Steel Propane Cylinders from China and Thailand

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

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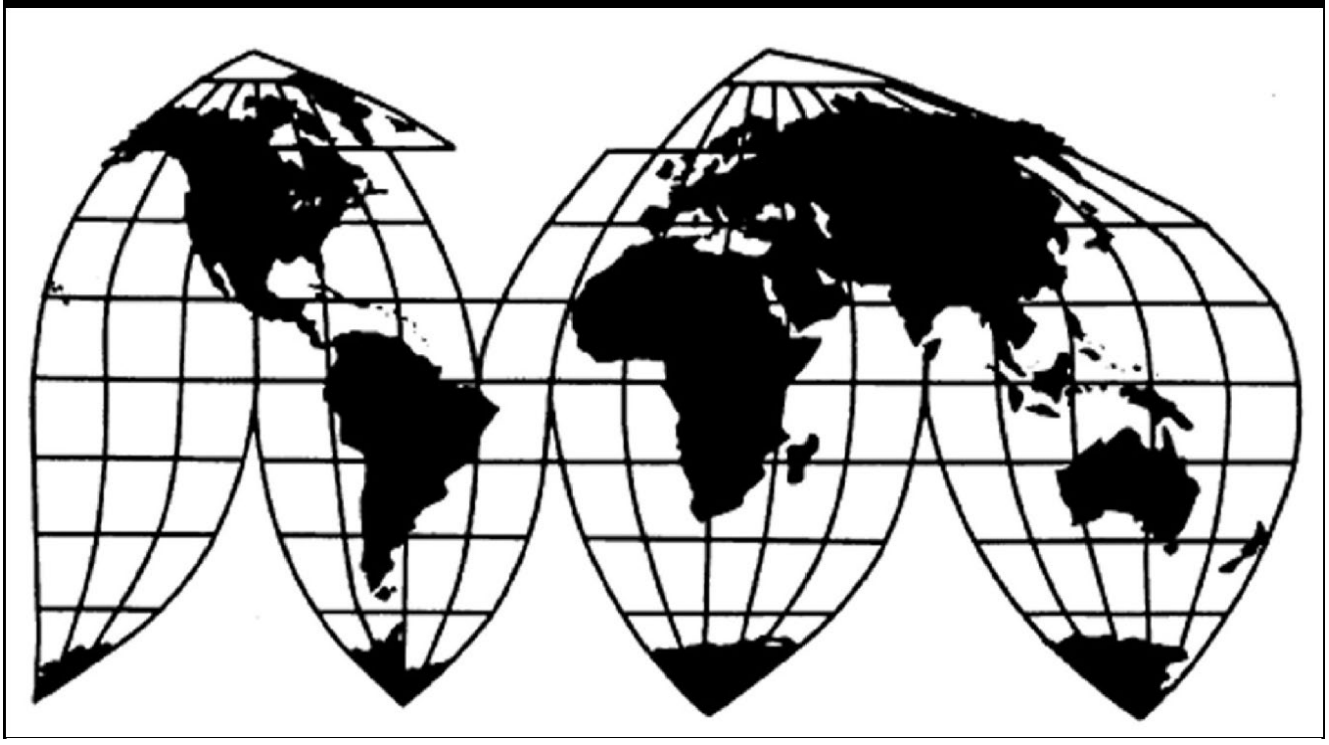

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Note.—Information that would reveal confidential operations of individual firms may not be published. Such information is identified by brackets ([ ]) in confidential reports and is deleted and replaced with asterisks (***) in public reports. Zeroes, null values, and undefined calculations are suppressed and shown as em dashes (—) in tables. If using a screen reader, we recommend increasing the verbosity setting.

UNITED STATES INTERNATIONAL TRADE COMMISSION

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

Steel Propane Cylinders from China and Thailand

DETERMINATIONS

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

BACKGROUND

The Commission instituted these reviews on July 1, 2024 (89 FR 54531), and determined on October 4, 2024, that it would conduct full reviews (89 FR 84193, October 21, 2024). Notice of the scheduling of the Commission's reviews and of a public hearing to be held in connection therewith was given by posting copies of the notice in the Office of the Secretary, U.S. International Trade Commission, Washington, DC, and by publishing the notice in the *Federal Register* on December 31, 2024 (89 FR 107162). The Commission conducted its hearing on May 1, 2025. All persons who requested the opportunity were permitted to participate.

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

Views of the Commission

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

I. Background

Original Investigations. In May 2018, domestic producers Worthington Enterprises, Inc. ("Worthington") and Manchester Tank & Equipment Co. ("Manchester"), filed antidumping duty petitions concerning steel propane cylinders from China and Thailand and a countervailing duty petition concerning steel propane cylinders from China.[1] In August 2019, the Commission determined that an industry in the United States was materially injured by reason of imports of steel propane cylinders from China and Thailand that were sold at less than fair value and imports of steel propane cylinders from China that were subsidized by the government of China.[2] On August 15, 2019, the Department of Commerce ("Commerce") issued antidumping duty orders on steel propane cylinders from China and Thailand and a countervailing duty order on steel propane cylinders from China.[3]

Current Reviews. The Commission instituted these five-year reviews on July 1, 2024.[4] Worthington, a domestic producer of steel propane cylinders, and Sahamitr Pressure Container Plc. ("SMPC"), the principal producer and exporter of subject merchandise in Thailand, responded to the Commission's notice of institution.[5] No respondent interested party submitted a response concerning the orders on steel propane cylinders from China. On October 4, 2024, the Commission found that the domestic interested party group response was adequate and that the respondent interested party group response for the order on steel propane cylinders from Thailand was adequate.[6] Accordingly, the Commission determined to

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[1] *Steel Propane Cylinders from China and Thailand*, Inv. Nos. 701-TA-607 and 731-TA-1417 and 1419 (Final), USITC Pub. 4938 (Aug. 2019) ("*Original Determinations*") at I-1.

[2] *Original Determinations*, USITC Pub. 4938 at 3.

[3] *Steel Propane Cylinders from the People's Republic of China and Thailand: Antidumping Duty Orders*, 84 Fed. Reg. 41703 (Aug. 15, 2019*); Steel Propane Cylinders from the People's Republic of China: Countervailing Duty Order*, 84 Fed. Reg. 41700 (Aug. 15, 2019).

[4] *Steel Propane Cylinders from China and Thailand; Institution of Five-Year Reviews*, 89 Fed. Reg. 54531 (July 1, 2024).

[5] Worthington's Response to Notice of Institution, EDIS Doc. 827845 (July 31, 2024) ("Worthington's NOI Response"); SMPC's Response to Notice of Institution, EDIS Doc. 827932 (July 31, 2024) ("SMPC's NOI Response").

[6] *Steel Propane Cylinders from China and Thailand; Notice of Commission Determination to Conduct Full Five-Year Reviews*, 89 Fed. Reg. 84193 (Oct. 16, 2024) ("*Full Review Determination*").

conduct a full review of the order on steel propane cylinders from Thailand.[7] The Commission also found that the respondent interested party group response for the orders on steel propane cylinders from China was inadequate but determined to conduct full reviews of those orders to promote administrative efficiency in light of its determination to conduct a full review of the order on steel propane cylinders from Thailand.[8]

The Commission received prehearing and posthearing briefs from Worthington,[9] and representatives for Worthington appeared at the hearing accompanied by counsel. The Commission received prehearing and posthearing briefs from SMPC,[10] and counsel for SMPC appeared at the hearing.

Data/Response Coverage. U.S. industry data are based on the questionnaire responses of two U.S. producers that are believed to have accounted for all domestic steel propane cylinder production during the January 1, 2019 - December 31, 2024, period of review ("POR").[11] U.S. import data are based on the questionnaire responses of six U.S. importers that are believed to have accounted for the vast majority of subject imports during the POR.[12] Data concerning the industry in Thailand are based on the questionnaire response of one firm, which accounted for all exports from Thailand to the United States in 2024 and estimates that it accounted for *** percent of steel propane cylinder production in Thailand in 2024.[13] In the absence of any questionnaire responses from Chinese producers/exporters, data concerning the industry in China are based largely on information from the original investigation, information submitted by Worthington in these reviews, and public information compiled by the Commission.[14]

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[7] *Full Review Determination*, 89 Fed. Reg. 84193.

[8] *Full Review Determination*, 89 Fed. Reg. 84193.

[9] Worthington's Prehearing Brief, EDIS Doc. 849487 (Apr. 23, 2025) ("Worthington's Prehear. Br."); Worthington's Posthearing Brief, EDIS Doc. 850824 (May 9, 2025) ("Worthington's Posthear. Br.").

[10] SMPC's Prehearing Brief, EDIS Doc. 849500 (Apr. 23, 2025) ("SMPC's Prehear. Br."); SMPC's Posthearing Brief, EDIS Doc. 850862 (May 9, 2025) ("SMPC's Posthear. Br.").

[11] Confidential Report, Memorandum INV-XX-068 (May 22, 2025) ("CR") at 1.9; *Steel Propane Cylinders from China and Thailand*, Inv. Nos. 701-TA-607 and 731-TA-1417, 1419 (Review), USITC Pub. 5638 (July 2024) ("PR") at 1.9. One of these two firms, Manchester Tank & Equipment Co. ("Manchester"), ceased producing steel propane cylinders in September 2023. CR/PR at 1.3.

[12] CR/PR at 1.9, 4.1.

[13] CR/PR at 1.10, 4.22.

[14] CR/PR at 1.10, 4.15–4.21. While the Commission received a response to its foreign producer questionnaire from one Chinese steel propane cylinder producer, Hubei Daly LPG Cylinder Manufacturer CO., LTD ("Daly Cylinder"), this response ***. *Id*. at 4.15.

II. Domestic Like Product and Industry

A. Domestic Like Product

In making its determination under section 751(c) of the Tariff Act, the Commission defines the "domestic like product" and the "industry."[15] The Tariff Act defines "domestic like product" as "a product which is like, or in the absence of like, most similar in characteristics and uses with, the article subject to an investigation under this subtitle."[16] The Commission's practice in five-year reviews is to examine the domestic like product definition from the original investigation and consider whether the record indicates any reason to revisit the prior findings.[17]

Commerce has defined the scope of the orders under review as follows:

> The products covered by the orders are steel cylinders for compressed or liquefied propane or other gases (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 and otherwise meeting the description provided below. 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.

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[15] 19 U.S.C. § 1677(4)(A).

[16] 19 U.S.C. § 1677(10); *see*, *e.g., Cleo Inc. v. United States*, 501 F.3d 1291, 1299 (Fed. Cir. 2007); *NEC Corp. v. Department of Commerce*, 36 F. Supp. 2d 380, 383 (Ct. Int'l Trade 1998); *Nippon Steel Corp. v. United States*, 19 CIT 450, 455 (1995); *Timken Co. v. United States*, 913 F. Supp. 580, 584 (Ct. Int'l Trade 1996); *Torrington Co. v. United States*, 747 F. Supp. 744, 748-49 (Ct. Int'l Trade 1990), *aff'd*, 938 F.2d 1278 (Fed. Cir. 1991); *see also* S. Rep. No. 249, 96th Cong., 1st Sess. 90-91 (1979).

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

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 orders 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 these orders 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 these orders 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.[18]

The scope of the orders has not changed since the original investigations.

Steel propane cylinders are portable, refillable steel tanks for storing propane gas that are used as heat sources in barbeque grills, outdoor heaters, and recreational vehicles ("RVs"). They generally consist of a tank, a port, a horseshoe collar, a foot ring, a gauge, a valve, and an overfill preventer. Steel propane cylinders within the scope generally range from 4.25 to 40 pounds in capacity, with 20- and 30-pound capacity cylinders being the most common sizes sold in the U.S. market. All steel propane cylinders sold in the U.S. market must meet U.S. Department of Transportation ("USDOT") safety specifications. All manufacturing facilities that produce steel propane cylinders for the U.S. market must be certified by the USDOT. [19]

In the original investigations, the Commission defined a single domestic like product consisting of steel propane cylinders, coextensive with Commerce's scope.[20] In these reviews, Worthington argues that the Commission should again define a single domestic like product consisting of steel propane cylinders, coextensive with the scope.[21] SMPC does not argue for a

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[18] *Issues and Decision Memorandum for the Final Results of the Expedited Sunset Reviews of the Antidumping Duty Orders on Steel Propane Cylinders from the People's Republic of China and Thailand* (Nov. 4, 2024); *Issues and Decision Memorandum for the Final Results of the Expedited First Sunset Review of the Countervailing Duty Order on Steel Propane Cylinders from the People's Republic of China* (Nov. 5, 2024).

[19] CR at 1.16–1.21.

[20] *Original Determinations*, USITC Pub. 4938 at 7. In the preliminary phase of the original investigations, the Commission found that all steel propane cylinders generally shared the same physical components and were used as heat sources in grills, outdoor heaters, and RVs. *Steel Propane Cylinders from China and Thailand*, Inv. Nos. 701-TA-607 and 731-TA-1417 and 1419 (Preliminary), USITC Pub. 4804 (July 2018) at 8. It further found that most domestically produced cylinders were sold through the same channels of distribution and were produced in the same manufacturing facilities using the same production process by the same employees. *Id*. at 9. Consistent with these similarities, it also found that producers and customers generally viewed all steel propane cylinders as belonging to the same product family. *Id*. The Commission also acknowledged, however, that steel propane cylinders of different sizes may not always be interchangeable, and that cylinder prices differed by size. *Id*. at 10. Notwithstanding these differences, the Commission found that the preponderance of similarities between the steel propane cylinders described by the scope supported defining a single domestic like product, coextensive with the scope. *Id*. Based on the absence of any new information or argument, the Commission adopted the same definition of the domestic like product in its final determinations. *Original Determinations*, USITC Pub. 4938 at 7.

[21] Worthington's Prehear. Br. at 4.

different definition,[22] and did not request that the Commission collect data concerning other possible domestic like products.[23]

There is no new information on the record of these reviews indicating that the pertinent characteristics and uses of domestically produced steel propane cylinders have changed since the original investigations so as to warrant revisiting the domestic like product definition.[24] Consequently, we again define a single domestic like product consisting of steel propane cylinders, coextensive with Commerce's scope.

B. Domestic Industry and Related Parties

Section 771(4)(A) of the Tariff Act defines the relevant industry as the domestic "producers as a whole of a domestic like product, or those producers whose collective output of a domestic like product constitutes a major proportion of the total domestic production of the product."[25] 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 a domestic industry pursuant to section 771(4)(B) of the Tariff Act.[26] This provision allows the Commission, if appropriate circumstances exist, to exclude from a domestic industry producers that are related to an exporter or importer of subject merchandise or which are themselves importers.[27] Exclusion of such a producer is within the Commission's discretion based upon the facts presented in each investigation.[28]

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[22] SMPC does not address the definition of the domestic like product in either its prehearing or posthearing brief. In its response to the notice of institution, SMPC wrote "not applicable" in reply to the Commission's optional request for a statement regarding whether it agreed with the definition of the domestic like product from the original investigations. *See* SMPC's Response to Notice of Institution, EDIS Doc. 827932 (July 31, 2024).

[23] CR/PR at 1.21.

[24] *See generally* CR at 1.16–1.21.

[25] 19 U.S.C. § 1677(4)(A). The definitions in 19 U.S.C. § 1677 are applicable to the entire subtitle containing the antidumping and countervailing duty laws, including 19 U.S.C. §§ 1675 and 1675a. *See* 19 U.S.C. § 1677.

[26] *See* 19 U.S.C. § 1677(4)(B).

[27] *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).

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

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

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

(Continued…)

1. The Original Investigations

In the original investigations, the Commission found that Manchester was subject to possible exclusion from the domestic industry under the related parties provision because it imported subject merchandise during the POI. It found that appropriate circumstances did not exist to exclude Manchester.[29] Accordingly, the Commission defined the domestic industry to include all U.S. producers of steel propane cylinders.[30]

2. The Current Reviews

Arguments of the Parties. In these reviews, Worthington argues that the Commission should again define the domestic industry to include all U.S. producers of steel propane cylinders. It acknowledges that Manchester is subject to possible exclusion from the domestic industry under the related parties provision because it imported subject merchandise during the POR but contends that appropriate circumstances do not exist to exclude Manchester. Worthington emphasizes in this respect that: (1) Manchester was a petitioner in the original investigations and supports the continuation of all orders in these reviews; (2) Manchester produced steel propane cylinders domestically for most of the POR; and (3) Manchester has reported that it ceased domestic production during the POR due to subject import competition.[31] SMPC did not present arguments concerning the definition of the domestic industry.

Analysis. In these reviews, Manchester is subject to possible exclusion from the domestic industry under the related parties provision because it imported subject merchandise from Thailand during the POR.[32] We consider below whether appropriate circumstances exist for its exclusion from the domestic industry.

Manchester was the *** of the two domestic steel propane cylinder producers from 2019 through 2021, accounting for *** percent of domestic production in 2019, *** percent in

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

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

(5) whether the primary interest of the importing producer lies in domestic production or importation. *Changzhou Trina Solar Energy Co. v. USITC*, 100 F. Supp.3d 1314, 1326-31 (Ct. Int'l Trade 2015), *aff'd*, 879 F.3d 1377 (Fed. Cir. 2018); *see also Torrington Co. v. United States*, 790 F. Supp. at 1168.

[29] Confidential Original Determinations, EDIS Doc. 830831 at 11; *Original Determinations*, USITC Pub. 4938 at 8. The Commission found that appropriate circumstances did not exist to exclude Manchester because its primary interest appeared to be in domestic production rather than importation. *Original Determinations*, USITC Pub. 4938 at 8. As the Commission explained, Manchester was a petitioner, its ratio of subject imports to domestic production remained relatively low throughout the POI, and it reported that it only imported steel propane cylinders ***. *Id*.

[30] *Original Determinations*, USITC Pub. 4938 at 8.

[31] Worthington's Prehear. Br. at 5.

[32] CR/PR at 3.11; 19 U.S.C. § 1677(4)(B)(i).

2020, and *** percent in 2021.[33] Manchester was the *** of the two domestic producers in 2022 and 2023, accounting for *** percent of production in 2022 and *** percent in 2023, the last year in which it produced the domestic like product.[34] It supports the continuation of all the orders under review.[35] Manchester reported importing *** pounds of steel propane cylinders from Thailand in 2019 (equivalent to *** percent of its domestic production), *** pounds in 2020 (equivalent to *** percent of its domestic production), *** pounds in 2021 (equivalent to *** percent of its domestic production), *** pounds in 2022 (equivalent to *** percent of its domestic production), and *** pounds in 2023 (equivalent to *** percent of its domestic production).[36] Manchester reported importing *** pounds of steel propane cylinders from Thailand in 2024, after it had ceased domestic production.[37] It explains that it imported during the POR ***, and ceased domestic production in 2023 due, in part, to subject import competition.[38] While Manchester's operating income to net sales ratio was generally *** than Worthington's throughout the POR, its performance nonetheless declined over the POR and it experienced operating losses starting in 2022.[39] It reported significant capital expenditures during the POR prior to its cessation of domestic production.[40]

Before Manchester ceased domestic production in 2023 to become solely an importer of subject merchandise, its ratio of subject imports to domestic production was relatively low from 2019 to 2023, during which time it also made substantial capital investments in its domestic operations, and it supports continuation of the orders.[41] Thus, during most of the POR, its primary interest appears to have been in domestic production. Furthermore, the record does not indicate that Manchester's domestic production operations benefitted from its subject imports to an extent that its inclusion in the domestic industry would skew industry data. To the contrary, Manchester's performance deteriorated over the POR and as Manchester indicated that it ceased domestic production due in part to subject import competition, [42] its performance during the POR is highly relevant to the Commission's

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[33] CR/PR at Table 3.5.

[34] CR/PR at Table 3.5. As previously discussed, Manchester ceased producing steel propane cylinders in September 2023. *Id*. at 1.3.

[35] CR/PR at Table 1.9.

[36] CR/PR at Table 3.8.

[37] CR/PR at Table 3.8.

[38] CR/PR at Tables 3.1, 3.9; Importer Questionnaire Response of Manchester at II-4; Worthington's Supplemental Response to the Notice of Institution (Sept. 5, 2024), Attach. 1 (Declaration of Jordan de Lima of Manchester) ("Manchester Declaration").

[39] CR/PR at Table 3.13. Manchester's operating income to net sales ratio was *** percent in 2019, *** percent in 2020, *** percent in 2021, *** percent in 2022, *** percent in 2023, and *** percent in 2024. CR at Table 3.13.

[40] Manchester reported capital expenditures of $*** in 2019, $*** in 2020, $*** in 2021, $*** in 2022, and $*** in 2023. CR at Table 3.15.

[41] U.S. Producer Questionnaire Response of Manchester at III-12b, III-13b.

[42] Manchester states that it was "unable to achieve sufficient profitability on its production and sales of the product, in significant part due to large, ongoing sales of imports from China and Thailand (Continued…)

assessment of the domestic industry's vulnerability, and its exclusion could mask injury to the domestic industry during the POR and likely injury in the future.

In light of these factors, and in the absence of any contrary argument, we find that appropriate circumstances do not exist to exclude Manchester from the domestic industry. Accordingly, consistent with our definition of the domestic like product, we again define the domestic industry as all domestic producers of propane cylinders.

III. Cumulation

A. Legal Standard

> With respect to five-year reviews, section 752(a) of the Tariff Act provides as follows: the Commission may cumulatively assess the volume and effect of imports of the subject merchandise from all countries with respect to which reviews under section 1675(b) or (c) of this title were initiated on the same day, if such imports would be likely to compete with each other and with domestic like products in the United States market. The Commission shall not cumulatively assess the volume and effects of imports of the subject merchandise in a case in which it determines that such imports are likely to have no discernible adverse impact on the domestic industry.[43]

Cumulation therefore is discretionary in five-year reviews, unlike original investigations, which are governed by section 771(7)(G)(i) of the Tariff Act.[44] The Commission may exercise its discretion to cumulate, however, only if the reviews are initiated on the same day, the Commission determines that the subject imports are likely to compete with each other and the domestic like product in the U.S. market, and imports from each such subject country are not likely to have no discernible adverse impact on the domestic industry in the event of revocation. Our focus in five-year reviews is not only on present conditions of competition, but also on likely conditions of competition in the reasonably foreseeable future.

(and new third country sources) at aggressive prices in the U.S. market, despite the imposition of the orders." Manchester Declaration. Manchester also stated that ***. Importer Questionnaire Response of Manchester at II-8. Manchester further explained that it ***. U.S. Producer Questionnaire Response of Manchester at III-9b.

[43] 19 U.S.C. § 1675a(a)(7).

[44] 19 U.S.C. § 1677(7)(G)(i); *see also*, *e.g.*, *Nucor Corp. v. United States*, 601 F.3d 1291, 1293 (Fed. Cir. 2010) (Commission may reasonably consider likely differing conditions of competition in deciding whether to cumulate subject imports in five-year reviews); *Allegheny Ludlum Corp. v. United States*, 475 F. Supp. 2d 1370, 1378 (Ct. Int'l Trade 2006) (recognizing the wide latitude the Commission has in selecting the types of factors it considers relevant in deciding whether to exercise discretion to cumulate subject imports in five-year reviews); *Nucor Corp. v. United States*, 569 F. Supp. 2d 1328, 1337-38 (Ct. Int'l Trade 2008).

The statute precludes cumulation if the Commission finds that subject imports from a country are likely to have no discernible adverse impact on the domestic industry.[45] Neither the statute nor the Uruguay Round Agreements Act ("URAA") Statement of Administrative Action ("SAA") provides specific guidance on what factors the Commission is to consider in determining that imports "are likely to have no discernible adverse impact" on the domestic industry.[46] With respect to this provision, the Commission generally considers the likely volume of subject imports and the likely impact of those imports on the domestic industry within a reasonably foreseeable time if the orders are revoked. Our analysis for each of the subject countries takes into account, among other things, the nature of the product and the behavior of subject imports in the original investigations.

B. The Original Investigations

In the original investigations, the Commission found a reasonable overlap of competition between and among the domestic like product and subject imports from China and Thailand.[47] The Commission therefore cumulated subject imports from China and Thailand for purposes of its material injury analysis.[48]

C. Arguments of the Parties

Worthington's Arguments. In these reviews, Worthington argues that the Commission should cumulate subject imports from China and Thailand, as it did in the original investigations.[49] With respect to the "no discernible adverse impact" analysis, Worthington argues that Chinese producers have the ability and incentive to substantially increase their exports to the U.S. market in the event of revocation.[50] With respect to Thailand, Worthington contends that the record demonstrates that Thai producers are export oriented and have the ability and incentive to substantially increase their exports to the U.S. market in the event of revocation.[51] It argues that subject imports from China and Thailand will each have a discernible adverse impact on the domestic industry following revocation of the orders.[52]

With respect to the analysis regarding a reasonable overlap of competition, Worthington argues that subject imports from both subject sources and the domestic like

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[45] 19 U.S.C. § 1675a(a)(7).

[46] SAA, H.R. Rep. No. 103-316, vol. I at 887 (1994).

[47] *Original Determinations*, USITC Pub. 4938 at 10.

[48] *Original Determinations*, USITC Pub. 4938 at 12.

[49] Worthington's Prehear. Br. at 6–25; Worthington's Posthearing Brief at 4–12. Worthington urges the Commission to take adverse inferences with respect to Chinese producers' likely behavior in the event of revocation because they have failed to adequately cooperate in these reviews. Worthington's Prehear. Br. at 8.

[50] Worthington's Prehear. Br. at 8–15.

[51] Worthington's Prehear. Br. at 16–20; Worthington's Posthear. Br. at 4–6.

[52] Worthington's Prehear. Br. at 8–20; Worthington's Posthear. Br. at 4–11; *see* Hearing Transcript, EDIS Doc. 850565 ("Hear. Tr.") at 42–43 (Rosenthal).

product are fungible, were sold in the same channels and geographic markets during the POR, and were simultaneously present in the market during the POR.[53] Worthington also argues that subject imports from China and Thailand are likely to compete under similar conditions of competition in the U.S. market in the event of revocation, notwithstanding differences in the applicable duties and tariff rates.[54] Worthington contends that subject imports from China and Thailand exhibited identical competitive behavior before the orders were imposed – underselling the domestic like product to gain market share – and would do so again after their revocation.[55]

SMPC's Arguments. SMPC argues that the Commission should not cumulate subject imports from Thailand because they are likely to have no discernible adverse impact on the domestic industry.[56] It contends that SMPC is *** and has neither the ability nor the incentive to increase its exports to the U.S. market in the event of revocation due to its limited excess capacity and insignificant inventories, and is unlikely to product shift. SMPC also contends that it focuses on non-U.S. export markets and that, even if the orders were revoked, it would still face a 25 percent Section 232 duty in the U.S. market.[57] While SMPC concedes that its exports to the United States have increased since the original investigations, it cites to a prior review in which the Commission found that a subject industry was unlikely to increase its exports to the United States substantially after revocation despite increased exports during the POR.[58]

SMPC also argues that subject imports from Thailand are unlikely to cause price effects in the event of revocation because, on a volume basis, subject imports from Thailand predominately oversold rather than undersold the domestic like product during the POR, and that this overselling became more significant as the POR progressed.[59]

In the alternative, SMPC argues that the Commission should not cumulate subject imports from China and Thailand because they are likely to compete under significantly different conditions of competition in the U.S. market in the event of revocation, given their significantly differing tariff treatment under IEEPA, Section 232, and Section 301.[60] SMPC also argues that subject imports from China will likely be unfairly traded while subject imports from Thailand will likely be fairly traded, as SMPC claims that the fact that subject imports from Thailand continued to enter the U.S. market while subject imports from China ceased after

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[53] Worthington's Prehear. Br. at 21–24.

[54] Worthington's Prehear. Br. at 24–25; Worthington's Posthear. Br. at 11–12, Exh. 1 at 7–19. Worthington distinguishes this from a quota that limits the absolute volume of subject imports from a country. Worthington's Posthear. Br. Exh. 1, at 13.

[55] Worthington's Posthear. Br. at 11–12.

[56] SMPC's Prehear. Br. at 3-5.

[57] SMPC's Prehear. Br. at 7–11; SMPC's Posthear. Br. at 5–10. SMPC also argues that there are no third-country trade barriers that would incentivize it to re-route cylinders originally intended for these third countries to the United States in the event of revocation. *Id*.

[58] SMPC's Prehearing Br. Exh. 1 at 1–5 (citing *Iron Metal Castings from India, Heavy Iron Construction Castings from Brazil, and Iron Construction Castings from Brazil, Canada, and China*, Inv. Nos. 303-TA-13; 701-TA-249; and 731-TA-262, 263 and 265 (Review), USITC Pub. 3247 (Oct. 1999)).

[59] SMPC's Prehear. Br. at 12–15.

[60] SMPC's Posthear. Br. at 4–5.

imposition of the orders demonstrates that imports from Thailand can compete fairly in the U.S. market.[61]

D. Analysis

In these reviews, the statutory threshold for cumulation is satisfied as all reviews were instituted on the same day: July 1, 2024.[62] We consider the following issues in deciding whether to exercise our discretion to cumulate the subject imports: (1) whether imports from any of the subject countries are precluded from cumulation because they are likely to have no discernible adverse impact on the domestic industry; (2) whether there is a likelihood of a reasonable overlap of competition among subject imports and the domestic like product; and (3) whether subject imports are likely to compete in the U.S. market under different conditions of competition.

1. Likelihood of No Discernible Adverse Impact

The statute precludes cumulation if the Commission finds that subject imports from a country are likely to have no discernible adverse impact on the domestic industry.[63] Neither the statute nor the Uruguay Round Agreements Act ("URAA") Statement of Administrative Action ("SAA") provides specific guidance on what factors the Commission is to consider in determining that imports "are likely to have no discernible adverse impact" on the domestic industry.[64] With respect to this provision, the Commission generally considers the likely volume of subject imports and the likely impact of those imports on the domestic industry within a reasonably foreseeable time if the orders are revoked. Our analysis for each of the subject countries takes into account, among other things, the nature of the product and the behavior of subject imports in the original investigations.

Based on the record, we do not find that subject imports from China or Thailand are likely to have no discernible adverse impact on the domestic industry in the event of revocation of the respective countervailing and antidumping duty orders.

China. During the original investigations, subject imports from China increased from *** pounds in 2016 to *** pounds in 2017, and then decreased to *** pounds in 2018.[65] As a share of apparent U.S. consumption, subject imports from China increased from *** percent in 2016 to *** percent in 2017, and then decreased to *** percent in 2018.[66]

In the final phase of the original investigations, the Commission received questionnaire responses from two Chinese producers/exporters, which accounted for approximately ***

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[61] SMPC's Prehear. Br. at 5–6; SMPC's Posthear. Br. at 2–3.

[62] *Steel Propane Cylinders From China and Thailand; Institution of Five-Year Reviews*, 89 Fed. Reg. 54531 (Int'l Trade Comm'n Jul. 1, 2024).

[63] 19 U.S.C. § 1675a(a)(7).

[64] SAA, H.R. Rep. No. 103-316, vol. I at 887 (1994).

[65] Confidential Original Staff Report, EDIS Doc. 830830 (July 3, 2019) ("Confidential Original Staff Report") at Table IV-2.

[66] Confidential Original Staff Report at Table IV-9.

percent of U.S. imports of steel propane cylinders from China in 2018, the final year of the POI.[67] These responding producers reported capacity of *** pounds, production of *** pounds, and a capacity utilization rate of *** percent in 2018.[68] Their exports as a share of their total shipments of steel propane cylinders ranged from *** percent to *** percent during the POI, while their exports to the United States as a share of total shipments ranged from *** percent to *** percent during the period.[69]

During the POR, subject imports from China declined by *** percent while under the disciplining effect of the orders, decreasing from *** pounds in 2019 to *** pounds in 2020 through 2023, then increasing to *** pounds in 2024.[70] As a share of apparent U.S. consumption, subject imports from China decreased from *** percent in 2019 to *** percent in 2020 through 2023, then increased to *** percent in 2024.[71]

There is limited information concerning the subject industry in China on the record of these reviews.[72] The responding Chinese producer reported that there are *** producers of steel propane cylinders in China.[73] Worthington provided publicly available information from Chinese producers of steel propane cylinders advertising their capacity and argues that the industry in China maintains a large production capacity and is export oriented.[74] The information available indicates that five producers/exporters in China are in good standing with the USDOT, and that four additional producers/exporters in China have received conditional USDOT approval for sales in the U.S. market, indicating that subject producers in China are positioned to increase their shipments to the United States.[75]

According to Global Trade Atlas ("GTA") data, exports from China of containers of iron or steel for compressed or liquified gas under HTS subheading 7311.00 – a category that includes steel propane cylinders and out-of-scope products – increased irregularly during the

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[67] CR/PR at 4.15.

[68] Confidential Original Staff Report at Table VII-3. These responding producers had the capacity to produce *** pounds, produced *** pounds, and had a capacity utilization rate of *** percent in 2016. *Id*. In 2017, they had the capacity to produce *** pounds, produced *** pounds, and had a capacity utilization rate of *** percent. *Id*.

[69] Confidential Original Staff Report at Table VII-3.

[70] *Derived from* CR at Table 4.1.

[71] CR/PR at Table C.1.

[72] CR/PR at 4.15–4.21. As discussed, while the Commission did receive a response to its foreign producer questionnaire from one Chinese producer, Daly Cylinder, this response was ***. *Id*. at 4.16, n.6.

[73] CR/PR at 4.16. As noted above, the Commission received a foreign producers' questionnaire from Daly Cylinder. This questionnaire left many unanswered questions and was missing substantive data, and so is generally not utilized in this report. However, some descriptions and information on the Chinese industry provided in its response have been included in the Commission's report for these reviews. CR/PR at 4.15, n.6.

[74] CR/PR at 4.15-4.16; Worthington's Prehear. Br. at 8–15.

[75] CR/PR at 4.16, Table 4.7. As discussed, all firms, including foreign producers, that produce steel propane cylinders for the U.S. market must be receive approval from the USDOT. *See*, *e.g.*, CR at 4.16. *** Foreign Producer Questionnaire Response of *** at II-11.

POR, increasing from 727.6 million pounds 2019 to 751.3 million pounds in 2020 and 1.1 billion pounds in 2021, decreasing to 917.6 million pounds in 2022, then increasing to 1.0 billion pounds in 2023 and 1.2 billion pounds in 2024.[76] China was the single largest global exporter of such merchandise during the POR,[77] and the United States was the single largest destination market for China's exports of such merchandise in 2024.[78] The GTA data also indicate that the average unit values ("AUVs") of China's exports of such merchandise to the United States were higher than the AUVs of its exports of such merchandise to third country markets throughout the POR, indicating that the United States is an attractive market for exports of these products.[79] [80]

In the original investigations, subject imports from China undersold the domestic like product in 26 of 48 (or 54.2 percent of) quarterly comparisons, corresponding to subject import sales of 2.0 million units (87.6 percent of the reported sales volume), at underselling margins ranging from 6.7 to 52.4 percent and averaging 30.1 percent.[81] In these reviews, subject imports from China oversold the domestic like product in all eight quarterly comparisons, corresponding to reported subject import sales of *** units, at overselling margins ranging from *** to *** percent and averaging *** percent.[82] We recognize that subject import prices during a POR while under the disciplining effect of an order are likely not representative of pricing likely to occur in the absence of the orders given the discipline of the orders, and in this case the very small volumes of imports from China during the POR.[83]

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[76] CR/PR at Table 4.8.

[77] CR/PR at Table 4.20.

[78] CR/PR at 4.17. After the United States, the Philippines, Poland, and India were the next largest destination markets for exports of these products from China in 2024. *Id*.

[79] CR/PR at Table 4.8. The AUVs of exports of these products to the United States were $1.27 in 2019, $1.31 in 2020, $1.65 in 2021, $1.60 in 2022, $1.59 in 2023, and $1.44 in 2024. By comparison, the AUVs of exports of these products to non-U.S. destination markets were $0.96 in 2019, $0.98 in 2020, and $1.09 in 2021, $1.18 in 2022, $1.11 in 2023, and $1.05 in 2024. *Id*.

[80] No third-country trade actions are currently applicable to steel propane cylinders from China. CR at 4.35. While the Philippines instituted a global safeguard investigation covering steel propane cylinders in 2023, the investigation was terminated in 2024. *Id*.

[81] Confidential Original Staff Report at Table V-13.

[82] CR/PR at Table 5.14. In the original investigations, the Commission requested that importers provide landed duty-paid values and quantities for imports used for internal consumption or retail sale. However, no such import purchase cost data were reported for steel propane cylinders from China. Confidential Original Staff Report at V-25. In these reviews, the Commission again requested such purchase cost data. One U.S. importer (*** reported import purchase cost data for imports from China for one pricing product (Pricing Product 4) for one quarter of the POR. CR/PR at 5.22 and Tables 5.11 and 5.17. *** purchase costs for subject imported Pricing Product 4 from China were *** than domestic prices for Pricing Product 4 in this one quarterly instance involving *** units of subject imports. *Id*.

[83] Imports from China totaled *** pounds from 2019-2024, as compared to *** pounds from 2016-2018. Compare id. at Table 4.1 with Confidential Original Staff Report at Table IV-2.

Steel propane cylinders originating in China are subject to a 25 percent *ad valorem* duty under Section 232,[84] a 25 percent *ad valorem* duty under Section 301, and a 20 percent *ad valorem* duty under IEEPA.[85] Thus, in total, as of the close of the record, steel propane cylinders originating in China are subject to a combined 70 percent *ad valorem* duty under these provisions.[86] Steel propane cylinders originating in China are not additionally subject to the "reciprocal" tariffs imposed under IEEPA.[87] Given the average margins of underselling by Chinese imports both during the POI and this POR, the large size of the industry in China and the substantial export volumes of similar merchandise from China, the attractiveness of the U.S. market to Chinese producers/exporters, and the uncertain duration and level of the IEEPA and Section 232 duties, we find that these additional duties on subject imports from China would not prevent subject imports from having a discernible adverse impact on the domestic industry if the orders were revoked.

In light of the foregoing, including the significant volume and market share of subject imports from China during the original investigations, the large size and exports of the subject industry in China, the information available indicating that the U.S. market remains attractive to Chinese producers, including the number of USDOT-certified, or soon to be certified, producers in China, and the underselling by subject imports from China in the original investigations, we find that subject imports from China would not likely have no discernible adverse impact on the domestic industry if the orders were revoked.

Thailand. During the original investigations, subject imports from Thailand increased from *** pounds in 2016 to *** pounds in 2017 and *** pounds in 2018.[88] As a share of apparent U.S. consumption, subject imports from Thailand increased from *** percent in 2016 to *** percent in 2017 and *** percent in 2018.[89]

In the final phase of the original investigations, the Commission received a questionnaire response from one Thai producer/exporter, SMPC, which accounted for *** U.S. imports of steel propane cylinder from Thailand in 2018.[90] SMPC reported capacity of *** pounds, production of *** pounds, and a capacity utilization rate of *** percent in 2018.[91] Its exports as a share of total shipments of steel propane cylinders ranged from *** percent to ***

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[84] After the closing of the record on June 29, 2025, the President issued Executive Order *Adjusting Imports of Aluminum and Steel Into the United States* on June 3, 2025, which increased Section 232 duties from 25 percent *ad valorem* to 50 percent *ad valorem*. Proclamation No. 10947, 90 Fed. Reg. 24199 (June 9, 2025).

[85] CR/PR at Table 1.8. As discussed further below in Section III.D.3, the IEEPA tariffs are subject to ongoing litigation and their duration remains uncertain at this time.

[86] CR/PR at Table 1.8.

[87] CR/PR at 1.15.

[88] Confidential Original Staff Report at Table IV-2.

[89] Confidential Original Staff Report at Table IV-9.

[90] CR/PR at 4.22.

[91] Confidential Original Staff Report at Table VII-8. SMPC had the capacity to produce *** pounds, produced *** pounds, and had a capacity utilization rate of *** percent in 2016. *Id*. In 2017, it had the capacity to produce *** pounds, produced *** pounds, and had a capacity utilization rate of *** percent. *Id*.

percent during the POI, while its exports to the United States as a share of total shipments ranged from *** percent to *** percent during the period.[92]

During the POR, subject imports from Thailand increased irregularly by *** percent, increasing from *** pounds in 2019 to *** pounds in 2020 and *** in 2021, decreasing to *** pounds in 2022 and *** pounds in 2023, then increasing to *** pounds in 2024.[93] As a share of apparent U.S. consumption, subject imports from Thailand increased irregularly by *** percentage points over the POR, increasing from *** percent in 2019 to *** percent in 2020 and 2021 and *** percent in 2022, decreasing to *** percent in 2023, and then increasing to *** percent in 2024.[94]

In these reviews, data concerning the subject industry in Thailand are based on the questionnaire response of Thai producer SMPC, which accounted for all exports from Thailand to the United States in 2024 and estimates that it accounted for *** percent of steel propane cylinder production in Thailand in 2024

The record indicates that the subject industry in Thailand has substantial capacity and unused capacity for production of steel propane cylinders. In its questionnaire response, SMPC reported that its practical steel propane cylinder production capacity was *** pounds in 2019, *** pounds in 2020, *** pounds in 2021, *** pounds in 2022, *** pounds in 2023, and *** pounds in 2024.[95] SMPC reported that it produced other products on the same equipment and machinery used to produce steel propane cylinders, with steel propane cylinders accounting for between *** percent and *** percent of its total production on the same equipment and machinery during the POR, and has the ability to shift production.[96] It reported that its steel propane cylinder production was *** pounds in 2019, *** pounds in 2020, *** pounds in 2021, *** pounds in 2022, *** pounds in 2023, and *** pounds in 2024.[97] SMPC reported that its practical steel propane cylinder capacity utilization rate was *** percent in 2019, *** percent in 2020, *** percent in 2021, *** percent in 2022, *** percent in 2023, and *** percent in 2024.[98]

Thus, in 2024, SMPC possessed excess practical capacity of *** pounds, equivalent to *** percent of apparent U.S. consumption that year, and could increase its production and exports to the United States further by shifting production on the same machinery from out-of-scope-products to in-scope cylinders.[99] SMPC also demonstrated the ability to ramp up production of steel propane cylinders quickly during the POR, as when it increased its

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[92] Confidential Original Staff Report at Table VII-8.

[93] *Derived from* CR at Table 4.1.

[94] CR/PR at Table C.1.

[95] CR/PR at Table 4.12.

[96] CR/PR at Tables 2.5, 4.17. SMPC reported that its installed production capacity was *** pounds in 2019 through 2021, and *** pounds in 2022 through 2024. *Id*. at Table 4.12.

[97] CR/PR at Table 4.12.

[98] CR/PR at Table 4.12. Worthington argues that the Commission should focus on capacity utilization based on SMPC's installed capacity rather than on its reported practical capacity. SMPC reported that its installed capacity utilization rate was *** percent in 2019, *** percent in 2020, *** percent in 2021, *** percent in 2022, *** percent in 2023, and *** percent in 2024. *Id*.

[99] Calculated from CR/PR at Tables 1.12, 4.12.

production by *** percent and increased its capacity utilization by *** percentage points from 2023 to 2024.

SMPC is highly export-oriented, with the United States an increasingly important market. SMPC's exports as a share of its total shipments of steel propane cylinders ranged from *** percent to *** percent during the POR.[100] According to GTA data, Thailand was a significant exporter of containers of iron or steel for compressed or liquified gas – a category that includes steel propane cylinders and out-of-scope products – and such exports from Thailand increased irregularly during the POR, increasing from 226.6 million pounds in 2019 to 267.8 million pounds in 2020, decreasing to 242.9 million pounds in 2021, 209.9 million pounds in 2022, and 204.6 million pounds in 2023, then increasing to 247.8 million pounds in 2024.[101]

The record indicates that the United States is an attractive market for the subject Thai industry. SMPC's exports to the United States accounted for between *** percent to *** percent of its total shipments of steel propane cylinders during the POR, and the GTA data indicate that the United States was the largest export destination for exports from Thailand of containers of iron or steel for compressed or liquified gas in every year of the POR.[102] The GTA data also indicate that the AUVs of Thai exports of these products to the United States were lower than the AUVs of Thai exports of these products to third country markets from 2019 through 2021,[103] but were higher than the AUVs of Thai exports to third country markets from 2022 through 2024.[104] SMPC's export AUVs to the United States were the highest or second-highest compared to other export destinations during 2022 through 2024, behind only the European Union.[105] According to information compiled by the Commission, two steel propane cylinder facilities in Thailand are in good standing with the USDOT, and one additional facility in Thailand has its good standing with the USDOT listed as "pending renewal."[106] [107]

In the original investigations, subject imports from Thailand undersold the domestic like product in 62 of 77 (or 80.5 percent of) quarterly comparisons, corresponding to reported subject import sales of 1.1 million units (86.7 percent of the reported sales volume), at

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[100] CR/PR Table 4.14.

