

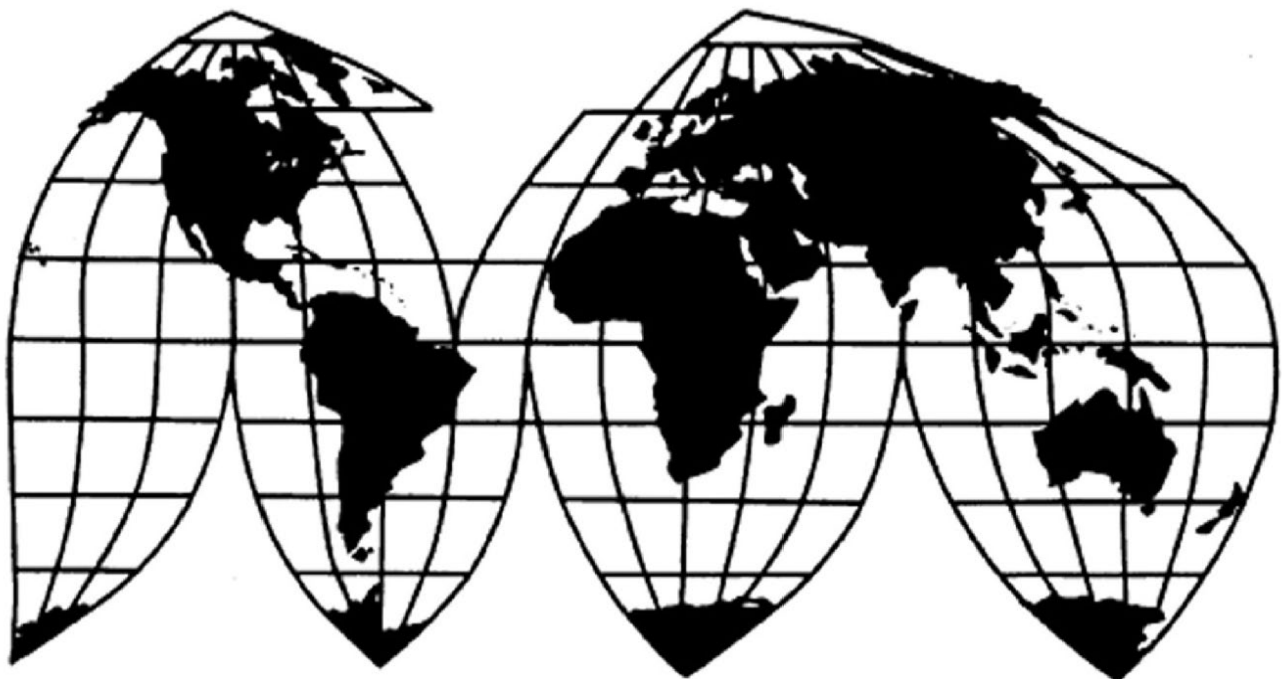
Non-Refillable Steel Cylinders from India

Investigation Nos. 701-TA-689 and 731-TA-1618 (Final)

Publication 5509

May 2024

U.S. International Trade Commission



Washington, DC 20436

U.S. International Trade Commission

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Note.—Information that would reveal confidential operations of individual concerns may not be published.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

UNITED STATES INTERNATIONAL TRADE COMMISSION

Investigation Nos. 701-TA-689 and 731-TA-1618 (Final)

Non-Refillable Steel Cylinders from India

DETERMINATIONS

On the basis of the record¹ developed in the subject investigations, the United States International Trade Commission (“Commission”) determines, pursuant to the Tariff Act of 1930 (“the Act”), that an industry in the United States is materially injured by reason of imports of non-refillable steel cylinders (“NRSC”) from India, provided for in subheading 7311.00.00 of the Harmonized Tariff Schedule of the United States, that have been found by the U.S. Department of Commerce (“Commerce”) to be sold in the United States at less than fair value (“LTFV”), and imports of the subject merchandise from India that have been found to be subsidized by the government of India.²

BACKGROUND

The Commission instituted these investigations effective April 27, 2023, following receipt of petitions filed with the Commission and Commerce by Worthington Industries, Columbus, Ohio. The final phase of the investigations was scheduled by the Commission following notification of preliminary determinations by Commerce that imports of NRSC from India were subsidized within the meaning of section 703(b) of the Act (19 U.S.C. 1671b(b)) and sold at LTFV within the meaning of 733(b) of the Act (19 U.S.C. 1673b(b)). Notice of the scheduling of the final phase of the Commission’s investigations and of a public hearing to be held in connection therewith was given by posting copies of the notice in the Office of the Secretary, U.S. International Trade Commission, Washington, DC, and by publishing the notice in the *Federal Register* on December 13, 2023 (88 FR 86379). The Commission conducted its hearing on April 16, 2024.

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

² 89 FR 29294 (April 22, 2024) and 89 FR 29296 (April 22, 2024).

Views of the Commission

Based on the record in the final phase of these investigations, we determine that an industry in the United States is materially injured by reason of imports of non-refillable steel cylinders (“NRSCs”) from India found by the U.S. Department of Commerce (“Commerce”) to be sold in the United States at less than fair value (“LTFV”) and subsidized by the government of India.

I. Background

Worthington Industries, Inc. (“Petitioner” or “Worthington”), the sole known U.S. producer of NRSCs, filed the petitions in these investigations on April 27, 2023.¹ Worthington submitted prehearing and posthearing briefs and final comments, and representatives of Worthington submitted testimony and appeared at the hearing accompanied by counsel. One respondent entity participated in these investigations. Inox India Limited (“Inox”), a subject producer and exporter of NRSCs, submitted a posthearing brief.

U.S. industry data are based on the questionnaire response of Worthington, which accounted for 100 percent of U.S. production of NRSCs in 2023.² U.S. imports are based on the questionnaire responses of 18 importers that accounted for *** percent of subject imports and *** percent of nonsubject imports, based on official import statistics.³ The Commission received responses to its questionnaire from three producers/exporters of merchandise in India, which accounted for approximately *** percent of overall production of NRSCs in India in 2023.⁴

II. Domestic Like Product

A. In General

In determining whether an industry in the United States is materially injured or threatened with material injury by reason of imports of subject merchandise, the Commission first defines the “domestic like product” and the “industry.”⁵ Section 771(4)(A) of the Tariff Act of 1930, as amended (“the Tariff Act”), defines the relevant domestic industry as the “producers as a whole of a domestic like product, or those producers whose collective output

¹ Confidential Staff Report, INV-VV-037 (May 6, 2024) (“CR”); *Non-Refillable Steel Cylinders from India*, Inv. Nos. 701-TA-689 and 731-TA-1618 (Final), USITC Pub. 5509 (May 2024) (“PR”) at I-1.

² CR/PR at I-4.

³ CR/PR at I-4.

⁴ CR/PR at VII-3.

⁵ 19 U.S.C. § 1677(4)(A).

of a domestic like product constitutes a major proportion of the total domestic production of the product.”⁶ In turn, the Tariff Act defines “domestic like product” as “a product which is like, or in the absence of like, most similar in characteristics and uses with, the article subject to an investigation.”⁷

By statute, the Commission’s “domestic like product” analysis begins with the “article subject to an investigation,” *i.e.*, the subject merchandise as determined by Commerce.⁸ Therefore, Commerce’s determination as to the scope of the imported merchandise that is subsidized and/or sold at less than fair value is “necessarily the starting point of the Commission’s like product analysis.”⁹ The Commission then defines the domestic like product in light of the imported articles Commerce has identified.¹⁰ The decision regarding the appropriate domestic like product in an investigation is a factual determination, and the Commission has applied the statutory standard of “like” or “most similar in characteristics and uses” on a case-by-case basis.¹¹ No single factor is dispositive, and the Commission may

⁶ 19 U.S.C. § 1677(4)(A).

⁷ 19 U.S.C. § 1677(10).

⁸ 19 U.S.C. § 1677(10). The Commission must accept Commerce’s determination as to the scope of the imported merchandise that is subsidized and/or sold at less than fair value. *See, e.g., USEC, Inc. v. United States*, 34 Fed. App’x 725, 730 (Fed. Cir. 2002) (“The ITC may not modify the class or kind of imported merchandise examined by Commerce.”); *Algoma Steel Corp. v. United States*, 688 F. Supp. 639, 644 (Ct. Int’l Trade 1988), *aff’d*, 865 F.3d 240 (Fed. Cir.), *cert. denied*, 492 U.S. 919 (1989).

⁹ *Cleo Inc. v. United States*, 501 F.3d 1291, 1298 (Fed. Cir. 2007); *see also Hitachi Metals, Ltd. v. United States*, Case No. 19-1289, slip op. at 8-9 (Fed. Circ. Feb. 7, 2020) (the statute requires the Commission to start with Commerce’s subject merchandise in reaching its own like product determination).

¹⁰ *Cleo*, 501 F.3d at 1298 n.1 (“Commerce’s {scope} finding does not control the Commission’s {like product} determination.”); *Hosiden Corp. v. Advanced Display Mfrs.*, 85 F.3d 1561, 1568 (Fed. Cir. 1996) (the Commission may find a single like product corresponding to several different classes or kinds defined by Commerce); *Torrington Co. v. United States*, 747 F. Supp. 744, 748–52 (Ct. Int’l Trade 1990), *aff’d*, 938 F.2d 1278 (Fed. Cir. 1991) (affirming the Commission’s determination defining six like products in investigations where Commerce found five classes or kinds).

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

consider other factors it deems relevant based on the facts of a particular investigation.¹² The Commission looks for clear dividing lines among possible like products and disregards minor variations.¹³

B. Product Description

Commerce has defined the imported merchandise within the scope of these investigations as follows:

. . . certain seamed (welded or brazed), non-refillable steel cylinders meeting the requirements of, or produced to meet the requirements of, U.S. Department of Transportation specification 39, TransportCanada specification 39M, or United Nations pressure receptacle standard ISO 11118 and otherwise meeting the description provided below (non-refillable steel cylinders). The subject non-refillable steel cylinders are portable and range from 100-cubic inch (1.6 liter) water capacity to 1,526-cubic inch (25 liter) water capacity. Subject non-refillable steel cylinders may be imported with or without a valve and/or pressure release device and are unfilled at the time of importation. Non-refillable steel cylinders filled with pressurized air otherwise meeting the physical description above are covered by this investigation.

Specifically excluded are seamless nonrefillable steel cylinders.

