry, January 2016 to December 2018

Item	U.S. imports				
	China	Thailand	Subject sources	Nonsubject sources	All import sources
	Quantity (1,000 pounds tare weight)				
2016.-					
January	4,414	1,399	5,813	8,041	13,854
February	2,176	1,713	3,889	6,471	10,360
March	2,646	1,420	4,066	6,303	10,369
April	3,487	2,239	5,726	6,279	12,005
May	4,384	971	5,355	13,540	18,895
June	6,478	978	7,456	7,698	15,153
July	2,960	1,014	3,974	7,717	11,690
August	2,639	942	3,581	8,613	12,194
September	3,578	534	4,112	9,738	13,850
October	3,878	813	4,691	10,324	15,016
November	2,405	1,342	3,747	9,051	12,798
December	3,158	1,321	4,479	9,205	13,685
2017.-					
January	3,735	1,260	4,994	7,452	12,446
February	3,103	1,249	4,352	6,412	10,765
March	5,720	1,646	7,366	9,912	17,277
April	6,684	1,220	7,904	7,337	15,241
May	6,511	1,574	8,085	8,341	16,425
June	6,735	907	7,642	9,501	17,143
July	5,497	1,163	6,660	8,871	15,531
August	5,141	1,229	6,369	10,629	16,998
September	3,941	1,288	5,228	9,038	14,266
October	3,448	2,940	6,387	9,150	15,537
November	5,375	2,585	7,960	9,709	17,669
December	8,417	2,331	10,748	7,139	17,887

Table continued on next page.

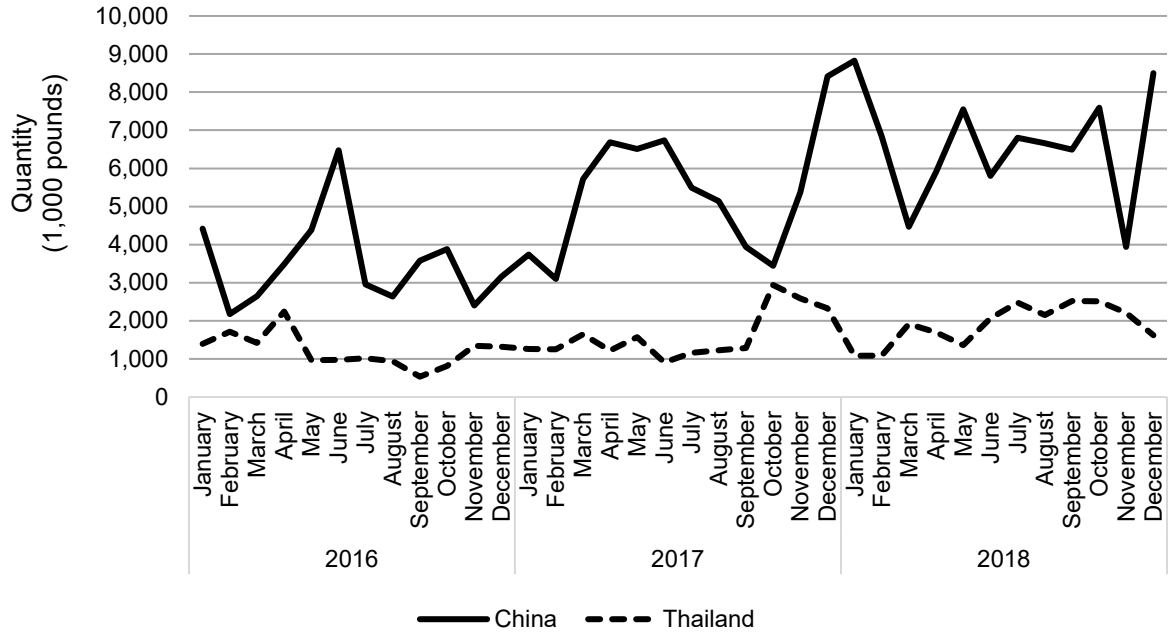
Table IV-7—Continued
Other containers for compressed or liquefied gas, of iron or steel: U.S. imports by source and month of entry, January 2016 to December 2018

Item	U.S. imports				
	China	Thailand	Subject sources	Nonsubject sources	All import sources
2018.-					
January	8,827	1,080	9,907	10,878	20,785
February	6,842	1,086	7,928	8,610	16,537
March	4,469	1,911	6,380	8,941	15,321
April	5,908	1,697	7,605	9,434	17,039
May	7,549	1,363	8,913	11,589	20,502
June	5,806	2,068	7,874	10,302	18,176
July	6,804	2,480	9,284	13,926	23,210
August	6,662	2,148	8,810	12,485	21,295
September	6,490	2,520	9,010	10,318	19,328
October	7,593	2,513	10,105	12,885	22,990
November	3,942	2,206	6,148	13,182	19,330
December	8,499	1,622	10,122	11,142	21,263

Note.--Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent.

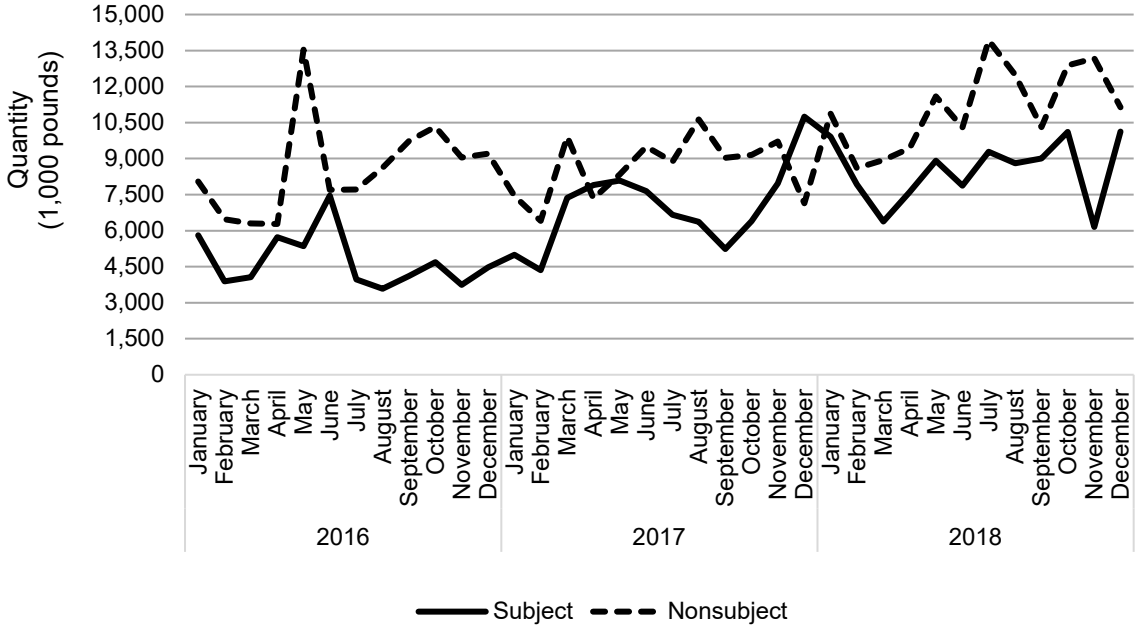
Source: Official U.S. import statistics using HTS reporting numbers 7311.00.0060 and 7311.00.0090, accessed April 10, 2019. Data for certified No firms removed (using proprietary Customs data).

Figure IV-3
Other containers for compressed or liquefied gas, of iron or steel: U.S. imports by subject country and month of entry, January 2016 to December 2018



Source: Adjusted official U.S. import statistics using HTS reporting numbers 7311.00.0060 and 7311.00.0090, accessed April 10, 2019. Data for certified No firms removed (using proprietary Customs data).

Figure IV-4
Other containers for compressed or liquefied gas, of iron or steel: U.S. imports by subject and nonsubject sources and month of entry, January 2016 through December 2018



Source: Adjusted official U.S. import statistics using HTS reporting numbers 7311.00.0060 and 7311.00.0090, accessed April 10, 2019. Data for certified No firms removed (using proprietary Customs data).

APPARENT U.S. CONSUMPTION

Table IV-8 and figure IV-5 present data on apparent U.S. consumption of steel propane cylinders during 2016-18. Apparent U.S. consumption based on quantity increased by *** percent from 2016 to 2018. Specifically, U.S. producers' shipments increased by *** percent, while U.S. imports based on quantity from subject sources increased by *** percent from 2016 to 2018. Apparent U.S consumption in value terms increased by *** percent from 2016 to 2018.

Table IV-8
Steel propane cylinders: U.S. shipments of domestic product, U.S. shipments of imports, and apparent U.S. consumption, 2016-18

* * * * * * *

Figure IV-5
Steel propane cylinders: Apparent U.S. consumption, 2016-18

* * * * * * *

U.S. MARKET SHARES

U.S. market share data from 2016 to 2018 are presented in table IV-9. These data show that U.S. producers' market share decreased by *** percentage points from 2016 to 2018 in quantity terms. U.S. producer's market share based on value decreased by *** percentage points from 2016 to 2018. During this period, the market share based on quantity of imports of steel propane cylinders from subject countries increased by *** percentage points, while the market share for nonsubject sources remained the same.

Table IV-9
Steel propane cylinders: U.S. consumption and market shares, 2016-18

* * * * * * *

PART V: PRICING DATA

FACTORS AFFECTING PRICES

Raw material costs

The main input for steel propane cylinders is flat rolled steel coils (grade 4130 steel). No pricing index is available for this product. Petitioners, however, reported that they use the price of *** as an index of the price of grade 4130 steel, because the prices of these move in tandem (figure V-1).[1] The cost of hot-rolled coil more than doubled between its low in January 2016 and its peak in July 2018. From July 2018 to May 2019, the cost of hot-rolled coil decreased almost 30 percent. Overall, the price of hot-rolled coil doubled between January 2016 and December 2018. Raw materials accounted for *** percent of the cost of producing steel propane cylinders in 2018.[2] The increase in the cost of hot-rolled coil may, at least in part, be the result of the countervailing and antidumping duties placed on hot-rolled steel in 2016 and the Section 301 and Section 232 tariffs that were implemented in 2018 (see Part I).

Figure V-1
Steel price index: Index of the price of hot rolled coil, January 2016-May 2019

* * * * * * *

Impact of Section 232 steel investigation[3]

Firms were asked about the impact of the announcement and subsequent implementation of remedies in the Section 232 investigation on imported steel products, including its effect on raw material costs, overall demand for steel propane cylinders in the U.S. market, and prices for steel propane cylinders in the U.S. market (table V-1). As explained in Part II, the responses of the different types of firms have been combined for this question. Most (11 of 13) responding firms reported that the Section 232 tariffs did not have an impact

[1] Petitioners' postconference brief, answers to staff questions p. 10.

[2] For more information about raw material costs, see Part VI.