[101] CR/PR at Table 4.18.

[102] *See* CR/PR at Tables 4.14, 4.15, 4.18. After the United States, Malaysia, South Africa, and the Philippines were the next largest destination markets for exports of these products from Thailand in 2024. *Id*. at 4.31.

[103] CR/PR at Table 4.18. The AUVs of exports of these products to the United States were $0.78 in 2019, $0.73 in 2020, and $0.83 in 2021. By comparison, the AUVs of exports of these products to non-U.S. destination markets were $0.95 in 2019, $0.86 in 2020, and $0.98 in 2021. *Id*.

[104] CR/PR at Table 4.18. The AUVs of exports of these products to the United States were $1.04 in 2022, $0.93 in 2023, and $0.84 in 2024. By comparison, the AUVs of exports of these products to non-U.S. destination markets were $0.95 in 2022, $0.85 in 2023, and $0.77 in 2024. *Id*.

[105] CR/PR at Table 4.15.

[106] CR/PR at Table 4.9.

[107] No third-country trade actions are currently applicable to steel propane cylinders from Thailand. CR/PR at 4.35. As discussed, while the Philippines instituted a provisional global safeguard measure covering steel propane cylinders in 2023, it terminated it in 2024. *Id*.

underselling margins ranging from 0.2 to 37.7 percent and averaging 12.3 percent.[108] In these reviews, subject imports from Thailand undersold the domestic like product in 84 of 139 (or 60.4 percent of) quarterly comparisons, corresponding to reported subject import sales of *** units (*** percent of the total reported sales volume), at underselling margins ranging from *** to *** percent and averaging *** percent.[109]

As of the closing of the record, steel propane cylinders originating in Thailand were subject to a 25 percent *ad valorem* duty under Section 232.[110] They are not subject to further additional duties under Section 301 or IEEPA.[111]

In light of the foregoing, including the significant and increasing volume and market share of subject imports from Thailand in the original investigations, the substantial and increasing presence of subject imports from Thailand during the POR, SMPC's large capacity, excess capacity, and exports, its documented ability to increase production significantly within a limited period of time, the attractiveness of the U.S. market for subject producers/exporters in Thailand, and the underselling by subject imports from Thailand during the original investigations and during the POR, we find that subject imports from Thailand would not likely have no discernible adverse impact on the domestic industry if the order is revoked.

We are unpersuaded by SMPC's argument that imports from Thailand would likely have no discernible adverse impact on the domestic industry if the order were revoked. Even with the order in place, subject imports from Thailand had a substantial and increasing market share over the POR, reaching *** percent in 2024.[112] Despite this sizeable volume of exports, SMPC still possessed substantial unused capacity in 2024, equivalent to *** percent of apparent U.S. consumption that year, based on reported practical capacity.[113] SMPC's ability to product shift

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[108] Confidential Original Staff Report at Table V-13.

[109] CR/PR at Table 5.14. As discussed, in the original investigations, the Commission requested that importers provide landed duty-paid values and quantities for imports used for internal consumption or retail sale. One U.S. importer reported such purchase cost data for imports from Thailand that accounted for *** percent of the value of imports from Thailand in 2018. Confidential Original Staff Report at V-25. The import purchase cost data collected in the original investigations indicated that the purchase costs for subject imports from Thailand were *** than domestic prices ***. *Id*. at Table V-11. In these reviews, one U.S. importer (*** reported import purchase cost data for imports from Thailand for one pricing product (Pricing Product 4) for three quarters of the POR. CR/PR at 5.22, Tables 5.11 and 5.17. *** purchase costs for subject imported Pricing Product 4 from Thailand were *** than domestic prices for Pricing Product 4 in *** quarterly instances involving *** units of subject imports, by *** percent. *Id*. at Tables 5.11 and 5.17. *** purchase costs for subject imported Pricing Product 4 from Thailand were *** than domestic prices for Pricing Product 4 in *** quarterly instances involving *** units of subject imports, at differentials ranging from *** to *** percent and averaging *** percent. *Id*.

[110] CR/PR at Table 1.8. After the closing of the record on June 29, 2025, the President issued Executive Order *Adjusting Imports of Aluminum and Steel Into the United States* on June 3, 2025, which increased Section 232 duties from 25 percent *ad valorem* to 50 percent *ad valorem*. Proclamation No. 10947, 90 Fed. Reg. 24199 (June 9, 2025).

[111] CR/PR at 1.15.

[112] CR/PR at Tables 4.10, C.1.

[113] CR/PR at Table 4.12.

would permit it to increase its production and exports to the United States still further. While subject imports from Thailand are now subject to duties under Section 232, these duties apply to imports of steel propane cylinders from all sources and therefore are not likely to limit imports from Thailand in particular relative to other import sources.[114] The record indicates that the U.S. market remains highly attractive to subject producers/exporters in Thailand, given the market share of subject imports from Thailand throughout the POR. Moreover, SMPC's high export AUVs for shipments of steel propane cylinders to the United States relative to other export destinations, and GTA data on exports of containers of iron or steel for compressed or liquified gas showing that the AUVs of Thailand's exports of such merchandise to the U.S. market were higher than the AUVs of its exports to third country markets during the 2022-2024 period, demonstrate the attractiveness of the U.S. market and provide subject producers/exporters in Thailand with an economic incentive to export to the United States after revocation.[115]

We are also unpersuaded by SMPC's argument that the facts in these reviews are similar to those in *Iron Metal Castings from India, Heavy Iron Constructions Castings from Brazil, and Iron Construction Castings from Brazil, Canada, and China ("Iron Metal Castings")*, in which the Commission found that subject imports from India were likely to have no discernible adverse impact on the domestic industry after revocation.[116] In that case, the Commission found that subject imports from India were unlikely to increase after revocation because they had already increased to well above the levels attained during the original investigations and were unlikely to have additional adverse price effects after revocation given that they already undersold the domestic like product with the orders in place.[117] As an initial matter, every Commission investigation is *sui generis*.[118] Moreover, the statute does not require that the volume or price effects of subject imports increase following revocation of the order for the Commission to find that subject imports would not likely have no discernible impact on the domestic industry following revocation.[119] In the current reviews, subject imports from Thailand were the largest source of import supply to the market in every year of the POR and undersold the domestic like product with respect to a substantial quantity of sales during the POR.[120] U.S. producer Manchester reported that subject imports from Thailand were part of the reason that it was

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[114] CR/PR at 1.15, Table 1.8.

[115] SMPC itself has characterized the U.S. market as a "***" export market. Foreign Producer Questionnaire Response of SMPC at III-5.

[116] *Iron Metal Castings*, Inv. Nos. 303-TA-13; 701-TA-249; and 731-TA-262, 263 and 265 (Review), USITC Pub. 3247 (Oct. 1999) at 13–14.

[117] *Iron Metal Castings*, USITC Pub. 3247 at 13.

[118] *See, e.g.*, *Cleo Inc. v. United States*, 501 F.3d 1291, 1299 (Fed. Cir. 2007) ("{E}ach injury investigation by the Commission 'is *sui generis*, involving a unique combination and interaction of many economic variables.' For that reason, prior determinations by the Commission with regard to one industry typically provide little guidance for later determinations with regard to different industries.") (internal citations omitted).

[119] *See* 19 U.S.C. § 1675a(a)(2), (3), and (7).

[120] CR/PR at Tables 5.14, C.1.

forced to cease domestic production.[121] The record thus indicates that subject imports from Thailand had a discernible adverse impact on the domestic industry during the POR. SMPC has the ability and incentive to continue to export and to increase its exports to the United States further if the order were revoked. Moreover, unlike the pattern of underselling by subject imports from India in *Iron Metal Castings*, the record of these reviews shows that underselling by subject imports from Thailand was less pervasive during the POR than during the original investigations in terms of both quarterly comparisons and reported sales volume, reflecting the disciplining effect of the order.

We disagree with SMPC that the reduced incidence of underselling by subject imports from Thailand during the POR indicates that these imports are unlikely to cause price effects if the order were revoked. As noted above, subject import prices during a POR while under the disciplining effects of an order are likely not representative of pricing likely to occur in the absence of the orders. Given the significant underselling by subject imports from Thailand during the original investigations, subject imports from Thailand would likely revert to their underselling behavior from the original investigations if the order were revoked, as a means of gaining market share in the U.S. market.[122]

Finally, while steel propane cylinders from Thailand are currently subject to Section 232 duties, we find that these duties would not prevent subject imports from Thailand from having a discernible adverse impact on the domestic industry, given their substantial presence in the U.S. market during the POR, SMPC's substantial capacity, including excess capacity, and dependance on exports to the U.S. market, the attractiveness of the U.S. market, and the significant underselling by subject imports from Thailand in the original investigations. As noted above, Section 232 duties apply to imports from all sources (which combined accounted for *** percent of apparent consumption in 2024) and therefore are not likely to limit imports from Thailand in particular, relative to other sources of import supply. In addition, Section 232 duties are not designed to have the disciplining effect on subject import prices that antidumping duty orders are designed to have.

2. Likelihood of a Reasonable Overlap of Competition

The Commission generally has considered four factors intended to provide a framework for determining whether subject imports compete with each other and with the domestic like

[121] *See* Importer Questionnaire Response of Manchester at II-4; Manchester Declaration.
[122] CR/PR at 1.10–1.12 and Tables 1.7.

product.[123] Only a "reasonable overlap" of competition is required.[124] In five-year reviews, the relevant inquiry is whether there likely would be competition even if none currently exists because the subject imports are absent from the U.S. market.[125]

Fungibility. In the original investigations, the Commission found 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.[126] The record in the current reviews indicates that imports from all three sources remain fungible. Most responding domestic producers, importers, and purchasers reported that imports from China and Thailand are always or frequently interchangeable with both each other and the domestic like product.[127] Similarly, most responding purchasers rated steel propane cylinders from each subject source as comparable to both each other and the domestic like product with respect to nearly all 15 purchasing factors.[128] Likewise, all responding domestic producers and a majority of

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[123] The four factors generally considered by the Commission in assessing whether imports compete with each other and with the domestic like product are as follows: (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 geographical markets of 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 subject imports are simultaneously present in the market with one another and the domestic like product. *See, e.g., Wieland Werke, AG v. United States*, 718 F. Supp. 50 (Ct. Int'l Trade 1989).

[124] *See Mukand Ltd. v. United States*, 937 F. Supp. 910, 916 (Ct. Int'l Trade 1996); *Wieland Werke,* 718 F. Supp. at 52 ("Completely overlapping markets are not required."); *United States Steel Group v. United States,* 873 F. Supp. 673, 685 (Ct. Int'l Trade 1994), *aff'd*, 96 F.3d 1352 (Fed. Cir. 1996). We note, however, that there have been investigations where the Commission has found an insufficient overlap in competition and has declined to cumulate subject imports. *See, e.g*., *Live Cattle from Canada and Mexico*, Inv. Nos. 701-TA-386 and 731-TA-812-13 (Preliminary), USITC Pub. 3155 at 15 (Feb. 1999), *aff'd sub nom, Ranchers-Cattlemen Action Legal Foundation v. United States*, 74 F. Supp. 2d 1353 (Ct. Int'l Trade 1999); *Static Random Access Memory Semiconductors from the Republic of Korea and Taiwan*, Inv. Nos. 731-TA-761-62 (Final), USITC Pub. 3098 at 13-15 (Apr. 1998).

[125] *See generally*, *Chefline Corp. v. United States*, 219 F. Supp. 2d 1313, 1314 (Ct. Int'l Trade 2002).

[126] In the original investigations, all responding domestic producers and majorities of responding importers and purchasers reported that steel propane cylinders from China and Thailand were always interchangeable with both each other and the domestic like product. *Id*. at 10. Moreover, purchasers reported that steel propane cylinders from all sources were comparable across the majority of purchasing factors, and nearly all U.S. shipments of steel propane cylinders produced in China, Thailand, and the United States consisted of 20- and 30-pound cylinders. *Original Determinations*, USITC Pub. 4938 at 10–11.

[127] CR/PR at Tables 2.14–2.16.

[128] CR/PR at Table 2.13. Specifically, most responding purchasers rated cylinders from the United States and China as comparable with respect to 12 of 15 purchasing factors, cylinders from the United States and Thailand as comparable with respect to 11 of 15 factors, and cylinders from China and Thailand as comparable with respect to all 15 purchasing factors. *Id*.

responding importers reported that factors other than price are only sometimes or never significant in steel propane cylinder purchasing decisions.[129] While a slight majority of responding purchasers (seven of 13) reported that factors other than price are always or frequently significant in purchasing decisions between cylinders from the United States and cylinders from Thailand, a majority of purchasers reported that they are only sometimes or never significant in purchasing decisions between cylinders from the United States and cylinders from China and between cylinders from China and cylinders from Thailand.[130]

The record also indicates that domestically produced steel propane cylinders and subject imports from both China and Thailand overlap with respect to product type. Twenty-pound cylinders accounted for the *** of the U.S. shipments of both domestically produced and subject imported cylinders from Thailand in 2024, and *** U.S. shipments of subject imported cylinders from China that year.[131] The Commission's pricing data similarly indicate an overlap in product type. Specifically, domestic producers reported sales of Pricing Products 2, 3, and 4 during the POR, as did importers of subject merchandise from both China and Thailand.[132]

Other evidence further corroborates that subject imports from each source are fungible with both each other and the domestic like product. All steel propane cylinders sold in the United States, regardless of source, must meet the same USDOT safety specifications.[133] Moreover, all steel propane cylinder production facilities that produce for the U.S. market, regardless of location, must be certified by the USDOT.[134]

Channels of Distribution. In the original investigations, the Commission found that subject imports from China and Thailand and the domestic like product were sold through overlapping channels of distribution during the POI, primarily to distributors and retailers.[135] In these reviews, subject imports from China and Thailand and the domestic like product continued to be sold through overlapping channels of distribution during the POR, primarily to distributors, retailers, and gas exchangers. A *** of U.S. shipments of the domestic like product were made to gas exchangers during the POR, as was a *** of U.S. shipments of subject imports from Thailand. Likewise, *** of U.S. shipments of subject imports from China went to gas exchangers in 2024. Moreover, U.S. shipments of the domestic like product and subject imports from both sources were also made to *** during the POR.[136]

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[129] CR/PR at Tables 2.17 and 2.18.

[130] CR/PR at Table 2.19.

[131] CR/PR at Table 4.2.

[132] CR/PR at Tables 5.5–5.7.

[133] CR/PR at 1.17.

[134] CR/PR at 1.17.

[135] *Original Determinations*, USITC Pub. 4938 at 11. The Commission recognized, however, that domestically produced cylinders were primarily sold to gas exchangers, whereas subject imports from China were primarily sold to distributors, and subject imports from Thailand were relatively evenly split between distributors, retailers, and RV manufacturers. *Id*.

[136] CR/PR at Table 2.3.

Geographic Overlap. In the original investigations, the Commission found that steel propane cylinders from all sources served a nationwide market.[137] In these reviews, domestically produced steel propane cylinders and subject imports from China and Thailand were all sold in the Midwest, Pacific Coast, and other regions. Domestically produced cylinders and subject imports from Thailand were also sold in the Northeast, Southeast, Central Southwest, and Mountain regions, and thus overlapped in all regions of the United States. Moreover, subject imports from China and Thailand overlapped with respect to borders of entry in 2024, with cylinders from both sources having entered the United States through all borders that year.[138]

Simultaneous Presence in Market. In the original investigations, the Commission found that steel propane cylinders from all sources were simultaneously present in the U.S. market during the POI.[139] In these reviews, the Commission's pricing data indicate that the domestic like product and subject imports from Thailand were present in every quarter of the POR, while subject imports from China were present in at least four of 24 quarters.[140]

Conclusion. The record indicates that there would likely be a reasonable overlap of competition between and among subject imports from China and Thailand, and the domestic like product if the orders were revoked. Specifically, the record of these reviews shows that the domestic like product and imports from each subject source are generally fungible. The record also shows that if the orders were revoked, domestically produced steel propane cylinders and subject imports from each source would likely be sold through similar channels of distribution and in overlapping geographic markets and would likely be simultaneously present in the U.S. market, as they were during the original investigations and POR. Consequently, we find that there would likely be a reasonable overlap of competition among subject imports from China and Thailand, and between subject imports from each source and the domestic like product, were the orders to be revoked.

3. Other Likely Conditions of Competition

We also find that the record in these reviews does not indicate that there would likely be significant differences in the conditions of competition between subject imports from China and Thailand. As discussed in section III.D.1 above, during the original investigations, the volumes and market shares of imports from China and Thailand were significant and subject imports from both countries undersold the domestic like product. As discussed in section III.D.2 above, the record also indicates that there would likely be a reasonable overlap of competition between imports from China and Thailand if the orders were revoked.

We are unpersuaded by SMPC's argument that subject imports from China and Thailand would likely compete under different conditions of competition in the event of revocation because subject imports from China will likely be unfairly traded while subject imports from

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[137] *Original Determinations*, USITC Pub. 4938 at 11.
[138] CR/PR at Table 4.3.
[139] *Original Determinations*, USITC Pub. 4799 at 15.
[140] CR/PR at Tables 5.4–5.10.

Thailand will likely be fairly traded as demonstrated by their different import trends during the POR and SMPC's pricing behavior during the POR.[141] Contrary to SMPC's argument, Commerce found positive dumping margins for SMPC in every administrative review of the antidumping order and has determined that dumping by subject imports from both China and Thailand is likely to recur if the relevant orders were revoked.[142] Moreover, subject producers'/exporters' behavior during the POR while under the disciplining effect of antidumping duty orders is of limited relevance to their likely behavior following revocation of the orders.

While we recognize that subject imports from China are subject to higher additional duties than subject imports from Thailand under IEEPA and Section 301, we do not find that the likely effects of these duties on subject imports from China would cause them to compete under different conditions of competition than subject imports from Thailand following revocation of the orders to warrant not cumulating. First, the Commission notes that the applicable IEEPA tariffs are currently subject to ongoing litigation after being enjoined by the Court of International Trade, making their applicability to subject imports from China after revocation uncertain at this time.[143] Moreover, as discussed above, all imports of propane cylinders are subject to the same Section 232 duties, resulting in no difference to the likely conditions of competition between subject countries with respect to those duties. Most responding firms reported that section 301 duties had no effect on subject imports from China, although six responding purchasers reported that they had an effect.[144] Despite the extra duties on subject imports from China, GTA data indicate that there have been substantial Chinese exports to the United States of containers of iron or steel for compressed or liquified gas, including steel propane cylinders and out-of-scope products. Thus, the section 301 tariffs have not prevented imports of products similar to subject imports, and the record otherwise indicates that the large subject industry in China would be incentivized to direct exports of steel propane cylinders to the attractive United States market if the AD/CVD orders were revoked. Furthermore, these applicable duties would not impose a quantitative limit on the volume of subject imports from China nor preclude Chinese exporters or U.S. importers from adjusting their prices to compensate for these additional duties. Indeed, the AUVs of subject imports from China were lower than the AUVs of subject imports from Thailand in 2019 and 2024, notwithstanding the applicability of section 301 duties to subject imports from China.[145] Subject producers in both countries would have the ability and incentive to resume their aggressive pricing behavior from the original investigation to increase their exports to the

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[141] SMPC Prehear. Br. at 5–6.

[142] *See Steel Propane Cylinders from the People's Republic of China and Thailand: Final Results of the Expedited Sunset Reviews of the Antidumping Duty Orders*, 89 Fed. Reg. 88727 (Nov. 8, 2024).

[143] *V.O.S. Selections Inc., v. Trump*, Case No. 15-1812, Order (Fed. Cir. May 29, 2025), EDIS Doc. 852314 (granting stay of Ct. of Int'l Trade permanent injunction of IEEPA tariffs); *V.O.S. Selections Inc., v. Trump*, Case Nos. 25-66, 25-77, slip op. 25-66 (Ct. Int'l Trade May 28, 2025), EDIS Doc. 852267 (permanently enjoining IEEPA tariffs).

[144] CR/PR at Table 2.1.

[145] CR/PR at Table C.1. Pricing data also shows that reported sales prices for subject imports from China were similar to those for subject imports from Thailand with respect to products 3 and 4, though higher with respect to product 1. *Id.* at Table 5.12.

attractive U.S. market. In light of these factors, we find that subject imports from China and Thailand would likely compete under similar conditions of competition if the orders were revoked.

In sum, based on the record of these reviews, we do not find differences in the likely conditions of competition that would warrant exercising our discretion to not cumulate subject imports from China and Thailand.

4. Conclusion

We determine that subject imports from China and Thailand, considered individually, are not likely to have no discernible adverse impact on the domestic industry in the event of revocation. We also find that there would likely be a reasonable overlap of competition between and among subject imports from each country and the domestic like product if the orders were revoked. Finally, we find that subject imports from each subject country would be likely to compete under similar conditions of competition upon revocation of the orders. Accordingly, we exercise our discretion to cumulate subject imports from China and Thailand for purposes of our analysis in these reviews with respect to steel propane cylinders.

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

A. Legal Standards

In a five-year review conducted under section 751(c) of the Tariff Act, Commerce will revoke an antidumping or countervailing duty order unless: (1) it makes a determination that dumping or subsidization is likely to continue or recur and (2) the Commission makes a determination that revocation of the antidumping or countervailing duty order "would be likely to lead to continuation or recurrence of material injury within a reasonably foreseeable time."[146] The SAA states that "under the likelihood standard, the Commission will engage in a counterfactual analysis; it must decide the likely impact in the reasonably foreseeable future of an important change in the status quo – the revocation or termination of a proceeding and the elimination of its restraining effects on volumes and prices of imports."[147] Thus, the likelihood standard is prospective in nature.[148] The U.S. Court of International Trade has found that

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[146] 19 U.S.C. § 1675a(a).

[147] SAA at 883-84. The SAA states that "{t}he likelihood of injury standard applies regardless of the nature of the Commission's original determination (material injury, threat of material injury, or material retardation of an industry). Likewise, the standard applies to suspended investigations that were never completed." *Id*. at 883.

[148] While the SAA states that "a separate determination regarding current material injury is not necessary," it indicates that "the Commission may consider relevant factors such as current and likely (Continued…)

"likely," as used in the five-year review provisions of the Act, means "probable," and the Commission applies that standard in five-year reviews.[149]

The statute states that "the Commission shall consider that the effects of revocation or termination may not be imminent, but may manifest themselves only over a longer period of time."[150] According to the SAA, a "'reasonably foreseeable time' will vary from case-to-case, but normally will exceed the 'imminent' timeframe applicable in a threat of injury analysis in original investigations."[151]

Although the standard in a five-year review is not the same as the standard applied in an original investigation, it contains some of the same fundamental elements. The statute provides that the Commission is to "consider the likely volume, price effect, and impact of imports of the subject merchandise on the industry if the orders are revoked or the suspended investigation is terminated."[152] It directs the Commission to take into account its prior injury determination, whether any improvement in the state of the industry is related to the order or the suspension agreement under review, whether the industry is vulnerable to material injury if an order is revoked or a suspension agreement is terminated, and any findings by Commerce regarding duty absorption pursuant to 19 U.S.C. § 1675(a)(4).[153] The statute further provides that the presence or absence of any factor that the Commission is required to consider shall not necessarily give decisive guidance with respect to the Commission's determination.[154]

In evaluating the likely volume of imports of subject merchandise if an order under review is revoked and/or a suspended investigation is terminated, the Commission is directed

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continued depressed shipment levels and current and likely continued {sic} prices for the domestic like product in the U.S. market in making its determination of the likelihood of continuation or recurrence of material injury if the order is revoked." SAA at 884.

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

[150] 19 U.S.C. § 1675a(a)(5).

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

[152] 19 U.S.C. § 1675a(a)(1).

[153] 19 U.S.C. § 1675a(a)(1). Commerce has not made any duty absorption findings since the imposition of the orders. CR/PR at LDWP 1.21 n.24.

[154] 19 U.S.C. § 1675a(a)(5). Although the Commission must consider all factors, no one factor is necessarily dispositive. SAA at 886.

to consider whether the likely volume of imports would be significant either in absolute terms or relative to production or consumption in the United States.[155] In doing so, the Commission must consider "all relevant economic factors," including four enumerated factors: (1) any likely increase in production capacity or existing unused production capacity in the exporting country; (2) existing inventories of the subject merchandise, or likely increases in inventories; (3) the existence of barriers to the importation of the subject merchandise into countries other than the United States; and (4) the potential for product shifting if production facilities in the foreign country, which can be used to produce the subject merchandise, are currently being used to produce other products.[156]

In evaluating the likely price effects of subject imports if an order under review is revoked and/or a suspended investigation is terminated, the Commission is directed to consider whether there is likely to be significant underselling by the subject imports as compared to the domestic like product and whether the subject imports are likely to enter the United States at prices that otherwise would have a significant depressing or suppressing effect on the price of the domestic like product.[157]

In evaluating the likely impact of imports of subject merchandise if an order under review is revoked and/or a suspended investigation is terminated, the Commission is directed to consider all relevant economic factors that are likely to have a bearing on the state of the industry in the United States, including but not limited to the following: (1) likely declines in output, sales, market share, profits, productivity, return on investments, and utilization of capacity; (2) likely negative effects on cash flow, inventories, employment, wages, growth, ability to raise capital, and investment; and (3) likely negative effects on the existing development and production efforts of the industry, including efforts to develop a derivative or more advanced version of the domestic like product.[158] All relevant economic factors are to be considered within the context of the business cycle and the conditions of competition that are distinctive to the industry. As instructed by the statute, we have considered the extent to which any improvement in the state of the domestic industry is related to the orders under review and whether the industry is vulnerable to material injury upon revocation.[159]

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[155] 19 U.S.C. § 1675a(a)(2).

[156] 19 U.S.C. § 1675a(a)(2)(A-D).

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

[158] 19 U.S.C. § 1675a(a)(4).

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

B. Conditions of Competition and the Business Cycle

In evaluating the likely impact of the subject imports on the domestic industry if an order is revoked, the statute directs the Commission to consider all relevant economic factors "within the context of the business cycle and conditions of competition that are distinctive to the affected industry."[160] The following conditions of competition inform our determinations.

1. Demand Conditions

Original Investigations. In the original investigations, the Commission found that demand for steel propane cylinders was derived from demand for the products in which they were used, including barbecue grills, outdoor heat lamps, and RVs. It also found that unusually cold weather, power outages, and natural disasters such as hurricanes could spike demand for steel propane cylinders. The record indicated that apparent U.S. consumption of steel propane cylinders steadily increased from 2016 to 2018.[161]

The Commission observed that the U.S. market for steel propane cylinders could be divided into four segments: retailers, gas exchangers, RV manufacturers, and distributors. As the Commission explained, retailers purchased steel propane cylinders for resale to customers. Gas exchangers purchased 20-pound cylinders, filled them with propane, and offered the filled cylinders to customers in exchange for their empty cylinders and a fee, typically from cages located outside retail establishments. RV manufacturers purchased 20- and 30-pound cylinders for assembly into RVs, while distributors primarily served RV manufacturers.[162]

Current Reviews. Demand for steel propane cylinders continues to be driven by the products in which they are used, including gas grills, outdoor heaters, firepits, and RVs.[163] According to Worthington and SMPC, demand increased sharply during the 2019-2021 period as the COVID-19 pandemic intensified and people increasingly cooked and socialized outdoors, and then fell from 2021 to 2024 as the pandemic waned.[164] Most responding producers, importers, and purchasers reported that demand fluctuated upward during the POR.[165] Although Worthington opines that future demand is "unlikely to show any notable improvement" and SMPC notes "softening demand" in the United States, most responding producers and importers reported that demand is likely to remain stable or fluctuate upwards in the near future, while responding purchasers were divided on the question.[166]

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[160] 19 U.S.C. § 1675a(a)(4).

[161] *Original Determinations*, USITC Pub. 4938 at 15. Apparent U.S. consumption increased from *** pounds in 2016 to *** pounds in 2017 and *** pounds in 2018, a level *** percent higher than in 2016. Confidential Original Determinations, EDIS Doc. 830831 at 21.

[162] *Original Determinations*, USITC Pub. 4938 at 15.

[163] CR/PR at 2.1, 2.8; Worthington's Prehear. Br. at 25; SMPC's Prehear. Br. at 8.

[164] Worthington's Prehear. Br. at 25; SMPC's Prehear. Br. at 8.

[165] CR/PR at Table 2.6

[166] CR/PR at 2.8, Table 2.7; Worthington's Prehear. Br. at 26. Two responding purchasers reported expecting U.S. demand to increase steadily or fluctuate up, three reported expecting U.S. (Continued…)

As in the original investigations, purchases of steel propane cylinders continue to be divided into different market segments, including RV manufacturers, gas exchangers, distributors, and retailers.[167] U.S. producers sold primarily to gas exchangers, while importers of subject merchandise reported shipments primarily to retailers, gas exchangers, and other end users.[168]

Apparent U.S. consumption fluctuated over the POR, increasing from 2019 to 2022 then decreasing through 2024 to levels slightly below those in 2019. Specifically, apparent U.S. consumption increased from 140.0 million pounds in 2019 to 196.7 million pounds in 2020 and 208.7 million pounds in 2021, before declining to 200.2 million pounds in 2022, 158.9 million pounds in 2023, and 133.0 million pounds in 2024, a level 5.0 percent lower than in 2019.[169]

2. Supply Conditions

Original Investigations. In the original investigations, the domestic industry was the largest source of supply to the U.S. market throughout the POI, although its market share declined from 2016 to 2017, and remained essentially flat from 2017 to 2018.[170] The Commission noted that the domestic industry comprised Worthington and Manchester and that both firms reported substantial unused capacity throughout the POI.[171]

Cumulated subject imports were the second largest source of supply to the U.S. market during the POI, and their market share increased from 2016 to 2017 and remained essentially flat from 2017 to 2018.[172] Nonsubject imports were the smallest source of supply to the U.S. market during the POI, and their market share remained the same in each year of the period.[173]

Current Reviews. The domestic industry was the largest source of supply from 2019 to 2023 and was the second largest source of supply in 2024.[174] The domestic industry's share of apparent U.S. consumption declined irregularly during the POR, declining from *** percent in

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demand to remain stable, and seven reported expecting U.S. demand to decline steadily or fluctuate down. CR/PR at Table 2.7.

[167] CR/PR at 1.24.

[168] CR/PR at 2.2.

[169] CR/PR at Table 1.12.

[170] *Original Determinations*, USITC Pub. 4938 at 16. During the POI, the domestic industry's share of the U.S. steel propane cylinder market was *** percent in 2016, *** percent in 2017, and *** percent in 2018. Confidential Original Determinations, EDIS Doc. 830831 at 22.

[171] *Original Determinations*, USITC Pub. 4938 at 16.

[172] *Original Determinations*, USITC Pub. 4938 at 16. During the POI, cumulated subject imports' share of the U.S. steel propane cylinder market was *** percent in 2016, *** percent in 2017, and *** percent in 2018. Confidential Original Determinations, EDIS Doc. 830831 at 22.

[173] *Original Determinations*, USITC Pub. 4938 at 16. Nonsubject imports' share of the U.S. steel propane cylinder market remained at *** percent in each year of the POI. Confidential Original Determinations, EDIS Doc. 830831 at 23. Responding importers only reported nonsubject imports from one source, Portugal, during the POI. *Original Determinations*, USITC Pub. 4938 at 16.

[174] CR/PR at Table 1.12.

2019 to *** percent in 2020, *** percent in 2021, and *** percent in 2022, then increasing to *** percent in 2023, and then declining to *** percent in 2024.[175]

As discussed in section II.B.2 above, Manchester, one of two U.S. producers, ceased domestic production in 2023. Worthington reported ***.[176] Several purchasers reported being placed on allocation by Worthington.[177] Similarly, 12 of 14 responding purchasers reported domestic supply constraints during the POR.[178] Nevertheless, the domestic industry reported substantial excess practical capacity throughout the POR.[179]

Cumulated subject imports were the second largest source of supply from 2019 to 2023 and the largest source of supply in 2024. Cumulated subject imports' share of apparent U.S. consumption irregularly increased over the POR, increasing from *** percent in 2019 to *** percent in 2020 and 2021 and *** percent in 2022, decreasing to *** percent in 2023, and then increasing to *** percent in 2024.[180]

Nonsubject imports were the third largest source of supply to the U.S. market throughout the POR, although their share of apparent U.S. consumption significantly increased over the period. Specifically, nonsubject imports' share of apparent U.S. consumption increased from *** percent in 2019 to *** percent in 2020, *** percent in 2021, *** percent in 2022, *** percent in 2023, and *** percent in 2024.[181] The largest sources of nonsubject imports during the POR were ***.[182]

3. Substitutability and Other Conditions

Original Investigations. The Commission found that there was a moderate-to-high degree of substitutability between the domestic like product and subject imports and that price was an important factor in purchasing decisions. In doing so, the Commission noted that all responding domestic producers and majorities of responding importers and purchasers reported that steel propane cylinders from both China and Thailand were always interchangeable with the domestic like product, and that 16 of 17 purchasers reported that price was a very important factor in their purchasing decisions.[183]

The Commission found that domestically produced cylinders were primarily sold from inventories, while subject imports were primarily produced-to-order. It also observed that domestically produced cylinders were primarily sold under ***, while subject imports were primarily sold under short term contracts.[184]

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[175] CR/PR at Table 1.12.

[176] CR/PR at 3.3, Table 3.2; Worthington's Prehear. Br. 30–31.

[177] CR/PR at 2.7.

[178] CR/PR at 2.7.

[179] CR/PR at Table 3.3.

[180] CR/PR at Table 1.12.

[181] CR/PR at Table 1.12.

[182] CR/PR at 2.7.

[183] *Original Determinations*, USITC Pub. 4938 at 17.

[184] *Original Determinations*, USITC Pub. 4938 at 18; Confidential Original Determinations, EDIS Doc. 830831 at 26.

The Commission found that the primary raw material for production of steel propane cylinders was flat-rolled steel coil (grade 4130 steel). The Commission observed that no pricing index was available for this product but noted that the record indicated that the price of hot-rolled coil moved in tandem with the price of grade 4130 steel. During the POI, the price of hot-rolled coil more than doubled from 2016 to 2018.[185]

Finally, the Commission observed that steel propane cylinders from China were subject to Section 301 duties. It noted that 12 of 15 responding market participants reported that these duties had increased the price of steel propane cylinders in the U.S market.[186]

Current Reviews. We find that there is a high degree of substitutability between domestically produced steel propane cylinders and subject imports.[187] As discussed in section III.D.2 above, most responding domestic producers, importers, and purchasers reported that subject imports from China and Thailand are always or frequently interchangeable with the domestic like product.[188] Similarly, most responding purchasers rated steel propane cylinders from China and Thailand as comparable to the domestic like product with respect to nearly all of 15 enumerated purchasing factors.[189] Furthermore, purchasers reported little preference for particular country of origin or producers, and limited significant purchasing factors other than price.[190]

We also find that price is the most important factor in purchasing decisions for steel propane cylinders. Responding purchasers most frequently ranked price as among the top three factors they consider in their purchasing decisions and as the first-most important purchasing factor.[191] All 13 responding firms identified price as a "very important" factor, along with availability, delivery time, product consistency, meeting industry quality standards, and reliability.[192] All responding domestic producers and a majority of responding importers reported that factors other than price are only sometimes or never significant in steel propane cylinder purchasing decisions.[193] Although a slight majority of responding purchasers (seven of 13) reported that factors other than price are always or frequently significant in purchasing decisions between cylinders from the United States and Thailand,[194] a majority reported that such factors are only sometimes or never significant in purchasing decisions between cylinders from the United States and China.[195]

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[185] *Original Determinations*, USITC Pub. 4938 at 19.

[186] *Original Determinations*, USITC Pub. 4938 at 19.

[187] CR/PR at 2.11.

[188] CR/PR at Tables 2.14–2.16.

[189] CR/PR at Table 2.13. Specifically, most responding purchasers rated cylinders from the United States and China as comparable with respect to 12 of 15 purchasing factors, cylinders from the United States and Thailand as comparable with respect to 11 of 15 factors, and cylinders from China and Thailand as comparable with respect to all 15 purchasing factors. *Id*.

[190] CR/PR at 2.11.

[191] CR/PR at Table 2.9.

[192] CR/PR at Table 2.10.

[193] CR/PR at Tables 2.17 and 2.18.

[194] CR/PR at Table 2.19.

[195] CR/PR at Table 2.19.

Eight of 14 responding purchasers require their suppliers to be certified to sell them steel propane cylinders and reported that no supplier had lost its certification during the POR.[196] As discussed above, all cylinders, regardless of source, must meet the same USDOT standards. Many global producers have achieved this certification, including five producers in China with four more having conditional approval or pending approval, and two producers in Thailand with one pending renewal.[197] Producers in India, Mexico, Portugal, South Korea, Taiwan, Turkey, the United Kingdom, and Vietnam are also in good standing or have conditional approval with USDOT.[198]

As discussed above in section III.D.2, in these reviews, subject imports from China and Thailand and the domestic like product were sold primarily to distributors, retailers, and gas exchangers. A *** of U.S. shipments of the domestic like product were made to gas exchangers during the POR, as was a *** of U.S. shipments of subject imports from Thailand.[199] Likewise, an *** of U.S. shipments of subject imports from China went to gas exchangers in 2024. [200]

The record indicates that propane cylinders were primarily sold from inventory during the POR. U.S. producers reported that *** percent of their commercial U.S. shipments were from inventories, with lead times averaging *** days.[201] U.S. importers reported that *** percent of their commercial U.S. shipments were from inventories, with lead times averaging *** days from U.S. inventories and *** days from foreign inventory.[202]

The substantial majority of U.S. producers' sales during the POR were made via annual contracts, representing *** percent of their commercial U.S. shipments, followed by spot sales, at *** percent, and short term contracts, at *** percent.[203] U.S. importers reported selling a substantial majority sales via short-term contracts, representing *** percent of their commercial U.S. shipments, followed by annual contracts, at *** percent, and spot sales, at *** percent.[204]

Raw materials represented the largest share of the domestic industry's cost of goods sold ("COGS") throughout the POR.[205] U.S. producers reported that prices of raw materials fluctuated upwards or increased steadily during the POR, and anticipate that prices will continue to fluctuate upwards.[206] The primary raw material for steel propane cylinders is flat hot-rolled steel band (grade 4130 steel).[207] Hot-rolled steel band prices fluctuated within a narrow range from 2019 to 2021, increased significantly from 2021 to 2022, then fluctuated

[196] CR/PR at 2.13.
[197] CR/PR at Table 4.19.
[198] CR/PR at Table 4.19.
[199] CR/PR at Table 2.3.
[200] CR/PR at Table 2.3.
[201] CR/PR at 2.13.
[202] CR/PR at 2.13.
[203] CR/PR at 5.4, Table 5.3.
[204] CR/PR at 5.4, Table 5.3.
[205] CR/PR at Table 3.11.
[206] CR/PR at 5.1.
[207] CR/PR at 5.1.

downwards from 2022 through the end of 2024 to level slightly lower than in the beginning of 2019.[208] Seven out of 10 purchasers reported that raw material costs affected contracts.[209]

As discussed in sections III.D.1 and III.D.3 above, as of the closing of the record, steel propane cylinders originating in China and Thailand were subject to a 25 percent *ad valorem* duty under Section 232, and steel propane cylinders from China were subject to a 25 percent *ad valorem* duty under Section 301 and a 20 percent *ad valorem* duty under IEEPA.[210] Thus, as of the closing of the record, subject imports from China were subject to an additional 70 percent *ad valorem* duty while subject imports from Thailand were subject to an additional 25 percent *ad valorem* duty.[211]

C. Likely Volume of Subject Imports

1. The Original Investigations

In the original investigations, the Commission found that the volume of cumulated subject imports, and the increase in that volume, were significant in both absolute terms and relative to apparent U.S. consumption.[212] In rejecting respondents' argument that the Commission should discount the volume of subject merchandise imported by Manchester, the Commission stated that, consistent with the statute and prior Commission determinations, it would consider the significance of all subject imports in its volume analysis.[213]

2. The Current Reviews

As discussed above, despite the disciplining effects of the orders, cumulated subject imports maintained a continuous, and growing, presence in the U.S. market during the POR. While under the disciplining effect of the orders, cumulated subject import volume increased irregularly by *** percent during the POR, increasing from *** pounds in 2019 to *** pounds in 2020 and *** pounds in 2021, decreasing to *** pounds in 2022 and *** pounds in 2023, then increasing to *** pounds in 2024.[214] Cumulated subject imports as a share of apparent U.S.

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[208] CR/PR at Table 5.1 and Figure 5.1.

[209] CR/PR at 5.5.

[210] CR/PR at Table 1.8.

[211] After the closing of the record on June 29, 2025, the President issued Executive Order *Adjusting Imports of Aluminum and Steel Into the United States* on June 3, 2025, which increased Section 232 duties from 25 percent *ad valorem* to 50 percent *ad valorem*. Proclamation No. 10947, 90 Fed. Reg. 24199 (June 9, 2025).

[212] *Original Determinations*, USITC Pub. 4938 at 20. Cumulated subject imports increased from *** pounds in 2016 to *** pounds in 2017 and *** pounds in 2018. Confidential Original Determinations, EDIS Doc. 830831 at 29. As a share of apparent U.S. consumption, cumulated subject imports increased from *** percent in 2016 to *** percent in 2017, then fell slightly to *** percent in 2018. *Id*.

[213] *Original Determinations*, USITC Pub. 4938 at 20, n.113.

[214] *Derived from* CR/PR at Table 4.1.

consumption increased irregularly by *** percentage points during the POR, increasing from *** percent in 2019 to *** percent in 2020 and 2021 and *** percent in 2022, decreasing to *** percent in 2023, and then increasing to *** percent in 2024.[215]

The record indicates that subject foreign producers have the ability and incentive to export significant volumes of steel propane cylinders to the U.S. market if the orders were revoked. There is limited information on the record regarding the industry in China as no Chinese producer provided a complete questionnaire response in these reviews. According to Worthington, there are at least ten producers of subject merchandise in China while the one responding Chinese producer reported that there are *** Chinese producers of steel propane cylinders, and the information available indicates that subject Chinese producers possessed large and increasing capacities during the POR.[216] The record also indicates that nine subject producers in China are in good standing or have conditional approval by USDOT to ship subject merchandise to the United States.[217]

As discussed in section III.D.1 above, SMPC reported that its practical steel propane cylinder production capacity declined irregularly from *** pounds in 2019 to *** pounds in 2024, while its steel propane cylinder production increased irregularly from *** pounds in 2019 to *** pounds in 2024, resulting in an increase in its capacity utilization rate from *** percent in 2019 to *** percent in 2024.[218] Nevertheless, in 2024, SMPC possessed excess practical capacity of *** pounds, equivalent to *** percent of apparent U.S. consumption that year. Furthermore, SMPC reported producing other products on the same equipment and machinery used to produce steel propane cylinders and the ability to shift production, and would therefore have the ability to increase production of steel propane cylinders by switching production from out-of-scope merchandise produced the same equipment.[219] SMPC also demonstrated the ability to quickly ramp up production of steel propane cylinders during the POR, as when it increased its production by *** percent and increased its capacity utilization by *** percentage points from 2023 to 2024.[220]

SMPC reported that its end-of-period inventories increased irregularly during the POR, increasing from *** pounds in 2019 to *** pounds in 2020 and *** pounds in 2021, declining to *** pounds in 2022, increasing to *** pounds in 2023, and declining to *** pounds in 2024, a level *** percent higher than in 2019.[221] As a share of total shipments, SMPC's end-of-period inventories increased from *** percent in 2019 to *** percent in 2020 and *** percent in 2021, declined to *** percent in 2022, increased to *** percent in 2023, and declined to ***

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[215] CR/PR at Table C.1.

[216] CR/PR at 4.16; Worthington's Prehear. Br. at 11–12; Worthington's NOI Response at 8–9.

[217] CR/PR at Table 4.7.