The merchandise subject to this investigation is properly classified under statistical reporting numbers 7311.00.0060 and 7311.00.0090 of the Harmonized Tariff Schedule of the United States (HTSUS). The merchandise may also enter under HTSUS statistical reporting numbers 7310.29.0030 and 7310.29.0065. Although the HTSUS statistical

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

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

reporting numbers are provided for convenience and customs purposes, the written description of the merchandise is dispositive.¹⁴

NRSCs are portable, non-reusable steel containers specifically designed to store, transport, and dispense compressed or liquefied gases, or other materials for a wide variety of end-use applications. Some common contents and end-uses include: (1) refrigerant gases for refrigeration and air-conditioning applications; (2) helium for inflating retail and commercial balloons; (3) gases for medical and industrial applications; and (4) various liquid chemical mixtures such as foam insulations, sealants, and adhesives for residential and commercial construction applications. Generally, the empty cylinders are sold to customers who fill them with gases or liquid chemical mixtures that are then sold to end users for each specific application.¹⁵ The record indicates that both domestically produced and imported NRSCs are manufactured by similar processes to meet the same technical specifications required for the U.S. market.¹⁶

C. Domestic Like Product Analysis

Based on the record in the final phase of these investigations, we define a single domestic like product consisting of NRSCs, coextensive with the scope. Petitioner argues that the Commission should continue to define a single domestic like product, coextensive with the scope of these investigations, as it did in the preliminary phase of these investigations.¹⁷ No respondent party argues for a different definition of the domestic like product.

In the preliminary determinations, the Commission defined a single domestic like product consisting of all NRSCs, coextensive with the scope. It found that all NRSCs share the same physical design and end uses and must meet specified safety standards for sale in the U.S. market. It also found that all domestically produced NRSCs are produced using the same manufacturing processes, facilities, and employees, and are interchangeable, sold to end users, and perceived by producers and customers to comprise the same product category. While recognizing that NRSCs are produced in a range of sizes and prices, with a variety of end-use applications, the Commission did not find clear dividing lines between different types of

¹⁴ *Final Affirmative Determination in the Less-Than-Fair-Value Investigation of Certain Non-Refillable Steel Cylinders From India*, 89 Fed. Reg. 29294, 29296 (Dep't Commerce Apr. 22, 2024); *Certain Non-Refillable Steel Cylinders From India: Final Affirmative Countervailing Duty Determination*, 89 Fed. Reg. 29296, 29298 (Dep't Commerce Apr. 22, 2024).

¹⁵ CR/PR at I-7-8.

¹⁶ CR/PR at I-9-11.

¹⁷ Petitioner's Prehearing Br. at 4-6.

NRSCs.¹⁸

The record in the final phase of these investigations does not contain any new information that would warrant reconsideration of the Commission's definition of a single domestic like product in the preliminary determinations. Moreover, no party has argued that the Commission should adopt a different definition of the domestic like product.¹⁹ Accordingly, we again define a single domestic like product consisting of all NRSCs, coextensive with the scope.

III. Domestic Industry

The domestic industry is defined as the domestic "producers as a whole of a domestic like product, or those producers whose collective output of a domestic like product constitutes a major proportion of the total domestic production of the product."²⁰ In defining the domestic industry, the Commission's general practice has been to include in the industry producers of all domestic production of the like product, whether toll-produced, captively consumed, or sold in the domestic merchant market.

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

¹⁸ *Non-Refillable Steel Cylinders from India*, Inv. Nos. 701-TA-644 and 731-TA-1494 (Final), USITC Pub. 5437 (June 2023) at 7-10 ("Preliminary Determinations").

¹⁹ Petitioner's Prehearing Br. at 4-6.

²⁰ 19 U.S.C. § 1677(4)(A).

²¹ See *Torrington Co. v. United States*, 790 F. Supp. 1161, 1168 (Ct. Int'l Trade 1992), *aff'd without opinion*, 991 F.2d 809 (Fed. Cir. 1993); *Sandvik AB v. United States*, 721 F. Supp. 1322, 1331-32 (Ct. Int'l Trade 1989), *aff'd mem.*, 904 F.2d 46 (Fed. Cir. 1990); *Empire Plow Co. v. United States*, 675 F. Supp. 1348, 1352 (Ct. Int'l Trade 1987).

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

- (1) the percentage of domestic production attributable to the importing producer;
 - (2) the reason the U.S. producer has decided to import the product subject to investigation (whether the firm benefits from the LTFV sales or subsidies or whether the firm must import in order to enable it to continue production and compete in the U.S. market);
 - (3) whether inclusion or exclusion of the related party will skew the data for the rest of the industry;
 - (4) the ratio of import shipments to U.S. production for the imported product; and
- (Continued...)

Worthington is subject to possible exclusion from the domestic industry under the related parties provision because it imported subject merchandise from India during the 2021-2023 period of investigation (“POI”).²³ Worthington argues that appropriate circumstances do not exist for its exclusion because it is the sole domestic producer of NRSCs, and that the Commission should therefore define the domestic industry as Worthington.²⁴ We discuss below whether appropriate circumstances exist to exclude Worthington from the domestic industry.

Worthington is the petitioner and the sole domestic producer of NRSCs, accounting for 100 percent of domestic production in 2023.²⁵ Worthington imported *** units of NRSCs from India in 2022, equivalent to *** of its domestic production that year.²⁶ Worthington indicated that it imported subject merchandise to ***.²⁷

Given the fact that Worthington’s subject imports were limited *** and *** small as a ratio to its domestic production, as well as the fact that it is the petitioner and sole domestic producer, we find that appropriate circumstances do not exist to exclude Worthington from the domestic industry pursuant to the related parties provision.

Accordingly, consistent with our definition of the domestic like product, we define the domestic industry as the only U.S. producer of NRSCs, Worthington.

IV. Negligibility

Pursuant to Section 771(24) of the Tariff Act, imports from a subject country of merchandise corresponding to a domestic like product shall be deemed negligible if they account for less than three percent (or four percent in the case of a developing country in a countervailing duty investigation) of all such merchandise imported into the United States during the most recent 12 months for which data are available preceding the filing of the petition.²⁸

(...Continued)

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

²³ CR/PR at III-13 & Table III-12.

²⁴ Petitioner’s Prehearing Br. at 6 n.3.

²⁵ CR/PR at Table III-1.

²⁶ CR/PR at Table III-12.

²⁷ CR/PR at Table III-13.

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

During the most recent 12-month period preceding the filing of the petitions in these investigations, April 2022 through March 2023, imports of NRSCs from India that are subject to the countervailing duty investigation accounted for *** percent of total imports of NRSCs during the same period and imports of NRSCs from India subject to the antidumping duty investigation accounted for *** percent of total imports during that period.²⁹ As subject imports from India exceed the three percent negligibility threshold in both investigations, we find that imports of NRSCs from India subject to the antidumping and countervailing duty investigations are not negligible.

V. Material Injury by Reason of Subject Imports

Based on the record in the final phase of these investigations, we find that an industry in the United States is materially injured by reason of imports of NRSCs from India that Commerce has found to be sold at LTFV and subsidized by the government of India.

A. Legal Standards

In the final phase of antidumping and countervailing duty investigations, the Commission determines whether an industry in the United States is materially injured or threatened with material injury by reason of the imports under investigation.³⁰ In making these determinations, the Commission must consider the volume of subject imports, their effect on prices for the domestic like product, and their impact on domestic producers of the domestic like product, but only in the context of U.S. production operations.³¹ The statute defines “material injury” as “harm which is not inconsequential, immaterial, or unimportant.”³² In assessing whether the domestic industry is materially injured by reason of subject imports, we consider all relevant economic factors that bear on the state of the industry in the United

²⁹ CR/PR at Table IV-10. In its final antidumping duty determination, Commerce found imports of NRSCs produced and exported by Inox to have a *de minimis* antidumping duty margin. *Final Affirmative Determination in the Less-Than-Fair-Value Investigation of Certain Non-Refillable Steel Cylinders From India*, 89 Fed. Reg. 29294, 29295 (Apr. 22, 2024). Therefore, imports of NRSCs produced and exported by Inox are nonsubject merchandise and are not included in the numerator of the negligibility ratio with respect to the antidumping duty investigation of subject imports. Such imports were not *de minimis* for the related countervailing duty investigation and thus are included in the Commission’s negligibility calculation.

³⁰ 19 U.S.C. §§ 1671d(b), 1673d(b).

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

³² 19 U.S.C. § 1677(7)(A).

States.³³ No single factor is dispositive, and all relevant factors are considered “within the context of the business cycle and conditions of competition that are distinctive to the affected industry.”³⁴

Although the statute requires the Commission to determine whether the domestic industry is “materially injured or threatened with material injury by reason of” unfairly traded imports,³⁵ it does not define the phrase “by reason of,” indicating that this aspect of the injury analysis is left to the Commission’s reasonable exercise of its discretion.³⁶ In identifying a causal link, if any, between subject imports and material injury to the domestic industry, the Commission examines the facts of record that relate to the significance of the volume and price effects of the subject imports and any impact of those imports on the condition of the domestic industry. This evaluation under the “by reason of” standard must ensure that subject imports are more than a minimal or tangential cause of injury and that there is a sufficient causal, not merely a temporal, nexus between subject imports and material injury.³⁷

In many investigations, there are other economic factors at work, some or all of which may also be having adverse effects on the domestic industry. Such economic factors might include nonsubject imports; changes in technology, demand, or consumer tastes; competition among domestic producers; or management decisions by domestic producers. The legislative history explains that the Commission must examine factors other than subject imports to ensure that it is not attributing injury from other factors to the subject imports, thereby inflating an otherwise tangential cause of injury into one that satisfies the statutory material injury threshold.³⁸ In performing its examination, however, the Commission need not isolate

³³ 19 U.S.C. § 1677(7)(C)(iii).

³⁴ 19 U.S.C. § 1677(7)(C)(iii).

³⁵ 19 U.S.C. §§ 1671d(b), 1673d(b).

³⁶ *Angus Chemical Co. v. United States*, 140 F.3d 1478, 1484-85 (Fed. Cir. 1998) (“{T}he statute does not ‘compel the commissioners’ to employ {a particular methodology}.”), *aff’d*, 944 F. Supp. 943, 951 (Ct. Int’l Trade 1996).

³⁷ The Federal Circuit, in addressing the causation standard of the statute, observed that “{a}s long as its effects are not merely incidental, tangential, or trivial, the foreign product sold at less than fair value meets the causation requirement.” *Nippon Steel Corp. v. USITC*, 345 F.3d 1379, 1384 (Fed. Cir. 2003). This was further ratified in *Mittal Steel Point Lisas Ltd. v. United States*, 542 F.3d 867, 873 (Fed. Cir. 2008), where the Federal Circuit, quoting *Gerald Metals, Inc. v. United States*, 132 F.3d 716, 722 (Fed. Cir. 1997), stated that “this court requires evidence in the record ‘to show that the harm occurred ‘by reason of’ the LTFV imports, not by reason of a minimal or tangential contribution to material harm caused by LTFV goods.’” See also *Nippon Steel Corp. v. United States*, 458 F.3d 1345, 1357 (Fed. Cir. 2006); *Taiwan Semiconductor Industry Ass’n v. USITC*, 266 F.3d 1339, 1345 (Fed. Cir. 2001).