[3] On March 8, 2018, the President announced that an additional 25 percent ad valorem rate of duty with respect to steel articles defined at the Harmonized Tariff Schedule 6-digit level as 7206.10 through 7216.50, 7216.99 through 7301.10, 7302.10, 7302.40 through 7302.90, and 7304.10 through 7306.90, would apply to imports of steel articles from all countries except Canada and Mexico. On March 23, 2018, these tariffs went into effect. Between March and May 2018, exemptions to these tariffs were announced for Argentina, Australia, Brazil, Canada, Mexico, member countries of the European Union, and South Korea, and import quotas were agreed to by Argentina, Brazil, and South Korea. As of May 20, 2019, the Section 232 tariff on imported steel is in effect for all countries except Argentina, Australia, Brazil, Canada, Mexico, and South Korea. For more information, see https://www.cbp.gov/trade/remedies/232-tariffs-aluminum-and-steel, accessed June 11, 2019.

Table V-1
Impact of the Section 232 investigation and tariffs: U.S. producers', importers', and purchasers' responses regarding the impact of the Section 232 investigation and tariffs in the U.S. market, by number of responding firms (increase=Inc, no change =No, decrease=Dec, fluctuate= Flu)

	U.S. producers				U.S. importers				Purchasers			
Type of impact	Inc	No	Dec	Flu	Inc	No	Dec	Flu	Inc	No	Dec	Flu
Overall demand for steel propane cylinders	***	***	***	***	***	***	***	***	0	8	0	2
Overall supply of steel propane cylinders	***	***	***	***	***	***	***	***	0	5	3	2
Prices of steel propane cylinders	***	***	***	***	***	***	***	***	8	1	0	1
Raw material costs	***	***	***	***	***	***	***	***	5	1	0	3

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

on the market for steel propane cyllinders, with most firms reporting it did not affect the supply of (9 of 14) or demand for (11 of 14) the product.[4] In contrast, most (12 of 14) responding firms reported that it had caused the price of steel propane cylinders to increase and most firms (8 of 12) also reported it had caused raw material costs to increase.[5] A number of firms that reported changes in domestic supply indicated that they experianced longer lead times from U.S. suppliers, low U.S. producer inventories, and similarly, that "domestic suppliers couldn't keep up," was reported by a purchaser.

Transportation costs to the U.S. market

Transportation costs for steel propane cylinders shipped from China to the United States averaged 9.5 percent during 2018, and 11.2 percent for product from Thailand. These estimates were derived from official import data and represent the cost of transportation to the United States and other charges on imports.[6]

U.S. inland transportation costs

U.S. producers reported that ***.[7] Most responding importers (4 of 5) reported that they typically arrange transportation for their customers. U.S. producers reported that their U.S. inland transportation costs ranged from *** to *** percent while the four responding importers reported that their U.S. inland transportation costs ranging from 2 to 15 percent.

[4] No firms reported that U.S. demand or U.S. supply had increased.

[5] No firms reported that prices of steel propane cylinders or the cost of inputs had decreased.

[6] The estimated transportation costs were obtained by subtracting the customs value from the c.i.f. value of the imports for 2017 and then dividing by the customs value based on the HTS subheading 7311.00.0060.

[7] *** customers arrange transportation.

Firms that import Chinese or Thai steel propane cylinders for their own use were requested to estimate U.S. inland transportation costs from the port of importation to the point of use. Only one importer responded, noting that the U.S. inland transportation cost for own-use imports of Thai steel propane cylinders was *** percent of total costs.

PRICING PRACTICES

Pricing methods

*** importers sell predominantly using transaction-by-transaction negotiations and contracts to determine the prices they charge for steel propane cylinders (as presented in table V-2).

Table V-2
Steel propane cylinders: U.S. producers' and importers' reported price setting methods, by number of responding firms[1]

Method	U.S. producers	Importers
Transaction-by-transaction	***	5
Contract	***	3
Set price list	***	2
Other[2]	***	2
Responding firms	2	6

[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.
[2] Other includes prices based on volumes and the other sells them as part of an ***.

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

U.S. producers reported selling most of their steel propane cylinders via *** (table V-3). Importers reported selling most of their steel propane cylinders under short-term contracts.

Table V-3
Steel propane cylinders: U.S. producers' and importers' shares of U.S. commercial shipments by type of sale, 2018

Type of sale	U.S. producers	Importers
Long-term contracts	***	---
Annual contracts	***	12.5
Short-term contracts	***	65.3
Spot sales	***	22.2

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

*** reported that ***.[8] ***.[9] *** reported using ***.[10] Both responding importers (***) that reported the use of short-term contracts reported that these fix ***, and *** price renegotiations during the term of the contract.

Two purchasers reported that they purchased steel propane cylinders daily, six purchased weekly, two purchased monthly, two purchased quarterly, and two purchased annually.[11] Some purchasers reported timing their purchases to take advantage of lower steel prices by increasing the amount they ordered when steel prices are lower. Most responding purchasers (13 of 17) reported that their purchasing frequency had not changed since 2016. All four purchasers that reported changing their purchasing frequency reported either increased demand or fluctuations in demand. Nearly all purchasers (16 of 17) contact one to three suppliers before making a purchase.[12]

Purchasers were asked if they were familiar with the cost of the raw materials used in steel propane cylinders. Most of the responding purchasers (11 of 17) reported that they were familiar with the cost of the raw materials, and most of the responding purchasers (12 of 13) reported that the price of raw materials had affected their negotiations.[13]

Sales terms and discounts

*** and two of five responding importers typically quote prices on an f.o.b. basis. Three importers typically quote prices on a delivered basis. *** reported offering quantity and total volume discounts. Three importers (***) reported both quantity and total volume discounts. Three importers (***) reported that they had no discount policy.

Price leadership

Most (7 of 13) responding purchasers reported that Worthington was a price leader in the industry, three of these also reported Manchester was price leader. One purchaser (***) reported only Manchester as the price leader. The five remaining purchasers reported one price leader each including Worldwide, Flame King, Home Depot, Amerigas, and Trinity Industries.[14]

---

[8] ***. ***. Petitioners' posthearing brief, Exhibit 1, p. 57. ***." Petitioners' posthearing brief, Exhibit 1, p. 58.

[9] Petitioner posthearing brief, Exhibit 1, p. 59.

[10] ***.

[11] *** reported purchasing as needed.

[12] ***.

[13] Steel was the only input that purchasers reported affecting negotiations, and was mentioned explicitly by seven purchasers. Additionally, two purchasers stated that tariffs had increased the price of steel.

[14] ***.

Most favored purchaser agreement

***.[15] *** reported having most favored purchaser agreements. No importers reported having most favored purchaser agreements. ***. ***. ***.[16]

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 steel propane cylinders products shipped to unrelated U.S. customers during 2016-18.

Product 1.--20-pound capacity steel cylinder for compressed or liquefied propane gas, without gauge, meeting the requirements of U.S. Department of Transportation specification 4BA.--**Sold to RV manufacturers.**

Product 2.--20-pound capacity steel cylinder for compressed or liquefied propane gas, without gauge, meeting the requirements of U.S. Department of Transportation specification 4BA.--**Sold to gas exchangers**.

Product 3.--20-pound capacity steel cylinder for compressed or liquefied propane gas, without gauge, meeting the requirements of U.S. Department of Transportation specification 4BA.--**Sold to distributors**.

Product 4.--20-pound capacity steel cylinder for compressed or liquefied propane gas, without gauge, meeting the requirements of U.S. Department of Transportation specification 4BA.--**Sold to retailers**.

Product 5.--30-pound capacity steel cylinder for compressed or liquefied propane gas, without gauge, meeting the requirements of U.S. Department of Transportation specification 4BA.--**Sold to distributors**.

Product 6.-- 30-pound capacity steel cylinder for compressed or liquefied propane gas, without gauge, meeting the requirements of U.S. Department of Transportation specification 4BA.--**Sold to RV manufacturers**.

[15] Petitioners' posthearing brief, exhibit 1, pp. 51-52.
[16] Petitioners' posthearing brief, exhibit 1 p. 52.

Product 7.--30-pound capacity steel cylinder for compressed or liquefied propane gas, without gauge, meeting the requirements of U.S. Department of Transportation specification 4BA.--**Sold to retailers**.

Two U.S. producers and four importers provided usable pricing data for sales of the requested products, although not all firms reported pricing for all products for all quarters.[17] Pricing data reported by these firms accounted for approximately *** percent of the value of U.S. producers' commercial shipments of steel propane cylinders, *** percent of the value of U.S. commercial shipments of subject imports from China in 2018, and *** percent of the value of U.S. commercial shipments of subject imports from Thailand in 2018.

Price data for products 1-7 are presented in tables V-4 to V-10 and figures V-2 to V-8. Each pricing product reflects a different size and channel of distribution combination, products 1 through 4 represent 20-pound steel propane cylinders, and products 5 through 7 represent 30-pound steel propane cylinders.

Table V-4
Steel propane cylinders: Weighted-average f.o.b. prices and quantities of domestic and imported product 1 and margins of underselling/(overselling), by quarter, 2016-2018

* * * * * * *

Table V-5
Steel propane cylinders: Weighted-average f.o.b. prices and quantities of domestic and imported product 2 and margins of underselling/(overselling), by quarter, 2016-2018

* * * * * * *

Table V-6
Steel propane cylinders: Weighted-average f.o.b. prices and quantities of domestic and imported product 3 and margins of underselling/(overselling), by quarter, 2016-2018

* * * * * * *

Table V-7
Steel propane cylinders: Weighted-average f.o.b. prices and quantities of domestic and imported product 4 and margins of underselling/(overselling), by quarter, 2016-2018

* * * * * * *

[17] 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-8
Steel propane cylinders: Weighted-average f.o.b. prices and quantities of domestic and imported product 5 and margins of underselling/(overselling), by quarter, 2016-2018

* * * * * * *

Table V-9
Steel propane cylinders: Weighted-average f.o.b. prices and quantities of domestic and imported product 6 and margins of underselling/(overselling), by quarter, 2016-2018

* * * * * * *

Table V-10
Steel propane cylinders: Weighted-average f.o.b. prices and quantities of domestic and imported product 7 and margins of underselling/(overselling), by quarter, 2016-2018

* * * * * * *

Figure V-2
Steel propane cylinders: Weighted-average prices and quantities of domestic and imported product 1, by quarter, 2016-18

* * * * * * *

Figure V-3
Steel propane cylinders: Weighted-average prices and quantities of domestic and imported product 2, by quarter, 2016-18

* * * * * * *

Figure V-4
Steel propane cylinders: Weighted-average prices and quantities of domestic and imported product 3, by quarter, 2016-18

* * * * * * *

Figure V-5
Steel propane cylinders: Weighted-average prices and quantities of domestic and imported product 4, by quarter, 2016-18

* * * * * * *

Figure V-6
Steel propane cylinders: Weighted-average prices and quantities of domestic and imported product 5, by quarter, 2016-18

* * * * * * *

Figure V-7
Steel propane cylinders: Weighted-average prices and quantities of domestic and imported product 6, by quarter, 2016-18

* * * * * * *

Figure V-8
Steel propane cylinders: Weighted-average prices and quantities of domestic and imported product 7, by quarter, 2016-18

* * * * * * *

Import purchase cost

The Commission also requested the importers provide landed duty-paid values and quantities for imports used for internal consumption or retail sale. No imports for internal consumption or retail sale were reported for China. *** provided such purchase cost data for its imports of 20-pound capacity steel propane cylinders from Thailand. Its purchase cost data are presented in table V-11 and figure V-9, along with U.S. sales prices for product 4 (20-pound steel propane cylinders sold to retailers).[18] [19] The value of purchase cost data reported represented *** percent of the 2018 value of imports from Thailand reported by importer/retailers (***).