[218] CR/PR at Table 4.12. SMPC also reported expansion ***. CR/PR at Table 4.11. In 2023, SMPC announced plans to upgrade its cylinder production process to speed up and expand production and export shipments. *Id.* at 4.22; Worthington's NOI Response at 10. Worthington reports that there are at least four other producers of steel propane cylinders in Thailand. Worthington's NOI Response at 9–10.

[219] CR/PR at Tables 2.5, 4.17; Foreign Producer Questionnaire Response of SMPC at II-4.

[220] *Derived from* CR/PR at Tables 1.12, 4.12.

[221] CR/PR at Table 4.14.

percent in 2024, a level *** that of 2019.[222] In 2024, SMPC's end-of-period inventories were equivalent to *** percent of apparent U.S. consumption.[223]

The record also shows that subject producers are large exporters and export oriented. SMPC's reported export shipments increased irregularly over the POR, increasing from *** pounds in 2019 to *** pounds in 2020, then decreasing to *** pounds in 2021, *** pounds in 2022, *** pounds in 2023, then increasing again to *** pounds in 2024, a level *** percent higher than in 2019.[224] SMPC's exports as a share of total shipment increased irregularly from *** percent in 2019 to *** percent in 2024, while its exports to the United States as a share of total exports increased irregularly from *** percent to *** percent.[225] With respect to China, GTA data concerning exports of containers of iron or steel for compressed or liquefied gas, including steel propane cylinders and out-of-scope products, indicate that China's global exports of such merchandise increased by 59 percent over the POR, from 727.6 million pounds in 2016 to 1.2 billion pounds in 2024, while exports to the United States increased by almost 74 percent, from 67.9 million pounds in 2019 to 117.9 million pounds in 2024.[226] China was by far the world's largest exporter of this product category.[227]

The record also indicates that the U.S. market remains attractive to the subject producers. Cumulated subject imports maintained a substantial presence in the U.S. market throughout the POR, accounting for *** percent of apparent U.S. consumption in 2024,[228] thereby maintaining extensive customers and distribution networks in the United States. Furthermore, SMPC reported that the AUVs of its exports to the U.S. market were the highest or second-highest compared to other export destinations during 2022 through 2024, behind only the European Union.[229] Similarly, as discussed in Section III.D.1 above, GTA data show that the subject industries in both countries can command higher AUVs in the United States for their gas containers relative to other export markets.[230] The relatively higher prices available in the U.S. market would provide an economic incentive for subject producers to continue to export significant volumes of subject merchandise to the U.S. market, as well as to shift additional exports to the U.S. market after revocation.

Based on the significant and increasing volume and market share of cumulated subject imports during the original investigations; the substantial and growing presence of cumulated subject imports in the U.S. market during the POR while under the disciplining effect of the orders; the cumulated subject producers' substantial capacity, excess capacity, inventories, and exports; and the attractiveness of the U.S. market, we find that the likely volume of cumulated subject imports would be significant, both in absolute terms and relative to consumption in the

[222] CR/PR at Table 4.14.

[223] *Derived from* CR/PR at Tables 1.12 and 4.14.

[224] CR/PR at Table 4.14.

[225] CR/PR at Tables 4.14, 4.15.

[226] CR/PR Table 4.8.

[227] CR/PR at Table 4.20.

[228] CR/PR at Table 1.2.

[229] CR/PR at Table 4.15. In 2024, the AUV of SMPC's exports to the United States was $*** per pound, while the AUV of its exports to non-U.S. markets was $*** per pound. *Id.*

[230] CR/PR at Tables 4.8 and 4.15. The GTA data include out-of-scope products.

United States, if the orders were revoked. Also, for the aforementioned reasons, as well as the uncertain duration and level of additional duties under IEEPA and Section 232, we find that the additional duties applicable to subject imports under IEEPA and Sections 232 and 301 will not likely prevent the volume of cumulated subject imports from being significant following revocation of the orders.

We analyze the likely volume of subject imports from China and Thailand on a cumulated basis. Therefore, SMPC's argument that revocation of the antidumping duty order on steel propane cylinders from Thailand is not likely to lead to significant volumes of subject imports because SMPC allegedly increased shipments to the United States only when necessitated by market conditions is inapposite.[231] [232] Moreover, subject producers'/exporters' behavior while under the disciplining effect of AD/CVD duty orders has limited probative value as to their behavior when those orders are revoked and the disciplining effect is removed. In the original investigations, cumulated subject import volume was significant and increased significantly as subject imports gained market share at the expense of the domestic industry, trends likely to continue or recur following revocation of the orders.

In conclusion, we find that the volume of cumulated subject imports is likely to be significant absolutely and relative to U.S. consumption following revocation of the orders.

D. Likely Price Effects of Subject Imports

1. The Original Investigations

In the original investigations, the Commission reiterated its findings that there was a moderate-to-high degree of substitutability between subject imports and the domestic like product and that price was an important consideration in steel propane cylinder purchasing decisions. The pricing data showed that subject imports undersold the domestic like product in 89 of 126 quarterly comparisons (involving 3.1 million units) and oversold the domestic like product in the remaining 37 quarterly comparisons (involving 454,590 units).[233] The

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[231] SMPC Prehear. Br. at 10.

[232] However, even as to subject imports from Thailand, we note that although the domestic industry experienced supply constraints during the POR, as discussed in section IV.B.2 above, the increased volume and market share of subject imports from Thailand during the POR coincided with an irregular decline in the domestic industry's practical capacity utilization rate from *** percent in 2019 to *** percent in 2024, indicating that the industry had available unused capacity with which it could have increased production and U.S. shipments during the period. CR/PR at Table 3.3. In addition, subject imports from Thailand *** their share of apparent U.S. consumption over the POR, as their volume increased by *** percent while apparent U.S. consumption declined by 5.0 percent, and thus demand trends do not explain the volumes of subject imports from Thailand during the POR. CR/PR at Tables 4.1, C.1.

[233] *Original Determinations*, USITC Pub. 4938 at 21–22. The Commission also considered the import purchase cost data on the record, which were collected from *** for Pricing Product 4 from Thailand. Although ***, the Commission observed that ***, and that it had purchased imports rather (Continued…)

Commission also found that the record, including lost sales information, indicated that underselling allowed cumulated subject imports to gain *** pounds of sales and *** percentage points of market share at the expense of the domestic industry.[234] In light of the above, the Commission found that there had been significant underselling by cumulated subject import, which allowed these imports to obtain a significant volume of sales and market share from the domestic industry.[235]

The Commission also observed that the U.S. prices for each of the pricing products had increased overall from the first quarter of 2016 through the last quarter of 2018. Accordingly, the Commission did not find that cumulated subject imports had depressed domestic prices during the POI to a significant degree.[236]

The Commission found that cumulated subject imports suppressed domestic prices during the POI to a significant degree. It noted that, notwithstanding increasing demand during the POI, the domestic industry's prices did not rise commensurately with its costs.[237] In particular, the Commission found that competitive pressure from low-priced subject imports had prevented the domestic industry from obtaining price increases sufficient to cover its rising costs on sales to gas exchangers, their most significant customers, during the POI.[238]

The Commission concluded that significant underselling by cumulated subject imports had enabled them to gain sales and market share at the expense of the domestic industry. The Commission also found that cumulated subject imports had suppressed domestic prices to a significant degree.[239]

2. The Current Reviews

As discussed in section IV.B.3, we have found that there is a high degree of substitutability between domestically produced steel propane cylinders and subject imports, and that price is the most important factor in purchasing decisions.

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than the domestic like product because the former were lower priced than the latter. In light of the foregoing, as well as other information on the record, the Commission accorded greater weight to the quarterly pricing data than the import purchase cost data in its analysis. Confidential Original Determinations, EDIS Doc. 830831 at 32, n.123.

[234] *Original Determinations*, USITC Pub. 4938 at 22–23; Confidential Original Determinations, EDIS Doc. 830831 at 32–34.

[235] *Original Determinations*, USITC Pub. 4938 at 23.

[236] *Original Determinations*, USITC Pub. 4938 at 23.

[237] *Original Determinations*, USITC Pub. 4938 at 24. Specifically, while the domestic industry's net sales unit value increased only *** percent over the POI, its unit cost of goods sold ("COGS") increased *** percent. Confidential Original Determinations, EDIS Doc. 830831 at 35. As a result, the industry's ratio of COGS to net sales increased by *** percentage points from 2016 to 2018. *Id*.

[238] *Original Determinations*, USITC Pub. 4938 at 25–26.

[239] *Original Determinations*, USITC Pub. 4938 at 27.

The Commission requested quarterly volume and f.o.b. price data on sales by U.S. producers and importers to unrelated customers of seven pricing products.[240] Both U.S. producers and four importers of subject merchandise from China and Thailand provided usable pricing data for sales of the requested products, although not all firms reported pricing for all products for all quarters.[241] Pricing data reported by these firms accounted for *** percent of U.S. producers' U.S. shipments of steel propane cylinders, *** percent of importers' U.S. shipments of subject imports from China, and *** percent of importers' U.S. shipments of subject imports from Thailand in 2024.[242]

The pricing data indicate that subject imports from China and Thailand undersold the domestic like product in 84 of 147 (or 57.1 percent of) quarterly comparisons, at margins ranging from *** percent to *** percent and averaging *** percent.[243] Quarters of underselling corresponded to reported subject import sales of *** pounds, accounting for ***

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[240] CR/PR at 5.6. The pricing product definitions are as follows:

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.

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.

[241] CR/PR at 5.7.

[242] CR/PR at Tables 5.4-5.10 and Table C.1.

[243] CR/PR at 5.27.

percent of the total volume of reported subject imports sales.[244] Subject imports oversold the domestic like product in the remaining 63 (or 42.9 percent of) quarterly comparisons, at margins ranging from *** percent to *** percent and averaging *** percent.[245] Quarters of overselling corresponded to reported subject import sales of *** pounds, accounting for 56.8 percent of total reported subject import sales.[246] The reduced incidence of subject import underselling during the POR compared to in the original investigations indicates that the orders have had a disciplining effect on subject import prices.[247]

We have considered price trends. Prices for steel propane cylinders generally increased in 2021 into 2022 and moderated thereafter.[248] Between the first and last quarters of the POR, sales prices for domestically produced steel propane cylinders increased by *** percent for product 2, *** percent for product 3, *** percent for product 4, and *** percent for product 7.[249] Over the same period, sales prices for subject imports from Thailand increased *** percent for product 1, *** percent for product 2, *** percent for product 4, *** percent for product 6, and *** percent for product 7, while declining *** percent for product 3 and ***

[244] CR/PR at Table 5.13.

[245] CR/PR at 5.27.

[246] CR/PR at Table 5.13.

[247] The Commission also requested that firms that imported subject merchandise for their own use or resale report their purchase cost data for product 4. CR/PR at 5.6. One importer, ***, reported useable import purchase cost data for product 4, accounting for *** percent of subject imports from Thailand in 2021. CR/PR at 5.22. These direct purchase cost data show that landed duty-paid ("LDP") costs for pricing product 4 imported from Thailand were below the sales prices for the domestic like product in one of three quarterly comparisons, corresponding to reported purchases of *** units, with a price-cost differential of *** percent. CR/PR at 5.30, Tables 5.17, 5.18. In the remaining two quarterly comparisons, LDP costs for steel propane cylinders from Thailand were above sales prices for the domestic like product, corresponding to reported purchases of *** units, with cost-price differentials of *** percent and *** percent. CR/PR at 5.30, Tables 5.17, 5.18.

We recognize that the import purchase cost data may not reflect the total cost of importing and therefore requested that importers provide additional information regarding the costs and benefits of directly importing large top mount refrigerators. The importer reported that it incurred no additional costs beyond the LDP costs. CR/PR at 5.22. Firms were also asked whether the cost of directly importing steel propane cylinders was lower than the cost of purchasing them from a U.S. producer or importer. The importer estimated that importing directly saved it *** percent of the purchase price compared to purchasing from a U.S. importer and *** percent of the purchase price compared to purchasing from a U.S. producer. CR/PR at 5.22. It reported that its reason for directly importing steel propane cylinders was that doing so was cheaper than purchasing them from U.S. importers or producers and "***." CR/PR at 5.22.

[248] CR/PR at Figures 5.1–5.8.

[249] CR/PR at Table 5.12. Price trend data are unavailable for domestic sales of products 1, 5, and 6. *Id.*

percent for product 5.[250] The sales prices of subject imports from China increased *** percent for product 4.[251]

Based on the significant underselling in the original investigations resulting in lost sales and market share for the domestic industry, the high degree of substitutability between subject imports and the domestic like product, the importance of price to purchasing decisions, and continuing underselling by subject imports observed in these reviews, we find that if the subject orders were revoked, there would likely be significant underselling by cumulated subject imports. Absent the discipline of the orders, the likely significant volume of low-priced cumulated subject imports would likely force the domestic industry to either reduce its prices, forgo price increases that would otherwise have occurred, or risk losing market share to subject imports, as occurred in the original investigations. Thus, we find that if the orders were revoked, the significant volume of low-priced cumulated subject imports would likely have significant adverse price effects within a reasonably foreseeable time.

E. Likely Impact of Subject Imports

1. The Original Investigations

The Commission observed that underselling by cumulated subject imports had enabled them to take sales and market share from the domestic industry. The Commission also found that cumulated subject imports placed competitive pressure on the domestic industry during the POI which prevented the industry from increasing its prices commensurately with its costs, placing the industry in a cost-price squeeze. Consequently, the Commission found, the domestic industry's profitability and margins declined during the POI by all measures. For these reasons, the Commission concluded that subject imports from China and Thailand had a significant adverse impact on the domestic industry during the POI.[252]

The Commission rejected respondents' argument that there was no causal link between subject imports and the domestic industry's declining financial performance, given that the industry's financial performance worsened from 2017 to 2018 even though U.S. producers did not lose market share to subject imports between those years. The Commission found the decline in the industry's financial performance between those years consistent with the domestic industry forgoing price increases due to competitive pressure from subject imports to maintain sales to key customers.[253]

The Commission also considered whether other factors may have had an impact on the domestic industry during the POI. In doing so, it rejected various respondent arguments that factors other than cumulated subject imports explained the domestic industry's performance during the POI. While recognizing that increasing raw material costs contributed to the domestic industry's cost-price squeeze, the Commission found that the record did not support

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[250] CR/PR at Table 5.12.

[251] CR/PR at Table 5.12. Price trend data concerning subject imports from China are unavailable for the other pricing products.

[252] *Original Determinations*, USITC Pub. 4938 at 30.

[253] *Original Determinations*, USITC Pub. 4938 at 30.

respondents' argument that domestic producers' contracts, particularly with gas exchangers, had prevented them from increasing prices commensurately with costs.[254] It also rejected respondents' argument that subject import volumes and underselling could not have injured the domestic industry in the RV segment because the industry had abandoned the segment, noting that domestic producers had lost sales to subject imports in the RV segment and served the segment throughout the POI.[255] It also noted that the domestic producers' higher prices on sales to RV customers reflected that they were largely spot sales that did not qualify for volume discounts, not that they were disinterested in serving the RV segment.[256] The Commission was also unpersuaded by respondents' argument that increased lead times and supply constraints had injured the domestic industry, explaining that most purchasers reported no supply constraints with respect to the domestic industry and rated domestic propane cylinders as comparable or superior to subject imports with respect to delivery time and availability, among other factors.[257] The Commission also found that domestic industry had the capacity to increase production and shipments, but it was economically feasible to do so.[258] Finally, the Commission found that nonsubject imports did not explain the domestic industry's performance as they were a small share of the U.S. market throughout the POI and were considerably higher priced than subject imports.[259]

2. The Current Reviews

The domestic industry's performance fluctuated over the POR, but generally declined over the second half of the POR to a level much weaker in 2024 than in 2019.

The domestic industry's reported practical capacity declined by *** percent from 2019 to 2024, remaining stable during the 2019-2022 period before declining by *** percent in 2023 and another *** percent in 2024.[260] The domestic industry's reduced capacity in 2024 resulted

[254] *Original Determinations*, USITC Pub. 4938 at 30–31.
[255] *Original Determinations*, USITC Pub. 4938 at 31–32.
[256] *Original Determinations*, USITC Pub. 4938 at 33.
[257] *Original Determinations*, USITC Pub. 4938 at 32–33.
[258] *Original Determinations*, USITC Pub. 4938 at 33.
[259] *Original Determinations*, USITC Pub. 4938 at 30–33.
[260] CR/PR at Table 3.3. The domestic industry's practical capacity was *** pounds in 2019, 2020, and 2021, *** pounds in 2022, *** pounds in 2023, and *** pounds in 2024. *Id.* Worthington reported its practical capacity based on production operations running ***. *Id.* at 3.3. n.4. However, Worthington later acknowledged that its "***," which would have corresponded to a practical capacity of *** pounds from 2019 to 2023, and *** pounds in 2024. *Id.* We observe that Worthington was capable of operating its production facility ***, and did so periodically during the POR. PR/CR at 3.3–3.4. n.4. Even operating its production facility ***, Worthington would have possessed excess practical capacity of *** pounds in 2024.

from two factors. First, Manchester, one of two U.S. producers, ceased domestic production of steel propane cylinders in 2023 due, in part, to subject import competition.[261] Second, ***.[262]

The industry's production initially increased from 2019 to 2021, but then decreased irregularly by *** percent from 2019 to 2024.[263] Its production in 2024, at *** pounds, was *** percent lower than its production in 2018, at *** pounds.[264] Because the domestic industry's production declined by more than its practical capacity over the POR, the industry's practical capacity utilization declined by *** percentage points from 2019 to 2024, from *** percent in 2019 to *** percent in 2024.[265]

Most of the domestic industry's employment indicators also declined from 2019 to 2024, except for hourly wages, which increased by *** percent from 2019 to 2024.[266] The number of PRWs decreased by *** percent from 2019 to 2024, while total hours worked decreased by *** percent over the same period. Total wages paid decreased *** percent, while productivity decreased by *** percent. Unit labor costs increased by *** percent from 2019 to 2024 as a result of climbing wage rates and reduced productivity towards the end of the POR.[267]

The domestic industry's U.S. shipments increased from *** pounds in 2019 to *** pounds in 2020, before decreasing to *** pounds in 2021, *** pounds in 2022, *** pounds in 2023, and *** pounds in 2024.[268] Its U.S. shipments as a share of apparent U.S. consumption decreased from *** percent in 2019 to *** percent in 2020, *** percent in 2021, and *** percent in 2022, increased slightly to *** percent in 2023, and then declined *** to *** percent in 2024.[269]

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[261] CR at Tables 3.1, 3.9; Importer Questionnaire Response of Manchester at II-4; Manchester Declaration. Specifically, Manchester states that it was "unable to achieve sufficient profitability on its production and sales of the product, in significant part due to large, ongoing sales of imports from China and Thailand (and new third country sources) at aggressive prices in the U.S. market, despite the imposition of the orders." Manchester Declaration. Manchester also stated that ***. Importer Questionnaire Response of Manchester at II-16. Manchester further explained that it ***. *Id.* at III-9b.

[262] Worthington's Prehear. Br. 30–31. Worthington explains that ***. CR/PR at 3.34 n. 25, Table 3.16; U.S. Producer Questionnaire Response of Worthington at II-16.

[263] CR/PR at Table 3.3. CR/PR at Table 3.3. The domestic industry's production was *** pounds in 2019, *** pounds in 2020, *** pounds in 2021, *** pounds in 2022, *** pounds in 2023, and *** pounds in 2024. *Id.*

[264] CR/PR at Table C.1.

[265] CR/PR at Table 3.5. The domestic industry's practical capacity utilization was *** percent in 2019, *** percent in 2020, *** percent in 2021, *** percent in 2022, *** percent in 2023, and *** percent in 2024. *Id.*

[266] CR/PR at 3.12.

[267] CR/PR at 3.12.

[268] CR/PR at Table 3.6.

[269] CR/PR at Table 1.12.

U.S. producers' end-of-period inventories decreased by *** percent from 2019 to 2024, ending *** percent lower in 2024 than in 2018.[270] As a ratio to total shipments, inventories declined from *** percent in 2019 to *** percent in 2020 and *** percent in 2021, increased to *** percent in 2022, then declined to *** percent in 2023 and *** percent in 2024.[271]

Most of the domestic industry's financial indicators declined irregularly during the POR, particularly in the second half of the period. The industry's net sales value fluctuated upward from 2019 to 2022, then declined in 2023 and 2024,[272] with its net sales value in 2024, at $***, just over *** of its net sales value in 2018, which was $***.[273] The industry's gross profits fluctuated over the POR, remaining steady at $*** in 2019 and 2020, increasing to $*** in 2021, decreasing to $*** in 2022, increasing again to $*** in 2023, before declining to a *** in 2024.[274] The industry experienced operating losses and negative operating income margins ***, including an operating loss of *** in 2024, equivalent to *** percent of net sales.[275] Similarly, the industry experienced net losses and negative net income margins ***, including a net loss of *** in 2024, equivalent to *** percent of net sales.[276]

The domestic industry's capital expenditures fluctuated over the POR, first increasing from $*** in 2019 to $*** in 2020, then decreasing to $*** in 2021, then increasing again to $*** in 2022 and $*** in 2023, before finally decreasing to $*** in 2024.[277] The industry's assets increased irregularly from $*** in 2019 to $*** in 2024, while its return on assets fluctuated and worsened irregularly from *** percent in 2019 to *** percent in 2024.[278]

Given the domestic industry's declining performance over the POR, particularly towards the end of the POR, including a COGS to net sales ratio of *** percent and an operating come to

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[270] CR/PR at Table 3.7. Manchester ceased production in 2023, and ***. *Id.* The domestic industry's end-of-period inventories were *** pounds in 2019, *** pounds in 2020, *** pounds in 2021, *** pounds in 2022, *** pounds in 2023, and *** pounds in 2024. *Id.*

[271] CR/PR at Table 3.7.

[272] CR/PR at Table C.1. The domestic industry's sales value was $*** in 2019, $*** in 2020, $*** in 2021, $*** in 2022, $*** in 2023, and $*** in 2024. *Id.*

[273] CR/PR at Table C.1.

[274] CR/PR at Table C.1.

[275] CR/PR at Table C.1. The domestic industry's operating income was *** in 2019, *** in 2020, $*** in 2021, *** in 2022, $*** in 2023, and *** in 2024. *Id.* The domestic industry's ratios of operating income to net sales were *** percent in 2019, *** percent in 2020, *** percent in 2021, *** percent in 2022, *** percent in 2023, and *** percent in 2024. *Id.*

[276] CR/PR at Table C.1. The domestic industry's net income was *** in 2019, *** in 2020, $*** in 2021, *** in 2022, *** in 2023, and *** in 2024. *Id.* The domestic industry's ratios of net income to net sales were *** percent in 2019, *** percent in 2020, *** percent in 2021, *** percent in 2022, *** percent in 2023, and *** percent in 2024. *Id.*

[277] CR/PR at Table 3.15. ***. *Id.* at 3.34.

[278] CR/PR at Tables 3.17, 3.18. The domestic industry's assets fluctuated down during the POR, declining from $*** in 2019 to $*** in 2020, increasing to $*** in 2021 and $*** in 2022, and then declining to $*** in 2023 and $*** in 2024. *Id.* at Table 3.17. The industry's return on assets worsened from *** percent in 2019 to *** percent in 2020, improved to *** percent in 2021, worsened to *** percent in 2022, improved to *** percent in 2023, and then worsened to *** percent in 2024. *Id.* at Table 3.18.

net sales ratio of *** percent in 2024, the shuttering of one of two domestic producers, and declining apparent U.S. consumption towards the end of the period, we find that the industry is vulnerable to the continuation or recurrence of material injury in the event of revocation of the orders.

Based on the information available in these reviews, we find that revocation of the orders would likely result in a significant volume of cumulated subject imports that would likely undersell the domestic like product to a significant degree. Given the high degree of substitutability between the domestic like product and subject imports and the importance of price in purchasing decisions, significant volumes of low-priced cumulated subject imports would likely capture sales and market share from the domestic industry and/or significantly depress or suppress prices for the domestic like product. The likely significant volume of cumulated subject imports and their adverse price effects would likely have a significant adverse impact on the domestic industry's production, shipments, sales, market share, and revenues, which in turn would have a direct adverse impact on the industry's profitability and employment, as well as its ability to raise capital and make and maintain necessary capital investments.

We are unpersuaded by SMPC's argument that revocation of the orders will not lead to continuation or recurrence of material injury to the domestic industry because subject imports are necessary to meet demand in the U.S. market, particularly in light of Manchester's closing and ***. As an initial matter, we note that Manchester reportedly ceased domestic production due in part to competition from subject imports. Worthington's ***; indeed, Worthington reports that ***.[279] Even after Manchester's closing in 2023 and Worthington's ***, the domestic industry still reported substantial unused practical capacity. Worthington has reported that its ***.[280] Moreover, there is no requirement that the domestic industry have the capacity to serve the entire U.S. market for the Commission to find that subject imports would likely have a significant adverse impact on the industry after revocation.[281] Finally, we have found that if the orders were revoked, there would likely be significant underselling by cumulated subject imports which would force the domestic industry to either cut prices, forgo needed price increases, or else relinquish sales and market share to subject imports.

We also reject SMPC's argument that the domestic industry's own imports from nonsubject sources account for the industry's declining performance during the POR.[282]

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[279] CR/PR at 3.34, n.25.

[280] CR/PR at 3.3, Table 3.2; Worthington's Prehear. Br. 30–31.

[281] The Commission has previously noted that "there is no short supply provision in the statute" and "the fact that the domestic industry may not be able to supply all of demand does not mean the industry may not be materially injured or threatened with material injury by reason of subject imports." *Softwood Lumber from Canada*, Inv. Nos. 701-TA-414 and 731-TA-928 (Article 1904 NAFTA Remand) (December 2003) at 108, n. 310.

[282] We note that the SAA recognizes that industry vulnerability may be caused by factors other than subject imports and instructs the Commission to consider the weakened condition of the U.S. industry in assessing whether injury will continue or recur if the orders are revoked. SAA, H.R. Rep. No. 103-316, vol. I at 885 (1994).

Although Worthington ***.[283] Given that Worthington ***.[284] Indeed, Worthington's *** reflect a strong commitment to domestic production.[285] We consider nonsubject imports for purposes of our non-attribution analysis below.

We have also considered the role of factors other than subject imports, including the presence of nonsubject imports, so as not to attribute likely injury from other factors to the subject imports. Nonsubject imports' share of apparent U.S. consumption increased by *** percentage points during the POR, from *** percent in 2019 to *** percent in 2024.[286] Although nonsubject imports would likely remain in the U.S. market after revocation of the orders, the record provides no indication that the presence of nonsubject imports would prevent cumulated subject imports from entering the U.S. market in significant quantities or adversely affecting domestic prices after revocation of the orders. Indeed, the increasing market share of nonsubject imports during the POR did not prevent cumulated subject imports from also increasing their market share. Given the high degree of substitutability between subject imports and domestic like product, and the importance of price in purchasing decisions, the significant volume of low-priced subject imports that is likely after revocation would likely force the domestic producer to lower prices or forgo needed price increases or else risk losing sales and market share to subject imports. Consequently, we find that any future effects of nonsubject imports would be distinct from the likely effects attributable to subject imports and that nonsubject imports would not prevent subject imports from having a significant impact on the domestic industry.

We have also considered the likely effects of demand trends on the domestic industry. As discussed in section IV.B.1 above, apparent U.S. consumption increased 49.1 percent from 2019 to 2021, driven by increased consumption during the COVD-19 pandemic, before declining 36.3 percent through 2024, as the pandemic receded, to a level 5.0 percent lower than in 2019.[287] Nevertheless, most responding producers, importers, and foreign producers project that U.S. demand will either be stable or fluctuate upward within a reasonable foreseeable time, although responding purchasers were divided on the question.[288] The record thus does not indicate that demand is likely to increase to the extent that the domestic industry would be insulated from the likely significant volume and significant price effects of subject imports in the reasonably foreseeable future. If demand were to decline, the significant volume of low-priced cumulated subject imports that is likely if the orders are revoked would exacerbate any negative effects caused by adverse demand trends by further reducing the industry's sales,

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[283] Importers Questionnaire of Worthington at II-4, II-7a; CR/PR at Table 3.16.

[284] Importers Questionnaire of Worthington at II-4, II-7a.

[285] CR/PR at 4.1, Tables 3.15–3.16.

[286] CR/PR at Table 1.12, 4.2. The volume of nonsubject imports was *** pounds in 2019, *** pounds in 2020, *** pounds in 2021, *** pounds in 2022, *** pounds in 2023, and *** pounds in 2024.

[287] *Derived from* CR/PR at Table 1.12.

[288] CR/PR at Table 2.7. Two responding purchasers reported expecting U.S. demand to increase steadily or fluctuate up, three reported expecting U.S. demand to remain stable, and seven reported expecting U.S. demand to decline steadily or fluctuate down. *Id.*

increasing domestic producers' per-unit costs and placing additional downward pressure price pressure on domestic producers.

In sum, we conclude that if the antidumping and countervailing duty orders on steel propane cylinders from China and Thailand were revoked, subject imports would likely have a significant impact on the domestic industry within a reasonably foreseeable time.

V. Conclusion

For the above reasons, we determine that revocation of the antidumping and countervailing duty orders on China and the antidumping duty order on Thailand would be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time.

Part 1: Introduction

Background

On July 1, 2024, the U.S. International Trade Commission ("Commission" or "USITC") gave notice, pursuant to section 751(c) of the Tariff Act of 1930, as amended ("the Act"),[1] that it had instituted reviews to determine whether revocation of the countervailing duty order on steel propane cylinders from China and the antidumping duty orders on steel propane cylinders from China and Thailand would likely lead to the continuation or recurrence of material injury to a domestic industry.[2] [3] On October 4, 2024, the Commission determined that it would conduct full reviews pursuant to section 751(c)(5) of the Act.[4] Table 1.1 presents information relating to the background and schedule of this proceeding.[5]

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

[2] 89 FR 54531*,* July 1, 2024. All interested parties were requested to respond to this notice by submitting the information requested by the Commission.

[3] In accordance with section 751(c) of the Act, the U.S. Department of Commerce ("Commerce") published a notice of initiation of five-year reviews of the subject antidumping and countervailing duty orders. 89 FR 54435, July 1, 2024.

[4] 89 FR 84193, October 21, 2024. The Commission found that both the domestic interested party group response and the respondent interested party group response from Thailand were adequate and determined to conduct full reviews of the orders on imports from Thailand. The Commission also found that the respondent interested party group response from China was inadequate but determined to conduct full reviews of the orders on imports from China in order to promote administrative efficiency in light of its determination to conduct a full review of the order with respect to Thailand.

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

Table 1.1 Steel propane cylinders: Information relating to the background and schedule of this proceeding

Effective date	Action
August 15, 2019	Commerce's countervailing and antidumping duty orders on steel propane cylinders from China and Thailand (84 FR 41700, 84 FR 41703)
July 1, 2024	Commission's institution of five-year reviews (89 FR 54531)
July 1, 2024	Commerce's initiation of five-year reviews (89 FR 54435)
October 4, 2024	Commission's determinations to conduct full five-year reviews (89 FR 84193, October 21, 2024)
November 8, 2024	Commerce's final results of expedited five-year reviews of the antidumping duty orders (89 FR 88727)
November 12, 2024	Commerce's final results of expedited five-year reviews of the countervailing duty order (89 FR 88968)
December 23, 2024	Commission's scheduling of the reviews (89 FR 107162, December 31, 2024)
May 1, 2025	Commission's hearing
June 6, 2025	Commission's vote
June 26, 2025	Commission's determinations and views

The original investigations

The original investigations resulted from petitions filed 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 subsidized imports of steel propane cylinders from China and less-than-fair-value ("LTFV") imports of steel propane cylinders from China, Taiwan, and Thailand.[6] Following notification of final determinations by Commerce that imports of steel propane cylinders from China and Thailand were being subsidized by the government of China and sold at LTFV, the Commission determined on August 5, 2019 that a domestic industry was materially injured by reason of subsidized and LTFV imports of steel propane cylinders from China and Thailand.[7] Commerce published the countervailing duty order on subject imports of steel propane cylinders from China, and the antidumping duty orders on subject imports of steel propane cylinders from China and Thailand, on August 15, 2019.[8]

[6] On June 14, 2018, the petitioners withdrew the petition regarding imports from Taiwan, and Commerce and the Commission subsequently terminated their respective investigations on steel propane cylinders from Taiwan. 83 FR 29748, June 26, 2018, and 83 FR 31174, July 3, 2018.

[7] Steel Propane Cylinders from China and Thailand, Investigation Nos. 701-TA-607 and 731-TA-1417 and 1419 (Final), USITC Publication 4938, August 2019, p. 1. ("Original publication")

[8] 84 FR 41700, 84 FR 41703, August 15, 2019.

Previous and related investigations

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

Summary data

Table 1.2 presents a summary of data from the original investigations and the current full five-year reviews. In September 2023, Manchester ceased U.S. production of steel propane cylinders. This firm was one of the original petitioning firms, and with its exit Worthington is the sole remaining domestic producer of steel propane cylinders.[9] Subject imports from China have largely exited the market, with *** of U.S. shipments of imports from China in 2024. No imports or shipments of imports from China were reported by any importer from 2020 to 2023. Subject imports from Thailand retain a presence in the U.S. market, and imports from nonsubject sources constitute a substantially larger share of the U.S. market than they did in 2018.

[9] Worthington's response to the notice of institution, July 31, 2024, pp. 14-15.

Table 1.2 Steel propane cylinders: Comparative data from the original investigations and subsequent reviews to-date, by terminal years

Quantity in 1,000 pounds, tare weight; value in 1,000 dollars; unit values in dollars per pound; shares in percent

Item	Measure	2018	2024
Apparent U.S. consumption	Quantity	***	133,005
U.S. producers market share	Share of quantity	***	***
China market share	Share of quantity	***	***
Thailand market share	Share of quantity	***	***
Subject market share	Share of quantity	***	***
Nonsubject market share	Share of quantity	***	***
Import market share	Share of quantity	***	***
Apparent U.S. consumption	Value	***	232,562
U.S. producers market share	Share of value	***	***
China market share	Share of value	***	***
Thailand market share	Share of value	***	***
Subject market share	Share of value	***	***
Nonsubject market share	Share of value	***	***
Import market share	Share of value	***	***
China	Quantity	***	***
China	Value	***	***
China	Unit value	***	***
Thailand	Quantity	***	***
Thailand	Value	***	***
Thailand	Unit value	***	***
Subject sources	Quantity	***	***
Subject sources	Value	***	***
Subject sources	Unit value	***	***
Nonsubject sources	Quantity	***	***
Nonsubject sources	Value	***	***
Nonsubject sources	Unit value	***	***
All import sources	Quantity	***	***
All import sources	Value	***	***
All import sources	Unit value	***	***

Table continued.

Table 1.2 (Continued) Steel propane cylinders: Comparative data from the original investigations and subsequent reviews to-date, by terminal years

Quantity in 1,000 pounds, tare weight; value in 1,000 dollars; unit values in dollars per pound; shares in percent

Item	Measure	2018	2024
Capacity	Quantity	***	***
Production	Quantity	***	***
Capacity utilization	Ratio	***	***
Producer U.S. shipments	Quantity	***	***
Producer U.S. shipments	Value	***	***
Producer U.S. shipments	Unit value	***	***
Producer inventories	Quantity	***	***
Producer inventory ratio to total shipments	Ratio	***	***
Production workers (number)	Noted in label	***	***
Hours worked (in 1,000 hours)	Noted in label	***	***
Wages paid (1,000 dollars)	Value	***	***
Hourly wages (dollars per hour)	Noted in label	***	***
Productivity (pounds, tare weight, per hour)	Noted in label	***	***
Net sales	Quantity	***	***
Net sales	Value	***	***
Net sales	Unit value	***	***
Cost of goods sold	Value	***	***
Gross profit or (loss)	Value	***	***
SG&A expense	Value	***	***
Operating income or (loss)	Value	***	***
Unit COGS	Unit value	***	***
Unit operating income	Unit value	***	***
COGS/ Sales	Ratio	***	***
Operating income or (loss)/ Sales	Ratio	***	***

Source: Office of Investigations memorandum INV-RR-061 (July 3, 2019) and compiled from data submitted in response to Commission questionnaires.

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Data for 2018 are from the last year of the original investigations and data for 2024 are from the last year of the current first reviews.

Table 1.3 and figure 1.1 present U.S. producers' and U.S. importers' U.S. shipments from the original investigations and the current full five-year reviews.

Table 1.3 Steel propane cylinders: U.S. producers' and U.S. importers' U.S. shipments, by year and source

Quantity in 1,000 pounds, tare weight

Source	Measure	2016	2017	2018
U.S. producers	Quantity	***	***	***
Subject sources	Quantity	***	***	***
Nonsubject sources	Quantity	***	***	***
All import sources	Quantity	***	***	***
All sources	Quantity	***	***	***

Table continued.

Table 1.3 (Continued) Steel propane cylinders: U.S. producers' and U.S. importers' U.S. shipments, by period and source

Quantity in 1,000 pounds, tare weight

Source	Measure	2019	2020	2021
U.S. producers	Quantity	***	***	***
Subject sources	Quantity	***	***	***
Nonsubject sources	Quantity	***	***	***
All import sources	Quantity	***	***	***
All sources	Quantity	139,980	196,743	208,694

Table continued.

Table 1.3 (Continued) Steel propane cylinders: U.S. producers' and U.S. importers' U.S. shipments, by period and source

Quantity in 1,000 pounds, tare weight

Source	Measure	2022	2023	2024
U.S. producers	Quantity	***	***	***
Subject sources	Quantity	***	***	***
Nonsubject sources	Quantity	***	***	***
All import sources	Quantity	***	***	***
All sources	Quantity	200,244	158,872	133,005

Source: Office of Investigations memorandum INV-RR-061 (July 3, 2019) and compiled from data submitted in response to Commission questionnaires.

Figure 1.1 Steel propane cylinders: U.S. producers' and U.S. importers' U.S. shipments, by year and source

* * * * * * *

Source: Office of Investigations memorandum INV-RR-061 (July 3, 2019) and compiled from data submitted in response to Commission questionnaires.

Statutory criteria

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

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

> *(I) IN GENERAL.-- . . . the Commission shall determine whether revocation of an order, or termination of a suspended investigation, would be likely to lead to continuation or recurrence of material injury within a reasonably foreseeable time. The Commission shall consider the likely volume, price effect, and impact of imports of the subject merchandise on the industry if the order is revoked or the suspended investigation is terminated. The Commission shall take into account--*

(A) its prior injury determinations, including the volume, price effect, and impact of imports of the subject merchandise on the industry before the order was issued or the suspension agreement was accepted,

(B) whether any improvement in the state of the industry is related to the order or the suspension agreement,

(C) whether the industry is vulnerable to material injury if the order is revoked or the suspension agreement is terminated, and

(D) in an antidumping proceeding . . ., (Commerce's findings) regarding duty absorption . . ..

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

(A) any likely increase in production capacity or existing unused production capacity in the exporting country,

(B) existing inventories of the subject merchandise, or likely increases in inventories,

(C) the existence of barriers to the importation of such merchandise into countries other than the United States, and

(D) the potential for product-shifting if production facilities in the foreign country, which can be used to produce the subject merchandise, are currently being used to produce other products.

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

(A) there is likely to be significant price underselling by imports of the subject merchandise as compared to domestic like products, and

(B) imports of the subject merchandise are likely to enter the United States at prices that otherwise would have a significant depressing or suppressing effect on the price of domestic like products.

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

(A) likely declines in output, sales, market share, profits, productivity, return on investments, and utilization of capacity,

(B) likely negative effects on cash flow, inventories, employment, wages, growth, ability to raise capital, and investment, and

(C) likely negative effects on the existing development and production efforts of the industry, including efforts to develop a derivative or more advanced version of the domestic like product.

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

Section 752(a)(VI) of the Act states further that in making its determination, "the Commission may consider the magnitude of the margin of dumping or the magnitude of the net countervailable subsidy. If a countervailable subsidy is involved, the Commission shall consider information regarding the nature of the countervailable subsidy and whether the subsidy is a subsidy described in Article 3 or 6.1 of the Subsidies Agreement."

Organization of report

Information obtained during the course of the proceeding that relates to the statutory criteria is presented throughout this report. A summary of trade and financial data for steel propane cylinders as collected in the original investigations and the current full five-year reviews is presented in appendix C. U.S. industry data are based on the questionnaire responses of two U.S. producers of steel propane cylinders that are believed to have accounted for all domestic production of steel propane cylinders over the course of 2019 to 2024. U.S. import data and related information are based on the questionnaire responses of six U.S. importers of steel propane cylinders that are believed to represent the vast majority of the subject import market for steel propane cylinders in 2024 and over the course of 2019 to 2024.

Foreign industry data and related information for the industry in China are based principally on staff research, as no firm in China submitted a completely usable questionnaire response.[10] Foreign industry data and related information for the industry in Thailand are based on the questionnaire response of one producer of steel propane cylinders in Thailand, Sahamitr Pressure Container Public Company Limited ("SMPC"). Based on estimates provided by this producer, it is believed to account for *** percent of total production in Thailand in 2024 and *** percent of total exports to the United States of steel propane cylinders from Thailand in 2024.[11] Responses by U.S. producers, importers, purchasers, and foreign producers of steel propane cylinders to a series of questions concerning the significance of the existing antidumping and countervailing duty orders and the likely effects of revocation of such orders are presented in appendix D.

Commerce's reviews

Administrative reviews, changed circumstances reviews, and other actions

Commerce has not conducted any scope rulings, nor has it issued any duty absorption findings, any company revocations, or anti-circumvention findings since the imposition of the orders. Commerce has not completed any administrative reviews concerning the outstanding countervailing duty orders or antidumping duty orders on steel propane cylinders from China.[12] Commerce has completed four administrative reviews of the outstanding antidumping duty order on steel propane cylinders from Thailand.[13] The results of the administrative reviews are shown in table 1.4.

[10] One firm, Hubei Daly LPG Cylinder Manufacturer Co., Ltd., submitted an incomplete questionnaire. However, the firm reported that ***.

[11] Additionally, ***.

[12] Concerning the countervailing duty order, Commerce rescinded one administrative review, covering 2021, based on the timely withdrawal of the request for review. Issues and Decision Memorandum for the Final Results of the Expedited First Sunset Review of the Countervailing Duty Order on Steel Propane Cylinders from the People's Republic of China, November 5, 2024, p. 5.

[13] For previously reviewed or investigated companies not included in an administrative review, the cash deposit rate continues to be the company-specific rate published for the most recent period.

Table 1.4 Steel propane cylinders: Administrative reviews of the antidumping duty order for Thailand

Date results published	Period of review	Producer or exporter	Margin (percent)
87 FR 12659 (March 7, 2022)	December 27, 2018, through July 31, 2020	Sahamitr Pressure Container Plc	13.89
88 FR 14334 (March 8, 2023)	August 1, 2020, through July 31, 2021	Sahamitr Pressure Container Plc	10.64
89 FR 22123 (March 29, 2024)	August 1, 2021, through July 31, 2022	Sahamitr Pressure Container Plc	2.15
90 FR 11152 (March 4, 2025)	August 1, 2022, through July 31, 2023	Sahamitr Pressure Container Plc	3.18

Source: Cited Federal Register notices.

Commerce has conducted one changed circumstances review, regarding the antidumping duty order on steel propane cylinders from China. On January 4, 2022, Commerce completed a changed circumstance review and determined that Yi Jun Hong Kong Limited is the successor-in-interest to GSBF Tank Inc./Hong Kong GSBF Company Limited (GSBF).[14] A changed circumstances review request regarding the countervailing duty order was submitted on September 30, 2021, but was found by Commerce to be insufficient to initiate. The review request was withdrawn on January 5, 2022.[15]

Five-year reviews

Commerce has issued the final results of its expedited reviews with respect to all subject countries.[16] Tables 1.5 through 1.7 present the countervailable subsidy margins and dumping margins calculated by Commerce in its original investigations and first reviews.

[14] Issues and Decision Memorandum for the Final Results of the Expedited First Sunset Review of the Antidumping Duty Orders on Steel Propane Cylinders from the People's Republic of China and Thailand, November 4, 2024, p. 5.

[15] Issues and Decision Memorandum for the Final Results of the Expedited First Sunset Review of the Countervailing Duty Order on Steel Propane Cylinders from the People's Republic of China, November 5, 2024, p. 5.