³⁸ Uruguay Round Agreements Act Statement of Administrative Action (“SAA”), H.R. Rep. 103-316, vol. I. at 851-52 (“{T}he Commission must examine other factors to ensure that it is not attributing (Continued...)”).

the injury caused by other factors from injury caused by unfairly traded imports.³⁹ Nor does the “by reason of” standard require that unfairly traded imports be the “principal” cause of injury or contemplate that injury from unfairly traded imports be weighed against other factors, such as nonsubject imports, which may be contributing to overall injury to an industry.⁴⁰ It is clear that the existence of injury caused by other factors does not compel a negative determination.⁴¹

Assessment of whether material injury to the domestic industry is “by reason of” subject imports “does not require the Commission to address the causation issue in any particular way” as long as “the injury to the domestic industry can reasonably be attributed to the subject imports.”⁴² The Commission ensures that it has “evidence in the record” to “show that the

(...Continued)

injury from other sources to the subject imports.”); S. Rep. 96-249 at 75 (1979) (the Commission “will consider information which indicates that harm is caused by factors other than less-than-fair-value imports.”); H.R. Rep. 96-317 at 47 (1979) (“in examining the overall injury being experienced by a domestic industry, the ITC will take into account evidence presented to it which demonstrates that the harm attributed by the petitioner to the subsidized or dumped imports is attributable to such other factors;” those factors include “the volume and prices of nonsubsidized imports or imports sold at fair value, contraction in demand or changes in patterns of consumption, trade restrictive practices of and competition between the foreign and domestic producers, developments in technology and the export performance and productivity of the domestic industry”); *accord Mittal Steel*, 542 F.3d at 877.

³⁹ SAA at 851-52 (“{T}he Commission need not isolate the injury caused by other factors from injury caused by unfair imports.”); *Taiwan Semiconductor Industry Ass’n*, 266 F.3d at 1345 (“{T}he Commission need not isolate the injury caused by other factors from injury caused by unfair imports Rather, the Commission must examine other factors to ensure that it is not attributing injury from other sources to the subject imports.” (emphasis in original)); *Asociacion de Productores de Salmon y Trucha de Chile AG v. United States*, 180 F. Supp. 2d 1360, 1375 (Ct. Int’l Trade 2002) (“{t}he Commission is not required to isolate the effects of subject imports from other factors contributing to injury” or make “bright-line distinctions” between the effects of subject imports and other causes.); *see also Softwood Lumber from Canada*, Inv. Nos. 701-TA-414 and 731-TA-928 (Remand), USITC Pub. 3658 at 100-01 (Dec. 2003) (Commission recognized that “{i}f an alleged other factor is found not to have or threaten to have injurious effects to the domestic industry, *i.e.*, it is not an ‘other causal factor,’ then there is nothing to further examine regarding attribution to injury”), *citing Gerald Metals*, 132 F.3d at 722 (the statute “does not suggest that an importer of LTFV goods can escape countervailing duties by finding some tangential or minor cause unrelated to the LTFV goods that contributed to the harmful effects on domestic market prices.”).

⁴⁰ S. Rep. 96-249 at 74-75; H.R. Rep. 96-317 at 47.

⁴¹ *See Nippon Steel Corp.*, 345 F.3d at 1381 (“an affirmative material-injury determination under the statute requires no more than a substantial-factor showing. That is, the ‘dumping’ need not be the sole or principal cause of injury.”).

⁴² *Mittal Steel*, 542 F.3d at 876 & 78; *see also id.* at 873 (“While the Commission may not enter an affirmative determination unless it finds that a domestic industry is materially injured ‘by reason of’ subject imports, the Commission is not required to follow a single methodology for making that (Continued...)”).

harm occurred ‘by reason of’ the LTFV imports,” and that it is “not attributing injury from other sources to the subject imports.”⁴³ The Federal Circuit has examined and affirmed various Commission methodologies and has disavowed “rigid adherence to a specific formula.”⁴⁴

The question of whether the material injury threshold for subject imports is satisfied notwithstanding any injury from other factors is factual, subject to review under the substantial evidence standard.⁴⁵ Congress has delegated this factual finding to the Commission because of the agency’s institutional expertise in resolving injury issues.⁴⁶

B. Conditions of Competition and the Business Cycle

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

1. Captive Production

The domestic industry captively consumes a portion of its production of NRSCs in the manufacture of downstream articles, ***.⁴⁷ We therefore consider the applicability of the statutory captive production provision.⁴⁸

(...Continued)

determination ... {and has} broad discretion with respect to its choice of methodology.”) *citing United States Steel Group v. United States*, 96 F.3d 1352, 1362 (Fed. Cir. 1996) and S. Rep. 96-249 at 75. In its decision in *Swiff-Train v. United States*, 793 F.3d 1355 (Fed. Cir. 2015), the Federal Circuit affirmed the Commission’s causation analysis as comporting with the Court’s guidance in *Mittal*.

⁴³ *Mittal Steel*, 542 F.3d at 873 (quoting from *Gerald Metals*, 132 F.3d at 722), 877-79. We note that one relevant “other factor” may involve the presence of significant volumes of price-competitive nonsubject imports in the U.S. market, particularly when a commodity product is at issue. In appropriate cases, the Commission collects information regarding nonsubject imports and producers in nonsubject countries in order to conduct its analysis.

⁴⁴ *Nucor Corp. v. United States*, 414 F.3d 1331, 1336, 1341 (Fed. Cir. 2005); *see also Mittal Steel*, 542 F.3d at 879 (“*Bratsk* did not read into the antidumping statute a Procrustean formula for determining whether a domestic injury was ‘by reason’ of subject imports.”).

⁴⁵ We provide in our discussion below a full analysis of other factors alleged to have caused any material injury experienced by the domestic industry.

⁴⁶ *Mittal Steel*, 542 F.3d at 873; *Nippon Steel Corp.*, 458 F.3d at 1350, *citing U.S. Steel Group*, 96 F.3d at 1357; S. Rep. 96-249 at 75 (“The determination of the ITC with respect to causation is ... complex and difficult, and is a matter for the judgment of the ITC.”).

⁴⁷ CR/PR at I-7 n.16, III-8 n.8, Table III-8.

⁴⁸ The captive production provision, 19 U.S.C. § 1677(7)(C)(iv), as amended by the Trade Preferences Extension Act of 2015 (“TPEA”), provides:

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

(I) the domestic like product produced that is internally transferred for processing into

(Continued...)

Petitioner argues that the Commission should continue to apply the statutory captive production provision, as it did in the preliminary phase, and focus on the merchant market in its analysis of domestic industry performance because the threshold criterion and both prongs of the captive production provision are met here.⁴⁹ Respondent does not take a position on the captive production issue.⁵⁰

Threshold Criterion. The captive production provision can be applied only if, as a threshold matter, significant production of the domestic like product is internally transferred and significant production is sold in the merchant market. In these investigations, internal consumption accounted for between *** and *** percent of Worthington's total U.S. shipments of NRSCs over the POI, while commercial shipments accounted for between *** and *** percent of its total U.S. shipments during the period.⁵¹ We find that both internal consumption and merchant market sales constitute significant portions of the domestic industry's production, and therefore the threshold criterion for applying the captive production provision is met.

First Statutory Criterion. The first criterion tests whether the domestic production that is internally transferred for processing into downstream articles does not enter the merchant market for the domestic like product.⁵² In these investigations, Petitioner reported internal consumption of NRSCs for the production of ***. It maintains that its internally transferred

(...Continued)

that downstream article does not enter the merchant market for the domestic like product, and (II) the domestic like product is the predominant material input in the production of that downstream article;

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

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

⁴⁹ Petitioner's Prehearing Br. at 30-32.

⁵⁰ See *generally* Respondent's Posthearing Br.

⁵¹ CR/PR at III-11, Table III-8.

⁵² See, e.g., *Hot-Rolled Steel Products from Argentina and South Africa*, Inv. Nos. 701-TA-404, 731-TA-898, 905 (Final), USITC Pub. 3446 at 15-16 (Aug. 2001); *Certain Cold-Rolled Steel Products from Argentina, Brazil, China, Indonesia, Japan, Russia, Slovakia, South Africa, Taiwan, Turkey and Venezuela*, Inv. Nos. 701-TA-393 and 731-TA-829-40 (Final) (Remand), USITC Pub. 3691 at 2 & n.19 (May 2004).

NRSCs, once ***, do not enter the merchant market as unfilled NRSCs.⁵³ Therefore, this criterion is satisfied.

Second Statutory Criterion. In applying the second statutory criterion, the Commission generally considers whether the domestic like product is the predominant material input into a downstream product by referring to its share of the raw material cost of the downstream product, but has also construed “predominant” material input to mean the main or strongest element, and not necessarily a majority, of the inputs by value.⁵⁴ In these investigations, the record indicates that NRSCs reportedly comprise *** percent of the finished cost of downstream ***.⁵⁵ Therefore, we find that this criterion is satisfied in these investigations.⁵⁶

Conclusion. We conclude that all criteria for application of the captive production provision are satisfied in these investigations. Accordingly, we focus primarily on the merchant market in analyzing the market share and financial performance of the domestic industry.⁵⁷

2. Demand Conditions

U.S. demand for NRSCs depends on demand for the downstream products in which they are used. NRSCs are typically filled with products such as refrigerants, helium, or other materials such as insulating foam sealant or adhesive, and are ultimately used in applications including maintenance of home, commercial, and automotive cooling and refrigerant systems, helium balloons, and construction.⁵⁸

Petitioner and half of responding importers reported that domestic demand for NRSCs *** during the POI, and a majority of responding purchasers (4 of 7) reported demand

⁵³ CR/PR at III-11.

⁵⁴ See generally, e.g., *Polyethylene Terephthalate Film, Sheet and Strip from Brazil, China, Thailand, and the United Arab Emirates*, Inv. Nos. 731-TA-1131-1134 (Final), USITC Pub. 4040 at 17 n.103 (Oct. 2008); *Polyethylene Terephthalate Film, Sheet, and Strip from India and Taiwan*, Inv. Nos. 701-TA-415 and 731-TA-933-934 (Final), USITC Pub. 3518 at 11 & n.51 (June 2002); *Polyvinyl Alcohol from Germany and Japan*, Inv. Nos. 731-TA-1015-16 (Final), USITC Pub. 3604 at 15 n.69 (June 2003).

⁵⁵ CR/PR at III-12, Table III-10.

⁵⁶ See *Carbon and Certain Alloy Steel Wire Rod from Belarus, Russia, and the United Arab Emirates*, Inv. Nos. 731-TA-1349, 1352, and 1357 (Final), USITC Pub. 4752 at 26-27 (Jan. 2018) (finding second statutory criterion satisfied when reporting domestic producers indicated that wire rod accounted for the majority of the finished cost of a number of downstream products).