These importers were asked to identify the benefits of directly importing steel propane cylinders as opposed to purchasing them from a U.S. producer or importer. One importer (***) stated that an advantage of directly importing were lower freight costs. It reported that {profit} margins ***. *** reported that it imported because ***.[20] *** reported that it began importing in *** and estimated that it had consistently saved *** percent by importing directly rather than purchasing from a U.S. importer.

Table V-11
Steel propane cylinders: Purchase costs. Weighted-average f.o.b. prices and quantities of domestic product 4 and f.o.b. landed duty-paid values and quantities of imported 20-pound steel propane cylinders, by quarter, 2016-18

* * * * * * *

Figure V-9
Steel propane cylinders: Purchase costs. Weighted-average f.o.b. prices and quantities of domestic product 4 and f.o.b. landed duty-paid values and quantities of imported 20-pound steel propane cylinders, by quarter, 2016-18

* * * * * * *

[18] Another importer (***) reported that it had retail sales but did not report purchase cost data because the product differed from the requested product definition because it ***.

[19] ***. Petitioners' posthearing brief, Exhibit 1, pp. 29-31.

[20] *** did not explain how the tanks it imported differed from U.S. produced tanks.

Price trends

In general, prices increased during 2016-18. Table V-12 summarizes the price trends, by country and by product. Figure V-10 illustrates the price changes for 20-pound cylinders produced in the United States and imported from subject countries. Figure V-11 illustrates the price changes for 30-pound cylinders produced in the United States and imported from subject countries. As shown in the table, domestic prices increased for all products; increases ranged from *** to *** percent during 2016-18. Import prices increased for products 1 through 6; increases ranged from *** to ***. The price of imported product 7 decreased by *** and *** percent for imports from China and Thailand, respectively. Prices for product from China tended to increase more than prices for product from Thailand. Between the first quarter of 2016 and the last quarter of 2018, the price of imports of steel propane cylinders from China increased by between *** and *** percent, while the prices of imports of steel propane cylinders from Thailand increased by between *** percent and *** percent.

Table V-12
Steel propane cylinders: Summary of weighted-average f.o.b. prices for products 1-7 from the United States, China, and Thailand

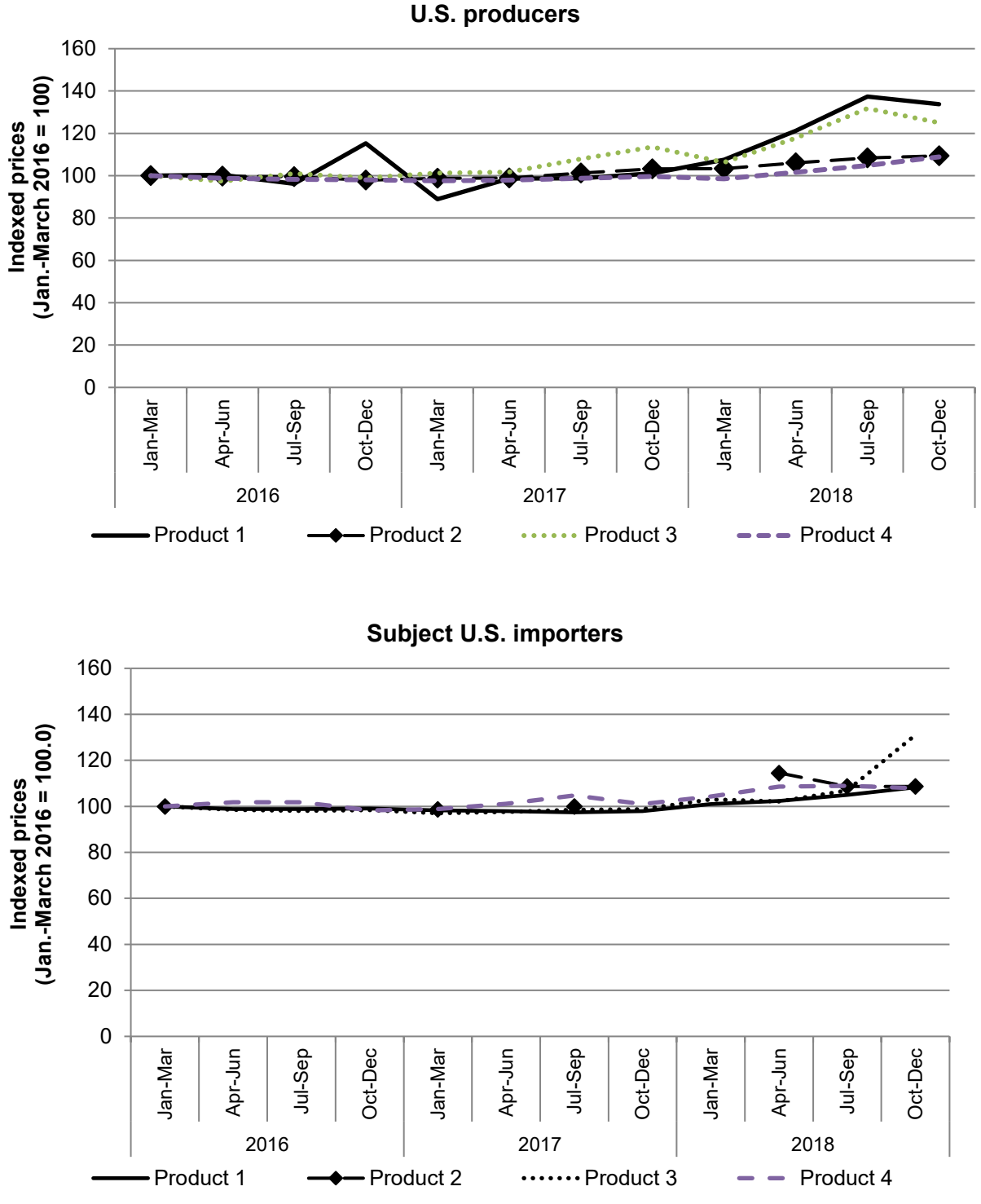
Item	Number of quarters	Low price (per cylinder)	High price (per cylinder)	Change in price[1] (percent)
Product 1				
United States	12	***	***	***
Thailand	12	***	***	***
Product 2				
United States	12	***	***	***
China	1	***	***	***
Thailand	5	***	***	***
Product 3				
United States	12	***	***	***
China	12	***	***	***
Thailand	12	***	***	***
Product 4				
United States	12	***	***	***
China	12	***	***	***
Thailand	12	***	***	***
Thailand purchase cost data	11	***	***	***
Product 5				
United States	12	***	***	***
China	12	***	***	***
Thailand	12	***	***	***
Product 6				
United States	12	***	***	***
Thailand	12	***	***	***
Product 7				
United States	12	***	***	***
China	12	***	***	***
Thailand	12	***	***	***