[16] 89 FR 88727, November 8, 2024 and 89 FR 88968, November 12, 2024.

Table 1.5 Steel propane cylinders: Commerce's original and first five-year countervailable subsidy margins for producers/exporters in China

Producer/exporter	Original margin (percent)	First five-year review margin (percent)
Guangzhou Lion Cylinders Co. Ltd.	142.37	142.37
Hubei Daly LPG Cylinder Manufacturer Co. Ltd.	142.37	142.37
Shandong Huanri Group Co. Ltd.	37.91	37.91
Taishan Machinery Factory Ltd.	142.37	142.37
TPA Metals and Machinery (SZ) Co. Ltd.	142.37	142.37
Wuyi Xilinde Machinery Manufacture Co., Ltd.	142.37	142.37
Zhejiang Jucheng Steel Cylinder Co., Ltd.	142.37	142.37
All Others	37.91	37.91

Source: 84 FR 41700, June 21, 2019, 89 FR 88968, November 12, 2024.

Table 1.6 Steel propane cylinders: Commerce's original and first five-year dumping margins for producers/exporters in China

Producer/exporter	Original margin (percent)	First five-year review margin (percent)
GSBF	43.65	See note
Shandong Huanri Group Co. Ltd.	25.52	See note
Jiaxing Pressure Vessel Factory	26.68	See note
China-Wide Entity	108.60	See note

Source: 84 FR 41703, August 15, 2019, 89 FR 88727, November 8, 2024.

Note: Commerce determined that revocation of the order would be likely to lead to continuation or recurrence of dumping and that the magnitude of the margins of dumping likely to prevail would be at rates up to 108.60 percent.

Table 1.7 Steel propane cylinders: Commerce's original and first five-year dumping margins for producers/exporters in Thailand

Producer/exporter	Original margin (percent)	First five-year review margin (percent)
Sahamitr Pressure Container Public Company Limited	10.77	See note
All Others	10.77	See note

Source: 84 FR 41703, August 15, 2019, 89 FR 88727, November 8, 2024.

Note: Commerce determined that revocation of the order would be likely to lead to continuation or recurrence of dumping and that the magnitude of the margins of dumping likely to prevail would be at rates up to 10.77 percent.

The subject merchandise

Commerce's scope

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

> *The products covered by the Orders are steel cylinders for compressed or liquefied propane or other gases (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 and otherwise meeting the description provided below. 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 porthole(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).[17]

Tariff treatment

Steel propane cylinders are currently imported under Harmonized Tariff Schedule of the United States ("HTS") statistical reporting numbers 7311.00.0060 and 7311.00.0090. The general rate of duty is "free" for HTS subheading 7311.00.00.[18] Decisions on the tariff classification and treatment of imported goods are within the authority of U.S. Customs and Border Protection.

Effective September 24, 2018, steel propane cylinders originating in China were subject to an additional 10 percent ad valorem duty under section 301 of the Trade Act of 1974. Effective May 10, 2019, the section 301 duty for steel propane cylinders was increased to 25 percent.[19]

[17] Issues and Decision Memorandum for the Final Results of the Expedited First Sunset Review of the Countervailing Duty Order on Steel Propane Cylinders from the People's Republic of China, November 5, 2024, pp. 2-3.

[18] The HTS subheading 7311.00.00 covers containers for compressed or liquefied gases, including steel propane cylinders. USITC, HTS (2025) Revision 9, Publication 5614, April 2025, p. 73.26.

[19] 83 FR 47974, September 21, 2018; 84 FR 20459, May 9, 2019. See also HTS headings 9903.88.03 and 9903.88.04 and U.S. notes 20(e) to 20(g) to subchapter III of chapter 99 and related tariff provisions for this duty treatment. USITC, HTS (2025) Revision 9, USITC Publication 5614, April 2025, pp. 99.3.46 to 99.3.70. Goods exported from China to the United States prior to May 10, 2019, and entering the United States prior to June 1, 2019, were not subject to the escalated 25 percent duty (84 FR 21892, May 15, 2019).

Effective February 4, 2025, steel propane cylinders originating in China were subject to an additional 10 percent ad valorem duty under the International Emergency Economic Powers Act ("IEEPA"), and on March 4, 2025, that additional duty increased to 20 percent ad valorem.[20]

Steel propane cylinders originating in China and Thailand are subject to an additional 25 percent ad valorem duty under section 232 of the Trade Expansion Act of 1962, as amended. Effective March 12, 2025, steel propane cylinders originating in China and Thailand became subject to an additional 25 percent ad valorem duty under section 232 of the Trade Expansion Act of 1962, as amended. [21] Imports of steel articles that are used to manufacture the subject goods may be subject to section 232 tariffs.[22]

Steel propane cylinders originating in China and Thailand are not subject to the reciprocal tariffs effective on April 5, 9, and 10, 2025, under IEEPA.[23] Table 1.8 presents the duty rates for China and Thailand based on the respective section 301, section 232, and IEEPA measures.

[20] 90 FR 9038, February 5, 2025; 90 FR 11426, March 6, 2025. See also HTS heading 9903.01.20 and U.S. note 2(s) and HTS heading 9903.01.24 and U.S. note 2(u) to subchapter III of chapter 99 and related tariff provisions for this duty treatment. USITC, HTS (2025) Revision 9, Publication 5614, April 2025, pp. 99.3.3 to 99.3.4, 99.3.296 to 99.3.297.

[21] 90 FR 9817, February 18, 2025. See also HTS headings 9903.81.90 and U.S. note 16(m) to subchapter III of chapter 99 and related tariff provisions for this duty treatment. USITC, HTS (2025) Revision 9, USITC Publication 5614, April 2025, pp. 99.3.23, 99.3.343.

[22] Hot-rolled alloy steel not coated or plated that are used to manufacture steel propane cylinders are provided for in HTS headings 7225 or 7226. Effective March 23, 2018, steel articles provided for in HTS headings 7225 or 7226 have been subjected to an additional 25 percent ad valorem duty under section 232 of the Trade Expansion Act of 1962, as amended. 83 FR 11625, March 15, 2018; 90 FR 9817, February 18, 2025. See also HTS headings 9903.81.87 and U.S. note 16(i) to subchapter III of chapter 99 and related tariff provisions for this duty treatment. USITC, HTS (2025) Revision 9, Publication 5614, April 2025, pp. 99.3.22, 99.3.332.

[23] 90 FR 15041, April 7, 2025. See also HTS heading 9903.01.25, 9903.01.32, 9903.01.33, and 9903.01.63, and U.S. note 2(v) to subchapter III of chapter 99 and related tariff provisions for this duty treatment. USITC, HTS (2025) Revision 9, Publication 5614, April 2025, pp. 99.3.4, 99.3.298, 99.3.299, and 99.3.304. The White House, Modifying Reciprocal Tariff Rates to Reflect Discussions With the People's Republic Of China, May 12, 2025, https://www.whitehouse.gov/presidential-actions/2025/05/modifying-reciprocal-tariff-rates-to-reflect-discussions-with-the-peoples-republic-of-china/.

Table 1.8 Steel propane cylinders: Additional tariff treatment for China and Thailand, in percent ad valorem

	China *(percent ad valorem)*	Thailand *(percent ad valorem)*
Section 301	25	N/A
IEEPA - effective February 4, 2025	20	N/A
IEEPA - effective April 5, 9, and 10, 2025	N/A	N/A
Section 232	25	25
Total additional ad valorem rate	70	25

Source: Cited Federal Register notices in this section.

Note: Duty rates in the table reflect the duty rates as of the date this report was issued. See the text of this section for previous rates.

The product

Description and uses[24]

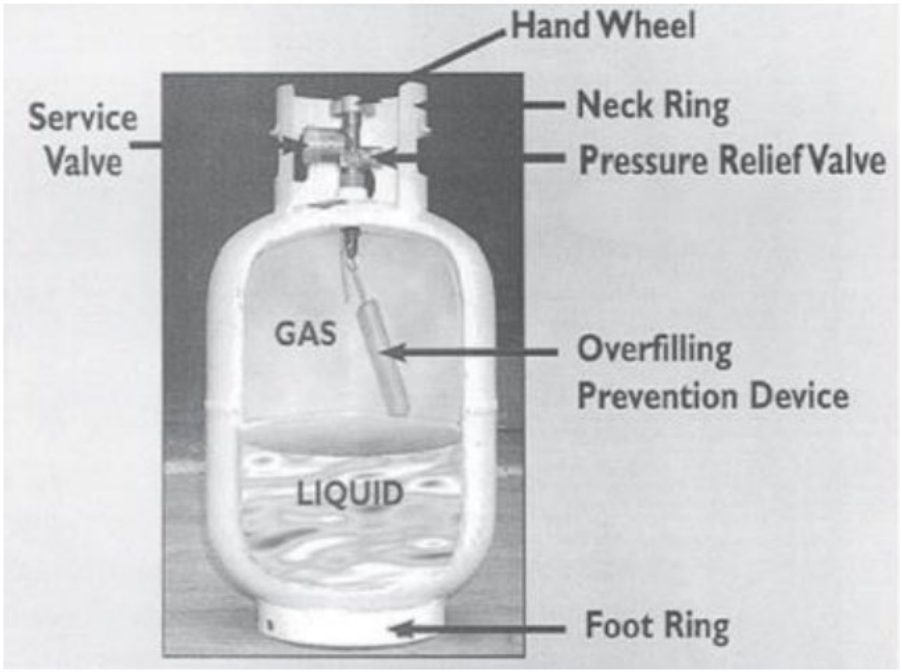
The steel propane cylinders covered in these reviews are portable, low-pressure (of up to 240 pounds per square inch) steel tanks designed to contain propane in a compressed or liquefied state. These cylinders are typically composed of a tank with a single port[25] that is sealed with a valve, gauge, collar, and foot ring (figure 1.2). For safety reasons, the valve includes a required overfill-prevention device since 2001. 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. The country of origin of the cylinder can be found on either the neck or foot ring. The foot ring stabilizes the bottom of the cylinder and prevents the cylinder tank from being in direct contact with the ground.[26] Although cylinders meeting the scope of these reviews can range in size from 4.25 pounds of propane capacity to 40 pounds of propane capacity, 20-pound and 30-pound cylinders are the most common sizes.

[24] Unless otherwise noted, this information is based on the original publication, pp. I-11 – I-14.

[25] 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.

[26] Propane Cylinder Requirements, http://www.propane101.com/propanecylinderrequirements.htm, retrieved March 21, 2025.

Figure 1.2
Steel propane cylinders: Cut-away view showing principal components



Source: Original publication, p. 1.12.

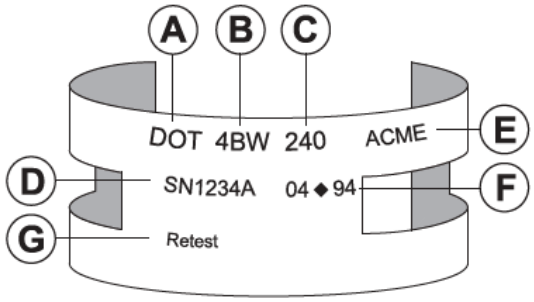
Steel propane cylinders are used as a portable and refillable source of propane storage and are therefore required to meet the USDOT's Pipeline and Hazardous Materials Safety Administration ("PHMSA") specifications 4B,[27] 4BA,[28] or 4BW[29] for cylinders used in hazardous material packaging in the United States. These specifications dictate the grade of steel, welding or brazing requirements, wall thickness, design features, and markings (figure 1.3), in addition to other technical specifications.

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

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

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

Figure 1.3
Steel propane cylinders: Required markings on the cylinder neck ring (collar) or cylinder shoulder



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

* Additional markings may be present as authorized by HMR under the specification

Source: USDOT, PHMSA, "Requalification Guidance for Propane Cylinders," no date, www.phmsa.dot.gov/sites/phmsa.dot.gov/files/docs/propane_en_v3.pdf, retrieved March 21, 2025.

The cylinders must also undergo requalification testing within 12 years of the manufacture date and every 5 years thereafter in order to remain in service.[30] Independent inspection agencies test steel propane cylinders manufactured by both domestic and foreign producers for USDOT certification. A producer's manufacturing facility and its products must receive USDOT certification before it can sell steel propane cylinders in the U.S. market.

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, but steel propane 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.[31] 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. Big-box retailers sell empty new steel propane cylinders, but consumers

[30] 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"). On October 30, 2020, PHMSA approved a petition by NPGA to return the requalification period to 12 years. For more information, see: Brian Richesson "DOT approves NPGA petition on cylinder requalification," Press Release, October 30, 2020, https://www.lpgasmagazine.com/dot-approves-npga-petition-on-cylinder-requalification/, all retrieved March 21, 2025.

[31] Outdoorsy, "Complete guide to RV propane tanks," September 30, 2024, https://www.outdoorsy.com/blog/rv-propane-tanks-guide?wb-auto_radius=true&wb-currency=USD&wb-instant_book=true&wb-locale=en-us&wb-page%5Blimit%5D=3&wb-page%5Boffset%5D=0; Garg, A, et al, "Sectoral overview of US propane demand trends," November 15, 2024, https://www.lpgasmagazine.com/sectoral-overview-of-us-propane-demand-trends/.

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.

Manufacturing process[32]

Domestic and foreign producers generally use the same manufacturing processes and equipment to produce steel propane cylinders; however, the level of automation may vary amongst producers, and there are minor differences during the assembly process. 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 hot rolled steel.[33] The coils are unwound into a hydraulic press that press-punches circular shaped disks from the steel. 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 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.[34]

[32] Unless otherwise noted, this information is based on the original publication, pp. I-15-I-17.

[33] 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.

[34] Medium Propane.Pro, "Canned Heat: How are 5-Gallon Propane Tanks Made?" February 21, 2011, https://medium.com/propanepro/canned-heat-how-are-5-gallon-propane-tanks-made-ebe3c1399833, retrieved March 25, 2025.

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[35] 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,[36] which serves as a pedestal for the unit and allows it to stand upright, is welded to the base of the unit.

The assembled cylinder then undergoes a heat-treating (tempering) process[37] to ensure that the assembled cylinder can endure the expansion and contraction caused by pressurized fuel.[38] 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.[39] Certain producers also hydrostatically test sample cylinders in order to ensure that the cylinders can expand under pressure without rupturing or leaking. There are certain differences between domestic and foreign producers during the final assembly process. Levels of automation may vary during the assembly process — particularly with how materials are handled — due to differences in labor costs.

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

[35] The flange is produced by cold forming of low-carbon cold-heading quality wire rod.

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

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

[38] MS Group, " A detailed guide to LPG cylinder manufacturing process," accessed may 15, 2025, https://www.msgascylinder.com/lpg-cylinder-manufacturing-process/; and Mechanical Contractors Association, "Understanding Bend Tests = MCAA," accessed May 15, 2025, https://www.mcaa.org/ncpwb/wp-content/uploads/sites/4/2016/07/NCPWB-TR-Understanding_Bend_Tests.pdf.

[39] Ibid.

ability to resist corrosion and provides an aesthetic appeal. Following this process, the tanks are then sent to an inspection station where they are examined for possible contaminants.[40]

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. These valves are a cold-formed steel product made from wire rod. The cylinders are then filled with air and submerged into water-filled tanks to detect any leaks from the valve.[41]

Domestic like product issues

In its original determinations, the Commission defined a single domestic like product coextensive with the scope in these investigations.[42] In its notice of institution in these current five-year reviews, the Commission solicited comments from interested parties regarding the appropriate domestic like product and domestic industry.[43] Worthington commented on the Commission's definition of the domestic like product and indicated that it agreed with the Commission's domestic like product definition.[44] In its prehearing brief, Worthington argued that the Commission should continue to find a single domestic like product defined as all steel propane cylinders coextensive with scope.[45] SMPC did not address the definition of the domestic like product in its prehearing or posthearing briefs, nor did it offer any alternative definition of the domestic like product.

[40] Copper Group, "20 lb Propane Tanks How it 27s Made," August 14, 2017, https://www.youtube.com/watch?v=zkw6zATiewM, retrieved March 15, 2025.

[41] Copper Group, "20 lb Propane Tanks How it 27s Made," August 14, 2017, https://www.youtube.com/watch?v=zkw6zATiewM, retrieved March 21, 2025.

[42] Original publication, p. 7. The petitioners had argued that the Commission should continue to define a single domestic like product coextensive with the scope, as it did in the preliminary phase of the investigations. No respondent party argued for a different definition of the domestic like product.

[43] 89 FR 54531, July 1, 2024.

[44] Worthington's response to the notice of institution, July 31, 2024, p. 19. SMPC responded "not applicable" to the Commission's inquiry concerning the domestic like product and domestic industry definitions. SMPC's response to the notice of institution, July 31, 2024, p. 9.

[45] Worthington's prehearing brief, pp. 4 to 5.

U.S. market participants

U.S. producers

During the original investigations, Manchester and Worthington supplied the Commission with information on their U.S. operations with respect to steel propane cylinders. These firms accounted for the vast majority of U.S. production of steel propane cylinders in 2018.[46] In these current proceedings, the Commission issued U.S. producers' questionnaires to two firms (Manchester and Worthington), both of which provided the Commission with information on their product operations. These firms accounted for all U.S. production of steel propane cylinders from 2019 to 2024. Presented in table 1.9 is a list of domestic producers of product and each company's position on continuation of the orders, production locations, and share of reported production of steel propane cylinders in 2024.

Table 1.9 Steel propane cylinders: U.S. producers, positions on orders, U.S. production locations, and shares of reported U.S. production, 2024

Share in percent

Firm	Position on continuation of orders	Production locations	Share of production
Manchester	Support	Elkhart, IN (former); Crossville, TN (former)	—
Worthington	Support	Westerville, OH	100.0
All firms	Support	Various	100.0

Source: Compiled from data submitted in response to Commission questionnaires and Worthington's response to the notice of institution, July 31, 2024, pp. 2 and 15.

As indicated in table 1.10, no U.S. producers are related to foreign producers of the subject merchandise or U.S. importers of the subject merchandise, although both are related to producers of steel propane cylinders in nonsubject sources. In addition, as discussed in greater detail in Part 3, one U.S. producer directly imports the subject merchandise and neither purchase the subject merchandise from U.S. importers.[47]

[46] Original publication, p. 3.1. The Commission issued a U.S. producer to three firms based on information contained in the petition, but the third firm, ***, did not provide a response.

[47] See also Worthington's response to the notice of institution, July 31, 2024, p. 16.

Table 1.10 Steel propane cylinders: U.S. producers' ownership, related and/or affiliated firms

Reporting firm	Relationship type and related firm	Details of relationship
Manchester	Ownership: McWane, Inc.	***
Manchester	***	***
Worthington	***	***
Manchester	***	***
Worthington	***	***

Source: Compiled from data submitted in response to Commission questionnaires; Manchester Tank, "Corporate Responsibility", accessed April 14, 2025, https://mantank.com/about-us/corporate-responsibility/.

U.S. importers

In the original investigations, eight U.S. importing firms supplied the Commission with usable information on their operations involving the importation of steel propane cylinders, accounting for 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. Of the responding U.S. importers, one (Worthington) was a domestic producer.

In the current proceedings, the Commission issued U.S. importers' questionnaires to 34 potential importers of steel propane cylinders, as well as to all U.S. producers of steel propane cylinders. Usable questionnaire responses were received from six firms, representing the vast majority of imports of steel propane cylinders.[48] Table 1.11 lists all responding U.S. importers of steel propane cylinders from China, Thailand, and other sources, as well as their locations and their shares of U.S. imports in 2024.

[48] Based on a comparison of responses submitted in the original investigations with responses obtained in these full reviews. ***. For more information, see Part 4.

Table 1.11 Steel propane cylinders: U.S. importers, their headquarters, and share of imports within each source, 2024, by firm

Share in percent

Firm	Headquarters	China	Thailand	Subject sources	Nonsubject sources	All import sources
Amazon	Seattle, WA	***	***	***	***	***
Manchester	Franklin, TN	***	***	***	***	***
Tropigas	Bayamon, PR	***	***	***	***	***
Worldwide	Jacksonville, FL	***	***	***	***	***
Worthington	Columbus, OH	***	***	***	***	***
YSN	Commerce, CA	***	***	***	***	***
All firms	Various	100.0	100.0	100.0	100.0	100.0

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

U.S. purchasers

The Commission received 14 usable questionnaire responses from firms that have purchased steel propane cylinders since 2019.[49] Nine responding purchasers are distributors, 2 are gas exchangers, and 5 are retailers. In general, responding U.S. purchasers were located across the contiguous U.S. regions, primarily in the Midwest. The responding purchasers represented firms in a variety of domestic industries, including RV manufacturing and gas exchangers. Large purchasers of steel propane cylinders include ***.

[49] Of the 14 responding purchasers, 6 purchased the domestic product, 0 purchased imports of the subject merchandise from China, 10 purchased imports of the subject merchandise from Thailand, and 7 purchased imports of steel propane cylinders from other sources.

Apparent U.S. consumption and market shares

Quantity

Table 1.12 and figure 1.4 present data on apparent U.S. consumption and U.S. market shares by quantity for steel propane cylinders. The share accounted for by U.S. producers decreased by *** percentage points from 2019 to 2024. U.S. producers' U.S. shipments decreased by *** percent from 2019 to 2024. The decrease was *** percent from 2019 to 2023; the decrease of *** percent from 2023 to 2024 was magnified due to Manchester's cessation of U.S. production in September 2023; the firm reported *** in 2024.

The market share accounted for by imports from China decreased by *** percentage points from 2019 to 2024, however only *** pounds of steel propane cylinders were imported from China over the entire period for which data were collected, with the majority of imports occurring in 2019. The market share held by imports from Thailand increased by *** percentage points from 2019 to 2024. The market share accounted for by imports from nonsubject sources increased by *** percentage points from 2019 to 2024.

Table 1.12 Steel propane cylinders: Apparent U.S. consumption and market shares based on quantity, by source and period

Quantity in 1,000 pounds, tare weight; shares in percent

Source	Measure	2019	2020	2021
U.S. producers	Quantity	***	***	***
China	Quantity	***	***	***
Thailand	Quantity	***	***	***
Subject sources	Quantity	***	***	***
Nonsubject sources	Quantity	***	***	***
All import sources	Quantity	***	***	***
All sources	Quantity	139,980	196,743	208,694
U.S. producers	Share	***	***	***
China	Share	***	***	***
Thailand	Share	***	***	***
Subject sources	Share	***	***	***
Nonsubject sources	Share	***	***	***
All import sources	Share	***	***	***
All sources	Share	100.0	100.0	100.0

Table continued.

Table 1.12 (Continued) Steel propane cylinders: Apparent U.S. consumption and market shares based on quantity, by source and period

Quantity in 1,000 pounds, tare weight; shares in percent

Source	Measure	2022	2023	2024
U.S. producers	Quantity	***	***	***
China	Quantity	***	***	***
Thailand	Quantity	***	***	***
Subject sources	Quantity	***	***	***
Nonsubject sources	Quantity	***	***	***
All import sources	Quantity	***	***	***
All sources	Quantity	200,244	158,872	133,005
U.S. producers	Share	***	***	***
China	Share	***	***	***
Thailand	Share	***	***	***
Subject sources	Share	***	***	***
Nonsubject sources	Share	***	***	***
All import sources	Share	***	***	***
All sources	Share	100.0	100.0	100.0

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

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as "—".

Figure 1.4 Steel propane cylinders: Apparent U.S. consumption based on quantity, by source and period

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires

Value

Table 1.13 and figure 1.5 present data on apparent U.S. consumption and U.S. market shares by value for steel propane cylinders. The share accounted for by U.S. producers decreased by *** percentage points from 2019 to 2024. The market share accounted for by imports from China decreased by *** percentage points from 2019 to 2024, while the market share accounted for by imports from Thailand increased by *** percentage points over the same period. The market share accounted for by imports from nonsubject sources increased by *** percentage points from 2019 to 2024.

Table 1.13 Steel propane cylinders: Apparent U.S. consumption and market shares based on value, by source and period

Value in 1,000 dollars; shares in percent

Source	Measure	2019	2020	2021
U.S. producers	Value	***	***	***
China	Value	***	***	***
Thailand	Value	***	***	***
Subject sources	Value	***	***	***
Nonsubject sources	Value	***	***	***
All import sources	Value	***	***	***
All sources	Value	180,049	262,851	317,705
U.S. producers	Share of value	***	***	***
China	Share of value	***	***	***
Thailand	Share of value	***	***	***
Subject sources	Share of value	***	***	***
Nonsubject sources	Share of value	***	***	***
All import sources	Share of value	***	***	***
All sources	Share of value	100.0	100.0	100.0

Table continued.

Table 1.13 (Continued) Steel propane cylinders: Apparent U.S. consumption and market shares based on value, by source and period

Value in 1,000 dollars; shares in percent

Source	Measure	2022	2023	2024
U.S. producers	Value	***	***	***
China	Value	***	***	***
Thailand	Value	***	***	***
Subject sources	Value	***	***	***
Nonsubject sources	Value	***	***	***
All import sources	Value	***	***	***
All sources	Value	398,517	287,979	232,562
U.S. producers	Share of value	***	***	***
China	Share of value	***	***	***
Thailand	Share of value	***	***	***
Subject sources	Share of value	***	***	***
Nonsubject sources	Share of value	***	***	***
All import sources	Share of value	***	***	***
All sources	Share of value	100.0	100.0	100.0

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

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as “—“.

Figure 1.5 Steel propane cylinders: Apparent U.S. consumption based on value, by source and period

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires

Part 2: 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 2019. 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]

Steel propane cylinders must be certified by the Department of Transportation ("DOT") to be sold in the United States. In order to maintain their certification, steel propane cylinders must be recertified 12 years after they are produced, and every 5 years thereafter. Typically, steel propane cylinders are expected to be used for 20 years.[2]

Only a single U.S. purchaser indicated that the market was subject to distinctive conditions of competition. Specifically, purchaser *** reported that the distinctive conditions of competition "can vary based on pricing from suppliers."

Apparent U.S. consumption of steel propane cylinders peaked in 2021 but decreased overall by 5 percent between 2019 and 2024.

Impact of section 301 tariffs and section 232 tariffs

U.S. producers, importers, purchasers, and foreign producers were asked to report the impact of section 301 tariffs and section 232 tariffs on overall demand, supply, prices, or raw material costs (tables 2.1 and 2.2). Most responding U.S. producers and importers reported that the section 301 tariffs did not have an impact on the U.S. market, and most responding purchasers reported that they did not know. The firms reporting that these tariffs had an impact on the U.S. market noted higher prices, increased demand, and longer lead times on the cylinders and on the steel inputs.

*** U.S. producers, one importer, five purchasers, *** reported that section 232 tariffs did have an impact on the U.S. market; nine purchasers reported that they did not know. Three importers reported that there was not an impact. Firms reported price increases on steel as a result of section 232 duties, and purchaser *** reported that there was an increase in steel

[1] Steel Propane Cylinders from China and Thailand, Inv. Nos. 701-TA-607 and 731-TA-1417 and 1419 (Final). USITC Publication 4938, August 2019 ("Original publication"), p. II-1.

[2] Original publication, p. II-1.

costs as a result of section 232 duties across all suppliers, including U.S. producers, which raised their cylinder prices by up to 15 percent in some cases.

Table 2.1 Steel propane cylinders: Count of firms' responses regarding the impact of the section 301 tariffs on Chinese origin products

Count in number of firms responding

Firm type	Yes	No	Don't know
U.S. producers	***	***	***
Importers	1	3	1
Purchasers	6	0	8
Foreign producers	***	***	NA

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

Table 2.2 Steel propane cylinders: Count of firms' responses regarding the impact of the section 232 tariffs on steel and aluminum imports

Count in number of firms responding

Firm type	Yes	No	Don't know
U.S. producers	***	***	***
Importers	1	3	1
Purchasers	5	0	9
Foreign producers	***	***	NA

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

Channels of distribution

Since 2019, U.S. producers of steel propane cylinders sold primarily to gas exchangers, as shown in table 2.3. Subject importers reported large shares of shipments to retailers, gas exchangers, and other end users.[3] During the hearing, Worthington described declining and losing sales to RV manufacturers over a decade ago due to "low-priced subject imports" and being unable to recapture the RV manufacturer market.[4] Similar to the original investigations, for the current review period, gas exchangers remain the largest channel of distribution for U.S. producer shipments. Overall, nonsubject U.S. shipments to most channels increased from levels in 2019.

[3] Two importers of Chinese steel propane cylinders reported shipments in *** and ***. Most shipments in *** were to *** while most shipments in *** were to ***. Importers of Thai steel propane cylinders reported that approximately *** of shipments were sold to retailers, *** to gas exchangers, and *** to all other end users in 2023.

[4] Hearing transcript, pp. 14-15 (Weinberg).

Table 2.3 Steel propane cylinders: Share of U.S. shipments by source, channel of distribution, and period

Shares in percent

Source	Channel	2019	2020	2021	2022	2023	2024
United States	Distributors	***	***	***	***	***	***
United States	Retailers	***	***	***	***	***	***
United States	Gas exchangers	***	***	***	***	***	***
United States	RV manufacturers	***	***	***	***	***	***
United States	All other end users	***	***	***	***	***	***
China	Distributors	***	***	***	***	***	***
China	Retailers	***	***	***	***	***	***
China	Gas exchangers	***	***	***	***	***	***
China	RV manufacturers	***	***	***	***	***	***
China	All other end users	***	***	***	***	***	***
Thailand	Distributors	***	***	***	***	***	***
Thailand	Retailers	***	***	***	***	***	***
Thailand	Gas exchangers	***	***	***	***	***	***
Thailand	RV manufacturers	***	***	***	***	***	***
Thailand	All other end users	***	***	***	***	***	***
Subject	Distributor	***	***	***	***	***	***
Subject	Retailers	***	***	***	***	***	***
Subject	Gas exchangers	***	***	***	***	***	***
Subject	RV manufacturers	***	***	***	***	***	***
Subject	All other end users	***	***	***	***	***	***
Nonsubject	Distributors	***	***	***	***	***	***
Nonsubject	Retailers	***	***	***	***	***	***
Nonsubject	Gas exchangers	***	***	***	***	***	***
Nonsubject	RV manufacturers	***	***	***	***	***	***
Nonsubject	All other end users	***	***	***	***	***	***
All imports	Distributor	***	***	***	***	***	***
All imports	Retailers	***	***	***	***	***	***
All imports	Gas exchangers	***	***	***	***	***	***
All imports	RV manufacturers	***	***	***	***	***	***
All imports	All other end users	***	***	***	***	***	***
All sources	Distributors	1.8	6.0	8.3	7.1	3.2	7.4
All sources	Retailers	18.0	18.5	22.1	14.5	13.1	16.8
All sources	Gas exchangers	63.2	58.2	51.8	60.1	66.0	55.5
All sources	RV manufacturers	0.8	1.2	2.0	1.9	2.1	3.0
All sources	All other end users	16.1	16.0	15.8	16.5	15.5	17.3

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

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as “—“.

Geographic distribution

U.S. producers reported selling steel propane cylinders to all regions in the United States (table 2.4). Importers of steel propane cylinders from Thailand reported selling to all regions in the United States, while importers from China reported selling to the Midwest, Pacific Coast, and other regions. For U.S. producers, *** percent of sales were within 100 miles of their production facility, *** percent were between 101 and 1,000 miles, and *** percent were over 1,000 miles. Importers sold *** percent within 100 miles of their U.S. point of shipment, *** percent between 101 and 1,000 miles, and *** percent over 1,000 miles. Imports from Thailand primarily were sold in the Midwest and Pacific Coast regions.

Table 2.4 Steel propane cylinders: Count of U.S. producers' and U.S. importers' geographic markets

Count in number of firms responding

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

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

Note: Other U.S. markets include AK, HI, PR, and VI.

Supply and demand considerations

U.S. supply

Table 2.5 provides a summary of the supply factors regarding steel propane cylinders from U.S. producers and from subject countries. U.S. producers had lower capacity and capacity utilization than Thailand in 2024. Most Thailand producers' shipments were to non-U.S. markets. The Commission received one questionnaire response from a Thai producer. No Chinese producer provided a complete response.

Table 2.5 Steel propane cylinders: Supply factors that affect the ability to increase shipments to the U.S. market, by country

Quantity in 1,000 pounds, tare weight; ratio and share in percent

Factor	Measure	United States	China	Thailand
Capacity 2019	Quantity	***	***	***
Capacity 2024	Quantity	***	***	***
Capacity utilization 2019	Ratio	***	***	***
Capacity utilization 2024	Ratio	***	***	***
Inventories to total shipments 2019	Ratio	***	***	***
Inventories to total shipments 2024	Ratio	***	***	***
Home market shipments 2024	Share	***	***	***
Non-US export market shipments 2024	Share	***	***	***
Ability to shift production (firms reporting “yes”)	Count	***	***	***

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

Note: Responding U.S. producers accounted for all of U.S. production of steel propane cylinders in 2024. No complete responses were received from foreign producers from China. The responding foreign producer from Thailand accounted for *** percent of total production in Thailand in 2024 and *** percent of total exports to the United States of steel propane cylinders from Thailand in 2024.

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as “—“.

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 large changes in the quantity of shipments of U.S.-produced steel propane cylinders to the U.S. market. During the hearing, Worthington stated that it had recently executed a capital improvement project on its facilities to improve production processes.[5] The main contributing factors to this degree of responsiveness of supply are the ability to shift shipments from other markets; mitigating factors include limited inventories, fluctuating capacity, limited ability to shift shipments from alternate products, and limited ability for production processes to respond to demand spikes.[6] Worthington reported having they have the capacity to supply most of U.S. demand.[7] The producer also stated that it continues to attempt to recapture RV manufacturers in their customer base.[8]

[5] Hearing transcript, pp. 35-36 (Patterson), p. 59 (Rosenthal).
[6] Hearing transcript, pp. 62-63 (Patterson, Weinberg).
[7] Domestic producer prehearing brief, p. 28 (Worthington).
[8] Hearing transcript, p. 15 (Patterson).

Subject imports from China

No foreign producers from China provided a complete questionnaire in these proceedings. Based on available information from the original investigation and U.S. producer responses to the Notice of Institution for these reviews, producers of steel propane cylinders from China have the ability to respond to changes in demand with moderate-to-large changes in the quantity of shipments of steel propane cylinders to the U.S. market. Factors mitigating responsiveness of supply included relatively high capacity utilization rates and limited inventories.[9] The main contributing factors to this degree of responsiveness of supply were an ability to shift shipments from alternate markets and the ability to shift production to or from alternate products. In the current proceeding, a U.S. domestic producer response to the Notice of Institution for this review reports there are at "least 10 producers of steel propane cylinders in China that have been engaged in the production and export of steel propane cylinders during the review period." Some of these foreign producers are reported to have expanded production facilities, capabilities, and have or are in the process of obtaining the appropriate U.S. Department of Transportation certifications necessary to export to U.S. markets.[10]

Subject imports from Thailand

Based on available information, the producer of steel propane cylinders from Thailand has the ability to respond to changes in demand with large 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 the availability inventories, ability to shift large shipments from alternate markets and the ability to shift production from producing steel propane cylinders of different sizes and standards to producing steel propane cylinders of sizes and standards used in the United States. Factors mitigating responsiveness of supply include limited availability of unused capacity. Thai producer SMPC reported inventories "peaked in *** (at *** pounds), such that the end-of-period quantity of *** pounds amounts to a *** percent decline from peak inventory quantities."[11] Thai producer SMPC reported that during the review period, U.S. imports accounted for approximately *** of their total shipments, that increased shipments to the U.S are due to market conditions that "necessitate doing so, and that SMPC prioritizes third-country markets."[12]

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[9] Original publication, p. II-5.
[10] Domestic Industry's Substantive Response to Notice of Institution, p. 8.
[11] Foreign producer prehearing brief, p. 10 (SMPC).
[12] Foreign producer prehearing brief, pp. 9-11 (SMPC).

Imports from nonsubject sources

Nonsubject imports accounted for *** percent of total U.S. imports in 2024. The largest sources of nonsubject imports during 2019 to 2024 were ***. Combined, these countries accounted for *** of nonsubject imports in 2024.

Supply constraints

Among U.S. producers and importers, only *** confirmed experiencing supply constraints since January 1, 2019. The firm stated that "***." In addition, Worthington reported difficulties in responding for unanticipated spikes in demand and *** when customers do not provide ***.[13]

Twelve of 14 responding purchasers reported experiencing supply constraints of domestically produced steel propane cylinders and 4 of 11 responding purchasers reported experiencing supply constraints from import sources. Purchasers described that domestic sources did not have the capacity to meet demand, and that producer Worthington has had allocations in place, and according to purchaser ***, "eventually cut off orders to production capacity," while *** reports the allocations are ongoing. Purchaser *** reported producer *** "failed in contractual delivery commitments" for *** and the purchaser has new suppliers. Regarding supply constraints on imported sources, purchasers cited high costs freight issues, and fluctuating demand during the COVID-19 pandemic.

New suppliers

Six of 13 purchasers indicated that new suppliers entered the U.S. market since January 1, 2019, and 3 of 11 expect additional entrants. Purchaser *** expects new suppliers to enter the market because "there is not enough domestic capacity for our needs" and purchaser *** reports that new suppliers are "obtaining DOT approval and trying to enter the U.S market."

[13] Domestic producer posthearing brief, Exhibit 1, p. 4 (Worthington).

U.S. demand

Based on available information, the overall demand for steel propane cylinders is likely to experience moderate to large 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 most of its 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. During the original investigations, reported end uses include the provision of fuel for heating, cooking, propane gas grills, propane storage, and recreational vehicles.[14] Steel propane cylinders accounted 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: recreational vehicles, 0.1 to 1 percent; cooking and grills, 3 to 10 percent; outdoor heating, 5 percent; adhesive cylinder 10 percent; industrial uses, 7 to 10 percent; and gas exchangers, 20 percent.[15]

Firms were asked if there have been any changes to steel propane cylinders' end uses since 2019 or whether firms anticipated changes in end uses. None of the responding U.S. producers, no importers, no purchasers, and no foreign producers reported new changes in end uses.

Business cycles

*** of U.S. producers, 2 of 5 importers, and 11 of 14 purchasers indicated that the market was subject to business cycles. A cross-section of market participants identified seasonal factors (including outdoor creation in the summers and winter heating) and natural disaster emergency preparedness as affecting demand for steel propane cylinders. Purchasers also indicated that while recreational vehicle (RV) manufacturing is year-round, that demand is affected by interest rates and consumer sentiment.

Demand trends

Most firms reported an increase in U.S. demand for steel propane cylinders since January 1, 2019 (table 2.6). Firms generally expect demand to remain stable or fluctuate upwards over the next two years (table 2.7). During the hearing, Worthington reiterated that

[14] Original publication, pp. II-7.
[15] Original publication, pp. II-7 and II-8.

U.S. demand for steel propane cylinders is driven by weather and seasonal changes, including winter storms and hurricanes.[16]

Table 2.6 Steel propane cylinders: Count of firms' responses regarding overall domestic and foreign demand since January 1, 2019, by firm type

Count in number of firms responding

Market	Firm type	Steadily increase	Fluctuated up	No change	Fluctuated down	Steadily decreased
U.S. demand	U.S. producers	***	***	***	***	***
U.S. demand	Importers	0	4	1	0	0
U.S. demand	Purchasers	0	6	2	3	1
U.S. demand	Foreign producers	***	***	***	***	***
Foreign demand	U.S. producers	***	***	***	***	***
Foreign demand	Importers	0	3	2	0	0
Foreign demand	Purchasers	3	0	1	1	0
Demand in subject country	Foreign producers	***	***	***	***	***
Demand in other export markets	Foreign producers	***	***	***	***	***
Demand for end use products	Purchasers	1	4	2	3	1

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

[16] Hearing transcript, p. 49 (Patterson).

Table 2.7 Steel propane cylinders: Count of firms' responses regarding anticipated overall domestic and foreign demand, by firm type

Count in number of firms responding

Market	Firm type	Steadily increase	Fluctuated up	No change	Fluctuated down	Steadily decreased
U.S. demand	U.S. producers	***	***	***	***	***
U.S. demand	Importers	0	1	3	1	0
U.S. demand	Purchasers	1	1	3	6	1
U.S. demand	Foreign producers	***	***	***	***	***
Foreign demand	U.S. producers	***	***	***	***	***
Foreign demand	Importers	0	3	2	0	0
Foreign demand	Purchasers	3	0	2	0	1
Demand in subject country	Foreign producers	***	***	***	***	***
Demand in other export markets	Foreign producers	***	***	***	***	***

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

Substitute products

Substitutes for steel propane cylinders are limited. Most U.S. producers, importers, and purchasers reported that there were no substitutes and did not anticipate any future changes in substitutes. On substitutes, purchaser *** stated that "there are composite cylinders available but unless the larger companies like Blue Rhino or Amerigas change to those, our propane tank exchange will remain using steel cylinders." The one responding foreign producer, SMPC, reported that ***.

Substitutability issues

This section assesses the degree to which U.S.-produced steel propane cylinders and imports of steel propane cylinders from subject countries can be substituted for one another by examining the importance of certain purchasing factors and the comparability of steel propane cylinders from domestic and imported sources based on those factors. Based on available data, staff believes that there is a high degree of substitutability between domestically produced steel propane cylinders and steel propane cylinders imported from subject sources.[17] Factors contributing to this level of substitutability include similar qualities between imported and domestically produced steel propane cylinders, interchangeability between domestic and subject and foreign sources, little preference for particular country of origin or producers, and limited significant factors other than price.

Factors affecting purchasing decisions[18]

Purchaser decisions based on source

As shown in table 2.8, most purchasers and their customers never make purchasing decisions based on the producer or country of origin. Purchaser *** reported always basing purchasing decisions on producers' "competitive bidding process, including previous performance reviews." Of the two purchasers that reported that they usually make decisions based on the producer or country of origin, *** reported that while producer and country of origin are factors in making purchasing decisions, other factors including product availability, pricing terms, and program rebates "play key roles in our decision-making process." Most purchasers cited reliability, availability, prices, lead times, and freight rates as determining factors in purchasing decisions.

[17] The degree of substitution between domestic and imported steel propane cylinders depends upon the extent of product differentiation between the domestic and imported products and reflects how easily purchasers can switch from domestically produced steel propane cylinders to steel propane cylinders imported from subject countries (or vice versa) when prices change. The degree of substitution may include such factors as quality differences (e.g., grade standards, defect rates, etc.), and differences in sales conditions (e.g., lead times between order and delivery dates, reliability of supply, product services, etc.).

[18] Twelve purchasers indicated they had marketing/pricing knowledge of domestic product, 5 of product from China, 12 of product from Thailand, and 8 of product from nonsubject countries.

Table 2.8 Steel propane cylinders: Count of purchasers' responses regarding frequency of purchasing decisions based on producer and country of origin

Count in number of firms responding

Firm making decision	Decision based on	Always	Usually	Sometimes	Never
Purchaser	Producer	1	2	4	7
Customer	Producer	0	0	2	9
Purchaser	Country	0	3	4	7
Customer	Country	0	0	2	9

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

Importance of purchasing domestic product

All of the 11 responding purchasers reported that most or all their purchases did not require purchasing U.S.-produced product.

Most important purchase factors

The most often cited top three factors firms consider in their purchasing decisions for steel propane cylinders were price (10 firms), availability and production capacity (6 firms), and quality (5 firms) as shown in table 2.9. Price was the most frequently cited first-most important factor (cited by 5 firms), followed by compliance and certifications (4 firms). Availability and production capacity and product quality were the most frequently reported second-most important factor (4 firms per each factor), followed by price or cost (3 firms). Logistics was the most frequently reported third-most important factor (4 firms), followed by vendor programs (3 firms).

Table 2.9 Steel propane cylinders: Count of ranking of factors used in purchasing decisions as reported by purchasers, by factor

Count in number of firms responding

Factor	First	Second	Third	Total
Price or cost	5	3	2	10
Certifications/compliance	4	0	0	4
Availability and production capacity	1	4	1	6
Quality	1	4	0	5
Logistics	0	0	4	4
Vendor programs	0	0	3	3

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

Importance of specified purchase factors

Purchasers were asked to rate the importance of 15 factors in their purchasing decisions (table 2.10). The factors rated as very important by more than half of responding purchasers were availability (13 firms), delivery time (13 firms), price (13 firms), product consistency (13

firms), quality meeting industry standards (13 firms), reliability of supply (13 firms), U.S. transportation costs (11 firms), delivery terms (9 firms), discounts offered (8 firms), packaging (8 firms), and technical support/service (8 firms).