⁵⁷ In addition to the merchant market, we also have considered the market as a whole. We observe that the data trends are substantially the same for both the merchant and total markets. See CR/PR at Table C-2 (“merchant market”); see also *id.* at Table C-1 (“total market”).

⁵⁸ CR/PR at I-6, II-7; Petitioner’s Prehearing Br. at 7.

remained steady or increased.⁵⁹ According to Petitioner, in late 2021 and early 2022, demand for NRSCs for foam and adhesives increased due to a spike in levels of construction and remodeling activity.⁶⁰ It notes that the increase in demand occurred just as Chinese NRSCs were receding from the market in 2021 after antidumping and countervailing duty orders were imposed on those imports.⁶¹ In general, however, Petitioner claims that demand for NRSCs stemming from downstream demand for refrigerant gas for air conditioning units, foam insulation and adhesive spray, and helium for balloons was largely stable during the POI.⁶²

During the POI, apparent U.S. consumption in the merchant market decreased by *** percent between 2021 and 2023, declining from *** units in 2021, to *** units in 2022, and to *** units in 2023.⁶³

3. Supply Conditions

The domestic industry was the largest source of NRSCs in the U.S. market throughout the POI. As noted above, Worthington was the sole domestic producer throughout the investigation period. Its share of apparent U.S. consumption in the merchant market declined from *** percent in 2021 to *** percent in 2022, and then increased to *** percent in 2023, a

⁵⁹ CR/PR at Table II-5. Seven responding importers indicated there was no change in domestic demand, while two indicated domestic demand steadily increased, four indicated domestic demand fluctuated down, and one indicated domestic demand steadily decreased. *Id.* Two responding purchasers reported no change in domestic demand, two reported domestic demand steadily decreased, one reported that it fluctuated down, one reported it fluctuated up, and one reported it steadily increased. *Id.*

⁶⁰ CR/PR at III-12 n.13; Petitioner's Prehearing Br. at 9.

⁶¹ Petitioner's Prehearing Br. at 10.

⁶² Petitioner's Posthearing Br. at Exhibit 1 at 22. Petitioner also claims that domestic demand for NRSCs increased in 2021 and early 2022 in response to a new rule adopted by the U.S. Environmental Protection Agency ("EPA") that would have phased out the use of NRSCs in certain applications, and that this new rule led customers in the refrigerant industry to demand additional NRSCs that could be filled and sold prior to the rule's January 1, 2027, cut off. CR/PR at II-9; Petitioner's Prehearing Br. at 8-9. Petitioner argues that as a result of the partial invalidation of the EPA regulations by the U.S. Court of Appeals for the District of Columbia Circuit in June 2023, demand for NRSCs will likely continue at the lower 2023 level, with no further declines expected. CR/PR at II-9; Petitioner's Prehearing Br. at 12-13. However, the majority of responding importers and all responding purchasers reported that the EPA's announcement had no impact on demand during the POI or future demand for NRSCs and the majority of responding importers and purchasers also reported that the court ruling had no impact on demand for NRSCs. CR/PR at II-9.

⁶³ CR/PR at IV-15, Tables IV-12, C-2. Apparent U.S. consumption in the total market for NRSCs decreased by *** percent between 2021 and 2023, decreasing from *** units in 2021, to *** units in 2022, to *** units in 2023. *Id.* at IV-13, Tables IV-11, C-1.

level *** percentage points lower than in 2021.⁶⁴ The domestic industry’s practical NRSCs capacity increased from *** units in 2021 to *** units in 2022 and 2023.⁶⁵ The domestic industry’s capacity utilization decreased over the POI, declining from *** percent in 2021, to *** percent in 2022, and *** percent in 2023.⁶⁶

Petitioner began construction of a new NRSCs production line in Columbus, Ohio, in 2021 and began operating it in February 2022.⁶⁷ When the new capacity came online, Worthington had enough capacity to supply the entire U.S. market.⁶⁸ Additionally, Petitioner made capital improvements at its Paducah, Kentucky facility during the POI.⁶⁹ Petitioner also acknowledges that there was “supply tightness” in 2021 and 2022 before the new production line became operational but asserts that it was generally able to meet demand during that time.⁷⁰ The majority of purchasers reported that they had experienced supply constraints since January 1, 2021 when attempting to obtain supply from Worthington, including lead times of twelve months or more and allocation restrictions when ordering from Worthington.⁷¹

Subject imports were the second largest source of supply to the U.S. market during the POI. Their share of apparent U.S. consumption in the merchant market decreased irregularly by *** percentage points over the POI, increasing from *** percent in 2021 to *** percent in 2022, before decreasing to *** percent in 2023.⁷²

Nonsubject imports were the smallest source of NRSCs during the POI. Their share of apparent U.S. consumption in the merchant market increased irregularly over the POI, increasing from *** percent in 2021 to *** percent in 2022 before decreasing to *** percent in 2023.⁷³ China and Mexico were the leading country sources of nonsubject imports during the

⁶⁴ CR/PR at Tables IV-12, C-2. In the total market, the domestic industry’s market share increased by *** percentage points during the POI and was *** percent in 2021, *** percent in 2022, and *** percent in 2023. *Id.* at Tables IV-11, C-1.

⁶⁵ CR/PR at Table III-5.

⁶⁶ CR/PR at Table III-5.

⁶⁷ CR/PR at Table III-3.

⁶⁸ CR/PR at Table C-1; Petitioner’s Prehearing Br. at 16.

⁶⁹ CR/PR at Table III-3.

⁷⁰ Petitioner’s Prehearing Br. at 17. In its questionnaire response, Petitioner reported that ***.
CR/PR at II-6.

⁷¹ CR/PR at II-6.

⁷² CR/PR at Tables IV-12, C-2. In the total market, subject imports’ market share decreased irregularly by *** percentage points during the POI, increasing from *** percent in 2021, to *** percent in 2022, before declining to *** percent in 2023. *Id.* at Tables IV-11, C-1.

⁷³ CR/PR at Tables IV-12, C-1. In the total market, nonsubject imports’ market share increased from *** percent in 2021 to *** percent in 2022, before decreasing to *** percent in 2023. *Id.* at Tables IV-11, C-1.

POI.⁷⁴ Imports of NRSCs from China are currently subject to antidumping and countervailing duty orders that were imposed in 2021.⁷⁵

The majority of responding importers reported that they had not experienced supply constraints since January 1, 2021. Importer *** reported it had experienced long lead times in 2022 that caused it to scale back filling capacity in its plant.⁷⁶

4. Substitutability and Other Conditions

Based on the record in the final phase of these investigations, we find that there is a moderate to high degree of substitutability between domestically produced NRSCs and subject imports. All NRSCs sold in the U.S. market are produced to meet USDOT Specification 39 or other applicable standards. The responding U.S. producer, the majority of importers, and the majority of purchasers reported that domestically produced NRSCs and subject imports are always interchangeable.⁷⁷ When asked to compare domestically produced NRSCs with subject imports based on 17 factors, at least half of responding purchasers reported that domestically produced NRSCs and subject imports are comparable with respect to all but two factors.⁷⁸ Factors mitigating substitutability include supply continuity concerns and differences in lead times.⁷⁹

Responding U.S. purchasers most often cited quality, availability, and price as their top three purchasing factors.⁸⁰ While Worthington reported that differences other than price are

⁷⁴ CR/PR at II-5.

⁷⁵ See *Non-Refillable Steel Cylinders from China*, Inv. Nos. 701-TA-644 and 731-TA-1949 (Final), USITC Pub. 5188 (May 2021). On May 26, 2023, Commerce initiated a circumvention inquiry to determine whether imports of non-refillable cylinders with a water capacity between 100 and 299 cubic inches were circumventing the antidumping and countervailing duty orders on NRSCs from China. On March 12, 2024, Commerce issued an affirmative determination that non-refillable cylinders with water capacities between 100 and 299 cubic inches produced in China and exported to the United States constitute merchandise altered in form or appearance in such minor respects that they should be included within the scope of the orders. CR/PR at VII-19 n.35.

⁷⁶ CR/PR at II-6.

⁷⁷ CR/PR at Tables II-14-II-16.

⁷⁸ CR/PR at Table II-13. The majority of responding purchasers reported that domestically produced NRSCs had superior delivery time and payment terms compared to subject imports. *Id.*

⁷⁹ CR/PR at II-10. All seven responding purchasers reported that reliability of supply and availability were very important factors in their purchasing decisions, and six of seven responding purchasers reported that delivery time was a very important factor in their purchasing decisions. *Id.* at Table II-8. As discussed below in this section, there are differences in reported lead times as between domestic producers and subject imports, and as discussed below in section V.E., supply continuity was a concern with respect to domestic producers in 2021.

⁸⁰ CR/PR at II-11, Table II-7.

never significant between domestically produced NRSCs and subject imports,⁸¹ the majority of importers reported that differences other than price are always or frequently significant between domestically produced NRSCs and subject imports, such as differences in lead times.⁸² Purchaser responses regarding the significance of differences other than price were mixed, with three reporting that there were never or sometimes significant differences other than price and three reporting that there were frequently or always significant differences other than price.⁸³ The majority of responding purchasers also reported that they sometimes purchase the lowest-priced product.⁸⁴ In light of the foregoing, we also find that price is an important purchasing factor, although other factors are also important.

In 2023, *** percent of Worthington's U.S. shipments of NRSCs were sold from inventory, with an average lead time of *** days, while the remainder were produced-to-order with lead times averaging *** days.⁸⁵ Worthington reported extending its lead times in 2021, with average lead times of *** days for contract sales that were sold from inventory and produced to order and *** days for spot sales that were sold from inventory and produced to order. Worthington reported that lead times returned to normal in 2022 and were the same as the lead times for 2023.⁸⁶ In 2021 and 2022, responding importers reported that they sold *** NRSCs as produced-to-order spot sales, and that lead times increased from *** days in 2021 to *** days in 2022.⁸⁷ Several major purchasers imported directly from subject producers during the POI and used the NRSCs internally rather than reselling the empty cylinders.⁸⁸

Worthington reported selling NRSCs primarily through *** in 2023, but also through ***.⁸⁹ Worthington reported that it ***.⁹⁰ All responding importers reported that they fixed both price and quantity in short-term contracts, and none of the responding importers reported

⁸¹ CR/PR at II-19, Table II-17.

⁸² CR/PR at II-19, Tables II-18.

⁸³ CR/PR at II-20, Table II-19. Two responding purchasers reported that differences other than price were never significant between domestically produced NRSCs and subject imports, one reported that such differences were sometimes significant, one reported that such differences were frequently significant, and two reported that such differences were always significant. *Id.* Purchasers reported differences in lead times, availability, ease of doing business, and convenience of specification between domestically produced NRSCs and subject imports. CR/PR at II-20.