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

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

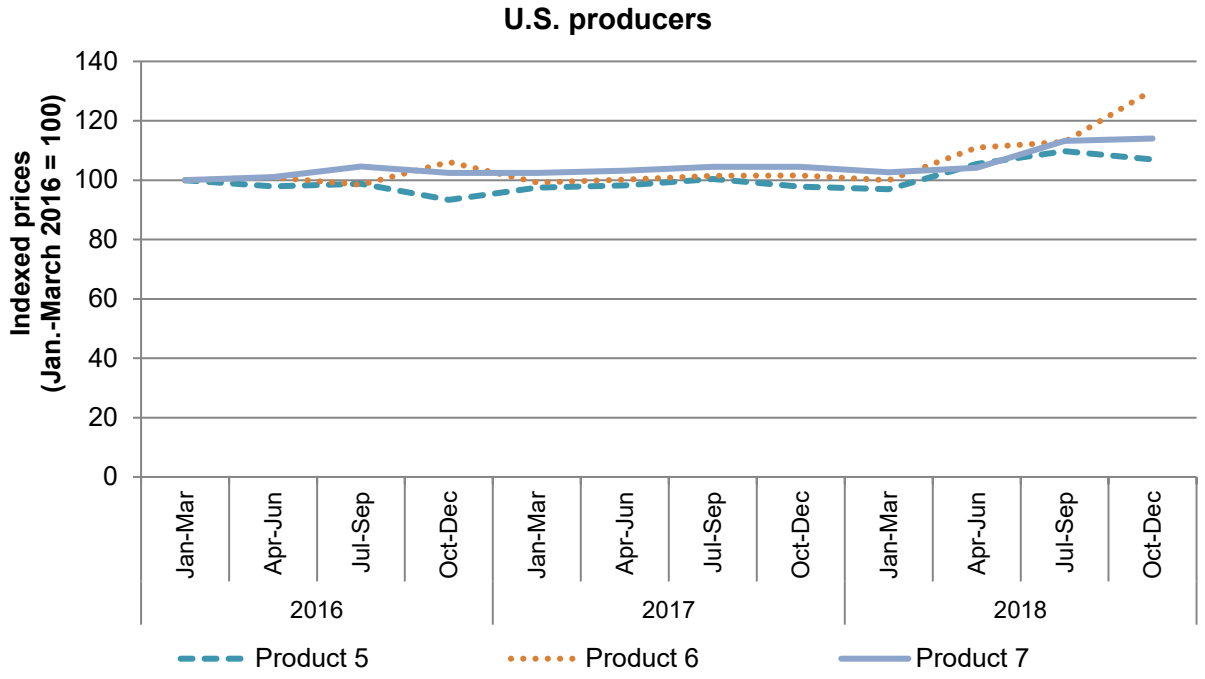
Figure V-10

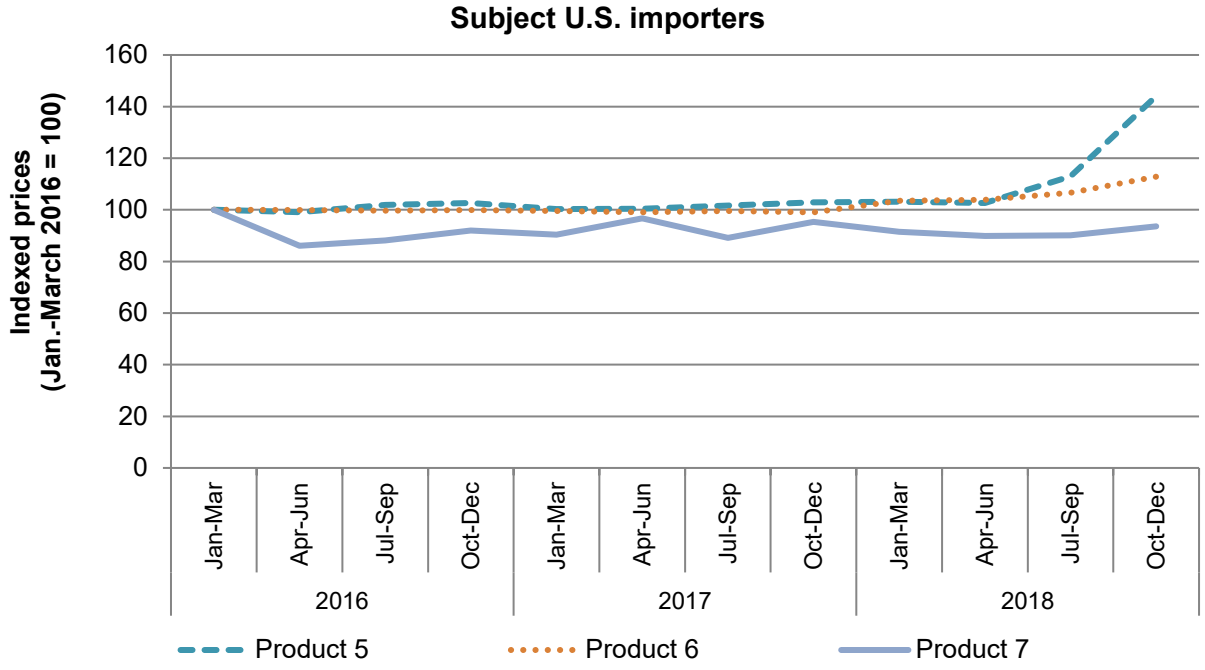
Steel propane cylinders: U.S. producers' and U.S. importers from subject countries indexed prices 20-pound cylinders, by quarter, 2016-18



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

Figure V-11
Steel propane cylinders: U.S. producers' indexed prices 30-pound cylinders, by quarter, 2016-18





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

Price comparisons

As shown in table V-13, there were no instances of overselling for products 1, 5, and 6. Prices for products 2, 3, 4, and 7 imported from China were below those for U.S.-produced product in 27 of 49 instances (*** cylinders); margins of underselling ranged from 3.9 to 52.4 percent. In the remaining 22 instances (*** cylinders), prices for product from China were between 1.0 and 24.2 percent above prices for the domestic product.[21] Prices for products 1 through 6 imported from Thailand were below those for U.S.-produced product in 62 of 77 instances (*** cylinders); margins of underselling ranged from 0.2 to 37.7 percent. In the remaining 15 instances (*** cylinders), prices for product from Thailand were between 0.1 and 14.2 percent above prices for the domestic product.

Respondents note that the price of product 2 (20-pound steel propane cylinders sold to gas exchangers) tends to be lower than the price of 20-pound steel propane cylinders sold to other types of users. Respondents claim that this low price is the result of competition between the two U.S. producers as well as "the gas exchangers' highly restrictive contracts and massive bargaining power"[22] rather than competition with imports, because there is relatively little import competition in this channel as shown in the small number of quarters in which there is import competition in this channel.[23] According to respondents, imports by the U.S. producers were merely one way in which the U.S. producers competed between themselves.[24] Respondents note that the average price of U.S. 20-pound steel propane cylinders (combining all channels) tends to be lower than import prices from China and Thailand.[25]

Petitioners claim that competition occurs between the retailers and gas exchangers for sales of steel propane cylinders, thus the relatively low number of underselling in the gas exchanger channel does not indicate little price competition with imports in this sector.[26]

---

[21] Petitoners argue that the number of instances of overselling is overstated because ***. Petitioners' posthearing brief, Exhibit 1, pp. 59-62.

[22] Respondents' posthearing brief, exhibit 1, p. 68.

[23] Respondents' posthearing brief, exhibit 1, pp. 51-52.

[24] Respondents' posthearing brief, exhibit 1, p. 55.

[25] The average price of U.S. 30-pound cylinders, in contrast then to be higher than the average price of imports. Respondents' posthearing brief, exhibit 1, p. 74.

[26] Hearing transcript, p. 29 (Bowes).

Table V-13
Steel propane cylinders: Instances of underselling/overselling and the range and average of margins, by country, 2016-18

Source	Underselling				
	Number of quarters	Quantity[1] (cylinders)	Average margin (percent)	Margin range (percent)	
				Min	Max
Product 1	12	***	***	***	***
Product 2	5	***	***	***	***
Product 3	19	***	***	***	***
Product 4	8	***	***	***	***
Total 20-pound	44	***	***	***	***
Product 5	24	***	***	***	***
Product 6	12	***	***	***	***
Product 7	9	***	***	***	***
Total 30-pound	45	***	***	***	***
Total	89	3,092,574	17.6	0.2	52.4
China	27	***	30.1	6.7	52.4
Thailand	62	***	12.3	0.2	37.7
Total	89	3,092,574	17.6	0.2	52.4

Source	(Overselling)				
	Number of quarters	Quantity[1] (cylinders)	Average margin (percent)	Margin range (percent)	
				Min	Max
Product 2	1	***	***	***	***
Product 3	5	***	***	***	***
Product 4	16	***	***	***	***
Total 20-pound	22	***	***	***	***
Product 7	15	***	***	***	***
Total 30-pound	15	***	***	***	***
Total	37	454,590	(6.6)	(0.1)	(24.2)
China	22	***	(8.8)	(1.0)	(24.2)
Thailand	15	***	(3.4)	(0.1)	(14.2)
Total	37	454,590	(6.6)	(0.1)	(24.2)

[1] These data include only quarters in which there is a comparison between the U.S. and subject product and product for which there is at least one instance of overselling or underselling.

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

LOST SALES AND LOST REVENUE

In the preliminary phase of the investigation, the Commission requested that U.S. producers of steel propane cylinders report purchasers where they experienced instances of lost sales or revenue due to competition from imports of steel propane cylinders from China and Thailand during January 2015 to March 2018. *** submitted lost sales and lost revenue allegations. The *** responding U.S. producers identified 19 firms where they lost sales or revenue (17 consisting of lost sales allegations and 2 consisting of both types of allegations).

In the final phase of the investigation, *** reported that *** had to either reduce prices or roll back announced price increases, and *** reported that *** had lost sales.

Staff contacted 53 purchasers and received responses from 17 purchasers.[27] Responding purchasers reported purchasing and/or importing *** million pounds during 2016-18 (table V-14).

Table V-14
Steel propane cylinders: Purchasers' responses to purchasing patterns

* * * * * * *

Of the 15 responding purchasers, 9 purchased Chinese product, and 6 of these reported that, since 2016, they had purchased imported steel propane cylinders from China instead of U.S.-produced product.[28] Chinese imports were reported to be lower priced than U.S. steel propane cylinders by four purchasers, three of which reported that this was the primary reason for purchasing Chinese steel propane cylinders. One purchaser estimated the quantity of steel propane cylinders from China purchased instead of domestic product was *** pounds (tables V-15 and V-16). In addition, two purchasers reported purchasing imported Chinese steel propane cylinders but reported that the price of the Chinese product was not lower than the price of the U.S. produced product. One reported that prices are sometimes higher and sometimes lower, but ***. One purchaser (***) reported that the price of Chinese product was lower than the price of U.S.-produced product but it did not purchase Chinese product because of price. *** preferred not to purchase from *** because *** requires a "take or pay" agreement to sell *** larger amounts.[29]

Six purchasers reported purchasing or importing product from Thailand and that they had purchased steel propane cylinders from Thailand instead of U.S.-produced product. Imports of product from Thailand were reported to be lower priced by five purchasers, four of which reported that this was the reason for purchasing Thai steel propane cylinders. Two purchasers estimated the quantity of steel propane cylinders from Thailand purchased instead of domestic product ranged from *** to *** pounds. One purchaser that reported Thai product was lower priced but that it purchased Thai product not because of price and explained that ***.

One purchaser (***) reported price was not the reason it purchased Chinese and Thai-produced steel propane cylinders. It stated that it has ***.

---

[27] One purchaser (***) submitted lost sales lost revenue survey responses in the preliminary phase, but did not submit a purchaser's questionnaire response in the final phase.

[28] One purchaser (***) reported that it did not purchase Chinese product instead of U.S. product, it purchased Chinese product because "domestic producers {are} not able to meet specifications." This firm also reported that prices of Chinese produced product were not lower than prices of U.S-produced product, commenting that "pricing sometimes is higher or lower."

[29] As described in *Part II*, in a take or pay agreement, the purchaser agrees to purchase a specified amount of product over a period, if it does not purchase this amount, it nonetheless agrees to pay for the whole agreed to-amount.

Table V-15
Steel propane cylinders: Purchasers' responses to purchasing subject imports instead of domestic product

Purchaser	Purchased imports instead of domestic (Y/N)	Imports lower priced (Y/N)	If purchased imports instead of domestic, was price a primary reason		
			Y/N	If Yes, quantity purchased instead of domestic (1000 pounds, tare weight)	If No, non-price reason
***	***	***	***	***	
***	***	***	***	***	
***	***	***	***	***	
***	***	***	***	***	
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	
***	***	***	***	***	
***	***	***	***	***	
***	***	***	***	***	
***	***	***	***	***	
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	
***	***	***	***	***	
***	***	***	***	***	***
***	***	***	***	***	
Total	Yes--10; No--7	Yes--8; No--3	Yes--6; No--5	15,009	

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

Table V-16
Steel propane cylinders: Purchasers' responses to purchasing subject imports instead of domestic product

Source	Count of purchasers reporting subject instead of domestic	Count of purchasers reporting imports were priced lower	Count of purchasers reporting that price was the primary reason for shift	Quantity subject purchased (1,000 pounds tare weight)
China	6	4	3	5,250
Thailand	6	5	4	9,759
Any subject source	10	8	6	15,009

One of the 17 responding purchasers reported that U.S. producers had reduced prices by *** percent in order to compete with lower-priced imports from China. Eight purchasers reported that U.S. firms had not reduced prices because of imports from China and six reported that U.S. firms had not reduced prices because of imports from Thailand (table V-17; eight reported that they did not know for China and nine did not know for Thailand).

Table V-17
Steel propane cylinders: Purchasers' responses to U.S. producer price reductions

Purchaser	Producers reduced price (Y/N)	Estimated U.S. price reduction (percent)
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
Totals	Yes--1; No--6	***

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

PART VI: FINANCIAL EXPERIENCE OF U.S. PRODUCERS

BACKGROUND

Two U.S. producers, Manchester and Worthington, accounted for *** percent and *** percent, respectively, of the U.S. industry's total sales volume.[1] [2] While fluctuating somewhat, the period-to-period market shares of each company did not change substantially.