Table 2.10 Steel propane cylinders: Count of purchasers' responses regarding importance of purchase factors, by factor

Count in number of firms responding

Factor	Very important	Somewhat important	Not important
Availability	13	0	0
Delivery time	13	0	0
Price	13	0	0
Product consistency	13	0	0
Quality meets industry standards	13	0	0
Reliability of supply	13	0	0
U.S. transportation costs	11	1	1
Delivery terms	9	3	1
Technical support/service	8	5	0
Discounts offered	8	4	1
Packaging	8	2	3
Payment terms	6	4	3
Quality exceeds industry standards	5	8	1
Minimum quantity requirements	4	5	4
Product range	3	7	3

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

Lead times

Steel propane cylinders are primarily sold from inventory. U.S. producers reported that *** percent of their sales were from U.S. inventory, and *** percent produced to order, with lead times averaging *** days for inventory shipments and *** days for produced-to-order shipments. Importers reported that *** percent of their commercial shipments are from existing inventories (*** percent from U.S. inventories and *** percent foreign inventories) and *** percent of shipments are produced to order, with lead times averaging *** days for propane steel cylinders from U.S. inventories,*** days for foreign inventory, and *** days for produced to order shipments.

Supplier certification

Eight of 14 responding purchasers require their suppliers to become certified or qualified to sell steel propane cylinders to their firm. All purchasers reported that no domestic or foreign supplier had failed in its attempt to qualify steel propane cylinders or had lost its approved status since 2019.

Minimum quality specifications

As can be seen from table 2.11, 10 responding purchasers reported that domestically produced product always met minimum quality specifications. Four responding purchasers reported that the China steel propane cylinders always met minimum quality specifications. Nine responding producers reported that the Thailand steel propane cylinders always met minimum quality specifications.

Table 2.11 Steel propane cylinders: Count of purchasers' responses regarding suppliers' ability to meet minimum quality specifications, by source

Count in number of firms responding

Source of purchases	Always	Usually	Sometimes	Rarely or never
United States	10	0	0	0
China	4	1	0	0
Thailand	9	1	0	0
Nonsubject sources	6	3	0	0

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

Note: Purchasers were asked how often domestically produced or imported steel propane cylinders meets minimum quality specifications for their own or their customers' uses.

Nine responding purchasers reported factors that determined quality such as meeting U.S. safety certifications, durable construction, product support, relevant product markings, and welding characteristics that indicate high reliability in both the cylinders and valves.

Changes in purchasing patterns

Five purchasers reported that they had changed suppliers since January 1, 2019, while nine reported that they had not. Specifically, firms dropped or reduced purchases from *** and *** because of increases in pricing and lack of supply. Firms added or increased purchases from import sources, including ***, to diversify supply. Firms also reported changes to stocking programs due to imposed duties.

Purchasers were also asked about changes in their purchasing patterns from different countries since January 1, 2019 (table 2.12). Purchasers reported decreased purchases of U.S.-produced product because of limited capacity to fill orders given increased demand. Purchasers reported decreased purchases of product from China because of increased AD/CVD duty costs. However, responding firms reported increasing purchases from Thailand due to inability to purchase from domestic sources due to a lack of domestic capacity. Purchasers reported

increased purchases of product from nonsubject countries because of concern with diversifying supply and lower costs due to no AD/CVD duties.

Table 2.12 Steel propane cylinders: Count of purchasers' responses regarding changes in purchase patterns from U.S., subject, and nonsubject countries

Count in number of firms responding

Source of purchases	Steadily increased	Fluctuated up	No change	Fluctuated down	Steadily decreased	Did not purchase
United States	1	1	0	2	3	5
China	0	0	0	2	0	8
Thailand	5	1	2	1	2	0
Nonsubject sources	2	3	0	1	0	4

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

Purchase factor 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 15 factors (table 2.13) for which they were asked to rate the importance.

Most purchasers reported that U.S.-produced steel propane cylinders and steel propane cylinders imported from Thailand as comparable on all factors except reliability of supply, while two purchasers reported steel propane imports from China were comparable on all factors except reliability of supply. Eight reported U.S. produced steel propane cylinders as inferior to imports from Thailand on factors of availability, reliability of supply, and price, and comparable and comparable in most other factors. Seven purchasers compared steel propane cylinders from China with that from Thailand, reported that imports were comparable except on price. The importance of delivery times as a purchase factor is also reflected on table 2.10.

Table 2.13 Steel propane cylinders: Count of purchasers' responses comparing U.S.-produced and imported product, by factor and country pair

Count in number of firms responding

Factor	Country pair	Superior	Comparable	Inferior
Availability	U.S. v. China	0	1	1
Delivery time	U.S. v. China	0	1	1
Price	U.S. v. China	0	2	0
Product consistency	U.S. v. China	0	2	0
Quality meets industry standards	U.S. v. China	0	2	0
Reliability of supply	U.S. v. China	0	0	2
U.S. transportation costs	U.S. v. China	0	2	0
Delivery terms	U.S. v. China	0	2	0
Technical support/service	U.S. v. China	0	2	0
Discounts offered	U.S. v. China	0	2	0
Packaging	U.S. v. China	0	2	0
Payment terms	U.S. v. China	0	2	0
Quality exceeds industry standards	U.S. v. China	0	2	0
Minimum quantity requirements	U.S. v. China	0	2	0
Product range	U.S. v. China	0	2	0

Table continued

Table 2.13 (Continued) Steel propane cylinders: Count of purchasers' responses comparing U.S.-produced and imported product, by factor and country pair

Count in number of firms responding

Factor	Country pair	Superior	Comparable	Inferior
Availability	U.S. v. Thailand	0	3	5
Delivery time	U.S. v. Thailand	3	2	3
Price	U.S. v. Thailand	1	4	4
Product consistency	U.S. v. Thailand	0	8	0
Quality meets industry standards	U.S. v. Thailand	0	8	0
Reliability of supply	U.S. v. Thailand	1	3	4
U.S. transportation costs	U.S. v. Thailand	1	7	0
Delivery terms	U.S. v. Thailand	0	7	1
Technical support/service	U.S. v. Thailand	1	7	0
Discounts offered	U.S. v. Thailand	0	7	2
Packaging	U.S. v. Thailand	1	8	0
Payment terms	U.S. v. Thailand	1	7	1
Quality exceeds industry standards	U.S. v. Thailand	0	8	0
Minimum quantity requirements	U.S. v. Thailand	0	8	1
Product range	U.S. v. Thailand	1	5	1

Table continued.

Table 2.13 (Continued) Steel propane cylinders: Count of purchasers' responses comparing U.S.-produced and imported product, by factor and country pair

Count in number of firms responding

Factor	Country pair	Superior	Comparable	Inferior
Availability	U.S. v. Nonsubject	0	2	2
Delivery time	U.S. v. Nonsubject	1	1	2
Price	U.S. v. Nonsubject	0	1	3
Product consistency	U.S. v. Nonsubject	2	2	0
Quality meets industry standards	U.S. v. Nonsubject	1	3	0
Reliability of supply	U.S. v. Nonsubject	0	2	2
U.S. transportation costs	U.S. v. Nonsubject	0	3	0
Delivery terms	U.S. v. Nonsubject	0	4	0
Technical support/service	U.S. v. Nonsubject	0	4	0
Discounts offered	U.S. v. Nonsubject	0	4	0
Packaging	U.S. v. Nonsubject	0	4	0
Payment terms	U.S. v. Nonsubject	0	4	0
Quality exceeds industry standards	U.S. v. Nonsubject	1	3	0
Minimum quantity requirements	U.S. v. Nonsubject	0	4	0
Product range	U.S. v. Nonsubject	0	4	0

Table continued

Table 2.13 (Continued) Steel propane cylinders: Count of purchasers' responses comparing U.S.-produced and imported product, by factor and country pair

Count in number of firms responding

Factor	Country Pair	Superior	Comparable	Inferior
Availability	China v. Nonsubject	0	2	0
Delivery time	China v. Nonsubject	0	2	0
Price	China v. Nonsubject	0	2	0
Product consistency	China v. Nonsubject	1	1	0
Quality meets industry standards	China v. Nonsubject	1	1	0
Reliability of supply	China v. Nonsubject	1	1	0
U.S. transportation costs	China v. Nonsubject	0	2	0
Delivery terms	China v. Nonsubject	0	2	0
Technical support/service	China v. Nonsubject	0	2	0
Discounts offered	China v. Nonsubject	0	2	0
Packaging	China v. Nonsubject	0	2	0
Payment terms	China v. Nonsubject	0	2	0
Quality exceeds industry standards	China v. Nonsubject	1	1	0
Minimum quantity requirements	China v. Nonsubject	0	2	0
Product range	China v. Nonsubject	0	2	0

Table continued

Table 2.13 (Continued) Steel propane cylinders: Count of purchasers' responses comparing U.S.-produced and imported product, by factor and country pair

Count in number of firms responding

Factor	Country Pair	Superior	Comparable	Inferior
Availability	Thailand v. Nonsubject	1	5	0
Delivery time	Thailand v. Nonsubject	0	6	0
Price	Thailand v. Nonsubject	0	6	0
Product consistency	Thailand v. Nonsubject	1	5	0
Quality meets industry standards	Thailand v. Nonsubject	1	5	0
Reliability of supply	Thailand v. Nonsubject	2	4	0
U.S. transportation costs	Thailand v. Nonsubject	0	6	0
Delivery terms	Thailand v. Nonsubject	0	6	0
Technical support/service	Thailand v. Nonsubject	0	6	0
Discounts offered	Thailand v. Nonsubject	0	6	0
Packaging	Thailand v. Nonsubject	0	6	0
Payment terms	Thailand v. Nonsubject	0	6	0
Quality exceeds industry standards	Thailand v. Nonsubject	1	5	0
Minimum quantity requirements	Thailand v. Nonsubject	0	6	0
Product range	Thailand v. Nonsubject	0	5	1

Table continued

Table 2.13 (Continued) Steel propane cylinders: Count of purchasers' responses comparing U.S.-produced and imported product, by factor and country pair

Count in number of firms responding

Factor	Country Pair	Superior	Comparable	Inferior
Availability	China v. Thailand	0	4	0
Delivery time	China v. Thailand	0	4	0
Price	China v. Thailand	1	3	0
Product consistency	China v. Thailand	0	4	0
Quality meets industry standards	China v. Thailand	0	4	0
Reliability of supply	China v. Thailand	0	4	0
U.S. transportation costs	China v. Thailand	0	4	0
Delivery terms	China v. Thailand	0	4	0
Technical support/service	China v. Thailand	0	4	0
Discounts offered	China v. Thailand	0	4	0
Packaging	China v. Thailand	0	4	0
Payment terms	China v. Thailand	0	4	0
Quality exceeds industry standards	China v. Thailand	0	4	0
Minimum quantity requirements	China v. Thailand	0	4	0
Product range	China v. Thailand	0	4	0

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

Note: With respect to cost/price factors, a rating of superior means that the cost/price for the first source in the country pair 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.

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 (tables 2.14 to 2.16). In questionnaire responses, purchasers *** and *** emphasized the importance of consistent quality and availability.

Table 2.14 Steel propane cylinders: Count of U.S. producers reporting the interchangeability between product produced in the United States and in other countries, by country pair

Count in number of firms responding

Country pair	Always	Frequently	Sometimes	Never
U.S. vs. China	***	***	***	***
U.S. vs. Thailand	***	***	***	***
China vs. Thailand	***	***	***	***
U.S. vs. Other	***	***	***	***
China vs. Other	***	***	***	***
Thailand vs. Other	***	***	***	***

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

Table 2.15 Steel propane cylinders: Count of importers reporting the interchangeability between product produced in the United States and in other countries, by country pair

Count in number of firms responding

Country pair	Always	Frequently	Sometimes	Never
U.S. vs. China	4	0	0	0
U.S. vs. Thailand	5	0	0	0
China vs. Thailand	4	0	0	0
U.S. vs. Other	4	0	0	0
China vs. Other	4	0	0	0
Thailand vs. Other	4	0	0	0

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

Table 2.16 Steel propane cylinders: Count of purchasers reporting the interchangeability between product produced in the United States and in other countries, by country pair

Count in number of firms responding

Country pair	Always	Frequently	Sometimes	Never
U.S. vs. China	5	2	0	0
U.S. vs. Thailand	9	2	0	0
China vs. Thailand	5	2	0	0
U.S. vs. Other	5	3	0	0
China vs. Other	4	2	0	0
Thailand vs. Other	4	3	0	0

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

In addition, U.S. 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. U.S. producers reported there are never significant differences other than price. Most importers reported there are never significant differences other than price (2 reported there are frequently differences other than price between product from the U.S. vs Thailand and China vs. Thailand). Purchasers' responses varied, with a plurality of purchasers reporting there are "always" significant differences other than price between product produced in the United States and Thailand. Purchaser *** noted that "Thailand has a consistent manufacturing base that can keep up with our demand. India makes a quality product, but needs to improve shipping consistently."

Table 2.17 Steel propane cylinders: Count of U.S. producers reporting the significance of differences other than price between product produced in the United States and in other countries, by country pair

Country pair	Always	Frequently	Sometimes	Never
U.S. vs. China	***	***	***	***
U.S. vs. Thailand	***	***	***	***
China vs. Thailand	***	***	***	***
U.S. vs. Other	***	***	***	***
China vs. Other	***	***	***	***
Thailand vs. Other	***	***	***	***

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

Table 2.18 Steel propane cylinders: Count of importers reporting the significance of differences between product produced in the United States and in other countries, by country pair

Country pair	Always	Frequently	Sometimes	Never
U.S. vs. China	0	0	1	3
U.S. vs. Thailand	0	1	1	3
China vs. Thailand	0	1	1	3
U.S. vs. Other	0	0	1	3
China vs. Other	0	0	1	3
Thailand vs. Other	0	0	1	3

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

Table 2.19 Steel propane cylinders: Count of purchasers reporting the significance of differences between product produced in the United States and in other countries, by country pair

Country pair	Always	Frequently	Sometimes	Never
U.S. vs. China	3	0	1	3
U.S. vs. Thailand	6	1	3	3
China vs. Thailand	3	0	1	3
U.S. vs. Other	4	1	1	4
China vs. Other	3	0	1	3
Thailand vs. Other	3	1	1	4

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 as an attachment to their posthearing brief. Although parties provided additional comments regarding U.S. supply, U.S. demand, and product substitutability, parties did not provide alternate elasticity estimates to those in the prehearing staff report.

U.S. supply elasticity

The domestic supply elasticity 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 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.[19] 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 4 to 7.

[19] 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 3: Condition of the U.S. industry

Overview

The information in this section of the report was compiled from responses to the Commission's questionnaires. Two firms, which accounted for all U.S. production of steel propane cylinders from 2019 to 2024, supplied information on their operations in these reviews and other proceedings on steel propane cylinders. One firm, Manchester, ceased production in September 2023. Accordingly, Worthington accounts for the entirety of data reported in 2024.

Table 3.1 presents events in the U.S. industry since January 1, 2019.

Table 3.1 Steel propane cylinders: Developments in the U.S. industry since 2019

Item	Firm	Event
Acquisition	Worthington	In January 2020, Worthington announced the acquisition of the Samuel Steel Pickling Company, a joint venture Worthington has had with Samuel, Son & Co since 2010.
Closure	Manchester	In November 2020, Manchester filed official WARN notice with the Indiana Department of Workforce Development regarding the layoff of 128 employees, due to closure of its Elkhart, Indiana facility. Manchester also closed its Crossville, Tennessee production facility in September 2023, resulting in the loss of 59 jobs.
Separation	Worthington	In December 2023, Worthington Enterprises completed separation of Worthington Steel, which is Worthington's steel processing business.
Acquisition	Worthington	In June 2024, Worthington Enterprises further expanded its operations by acquiring Hexagon Ragasco, a manufacturer of customizable LPG composite cylinders used in leisure, household, and industrial applications.
Acquisition	Manchester	In June 2024, Manchester announced the acquisition of business assets related to the tank refurbishment of Ditech Testing, a Canadian company.
Expansion	Worthington	On September 10, 2024, Worthington Enterprises announced the commencement of a modernization project at its Chilton, Wisconsin campus which produces both fuel cylinders and hand torches. The project involves the construction of a new 58,00 square foot building and the installation of advanced equipment to enhance efficiency and automation.
Safety Advisory	Industry	On January 13, 2025, the Pipeline and Hazardous Materials Safety Administration (PHMSA) issued a warning against unsafe cylinders being sold online by primarily non-U.S. companies to consumers, and to HVAC personnel and service technicians. PHMSA is particularly concerned that these cylinders are not being manufactured to DOT or UN standard specifications and lack certification markings.

Source: Department of Transportation, the Pipeline and Hazardous Materials Safety Administration, "Safety Advisory Notice: Unsafe Cylinders Being Sold Online by Major Retailers to Consumers and HVAC Contractors," January 13, 2025, https://www.phmsa.dot.gov/regulatory-compliance/phmsa-guidance/safety-advisory-notice-unsafe-cylinders-being-sold-online.
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Worthington's Response to the Notice of Institution, July 31, 2024, p. 17.

Changes experienced by the industry

Producers in the United States were asked to report any change in the character of their operations or organization relating to the production of steel propane cylinders since 2019. Both producers indicated in their questionnaires that they had experienced such changes.[1] Table 3.2 presents the changes identified by these producers.

[1] A representative for Manchester stated that the company ceased in production in 2023 because it was "…unable to achieve sufficient profitability on its production and sales of the product, in significant part due to large, ongoing sales of imports from China and Thailand (and new third country sources) at aggressive prices in the U.S. market, despite the imposition of the orders." Worthington's prehearing brief, p. 60. Worthington claims that Manchester exited production completely following the loss of an account with a "large gas exchanger". Hearing transcript, p. 43 (Rosenthal). In its U.S. producers' questionnaire response, Manchester reported that ***. Manchester's U.S. producers' questionnaire response.

Among Manchester's five largest customers from 2019 to 2024, it identified *** as its largest customers. Manchester's U.S. producers' questionnaire response. In its Purchasers' Questionnaire response, ***. Purchaser responses of ***.

Table 3.2 Steel propane cylinders: Reported changes in operations since January 1, 2019

Type of change	Firm name and narrative on changes in operations
Plant closings	Manchester: Elkhart, Indiana plant closed in April 2021 and Crossville, Tennessee plant closed in September 2023.
Production curtailments	***

Source: Compiled from data submitted in response to Commission questionnaires and Worthington's Response to the Notice of Institution, July 31, 2024, p. 17.

Anticipated changes in operations

The Commission asked domestic producers to report anticipated changes in the character of their operations relating to the production of steel propane cylinders. Neither producer reported anticipated changes in the character of their operations.

U.S. production, capacity, and capacity utilization

Table 3.3 presents U.S. producers' installed and practical capacity and production on the same equipment.[2] The collection of installed capacity permits the assessment of practical capacity, a subset of installed capacity.[3] Installed capacity decreased by *** percent from 2019 to 2024, remaining stable from 2019 to 2021, then decreasing in ever-greater increments in 2022, 2023, and 2024. The decrease was *** percent from 2019 to 2023 and *** percent to 2024.

Worthington reported ***.[4] Manchester reported ***

[2] As neither firm reported production of alternate products on the same equipment used to make steel propane cylinders, data for practical overall capacity and practical capacity to produce steel propane cylinders are the same.

[3] As discussed in greater detail below, installed capacity is the level of production that firms could reasonably have expected to attain taking into account actual product mix over the period.

[4] In its U.S. Producers' Questionnaire response, Worthington reported that its installed overall capacity for each year was based on production operations running ***. Furthermore, the company reported ***.

However, Worthington later acknowledged that its ***. Email from ***, May 14, 2025.

If Worthington's practical capacity were based on operating *** in all periods, staff calculates that the firm's reported capacity would have been *** pounds from 2019 to 2023, and *** pounds in 2024. (***.)

***.

Table 3.3 Steel propane cylinders: U.S. producers' installed and practical capacity, production, and utilization on the same equipment as in-scope production, by period

Capacity and production in 1,000 pounds, tare weight; utilization in percent

Item	Measure	2019	2020	2021
Installed overall	Capacity	***	***	***
Installed overall	Production	***	***	***
Installed overall	Utilization	***	***	***
Practical overall	Capacity	***	***	***
Practical overall	Production	***	***	***
Practical overall	Utilization	***	***	***
Practical steel propane cylinders	Capacity	***	***	***
Practical steel propane cylinders	Production	***	***	***
Practical steel propane cylinders	Utilization	***	***	***

Table continued.

Table 3.3 (Continued) Steel propane cylinders: U.S. producers' installed and practical capacity, production, and utilization on the same equipment as in-scope production, by period

Capacity and production in 1,000 pounds, tare weight; utilization in percent

Item	Measure	2022	2023	2024
Installed overall	Capacity	***	***	***
Installed overall	Production	***	***	***
Installed overall	Utilization	***	***	***
Practical overall	Capacity	***	***	***
Practical overall	Production	***	***	***
Practical overall	Utilization	***	***	***
Practical steel propane cylinders	Capacity	***	***	***
Practical steel propane cylinders	Production	***	***	***
Practical steel propane cylinders	Utilization	***	***	***

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

Table 3.4 presents U.S. producers' reported narratives regarding practical capacity constraints.

Table 3.4 Steel propane cylinders: U.S. producers' reported capacity constraints since January 1, 2019

Type of constraint	Firm name and narrative on constraints to practical overall capacity
Production bottlenecks	***
Existing labor force	***
Other constraints	***

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

Table 3.5 and figure 3.1 present U.S. producers' production, capacity, capacity utilization, and share of production.[5] Reported practical capacity decreased by *** percent from 2019 to 2024. The decrease was *** percent from 2019 to 2023, and *** percent from 2023 to 2024. While production initially increased from 2019 to 2021,[6] production

[5] This table presents firms' "practical capacity", which is defined as the level of production that firms could reasonably have expected to attain taking into account actual product mix over the period. This capacity measure is based on not only existing capital investments, i.e., machinery and equipment that is in place and ready to operate; but also non-capital investment constraints, such as (1) normal operating conditions, including normal downtime for maintenance, repair, and cleanup; (2) existing in place and readily available labor force; (3) availability of material inputs; and (4) any other constraints that may have limited firms' ability to produce the reported products. This capacity measure is the maximum "practical" production a firm could have achieved without hiring new personnel or expanding the number of shifts operated in the period.

[6] Manchester reported that ***. Worthington reported that ***.

decreased thereafter from 2021 to 2024, resulting in an overall decrease of *** percent from 2019 to 2024. The decrease in production was *** percent from 2019 to 2023 and *** percent from 2023 to 2024. As a result of these decreases in capacity and production, practical capacity utilization decreased *** percentage points from 2019 to 2024; the decrease was *** percentage points from 2019 to 2023 and *** percentage points from 2023 to 2024.[7]

Table 3.5 Steel propane cylinders: U.S. producers' output, by firm and period

Practical capacity

Capacity in 1,000 pounds, tare weight

Firm	2019	2020	2021
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

Table continued.

Capacity in 1,000 pounds, tare weight

Firm	2022	2023	2024
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

Table continued.

Table 3.5 (Continued) Steel propane cylinders: U.S. producers' output, by firm and period

Production

Production in 1,000 pounds, tare weight

Firm	2019	2020	2021
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

Table continued.

Production in 1,000 pounds, tare weight

Firm	2022	2023	2024
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

Table continued.

[7] Based on its reported practical capacity, Manchester operated at capacity utilization levels of *** until its final year of production. Based on Worthington's reported practical capacity, the firm operated at capacity utilization levels of ***.

Table 3.5 (Continued) Steel propane cylinders: U.S. producers' output, by firm and period

Capacity utilization

Capacity utilization in percent

Firm	2019	2020	2021
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

Table continued.

Capacity utilization in percent

Firm	2022	2023	2024
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

Table continued.

Table 3.5 (Continued) Steel propane cylinders: U.S. producers' output, by firm and period

Share of production

Share in percent

Firm	2019	2020	2021
Manchester	***	***	***
Worthington	***	***	***
All firms	100.0	100.0	100.0

Table continued.

Share in percent

Firm	2022	2023	2024
Manchester	***	***	***
Worthington	***	***	***
All firms	100.0	100.0	100.0

Note: Capacity utilization ratio represents the ratio of the U.S. producer's production to its production capacity.

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

Figure 3.1 Steel propane cylinders: U.S. producers' output, by period

* * * * * * *

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

U.S. producers' U.S. shipments and exports

Table 3.6 presents U.S. producers' U.S. shipments, export shipments, and total shipments. Only Worthington reported shipments in 2024. U.S. shipments decreased irregularly by *** percent by quantity from 2019 to 2024, and by *** percent by value over the same period. However, the average unit value of U.S. shipments increased by *** percent from 2019 to 2024. Less than *** of total shipments of U.S.-produced steel propane cylinders during 2019 to 2024 were export shipments. ***.

Table 3.6 Steel propane cylinders: U.S. producers' shipments, by destination and period

Quantity in 1,000 pounds, tare weight; value in 1,000 dollars; unit values in dollars per pound, tare weight; shares in percent

Item	Measure	2019	2020	2021
U.S. shipments	Quantity	***	***	***
Export shipments	Quantity	***	***	***
Total shipments	Quantity	***	***	***
U.S. shipments	Value	***	***	***
Export shipments	Value	***	***	***
Total shipments	Value	***	***	***
U.S. shipments	Unit value	***	***	***
Export shipments	Unit value	***	***	***
Total shipments	Unit value	***	***	***
U.S. shipments	Share of quantity	***	***	***
Export shipments	Share of quantity	***	***	***
Total shipments	Share of quantity	100.0	100.0	100.0
U.S. shipments	Share of value	***	***	***
Export shipments	Share of value	***	***	***
Total shipments	Share of value	100.0	100.0	100.0

Table continued.

Table 3.6 (Continued) Steel propane cylinders: U.S. producers' shipments, by destination and period

Quantity in 1,000 pounds, tare weight; value in 1,000 dollars; unit values in dollars per pound, tare weight; shares in percent

Item	Measure	2022	2023	2024
U.S. shipments	Quantity	***	***	***
Export shipments	Quantity	***	***	***
Total shipments	Quantity	***	***	***
U.S. shipments	Value	***	***	***
Export shipments	Value	***	***	***
Total shipments	Value	***	***	***
U.S. shipments	Unit value	***	***	***
Export shipments	Unit value	***	***	***
Total shipments	Unit value	***	***	***
U.S. shipments	Share of quantity	***	***	***
Export shipments	Share of quantity	***	***	***
Total shipments	Share of quantity	100.0	100.0	100.0
U.S. shipments	Share of value	***	***	***
Export shipments	Share of value	***	***	***
Total shipments	Share of value	100.0	100.0	100.0

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

U.S. producers' inventories

Table 3.7 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**.** Ending inventories decreased sharply by *** percent from 2019 to 2024. Manchester ceased production in 2023, and ***. As a ratio to total shipments, inventories declined from *** percent in 2019 to *** from 2020 to 2022, then diminished to *** from 2023 to 2024.[8]

Table 3.7 Steel propane cylinders: U.S. producers' inventories and their ratio to select items, by period

Quantity in 1,000 pounds, tare weight; inventory ratios in percent

Item	Measure	2019	2020	2021
End-of-period inventory	Quantity	***	***	***
Inventory to U.S. production	Ratio	***	***	***
Inventory to U.S. shipments	Ratio	***	***	***
Inventory to total shipments	Ratio	***	***	***

Table continued.

Table 3.7 (Continued) Steel propane cylinders: U.S. producers' inventories and their ratio to select items, by period

Quantity in 1,000 pounds, tare weight; inventory ratios in percent

Item	Measure	2022	2023	2024
End-of-period inventory	Quantity	***	***	***
Inventory to U.S. production	Ratio	***	***	***
Inventory to U.S. shipments	Ratio	***	***	***
Inventory to total shipments	Ratio	***	***	***

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

[8] Manchester's reported inventories were ***. Worthington's reported inventories were ***.

U.S. producers' imports from subject sources

U.S. producers' imports of steel propane cylinders are presented in table 3.8. Only Manchester reported imports from subject sources, specifically from Thailand.[9] Table 3.9 presents the U.S. producer's reasons for importing.

Table 3.8 Steel propane cylinders: Manchester's U.S. production, subject imports, and ratio of subject imports to production, by source and period

Quantity in 1,000 pounds, tare weight; ratios in percent

Item	Measure	2019	2020	2021
U.S. production	Quantity	***	***	***
Imports from Thailand	Quantity	***	***	***
Imports from Thailand to U.S. production	Ratio	***	***	***

Table continued.

Table 3.8 (Continued) Steel propane cylinders: Manchester's U.S. production, subject imports, and ratio of subject imports to production, by source and period

Quantity in 1,000 pounds, tare weight; ratios in percent

Item	Measure	2022	2023	2024
U.S. production	Quantity	***	***	***
Imports from Thailand	Quantity	***	***	***
Imports from Thailand to U.S. production	Ratio	***	***	***

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

Table 3.9 Steel propane cylinders: U.S. producers' reasons for importing

Item	Narrative response on reason(s) for importation
Manchester's reason for importing	***

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

U.S. producers' purchases of imports from subject sources

No responding U.S. producer reported purchases of steel propane cylinder during 2019 to 2024.

U.S. employment, wages, and productivity

Table 3.10 shows U.S. producers' employment-related data. Data include employment of production and related workers for both Manchester's and Worthington's steel propane cylinder operations through 2023. Thereafter, following the cessation of production by Manchester, employment data exclusively reflect Worthington's steel propane cylinder operations.

[9] See Worthington's Response to the Notice of Institution, July 31, 2024, p. 16.

Most employment indicators declined from 2019 to 2024, except for hourly wages, which increased by *** percent from 2019 to 2024. The number of PRWs decreased by *** percent from 2019 to 2024, while total hours worked decreased by *** percent over the same period. Total wages paid decreased *** percent, while productivity decreased by *** percent. Unit labor costs increased by *** percent from 2019 to 2024 as a result of climbing wage rates and, at least later in the period for which data were collected, diminished productivity.[10]

Table 3.10 Steel propane cylinders: U.S. producers' employment related information, by period

Item	2019	2020	2021
Production and related workers (PRWs) (number)	***	***	***
Total hours worked (1,000 hours)	***	***	***
Hours worked per PRW (hours)	***	***	***
Wages paid ($1,000)	***	***	***
Hourly wages (dollars per hour)	***	***	***
Productivity (pounds, tare weight, per hour)	***	***	***
Unit labor costs (dollars per pound, tare weight)	***	***	***

Table continued.

Table 3.10 (Continued) Steel propane cylinders: U.S. producers' employment related information, by period

Item	2022	2023	2024
Production and related workers (PRWs) (number)	***	***	***
Total hours worked (1,000 hours)	***	***	***
Hours worked per PRW (hours)	***	***	***
Wages paid ($1,000)	***	***	***
Hourly wages (dollars per hour)	***	***	***
Productivity (pounds, tare weight, per hour)	***	***	***
Unit labor costs (dollars per pound, tare weight)	***	***	***

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

[10] Worthington provided the following explanation of its employment-related data: ***. Worthington's U.S. producers' questionnaire response.

Financial experience of U.S. producers

Background [11]

Two U.S. producers, Worthington and Manchester, provided usable financial results on their steel propane cylinders operations. Both U.S. producers reported financial data on a calendar year basis and provided their financial data on a GAAP basis.[12]

The steel propane cylinder industry changed during the period for which data were collected. As discussed above, Manchester ceased production of steel propane cylinders in 2023. Figure 3.2 presents Worthington's and Manchester's share of the total reported net sales quantity from 2019 to 2024.[13]

[11] The following abbreviations are used in the tables and/or text of this section: generally accepted accounting principles ("GAAP"), fiscal year ("FY"), net sales ("NS"), cost of goods sold ("COGS"), selling, general, and administrative expenses ("SG&A expenses"), average unit values ("AUVs"), research and development ("R&D"), and return on assets ("ROA").

[12] Although ***, both U.S. producers provided their financial results on a calendar year basis. U.S. producers' questionnaire, section 3.2A.1 and 3.2A.2.

[13] Manchester closed its Elkhart, Indiana plant in 2021 and closed its Crossville, Tennessee plant in 2023. WISHTV.com, "Manchester Tank & Equipment to close Elkhart Facility," news release, November 16, 2020, https://www.wishtv.com/news/inside-indiana-business/manchester-tank-equipment-to-close-elkhart-facility/, accessed April 14, 2025. Manchester WARN letter, July 11, 2023, https://www.tn.gov/content/dam/tn/workforce/documents/majorpublications/reports-02/Manchester-Tank-and-Equipment-Co-TDLWD-WARN-LETTER.pdf, accessed April 14, 2025. U.S. producers' questionnaire, section 2.2a. Accordingly, the firm reported no financial data for 2024.

Figure 3.2 Steel propane cylinders: U.S. producers' net sales quantity, by firm and period

* * * * * * *

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

Operations on Steel propane cylinders

Table 3.11 presents aggregated data on U.S. producers' operations in relation to Steel propane cylinders, while table 3.12 presents corresponding changes in AUVs. Table 3.13 presents selected company-specific financial data.

Table 3.11 Steel propane cylinders: U.S. producers' results of operations, by item and period

Quantity in 1,000 pounds, tare weight; value in 1,000 dollars; ratios in percent

Item	Measure	2019	2020	2021
Total net sales	Quantity	***	***	***
Total net sales	Value	***	***	***
COGS: Raw materials	Value	***	***	***
COGS: Direct labor	Value	***	***	***
COGS: Other factory	Value	***	***	***
COGS: Total	Value	***	***	***
Gross profit or (loss)	Value	***	***	***
SG&A expenses	Value	***	***	***
Operating income or (loss)	Value	***	***	***
All interest, other expenses, income combined	Value	***	***	***
Net income or (loss)	Value	***	***	***
Depreciation/amortization	Value	***	***	***
Cash flow	Value	***	***	***
COGS: Raw materials	Ratio to NS	***	***	***
COGS: Direct labor	Ratio to NS	***	***	***
COGS: Other factory	Ratio to NS	***	***	***
COGS: Total	Ratio to NS	***	***	***
Gross profit	Ratio to NS	***	***	***
SG&A expense	Ratio to NS	***	***	***
Operating income or (loss)	Ratio to NS	***	***	***
Net income or (loss)	Ratio to NS	***	***	***

Table continued.

Table 3.11 Continued Steel propane cylinders: U.S. producers' results of operations, by item and period

Quantity in 1,000 pounds, tare weight; value in 1,000 dollars; ratios in percent

Item	Measure	2022	2023	2024
Total net sales	Quantity	***	***	***
Total net sales	Value	***	***	***
COGS: Raw materials	Value	***	***	***
COGS: Direct labor	Value	***	***	***
COGS: Other factory	Value	***	***	***
COGS: Total	Value	***	***	***
Gross profit or (loss)	Value	***	***	***
SG&A expenses	Value	***	***	***
Operating income or (loss)	Value	***	***	***
All interest, other expenses, income combined	Value	***	***	***
Net income or (loss)	Value	***	***	***
Depreciation/amortization	Value	***	***	***
Cash flow	Value	***	***	***
COGS: Raw materials	Ratio to NS	***	***	***
COGS: Direct labor	Ratio to NS	***	***	***
COGS: Other factory	Ratio to NS	***	***	***
COGS: Total	Ratio to NS	***	***	***
Gross profit	Ratio to NS	***	***	***
SG&A expense	Ratio to NS	***	***	***
Operating income or (loss)	Ratio to NS	***	***	***
Net income or (loss)	Ratio to NS	***	***	***

Table continued.

Table 3.11 Continued Steel propane cylinders: U.S. producers' results of operations, by item and period

Shares in percent; unit values in dollars per pound, tare weight; count in number of firms reporting

Item	Measure	2019	2020	2021
COGS: Raw materials	Share	***	***	***
COGS: Direct labor	Share	***	***	***
COGS: Other factory	Share	***	***	***
COGS: Total	Share	100.0	100.0	100.0
Total net sales	Unit value	***	***	***
COGS: Raw materials	Unit value	***	***	***
COGS: Direct labor	Unit value	***	***	***
COGS: Other factory	Unit value	***	***	***
COGS: Total	Unit value	***	***	***
Gross profit or (loss)	Unit value	***	***	***
SG&A expenses	Unit value	***	***	***
Operating income or (loss)	Unit value	***	***	***
Net income or (loss)	Unit value	***	***	***
Operating losses	Count	***	***	***
Net losses	Count	***	***	***
Data	Count	***	***	***

Table continued.

Table 3.11 Continued Steel propane cylinders: U.S. producers' results of operations, by item and period

Shares in percent; unit values in dollars per pound, tare weight; count in number of firms reporting

Item	Measure	2022	2023	2024
COGS: Raw materials	Share	***	***	***
COGS: Direct labor	Share	***	***	***
COGS: Other factory	Share	***	***	***
COGS: Total	Share	100.0	100.0	100.0
Total net sales	Unit value	***	***	***
COGS: Raw materials	Unit value	***	***	***
COGS: Direct labor	Unit value	***	***	***
COGS: Other factory	Unit value	***	***	***
COGS: Total	Unit value	***	***	***
Gross profit or (loss)	Unit value	***	***	***
SG&A expenses	Unit value	***	***	***
Operating income or (loss)	Unit value	***	***	***
Net income or (loss)	Unit value	***	***	***
Operating losses	Count	***	***	***
Net losses	Count	***	***	***
Data	Count	***	***	***

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

Note: Shares represent the share of COGS.

Table 3.12 Steel propane cylinders: Changes in AUVs between comparison periods

Changes in percent

Item	2019 to 2024	2019 to 2020	2020 to 2021	2021 to 2022	2022 to 2023	2023 to 2024
Total net sales	▲***	▲***	▲***	▲***	▼***	▼***
COGS: Raw materials	▲***	▲***	▲***	▲***	▼***	▼***
COGS: Direct labor	▲***	▼***	▲***	▲***	▼***	▲***
COGS: Other factory	▲***	▲***	▼***	▲***	▲***	▲***
COGS: Total	▲***	▲***	▲***	▲***	▼***	▲***

Table continued.

Table 3.12 Continued Steel propane cylinders: Changes in AUVs between comparison periods

Changes in dollars per pound, tare weight

Item	2019 to 2024	2019 to 2020	2020 to 2021	2021 to 2022	2022 to 2023	2023 to 2024
Total net sales	▲***	▲***	▲***	▲***	▼***	▼***
COGS: Raw materials	▲***	▲***	▲***	▲***	▼***	▼***
COGS: Direct labor	▲***	▼***	▲***	▲***	▼***	▲***
COGS: Other factory	▲***	▲***	▼***	▲***	▲***	▲***
COGS: Total	▲***	▲***	▲***	▲***	▼***	▲***
Gross profit or (loss)	▼***	▼***	▲***	▼***	▲***	▼***
SG&A expense	▲***	▼***	▼***	▲***	▲***	▲***
Operating income or (loss)	▼***	▼***	▲***	▼***	▲***	▼***
Net income or (loss)	▼***	▼***	▲***	▼***	▲***	▼***

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

Note: Percentages and unit values shown as “0.0” or “0.00” represent values greater than zero, but less than “0.05” or “0.005,” respectively. Zeroes, null values, and undefined calculations are suppressed and shown as “---”. Period changes preceded by a “▲” represent an increase, while period changes preceded by a “▼” represent a decrease.

Table 3.13 Steel propane cylinders: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Net sales quantity

Quantity in 1,000 pounds, tare weight

Firm	2019	2020	2021
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

Table continued.

Table 3.13 Steel propane cylinders: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Net sales quantity

Quantity in 1,000 pounds, tare weight

Firm	2022	2023	2024
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

Table continued.

Table 3.13 Continued Steel propane cylinders: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Net sales value

Value in 1,000 dollars

Firm	2019	2020	2021
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

Table continued.

Table 3.13 Continued Steel propane cylinders: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Net sales value

Value in 1,000 dollars

Firm	2022	2023	2024
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

Table continued.

Table 3.13 Continued Steel propane cylinders: U.S. producers' sales, costs/expenses, and profitability, by firm and period

COGS

Value in 1,000 dollars

Firm	2019	2020	2021
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

Table continued.

Table 3.13 Continued Steel propane cylinders: U.S. producers' sales, costs/expenses, and profitability, by firm and period

COGS

Value in 1,000 dollars

Firm	2022	2023	2024
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

Table continued.

Table 3.13 Continued Steel propane cylinders: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Gross profit or (loss)

Value in 1,000 dollars

Firm	2019	2020	2021
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

Table continued.

Table 3.13 Continued Steel propane cylinders: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Gross profit or (loss)

Value in 1,000 dollars

Firm	2022	2023	2024
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

Table continued.

Table 3.13 Continued Steel propane cylinders: U.S. producers' sales, costs/expenses, and profitability, by firm and period

SG&A expenses

Value in 1,000 dollars

Firm	2019	2020	2021
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

Table continued.

Table 3.13 Continued Steel propane cylinders: U.S. producers' sales, costs/expenses, and profitability, by firm and period

SG&A expenses

Value in 1,000 dollars

Firm	2022	2023	2024
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

Table continued.

Table 3.13 Continued Steel propane cylinders: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Operating income or (loss)

Value in 1,000 dollars

Firm	2019	2020	2021
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

Table continued.

Table 3.13 Continued Steel propane cylinders: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Operating income or (loss)

Value in 1,000 dollars

Firm	2022	2023	2024
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

Table continued.

Table 3.13 Continued Steel propane cylinders: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Net income or (loss)

Value in 1,000 dollars

Firm	2019	2020	2021
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

Table continued.

Table 3.13 Continued Steel propane cylinders: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Net income or (loss)

Value in 1,000 dollars

Firm	2022	2023	2024
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

Table continued.

Table 3.13 Continued Steel propane cylinders: U.S. producers' sales, costs/expenses, and profitability, by firm and period

COGS to net sales ratio

Ratios in percent

Firm	2019	2020	2021
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

Table continued.

Table 3.13 Continued Steel propane cylinders: U.S. producers' sales, costs/expenses, and profitability, by firm and period

COGS to net sales ratio

Ratios in percent

Firm	2022	2023	2024
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

Table continued.

Table 3.13 Continued Steel propane cylinders: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Gross profit or (loss) to net sales ratio

Ratios in percent

Firm	2019	2020	2021
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

Table continued.

Table 3.13 Continued Steel propane cylinders: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Gross profit or (loss) to net sales ratio

Ratios in percent

Firm	2022	2023	2024
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

Table continued.

Table 3.13 Continued Steel propane cylinders: U.S. producers' sales, costs/expenses, and profitability, by firm and period

SG&A expenses to net sales ratio

Ratios in percent

Firm	2019	2020	2021
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

Table continued.

Table 3.13 Continued Steel propane cylinders: U.S. producers' sales, costs/expenses, and profitability, by firm and period

SG&A expenses to net sales ratio

Ratios in percent

Firm	2022	2023	2024
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

Table continued.

Table 3.13 Continued Steel propane cylinders: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Operating income or (loss) to net sales ratio

Ratios in percent

Firm	2019	2020	2021
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

Table continued.

Table 3.13 Continued Steel propane cylinders: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Operating income or (loss) to net sales ratio

Ratios in percent

Firm	2022	2023	2024
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

Table continued.

Table 3.13 Continued Steel propane cylinders: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Net income or (loss) to net sales ratio

Ratios in percent

Firm	2019	2020	2021
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

Table continued.

Table 3.13 Continued Steel propane cylinders: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Net income or (loss) to net sales ratio

Ratios in percent

Firm	2022	2023	2024
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

Table continued.

Table 3.13 Continued Steel propane cylinders: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Unit net sales value

Unit values in dollars per pound, tare weight

Firm	2019	2020	2021
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

Table continued.

Table 3.13 Continued Steel propane cylinders: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Unit net sales value

Unit values in dollars per pound, tare weight

Firm	2022	2023	2024
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

Table continued.

Table 3.13 Continued Steel propane cylinders: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Unit raw material

Unit values in dollars per pound, tare weight

Firm	2019	2020	2021
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

Table continued.

Table 3.13 Continued Steel propane cylinders: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Unit raw material

Unit values in dollars per pound, tare weight

Firm	2022	2023	2024
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

Table continued.