⁸⁴ CR/PR at II-11.

⁸⁵ CR/PR at Table II-9.

⁸⁶ CR/PR at II-6, Table II-9.

⁸⁷ CR/PR at II-13, Table II-10. Given that importers often internally consume NRSCs, as noted below, responding importers did not report commercial shipments data for 2023. *Id.*

⁸⁸ CR/PR at V-10.

⁸⁹ CR/PR at V-3.

⁹⁰ CR/PR at V-4.

that they renegotiated prices during short-term contracts.⁹¹ Worthington sold NRSCs *** to end users and importers sold NRSCs *** to end users.⁹²

NRSCs are typically made from cold-rolled steel.⁹³ ***.⁹⁴ Worthington's merchant market unit raw material costs increased from \$*** in 2021 to \$*** in 2022, and then decreased to \$*** in 2023, for an overall increase of *** percent over the POI.⁹⁵ Raw materials as a share of Worthington's total cost of goods sold ("COGS") for sales in the merchant market decreased during the POI from *** percent in 2021 and 2022 to *** percent in 2023.⁹⁶

C. Volume of Subject Imports

Section 771(7)(C)(i) of the Tariff Act provides that the "Commission shall consider whether the volume of imports of the merchandise, or any increase in that volume, either in absolute terms or relative to production or consumption in the United States, is significant."⁹⁷

The volume of subject imports declined irregularly over the POI, initially increasing from *** units in 2021 to *** units in 2022 before declining to *** units in 2023, for an overall decline of *** percent.⁹⁸

U.S. shipments of subject imports as a share of apparent U.S. consumption in the merchant market also decreased irregularly over the POI, initially increasing from *** in 2021

⁹¹ CR/PR at V-4.

⁹² CR/PR at II-2, Table II-2.

⁹³ CR/PR at V-1.

⁹⁴ CR/PR at V-1. Worthington reported that the additional duties on steel products imposed pursuant to section 232 of the Trade Expansion Act of 1962 ("section 232 tariffs") had *** the overall demand, supply, price, or raw material cost of NRSCs. *Id.* at II-2. The majority of importers and purchasers reported that section 232 tariffs had no impact or that they did not know the impact of section 232 tariffs on the overall demand, supply, price, or raw material cost of NRSCs. *Id.* at II-2.

⁹⁵ CR/PR at Tables VI-4, VI-5. Worthington's raw material costs comprised *** percent of the cost of goods sold in the merchant market in 2023 while other factory costs comprised *** percent and direct labor comprised *** percent. *Id.* Worthington's total market unit raw material costs rose from \$*** in 2021 to \$*** in 2022, then decreased to \$*** in 2023. *Id.* at Table VI-1. Worthington's raw material costs comprised *** percent of the cost of goods sold in the total market in 2023 while other factory costs comprised *** percent and direct labor comprised *** percent. *Id.*

⁹⁶ CR/PR at Table VI-4. Raw materials as a share of total COGS in the total market increased from *** percent in 2021 to *** percent in 2022, and then decreased to *** percent in 2023. *Id.* at Table VI-1.

⁹⁷ 19 U.S.C. § 1677(7)(C)(i).

⁹⁸ CR/PR at IV-2, Table IV-2. U.S. shipments of subject imports decreased irregularly, initially increasing from *** units in 2021 to *** units in 2022, before decreasing to *** units in 2023, for an overall decline of *** percent. *Id.* at Tables IV-12, C-2.

to *** percent in 2022, before declining to *** percent in 2023, for an overall decline of *** percentage points.⁹⁹

Based on the foregoing, we find that the volume of subject imports is significant in absolute terms and relative to apparent U.S. consumption.¹⁰⁰

D. Price Effects of the Subject Imports

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

(I) there has been significant price underselling by the imported merchandise as compared with the price of domestic like products of the United States, and

(II) the effect of imports of such merchandise otherwise depresses prices to a significant degree or prevents price increases, which otherwise would have occurred, to a significant degree.¹⁰¹

As discussed above in Section IV.B.4., we find that there is a moderate-to-high degree of substitutability between the domestic like product and subject imports and that price is an important factor in purchasing decisions, among other important factors.

We have examined several sources of data for our underselling analysis, including pricing data, import purchase cost data and information concerning lost sales. The Commission asked U.S. producers and importers to provide quarterly data for the f.o.b. value of two NRSCs products shipped to unrelated customers during the POI.¹⁰² Worthington and two importers

⁹⁹ CR/PR at Tables IV-12, C-2. In the total market, subject import market share was *** percent in 2021, *** percent in 2022, and *** percent in 2023. *Id.* at Tables IV-11, C-1.

¹⁰⁰ Commissioner Kearns and Commissioner Karpel note that there was also a dramatic increase in subject imports in the first year of the POI, 2021. An order was imposed on imports of NRSCs from China in May 2021. The Commission found that this increase in subject import volume was significant, both in absolute terms and relative to consumption, in the preliminary investigation. USITC Pub. 5437 (June 2023) at 22 (“*Preliminary Determinations*”). The record in the preliminary phase showed that volume of subject imports in the merchant market increased throughout the POI, from *** units in 2020 to *** units in 2021 and *** units in 2022, a level *** percent higher than in 2020. Subject imports as a share of apparent U.S. consumption in the merchant market increased from *** percent in 2020 to *** percent in 2021 and *** percent in 2022, a level *** percentage points higher than in 2020. Confidential Preliminary Staff Report, INV-VV-047 (June 6, 2023) at Tables IV-6 – IV-7, C-1 – C-2.

¹⁰¹ 19 U.S.C. § 1677(7)(C)(ii).

¹⁰² The two pricing products are as follows:

Product 1.-- Non-refillable steel cylinder, 9.5-inches in diameter, with 260 PSIG service pressure rating, unfilled, meeting the requirements of U.S. Department of Transportation specification 39.

(Continued...)

provided usable pricing data for sales of the requested pricing products, although not all firms reported data for all products for all quarters. Pricing data reported by these firms accounted for *** percent of the domestic industry's U.S. shipments of NRSCs in 2023. Importers did not report any pricing data for 2023, but pricing data reported by importers accounted for *** percent of U.S. commercial shipments of subject imports in 2022.¹⁰³

According to these pricing data, subject imports undersold the domestic like product in two of eight quarterly comparisons, at underselling margins ranging from 7.7 percent to 14.2 percent and averaging 10.9 percent.¹⁰⁴ Subject imports oversold the domestic like product in the remaining six comparisons, at overselling margins ranging from 1.8 percent to 87.3 percent and averaging 18.8 percent.¹⁰⁵ There were 18,000 units of subject imports in the underselling quarters and 38,920 units of subject imports in the overselling quarters. Thus, subject imports undersold the domestic like product in 25.0 percent of quarterly comparisons corresponding to 31.6 percent of reported subject import sales volume.

The Commission also collected import purchase cost data for the same two pricing products from firms that imported NRSCs from India for their own use in the production of filled NRSC. Thirteen importers provided usable purchase cost data for the pricing products, although not all firms reported data for all products for all quarters.¹⁰⁶ Purchase cost data reported by these firms accounted for approximately *** percent of subject imports in 2023.¹⁰⁷ Pricing data accounted for a smaller share of subject imports than purchase cost data over the 2021-2023 period.¹⁰⁸

Based on the purchase cost data obtained by the Commission, landed duty-paid ("LDP") costs for subject imports were below the sales price for domestically produced NRSCs in 17 of 24 quarterly comparisons, at price-cost differentials ranging from *** percent to *** percent

(...Continued)

Product 2.-- Non-refillable steel cylinder, 9.5-inches in diameter, with 400 PSIG service pressure rating, unfilled, meeting the requirements of U.S. Department of Transportation specification 39. CR/PR at V-5.

¹⁰³ CR/PR at V-5.

¹⁰⁴ CR/PR at Table V-11.

¹⁰⁵ CR/PR at Table V-11.

¹⁰⁶ CR/PR at V-10.

¹⁰⁷ CR/PR at V-10.

¹⁰⁸ Commercial shipments accounted for 2.0 percent of total U.S. shipments of Indian NRSCs over the 2021-2023 period. *Derived from* *** Importer Questionnaire Response at Question II-5a (*** was the only responding importer to report commercial shipments of NRSC from India during the POI) and CR/PR at Table IV-11.

and averaging *** percent.¹⁰⁹ LDP costs for subject imports were above the sales prices of domestically produced NRSCs in the remaining seven quarterly comparisons, at price-cost differentials ranging from *** percent to *** percent and averaging *** percent.¹¹⁰ There were *** units of subject imports in the quarters where subject import costs were lower than domestic producer prices and *** units in the quarters where subject import costs were higher than domestic producer prices. Thus, LDP costs for subject imports were lower than the domestic sales prices in 70.8 percent of quarterly comparisons corresponding to 72.9 percent of reported subject import purchases. The LDP costs for subject imports of product 2 were lower than domestic sales prices in all quarterly comparisons with an average price-cost differential of *** percent, and these purchases accounted for 63.8 percent of subject imports.¹¹¹

We recognize that the import purchase cost data may not reflect the total cost of importing and therefore requested that direct importers provide information regarding the additional costs of directly importing NRSCs. Nine of 13 responding importers reported there that they did not incur additional costs beyond LDP costs associated with importing.¹¹² The remaining four responding importers reported that they did incur additional costs, three of which reported that total additional costs ranged from 0.7 to 31.0 percent of the LDP value.¹¹³ Given that subject import purchase costs ranged from *** percent to *** percent below domestic sales prices,¹¹⁴ the inclusion of these additional costs would still leave the cost of importing subject imports frequently below domestic sales prices for these four purchasers, and the majority of importers reported incurring no additional costs.¹¹⁵

U.S. importers were also asked whether the cost of NRSCs that they imported was lower than the price of purchasing NRSCs from a U.S. producer or importer. Nine importers reported that the cost of importing directly was lower than purchasing from a U.S. producer or importer,

¹⁰⁹ CR/PR at Table V-12.

¹¹⁰ CR/PR at Table V-12.

¹¹¹ CR/PR at Table V-12.

¹¹² CR/PR at V-10. These reported additional costs included quality management, financing, shipping, and storage costs, with estimated costs ranging from *** to *** percent of LDP value. *Id.*

¹¹³ CR/PR at V-10. In determining whether to directly import NRSCs, 11 of 16 responding importers reported that they compare costs of importing directly to the cost of purchasing from a U.S. producer, three reported not comparing costs, and two importers reported comparing costs to purchasing from a U.S. importer. CR/PR at V-10.

¹¹⁴ CR/PR at Table V-12.