The only disruption in the U.S. producers' manufacturing operations during the period was ***.[3] The impact of this event on the company's financial results is described in the section entitled *Cost of goods sold and gross profit or loss*.

OPERATIONS ON STEEL PROPANE CYLINDERS

Tables VI-1 and VI-2 present income-and-loss data for U.S. producers' operations on steel propane cylinders and corresponding changes in average per-pound values (tare weight), respectively. Table VI-3 presents a variance analysis of these financial results and table VI-4 presents selected financial information by firm.[4]

Table VI-1
Steel propane cylinders: Results of operations of U.S. producers, 2016-18

* * * * * * *

[1] Both U.S. producers reported steel cylinder propane financial results on the basis of generally accepted accounting principles (GAAP) for calendar-year periods.

Manchester, a subsidiary of privately held McWane Inc., is currently part of that company's Pressure Vessels Division, http://www.mcwane.com/our-businesses/pressure-vessels/ retrieved on May 20, 2019. The steel propane cylinders operations of Worthington, a publicly traded company, are part of that company's Pressure Cylinders segment. Worthington 2016 10-K, p. 4.

[2] Staff conducted a verification of the financial section, and selected elements of the trade and pricing sections, of Worthington's U.S. producer questionnaire on April 10-11, 2019. Data changes pursuant to verification are reflected in this and other relevant sections of this report.

[3] *** U.S. producer questionnaire, response to question II-2.

[4] The Commission's variance analysis is calculated in three parts: sales variance, cost of goods sold (COGS) variance, and sales, general, and administrative (SG&A) expenses variance. Each part consists of a price variance (in the case of the sales variance) or a cost or expense variance (in the case of the COGS and SG&A expense variances), 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. As 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 expenses variances. In general, the utility of the Commission's variance analysis is enhanced when product mix remains the same throughout the period. ***. E-mail with attachments from ***, April 5, 2019.

Table VI-2
Steel propane cylinders: Changes in average per-pound values, 2016-18

* * * * * * *

Table VI-3
Steel propane cylinders: Variance analysis on the operations of U.S. producers, 2016-18

* * * * * * *

Table VI-4
Steel propane cylinders: Results of operations of U.S. producers, by firm, 2016-18

* * * * * * *

Revenue

The substantial majority of total steel propane cylinder revenue represents U.S. commercial sales (*** percent of total sales volume) with a relatively small share (*** percent) representing exports.[5] *** reported revenue associated with internal consumption or transfers to related firms.

Volume

Table VI-1 shows that the U.S. industry's total sales quantity was at its lowest full-year level in 2016, increasing in both 2017 and 2018. *** reported higher sales quantity in 2017, with Manchester reporting a *** percentage *** (*** percent) than Worthington (*** percent).[6] In contrast, directional trends *** in 2018, with Manchester reporting a *** percent *** in sales quantity and Worthington reporting an increase of *** percent.[7]

Value

The U.S. industry's average per-pound sales value increased marginally in 2017 (*** percent) and then by a somewhat larger amount in 2018 (*** percent). The trend of marginally higher average sales values in 2017 was *** for Manchester and Worthington but *** somewhat in 2018, with Manchester reporting a *** in its average per-pound sales value compared to the *** reported by Worthington.[8] As shown in table VI-4, Manchester's average

[5] The share of U.S. commercial shipments fluctuated somewhat but remained within a relatively narrow range.

[6] ***. E-mail with attachment from ****, June 15, 2018.

***. E-mail with attachments from ***, June 15, 2018.

[7] ***. Ibid.

***. E-mail with attachments from ***, April 5, 2019.

[8] ***. Ibid. Manchester's sales transactions include prices that are fixed for a period of time, as well as prices that are indexed to the price of steel. Sales to the same customer may reflect both fixed and indexed pricing. Hearing transcript, p. 91 (Page).

sales value moved in a *** range and was *** compared with Worthington's average sales value throughout the period, with the difference *** in 2018.

Table VI-2 shows that, while the trend of the U.S. industry's average per-pound sales value and raw material cost was directionally the same, the magnitude of change in average per-pound sales value and raw material cost differed.[9]

Cost of goods sold and gross profit or loss

Raw materials

Manchester and Worthington reported that steel propane cylinder raw material costs reflect the cost of steel, as well as other inputs and related activity.[10] Total raw material costs fluctuated somewhat, ranging from *** percent of total COGS (2016) to *** percent (2017). Notwithstanding the notable increase in steel costs in 2018, period-to-period changes in the components of COGS (see table VI-2) generally explain why the share of raw material cost was at its highest level in 2017, as opposed to 2018.[11]

On an average per-pound basis, the U.S. industry's raw material cost was at its lowest level in 2016 and increased in 2017 and 2018. While magnitudes varied, Manchester and Worthington *** with respect to average raw material cost, with Manchester's average raw material cost being *** than Worthington's throughout the period (see table VI-4).[12]

Direct labor and other factory costs

Other factory costs make up the second largest component of steel propane cylinder COGS, ranging from *** percent of total COGS (2017) to *** percent (2016). Table VI-4 shows

---

[9] ***. Petitioners' posthearing brief, Exhibit 1, p. 57. ***. E-mail with attachments from ***, June 15, 2018. ***. E-mail with attachments from ***, April 5, 2019.

[10] ***. E-mail with attachment from ***, June 15, 2018. ***. E-mail with attachments from ***, April 5, 2019.

***. E-mail with attachments from ***, June 15, 2018.

[11] As noted by a company official at the Commission's hearing, Worthington uses derivatives to hedge the cost of a portion of its steel requirements. Hearing transcript, p. 90 (Bowes). As it relates to its operations on steel propane cylinders, Worthington's hedging and related activity was described as follows: ***. Petitioners' posthearing brief, Exhibit 1, p. 56.

***. Petitioners' posthearing brief, Exhibit 1, p. 55.

[12] At the Commission's staff conference, a Worthington company official, with respect to the company's overall operations, noted ". . . steel processing continues to be our core competency. That means that across the different Worthington businesses, we are a major steel purchaser. We leverage that purchasing power to ensure that our operations, including steel propane cylinders production, are as efficient and cost-effective as possible. In fact, we are quite proud of our buying expertise and the ability to manage costs for the company overall. Given our ability to exercise purchasing power and keep our steel costs as low as possible, our steel propane cylinders operation should be one of our most profitable businesses." Conference transcript, p. 32 (Bowes).

***. Verification report, p. 4. ***. *** U.S. producer questionnaire (revised), response to III-7.

that Manchester's average per-pound other factory costs were *** compared to Worthington's and also ***. At the Commission's preliminary phase conference, Manchester and Worthington company officials noted the high fixed cost nature of steel propane cylinder manufacturing, as well as related general and administrative support, and the corresponding importance of high capacity utilization in order to minimize average unit costs.[13] ***.[14] While *** overall capacity utilization *** in 2018 compared to 2017, the company's other factory costs in 2018 were *** impacted by ***.[15]

Direct labor cost is the smallest component of COGS and ranged from *** percent of total COGS (2018) to *** percent (2016). On an average per-pound basis, company-specific directional trends were mixed: in 2017, *** reported a *** in average per-pound direct labor while *** reported an increase. In 2018, *** in average per-pound direct labor, but of different magnitudes.[16]

Cost of goods sold

Table VI-4 shows that Manchester's average per-pound COGS was *** Worthington's with the average per-pound difference (around *** per pound) *** throughout the period. Notwithstanding the *** average per-pound COGS amounts, Manchester reported *** average per-pound raw material costs compared with Worthington, but *** average per-pound other factory costs.[17] The average per-pound direct labor costs of both companies were ***.

Gross profit

In 2016, the U.S. industry's total gross profit and gross profit ratio (total gross profit divided by total revenue) were at their highest levels and subsequently declined in 2017 and 2018. The deterioration in the gross profit ratio reflects increases in average COGS, principally the raw material component and to a lesser extent the other factory costs component, which were not offset by higher average sales value in 2017 and only partially offset by higher average per-pound sales value in 2018 (see tables VI-1 and VI-2). Declining total gross profit, despite increasing total revenue in 2017 and 2018, reflects the above-noted decline in gross profit ratio.[18]

Table VI-4 shows that Manchester and Worthington both reported *** and ended the period with *** gross profit ratios.[19] [20] Whereas ***, its gross profit ratio was *** in 2018.

---

[13] Conference transcript, pp. 68-69 (Grauman), p. 69 (Bowes).

[14] ***. Verification report (Worthington), p. 5.

[15] ***. E-mail with attachments from ***, April 5, 2019.

[16] ***. E-mail with attachment from ***, June 15, 2018.

[17] ***.

[18] With regard to the period in general, Manchester and Worthington both indicated that steel propane cylinder gross profit ratios were ***. E-mail with attachment from ***, June 15, 2018. E-mail with attachments from ***, June 15, 2018.

[19] ***. E-mail with attachments from ***, April 5, 2019.

[20] ***. E-mail with attachments from ***, April 5, 2019.

SG&A expenses and operating income or loss

While the U.S. industry's total SG&A expenses followed the same increasing directional trend as revenue throughout the period, the increases were smaller in magnitude. As a result, corresponding SG&A expense ratios (total SG&A expenses divided by total revenue) declined from *** percent (2016) to *** percent (2017, 2018). On a company-specific basis, table VI-4 shows that Worthington and Manchester reported *** SG&A expense ratios with Worthington's SG&A expense ratio *** than Manchester's throughout the period.

While a factor in terms of explaining the level of the U.S. industry's operating results, SG&A expenses ratios remained within a narrow range and therefore had a generally neutral impact on the pattern of operating results. To the extent that SG&A expense ratios declined modestly, their impact on operating results was positive inasmuch as they partially offset the deterioration of profitability at the gross level.[21]

Interest expense, other expenses, and net income or loss

Interest expense presented in table VI-1, reflects *** with ***.[22] *** company reported other expenses or other income. Accordingly and with the exception of the modest impact of interest expense, operating and net results ***.

CAPITAL EXPENDITURES AND RESEARCH AND DEVELOPMENT EXPENSES

Table VI-5 presents U.S. producers' capital expenditures and research and development (R&D) expenses related to their steel propane cylinder operations.

Table VI-5
Steel propane cylinders: Capital expenditures and research and development (R&D) expenses of U.S. producers, 2016-18

* * * * * * *

Manchester (which accounted for *** percent of total capital expenditures in 2016-18) reported its *** capital expenditure level in 2017.[23] Worthington (which accounted for *** percent of total capital expenditures in 2016-18) reported its *** level in 2018.[24] Table VI-5 shows that ***.

---

[21] ***. Verification report (Worthington), p. 5.
***.

[22] ***. Ibid.

[23] ***. *** U.S. producer questionnaire (preliminary phase), response to III-13 (note 1). ***. E-mail with attachments from ***, April 5, 2019.