Table 3.13 Continued Steel propane cylinders: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Unit direct labor

Unit values in dollars per pound, tare weight

Firm	2019	2020	2021
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

Table continued.

Table 3.13 Continued Steel propane cylinders: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Unit direct labor

Unit values in dollars per pound, tare weight

Firm	2022	2023	2024
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

Table continued.

Table 3.13 Continued Steel propane cylinders: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Unit other factory costs

Unit values in dollars per pound, tare weight

Firm	2019	2020	2021
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

Table continued.

Table 3.13 Continued Steel propane cylinders: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Unit other factory costs

Unit values in dollars per pound, tare weight

Firm	2022	2023	2024
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

Table continued.

Table 3.13 Continued Steel propane cylinders: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Unit COGS

Unit values in dollars per pound, tare weight

Firm	2019	2020	2021
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

Table continued.

Table 3.13 Continued Steel propane cylinders: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Unit COGS

Unit values in dollars per pound, tare weight

Firm	2022	2023	2024
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

Table continued.

Table 3.13 Continued Steel propane cylinders: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Unit gross profit or (loss)

Unit values in dollars per pound, tare weight

Firm	2019	2020	2021
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

Table continued.

Table 3.13 Continued Steel propane cylinders: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Unit gross profit or (loss)

Unit values in dollars per pound, tare weight

Firm	2022	2023	2024
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

Table continued.

Table 3.13 Continued Steel propane cylinders: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Unit SG&A expenses

Unit values in dollars per pound, tare weight

Firm	2019	2020	2021
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

Table continued.

Table 3.13 Continued Steel propane cylinders: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Unit SG&A expenses

Unit values in dollars per pound, tare weight

Firm	2022	2023	2024
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

Table continued.

Table 3.13 Continued Steel propane cylinders: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Unit operating income or (loss)

Unit values in dollars per pound, tare weight

Firm	2019	2020	2021
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

Table continued.

Table 3.13 Continued Steel propane cylinders: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Unit operating income or (loss)

Unit values in dollars per pound, tare weight

Firm	2022	2023	2024
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

Table continued.

Table 3.13 Continued Steel propane cylinders: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Unit net income or (loss)

Unit values in dollars per pound, tare weight

Firm	2019	2020	2021
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

Table continued.

Table 3.13 Continued Steel propane cylinders: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Unit net income or (loss)

Unit values in dollars per pound, tare weight

Firm	2022	2023	2024
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

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

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as "---".

Net sales

Commercial sales accounted for *** sales during the period for which data were collected. Accordingly, because commercial sales are the *** category represented, a single net sales line is presented in the tables above.

Total net sales quantity decreased irregularly from 2019 to 2024, declining by *** percent. Net sales quantity increased from 2019 to 2020, but decreased from 2020 to 2024, with the largest decrease occurring from 2023 to 2024, consistent with the 2023 closure by Manchester of its steel propane cylinder operations. ***.[14]

[14] ***. U.S. producers' questionnaire response, section 3.9b and 3.15.

Total net sales value increased from 2019 to 2022, then decreased from 2022 to 2024, resulting in a net decrease of *** percent from 2019 to 2024, with the largest decrease occurring from 2023 to 2024 (***). ***.[15] [16]

Total net sales AUV, on a per-pound, tare weight basis, increased irregularly from $*** in 2019 to $*** in 2024. It followed the same directional trend as total net sales value (increasing from 2019 to 2022, then decreasing from 2022 to 2024).

Cost of goods sold and gross profit or loss

Raw materials costs, the *** component of COGS, accounted for between *** percent and *** percent of COGS during the period for which data were collected. Raw material costs increased from 2019 to 2022, then decreased from 2022 to 2024, decreasing irregularly by *** percent from 2019 to 2024. *** stated that raw material costs, specifically steel costs, were at all-time highs during the COVID-19 pandemic and increased greatly in 2021 into 2022.[17] [18] Raw material cost AUVs, on a per-pound, tare weight basis, increased irregularly from $*** in 2019 to $*** in 2024. As a ratio to net sales, raw material costs decreased irregularly from *** percent in 2019 to *** percent in 2024.

Table 3.14 presents raw materials, by type. Flat-rolled steel represented *** percent of raw material costs in 2024. Of other raw material costs reported, *** percent were ***.[19]

[15] ***. U.S. producers' questionnaire response, section 3.9b.

[16] ***. Email from ***.

[17] In response to staff questions, ***. Email from *** and U.S. producers' questionnaire, section 3.9b and section 3.15.

[18] ***. ***'s U.S. producers' questionnaire, section 3.9b and email from ***.

[19] ***'s U.S. producers' questionnaire, section 3.9e.

Table 3.14 Steel propane cylinders: U.S. producers' raw material costs in 2024

Value in 1,000 dollars; unit values in dollars per pound, tare weight; share of value in percent

Item	Value	Share of value
Flat rolled steel	***	***
Other material inputs	***	***
Total, raw materials	***	100.0

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

Note: As Manchester stopped its propane cylinder operations in 2023, the raw material costs in the above table are reported only by Worthington.

Direct labor costs, the *** component of COGS, decreased from 2019 to 2020, increased from 2020 to 2022, then decreased from 2022 to 2024, decreasing irregularly by *** percent from 2019 to 2024.[20] Direct labor cost AUVs on a per-pound, tare weight basis, increased irregularly from $*** in 2019 to $*** in 2024. ***'s direct labor cost AUVs ***.[21] As a ratio to net sales, direct labor costs increased irregularly from *** percent in 2019 to *** percent in 2024.

Other factory costs were the *** component of COGS and fluctuated throughout the period for which data were collected, decreasing irregularly by *** percent from 2019 to 2024.[22] On a per-pound, tare weight basis, other factory cost AUVs increased irregularly from $*** in 2019 to $*** in 2024. As a ratio to net sales, other factory costs increased irregularly from *** percent in 2019 to *** percent in 2024.

Total COGS decreased irregularly from 2019 to 2024 by *** percent, with increases in total COGS occurring from 2019 to 2020 and 2021 to 2022. Total COGS AUVs on a per-pound, tare weight basis, increased irregularly from $*** in 2019 to $*** in 2024. As a ratio to net sales, total COGS increased irregularly from *** percent in 2019 to *** percent in 2024.

[20] ***. ***'s U.S. producer questionnaire, section 3.10.

[21] ***'s U.S. producers' questionnaire, section 3.9b.

[22] ***. ***'s U.S. producers' questionnaire, section 3.9b.

Gross profit decreased irregularly from $*** 2019 to a *** in 2024. As a ratio to net sales, gross profit decreased irregularly from *** percent in 2019 to *** percent in 2024. ***. ***.

SG&A expenses and operating income or loss

SG&A expenses irregularly decreased from 2019 to 2024, increasing from 2019 to 2020, then decreasing from 2020 to 2024. *** U.S. producers followed the same directional trend and *** accounted for the majority of SG&A expenses. As a ratio to net sales, SG&A expenses increased irregularly from *** percent in 2019 to *** percent in 2024.

Operating income improved irregularly from an operating *** of $*** in 2019 to an operating *** of $*** in 2021, then worsened to an operating *** of $*** in 2022. It improved in 2023 to an operating *** but worsened to an operating *** in 2024. As a ratio to net sales, operating income worsened from *** percent in 2019 to *** percent in 2020, improved to *** percent in 2021, then worsened to *** in 2022. It improved in 2023 to *** percent, then worsened to *** percent in 2024. *** reported operating *** in *** and *** reported an operating *** in ***.

All other expenses and net income or loss

Interest expenses, other expenses, and other income are classified below the operating income level.[23] Interest expense, other expense, and other income were combined and only the net amount is shown. Net all other expense/(income) fluctuated throughout the period for which data were collected, decreasing overall from $*** in 2019 to $*** in 2024. ***. [24]

Net income improved irregularly from a *** in 2019 to a *** in 2021. It worsened to a *** in 2022 before improving to a *** in 2024. The net income margin improved irregularly from *** percent in 2019 to *** percent in 2021, then worsened to *** percent in 2024. *** reported *** in *** and *** reported *** in ***.

[23] A variance analysis is not shown due to the impact of Manchester's cessation of production in 2023.

[24] ***. U.S. producers' questionnaire, section 3.10.

Capital expenditures and research and development expenses

Table 3.15 presents capital expenditures, by firm and table 3.16 present the firms' narrative explanations of the nature, focus, and significance of their capital expenditures. ***.[25]

Table 3.15 Steel propane cylinders: U.S. producers' capital expenditures, by firm and period

Value in 1,000 dollars

Firm	2019	2020	2021
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

Table continued.

Table 3.15 Continued Steel propane cylinders: U.S. producers' capital expenditures, by firm and period

Value in 1,000 dollars

Firm	2022	2023	2024
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

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

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as "—".

Table 3.16 Steel propane cylinders: U.S. producers' narrative descriptions of their capital expenditures, by firm

Firm	Narrative on capital expenditures
Manchester	***
Worthington	***

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

[25] ***. ***'s posthearing brief, Exhibit 1, p. 1.

Assets and return on assets

Table 3.17 presents data on the U.S. producers' total net assets, while table 3.18 presents their operating ROA.[26] Table 3.19 presents U.S. producers' narrative responses explaining their major asset categories and any significant changes in asset levels over time.[27]

Table 3.17 Steel propane cylinders: U.S. producers' total net assets, by firm and period

Value in 1,000 dollars

Firm	2019	2020	2021
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

Table continued.

Table 3.17 Continued Steel propane cylinders: U.S. producers' total net assets, by firm and period

Value in 1,000 dollars

Firm	2022	2023	2024
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

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

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as "—".

Table 3.18 Steel propane cylinders: U.S. producers' ROA, by firm and period

Ratio in percent

Firm	2019	2020	2021
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

Table continued.

[26] The operating ROA is calculated as operating income divided by total assets. With respect to a firm's overall operations, the total asset value reflects an aggregation of a number of assets which are generally not product specific. Thus, high-level allocations are generally required in order to report a total asset value on a product-specific basis.

[27] ***. Email from ***.

Table 3.18 Continued Steel propane cylinders: U.S. producers' ROA, by firm and period

Ratio in percent

Firm	2022	2023	2024
Manchester	***	***	***
Worthington	***	***	***
All firms	***	***	***

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

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as "—".

Table 3.19 Steel propane cylinders: U.S. producers' narrative descriptions of their total net assets, by firm

Firm	Narrative on assets
Manchester	***
Worthington	***

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

Part 4: U.S. imports and the foreign industries

U.S. imports

Overview

The Commission issued questionnaires to 34 potential importers of steel propane cylinders between 2019 to 2024. Six firms provided data and information in response to the questionnaires, while four firms indicated that they had not imported product since 2019.[1]

Firms that provided responses covering the vast majority of imports in the original investigations have provided responses in these current reviews. Specifically, staff obtained responses from all firms which responded in the final phase of the original investigations (including ***), with the exception of ***. Staff's estimated coverage of responses in the final phase of the original investigations was *** 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. (Worthington also provided a response in these reviews, and was ***.) In light of the data coverage by the Commission's questionnaires, import data in this report are based on questionnaire responses for steel propane cylinders.

As shown below, subject imports from China have largely exited the market, with *** of U.S. imports from China in 2024. No imports or shipments of imports from China were reported by any importer from 2020 to 2023. In contrast, while only *** reported nonsubject imports in the final phase of the original investigations and staff had characterized nonsubject imports as "not a significant factor in the market," five firms reported imports from nonsubject sources between 2019 and 2024. These imports account for *** percent of all imports in 2024. The largest importers of nonsubject sources in 2024 were ***, followed by *** and ***.

[1] ***.

The Commission also requested additional information in its importers' questionnaire concerning importers' use of foreign trade zones, bonded warehouses, or the Temporary Importation under Bond program. No importers reported using any of these programs.

Imports from subject and nonsubject countries

Table 4.1 and figure 4.1 present information on U.S. imports of steel propane cylinders from China, Thailand, and all other sources over the period for which data were collected. Imports from China were only reported in 2019 and 2024, totaling approximately *** pounds. Imports from China accounted for *** percent of all imports in 2024. Imports from Thailand increased by *** percent by quantity from 2019 to 2024, and by *** percent by value over the same period. However, the share of total imports for which imports from Thailand accounted decreased by *** percentage points from 2019 to 2024, declining from *** percent to *** percent.

In contrast, imports from nonsubject sources (primarily ***) increased by *** percent by quantity from 2019 to 2024 and increased by *** percent by value over the same period. The share of total imports for which imports from nonsubject countries accounted increased by *** percentage points from 2019 to 2024, rising from *** percent to *** percent.

The ratio of subject imports to U.S. production increased by *** percentage points from 2019 to 2024, increasing from *** percent to *** percent.

Table 4.1 Steel propane cylinders: U.S. imports by source and period

Quantity in 1,000 pounds, tare weight; value in 1,000 dollars; unit values in dollars per pound, tare weight; shares and ratio in percent; ratio is to U.S. production

Source	Measure	2019	2020	2021
China	Quantity	***	***	***
Thailand	Quantity	***	***	***
Subject sources	Quantity	***	***	***
Nonsubject sources	Quantity	***	***	***
All import sources	Quantity	***	***	***
China	Value	***	***	***
Thailand	Value	***	***	***
Subject sources	Value	***	***	***
Nonsubject sources	Value	***	***	***
All import sources	Value	***	***	***
China	Unit value	***	***	***
Thailand	Unit value	***	***	***
Subject sources	Unit value	***	***	***
Nonsubject sources	Unit value	***	***	***
All import sources	Unit value	***	***	***
China	Share of quantity	***	***	***
Thailand	Share of quantity	***	***	***
Subject sources	Share of quantity	***	***	***
Nonsubject sources	Share of quantity	***	***	***
All import sources	Share of quantity	100.0	100.0	100.0
China	Share of value	***	***	***
Thailand	Share of value	***	***	***
Subject sources	Share of value	***	***	***
Nonsubject sources	Share of value	***	***	***
All import sources	Share of value	100.0	100.0	100.0
China	Ratio	***	***	***
Thailand	Ratio	***	***	***
Subject sources	Ratio	***	***	***
Nonsubject sources	Ratio	***	***	***
All import sources	Ratio	***	***	***

Table continued.

Table 4.1 (Continued) Steel propane cylinders: U.S. imports by source and period

Quantity in 1,000 pounds, tare weight; value in 1,000 dollars; unit values in dollars per pound, tare weight; shares and ratio in percent; ratio is to U.S. production

Source	Measure	2022	2023	2024
China	Quantity	***	***	***
Thailand	Quantity	***	***	***
Subject sources	Quantity	***	***	***
Nonsubject sources	Quantity	***	***	***
All import sources	Quantity	***	***	***
China	Value	***	***	***
Thailand	Value	***	***	***
Subject sources	Value	***	***	***
Nonsubject sources	Value	***	***	***
All import sources	Value	***	***	***
China	Unit value	***	***	***
Thailand	Unit value	***	***	***
Subject sources	Unit value	***	***	***
Nonsubject sources	Unit value	***	***	***
All import sources	Unit value	***	***	***
China	Share of quantity	***	***	***
Thailand	Share of quantity	***	***	***
Subject sources	Share of quantity	***	***	***
Nonsubject sources	Share of quantity	***	***	***
All import sources	Share of quantity	100.0	100.0	100.0
China	Share of value	***	***	***
Thailand	Share of value	***	***	***
Subject sources	Share of value	***	***	***
Nonsubject sources	Share of value	***	***	***
All import sources	Share of value	100.0	100.0	100.0
China	Ratio	***	***	***
Thailand	Ratio	***	***	***
Subject sources	Ratio	***	***	***
Nonsubject sources	Ratio	***	***	***
All import sources	Ratio	***	***	***

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

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as “—“.

Figure 4.1 Steel propane cylinders: U.S. import quantities and average unit values, by source and period

* * * * * * *

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

Cumulation considerations

In assessing whether U.S. imports from the subject countries are likely to compete with each other and with the domestic like product, the Commission 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 4.2 and figure 4.2 present U.S. producers' and U.S. importers' U.S. shipments, by cylinder size and source, in 2024. The majority of U.S. shipments from each source consisted of 20-pound capacity cylinders, which in total accounted for approximately four-fifths of reported U.S. shipments from all sources combined in 2024. Most shipments of 20-pound capacity cylinders were by U.S. producers, while most shipments of 30-pound capacity cylinders and all other cylinders were by nonsubject sources and Thailand, respectively.

Table 4.2 Steel propane cylinders: U.S. producers' and U.S. importers' U.S. shipments, by cylinder size and source, 2024

Quantity in 1,000 pounds, tare weight

Source	20-pound capacity cylinders	30-pound capacity cylinders	All other cylinder sizes	All cylinder sizes
U.S. producers	***	***	***	***
China	***	***	***	***
Thailand	***	***	***	***
Subject sources	***	***	***	***
Nonsubject sources	***	***	***	***
All import sources	***	***	***	***
All sources	***	***	***	133,005

Table continued.

Table 4.2 (Continued) Steel propane cylinders: U.S. producers' and U.S. importers' U.S. shipments, by cylinder size and source, 2024

Share across in percent

Source	20-pound capacity cylinders	30-pound capacity cylinders	All other cylinder sizes	All cylinder sizes
U.S. producers	***	***	***	100.0
China	***	***	***	100.0
Thailand	***	***	***	100.0
Subject sources	***	***	***	100.0
Nonsubject sources	***	***	***	100.0
All import sources	***	***	***	100.0
All sources	***	***	***	100.0

Table continued.

Table 4.2 (Continued) Steel propane cylinders: U.S. producers' and U.S. importers' U.S. shipments, by cylinder size and source, 2024

Share down in percent

Source	20-pound capacity cylinders	30-pound capacity cylinders	All other cylinder sizes	All cylinder sizes
U.S. producers	***	***	***	***
China	***	***	***	***
Thailand	***	***	***	***
Subject sources	***	***	***	***
Nonsubject sources	***	***	***	***
All import sources	***	***	***	***
All sources	100.0	100.0	100.0	100.0

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

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as "—".

Figure 4.2 Steel propane cylinders: U.S. producers' and U.S. importers' U.S. shipments, by cylinder size and source, 2024

* * * * * * *

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

Note: ***.

Geographical markets

Table 4.3 presents U.S. imports of other containers for compressed or liquefied gas (of iron or steel) by source and border of entry in 2024.[2] Imports from each subject source and from nonsubject sources entered through each border of entry in 2024. Staff believes that the limited volume of reported imports of subject merchandise from China entered through Northern and Western borders of entry.[3]

Table 4.3 Other containers for compressed or liquefied gas, of iron or steel: U.S. imports, by source and border of entry, 2024

Quantity in 1,000 pounds

Source	East	North	South	West	All borders
China	9,787	13,361	19,028	4,756	46,931
Thailand	7,537	4,440	798	46,728	59,504
Subject sources	17,324	17,801	19,826	51,484	106,435
Nonsubject sources	39,319	28,629	97,626	22,004	187,578
All import sources	56,643	46,430	117,452	73,488	294,013

Table continued.

[2] As these data are compiled from official U.S. import statistics, the figures in the table include substantial volumes of out-of-scope products other than steel propane cylinders.

[3] Reported Northern borders of entry include Chicago, Illinois; Cleveland, Ohio; Detroit, Michigan; Duluth, Minnesota; Great Falls, Montana; Milwaukee, Wisconsin; Minneapolis, Minnesota; Pembina, North Dakota; and St. Louis, Missouri.

Reported Western borders of entry include Anchorage, Alaska; Columbia-Snake, Oregon; Honolulu, Hawaii; Los Angeles, California; Nogales, Arizona; San Diego, California; San Francisco, California; and Seattle, Washington.

Reported Southern borders of entry include Dallas-Fort Worth, Texas; El Paso, Texas; Houston-Galveston, Texas; Laredo, Texas; Miami, Florida; Mobile, Alabama; New Orleans, Louisiana; Port Arthur, Texas; and Tampa, Florida.

Reported Eastern borders of entry include 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; and Savannah, Georgia.

Table 4.3 (Continued) Other containers for compressed or liquefied gas, of iron or steel: U.S. imports, by source and border of entry, 2024

Share across in percent

Source	East	North	South	West	All borders
China	20.9	28.5	40.5	10.1	100.0
Thailand	12.7	7.5	1.3	78.5	100.0
Subject sources	16.3	16.7	18.6	48.4	100.0
Nonsubject sources	21.0	15.3	52.0	11.7	100.0
All import sources	19.3	15.8	39.9	25.0	100.0

Table continued.

Table 4.3 (Continued) Other containers for compressed or liquefied gas, of iron or steel: U.S. imports, by source and border of entry, 2024

Share down in percent

Source	East	North	South	West	All borders
China	17.3	28.8	16.2	6.5	16.0
Thailand	13.3	9.6	0.7	63.6	20.2
Subject sources	30.6	38.3	16.9	70.1	36.2
Nonsubject sources	69.4	61.7	83.1	29.9	63.8
All import sources	100.0	100.0	100.0	100.0	100.0

Source: Compiled from official U.S. imports statistics of the U.S. Department of Commerce using HTS statistical reporting numbers 7311.00.0060 and 7311.00.0090, accessed February 18, 2025. Imports are based on the imports for consumption data series.

Presence in the market

Table 4.4 presents U.S. imports of other containers for compressed or liquefied gas (of iron or steel) by source and month from 2019 to 2024.[4] Imports from each subject source and from nonsubject sources were entered in every month of the period. Staff believes that the limited volume of reported imports of subject merchandise from China entered in less than 12 months total since 2019.

[4] As these data are compiled from official U.S. import statistics, the figures in the table include substantial volumes of products other than steel propane cylinders.

Table 4.4 Other containers for compressed or liquefied gas, of iron or steel: Quantity of U.S. imports, by source and month

Quantity in 1,000 pounds

Year	Month	China	Thailand	Subject sources	Nonsubject sources	All import sources
2019	January	3,439	1,154	4,593	10,021	14,615
2019	February	3,308	1,597	4,905	8,661	13,566
2019	March	3,303	2,730	6,033	10,805	16,838
2019	April	3,827	1,763	5,591	11,754	17,345
2019	May	7,301	2,989	10,290	12,349	22,639
2019	June	8,118	2,506	10,625	11,159	21,784
2019	July	7,462	2,620	10,082	13,031	23,113
2019	August	4,550	2,138	6,688	13,268	19,956
2019	September	6,134	1,826	7,960	11,995	19,955
2019	October	5,397	758	6,155	13,427	19,583
2019	November	3,540	2,013	5,553	11,098	16,651
2019	December	6,776	1,757	8,533	9,491	18,023
2020	January	6,389	1,311	7,699	10,361	18,060
2020	February	3,550	2,541	6,091	10,220	16,311
2020	March	2,181	2,286	4,467	12,356	16,823
2020	April	5,482	1,801	7,283	11,817	19,100
2020	May	9,151	1,390	10,541	11,535	22,076
2020	June	6,215	2,073	8,288	13,682	21,970
2020	July	6,397	3,740	10,137	15,009	25,146
2020	August	7,995	3,074	11,069	13,902	24,971
2020	September	2,472	3,115	5,587	13,493	19,080
2020	October	10,327	3,323	13,649	15,364	29,014
2020	November	2,142	3,694	5,836	15,214	21,050
2020	December	2,383	3,240	5,623	15,420	21,044

Table continued.

Table 4.4 (Continued) Other containers for compressed or liquefied gas, of iron or steel: Quantity of U.S. imports, by source and month

Quantity in 1,000 pounds

Year	Month	China	Thailand	Subject sources	Nonsubject sources	All import sources
2021	January	1,720	2,510	4,230	15,819	20,048
2021	February	2,430	2,974	5,403	10,370	15,773
2021	March	2,597	5,133	7,730	16,249	23,979
2021	April	5,234	6,607	11,841	17,926	29,767
2021	May	6,033	4,925	10,958	18,499	29,457
2021	June	3,001	4,550	7,551	16,893	24,444
2021	July	3,635	3,813	7,448	18,581	26,029
2021	August	3,053	6,369	9,422	20,269	29,691
2021	September	2,232	4,488	6,720	15,907	22,626
2021	October	3,096	6,201	9,297	16,477	25,774
2021	November	2,725	5,898	8,623	15,097	23,720
2021	December	3,752	4,899	8,651	20,085	28,737
2022	January	3,632	6,214	9,847	17,043	26,890
2022	February	3,695	7,202	10,897	16,532	27,429
2022	March	3,582	9,594	13,176	24,022	37,198
2022	April	5,825	9,957	15,782	19,043	34,826
2022	May	4,983	7,996	12,978	23,753	36,732
2022	June	5,515	4,824	10,340	21,161	31,501
2022	July	7,666	4,815	12,481	19,407	31,888
2022	August	4,799	5,336	10,135	20,281	30,416
2022	September	6,318	3,662	9,980	18,552	28,532
2022	October	5,686	3,972	9,658	19,606	29,263
2022	November	5,747	1,929	7,676	16,634	24,310
2022	December	5,839	3,867	9,706	16,448	26,155

Table continued.

Table 4.4 (Continued) Other containers for compressed or liquefied gas, of iron or steel: Quantity of U.S. imports, by source and month

Quantity in 1,000 pounds

Year	Month	China	Thailand	Subject sources	Nonsubject sources	All import sources
2023	January	3,980	2,309	6,289	14,384	20,673
2023	February	3,999	1,564	5,562	11,018	16,580
2023	March	4,260	2,943	7,202	14,041	21,243
2023	April	5,273	4,186	9,459	16,020	25,479
2023	May	6,263	2,327	8,590	18,675	27,265
2023	June	4,071	2,795	6,866	19,699	26,564
2023	July	6,139	4,125	10,264	17,051	27,314
2023	August	6,418	2,855	9,272	24,070	33,342
2023	September	4,957	1,397	6,354	16,317	22,671
2023	October	4,048	2,821	6,869	17,891	24,760
2023	November	2,239	4,360	6,599	13,069	19,668
2023	December	2,770	3,149	5,919	15,242	21,161
2024	January	3,049	4,798	7,846	15,659	23,506
2024	February	3,598	3,308	6,905	13,277	20,182
2024	March	2,623	5,844	8,467	12,882	21,350
2024	April	3,639	6,884	10,522	15,067	25,589
2024	May	3,193	2,742	5,935	17,535	23,469
2024	June	2,708	6,652	9,360	17,971	27,331
2024	July	3,605	5,399	9,004	13,873	22,877
2024	August	5,646	5,962	11,608	15,954	27,561
2024	September	5,789	3,812	9,602	16,132	25,734
2024	October	5,152	3,654	8,806	16,409	25,215
2024	November	3,945	5,188	9,134	17,687	26,820
2024	December	3,985	5,261	9,246	15,134	24,380

Source: Compiled from official U.S. imports statistics of the U.S. Department of Commerce using HTS statistical reporting numbers 7311.00.0060 and 7311.00.0090, accessed February 18, 2025. Imports are based on the imports for consumption data series.

U.S. inventories of imported merchandise

Table 4.5 presents data for inventories of U.S. imports of steel propane cylinders from China, Thailand, and all other sources held in the United States.[5] Consistent with the import trends discussed above, U.S. inventories of steel propane cylinders from China were limited and sporadic. No inventories from China were reported until 2024, when they totaled *** pounds. The ratio of inventories from China to U.S. shipments of imports from China was

[5] Since firms frequently utilize steel propane cylinders for use in a gas exchange business model or for rental, firms were instructed to not report steel propane cylinders kept on hand as part of their assets for these purposes as ending inventories. Such steel propane cylinders were to be reported as internal consumption.

*** percent in 2024. Inventories from Thailand peaked in 2022 after increasing from their lowest level in 2020, before ultimately decreasing from 2022 to 2024, for a total decrease of *** percent from 2019 to 2024. Inventories from Thailand as a ratio to U.S. shipments of imports decreased by *** percentage points from 2019 to 2024.

Four firms reported inventories of subject imports at the end of at least one period from 2019 to 2024, with the majority accounted for by ***.

Table 4.5 Steel propane cylinders: U.S. importers' end-of-period inventories of imports, by source and period

Quantity in 1,000 pounds, tare weight; ratio in percent

Measure	Source	2019	2020	2021
Inventories quantity	China	***	***	***
Ratio to imports	China	***	***	***
Ratio to U.S. shipments of imports	China	***	***	***
Ratio to total shipments of imports	China	***	***	***
Inventories quantity	Thailand	***	***	***
Ratio to imports	Thailand	***	***	***
Ratio to U.S. shipments of imports	Thailand	***	***	***
Ratio to total shipments of imports	Thailand	***	***	***
Inventories quantity	Subject	***	***	***
Ratio to imports	Subject	***	***	***
Ratio to U.S. shipments of imports	Subject	***	***	***
Ratio to total shipments of imports	Subject	***	***	***
Inventories quantity	Nonsubject	***	***	***
Ratio to imports	Nonsubject	***	***	***
Ratio to U.S. shipments of imports	Nonsubject	***	***	***
Ratio to total shipments of imports	Nonsubject	***	***	***
Inventories quantity	All	***	***	***
Ratio to imports	All	***	***	***
Ratio to U.S. shipments of imports	All	***	***	***
Ratio to total shipments of imports	All	***	***	***

Table continued.

Table 4.5 (Continued) Steel propane cylinders: U.S. importers' end-of-period inventories of imports, by source and period

Quantity in 1,000 pounds, tare weight; ratio in percent

Measure	Source	2022	2023	2024
Inventories quantity	China	***	***	***
Ratio to imports	China	***	***	***
Ratio to U.S. shipments of imports	China	***	***	***
Ratio to total shipments of imports	China	***	***	***
Inventories quantity	Thailand	***	***	***
Ratio to imports	Thailand	***	***	***
Ratio to U.S. shipments of imports	Thailand	***	***	***
Ratio to total shipments of imports	Thailand	***	***	***
Inventories quantity	Subject	***	***	***
Ratio to imports	Subject	***	***	***
Ratio to U.S. shipments of imports	Subject	***	***	***
Ratio to total shipments of imports	Subject	***	***	***
Inventories quantity	Nonsubject	***	***	***
Ratio to imports	Nonsubject	***	***	***
Ratio to U.S. shipments of imports	Nonsubject	***	***	***
Ratio to total shipments of imports	Nonsubject	***	***	***
Inventories quantity	All	***	***	***
Ratio to imports	All	***	***	***
Ratio to U.S. shipments of imports	All	***	***	***
Ratio to total shipments of imports	All	***	***	***

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

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as "—".

U.S. importers' imports subsequent to December 31, 2024

The Commission requested importers to indicate whether they had imported or arranged for the importation of steel propane cylinders from any source for delivery after December 31, 2024 (table 4.6). These data are reported below. ***, ordered by total volume, reported arranged imports from subject sources subsequent to December 31, 2024.

Table 4.6 Steel propane cylinders: U.S. importers' arranged imports, by source and period

Quantity in 1,000 pounds, tare weight

Source	2025 Q1	2025 Q2	2025 Q3	2025 Q4	Total
China	***	***	***	***	***
Thailand	***	***	***	***	***
Subject sources	***	***	***	***	***
Nonsubject sources	***	***	***	***	***
All import sources	***	***	***	***	***

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

The industry in China

Overview

In the original investigations, the Commission issued foreign producers' questionnaires to 18 firms believed to produce and export steel propane cylinders from China. Usable responses to the Commission's questionnaire were received from two firms: Shandong Huanri Group Co., Ltd. ("Shandong Huanri") and Hong Kong GSBF Company Limited ("Hong Kong GSBF"). These firm's exports to the United States were equivalent to approximately *** percent of U.S. imports of steel propane cylinders from China in 2018 and, according to estimates requested of the responding Chinese producers, the production of steel propane cylinders in China reported in these questionnaires accounted for approximately *** percent of overall production of steel propane cylinders in China. In the current proceeding, the Commission issued a foreign producer questionnaire to eight firms in China for which valid contact information was identified, and one firm responded to the questionnaire with a largely incomplete response.[6]

U.S. producer Worthington identified Chinese companies that market themselves as significant producers of liquified and petroleum gas cylinders, including Yi Jun Hong Kong Ltd. (formerly Hong Kong GSBF Co., Ltd.), Hubei Daly LPG Cylinder Manufacturer Co., Ltd., Jiangsu Tianhai Special Equipment Co., Ltd. Jianxing Pressure Vessel Factory, Shandong Huanri Group Co., Ltd., Wuyi Xilinde Machinery Manufacture Co., Ltd., and Power Saints, Ltd.[7] In addition, in its response to the notice of institution, Worthington also indicated that there are at least 10 Chinese subject producers that engaged in production and export of steel propane cylinders since 2019.[8]

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[6] The Commission received a foreign producers' questionnaire from Hubei Daly LPG Cylinder Manufacturer Co., Ltd. ("Daly Cylinder"). This questionnaire left many unanswered questions and was missing substantive data, and so is generally not utilized in this report. However, some descriptions and information on the Chinese industry provided in its response have been included here.

[7] Prehearing Brief, pp. 11–12.

[8] The company provided a summary of the operations of seven producers in China, including Daly Cylinder, Hong Kong GSBF, and Shandong Huanri (the firms responding in the original investigations or these reviews). Worthington reports that Hong Kong GSBF identifies itself as a "top cylinder manufacturer" with four production lines. According to Worthington, Daly Cylinder reportedly has production capacity of 5 million pieces and that it produces DOT-certified cylinders. ***. Shandong Huanri reportedly has annual production of 6 million steel cylinders ***, while exporting its production to more than 30 countries including the United States. Further, in 2019, some of Shandong Huanri's main production line equipment was completely renovated. Worthington's response to the notice of institution, July 31, 2024, pp. 7-9.

(*continued*...)

According to Daly Cylinder, ***.[9]

Foreign producers that want to sell steel propane cylinders in the United States must receive approval from the U.S. Department of Transportation (DOT). As of April 15, 2025, five Chinese manufacturers were rated by the DOT as having a ranking of "Good Standing" whereas three had received "Conditional Approval." In addition, one Chinese manufacturer had received a ranking from the DOT of "Pending Renewal – Conditional Approval/Good Standing." Table 4.7 presents firms in China which have approved certifications (or pending renewal certifications) from DOT.

(…*continued*)

The four other companies in China described by Worthington include Jiangsu Tianhai Special Equipment Co., Ltd., Jiaxing Pressure Vessel Factory, Taishan Machinery Factory Ltd., and Wuyi Xilinde Machinery Manufacture Co., Ltd. Jiangsu Tianhai is reported to be pursuing expanded capacity, while Wuyi Xilinde in 2020 expanded its capacity with a new factory. Worthington's response to the notice of institution, July 31, 2024, pp. 7-9.

[9] Daly's foreign producer questionnaire response, section 3.6 and 3.13.

Table 4.7 Steel propane cylinders: Chinese manufacturers of steel propane cylinders (U.S. Department of Transportation approved), as of April 15, 2025

Manufacturer	Specification	Status	Expiration date
Shandong Huanri Group	4BA, 4BW	Good Standing	8/17/2028
Jiangsu Tianhai Special Equipment Co. Ltd. (JTSE)	4BA, 4BW	Good Standing	7/29/2026
Power Saints, LTD	4BA, 4BW	Good Standing	1/16/2030
LING TAI GSBF Tank Inc. (formerly GSBF Tank, Inc.)	4BA, 4BW	Good Standing	11/26/2029
Zhejiang Winner Fire Fighting Equipment Co., Ltd.	4B	Good Standing	5/8/2029
Bina (Xuancheng) Gas Cylinder Co., Ltd.	4BA, 4BW	Conditional Approval	1/5/2026
Ningbo Kaixuan Fire Control Equipment Co. Ltd. (KX Fire)	4BW	Conditional Approval	2/15/2027
Shandong Luhua Container Co., Ltd.	4BA	Conditional Approval	5/14/2027
Hubei Daly LPG Cylinder Manufacturer Co. Ltd.	4BA, 4BW	Pending Renewal - Conditional Approval/Good Standing	10/28/2024

Source: U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration, "Foreign Manufacturers Listing Hazmat Approvals: Cylinders (April 2025)," https://www.phmsa.dot.gov/hazmat/pressure-vessels-approvals/foreign-manufacturers-listing-hazmat-approvals-cylinders-april-2025.

Exports

Table 4.8 presents export data for certain containers from China. In 2024, the United States was the leading export destination for containers of iron or steel for compressed or liquefied gas produced in China, representing 10.2 percent of total exports of such merchandise, followed by the Philippines (6.5 percent), Poland (5.2 percent), and India (4.0 percent). The overall quantity of exports of such containers from China has fluctuated since 2019, ending 59.0 percent higher in 2024.

Table 4.8 Containers of iron or steel for compressed or liquefied gas: Exports from China, by destination market and by period

Quantity in 1,000 pounds, tare weight; value in 1,000 dollars

Destination market	Measure	2019	2020	2021
United States	Quantity	67,940	64,202	58,076
Philippines	Quantity	51,959	66,054	93,720
Poland	Quantity	6,316	7,508	20,081
India	Quantity	11,727	17,239	74,054
Indonesia	Quantity	28,431	24,302	57,867
Nigeria	Quantity	74,028	44,728	37,237
Mexico	Quantity	11,382	12,341	19,025
Vietnam	Quantity	23,038	19,390	33,963
Germany	Quantity	7,657	9,400	19,808
All other destination markets	Quantity	445,098	486,142	639,437
Non-U.S. destination markets	Quantity	659,636	687,102	995,191
All destination markets	Quantity	727,575	751,304	1,053,267
United States	Value	86,005	83,914	95,923
Philippines	Value	30,411	38,123	67,992
Poland	Value	6,263	7,983	26,641
India	Value	16,074	21,056	61,811
Indonesia	Value	22,391	24,374	52,500
Nigeria	Value	51,170	31,302	31,879
Mexico	Value	13,276	11,954	20,751
Vietnam	Value	28,488	19,423	37,250
Germany	Value	9,395	14,507	31,795
All other destination markets	Value	458,385	502,688	753,918
Non-U.S. destination markets	Value	635,853	671,409	1,084,536
All destination markets	Value	721,857	755,323	1,180,459

Table continued.

Table 4.8 (Continued) Containers of iron or steel for compressed or liquefied gas: Exports from China, by destination market and by period

Quantity in 1,000 pounds, tare weight; value in 1,000 dollars

Destination market	Measure	2022	2023	2024
United States	Quantity	78,867	92,492	117,914
Philippines	Quantity	56,530	68,779	74,908
Poland	Quantity	30,490	47,103	59,779
India	Quantity	51,906	45,396	46,557
Indonesia	Quantity	36,986	38,802	45,635
Nigeria	Quantity	47,470	53,607	37,035
Mexico	Quantity	20,267	22,770	32,939
Vietnam	Quantity	29,635	31,955	31,189
Germany	Quantity	21,685	18,945	30,987
All other destination markets	Quantity	543,716	595,201	679,642
Non-U.S. destination markets	Quantity	838,685	922,557	1,038,672
All destination markets	Quantity	917,552	1,015,049	1,156,586
United States	Value	126,140	147,514	170,044
Philippines	Value	39,662	45,714	45,968
Poland	Value	32,337	42,583	46,627
India	Value	47,498	40,554	41,526
Indonesia	Value	37,452	36,422	39,089
Nigeria	Value	46,266	49,890	45,131
Mexico	Value	26,711	26,388	34,773
Vietnam	Value	36,108	34,656	30,323
Germany	Value	24,041	23,223	28,581
All other destination markets	Value	700,912	727,044	779,356
Non-U.S. destination markets	Value	990,987	1,026,475	1,091,373
All destination markets	Value	1,117,127	1,173,989	1,261,417

Table continued.

Table 4.8 (Continued) Containers of iron or steel for compressed or liquefied gas: Exports from China, by destination market and by period

Unit values in dollars per pound, tare weight; share in percent

Destination market	Measure	2019	2020	2021
United States	Unit value	1.27	1.31	1.65
Philippines	Unit value	0.59	0.58	0.73
Poland	Unit value	0.99	1.06	1.33
India	Unit value	1.37	1.22	0.83
Indonesia	Unit value	0.79	1.00	0.91
Nigeria	Unit value	0.69	0.70	0.86
Mexico	Unit value	1.17	0.97	1.09
Vietnam	Unit value	1.24	1.00	1.10
Germany	Unit value	1.23	1.54	1.61
All other destination markets	Unit value	1.03	1.03	1.18
Non-U.S. destination markets	Unit value	0.96	0.98	1.09
All destination markets	Unit value	0.99	1.01	1.12
United States	Share of quantity	9.3	8.5	5.5
Philippines	Share of quantity	7.1	8.8	8.9
Poland	Share of quantity	0.9	1.0	1.9
India	Share of quantity	1.6	2.3	7.0
Indonesia	Share of quantity	3.9	3.2	5.5
Nigeria	Share of quantity	10.2	6.0	3.5
Mexico	Share of quantity	1.6	1.6	1.8
Vietnam	Share of quantity	3.2	2.6	3.2
Germany	Share of quantity	1.1	1.3	1.9
All other destination markets	Share of quantity	61.2	64.7	60.7
Non-U.S. destination markets	Share of quantity	90.7	91.5	94.5
All destination markets	Share of quantity	100.0	100.0	100.0

Table continued.

Table 4.8 (Continued) Containers of iron or steel for compressed or liquefied gas: Exports from China, by destination market and by period

Unit values in dollars per pound, tare weight; share in percent

Destination market	Measure	2022	2023	2024
United States	Unit value	1.60	1.59	1.44
Philippines	Unit value	0.70	0.66	0.61
Poland	Unit value	1.06	0.90	0.78
India	Unit value	0.92	0.89	0.89
Indonesia	Unit value	1.01	0.94	0.86
Nigeria	Unit value	0.97	0.93	1.22
Mexico	Unit value	1.32	1.16	1.06
Vietnam	Unit value	1.22	1.08	0.97
Germany	Unit value	1.11	1.23	0.92
All other destination markets	Unit value	1.29	1.22	1.15
Non-U.S. destination markets	Unit value	1.18	1.11	1.05
All destination markets	Unit value	1.22	1.16	1.09
United States	Share of quantity	8.6	9.1	10.2
Philippines	Share of quantity	6.2	6.8	6.5
Poland	Share of quantity	3.3	4.6	5.2
India	Share of quantity	5.7	4.5	4.0
Indonesia	Share of quantity	4.0	3.8	3.9
Nigeria	Share of quantity	5.2	5.3	3.2
Mexico	Share of quantity	2.2	2.2	2.8
Vietnam	Share of quantity	3.2	3.1	2.7
Germany	Share of quantity	2.4	1.9	2.7
All other destination markets	Share of quantity	59.3	58.6	58.8
Non-U.S. destination markets	Share of quantity	91.4	90.9	89.8
All destination markets	Share of quantity	100.0	100.0	100.0

Source: Official exports statistics under HTS subheading 7311.00 reported by China Customs in the Global Trade Atlas Suite database, accessed February 27, 2025.

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as "—". The United States is shown at the top followed by the top destination markets in descending order of 2024 data.

The industry in Thailand

Overview

In the original investigations, the Commission issued foreign producers' questionnaires to nine firms believed to produce and/or export steel propane cylinders from Thailand. Usable responses to the Commission's questionnaire were received from one firm, 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 *** percent of overall production of steel propane cylinders in Thailand in that year.

In the current proceeding, the Commission issued a foreign producers' questionnaire to four firms in Thailand for which valid contact information was identified. SMPC again provided a usable questionnaire response.

Worthington reports that there were at least five producers of steel propane cylinders in Thailand, including SMPC, Linh Gas Cylinder Co., Ltd., ("Linh"), [10] Metal Mate Co., Ltd, Siam Intermagnate Co., Ltd., and Sahamitr Pressure Container.[11] In its questionnaire response, SMPC estimated that its production of steel propane cylinders accounted for *** percent of total Thai production in 2024 and that its exports of the same product represented *** percent of total exports from Thailand to the United States. In 2023 "SMPC announced plans to allocate a portion of a 135 million baht investment budget to upgrade the cylinder production process and debottleneck logistics, which can speed up and expand production and export shipments."[12]

Foreign producers that want to sell propane cylinders in the United States must receive approval from the U.S. Department of Transportation (DOT). As of April 15, 2025, only two Thai manufacturers were rated by the DOT as having a ranking of "Good Standing". Table 4.9 presents firms in Thailand which have approved certifications from DOT.

[10] Linh ***. Worthington's response to the notice of institution, July 31, 2024, pp. 9-10.
[11] Prehearing Brief, p. 19, Exh. 4.
[12] Worthington's response to the notice of institution, July 31, 2024, p. 10.