¹¹⁵ Two of the four importers that reported incurring additional costs as a result of importing (*** and ***) also reported that the cost of importing directly was lower than purchasing from a U.S. producer or importer, even when including the additional costs of importing. CR/PR at V-10; *** Importer Questionnaire at Question III-3d-i; *** Importer Questionnaire at Question III-3d-i.

even when including any additional costs of importing.¹¹⁶ Two importers estimated that they saved between *** percent of the purchase price by importing directly, including additional costs of importing, rather than purchasing from a U.S. importer.¹¹⁷ Eight importers estimated that they saved between *** percent of the purchase price by importing directly, including additional costs of importing, rather than purchasing from a U.S. producer.¹¹⁸

We have also considered information concerning lost sales. Of seven responding purchasers, six reported that they purchased subject imports rather than domestically produced NRSCs since January 2021.¹¹⁹ Five responding purchasers reported that subject import prices were lower than domestically produced NRSCs,¹²⁰ although no responding purchasers reported that price was a primary reason for the decision to purchase subject imports instead of the domestic like product.¹²¹ Responding purchasers reported that their purchases of domestically produced NRSCs increased as a share of their total purchases by *** percentage points from 2021 to 2023, while their purchases of subject imports increased as a share of their total purchases by *** percentage points over the same period.¹²²

Based on the moderate-to-high degree of substitutability between the domestic like product and subject imports, the importance of price in purchasing decisions, the purchase cost data showing that subject imports were predominantly priced lower than the domestic like product in quarters accounting for 72.9 percent of reported subject import purchases, and several purchasers reporting that subject imports were lower priced in the lost sales information, we find that subject import underselling was significant.¹²³

¹¹⁶ CR/PR at V-10. Importer *** reported inland freight costs, chassis rentals, and demurrage fees incurred between 14 and 21 percent additional costs as a result of importing NRSCs, while financing costs were between 1 to 3 percent, for total additional costs between 15 and 23 percent. *Id.*

¹¹⁷ CR/PR at V-11.

¹¹⁸ CR/PR at V-11.

¹¹⁹ CR/PR at V-21 & Table V-14.

¹²⁰ CR/PR at V-21 & Table V-14.

¹²¹ CR/PR at V-21 & Table V-14. Firms that reported purchasing subject imports instead of the domestic like product reported non-price reasons for such purchases, including increased availability of NRSCs, a diversified supply chain, decreased wait times, and increased ease of doing business. *Id.* However, as discussed below, other contemporaneous documentation on the record shows that the domestic industry lost additional sales to subject imports primarily due to price during the POI.

¹²² CR/PR at Table V-13.

¹²³ As subject imports significantly undersold the domestic like product during the POI, subject imports gained *** percentage points of market share in the merchant market from the domestic (Continued...)

We have also considered price trends during the POI. For both pricing products, the domestic industry's sales prices increased between the first and last quarters of the POI.¹²⁴ This overall trend, however, obscures the price declines of domestically produced NRSCs that occurred during the second half of the period.¹²⁵ The pricing data show that prices for domestically produced NRSCs generally increased from the first quarter of 2021 through the second quarter of 2022 before declining through the fourth quarter of 2023.¹²⁶ For pricing product 1, domestic prices increased *** percent from the first quarter of 2021 to the second quarter of 2022, before decreasing *** percent from the second quarter of 2022 to the fourth quarter of 2023.¹²⁷ For pricing product 2, domestic prices increased *** from the first quarter of 2021 to the second quarter of 2022, before decreasing *** percent from the second quarter of 2022 to the fourth quarter of 2023.¹²⁸ Generally, the purchase cost data show subject imports' LDP costs followed this same pattern, increasing from the beginning of 2021 until mid-2022, before decreasing through the end of 2023.¹²⁹ For pricing product 1, subject import LDP costs increased *** percent from the first quarter of 2021 to the second quarter of 2022, before decreasing *** percent from the second quarter of 2022 to the fourth quarter of 2023.¹³⁰ Similarly, for pricing product 2, subject import LDP costs increased *** percent from the first quarter of 2021 to the second quarter of 2022, before decreasing *** percent from the

(...Continued)

industry from 2021 to 2022. CR/PR at Table C-2. In the total market, subject imports gained *** percentage points in market share from the domestic industry from 2021 to 2022. *Id.* at Table C-1.

¹²⁴ The domestic industry's price for pricing product 1 increased *** between the first quarter of 2021 and the fourth quarter of 2023 percent and the price for pricing product 2 increased *** percent over the POI. CR/PR at Table V-8.

¹²⁵ CR/PR at Tables V-6-7

¹²⁶ See CR/PR at Figs. V-4-5.

¹²⁷ *Calculated from* CR/PR at Table V-6 (calculated percentage declines from first quarter 2021 to second quarter 2022, and second quarter 2022 to fourth quarter 2023).

¹²⁸ *Calculated from* CR/PR at Table V-7 (calculated percentage declines from first quarter 2021 to second quarter 2022, and second quarter 2022 to fourth quarter 2023).

¹²⁹ CR/PR at Tables V-6-7. Reported LDP purchase costs for subject imports for pricing products 1 decreased *** percent and pricing for product 2 increased *** percent over the POI. *Id.* at Table V-8. Pricing data for subject imports was limited to four quarters of the POI and was insufficient to establish trends the entire POI. *Id.* at V-16. From third quarter of 2021 through the second quarter of 2022, subject import prices increased for both pricing products, increasing *** percent for pricing product 1 and *** percent from pricing product 2. *Id.* at Tables V-4-5.

¹³⁰ CR/PR at Table V-6 (calculated percentage declines from first quarter 2021 to second quarter 2022, and second quarter 2022 to fourth quarter 2023).

second quarter of 2022 to the fourth quarter of 2023.¹³¹

As explained above, the record reflects that Worthington's prices increased for both pricing products during the first half of the POI.¹³² As subject imports increased in the U.S. market during this time, they gained *** percentage points of market share in the merchant market at the domestic industry's expense between 2021 and 2022.¹³³ In the face of intensifying competition from significant volumes of low-priced subject imports, Worthington was forced to lower its prices from mid-2022 into 2023 to compete with subject imports in an effort to retain sales and gain back market share.¹³⁴ Declarations and contemporaneous business documents provided by Worthington, including purchaser emails, show that purchasers notified Worthington of lower priced offers for subject imports and used the offers to force Worthington to reduce prices.¹³⁵ Consistent with this evidence, Worthington representatives testified at the hearing that competition from low-priced subject imports forced Worthington to lower prices.¹³⁶ As a consequence, the domestic industry's prices declined for both pricing products during the second half of the POI.¹³⁷

The record shows that subject imports substantially contributed to the decline in the domestic industry's prices between 2022 and 2023. Although apparent U.S. consumption declined during the period, the record evidence is mixed on the extent to which changes in apparent U.S. consumption were perceived by market participants and whether any perceived demand trends would have also placed downward pressure on prices.¹³⁸ Contrary to the apparent U.S. consumption data, Worthington reported that *** during the POI, a majority of responding importers reported that demand either did not change or increased steadily during

¹³¹ CR/PR at Table V-7 (calculated percentage declines from first quarter 2021 to second quarter 2022, and second quarter 2022 to fourth quarter 2023).

¹³² CR/PR at Table V-6-7.

¹³³ CR/PR at Tables IV-12, C-2. In the total market, subject imports took *** percent of market share from the domestic industry from 2021 to 2022. *Id.* at Tables IV-11, C-1.

¹³⁴ CR/PR at Table V-6-7, C-2.

¹³⁵ Petitioner's Prehearing Br. at Exhibit 1; Petitioner's Postconference Br. at Atts. 2-4, 6-9, 10-16. For example, *** *Id.* at Exhibit 3 Paragraph 21, Att. 7. ***. *Id.* at Atts. 15-16. ***. *Id.* at Atts. 11-12.

¹³⁶ Hearing Transcript at 24 (Bowes) ("we chose not to continue ceding market share to the Indian producers... but the only way to achieve that was to lower our prices to attempt to compete with the Indian producers' pricing").

¹³⁷ CR/PR at Tables V-6-7.

¹³⁸ As noted above, apparent U.S. consumption of NRSCs in the merchant market declined by *** percent over the POI, with a *** percent decrease from 2022 to 2023. CR/PR at Table C-2. Apparent U.S. consumption in the total market declined *** percent over the POI, with a *** percent decrease from 2022 to 2023. CR/PR at Table C-1.

the period, and a majority of responding purchasers reported that demand either did not change, increased steadily, or fluctuated up during the period.¹³⁹ Furthermore, declarations, contemporaneous business documents, and testimony provided by Petitioner indicate that purchasers used the availability of low-priced subject imports to extract lower prices from Worthington.¹⁴⁰ Thus, we do not find that the decline in apparent U.S. consumption explains the price declines experienced by the domestic industry in 2023, particularly in light of the other record evidence reviewed above showing that subject imports exerted downward pricing pressure on domestic producer prices. We further observe that while the domestic industry's per-unit raw material costs and total per-unit COGS declined from 2022 to 2023, these declines do not explain the extent of the price declines in 2023 as the industry's net sales AUV declined to a greater degree.¹⁴¹

Consequently, we find that the significant quantity of low-priced subject imports depressed domestic prices to a significant degree.

We have also examined whether subject imports prevented price increases which otherwise would have occurred to a significant degree. Worthington's COGS-to-net-sales ratio for its merchant market sales increased *** percentage points over the POI, increasing from *** percent in 2021 and 2022 to *** percent in 2023.¹⁴² Specifically, the domestic industry's unit COGS for its merchant market sales increased by \$*** per unit, or *** percent, over the POI, increasing from \$*** in 2021 to \$*** in 2022 before decreasing to \$*** in 2023.¹⁴³ Its net sales AUV for merchant market shipments increased \$*** per unit, or *** percent, during the POI, increasing from \$*** in 2021 to \$*** in 2022 and then decreased to \$*** in 2023.¹⁴⁴ Although the domestic industry's ratio of COGS-to-net sales deteriorated over the POI,

¹³⁹ CR/PR at Table II-5.

¹⁴⁰ One purchaser also confirmed that domestic producers had reduced prices to compete with lower-priced subject imports during the POI. CR/PR at V-21.

¹⁴¹ CR/PR Table C-1. For its merchant market sales, Worthington's unit raw material costs declined from \$*** in 2022 to \$*** in 2023 and its unit COGS declined from \$*** to \$*** from 2022 to 2023 while its unit net sales AUVs declined from \$*** to \$***. CR/PR at Table VI-4. Worthington reported selling NRSCs primarily through *** in 2023 and that its ***. CR/PR at V-4.

¹⁴² CR/PR at Tables VI-4, C-2. In the total market, Worthington's ratio of COGS to net sales increased by *** percentage points over the POI, from *** percent in 2021, to *** percent in 2022 and *** percent in 2023. *Id.* at Tables VI-1, C-1.