[24] ***. *** U.S. producer questionnaire, response to III-13 (note 1). ***. E-mail with attachments from ***, June 15, 2018. ***. Verification report (Worthington), p. 6.

ASSETS AND RETURN ON ASSETS

Table VI-6 presents data on the U.S. producers' total net assets and operating return on net assets related to operations on steel propane cylinders.[25]

Table VI-6
Steel propane cylinders: U.S. producers' total net assets and operating return on net assets, 2016-18

* * * * * * *

CAPITAL AND INVESTMENT

The Commission requested the U.S. producers of steel propane cylinders to describe any actual or potential negative effects on their return on investment or its growth, investment, ability to raise capital, existing development and production efforts (including efforts to develop a derivative or more advanced version of the product), or the scale of capital investments as a result of imports of steel propane cylinders from China and/or Thailand. Table VI-7 tabulates the responses regarding actual negative effects on investment, growth, and development, as well as anticipated negative effects. Table VI-8 presents the narrative responses of the U.S. producers regarding actual and anticipated negative effects on investment, growth, and development.

Table VI-7
Steel propane cylinders: Negative effects of imports from subject sources on investment, growth, and development since January 1, 2016

* * * * * * *

Table VI-8
Steel propane cylinders: Narrative responses of U.S. producers regarding actual and anticipated negative effects of imports from subject sources on investment, growth, and development since January 1, 2016

* * * * * * *

[25] With respect to a company's overall operations, staff notes that a total asset value (i.e., the bottom line value on the asset side of a company's balance sheet) reflects an aggregation of a number of current and non-current assets, which, in many instances, are not product specific. In most cases, allocation factors are necessary in order to report total asset values on a product-specific basis. ***. The ability of U.S. producers to assign total asset values to discrete product lines affects the meaningfulness of operating return on net assets.

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 18 firms believed to produce and export steel propane cylinders from China.[3] Usable responses to the Commission's questionnaire were received from two firms: Shandong Huanri Group Co., Ltd ("Huanri") and Hong Kong GSBF Company Limited ("GSBF"). These firms' exports to the United States were equivalent to approximately *** percent of U.S. imports of steel propane cylinders from China in 2018. According to estimates requested of the responding Chinese producers, the production of steel propane cylinders in China reported in questionnaires accounts for approximately *** percent of overall production of steel propane cylinder in China. Table VII-1 presents information on the steel propane cylinder operations of the responding producers and exporters in China.

Table VII-1
Steel propane cylinders: Summary data for producers in China, 2018

* * * * * * *

Changes in operations

As presented in table VII-2, producers in China reported several operational and organizational changes since January 1, 2016.

Table VII-2
Steel propane cylinders: Reported changes in operations by producers in China, since January 1, 2016

* * * * * * *

Operations on steel propane cylinders

Table VII-3 presents information on the steel propane cylinder operations of the responding producers and exporters in China.

Capacity in China decreased by *** percent from 2016 to 2018, and is projected to be the same in 2019 and 2020 as it was in 2018. Production in China decreased by *** percent from 2016 to 2018, and is projected to *** at lower levels in 2019 and 2020. Capacity utilization increased by *** percentage points from 2016 to 2018; it is projected to be *** percentage points lower in 2019 and 2020 at *** percent, than in 2018. Responding Chinese producers' exports to the United States fluctuated between 2016 and 2018. From 2016 to 2017, exports increased by *** percent, but then decreased by *** percent from 2017 to 2018 for an overall decrease of *** percent. Exports to the United States are projected to decrease by *** percent from 2018 to 2019, and remain at 2019 level in 2020.

[3] These firms were identified through a review of information submitted in the petition and contained in *** records.

Table VII-3
Steel propane cylinders: Data on the industry in China, 2016-18 and projected calendar years 2019 and 2020

* * * * * * *

Alternative products

As shown in table VII-4, responding Chinese firms produced other products on the same equipment and machinery used to produce steel propane cylinders. Table VII-4 indicates that steel propane cylinders' share of total production on the same equipment and machinery accounted for more than *** percent of production on average each year. Production of other goods increased slightly (by *** percent), while production of steel propane cylinders decreased. Between 2016 and 2018, Chinese firms' capacity utilization increased by *** percentage points as their capacity decreased by *** percent.

Table VII-4
Steel propane cylinders: Overall capacity and production on the same equipment as in-scope products by producers in China, 2016-18

* * * * * * *

Exports

According to the Global Trade Atlas database ("GTA"), the leading export markets for containers of iron or steel for compressed or liquefied gas, including steel propane cylinders, from China are the United States, which accounted for 12.8 percent of its containers of iron or steel for compressed or liquefied gas exports; Nigeria, which accounted for 7.6 percent; and the Philippines accounting for 6.8 (table VII-5).

Table VII-5
Containers of iron or steel for compressed or liquefied gas: Exports from China by destination market, 2016-18

Destination market	Calendar year		
	2016	2017	2018
	Quantity (1,000 pounds tare weight)		
Exports to the United States from China	62,752	89,733	82,244
Exports to other major destination markets from China.--			
Nigeria	25,905	43,473	48,907
Philippines	32,642	42,972	43,653
Indonesia	34,201	25,414	30,193
Korea	42,050	41,474	29,726
Bangladesh	1,580	4,142	27,238
Thailand	17,011	18,122	23,612
Malaysia	11,905	18,714	23,332
Brunei Darussalam	55	6,352	22,455
All other destination markets	333,704	340,075	312,004
Total exports from China	561,805	630,472	643,365
	Value (1,000 dollars)		
Exports to the United States from China	69,879	102,930	101,565
Exports to other major destination markets from China.--			
Nigeria	23,838	31,708	42,790
Philippines	17,049	25,134	27,991
Indonesia	32,721	19,701	27,682
Korea	53,293	49,505	31,512
Bangladesh	2,018	2,888	20,606
Thailand	12,438	18,344	17,530
Malaysia	9,476	16,516	25,219
Brunei Darussalam	91	3,215	13,218
All other destination markets	299,144	309,625	338,664
Total exports from China	519,946	579,567	646,777

Table continued on next page.

Table VII-5—Continued
Containers of iron or steel for compressed or liquefied gas: Exports from China by destination market, 2016-18

Destination market	Calendar year		
	2016	2017	2018
	Unit value (dollars per pound)		
Export to the United States from China	1.11	1.15	1.23
Exports to other major destination markets from China.--			
Nigeria	0.92	0.73	0.87
Philippines	0.52	0.58	0.64
Indonesia	0.96	0.78	0.92
Korea South	1.27	1.19	1.06
Bangladesh	1.28	0.70	0.76
Thailand	0.73	1.01	0.74
Malaysia	0.80	0.88	1.08
Brunei Darussalam	1.65	0.51	0.59
All other destination markets	0.90	0.91	1.09
Total exports from China	0.93	0.92	1.01
	Share of quantity (percent)		
Exports to the United States from China	11.2	14.2	12.8
Exports to other major destination markets from China.--			
Nigeria	4.6	6.9	7.6
Philippines	5.8	6.8	6.8
Indonesia	6.1	4.0	4.7
Korea South	7.5	6.6	4.6
Bangladesh	0.3	0.7	4.2
Thailand	3.0	2.9	3.7
Malaysia	2.1	3.0	3.6
Brunei Darussalam	0.0	1.0	3.5
All other destination markets	59.4	53.9	48.5
Total exports from China	100.0	100.0	100.0

Note.--Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Data reported under the subheading includes some merchandise outside of the scope of these investigations.

Source: Official exports statistics under HS subheading 7311.00 as reported by China in the Global Trade Atlas database, accessed March 14, 2019.

THE INDUSTRY IN THAILAND

The Commission issued foreign producers' or exporters' questionnaires to nine firms believed to produce and/or export steel propane cylinders from Thailand.[4] Usable responses to the Commission's questionnaire were received from one firm: Sahamitr Pressure Container Public Company Limited ("SMPC"). This firm's exports to the United States accounted for *** U.S. imports of steel propane cylinders from Thailand in 2018. According to SMPC's estimate, its reported production accounted for approximately *** percent of overall production of steel propane cylinders in Thailand. Table VII-6 presents information on its steel propane cylinder operations.

Table VII-6
Steel propane cylinders: Summary data for SMPC, 2018

* * * * * * *

Changes in operations

As presented in table VII-7, SMPC reported *** since January 1, 2016. It expanded its production by *** percent from 2016 to 2019.

Table VII-7
Steel propane cylinders: Reported changes in operations by SMPC, since January 1, 2016

* * * * * * *

Operations on steel propane cylinders

Table VII-8 presents information on the steel propane cylinder operations of SMPC. Capacity in Thailand increased by *** percent from 2016 to 2018, and is projected to continue to increase by *** percent between 2018 and 2019; however, it is expected to *** in 2020. From 2016 to 2018, SMPC's production in Thailand increased by *** percent and is projected to increase in 2019 and 2020 by *** percent and *** percent, respectively. Due to increases in capacity, capacity utilization decreased by *** percentage points from 2016 to 2018, and it is projected to decrease by *** percentage points in 2019 before increasing by *** percentage points in 2020. Exports, primarily to markets other than the United States, accounted for a *** of SMPC's total shipments. Exports by SMPC from Thailand to the United States increased from 2016 to 2018 by *** percent and are projected to increase in 2019 and 2020 by *** percent each year.

[4] These firms were identified through a review of information submitted in the petition and contained in *** records.

Table VII-8
Steel propane cylinders: Data on SMPC's steel propane cylinder operations in Thailand, 2016-18 and projected calendar years 2019 and 2020

* * * * * * *

Alternative products

As shown in table VII-9, SMPC produced other products on the same equipment and machinery used to produce steel propane cylinders. Table VII-9 indicates that steel propane cylinders accounted for more than *** percent of production on same equipment and machinery as other products on average each year. Between 2016 and 2018, SMPC's overall capacity utilization decreased by *** percentage points as it continued to add capacity each year.

Table VII-9
Steel propane cylinders: Overall capacity and production on the same equipment as in-scope products by SMPC in Thailand, 2016-18

* * * * * * *

Exports

According to GTA, the leading export markets for containers of iron or steel for compressed or liquefied gas, including steel propane cylinders, from Thailand are Bangladesh, which accounted for 27.6 percent of exports, the United States, which accounted for 7.6 percent, and Malaysia, which accounted for 7.1 percent (table VII-10).