Table 4.9 Steel propane cylinders: Thai manufacturers of steel propane cylinders (U.S. Department of Transportation approved), as of April 15, 2025

Manufacturer	Specification	Status	Expiration date
Sahamitr Pressure Container Public Co., Ltd. (SMPC)	4BA, 4BW	Good Standing	2/24/2027
Metal Mate Co. Ltd (Bangpu Plant)	4BW, 4BA	Good Standing	5/28/2026
Metal Mate Co., Ltd. (Praeksa Plant)	4BW	Pending Renewal / Good Standing	12/16/2024

Source: U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration, "Foreign Manufacturers Listing Hazmat Approvals: Cylinders (April 2025)," https://www.phmsa.dot.gov/hazmat/pressure-vessels-approvals/foreign-manufacturers-listing-hazmat-approvals-cylinders-april-2025.

Table 4.10 presents information on the steel propane cylinder operations of the responding producer and exporter in Thailand.

Table 4.10 Steel propane cylinders: Summary data on Thai producer SMPC, 2024

Firm	Production (1,000 pounds, tare weight)	Share of reported production (percent)	Exports to the United States (1,000 pounds, tare weight)	Share of reported exports to the United States (percent)	Total shipments (1,000 pounds, tare weight)	Share of firm's total shipments exported to the United States (percent)
SMPC	***	***	***	***	***	***
All firms	***	100.0	***	100.0	***	***

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

Changes in operations

The producer in Thailand was asked to report any change in the character of its operations or organization relating to the production of steel propane cylinders since 2019. SMPC indicated in its questionnaire that it had experienced two changes which are detailed in Table 4.11 below.

Table 4.11 Steel propane cylinders: Reported changes in operations in Thailand, since January 1, 2019

Item	Firm name and narrative on changes in operations
Expansions	***
Other	***

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

Operations on steel propane cylinders

Table 4.12 presents data on SMPC's installed capacity, practical capacity, and production on the same equipment. From 2019 to 2024, SMPC reported that practical overall capacity increased by *** percent and that overall production increased by *** percent. During the period, installed overall capacity was steady from 2019 to 2021 but increased by *** percent from 2021 to 2022, and thereafter held steady through 2024. As discussed further below, SMPC produced other products on the same machinery used to produce steel propane cylinders.

Table 4.12 Steel propane cylinders: Thai producer SMPC's installed and practical capacity, production, and utilization, by measure and period

Capacity and production in 1,000 pounds, tare weight, utilization in percent

Item	Measure	2019	2020	2021
Installed overall	Capacity	***	***	***
Installed overall	Production	***	***	***
Installed overall	Utilization	***	***	***
Practical overall	Capacity	***	***	***
Practical overall	Production	***	***	***
Practical overall	Utilization	***	***	***
Practical steel propane cylinders	Capacity	***	***	***
Practical steel propane cylinders	Production	***	***	***
Practical steel propane cylinders	Utilization	***	***	***

Table continued

Table 4.12 (Continued) Steel propane cylinders: Thai producer SMPC's installed and practical capacity, production, and utilization, by measure and period

Capacity and production in 1,000 pounds, tare weight, utilization in percent

Item	Measure	2022	2023	2024
Installed overall	Capacity	***	***	***
Installed overall	Production	***	***	***
Installed overall	Utilization	***	***	***
Practical overall	Capacity	***	***	***
Practical overall	Production	***	***	***
Practical overall	Utilization	***	***	***
Practical steel propane cylinders	Capacity	***	***	***
Practical steel propane cylinders	Production	***	***	***
Practical steel propane cylinders	Utilization	***	***	***

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

Table 4.13 presents SMPC's reported explanations for regarding practical capacity constraints.

Table 4.13 Steel propane cylinders: Reported constraints in Thai producer SMPC's practical capacity

Item	Firm name and narrative on constraints to practical overall capacity
Production bottlenecks	***
Existing labor force	***
Other constraints	***

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

Table 4.14 presents data on the industry in Thailand, as reported by Thai producer SMPC. From 2019 to 2024, production increased by *** percent. Capacity utilization, which was *** percent in 2019, increased to *** percent in 2020, before declining to *** percent by 2024. The share of home market shipments in Thailand fluctuated during the period for which data were collected, declining from *** percent in 2019 to *** percent by the end of 2024.

Table 4.14 Steel propane cylinders: Thai producer SMPC's data on industry, by item and period

Quantity in 1,000 pounds, tare weight; value in 1,000 dollars

Item	Measure	2019	2020	2021
Capacity	Quantity	***	***	***
Production	Quantity	***	***	***
End-of-period inventories	Quantity	***	***	***
Internal consumption and transfers	Quantity	***	***	***
Commercial home market shipments	Quantity	***	***	***
Home market shipments	Quantity	***	***	***
Export shipments	Quantity	***	***	***
Total shipments	Quantity	***	***	***
Internal consumption and transfers	Value	***	***	***
Commercial home market shipments	Value	***	***	***
Home market shipments	Value	***	***	***
Export shipments	Value	***	***	***
Total shipments	Value	***	***	***

Table continued

Table 4.14 (Continued) Steel propane cylinders: Thai producer SMPC's data on industry, by item and period

Quantity in 1,000 pounds, tare weight; value in 1,000 dollars

Item	Measure	2022	2023	2024
Capacity	Quantity	***	***	***
Production	Quantity	***	***	***
End-of-period inventories	Quantity	***	***	***
Internal consumption and transfers	Quantity	***	***	***
Commercial home market shipments	Quantity	***	***	***
Home market shipments	Quantity	***	***	***
Export shipments	Quantity	***	***	***
Total shipments	Quantity	***	***	***
Internal consumption and transfers	Value	***	***	***
Commercial home market shipments	Value	***	***	***
Home market shipments	Value	***	***	***
Export shipments	Value	***	***	***
Total shipments	Value	***	***	***

Table continued

Table 4.14 (Continued) Steel propane cylinders: Thai producer SMPC's data on industry, by item and period

Unit values in dollars per pound, tare weight; shares in percent

Item	Measure	2019	2020	2021
Internal consumption and transfers	Unit value	***	***	***
Commercial home market shipments	Unit value	***	***	***
Home market shipments	Unit value	***	***	***
Export shipments	Unit value	***	***	***
Total shipments	Unit value	***	***	***
Capacity utilization ratio	Ratio	***	***	***
Inventory ratio to production	Ratio	***	***	***
Inventory ratio to total shipments	Ratio	***	***	***
Internal consumption and transfers	Share	***	***	***
Commercial home market shipments	Share	***	***	***
Home market shipments	Share	***	***	***
Export shipments	Share	***	***	***
Total shipments	Share	100.0	100.0	100.0

Table continued

Table 4.14 (Continued) Steel propane cylinders: Thai producer SMPC's data on industry, by item and period

Unit values in dollars per pound, tare weight; shares in percent

Item	Measure	2022	2023	2024
Internal consumption and transfers	Unit value	***	***	***
Commercial home market shipments	Unit value	***	***	***
Home market shipments	Unit value	***	***	***
Export shipments	Unit value	***	***	***
Total shipments	Unit value	***	***	***
Capacity utilization ratio	Ratio	***	***	***
Inventory ratio to production	Ratio	***	***	***
Inventory ratio to total shipments	Ratio	***	***	***
Internal consumption and transfers	Share	***	***	***
Commercial home market shipments	Share	***	***	***
Home market shipments	Share	***	***	***
Export shipments	Share	***	***	***
Total shipments	Share	100.0	100.0	100.0

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

Table 4.15 presents data on the exports of SMPC to the United States and regional export markets. From 2019 through 2024, the quantity of exports to the United States increased by *** percent, whereas exports to the European Union (EU)[13] and all other

[13] SPMC's top five reported export markets in the EU were ***.

markets[14] increased by *** percent and *** percent, respectively. Exports to Asia[15] decreased by *** percent from 2019 to 2024.

Table 4.15 Steel propane cylinders: Thai producer SMPC's exports, by destination market and period

Quantity in 1,000 pounds, tare weight; value in 1,000 dollars; unit values in dollars per pound, tare weight; shares and ratios in percent

Destination market	Measure	2019	2020	2021
United States	Quantity	***	***	***
European Union	Quantity	***	***	***
Asia	Quantity	***	***	***
All other destination markets	Quantity	***	***	***
Non-U.S. destination markets	Quantity	***	***	***
All destination markets	Quantity	***	***	***
United States	Value	***	***	***
European Union	Value	***	***	***
Asia	Value	***	***	***
All other destination markets	Value	***	***	***
Non-U.S. destination markets	Value	***	***	***
All destination markets	Value	***	***	***
United States	Unit value	***	***	***
European Union	Unit value	***	***	***
Asia	Unit value	***	***	***
All other destination markets	Unit value	***	***	***
Non-U.S. destination markets	Unit value	***	***	***
All destination markets	Unit value	***	***	***
United States	Share of quantity	***	***	***
European Union	Share of quantity	***	***	***
Asia	Share of quantity	***	***	***
All other destination markets	Share of quantity	***	***	***
Non-U.S. destination markets	Share of quantity	***	***	***
All destination markets	Share of quantity	100.0	100.0	100.0
United States	Ratio	***	***	***
European Union	Ratio	***	***	***
Asia	Ratio	***	***	***
All other destination markets	Ratio	***	***	***
Non-U.S. destination markets	Ratio	***	***	***
All destination markets	Ratio	100.0	100.0	100.0

Table continued

[14] Outside the EU and Asia, SMPC's top five reported export markets were ***.

[15] SMPC's top five reported export markets in Asia were ***.

Table 4.15 (Continued) Steel propane cylinders: Thai producer SMPC's exports, by destination market and period

Quantity in 1,000 pounds, tare weight; value in 1,000 dollars; unit values in dollars per pound, tare weight; shares and ratios in percent

Destination market	Measure	2022	2023	2024
United States	Quantity	***	***	***
European Union	Quantity	***	***	***
Asia	Quantity	***	***	***
All other destination markets	Quantity	***	***	***
Non-U.S. destination markets	Quantity	***	***	***
All destination markets	Quantity	***	***	***
United States	Value	***	***	***
European Union	Value	***	***	***
Asia	Value	***	***	***
All other destination markets	Value	***	***	***
Non-U.S. destination markets	Value	***	***	***
All destination markets	Value	***	***	***
United States	Unit value	***	***	***
European Union	Unit value	***	***	***
Asia	Unit value	***	***	***
All other destination markets	Unit value	***	***	***
Non-U.S. destination markets	Unit value	***	***	***
All destination markets	Unit value	***	***	***
United States	Share of quantity	***	***	***
European Union	Share of quantity	***	***	***
Asia	Share of quantity	***	***	***
All other destination markets	Share of quantity	***	***	***
Non-U.S. destination markets	Share of quantity	***	***	***
All destination markets	Share of quantity	100.0	100.0	100.0
United States	Ratio	***	***	***
European Union	Ratio	***	***	***
Asia	Ratio	***	***	***
All other destination markets	Ratio	***	***	***
Non-U.S. destination markets	Ratio	***	***	***
All destination markets	Ratio	100.0	100.0	100.0

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

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as "—". Ratios represent the portion of the producers' total shipments that are exported.

Table 4.16 presents SMPC's total shipments (inclusive of home market shipments and export shipments) by product type in 2024. Most (*** percent) of SMPC's shipments were of cylinder sizes other than 20- or 30-pound capacities, followed by 20-pound capacity cylinders (*** percent) and 30-pound capacity cylinders (*** percent).

Table 4.16 Steel propane cylinders: Thai producer SMPC's total shipments by product type, 2024

Quantity in 1,000 pounds, tare weight, shares in percent

Product type	Quantity	Share
20-pound capacity cylinders	***	***
30-pound capacity cylinders	***	***
All other cylinder sizes	***	***
All cylinder sizes	***	100.0

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

Alternative products

As shown in table 4.17, SMPC produced other products on the same equipment and machinery used to produce steel propane cylinders. In 2024, steel propane cylinders accounted for *** percent of SMPC's overall production in Thailand, with all other products (which included ***) representing *** percent.

Table 4.17 Steel propane cylinders: Overall production on the same equipment as in-scope production of Thai producer SMPC, by product type and period

Quantity in 1,000 pounds, tare weight, shares and rations in percent

Product type	Measure	2019	2020	2021
Steel propane cylinders	Quantity	***	***	***
Other products	Quantity	***	***	***
All products	Quantity	***	***	***
Steel propane cylinders	Share	***	***	***
Other products	Share	***	***	***
All products	Share	100.0	100.0	100.0

Table continued

Table 4.17 (Continued) Steel propane cylinders: Overall production on the same equipment as in-scope production of Thai producer SMPC, by product type and period

Quantity in 1,000 pounds, tare weight, shares and rations in percent

Product type	Measure	2022	2023	2024
Steel propane cylinders	Quantity	***	***	***
Other products	Quantity	***	***	***
All products	Quantity	***	***	***
Steel propane cylinders	Share	***	***	***
Other products	Share	***	***	***
All products	Share	100.0	100.0	100.0

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

Exports

According to the GTA, the United States is the leading export market for cylinders of iron or steel for compressed or liquefied gas from Thailand in 2024, representing 23.7 percent of total exports of such products, followed by Malaysia (8.9 percent), South Africa (6.7 percent), the Philippines (6.6 percent), and Cote d'Ivoire (5.9 percent) (table 4.18).

Table 4.18 Containers of iron or steel for compressed or liquefied gas: Exports from Thailand, by destination and by period

Quantity in 1,000 pounds, tare weight; value in 1,000 dollars

Destination market	Measure	2019	2020	2021
United States	Quantity	24,576	35,302	67,523
Malaysia	Quantity	22,584	18,794	14,368
South Africa	Quantity	8,873	12,773	15,514
Philippines	Quantity	16,833	16,612	14,597
Cote d Ivoire	Quantity	6,738	11,523	6,247
Cambodia	Quantity	12,993	12,261	11,166
Australia	Quantity	11,057	11,781	15,750
United Kingdom	Quantity	3,938	5,639	5,022
Tanzania	Quantity	13,488	17,996	12,410
All other destination markets	Quantity	105,536	125,084	80,321
Non-U.S. destination markets	Quantity	202,038	232,463	175,394
All destination markets	Quantity	226,614	267,765	242,917
United States	Value	19,074	25,853	56,003
Malaysia	Value	10,981	9,405	7,272
South Africa	Value	6,315	8,919	11,366
Philippines	Value	7,914	6,706	5,622
Cote d Ivoire	Value	5,652	9,055	4,784
Cambodia	Value	39,885	35,745	34,244
Australia	Value	8,517	8,219	11,671
United Kingdom	Value	2,721	3,775	3,997
Tanzania	Value	10,878	13,319	10,313
All other destination markets	Value	98,258	103,738	82,809
Non-U.S. destination markets	Value	191,122	198,882	172,077
All destination markets	Value	210,196	224,735	228,080

Table continued

Table 4.18 (Continued) Containers of iron or steel for compressed or liquefied gas: Exports from Thailand, by destination market and by period

Quantity in 1,000 pounds, tare weight; value in 1,000 dollars

Destination market	Measure	2022	2023	2024
United States	Quantity	53,318	36,394	58,659
Malaysia	Quantity	15,297	18,808	22,171
South Africa	Quantity	13,239	9,168	16,642
Philippines	Quantity	14,988	14,615	16,468
Cote d Ivoire	Quantity	8,447	11,322	14,737
Cambodia	Quantity	13,432	15,837	14,356
Australia	Quantity	13,618	14,252	12,705
United Kingdom	Quantity	3,995	16,751	10,912
Tanzania	Quantity	5,580	3,313	9,983
All other destination markets	Quantity	67,983	64,167	71,201
Non-U.S. destination markets	Quantity	156,580	168,231	189,175
All destination markets	Quantity	209,897	204,625	247,834
United States	Value	55,415	33,766	49,559
Malaysia	Value	6,559	9,546	8,738
South Africa	Value	12,203	7,205	12,535
Philippines	Value	6,297	5,433	6,315
Cote d Ivoire	Value	6,831	9,613	11,465
Cambodia	Value	28,132	24,737	22,057
Australia	Value	13,808	11,590	10,377
United Kingdom	Value	3,444	12,915	8,842
Tanzania	Value	5,072	2,526	7,165
All other destination markets	Value	66,476	60,248	57,984
Non-U.S. destination markets	Value	148,823	143,813	145,479
All destination markets	Value	204,238	177,579	195,038

Table continued

Table 4.18 (Continued) Containers of iron or steel for compressed or liquefied gas: Exports from Thailand, by destination market and by period

Unit values in dollars per pound, tare weight; shares in percent

Destination market	Measure	2019	2020	2021
United States	Unit value	0.78	0.73	0.83
Malaysia	Unit value	0.49	0.50	0.51
South Africa	Unit value	0.71	0.70	0.73
Philippines	Unit value	0.47	0.40	0.39
Cote d Ivoire	Unit value	0.84	0.79	0.77
Cambodia	Unit value	3.07	2.92	3.07
Australia	Unit value	0.77	0.70	0.74
United Kingdom	Unit value	0.69	0.67	0.80
Tanzania	Unit value	0.81	0.74	0.83
All other destination markets	Unit value	0.93	0.83	1.03
Non-U.S. destination markets	Unit value	0.95	0.86	0.98
All destination markets	Unit value	0.93	0.84	0.94
United States	Share of quantity	10.8	13.2	27.8
Malaysia	Share of quantity	10.0	7.0	5.9
South Africa	Share of quantity	3.9	4.8	6.4
Philippines	Share of quantity	7.4	6.2	6.0
Cote d Ivoire	Share of quantity	3.0	4.3	2.6
Cambodia	Share of quantity	5.7	4.6	4.6
Australia	Share of quantity	4.9	4.4	6.5
United Kingdom	Share of quantity	1.7	2.1	2.1
Tanzania	Share of quantity	6.0	6.7	5.1
All other destination markets	Share of quantity	46.6	46.7	33.1
Non-U.S. destination markets	Share of quantity	89.2	86.8	72.2
All destination markets	Share of quantity	100.0	100.0	100.0

Table continued

Table 4.18 (Continued) Containers of iron or steel for compressed or liquefied gas: Exports from Thailand, by destination market and by period

Unit values in dollars per pound, tare weight; shares in percent

Destination market	Measure	2022	2023	2024
United States	Unit value	1.04	0.93	0.84
Malaysia	Unit value	0.43	0.51	0.39
South Africa	Unit value	0.92	0.79	0.75
Philippines	Unit value	0.42	0.37	0.38
Cote d Ivoire	Unit value	0.81	0.85	0.78
Cambodia	Unit value	2.09	1.56	1.54
Australia	Unit value	1.01	0.81	0.82
United Kingdom	Unit value	0.86	0.77	0.81
Tanzania	Unit value	0.91	0.76	0.72
All other destination markets	Unit value	0.98	0.94	0.81
Non-U.S. destination markets	Unit value	0.95	0.85	0.77
All destination markets	Unit value	0.97	0.87	0.79
United States	Share of quantity	25.4	17.8	23.7
Malaysia	Share of quantity	7.3	9.2	8.9
South Africa	Share of quantity	6.3	4.5	6.7
Philippines	Share of quantity	7.1	7.1	6.6
Cote d Ivoire	Share of quantity	4.0	5.5	5.9
Cambodia	Share of quantity	6.4	7.7	5.8
Australia	Share of quantity	6.5	7.0	5.1
United Kingdom	Share of quantity	1.9	8.2	4.4
Tanzania	Share of quantity	2.7	1.6	4.0
All other destination markets	Share of quantity	32.4	31.4	28.7
Non-U.S. destination markets	Share of quantity	74.6	82.2	76.3
All destination markets	Share of quantity	100.0	100.0	100.0

Source: Official export statistics under HS subheading 7311.11 reported by the Thai Customs Department in the Global Trade Atlas Suite database, accessed February 27, 2025.

Note: Shares and rations shown as “0.0” represent values greater than zero but less than “0.05” percent. Zeros, null values, and undefined calculations are suppressed and shown as “—” United States is shown at the top. All remaining top export destinations are shown in descending order of 2024 data.

Third-country trade actions

On April 4, 2023, the Philippines initiated a safeguard investigation on imports of LPG (propane) steel cylinders which enters the country under HS 7311.00, containers of iron or steel, for compressed or liquefied gas. On December 13, 2023, the Philippines notified the World Trade Organization that the provisional safeguard measure is in the form of a cash bond amounting to PhP2.18/kg. China was included and Thailand was excluded from the safeguard measure.[16] However, on August 28, 2024, the Philippines found it unnecessary to impose a final measure and terminated the investigation.[17]

Global market

Foreign producers that want to sell propane cylinders in the United States must receive approval from the U.S. Department of Transportation (DOT). As of April 15, 2025, there are 15 foreign manufacturers (in addition to the previously identified firms in China and Thailand) that were rated by the DOT as having a ranking of "Good Standing," "Conditionally Approved," or "Pending Renewal" (table 4.19).

[16] WTO, Notification Under Article 12.1(A) of the Agreement on Safeguards on Initiation of an Investigation and The Reason for It, Committee on Safeguards Report, WTO Doc. G/SG/N/6/PHL/20, April 4, 2023, https://docs.wto.org/dol2fe/Pages/FE_Search/FE_S_S009-DP.aspx?language=E&CatalogueIdList=293292&CurrentCatalogueIdIndex=0&FullTextHash=&HasEnglishRecord=True&HasFrenchRecord=True&HasSpanishRecord=True; and WTO, Notification Under Article 12.4 of the Agreement on Safeguards Before Taking a Provisional, Committee on Safeguards Report, WTO Doc. G/SG/N/6/PHL/20, December 14, 2023, https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/G/SG/N7PHL13.pdf&Open=True.

[17] WTO, Notification Under Article 12.1(A) of the Agreement on Safeguards on Initiation of an Investigation and The Reason for It, Committee on Safeguards Report, WTO Doc G/SG/N/7/PHL/13/Suppl.1, https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/G/SG/N7PHL13S1.pdf&Open=True.

Table 4.19 Steel propane cylinders: Foreign manufacturers of steel propane cylinders (U.S. Department of Transportation approved), as of April 15, 2025

Country	Manufacturer	Specification	Status	Expiration date
China	Bina (Xuancheng) Gas Cylinder Co., Ltd.	4BA, 4BW	Conditional Approval	1/5/2026
China	Hubei Daly LPG Cylinder Manufacturer Co. Ltd.	4BA, 4BW	Pending Renewal - Conditional Approval / Good Standing	10/28/2024
China	Jiangsu Tianhai Special Equipment Co. Ltd.	4BA, 4BW	Good Standing	7/29/2026
China	Ling Tai GSBF Tank Inc	4BA, 4BW	Good Standing	11/26/2029
China	Ningbo Kaixuan Fire Control Equipment Co. Ltd.	4BW	Conditional Approval	2/15/2027
China	Shandong Huanri Group	4BA, 4BW	Good Standing	8/17/2028
China	Shandong Luhua Container Co., Ltd.	4BA	Conditional Approval	5/14/2027
China	Zhejiang Winner Fire Fighting Equipment Co., Ltd.	4B	Good Standing	5/8/2029
China	Power Saints, Ltd.	4BA, 4BW	Good Standing	1/16/2030
Thailand	Metal Mate Co. Ltd (Bangpu Plant)	4BW, 4BA	Good Standing	5/28/2026
Thailand	Metal Mate Co., Ltd. (Praeksa Plant)	4BW	Pending Renewal / Good Standing	12/16/2024
Thailand	Sahamitr Pressure Container Public Co., Ltd. (SMPC)	4BA, 4BW	Good Standing	2/24/2027
India	Bhiwadi Cylinder Pvt. Ltd.	4BA, 4BW	Good Standing	2/14/2029
India	Mauria Udyog, Ltd.	4BA, 4BW	Good Standing	3/4/2029
India	Mcwane India Private Limited	4BA	Good Standing	6/25/2029
India	Surya Shakti Vessels Private Limited	4BA	Conditional Approval	12/26/2025
Mexico	Ingusa Grupo	4BA, 4BW	Good Standing	3/28/2029
Mexico	Svifflug S. de R.L. de C.V.	4BW	Good Standing	3/4/2025
Mexico	Tanques Menher S.A. DE C.V.	4BA	Conditional Approval	7/22/2027
Portugal	Amtrol - Alfa Metalomecanica, S.A	4BW, 4BA	Good Standing	3/5/2029
South Korea	Masteco Industry Co., Ltd.	4BW	Good Standing	7/8/2029

Table continued.

Table 4.19 (Continued) Steel propane cylinders: Foreign manufacturers of steel propane cylinders (U.S. Department of Transportation approved), as of April 15, 2025

Country	Manufacturer	Specification	Status	Expiration date
Taiwan	King Lai Hygenic Materials Co., Ltd.	4B	Good Standing	9/11/2025
Turkey	Aygaz A.S.	4BA, 4BW	Good Standing	8/22/2029
Turkey	Evas Ev Aletleri San. A.Ş.	4BA, 4BW	Good Standing	3/12/2026
United Kingdom	ICAM Engineering, Ltd.	4B	Good Standing	6/11/2025
Vietnam	Southern Gas Trading Joint Stock Company - Cylinder Branch	4BA	Good Standing	11/2/2028
Vietnam	Tan Phong An Industrial Co. Ltd.	4BA	Good Standing	6/10/2029

Source: U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration, "Foreign Manufacturers Listing Hazmat Approvals: Cylinders (April 2025)," https://www.phmsa.dot.gov/hazmat/pressure-vessels-approvals/foreign-manufacturers-listing-hazmat-approvals-cylinders-april-2025.

Table 4.20 presents global export data for compressed or liquefied gas, of iron or steel, a category that includes steel propane cylinders and out-of-scope products, by source (United States, subject countries, and then nonsubject countries) in descending order of value for 2024. China, one of the two subject countries in these reviews, was the single largest source of exports in the world for containers of iron or steel for compressed or liquefied gas. The value of such exports from China increased in each year between 2019 and 2024. Thailand, the other subject country, was consistently a top ten source of exports of containers of iron or steel for compressed or liquefied gas, however, the value of such exports was substantially lower than the value of exports from China, fluctuated on an annual basis, and exhibited a net decline between 2019 and 2024.

Table 4.20 Containers of iron or steel for compressed or liquefied gas: Global exports, by reporting country and by period

Value in 1,000 dollars; share in percent

Exporting country	Measure	2019	2020	2021
United States	Value	368,583	368,483	399,758
China	Value	721,857	755,323	1,180,459
Thailand	Value	210,196	224,735	228,080
Subject exporters	Value	932,053	980,058	1,408,540
Germany	Value	214,264	182,351	223,120
Italy	Value	244,855	236,358	271,338
Czech Republic	Value	230,967	224,498	269,894
Turkey	Value	182,420	183,828	240,210
South Korea	Value	189,724	263,181	275,722
India	Value	86,755	66,253	114,122
Poland	Value	111,531	115,465	139,166
Austria	Value	111,189	92,396	106,108
All other exporters	Value	925,463	949,827	1,170,933
Nonsubject exporters	Value	2,297,169	2,314,157	2,810,614
All reporting exporters	Value	3,597,805	3,662,698	4,618,911
United States	Share of value	10.2	10.1	8.7
China	Share of value	20.1	20.6	25.6
Thailand	Share of value	5.8	6.1	4.9
Subject exporters	Share of value	25.9	26.8	30.5
Germany	Share of value	6.0	5.0	4.8
Italy	Share of value	6.8	6.5	5.9
Czech Republic	Share of value	6.4	6.1	5.8
Turkey	Share of value	5.1	5.0	5.2
South Korea	Share of value	5.3	7.2	6.0
India	Share of value	2.4	1.8	2.5
Poland	Share of value	3.1	3.2	3.0
Austria	Share of value	3.1	2.5	2.3
All other exporters	Share of value	25.7	25.9	25.4
Nonsubject exporters	Share of value	63.8	63.2	60.9
All reporting exporters	Share of value	100.0	100.0	100.0

Table continued.

Table 4.20 (Continued) Containers of iron or steel for compressed or liquefied gas: Global exports, by reporting country and by period

Value in 1,000 dollars; share in percent

Exporting country	Measure	2022	2023	2024
United States	Value	386,946	370,857	347,119
China	Value	1,117,127	1,173,989	1,261,417
Thailand	Value	204,238	177,579	195,038
Subject exporters	Value	1,321,364	1,351,568	1,456,455
Germany	Value	222,075	266,018	314,818
Italy	Value	285,970	333,684	262,289
Czech Republic	Value	277,909	249,873	248,691
Turkey	Value	288,338	275,014	247,067
South Korea	Value	259,617	232,251	232,475
India	Value	140,330	170,259	151,887
Poland	Value	168,304	160,315	146,905
Austria	Value	122,734	110,716	122,217
All other exporters	Value	1,128,413	1,107,725	930,244
Nonsubject exporters	Value	2,893,690	2,905,856	2,656,593
All reporting exporters	Value	4,602,001	4,628,281	4,460,167
United States	Share of value	8.4	8.0	7.8
China	Share of value	24.3	25.4	28.3
Thailand	Share of value	4.4	3.8	4.4
Subject exporters	Share of value	28.7	29.2	32.7
Germany	Share of value	4.8	5.7	7.1
Italy	Share of value	6.2	7.2	5.9
Czech Republic	Share of value	6.0	5.4	5.6
Turkey	Share of value	6.3	5.9	5.5
South Korea	Share of value	5.6	5.0	5.2
India	Share of value	3.0	3.7	3.4
Poland	Share of value	3.7	3.5	3.3
Austria	Share of value	2.7	2.4	2.7
All other exporters	Share of value	24.5	23.9	20.9
Nonsubject exporters	Share of value	62.9	62.8	59.6
All reporting exporters	Share of value	100.0	100.0	100.0

Source: Official exports statistics under HTS subheading 7311.00 reported by various national statistical authorities in the Global Trade Atlas Suite database, accessed May 12, 2025.

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as "—". United States is shown at the top followed by the countries under order, all remaining top exporting countries in descending order of 2024 data.

Part 5: Pricing data

Factors affecting prices

Raw material costs

The main input for steel propane cylinders is flat hot-rolled steel band (grade 4130 steel). As shown in table 5.1 and figure 5.1, the cost of hot-rolled steel band more than doubled between January 2019 and its peak in October 2021, after which prices decreased and reached levels lower than in January 2019.[1]

*** U.S. producers reported that prices of raw materials either fluctuated upwards or increased steadily during the period for which data were collected, and *** U.S. producers anticipate that prices will continue to fluctuate upwards. U.S. producer Worthington reported that ***.

[1] For more information about raw material costs, see Part 3.

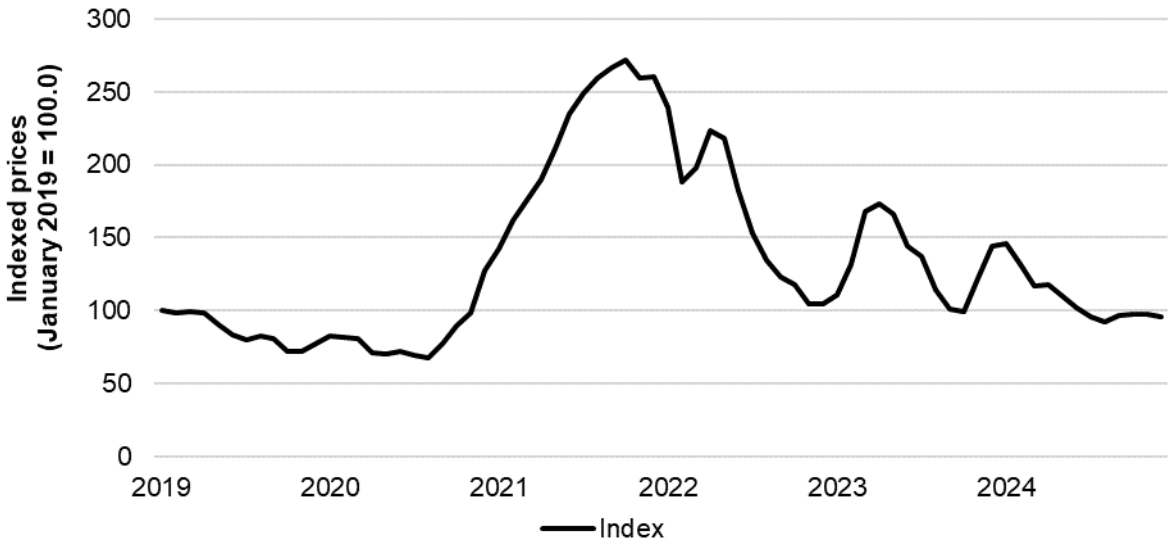
Table 5.1 Raw materials: Steel hot-rolled band, January 2019 to December 2024

Indexed price in percent (January 2019=100.0)

Month	2019	2020	2021	2022	2023	2024
January	100.0	82.7	142.7	239.0	111.1	145.5
February	98.5	81.9	161.9	187.9	131.5	132.1
March	99.6	81.0	176.1	197.5	167.9	116.8
April	98.7	71.3	189.8	223.7	173.5	117.8
May	90.6	70.4	210.7	218.4	166.0	110.3
June	83.1	72.3	235.0	181.8	144.0	102.1
July	80.0	69.2	248.7	153.4	137.6	95.4
August	82.7	67.7	259.6	134.8	114.3	92.6
September	80.6	77.5	266.5	123.3	101.1	96.3
October	71.8	89.6	271.8	117.9	99.0	97.5
November	71.6	98.5	259.8	104.4	121.9	97.6
December	77.2	127.1	260.5	104.6	144.0	95.9

Source: Steel Benchmarker, retrieved May 2, 2025.

Figure 5.1 Raw materials: Steel hot-rolled band, January 2019 to December 2024



Source: Steel Benchmarker, retrieved May 2, 2025.

Transportation costs to the U.S. market

Transportation costs for steel propane cylinders shipped to the United States in 2024 averaged 9.8 percent for shipments from China and 3.5 percent for shipments from Thailand. These estimates were derived from official import data and represent the transportation and other charges on imports.[2]

U.S. inland transportation costs

The majority of U.S. producers and importers typically arrange transportation to their customers. *** U.S. producers reported that their U.S. inland transportation costs ranged from *** to *** percent while responding importers reported costs of 10 to 15 percent. Two importers indicated that their purchasers arranged transportation.

Importers of Chinese or Thai steel propane cylinders that imported for their firms' 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, estimating that the U.S. inland transportation cost for own-use imports of Thai-origin steel propane cylinders was *** percent of total costs.

Pricing practices

Pricing methods

U.S. producers and importers reported setting prices using transaction-by-transaction negotiations, contracts, and set price lists (table 5.2).

[2] The estimated transportation costs were obtained by subtracting the customs value from the c.i.f. value of the imports for 2024 and then dividing by the customs value based on the HTS statistical reporting numbers 7311.00.0060 and 7311.00.0090.

Table 5.2 Steel propane cylinders: Count of U.S. producers' and importers' reported price setting methods

Count in number of firms

Method	U.S. producers	Importers
Transaction-by-transaction	***	5
Contract	***	3
Set price list	***	4
Other	***	0
Responding firms	2	5

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

Note: 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.

U.S. producers reported selling a substantial majority their steel propane cylinders via annual contracts, followed by spot sales. U.S. importers reported selling a substantial majority of their steel propane cylinders via short-term contracts, followed by annual contracts (table 5.3).

Table 5.3 Steel propane cylinders: U.S. producers' and importers' shares of commercial U.S. shipments by type of sale, 2024

Share in percent

Type of sale	U.S. producers	Subject U.S. Importers
Long-term contracts	—	—
Annual contracts	***	***
Short-term contracts	***	***
Spot sales	***	***
Total	100.0	100.0

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

Note: Because of rounding, figures may not add to the totals shown. Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as "—".

Producer Manchester Tank ***. Producer Worthington does ***. *** producer uses most favored purchaser agreements, while three purchasers reported having most favored purchaser agreements. Importers' contract provisions varied, but most allowed price renegotiation during the contract terms, fixed quantities or fixed price and quantity, and were not indexed to raw materials. Importers reported that short term contract periods varied from 90 to 180 days, and one importer, ***, reported long term contract periods of 2 years.

Purchasers' reported frequency of steel propane cylinder purchases varied. Two firms reported purchasing daily, four weekly, four monthly, two quarterly, and one purchaser reported purchasing on an annual basis.

Seven out of 14 purchasers reported being familiar with raw material costs. Seven out of 10 purchasers reported that raw material costs affected contracts, and that steel price increases have affected contracts. Purchaser *** reported that pricing agreements are "typically agreed based on raw material prices." *** reported that raw material cost fluctuations also affect the quantities of steel propane cylinders purchased.

Sales terms and discounts

U.S. producers and importers typically quote prices on an f.o.b. basis. Producers reported ***. Among U.S. responding importers, three reported offering quantity discounts, three reported offering annual total volumes purchased discounts, and two reported no specific discount policy.

Price leadership

A price leader is defined as one or more firms that initiate a price change that is followed by other firms or one or more firms that have a significant impact on prices. Five purchasers identified YSN or its parent company, Flame King Holdings, LLC, as a price leader. Two purchasers *** reported these price "often sell below cost."

Purchasers *** and *** reported that U.S. producer Worthington is a price leader due to maintaining a "monopoly on the U.S. market" (*** or initiating price changes (***). Other price leaders cited by purchasers include large retailers of steel propane cylinders and Chinese producers generally.

Price and purchase cost

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 January 2019 to December 2024. Firms that imported the following products from China and Thailand for internal use or resale from were requested to provide import purchase cost data for product 4.

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**

***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.**

Both 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.[3] Pricing data reported by these firms accounted for virtually all of U.S. producers' U.S. shipments of steel propane cylinders, the vast majority of U.S. shipments of subject imports from China, which have largely exited the market, and the majority of U.S. shipments of subject imports from Thailand in 2024.[4] Price data for products 1 to 7 are presented in tables 5.4 to 5.10 and figures 5.2 to 5.8.

[3] 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.

[4] Pricing coverage is based on U.S. shipments reported in questionnaires.

Table 5.4 Steel propane cylinders: Weighted-average f.o.b. prices and quantities of domestic and imported product 1 and margins of underselling/(overselling), by source and quarter

Price in dollars per unit, quantity in units, margin in percent.

Period	U.S. price	U.S. quantity	Thailand price	Thailand quantity	Thailand margin
2019 Q1	***	***	***	***	***
2019 Q2	***	***	***	***	***
2019 Q3	***	***	***	***	***
2019 Q4	***	***	***	***	***
2020 Q1	***	***	***	***	***
2020 Q2	***	***	***	***	***
2020 Q3	***	***	***	***	***
2020 Q4	***	***	***	***	***
2021 Q1	***	***	***	***	***
2021 Q2	***	***	***	***	***
2021 Q3	***	***	***	***	***
2021 Q4	***	***	***	***	***
2022 Q1	***	***	***	***	***
2022 Q2	***	***	***	***	***
2022 Q3	***	***	***	***	***
2022 Q4	***	***	***	***	***
2023 Q1	***	***	***	***	***
2023 Q2	***	***	***	***	***
2023 Q3	***	***	***	***	***
2023 Q4	***	***	***	***	***
2024 Q1	***	***	***	***	***
2024 Q2	***	***	***	***	***
2024 Q3	***	***	***	***	***
2024 Q4	***	***	***	***	***

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

Note: 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. Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as "—".

Figure 5.2 Steel propane cylinders: Weighted-average f.o.b. prices and volumes of domestic and imported product 1, by source and quarter

Price of product 1

* * * * * * * *

Volume of product 1

* * * * * * * *

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

Table 5.5 Steel propane cylinders: Weighted-average f.o.b. prices and quantities of domestic and imported product 2 and margins of underselling/(overselling), by source and quarter

Price in dollars per unit, quantity in units, margin in percent.

Period	U.S. price	U.S. quantity	China price	China quantity	China margin	Thailand price	Thailand quantity	Thailand margin
2019 Q1	***	***	***	***	***	***	***	***
2019 Q2	***	***	***	***	***	***	***	***
2019 Q3	***	***	***	***	***	***	***	***
2019 Q4	***	***	***	***	***	***	***	***
2020 Q1	***	***	***	***	***	***	***	***
2020 Q2	***	***	***	***	***	***	***	***
2020 Q3	***	***	***	***	***	***	***	***
2020 Q4	***	***	***	***	***	***	***	***
2021 Q1	***	***	***	***	***	***	***	***
2021 Q2	***	***	***	***	***	***	***	***
2021 Q3	***	***	***	***	***	***	***	***
2021 Q4	***	***	***	***	***	***	***	***
2022 Q1	***	***	***	***	***	***	***	***
2022 Q2	***	***	***	***	***	***	***	***
2022 Q3	***	***	***	***	***	***	***	***
2022 Q4	***	***	***	***	***	***	***	***
2023 Q1	***	***	***	***	***	***	***	***
2023 Q2	***	***	***	***	***	***	***	***
2023 Q3	***	***	***	***	***	***	***	***
2023 Q4	***	***	***	***	***	***	***	***
2024 Q1	***	***	***	***	***	***	***	***
2024 Q2	***	***	***	***	***	***	***	***
2024 Q3	***	***	***	***	***	***	***	***
2024 Q4	***	***	***	***	***	***	***	***

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

Note: 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. Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as “—“.

Figure 5.3 Steel propane cylinders: Weighted-average f.o.b. prices and volumes of domestic and imported product 2, by source and quarter

Price of product 2

* * * * * * * * *

Volume of product 2

* * * * * * * * *

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

Note: 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.

Table 5.6 Steel propane cylinders: Weighted-average f.o.b. prices and quantities of domestic and imported product 3 and margins of underselling/(overselling), by source and quarter

Price in dollars per unit, quantity in units, margin in percent.

Period	U.S. price	U.S. quantity	China price	China quantity	China margin	Thailand price	Thailand quantity	Thailand margin
2019 Q1	***	***	***	***	***	***	***	***
2019 Q2	***	***	***	***	***	***	***	***
2019 Q3	***	***	***	***	***	***	***	***
2019 Q4	***	***	***	***	***	***	***	***
2020 Q1	***	***	***	***	***	***	***	***
2020 Q2	***	***	***	***	***	***	***	***
2020 Q3	***	***	***	***	***	***	***	***
2020 Q4	***	***	***	***	***	***	***	***
2021 Q1	***	***	***	***	***	***	***	***
2021 Q2	***	***	***	***	***	***	***	***
2021 Q3	***	***	***	***	***	***	***	***
2021 Q4	***	***	***	***	***	***	***	***
2022 Q1	***	***	***	***	***	***	***	***
2022 Q2	***	***	***	***	***	***	***	***
2022 Q3	***	***	***	***	***	***	***	***
2022 Q4	***	***	***	***	***	***	***	***
2023 Q1	***	***	***	***	***	***	***	***
2023 Q2	***	***	***	***	***	***	***	***
2023 Q3	***	***	***	***	***	***	***	***
2023 Q4	***	***	***	***	***	***	***	***
2024 Q1	***	***	***	***	***	***	***	***
2024 Q2	***	***	***	***	***	***	***	***
2024 Q3	***	***	***	***	***	***	***	***
2024 Q4	***	***	***	***	***	***	***	***

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

Note: 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. Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as “—“.

Figure 5.4 Steel propane cylinders: Weighted-average f.o.b. prices and volumes of domestic and imported product 3, by source and quarter

Price of product 3

* * * * * * * *

Volume of product 3

* * * * * * * *

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

Note: 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.

Table 5.7 Steel propane cylinders: Weighted-average f.o.b. prices and quantities of domestic and imported product 4 and margins of underselling/(overselling), by source and quarter

Price in dollars per unit, quantity in units, margin in percent.