¹⁴³ CR/PR at Tables VI-4, VI-5, C-2. In the total market, Worthington's unit COGS increased \$*** over the POI, increasing from \$*** in 2021 to \$*** in 2022 before decreasing to \$*** in 2023, for an overall increase of *** percent. *Id.* at Tables VI-1, VI-2, C-1.

¹⁴⁴ CR/PR at Tables VI-5, VI-6, C-2. In the total market, net sales AUV increased \$*** per unit during the POI, rising from \$*** in 2021 to \$*** in 2022 and then falling to \$*** in 2023, for an overall increase of *** percent. *Id.* at Tables VI-1, VI-2, C-1.

specifically in 2023, we do not find that subject imports prevented price increases which otherwise would have occurred to a significant degree. In 2023, domestic producer prices were declining, as were its COGS.¹⁴⁵ As COGS declined, it would be expected, particularly given domestic producers' ***,¹⁴⁶ to prompt declines in domestic producer prices. Thus, we do not view 2023 as a period where price increases otherwise would have occurred to a significant degree. However, as discussed above, net sales AUVs fell to a greater degree than COGS, and we attribute this to the price depressing effects of subject imports in 2023.¹⁴⁷

In sum, we find that subject imports significantly undersold the domestic like product and depressed prices for the domestic like product to a significant degree. Consequently, we find that subject imports had significant price effects.

¹⁴⁵ CR/PR at Tables VI-4, VI-5, C-2.

¹⁴⁶ CR/PR at V-4.

¹⁴⁷ Commissioner Kearns finds that the domestic industry's prices were suppressed by subject imports from the beginning of the POI and throughout it. Worthington's COGS/net sales ratio had steadily increased since the start of the record in the prior investigation concerning NRSCs from China. The COGS/net sales ratio was *** percent in 2017, *** percent in 2018, and *** percent in 2019. As a result, the Commission found price suppression in the China investigation. *Non-Refillable Steel Cylinders from China*, Inv. Nos. 701-TA-644 and 731-TA-1494 (Final), USITC Pub. 5188 at 24 (May 2021).

As Worthington continued to face competition from low-priced imports from China in 2020, the COGS/net sales ratio further deteriorated to *** percent and Worthington's operating margin was negative *** percent. Preliminary Phase CR/PR at Table C-2. At the start of the current POI, in 2021, after years of price suppression by NRSCs from China, Worthington was still unable to price its product at a level to achieve profitable operations due to low-priced imports that were now arriving from India instead of China, even as apparent consumption peaked. In 2021, Worthington's COGS/net sales ratio was *** percent and its operating margin was negative *** percent. CR/PR at Table C-2.

Worthington's costs continue to rise during the current POI, but it had limited ability to raise prices. The domestic industry's unit COGS increase of \$*** outpaced the increase in its net sales AUV of \$*** over the 2021-23 period. Worthington's COGS/net sales ratio increased from *** percent in 2021 to *** percent in 2023. CR/PR at Table C-2. Thus, the industry experienced a cost-price squeeze just as it had in prior years due to imports from China. All components of Worthington's COGS contributed to this cost-price squeeze. In particular, the ratio of Worthington's raw material costs to sales increased from *** percent in 2021 to *** percent in 2023. CR/PR at Table VI-4. All told, from 2017 to 2023, Worthington's COGS/net sales ratio increased from *** percent to *** percent as its unit COGS increased by \$*** and net sales AUV increased by ***.

Information in the record indicates several instances of purchasers putting downward pricing pressure on Worthington using the availability of lower-priced subject imports during the POI. For example, Hudson quoted lower Indian prices to Worthington starting in late 2020 to drive down Worthington's quoted prices (Petitioner's Prehearing Br. at Exh. 2, para. 20). This indicates that subject imports played an important role in the domestic industry's inability to raise prices in line with increases in input costs.

E. Impact of the Subject Imports¹⁴⁸

Section 771(7)(C)(iii) of the Tariff Act provides that examining the impact of subject imports, the Commission “shall evaluate all relevant economic factors which have a bearing on the state of the industry.”¹⁴⁹ These factors include output, sales, inventories, capacity utilization, market share, employment, wages, productivity, gross profits, net profits, operating profits, cash flow, return on investment, return on capital, ability to raise capital, ability to service debts, research and development, and factors affecting domestic prices. No single factor is dispositive and all relevant factors are considered “within the context of the business cycle and conditions of competition that are distinctive to the affected industry.”¹⁵⁰

During the POI, the domestic industry’s production, capacity utilization, and U.S. shipments declined, its inventories increased, and its employment indicators were mixed. The industry’s financial indicators, including its gross profit, operating income, net income, and

¹⁴⁸ In its final determination of sales at less-than-fair-value, Commerce found dumping margins of 0.0 to 6.27 percent for imports from India. *Final Affirmative Determination in the Less-Than-Fair-Value Investigation of Certain Non-Refillable Steel Cylinders From India*, 89 Fed. Reg. 29294, 29295 (Apr. 22, 2024). Commerce calculated a *de minimis* dumping margin of 0.00 for Inox. *See id.* at 29295. We take into account in our analysis the fact that Commerce has made a final finding that all subject producers in India except for one are selling subject imports in the United States at LTFV. In addition to this consideration, our impact analysis has considered other factors affecting domestic prices. Our analysis of the significant underselling and price depressing effect of subject imports, discussed in both the price effects section and below, is particularly probative to our assessment of the impact of the subject imports.

We are unpersuaded by Inox’s argument that because it received a *de minimis* dumping margin and a “minor” subsidy margin, subject imports from Inox could not have injured the domestic industry. Inox’s Posthearing Br. at 1. The statute instructs the Commission to consider the “magnitude of the dumping margin” in an antidumping proceeding as part of its consideration of the impact of imports. 19 U.S.C. § 1677(7)(C)(iii)(V). The Court has held that “the statutory language does not ‘require that ITC demonstrate the dumped imports, through the effects of particular margins of dumping, are causing injury. Rather ITC must examine the effects of imports of a class or kind of merchandise which is found to be sold at LTFV and make its conclusion about causation accordingly.’” *Titanium Metal Corp. v. United States*, 155 F. Supp. 2d 750, 757 (Ct. Int’l Trade 2002). Subject imports from Inox remain subject to the countervailing duty investigation and we have considered the impact of all subject imports on the domestic industry.

¹⁴⁹ 19 U.S.C. § 1677(7)(C)(iii); *see also* SAA at 851 and 885 (“In material injury determinations, the Commission considers, in addition to imports, other factors that may be contributing to overall injury. While these factors, in some cases, may account for the injury to the domestic industry, they also may demonstrate that an industry is facing difficulties from a variety of sources and is vulnerable to dumped or subsidized imports.”).

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

operating and net income margins all sharply declined over the POI.¹⁵¹

The domestic industry's practical NRSCs capacity increased by *** percent during the POI as Worthington's new production line was completed in February 2022.¹⁵² Practical NRSCs capacity increased from *** units in 2021 to *** units in 2022 and 2023.¹⁵³ Its production decreased by *** percent during the POI, however, increasing from *** units in 2021 to *** units 2022 and then falling to *** units in 2023.¹⁵⁴ Accordingly, the industry's capacity utilization decreased from *** percent in 2021 to *** percent in 2022 and *** percent in 2023, a level *** percentage points lower than in 2021.¹⁵⁵ As Worthington's capacity increased from 2021 to 2022, low-priced subject imports captured *** percentage points of market share from the domestic industry, which limited Worthington's ability to utilize its new capacity and contributed to the decline in the industry's rate of capacity utilization during the period.¹⁵⁶

Worthington's employment indicators were mixed. The number of production and related workers ("PRWs") increased from *** PRWs in 2021 to *** PRWs in 2022, and then decreased to *** PRWs in 2023, for an overall decrease of *** percent.¹⁵⁷ Hours worked declined irregularly by *** percent during the POI, rising from *** hours in 2021 to *** hours in 2022 before falling to *** hours in 2023.¹⁵⁸ Wages paid increased irregularly by *** percent during the POI, rising from \$*** in 2021 to \$*** in 2022 and then falling to \$*** in 2023.¹⁵⁹ Productivity declined irregularly by *** percent during the POI, decreasing from *** units per hour in 2021 to *** units per hour in 2022, and then increasing to *** units per hour in 2023.¹⁶⁰

The domestic industry's U.S. shipments in the merchant market decreased from *** units in 2021 to *** units in 2022, and *** units in 2023, a level *** percent lower than in 2021.¹⁶¹ The industry's share of apparent U.S. consumption in the merchant market decreased

¹⁵¹ CR/PR at Table C-2.

¹⁵² CR/PR at Table III-5 & n.3.

¹⁵³ CR/PR at Table III-5.

¹⁵⁴ CR/PR at Table III-5.

¹⁵⁵ CR/PR at Tables III-5, C-1.

¹⁵⁶ CR/PR at Tables III-5, C-2. In the total market, subject imports captured *** percentage points of market share from the domestic industry. *Id.* at Table C-1.

¹⁵⁷ CR/PR at Table III-14. Petitioner asserts that it was *** in November 2022, and that in January 2023 it was *** due to low-priced subject imports taking market share and reducing Worthington's sales and production. Petitioner Prehearing. Br. at Exhibit 2 ¶ 17.

¹⁵⁸ CR/PR at Tables III-14, C-1.

¹⁵⁹ CR/PR at Tables III-14, C-1.

¹⁶⁰ CR/PR at Tables III-14, C-1.

¹⁶¹ CR/PR at Tables III-8, C-2. In the total market, Worthington's U.S. shipments decreased from *** units in 2021, to *** units in 2022, and *** units in 2023. Thus, domestic producer's U.S. shipments in the total market declined *** percent over the POI. CR/PR at Tables III-7, C-1.

from *** percent in 2021 to *** percent in 2022, and then increased to *** percent in 2023, a loss of *** percentage points of market share over the POI.¹⁶²

The domestic industry's end-of-period inventories increased irregularly by *** percent from 2021 to 2023, increasing from *** units in 2021 to *** units in 2022 before decreasing to *** units in 2023.¹⁶³ As a share of total shipments, the domestic industry's end-of-period inventories increased from *** percent in 2021 to *** percent in 2022, and then decreased to *** percent in 2023, a level *** percentage points higher than in 2021.¹⁶⁴

The domestic industry's financial indicators also deteriorated over the POI. The industry's commercial sales revenue in the merchant market decreased irregularly by *** percent over the POI, rising from \$*** in 2021 to \$*** in 2022, before falling to \$*** in 2023.¹⁶⁵ The industry's gross profits in the merchant market decreased irregularly by *** percent over the POI, rising from \$*** in 2021 to \$*** in 2022, and then falling to \$*** in 2023.¹⁶⁶ The industry's operating income in the merchant market declined irregularly, increasing from *** in 2021 to \$*** in 2022 and then decreasing to *** in 2023.¹⁶⁷ Similarly, its net income in the merchant market declined irregularly, increasing from *** in 2021 to \$*** in 2022 and then decreasing to *** in 2023.¹⁶⁸ As a ratio to net sales, the industry's operating income in the merchant market declined irregularly by *** percentage points, initially improving from *** percent in 2021 to *** percent in 2022 and then decreasing to *** percent in 2023.¹⁶⁹ Its net income as a share of net sales in the merchant market declined irregularly by *** percentage points, initially improving from *** percent in 2021 to *** percent in 2022 and

¹⁶² CR/PR at Tables IV-12, C-2. In the total market, Worthington's market share decreased from *** percent in 2021 to *** percent in 2022, before increasing to *** percent in 2023. Thus, domestic producer's share of the total market increased *** percentage points over the POI. CR/PR at Tables IV-11, C-1.