Table VII-10
Containers of iron or steel for compressed or liquefied gas: Exports from Thailand by destination market, 2016-18

Destination market	Calendar year		
	2016	2017	2018
	Quantity (1,000 pounds tare weight)		
Exports to the United States from Thailand	13,971	19,125	22,195
Exports to other major destination markets from Thailand.--Bangladesh	47,446	102,050	81,193
Malaysia	20,753	18,832	20,799
Tanzania	16,765	15,101	15,875
Philippines	9,861	12,474	14,743
Australia	10,640	10,212	13,117
Côte d'Ivoire	7,528	14,223	12,521
Myanmar	5,732	7,328	10,112
United Kingdom	6,053	6,197	9,557
All other destination markets	103,353	83,654	92,147
Total exports from Thailand	242,102	289,196	292,260
	Value (1,000 dollars)		
Exports to the United States from Thailand	8,646	11,989	16,299
Exports to other major destination markets from Thailand.--Bangladesh	30,102	66,171	57,801
Malaysia	10,146	8,041	11,206
Tanzania	13,134	12,388	12,951
Philippines	4,082	5,611	6,125
Australia	6,514	7,369	11,018
Côte d'Ivoire	5,304	11,504	10,690
Myanmar	4,395	5,762	9,162
United Kingdom	3,156	3,861	6,207
All other destination markets	121,021	95,505	106,442
Total exports from Thailand	206,500	228,201	247,901

Table continued on next page.

Table VII-10—Continued
Containers of iron or steel for compressed or liquefied gas: Exports from Thailand by destination market, 2016-18

Destination market	Calendar year		
	2016	2017	2018
	Unit value (dollars per pound)		
Exports to the United States from Thailand	0.62	0.63	0.73
Exports to other major destination markets from Thailand.--Bangladesh	0.63	0.65	0.71
Malaysia	0.49	0.43	0.54
Tanzania	0.78	0.82	0.82
Philippines	0.41	0.45	0.42
Australia	0.61	0.72	0.84
Côte d'Ivoire	0.70	0.81	0.85
Myanmar	0.77	0.79	0.90
United Kingdom	0.52	0.62	0.65
All other destination markets	1.17	1.14	1.15
Total exports from Thailand	0.85	0.79	0.85
	Share of quantity (percent)		
Exports to the United States from Thailand	5.8	6.6	7.6
Exports to other major destination markets from Thailand.--Bangladesh	19.6	35.3	27.6
Malaysia	8.6	6.5	7.1
Tanzania	6.9	5.2	5.4
Philippines	4.1	4.3	5.1
Australia	4.4	3.5	4.5
Côte d'Ivoire	3.1	4.9	4.3
Myanmar	2.4	2.5	3.5
United Kingdom	2.5	2.1	3.3
All other destination markets	42.7	28.9	31.6
Total exports from Thailand	100.0	100.0	100.0

Note.--Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Data reported under the subheading includes some merchandise outside of the scope of these investigations.

Source: Official exports statistics under HS subheading 7311.00 as reported by Thailand in the Global Trade Atlas database, accessed March 14, 2019.

SUBJECT COUNTRIES COMBINED

Table VII-11 presents summary data on steel propane cylinder operations of the reporting subject producers in the subject countries.

Table VII-11
Steel propane cylinders: Data on the industry in subject countries, 2016-18 and projected calendar years 2019 and 2020

* * * * * * *

U.S. INVENTORIES OF IMPORTED MERCHANDISE

Table VII-12 presents data on U.S. importers' reported inventories of steel propane cylinders. Inventories of steel propane cylinders imported from China decreased by more than *** between 2016 and 2018, while inventories of steel propane cylinders imported from Thailand ***.

Table VII-12
Steel propane cylinders: U.S. importers' end-of-period inventories of imports by source, 2016-18

* * * * * * *

U.S. IMPORTERS' OUTSTANDING ORDERS

The Commission requested importers to indicate whether they imported or arranged for the importation of steel propane cylinders from China and/or Thailand after December 31, 2018. Importers' responses are tabulated in table VII-13.

Table VII-13
Steel propane cylinders: Arranged imports, January 2019 through December 2019

* * * * * * *

ANTIDUMPING OR COUNTERVAILING DUTY ORDERS IN THIRD-COUNTRY MARKETS

There are no known trade remedy actions on steel propane cylinders in third-country markets.[5] Moreover, review of notifications to the World Trade Organization's ("WTO") Committee on Anti-Dumping Practices[6] and Committee on Subsidies and Countermeasures[7] found no additional import-injury orders on the subject product in third-country markets.

INFORMATION ON NONSUBJECT COUNTRIES

The leading nonsubject import sources, by quantity in 2018, for containers of iron or steel for compressed or liquefied gas (including steel propane cylinders) entering the U.S. market were Mexico, followed by Canada.[8] According to one respondent during the preliminary phase of these investigations, nonsubject producers of steel propane cylinders in India, France, Mexico, and Portugal have received USDOT certification to produce steel propane cylinders for the U.S. market; however, the respondent was not aware of any producers in those countries that export steel propane cylinders to the United States.[9] Table VII-14 presents information available from USDOT's Pipeline and Hazardous Materials Safety Administration ("PHMSA") about foreign manufacturers who have received 4B, 4BA, 4BW, and/or other certifications that are eligible to export steel propane cylinders to the U.S. market.

---

[5] See e.g., conference transcript, p. 90 (Ringel). Responding foreign producers did not note any third-country trade actions.

[6] WTO, "Anti-dumping," https://www.wto.org/english/tratop_e/adp_e/adp_e.htm, retrieved June 19, 2019.

[7] WTO, "Subsidies and Countervailing Measures," https://www.wto.org/english/tratop_e/scm_e/scm_e.htm, retrieved June 19, 2019.

[8] U.S. imports for consumption under HTS 7311.00.0060 and 7311.00.0090. USITC, Interactive Tariff and Trade DataWeb, retrieved April 4, 2019.

[9] SMPC and Flame King's postconference brief, "Answers to ITC Staff Questions," Question No. 3, p. 4.

Table VII-14
Steel propane cylinders: Foreign manufacturers of steel propane cylinders with USDOT certification, with good standing, as of April 2019

Manufacturer	Location	In-scope specifications	Out-of-scope specifications
Subject:			
GSBF Tank Inc.	China	DOT-4BA, 4BW	
Guangzhou Lion Cylinders Co. Ltd.	China	DOT-4BA	
Jiangsu Tianhai Special Equipment Co. Ltd. (JTSE)	China	DOT-4BA, 4BW	DOT-8, 8AL
Power Saints Ltd.	China	DOT-4BA, 4BW	
Taishan Machinery Factory Ltd.	China	DOT-4BA	
Sahamitr Pressure Container Public Co. Ltd. (SMPC)	Thailand	DOT-4BA, 4BW	
Nonsubject:			
Dockweiler AG	Germany	DOT-4B	
Mauria Udyog Ltd.	India	DOT-4BA, 4BW	DOT-39
Masteco Industry Co. Ltd.	Korea	DOT-4BW	
Grupo INGUSA	Mexico	DOT-4BA, 4BW	
Trinity Industries de Mexico (TIMSA)	Mexico	DOT-4BA, 4BW	DOT-110A, SP-11808, 110A
Amtrol-Alfa Metalomecanica S.A.	Portugal	DOT-4BA, 4BW	DOT-39, SP 14457, SP-14808, UNISO-11118
King Lai Hygienic Materials Co. Ltd.	Taiwan	DOT-4B	
ICAM Engineering Ltd.	United Kingdom	DOT-4B	

Source: PHMSA, "Foreign Manufacturers Listing Hazmat Approvals: Cylinders (Updated April 2019)," April 2019, https://www.phmsa.dot.gov/hazmat/pressure-vessels-approvals/foreign-manufacturers-listing-hazmat-approvals-cylinders-updated, retrieved April 24, 2019.

The industry in Mexico

According to PHMSA, two Mexican producers, Trinity Industries de Mexico ("TIMSA") and Grupo INGUSA are qualified to produce steel propane cylinders under USDOT specifications 4BA and 4BW for the U.S. market (see table VII-14). The United States was the leading destination in 2018 for Mexican exports of containers of iron or steel for compressed or liquefied gas, including steel propane cylinders (table VII-15; 78.4 percent of the total).[10] In the preliminary phase of these investigations, *** reported imports of steel propane cylinders from nonsubject countries, specifically Mexico, but the ***.[11]

[10] Includes exports from Mexico to Puerto Rico.

[11] ***; SMPC and Flame King's postconference brief, p. 2. ***.

Table VII-15
Containers of iron or steel for compressed or liquefied gas: Exports from Mexico by destination market, 2016-18

Destination market	Calendar year		
	2016	2017	2018
	Value (1,000 dollars)		
Exports from Mexico to the United States.—United States (excluding Puerto Rico)	45,329	54,813	77,592
Puerto Rico	1,126	1,051	1,469
Subtotal (United States including Puerto Rico)	46,455	55,864	79,061
Exports from Mexico to other major destination markets.--Cuba	2,294	3,851	2,662
Guatemala	1,097	2,245	2,653
Nigeria	0	0	2,269
Dominican Republic	3,594	2,656	2,107
Peru	2,011	1,370	1,558
Canada	0	1,793	1,371
Colombia	737	1,146	860
Suriname	94	337	944
Costa Rica	828	1,098	1,122
Jordan	884	246	707
All other destination markets	8,619	5,561	5,517
Total exports from Mexico	66,614	76,166	100,831
	Share of value (percent)		
Exports from Mexico to the United States.—United States (excluding Puerto Rico)	68.0	72.0	77.0
Puerto Rico	1.7	1.4	1.5
Subtotal (United States and Puerto Rico)	69.7	73.3	78.4
Exports from Mexico to other major destination markets.--Cuba	3.4	5.1	2.6
Guatemala	1.6	2.9	2.6
Nigeria	0.0	0.0	2.3
Dominican Republic	5.4	3.5	2.1
Peru	3.0	1.8	1.5
Canada	0.0	2.4	1.4
Colombia	1.1	1.5	0.9
Suriname	0.1	0.4	0.9
Costa Rica	1.2	1.4	1.1
Jordan	1.3	0.3	0.7
All other destination markets	12.9	7.3	5.5
Total exports from Mexico	100.0	100.0	100.0

Note.--Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Data reported under the subheading includes some merchandise outside of the scope of these investigations.

Source: Official export statistics under HS subheading 7311.00, reported by Mexico's National Institute of Statistics and Geography ("INEGI"), in the IHS Markit, Global Trade Atlas database, accessed May 20, 2019.

The industry in Portugal

According to PHMSA, Portuguese producer, Amtrol-Alfa Metalomecanica S.A. ("Amtrol-Alfa") is qualified to produce steel propane cylinders under USDOT specifications 4BA and 4BW for the U.S. market (see table VII-14). The leading destinations in 2018 for Portuguese exports of containers of iron or steel for compressed or liquefied gas, including steel propane cylinders, were Spain (table VII-16; 38.7 percent of the total), the United Kingdom (12.9 percent), Belgium (9.4 percent), and France (9.3 percent). The United States accounted for only 4.3 percent of such exports from Portugal in 2018. In the final phase of these investigations, ***.[12] [13]

Table VII-16
Containers of iron or steel for compressed or liquefied gas: Exports from Portugal by destination market, 2016-18

Destination market	Calendar year		
	2016	2017	2018
	Value (1,000 dollars)		
Exports from Portugal to the United States	1,391	2,117	4,709
Exports from Portugal to other major destination markets.--Spain	45,389	41,338	42,866
United Kingdom	9,666	9,308	14,330
Belgium	8,907	8,951	10,437
France	9,832	10,364	10,320
Burkina Faso	3,432	1,888	2,483
Mozambique	1,347	841	2,345
Canada	2,366	1,476	2,200
Angola	831	1,649	2,191
Germany	1,925	1,419	1,982
Ireland	1,407	1,492	1,550
All other destination markets	23,505	23,301	15,286
Total exports from Portugal	109,999	104,144	110,698

Table continued on next page.