Period	U.S. price	U.S. quantity	China price	China quantity	China margin	Thailand price	Thailand quantity	Thailand margin
2019 Q1	***	***	***	***	***	***	***	***
2019 Q2	***	***	***	***	***	***	***	***
2019 Q3	***	***	***	***	***	***	***	***
2019 Q4	***	***	***	***	***	***	***	***
2020 Q1	***	***	***	***	***	***	***	***
2020 Q2	***	***	***	***	***	***	***	***
2020 Q3	***	***	***	***	***	***	***	***
2020 Q4	***	***	***	***	***	***	***	***
2021 Q1	***	***	***	***	***	***	***	***
2021 Q2	***	***	***	***	***	***	***	***
2021 Q3	***	***	***	***	***	***	***	***
2021 Q4	***	***	***	***	***	***	***	***
2022 Q1	***	***	***	***	***	***	***	***
2022 Q2	***	***	***	***	***	***	***	***
2022 Q3	***	***	***	***	***	***	***	***
2022 Q4	***	***	***	***	***	***	***	***
2023 Q1	***	***	***	***	***	***	***	***
2023 Q2	***	***	***	***	***	***	***	***
2023 Q3	***	***	***	***	***	***	***	***
2023 Q4	***	***	***	***	***	***	***	***
2024 Q1	***	***	***	***	***	***	***	***
2024 Q2	***	***	***	***	***	***	***	***
2024 Q3	***	***	***	***	***	***	***	***
2024 Q4	***	***	***	***	***	***	***	***

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

Note: 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. Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as “—“.

Figure 5.5 Steel propane cylinders: Weighted-average f.o.b. prices and volumes of domestic and imported product 4, by source and quarter

Price of product 4

* * * * * * * *

Volume of product 4

* * * * * * * *

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

Note: 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.

Table 5.8 Steel propane cylinders: Weighted-average f.o.b. prices and quantities of domestic and imported product 5 and margins of underselling/(overselling), by source and quarter

Price in dollars per unit, quantity in units, margin in percent.

Period	U.S. price	U.S. quantity	Thailand price	Thailand quantity	Thailand margin
2019 Q1	***	***	***	***	***
2019 Q2	***	***	***	***	***
2019 Q3	***	***	***	***	***
2019 Q4	***	***	***	***	***
2020 Q1	***	***	***	***	***
2020 Q2	***	***	***	***	***
2020 Q3	***	***	***	***	***
2020 Q4	***	***	***	***	***
2021 Q1	***	***	***	***	***
2021 Q2	***	***	***	***	***
2021 Q3	***	***	***	***	***
2021 Q4	***	***	***	***	***
2022 Q1	***	***	***	***	***
2022 Q2	***	***	***	***	***
2022 Q3	***	***	***	***	***
2022 Q4	***	***	***	***	***
2023 Q1	***	***	***	***	***
2023 Q2	***	***	***	***	***
2023 Q3	***	***	***	***	***
2023 Q4	***	***	***	***	***
2024 Q1	***	***	***	***	***
2024 Q2	***	***	***	***	***
2024 Q3	***	***	***	***	***
2024 Q4	***	***	***	***	***

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

Note: 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. Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as “—“.

Figure 5.6 Steel propane cylinders: Weighted-average f.o.b. prices and volumes of domestic and imported product 5, by source and quarter

Price of product 5

* * * * * * * *

Volume of product 5

* * * * * * * *

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

Note: 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.

Table 5.9 Steel propane cylinders: Weighted-average f.o.b. prices and quantities of domestic and imported product 6 and margins of underselling/(overselling), by source and quarter

Price in dollars per unit, quantity in units, margin in percent.

Period	U.S. price	U.S. quantity	Thailand price	Thailand quantity	Thailand margin
2019 Q1	***	***	***	***	***
2019 Q2	***	***	***	***	***
2019 Q3	***	***	***	***	***
2019 Q4	***	***	***	***	***
2020 Q1	***	***	***	***	***
2020 Q2	***	***	***	***	***
2020 Q3	***	***	***	***	***
2020 Q4	***	***	***	***	***
2021 Q1	***	***	***	***	***
2021 Q2	***	***	***	***	***
2021 Q3	***	***	***	***	***
2021 Q4	***	***	***	***	***
2022 Q1	***	***	***	***	***
2022 Q2	***	***	***	***	***
2022 Q3	***	***	***	***	***
2022 Q4	***	***	***	***	***
2023 Q1	***	***	***	***	***
2023 Q2	***	***	***	***	***
2023 Q3	***	***	***	***	***
2023 Q4	***	***	***	***	***
2024 Q1	***	***	***	***	***
2024 Q2	***	***	***	***	***
2024 Q3	***	***	***	***	***
2024 Q4	***	***	***	***	***

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

Note: 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. Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as "—".

Figure 5.7 Steel propane cylinders: Weighted-average f.o.b. prices and volumes of domestic and imported product 6, by source and quarter

Price of product 6

* * * * * * * *

Volume of product 6

* * * * * * * *

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

Note: 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.

Table 5.10 Steel propane cylinders: Weighted-average f.o.b. prices and quantities of domestic and imported product 7 and margins of underselling/(overselling), by source and quarter

Price in dollars per unit, quantity in units, margin in percent.

Period	U.S. price	U.S. quantity	Thailand price	Thailand quantity	Thailand margin
2019 Q1	***	***	***	***	***
2019 Q2	***	***	***	***	***
2019 Q3	***	***	***	***	***
2019 Q4	***	***	***	***	***
2020 Q1	***	***	***	***	***
2020 Q2	***	***	***	***	***
2020 Q3	***	***	***	***	***
2020 Q4	***	***	***	***	***
2021 Q1	***	***	***	***	***
2021 Q2	***	***	***	***	***
2021 Q3	***	***	***	***	***
2021 Q4	***	***	***	***	***
2022 Q1	***	***	***	***	***
2022 Q2	***	***	***	***	***
2022 Q3	***	***	***	***	***
2022 Q4	***	***	***	***	***
2023 Q1	***	***	***	***	***
2023 Q2	***	***	***	***	***
2023 Q3	***	***	***	***	***
2023 Q4	***	***	***	***	***
2024 Q1	***	***	***	***	***
2024 Q2	***	***	***	***	***
2024 Q3	***	***	***	***	***
2024 Q4	***	***	***	***	***

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

Note: 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. Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as “—“.

Figure 5.8 Steel propane cylinders: Weighted-average f.o.b. prices and volumes of domestic and imported product 7, by source and quarter

Price of product 7

* * * * * * * *

Volume of product 7

* * * * * * * *

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

Note: 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.

Import purchase cost data

One importer ***, which is based in ***, reported useable import purchase cost data for product 4. Purchase cost data reported by this firm accounted for *** percent of imports from Thailand in 2021. Landed duty-paid purchase cost data for imports from Thailand are presented in table 5.11 and figure 5.9, along with U.S. producers' sales prices.[5]

Firms reporting import purchase cost data were asked to provide additional information regarding the costs and benefits of importing steel propane cylinders themselves.
The importer reported that it did not incur additional costs beyond landed duty-paid costs by importing steel propane cylinders themselves rather than purchasing from a U.S. producer or U.S. importer. It reported that it compared costs of importing to the cost of purchasing from a U.S. producer, from a U.S. importer, as well as sources other than U.S. importers or U.S. producers.

*** identified benefits from importing steel propane cylinders itself instead of purchasing from U.S. producers or importers, specifically that "***." The firm also reported that the import cost (including additional costs) of steel propane cylinders they imported are lower than the price of purchasing steel propane cylinders from a U.S. producer or importer.

Importer *** estimated that it saved *** percent of the purchase price by importing steel propane cylinders rather than purchasing from a U.S. importer, and *** percent compared to purchasing the product from a U.S. producer.[6]

[5] LDP import value does not include any potential additional costs that a purchaser may incur by importing rather than purchasing from another importer or U.S. producer. Price-cost differences are based on LDP import values whereas margins of underselling/overselling are based on importer sales prices.

[6] *** reported that it based its estimates on previous company transactions.

Table 5.11: Steel propane cylinders: Import landed duty-paid purchase costs, domestic prices, imported and domestic-produced quantities of product 4, and price-cost differentials, by quarter

Price and LDP value in dollars per unit, quantity in units, price-cost differentials in percent.

Period	U.S. price	U.S. quantity	China LDP unit cost	China quantity	China Price-cost differential	Thailand LDP unit cost	Thailand quantity	Thailand Price-cost differential
2019 Q1	***	***	***	***	***	***	***	***
2019 Q2	***	***	***	***	***	***	***	***
2019 Q3	***	***	***	***	***	***	***	***
2019 Q4	***	***	***	***	***	***	***	***
2020 Q1	***	***	***	***	***	***	***	***
2020 Q2	***	***	***	***	***	***	***	***
2020 Q3	***	***	***	***	***	***	***	***
2020 Q4	***	***	***	***	***	***	***	***
2021 Q1	***	***	***	***	***	***	***	***
2021 Q2	***	***	***	***	***	***	***	***
2021 Q3	***	***	***	***	***	***	***	***
2021 Q4	***	***	***	***	***	***	***	***
2022 Q1	***	***	***	***	***	***	***	***
2022 Q2	***	***	***	***	***	***	***	***
2022 Q3	***	***	***	***	***	***	***	***
2022 Q4	***	***	***	***	***	***	***	***
2023 Q1	***	***	***	***	***	***	***	***
2023 Q2	***	***	***	***	***	***	***	***
2023 Q3	***	***	***	***	***	***	***	***
2023 Q4	***	***	***	***	***	***	***	***
2024 Q1	***	***	***	***	***	***	***	***
2024 Q2	***	***	***	***	***	***	***	***
2024 Q3	***	***	***	***	***	***	***	***
2024 Q4	***	***	***	***	***	***	***	***

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

Note: 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. Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as "—".

Note: U.S. producer price data is the same as that presented in table 5.7.

Figure 5.9: Steel propane cylinders: U.S. producer prices and import purchase costs, and volumes, of product 4, by quarter

U.S. price and import purchase cost of product 4

* * * * * * * *

Volume of product 4

* * * * * * * *

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

Price and purchase cost trends

In general, prices increased during January 2019 to December 2024. Table 5.12 summarizes the price trends, by country and by product. As shown in the table, domestic price increases ranged from *** percent to *** percent during 2019 to 2024 while import price increases ranged from *** percent to *** percent.

Table 5.12 Steel propane cylinders: Summary of price data, by product and source, change by price over period

Quantity in units, price in dollars per unit

Product	Source	Number of quarters	Quantity of shipments	Low price	High price	First quarter price	Last quarter price	Percent change in price over period
Product 1	United States	20	***	***	***	***	***	***
Product 1	China	0	***	***	***	***	***	***
Product 1	Thailand	21	***	***	***	***	***	***
Product 2	United States	24	***	***	***	***	***	***
Product 2	China	1	***	***	***	***	***	***
Product 2	Thailand	24	***	***	***	***	***	***
Product 3	United States	22	***	***	***	***	***	***
Product 3	China	3	***	***	***	***	***	***
Product 3	Thailand	24	***	***	***	***	***	***
Product 4	United States	24	***	***	***	***	***	***
Product 4	China	4	***	***	***	***	***	***
Product 4	Thailand	24	***	***	***	***	***	***
Product 5	United States	21	***	***	***	***	***	***
Product 5	China	0	***	***	***	***	***	***
Product 5	Thailand	23	***	***	***	***	***	***
Product 6	United States	9	***	***	***	***	***	***
Product 6	China	0	***	***	***	***	***	***
Product 6	Thailand	24	***	***	***	***	***	***
Product 7	United States	23	***	***	***	***	***	***
Product 7	China	0	***	***	***	***	***	***
Product 7	Thailand	24	***	***	***	***	***	***

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

Note: Percent change column is percentage change from the first quarter 2019 to the last quarter in 2024. Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as “—“.

Price comparisons[7]

As shown in tables 5.13, to 5.16, prices for steel propane cylinders imported from China and Thailand were below those for U.S.-produced product in 84 out of 147 instances; all instances of underselling were for product from Thailand and average margins of underselling ranged from 0.2 percent to 68.2 percent. In the remaining 63 instances, prices for steel propane cylinders from China and Thailand were between 0.3 and 61.8 percent above prices for the domestic product.

[7] In the original investigations, subject imports of certain products from China were priced lower than domestic product in 27 of 49 comparisons, with underselling margins ranging from 3.9 to 52.4 percent; subject imports of products 6 from Thailand were priced lower than domestic product in 62 of 77 comparisons, with underselling margins ranging from 0.2 to 37.7 percent. *Steel propane cylinders from China and Thailand, Inv. Nos. 701-TA-607 and 731-TA-1417 and 1419 (Final)*, USITC Publication 4938, August 2019, p. V-12.

Table 5.13 Steel propane cylinders: Instances of underselling and overselling and the range and average of margins, by product

Quantity in units; margins in percent

Product	Type	Number of instances	Quantity	Average margin	Min margin	Max margin
Product 1	Underselling	16	***	***	***	***
Product 2	Underselling	3	***	***	***	***
Product 3	Underselling	10	***	***	***	***
Product 4	Underselling	13	***	***	***	***
Product 5	Underselling	18	***	***	***	***
Product 6	Underselling	8	***	***	***	***
Product 7	Underselling	16	***	***	***	***
All products	Underselling	84	***	19.1	0.2	68.2
Product 1	Overselling	1	***	***	***	***
Product 2	Overselling	22	***	***	***	***
Product 3	Overselling	15	***	***	***	***
Product 4	Overselling	15	***	***	***	***
Product 5	Overselling	2	***	***	***	***
Product 6	Overselling	1	***	***	***	***
Product 7	Overselling	7	***	***	***	***
All products	Overselling	63	***	(12.9)	(0.3)	(61.8)

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

Note: These data include only quarters in which there is a comparison between the U.S. and subject product.

Table 5.14 Steel propane cylinders: Instances of underselling and overselling and the range and average of margins, by source

Quantity in units; margin in percent

Source	Type	Number of instances	Quantity	Average margin	Min margin	Max margin
China	Underselling	—	***	***	***	***
Thailand	Underselling	84	***	***	***	***
All subject sources	Underselling	84	***	19.1	0.2	68.2
China	Overselling	8	***	***	***	***
Thailand	Overselling	55	***	***	***	***
All subject sources	Overselling	63	***	(12.9)	(0.3)	(61.8)

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

Note: These data include only quarters in which there is a comparison between the U.S. and subject product. Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as “—“.

Table 5.15 Steel propane cylinders: Instances of underselling and overselling and the range and average of margins, by period, January 2019 through December 2024

Quantity in units; margins in percent

Year	Type	Number of quarters	Quantity	Average margin	Min margin	Max margin
2019	Underselling	18	***	***	***	***
2020	Underselling	15	***	***	***	***
2021	Underselling	20	***	***	***	***
2022	Underselling	14	***	***	***	***
2023	Underselling	11	***	***	***	***
2024	Underselling	6	***	***	***	***
All periods	Underselling	84	***	19.1	0.2	68.2
2019	Overselling	14	***	***	***	***
2020	Overselling	10	***	***	***	***
2021	Overselling	8	***	***	***	***
2022	Overselling	9	***	***	***	***
2023	Overselling	8	***	***	***	***
2024	Overselling	14	***	***	***	***
All periods	Overselling	63	***	(12.9)	(0.3)	(61.8)

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

Note: These data include only quarters in which there is a comparison between the U.S. and subject product.

Table 5.16 Steel propane cylinders: Instances of underselling and overselling and the range and average of margins, by channels of distribution, January 2019 through December 2024

Quantity in units; margins in percent

Channel	Type	Number of instances	Quantity	Average margin	Minimum margin	Maximum margin
Distributors	Underselling	28	***	***	***	***
Retailers	Underselling	29	***	***	***	***
Gas exchangers	Underselling	3	***	***	***	***
RV manufacturers	Underselling	24	***	***	***	***
All channels	Underselling	84	***	19.1	0.2	68.2
Distributors	Overselling	17	***	***	***	***
Retailers	Overselling	22	***	***	***	***
Gas exchangers	Overselling	22	***	***	***	***
RV manufacturers	Overselling	2	***	***	***	***
All channels	Overselling	63	***	(12.9)	(0.3)	(61.8)

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

Note: These data include only quarters in which there is a comparison between the U.S. and subject product.

In the original investigation's period of review, the ranges for underselling by channels of distribution were ranged from *** to *** percent for RV manufacturers, *** to *** percent for gas exchangers, *** to *** percent for distributors, and *** to *** percent for retailers.[8]

Price-cost comparisons

As shown in table 5.17 and 5.18, landed duty-paid costs for product 4 steel propane cylinders imported from China were below the sales price for U.S.-produced product in one of four instances (*** units); price-cost differentials were reported as *** percent. Landed duty-paid costs for steel propane cylinders imported from Thailand were below the sales price for U.S.-produced product in one of four instances (*** units); price-cost differentials were reported as *** percent. In the remaining two instances (*** units), landed duty-paid costs for steel propane cylinders from Thailand were between *** percent and *** percent above sales prices for the domestic product.

[8] *Steel Propane Cylinders from China and Thailand, Inv. Nos. 701-TA-607 and 731-TA-1417 and 1419 (Final)*, USITC Publication 4938, August 2019.

Table 5.17 Steel propane cylinders: Instances of lower and higher import purchase costs and the range and average of price-cost differentials, by source

Quantity in units; price-cost differentials in percent

Source	Type	Number of instances	Quantity	Average price-cost differential	Min price-cost differential	Max price-cost differential
China	Lower than U.S. price	1	***	***	***	***
Thailand	Lower than U.S. price	1	***	***	***	***
All subject sources	Lower than U.S. price	2	***	***	***	***
China	Higher than U.S. price	—	—	—	—	—
Thailand	Higher than U.S. price	2	***	***	***	***
All subject sources	Higher than U.S. price	2	***	***	***	***

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

Note: These data include only quarters in which there is a comparison between the U.S. and subject product. Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as “—“.

Table 5.18 Steel propane cylinders: Instances of lower and higher import purchase costs and the range and average of price-cost differentials, by year

Quantity in units; price-cost differentials in percent

Year	Type	Number of instances	Quantity	Average differentials	Minimum differentials	Maximum differentials
2019	Lower than U.S. price	—	***	***	***	***
2020	Lower than U.S. price	1	***	***	***	***
2021	Lower than U.S. price	—	***	***	***	***
2022	Lower than U.S. price	—	***	***	***	***
2023	Lower than U.S. price	—	***	***	***	***
2024	Lower than U.S. price	1	***	***	***	***
Total, all years	Lower than U.S. price	2	***	***	***	***
2019	Higher than U.S. price	1	***	***	***	***
2020	Higher than U.S. price	—	***	***	***	***
2021	Higher than U.S. price	1	***	***	***	***
2022	Higher than U.S. price	—	***	***	***	***
2023	Higher than U.S. price	—	***	***	***	***
2024	Higher than U.S. price	—	***	***	***	***
Total, all years	Higher than U.S. price	2	***	***	***	***

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

Note: These data include only quarters in which there is a comparison between the U.S. and subject product. Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as "—".

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
89 FR 54531 July 1, 2024	Steel Propane Cylinders From China and Thailand; Institution of Five-Year Reviews	https://www.govinfo.gov/content/pkg/FR-2024-07-01/pdf/2024-14452.pdf
89 FR 54435 July 1, 2024	Initiation of Five-Year Sunset Reviews	https://www.govinfo.gov/content/pkg/FR-2024-07-01/pdf/2024-14459.pdf
89 FR 84193 October 21, 2024	Steel Propane Cylinders From China and Thailand; Notice of Commission Determination To Conduct Full Five-Year Reviews	https://www.govinfo.gov/content/pkg/FR-2024-10-21/pdf/2024-24295.pdf
89 FR 88727 November 8, 2024	Steel Propane Cylinders From the People's Republic of China and Thailand: Final Results of the Expedited Sunset Reviews of the Antidumping Duty Orders	https://www.govinfo.gov/content/pkg/FR-2024-11-08/pdf/2024-26026.pdf
89 FR 88968 November 12, 2024	Steel Propane Cylinders From the People's Republic of China: Final Results of the Expedited First Sunset Review of the Countervailing Duty Order	https://www.govinfo.gov/content/pkg/FR-2024-11-12/pdf/2024-26121.pdf
89 FR 107162 December 31, 2024	Steel Propane Cylinders From China and Thailand; Scheduling of Full Five-Year Reviews	https://www.govinfo.gov/content/pkg/FR-2024-12-31/pdf/2024-31371.pdf

APPENDIX B

LIST OF HEARING WITNESSES

CALENDAR OF PUBLIC HEARING

Those listed below appeared in 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 (Review)

Date and Time: May 1, 2025 - 9:30 a.m.

Sessions were held in connection with these reviews in the Main Hearing Room (Room 101), 500 E Street, SW., Washington, DC.

OPENING REMARKS:

In Support of Continuation (**Paul C. Rosenthal**, Kelley Drye & Warren LLP)
In Opposition to Continuation (**Ron Kendler**, White & Case LLP)

In Support of the Continuation of the
Antidumping and Countervailing Duty Orders:

Kelley Drye & Warren LLP
Washington, DC
on behalf of

Worthington Enterprises ("Worthington")

Warren Patterson, Vice President, North American Heating & Cooling, Worthington

Robert ("Bobby") Weinberg, General Manager for Building Products, Worthington

Michael T. Kerwin, Assistant Director, Georgetown Economic Services LLC

Paul C. Rosenthal)
R. Alan Luberda)
) – OF COUNSEL
Brooke M. Ringel)
Matthew T. Martin)

In Opposition to the Continuation of the
Antidumping and Countervailing Duty Orders:

White & Case LLP
Washington, DC
on behalf of

Sahamitr Pressure Container Plc. ("SMPC")

Ron Kendler)
) – OF COUNSEL
Chunfu Yan)

REBUTTAL/CLOSING REMARKS:

In Support of Continuation (**Paul C. Rosenthal**, Kelley Drye & Warren LLP)
In Opposition to Continuation (**Ron Kendler**, White & Case LLP)

APPENDIX C

SUMMARY DATA

Table C.1

Steel propane cylinders: Summary data concerning the U.S. market, by item and period

Quantity=1,000 pounds, tare weight; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per pound, tare weight; Period changes=percent--exceptions noted

Item	Reported data					
	Calendar year					
	2019	2020	2021	2022	2023	2024
U.S. consumption quantity:						
Amount	139,980	196,743	208,694	200,244	158,872	133,005
Producers' share (fn1)	***	***	***	***	***	***
Importers' share (fn1):						
China	***	***	***	***	***	***
Thailand	***	***	***	***	***	***
Subject sources	***	***	***	***	***	***
Nonsubject sources	***	***	***	***	***	***
All import sources	***	***	***	***	***	***
U.S. consumption value:						
Amount	180,049	262,851	317,705	398,517	287,979	232,562
Producers' share (fn1)	***	***	***	***	***	***
Importers' share (fn1):						
China	***	***	***	***	***	***
Thailand	***	***	***	***	***	***
Subject sources	***	***	***	***	***	***
Nonsubject sources	***	***	***	***	***	***
All import sources	***	***	***	***	***	***
U.S. importers' U.S. shipments of imports 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 continued.

Table C.1 Continued

Steel propane cylinders: Summary data concerning the U.S. market, by item and period

Quantity=1,000 pounds, tare weight; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per pound, tare weight; Period changes=percent--exceptions noted

Item	Period changes					
		Calendar year				
	2019–24	2019–20	2020–21	2021–22	2022–23	2023–24
U.S. consumption quantity:						
Amount	▼(5.0)	▲40.6	▲6.1	▼(4.0)	▼(20.7)	▼(16.3)
Producers' share (fn1)	▼***	▼***	▼***	▼***	▲***	▼***
Importers' share (fn1):						
China	▼***	▼***	***	***	***	▲***
Thailand	▲***	▲***	▼***	▲***	▼***	▲***
Subject sources	▲***	▲***	▼***	▲***	▼***	▲***
Nonsubject sources	▲***	▲***	▲***	▲***	▲***	▲***
All import sources	▲***	▲***	▲***	▲***	▼***	▲***
U.S. consumption value:						
Amount	▲29.2	▲46.0	▲20.9	▲25.4	▼(27.7)	▼(19.2)
Producers' share (fn1)	▼***	▼***	▼***	▼***	▲***	▼***
Importers' share (fn1):						
China	▼***	▼***	***	***	***	▲***
Thailand	▲***	▲***	▲***	▲***	▼***	▲***
Subject sources	▲***	▲***	▲***	▲***	▼***	▲***
Nonsubject sources	▲***	▲***	▲***	▲***	▲***	▲***
All import sources	▲***	▲***	▲***	▲***	▼***	▲***
U.S. importers' U.S. shipments of imports 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 continued.

Table C.1 Continued

Steel propane cylinders: Summary data concerning the U.S. market, by item and period

Quantity=1,000 pounds, tare weight; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per pound, tare weight; Period changes=percent--exceptions noted

Item	Reported data					
	Calendar year					
	2019	2020	2021	2022	2023	2024
U.S. producers':						
Practical 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) (fn2)	***	***	***	***	***	***
SG&A expenses	***	***	***	***	***	***
Operating income or (loss) (fn2)	***	***	***	***	***	***
Net income or (loss) (fn2)	***	***	***	***	***	***
Unit COGS	***	***	***	***	***	***
Unit SG&A expenses	***	***	***	***	***	***
Unit operating income or (loss) (fn2)	***	***	***	***	***	***
Unit net income or (loss) (fn2)	***	***	***	***	***	***
COGS/sales (fn1)	***	***	***	***	***	***
Operating income or (loss)/sales (fn1)	***	***	***	***	***	***
Net income or (loss)/sales (fn1)	***	***	***	***	***	***
Capital expenditures	***	***	***	***	***	***
Research and development expenses	***	***	***	***	***	***
Total assets	***	***	***	***	***	***

Table continued.

Table C.1 Continued

Steel propane cylinders: Summary data concerning the U.S. market, by item and period

Quantity=1,000 pounds, tare weight; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per pound, tare weight; Period changes=percent--exceptions noted

Item	Period changes					
	Calendar year					
	2019–24	2019–20	2020–21	2021–22	2022–23	2023–24
U.S. producers':						
Practical 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) (fn2)	▼***	▼***	▲***	▼***	▲***	▼***
SG&A expenses	▼***	▲***	▼***	▼***	▼***	▼***
Operating income or (loss) (fn2)	▼***	▼***	▲***	▼***	▲***	▼***
Net income or (loss) (fn2)	▼***	▼***	▲***	▼***	▲***	▲***
Unit COGS	▲***	▲***	▲***	▲***	▼***	▲***
Unit SG&A expenses	▲***	▼***	▼***	▲***	▲***	▲***
Unit operating income or (loss) (fn2)	▼***	▼***	▲***	▼***	▲***	▼***
Unit net income or (loss) (fn2)	▼***	▼***	▲***	▼***	▲***	▼***
COGS/sales (fn1)	▲***	▲***	▼***	▲***	▼***	▲***
Operating income or (loss)/sales (fn1)	▼***	▼***	▲***	▼***	▲***	▼***
Net income or (loss)/sales (fn1)	▼***	▼***	▲***	▼***	▲***	▼***
Capital expenditures	▲***	▲***	▼***	▲***	▲***	▼***
Research and development expenses	***	***	***	***	***	***
Total assets	▲***	▼***	▲***	▲***	▼***	▼***

Source: Compiled from data submitted in response to Commission questionnaires. Section 508-compliant tables are available in Parts 1, 3, and 4 of this report.

fn1.--Reported data are in percent and period changes are in percentage points.
fn2.--Percent changes only calculated when both comparison values represent profits. The directional change in profitability provided when one or both comparison values represent a loss.

Note.--Shares and ratios shown as “0.0” percent represent non-zero values less than “0.05” percent (if positive) and greater than “(0.05)” percent (if negative). Zeroes, null values, and undefined calculations are suppressed and shown as “—“. Period changes preceded by a “▲” represent an increase, while period changes preceded by a “▼” represent a decrease.

ORIGINAL INVESTIGATIONS

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.

APPENDIX D

COMMENTS ON EFFECTS OF ORDERS AND LIKELY EFFECTS OF REVOCATION

Table D.1 Steel propane cylinders: Firms' narratives on the impact of the orders and the likely impact of revocation

Response type	Firm type	Firm name and narrative on impact or likely impact
Effect of order	U.S. producers	***
Effect of order	U.S. producers	***
Likely impact of revocation	U.S. producers	***
Likely impact of revocation	U.S. producers	***

Response type	Firm type	Firm name and narrative on impact or likely impact
Effect of order	Importers	***
Effect of order	Importers	***
Effect of order	Importers	***
Effect of order	Importers	***
Effect of order	Importers	***
Effect of order	Importers	***
Likely impact of revocation	Importers	***
Likely impact of revocation	Importers	***
Likely impact of revocation	Importers	***
Likely impact of revocation	Importers	***

Response type	Firm type	Firm name and narrative on impact or likely impact
Effect of order	Purchasers	***
Effect of order	Purchasers	***
Effect of order	Purchasers	***
Effect of order	Purchasers	***
Effect of order	Purchasers	***
Effect of order	Purchasers	***
Effect of order	Purchasers	***
Effect of order	Purchasers	***
Effect of order	Purchasers	***
Effect of order	Purchasers	***
Effect of order	Purchasers	***
Effect of order	Purchasers	***
Effect of order	Purchasers	***
Likely impact of revocation	Purchasers	***
Likely impact of revocation	Purchasers	***

Response type	Firm type	Firm name and narrative on impact or likely impact
Likely impact of revocation	Purchasers	***
Likely impact of revocation	Purchasers	***
Likely impact of revocation	Purchasers	***
Likely impact of revocation	Purchasers	***
Likely impact of revocation	Purchasers	***
Likely impact of revocation	Purchasers	***
Likely impact of revocation	Purchasers	***
Likely impact of revocation	Purchasers	***
Likely impact of revocation	Purchasers	***
Likely impact of revocation	Purchasers	***
Effect of order	Foreign producers	***

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

APPENDIX E

DETAILED U.S. SHIPMENTS BY PRODUCT TYPE

Table E.1 Steel propane cylinders: U.S. producers' and U.S. importers' U.S. shipments of 20-pound cylinders, by period and source

Quantity in 1,000 pounds, tare weight; shares and ratio in percent; ratio is to overall apparent U.S. consumption quantity

Source	Measure	2019	2020	2021
U.S. producers	Quantity	***	***	***
China	Quantity	***	***	***
Thailand	Quantity	***	***	***
Subject sources	Quantity	***	***	***
Nonsubject sources	Quantity	***	***	***
All import sources	Quantity	***	***	***
All sources	Quantity	***	***	***
U.S. producers	Share	***	***	***
China	Share	***	***	***
Thailand	Share	***	***	***
Subject sources	Share	***	***	***
Nonsubject sources	Share	***	***	***
All import sources	Share	***	***	***
All sources	Share	100.0	100.0	100.0
U.S. producers	Ratio	***	***	***
China	Ratio	***	***	***
Thailand	Ratio	***	***	***
Subject sources	Ratio	***	***	***
Nonsubject sources	Ratio	***	***	***
All import sources	Ratio	***	***	***
All sources	Ratio	***	***	***

Table continued.

Table E.1 (Continued) Steel propane cylinders: U.S. producers' and U.S. importers' U.S. shipments of 20-pound cylinders, by period and source

Quantity in 1,000 pounds, tare weight; shares and ratio in percent; ratio is to overall apparent U.S. consumption quantity

Source	Measure	2022	2023	2024
U.S. producers	Quantity	***	***	***
China	Quantity	***	***	***
Thailand	Quantity	***	***	***
Subject sources	Quantity	***	***	***
Nonsubject sources	Quantity	***	***	***
All import sources	Quantity	***	***	***
All sources	Quantity	***	***	***
U.S. producers	Share	***	***	***
China	Share	***	***	***
Thailand	Share	***	***	***
Subject sources	Share	***	***	***
Nonsubject sources	Share	***	***	***
All import sources	Share	***	***	***
All sources	Share	100.0	100.0	100.0
U.S. producers	Ratio	***	***	***
China	Ratio	***	***	***
Thailand	Ratio	***	***	***
Subject sources	Ratio	***	***	***
Nonsubject sources	Ratio	***	***	***
All import sources	Ratio	***	***	***
All sources	Ratio	***	***	***

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

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as “—“.

Table E.2 Steel propane cylinders: U.S. producers' and U.S. importers' U.S. shipments of 30-pound cylinders, by period and source

Quantity in 1,000 pounds, tare weight; shares and ratio in percent; ratio is to overall apparent U.S. consumption quantity

Source	Measure	2019	2020	2021
U.S. producers	Quantity	***	***	***
China	Quantity	***	***	***
Thailand	Quantity	***	***	***
Subject sources	Quantity	***	***	***
Nonsubject sources	Quantity	***	***	***
All import sources	Quantity	***	***	***
All sources	Quantity	***	***	***
U.S. producers	Share	***	***	***
China	Share	***	***	***
Thailand	Share	***	***	***
Subject sources	Share	***	***	***
Nonsubject sources	Share	***	***	***
All import sources	Share	***	***	***
All sources	Share	100.0	100.0	100.0
U.S. producers	Ratio	***	***	***
China	Ratio	***	***	***
Thailand	Ratio	***	***	***
Subject sources	Ratio	***	***	***
Nonsubject sources	Ratio	***	***	***
All import sources	Ratio	***	***	***
All sources	Ratio	***	***	***

Table continued.

Table E.2 (Continued) Steel propane cylinders: U.S. producers' and U.S. importers' U.S. shipments of 30-pound cylinders, by period and source

Quantity in 1,000 pounds, tare weight; shares and ratio in percent; ratio is to overall apparent U.S. consumption quantity

Source	Measure	2022	2023	2024
U.S. producers	Quantity	***	***	***
China	Quantity	***	***	***
Thailand	Quantity	***	***	***
Subject sources	Quantity	***	***	***
Nonsubject sources	Quantity	***	***	***
All import sources	Quantity	***	***	***
All sources	Quantity	***	***	***
U.S. producers	Share	***	***	***
China	Share	***	***	***
Thailand	Share	***	***	***
Subject sources	Share	***	***	***
Nonsubject sources	Share	***	***	***
All import sources	Share	***	***	***
All sources	Share	100.0	100.0	100.0
U.S. producers	Ratio	***	***	***
China	Ratio	***	***	***
Thailand	Ratio	***	***	***
Subject sources	Ratio	***	***	***
Nonsubject sources	Ratio	***	***	***
All import sources	Ratio	***	***	***
All sources	Ratio	***	***	***

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

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as “—“.

Table E.3 Steel propane cylinders: U.S. producers' and U.S. importers' U.S. shipments of all other cylinder sizes, by period and source

Quantity in 1,000 pounds, tare weight; shares and ratio in percent; ratio is to overall apparent U.S. consumption quantity

Source	Measure	2019	2020	2021
U.S. producers	Quantity	***	***	***
China	Quantity	***	***	***
Thailand	Quantity	***	***	***
Subject sources	Quantity	***	***	***
Nonsubject sources	Quantity	***	***	***
All import sources	Quantity	***	***	***
All sources	Quantity	***	***	***
U.S. producers	Share	***	***	***
China	Share	***	***	***
Thailand	Share	***	***	***
Subject sources	Share	***	***	***
Nonsubject sources	Share	***	***	***
All import sources	Share	***	***	***
All sources	Share	100.0	100.0	100.0
U.S. producers	Ratio	***	***	***
China	Ratio	***	***	***
Thailand	Ratio	***	***	***
Subject sources	Ratio	***	***	***
Nonsubject sources	Ratio	***	***	***
All import sources	Ratio	***	***	***
All sources	Ratio	***	***	***

Table continued.

Table E.3 (Continued) Steel propane cylinders: U.S. producers' and U.S. importers' U.S. shipments of all other cylinder sizes, by period and source

Quantity in 1,000 pounds, tare weight; shares and ratio in percent; ratio is to overall apparent U.S. consumption quantity

Source	Measure	2022	2023	2024
U.S. producers	Quantity	***	***	***
China	Quantity	***	***	***
Thailand	Quantity	***	***	***
Subject sources	Quantity	***	***	***
Nonsubject sources	Quantity	***	***	***
All import sources	Quantity	***	***	***
All sources	Quantity	***	***	***
U.S. producers	Share	***	***	***
China	Share	***	***	***
Thailand	Share	***	***	***
Subject sources	Share	***	***	***
Nonsubject sources	Share	***	***	***
All import sources	Share	***	***	***
All sources	Share	100.0	100.0	100.0
U.S. producers	Ratio	***	***	***
China	Ratio	***	***	***
Thailand	Ratio	***	***	***
Subject sources	Ratio	***	***	***
Nonsubject sources	Ratio	***	***	***
All import sources	Ratio	***	***	***
All sources	Ratio	***	***	***

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

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as “—“.

Figure E.1 Steel propane cylinders: Quantities and average unit values for 20-pound capacity cylinders, by source and by period

* * * * * * *

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

Figure E.2 Steel propane cylinders: Quantities and average unit values for 30-pound capacity cylinders, by source and by period

* * * * * * *

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

Figure E.3 Steel propane cylinders: Quantities and average unit values for all other cylinder sizes, by source and by period

* * * * * * *

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

APPENDIX F

DETAILED SHIPMENT DATA BY CHANNEL OF DISTRIBUTION

Table F.1 Steel propane cylinders: U.S. producers' and U.S. importers' U.S. shipments to distributors, by period and source

Quantity in 1,000 pounds, tare weight; share in percent

Source	Measure	2019	2020	2021
U.S. producers	Quantity	***	***	***
China	Quantity	***	***	***
Thailand	Quantity	***	***	***
Subject sources	Quantity	***	***	***
Nonsubject sources	Quantity	***	***	***
All import sources	Quantity	***	***	***
All sources	Quantity	***	***	***
U.S. producers	Share	***	***	***
China	Share	***	***	***
Thailand	Share	***	***	***
Subject sources	Share	***	***	***
Nonsubject sources	Share	***	***	***
All import sources	Share	***	***	***
All sources	Share	100.0	100.0	100.0

Table continued.

Table F.1 (Continued) Steel propane cylinders: U.S. producers' and U.S. importers' U.S. shipments to distributors, by period and source

Quantity in 1,000 pounds, tare weight; share in percent

Source	Measure	2022	2023	2024
U.S. producers	Quantity	***	***	***
China	Quantity	***	***	***
Thailand	Quantity	***	***	***
Subject sources	Quantity	***	***	***
Nonsubject sources	Quantity	***	***	***
All import sources	Quantity	***	***	***
All sources	Quantity	***	***	***
U.S. producers	Share	***	***	***
China	Share	***	***	***
Thailand	Share	***	***	***
Subject sources	Share	***	***	***
Nonsubject sources	Share	***	***	***
All import sources	Share	***	***	***
All sources	Share	100.0	100.0	100.0

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

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as “—“.

Table F.2 Steel propane cylinders: U.S. producers' and U.S. importers' U.S. shipments to retailers, by period and source

Quantity in 1,000 pounds, tare weight; share in percent

Source	Measure	2019	2020	2021
U.S. producers	Quantity	***	***	***
China	Quantity	***	***	***
Thailand	Quantity	***	***	***
Subject sources	Quantity	***	***	***
Nonsubject sources	Quantity	***	***	***
All import sources	Quantity	***	***	***
All sources	Quantity	***	***	***
U.S. producers	Share	***	***	***
China	Share	***	***	***
Thailand	Share	***	***	***
Subject sources	Share	***	***	***
Nonsubject sources	Share	***	***	***
All import sources	Share	***	***	***
All sources	Share	100.0	100.0	100.0

Table continued.

Table F.2 (Continued) Steel propane cylinders: U.S. producers' and U.S. importers' U.S. shipments to retailers, by period and source

Quantity in 1,000 pounds, tare weight; share in percent

Source	Measure	2022	2023	2024
U.S. producers	Quantity	***	***	***
China	Quantity	***	***	***
Thailand	Quantity	***	***	***
Subject sources	Quantity	***	***	***
Nonsubject sources	Quantity	***	***	***
All import sources	Quantity	***	***	***
All sources	Quantity	***	***	***
U.S. producers	Share	***	***	***
China	Share	***	***	***
Thailand	Share	***	***	***
Subject sources	Share	***	***	***
Nonsubject sources	Share	***	***	***
All import sources	Share	***	***	***
All sources	Share	100.0	100.0	100.0

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

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as “—“.

Table F.3 Steel propane cylinders: U.S. producers' and U.S. importers' U.S. shipments to gas exchangers, by period and source

Quantity in 1,000 pounds, tare weight; share in percent

Source	Measure	2019	2020	2021
U.S. producers	Quantity	***	***	***
China	Quantity	***	***	***
Thailand	Quantity	***	***	***
Subject sources	Quantity	***	***	***
Nonsubject sources	Quantity	***	***	***
All import sources	Quantity	***	***	***
All sources	Quantity	***	***	***
U.S. producers	Share	***	***	***
China	Share	***	***	***
Thailand	Share	***	***	***
Subject sources	Share	***	***	***
Nonsubject sources	Share	***	***	***
All import sources	Share	***	***	***
All sources	Share	100.0	100.0	100.0

Table continued.

Table F.3 (Continued) Steel propane cylinders: U.S. producers' and U.S. importers' U.S. shipments to gas exchangers, by period and source

Quantity in 1,000 pounds, tare weight; share in percent

Source	Measure	2022	2023	2024
U.S. producers	Quantity	***	***	***
China	Quantity	***	***	***
Thailand	Quantity	***	***	***
Subject sources	Quantity	***	***	***
Nonsubject sources	Quantity	***	***	***
All import sources	Quantity	***	***	***
All sources	Quantity	***	***	***
U.S. producers	Share	***	***	***
China	Share	***	***	***
Thailand	Share	***	***	***
Subject sources	Share	***	***	***
Nonsubject sources	Share	***	***	***
All import sources	Share	***	***	***
All sources	Share	100.0	100.0	100.0

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

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as “—“.

Table F.4 Steel propane cylinders: U.S. producers' and U.S. importers' U.S. shipments to RV manufacturers, by period and source

Quantity in 1,000 pounds, tare weight; share in percent

Source	Measure	2019	2020	2021
U.S. producers	Quantity	***	***	***
China	Quantity	***	***	***
Thailand	Quantity	***	***	***
Subject sources	Quantity	***	***	***
Nonsubject sources	Quantity	***	***	***
All import sources	Quantity	***	***	***
All sources	Quantity	***	***	***
U.S. producers	Share	***	***	***
China	Share	***	***	***
Thailand	Share	***	***	***
Subject sources	Share	***	***	***
Nonsubject sources	Share	***	***	***
All import sources	Share	***	***	***
All sources	Share	100.0	100.0	100.0

Table continued.

Table F.4 (Continued) Steel propane cylinders: U.S. producers' and U.S. importers' U.S. shipments to RV manufacturers, by period and source

Quantity in 1,000 pounds, tare weight; share in percent

Source	Measure	2022	2023	2024
U.S. producers	Quantity	***	***	***
China	Quantity	***	***	***
Thailand	Quantity	***	***	***
Subject sources	Quantity	***	***	***
Nonsubject sources	Quantity	***	***	***
All import sources	Quantity	***	***	***
All sources	Quantity	***	***	***
U.S. producers	Share	***	***	***
China	Share	***	***	***
Thailand	Share	***	***	***
Subject sources	Share	***	***	***
Nonsubject sources	Share	***	***	***
All import sources	Share	***	***	***
All sources	Share	100.0	100.0	100.0

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

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as “—“.

Table F.5 Steel propane cylinders: U.S. producers' and U.S. importers' U.S. shipments to all other end users, by period and source

Quantity in 1,000 pounds, tare weight; share in percent

Source	Measure	2019	2020	2021
U.S. producers	Quantity	***	***	***
China	Quantity	***	***	***
Thailand	Quantity	***	***	***
Subject sources	Quantity	***	***	***
Nonsubject sources	Quantity	***	***	***
All import sources	Quantity	***	***	***
All sources	Quantity	***	***	***
U.S. producers	Share	***	***	***
China	Share	***	***	***
Thailand	Share	***	***	***
Subject sources	Share	***	***	***
Nonsubject sources	Share	***	***	***
All import sources	Share	***	***	***
All sources	Share	100.0	100.0	100.0

Table continued.

Table F.5 (Continued) Steel propane cylinders: U.S. producers' and U.S. importers' U.S. shipments to all other end users, by period and source

Quantity in 1,000 pounds, tare weight; share in percent

Source	Measure	2022	2023	2024
U.S. producers	Quantity	***	***	***
China	Quantity	***	***	***
Thailand	Quantity	***	***	***
Subject sources	Quantity	***	***	***
Nonsubject sources	Quantity	***	***	***
All import sources	Quantity	***	***	***
All sources	Quantity	***	***	***
U.S. producers	Share	***	***	***
China	Share	***	***	***
Thailand	Share	***	***	***
Subject sources	Share	***	***	***
Nonsubject sources	Share	***	***	***
All import sources	Share	***	***	***
All sources	Share	100.0	100.0	100.0

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

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as “—“.