[12] ***.

[13] ***. Petitioners' posthearing brief, exh. 3, "Declaration of James Bowes," pp. 12-13.

Table VII-16--Continued
Containers of iron or steel for compressed or liquefied gas: Exports from Portugal by destination market, 2016-18

Destination market	Calendar year		
	2016	2017	2018
	Share of value (percent)		
Exports from Portugal to the United States	1.3	2.0	4.3
Exports from Portugal to other major destination markets.--Spain	41.3	39.7	38.7
United Kingdom	8.8	8.9	12.9
Belgium	8.1	8.6	9.4
France	8.9	10.0	9.3
Burkina Faso	3.1	1.8	2.2
Mozambique	1.2	0.8	2.1
Canada	2.2	1.4	2.0
Angola	0.8	1.6	2.0
Germany	1.8	1.4	1.8
Ireland	1.3	1.4	1.4
All other destination markets	21.4	22.4	13.8
Total exports from Portugal	100.0	100.0	100.0

Note.--Consistent units of quantity were not reported to all destination markets.
Data reported under the subheading includes some merchandise outside of the scope of these investigations.

Source: Official export statistics under HS subheading 7311.00, reported by Eurostat, in the IHS Markit, Global Trade Atlas database, accessed June 19, 2019.

Global exports

Data on global exports of containers of iron or steel for compressed or liquefied gas (including steel propane cylinders) during 2016-18 are presented in table VII-17. China (18.6 percent), the United States (10.9 percent), and Thailand (7.1 percent) were the largest sources of exports (in terms of value) of containers of iron or steel for compressed or liquefied gas in 2018, and together accounted for 36.5 percent of global exports of these products that year.

Table VII-17
Containers of iron or steel for compressed or liquefied gas: Global exports by destination market, 2016-18

Exporter	Calendar year		
	2016	2017	2018
	Value (1,000 dollars)		
United States	306,903	326,140	376,960
Subject exporters:			
China	519,946	579,567	646,777
Thailand	206,500	228,201	247,363
All other major reporting exporters.--Italy	180,166	203,574	244,094
Czech Republic	209,849	226,526	226,308
Germany	170,536	177,271	198,740
South Korea	221,368	199,392	185,426
Turkey	129,098	126,078	142,968
Austria	103,334	95,476	117,725
Poland	86,023	88,029	115,966
Portugal	109,999	104,144	110,698
India	106,679	125,525	106,385
Mexico	66,614	76,166	100,831
All other exporters	752,249	640,182	657,629
Total exports from the world	3,169,264	3,196,272	3,477,866
	Share of value (percent)		
United States	9.7	10.2	10.9
Subject exporters:			
China	16.4	18.1	18.6
Thailand	6.5	7.1	7.1
All other major reporting exporters.--Italy	5.7	6.4	7.0
Czech Republic	6.6	7.1	6.5
Germany	5.4	5.5	5.7
South Korea	7.0	6.2	5.3
Turkey	4.1	3.9	4.1
Austria	3.3	3.0	3.4
Poland	2.7	2.8	3.3
Portugal	3.5	3.3	3.2
India	3.4	3.9	3.1
Mexico	2.1	2.4	2.9
All other exporters	23.7	20.0	18.9
Total exports from the world	100.0	100.0	100.0

Note.--Shares and ratios shown as “0.0” represent values greater than zero, but less than “0.05” percent. Data reported under the subheading includes some merchandise outside of the scope of these investigations. Import quantities not provided due to differences in units of measure amongst reporting countries.

Source: Official export statistics under HS subheading 7311.00, reported by national customs authorities, in the IHS Markit, Global Trade Atlas database, accessed April 10, 2019.

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
83 FR 24491 May 29, 2018	*Steel Propane Cylinders From China, Taiwan, and Thailand; Institution of Anti-Dumping and Countervailing Duty Investigations and Scheduling of Preliminary Phase Investigations*	https://www.gpo.gov/fdsys/pkg/FR-2018-05-29/pdf/2018-11392.pdf
83 FR 28189 June 16, 2018	*Steel Propane Cylinders From the People's Republic of China: Initiation of Countervailing Duty Investigation*	https://www.gpo.gov/fdsys/pkg/FR-2018-06-18/pdf/2018-12998.pdf
83 FR 28196 June 16, 2018	*Steel Propane Cylinders From the People's Republic of China, Taiwan, and Thailand: Initiation of Less-Than-Fair-Value Investigations*	https://www.gpo.gov/fdsys/pkg/FR-2018-06-18/pdf/2018-12989.pdf
83 FR 29748 June 26, 2018	*Steel Propane Cylinders From Taiwan: Termination of LTFV investigation*	https://www.gpo.gov/fdsys/pkg/FR-2018-06-26/pdf/2018-13675.pdf
83 FR 31174 July 3, 2018	*Steel Propane Cylinders From Taiwan;Termination of Investigation*	https://www.govinfo.gov/content/pkg/FR-2018-07-03/pdf/2018-14232.pdf
83 FR 32329 July 12, 2018	*Steel Propane Cylinders From China and Thailand: Determinations*	https://www.govinfo.gov/content/pkg/FR-2018-07-12/pdf/2018-14886.pdf
83 FR 54086 October 26, 2018	*Steel Propane Cylinders From the People's Republic of China: Preliminary Affirmative Countervailing Duty Determination and Alignment of Final Determination With Final Antidumping Duty Determination*	https://www.govinfo.gov/content/pkg/FR-2018-10-26/pdf/2018-23453.pdf
83 FR 66675 December 27, 2018	*Steel Propane Cylinders From the People's Republic of China: Preliminary Affirmative Determination of Sales at Less Than Fair Value and Postponement of Final Determination Measures*	https://www.govinfo.gov/content/pkg/FR-2018-12-27/pdf/2018-28065.pdf
83 FR 66678 December 27, 2018	*Steel Propane Cylinders From Thailand: Preliminary Affirmative Determination of Sales at Less Than Fair Value and Postponement of Final Determination*	https://www.govinfo.gov/content/pkg/FR-2018-12-27/pdf/2018-28066.pdf
84 FR 9135 March 13, 2019	*Steel Propane Cylinders From China and Thailand; Scheduling of the Final Phase of Countervailing Duty and Anti-Dumping Duty Investigations*	https://www.govinfo.gov/content/pkg/FR-2019-03-13/pdf/2019-04591.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: Steel Propane Cylinders from China and Thailand

Inv. Nos.: 701-TA-607 and 731-TA-1417 and 1419 (Final)

Date and Time: June 5, 2019 - 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 (**Paul C. Rosenthal**, Kelley Drye & Warren LLP)
Respondents (**Gregory S. Menegaz**, DeKieffer & Horgan, PLLC)

In Support of the Imposition of
Antidumping and Countervailing Duty Orders:

Kelley Drye & Warren LLP
Washington, DC
on behalf of

Worthington Industries
Manchester Tank & Equipment Co.

G. Ruffner Page, Jr., President, Mc Wane, Inc. and
Acting Chief Operating Officer, Manchester Tank & Equipment Co.

Scott Viebranz, Vice President, Sales, Propane and Chemical,
Manchester Tank & Equipment Co.

Mark Komlosi, Director of LP Gas Products, Worthington Industries

James Bowes, Director of Finance, Worthington Industries

Dale Brinkman, General Counsel, Worthington Industries

Michael T. Kerwin, Economist, Georgetown Consultant Services LLC

Paul C. Rosenthal)
R. Alan Luberda) – OF COUNSEL
Brooke M. Ringel)

In Opposition to the Imposition of
Antidumping and Countervailing Duty Orders:

DeKieffer & Horgan, PLLC
Washington, DC
on behalf of

Worldwide Distribution, LLLP
Shandong Huanri Group Co., Ltd.
Hongkong GSBF Company Limited

Rob Simon, CEO, Worldwide Distribution, LLLP

Brad Cancelosi, VPO, Worldwide Distribution, LLLP

Eric Brumbaugh, General Manager, UFP Distribution

Leo Akins, Director, Quality Assurance, Codes & Standard, Forest River, Inc.

James P. Dougan, Vice President, Economic Consulting Services

Marlena Luhr, Staff Economist, Economic Consulting Services

Gregory S. Menegaz) – OF COUNSEL

REBUTTAL/CLOSING REMARKS:

Petitioners (**Paul C. Rosenthal** and **R. Alan Luberda**, Kelley Drye & Warren LLP)
Respondents (**Gregory S. Menegaz**, DeKieffer & Horgan, PLLC; and
James P. Dougan, Economic Consulting Services)

-END-

APPENDIX C

SUMMARY DATA

Table C-1
Steel propane cylinders: Summary data concerning the U.S. market, 2016-2018
(Quantity=1,000 pounds tare weight; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per pound; Period changes=percent--exceptions noted)

	Reported data			Period changes		
	Calendar year			Calendar year		
	2016	2017	2018	2016-18	2016-17	2017-18
U.S. consumption quantity:						
Amount	***	***	***	***	***	***
Producers' share (fn1)	***	***	***	***	***	***
Importers' share (fn1):	***	***	***			
China	***	***	***	***	***	***
Thailand	***	***	***	***	***	***
Subject sources	***	***	***	***	***	***
Nonsubject sources	***	***	***	***	***	***
All import sources	***	***	***	***	***	***
U.S. consumption value:						
Amount	***	***	***	***	***	***
Producers' share (fn1)	***	***	***	***	***	***
Importers' share (fn1):	***	***	***			
China	***	***	***	***	***	***
Thailand	***	***	***	***	***	***
Subject sources	***	***	***	***	***	***
Nonsubject sources	***	***	***	***	***	***
All import sources	***	***	***	***	***	***
U.S. importers U.S. shipments from:						
China:						
Quantity	***	***	***	***	***	***
Value	***	***	***	***	***	***
Unit value	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***
Thailand:						
Quantity	***	***	***	***	***	***
Value	***	***	***	***	***	***
Unit value	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***
Subject sources:						
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	***	***	***	***	***	***

Table continue on next page

Table C-1--Continued

Steel propane cylinders: Summary data concerning the U.S. market, 2016-2018

(Quantity=1,000 pounds tare weight; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per pound; Period changes=percent--exceptions noted)

	Reported data			Period changes		
	Calendar year			Calendar year		
	2016	2017	2018	2016-18	2016-17	2017-18
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 per hour)	***	***	***	***	***	***
Productivity (pounds per hour)	***	***	***	***	***	***
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)	***	***	***	***	***	***

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