¹⁶³ CR/PR at Table III-11.

¹⁶⁴ CR/PR at Table III-11.

¹⁶⁵ CR/PR at Tables VI-4, C-2. Net sales value in the total market increased from \$*** in 2021 to \$*** in 2022, and then declined to \$*** in 2023, for a decline of *** percent over the POI. *Id.* at Tables VI-1, C-1.

¹⁶⁶ CR/PR at Tables VI-4, C-2. In the total market, gross profits increased from \$*** in 2021 to \$*** in 2022, and then declined to \$*** in 2023, for a decline of *** percent over the POI. *Id.* at Tables VI-1, C-1.

¹⁶⁷ CR/PR at Tables VI-4, C-2. In the total market, its operating income increased from *** in 2021 to \$*** in 2022, and decreased to *** in 2023. *Id.* at Tables VI-1, C-1.

¹⁶⁸ CR/PR at Tables VI 4, C-2. The domestic industry's net income in the total market increased from *** in 2021 to \$*** in 2022, and decreased to *** in 2023. *Id.* at Tables VI-1, C-1.

¹⁶⁹ CR/PR at Tables VI-4, C-2. In the total market, its ratio of operating income to net sales increased from *** percent in 2021 to *** percent in 2022 and decreased to *** percent in 2023. *Id.* at Tables VI -1, C-1.

then decreasing to *** percent in 2023.¹⁷⁰

The domestic industry's capital expenditures decreased during the POI from \$*** in 2021 to \$*** in 2022 and \$*** in 2023,¹⁷¹ while R&D expenses declined irregularly, initially increasing from \$*** in 2021 to \$*** in 2022 and then decreasing to \$*** in 2023.¹⁷² According to Worthington, the capital expenditures reflect ***, and the increase in R&D expenses reflect ***.¹⁷³ The industry's return on assets declined irregularly over the POI, rising from *** percent in 2021 to *** percent in 2022 before falling to *** percent in 2023.¹⁷⁴

As discussed above, we have found that the significant volume of subject imports undersold the domestic like product to a significant degree during the POI. These low-priced subject imports gained market share from the domestic industry from 2021 to 2022, forcing domestic producers to reduce their prices from mid-2022 through 2023 in an effort to defend and regain market share. As significant volumes of low-priced subject imports depressed prices for the domestic like product to a significant degree, subject imports had a significant impact on the domestic industry's financial performance, which was weaker than it otherwise would have been.¹⁷⁵

We have considered whether there are other factors that may have had an impact on the domestic industry during the POI, including nonsubject imports and demand trends, to ensure that we are not attributing injury from other factors to subject imports. Nonsubject imports accounted for a relatively small share of apparent U.S. consumption in the merchant market as compared to subject imports.¹⁷⁶ Nonsubject imports accounted for *** percent of apparent U.S. consumption in the merchant market in 2021, *** percent in 2022, and *** percent in 2023.¹⁷⁷ Although nonsubject imports increased market share from 2021 to 2022, that cannot account for the loss of the domestic industry's market share to subject imports

¹⁷⁰ CR/PR at Tables VI-4, C-2. In the total market, its ratio of net income to net sales increased from *** percent in 2021 to *** percent in 2022 and decreased to *** percent in 2023. *Id.* at Tables VI-1, C-1.

¹⁷¹ CR/PR at Tables VI-7, C-1. The industry's capital expenditures decreased *** percent over the POI. *Id.*

¹⁷² CR/PR at Tables VI-7, C-1. Thus, R&D expenses decreased *** percent over the POI. *Id.*

¹⁷³ CR/PR at Table VI-8.

¹⁷⁴ CR/PR at Table VI-7.

¹⁷⁵ As noted above, Commissioner Kearns finds that the significant volume of low-priced subject imports during the POI also prevented price increases for the domestic like product that would otherwise have occurred.

¹⁷⁶ CR/PR at Tables IV-14 and C-2.

¹⁷⁷ CR/PR at Tables IV-14 and C-2. Nonsubject imports' share of the U.S. total market was *** percent in 2021, *** percent in 2022, and *** percent in 2023. *Id.* at Table C-1.

over the same period. In addition, available purchase cost data show that nonsubject imports from China, the single largest source of nonsubject imports, had LDP purchase costs that were higher than the LDP costs of subject imports and the domestic industry's sales prices for domestically produced NRSCs in all quarters for which data were available throughout the POI.¹⁷⁸ Accordingly, we find that nonsubject imports cannot explain the significant price depression that we have attributed to subject imports and the resulting declines in the domestic industry's financial performance in the second half of the POI.

We recognize that apparent U.S. consumption in the merchant market declined by *** percent from 2021 to 2022 and then by *** percent from 2022 to 2023 for a *** percent decline from 2021 to 2023.¹⁷⁹ However, as discussed in section V.D above, the questionnaire responses of Worthington and a majority of responding importers and purchasers report that demand either did not change, increased steadily, or fluctuated up during the POI.¹⁸⁰ Thus, it does not appear that most market participants perceived a decline in demand that likely would have affected their price negotiations. Furthermore, the record shows that subject imports significantly undersold the domestic like product during the POI and that contemporaneous evidence shows purchasers used the availability of low-priced subject imports to extract lower prices from Worthington during the period.¹⁸¹ Given this, demand trends do not explain the significant price depression that we have attributed to subject imports and the resulting declines in the domestic industry's financial performance.

We also recognize that Worthington reported that it experienced supply constraints from *** and extended lead times for its *** during that time.¹⁸² However, we find that the domestic industry's supply constraints, most of which were in 2021, do not explain the large

¹⁷⁸ Compare CR/PR at Tables D-1, D-2 with Table V-4; see also *id.* at D-3. Nonsubject imports from China accounted for *** percent of apparent U.S. consumption in the merchant market in 2023, while nonsubject imports from all other sources accounted for *** percent. CR/PR at Table C-2. In the total market, nonsubject imports from China accounted for *** percent of apparent U.S. consumption and nonsubject imports from all other sources accounted for *** percent. *Id.* at Table C-1.

¹⁷⁹ CR/PR at Table C-2. Apparent U.S. consumption in the total market declined *** percent between from 2021 to 2023. *Id.* at Table C-1.

¹⁸⁰ CR/PR at Table II-5.

¹⁸¹ Petitioner's Prehearing Br. at Exhibit 1; Petitioner's Postconference Br. at Atts. 2-4, 6-9, 10-16.

¹⁸² See CR/PR at II-6; Petitioner's Postconference Br., Exhibit 1 at 3. Petitioner asserts that to the extent it was not able to meet total market demand from its practical capacity in 2021, that was largely due to the longer-term history of competition with unfairly traded imports, particularly those from China dating back to 2015. Petitioner asserts that it shut down its NRSCs production facility in Rhode Island in 2018 as a result. Petitioner's Prehearing Br. at 17.

volumes of low-priced subject imports throughout the POI that significantly undersold the domestic like product throughout the POI and depressed the domestic industry's prices in the second half of the POI. Despite Worthington's supply constraints substantially declining in 2022 as it began operation of its new production line in February 2022, subject import volume and market share peaked in 2022 as subject imports undersold domestically produced NRSCs.¹⁸³ As discussed above, contemporaneous documentation on the record shows that the domestic industry lost additional sales to subject imports primarily due to price during the POI.¹⁸⁴ Additionally, majorities of responding purchasers reported that the domestic like product was "comparable" or "superior" in "availability", "delivery time", and "minimum quantity requirements" to subject imports, and half of responding purchasers reported that the domestic like product was "comparable" in "reliability of supply" to subject imports.¹⁸⁵ Lastly, Worthington's lead times were generally comparable or shorter than the lead times reported by U.S. importers of subject imports during the POI.¹⁸⁶ Accordingly, we find that domestic industry supply constraints do not explain the injury that we have found to the domestic industry caused by significant volumes of low-priced imports that significantly undersold the domestic like product and depressed the domestic industry's prices to a significant degree.

In sum, based on the record of the final phase of these investigations, we find that subject imports had a significant impact on the domestic industry.

VI. Conclusion

For the reasons stated above, we determine that an industry in the United States is materially injured by reason of subject imports of NRSCs from India that have been found by Commerce to be sold in the United States at LTFV and subsidized by the government of India.

¹⁸³ CR/PR at Tables III-3, C-1-2.

¹⁸⁴ Petitioner's Prehearing Br. at Exhibit 1; Petitioner's Postconference Br. at Atts. 2-4, 6-9, 10-16.

¹⁸⁵ CR/PR at Table II-13.

¹⁸⁶ In 2021, Worthington's average lead time was *** days for contract sales made from inventories or produced to order and its spot sales from inventories or produced to order had extended average lead times of *** days. Importers reported average lead times of *** days for subject imports during this time. In 2022 and 2023, Worthington's average lead times ranged from *** to *** days, while responding importers reported lead times of *** days for subject imports in 2022. As responding importers primarily reported direct imports for internal use, they did not report commercial shipments specifically in 2023. CR/PR at II-13, V-10, Tables II-9-10.

Part I: Introduction

Background

These investigations result from petitions filed with the U.S. Department of Commerce (“Commerce”) and the U.S. International Trade Commission (“USITC” or “Commission”) by Worthington Industries, Columbus, Ohio, on April 27, 2023, alleging that an industry in the United States is materially injured and threatened with material injury by reason of subsidized and less-than-fair-value (“LTFV”) imports of non-refillable steel cylinders (“NRSCs”)¹ from India. Table I-1 presents information relating to the background of these investigations.^{2 3}

Table I-1

NRSCs: Information relating to the background and schedule of this proceeding

Effective date	Action
April 27, 2023	Petitions filed with Commerce and the Commission; institution of the Commission's investigations (88 FR 27920, May 3, 2023)
May 17, 2023	Commerce's notice of initiation of LTFV investigation (88 FR 33571, May 24, 2023)
May 17, 2023	Commerce's notice of initiation of countervailing duty (“CVD”) investigation (88 FR 33580, May 24, 2023)
June 12, 2023	Commission's preliminary determinations (88 FR 39476, June 16, 2023)
September 29, 2023	Commerce's preliminary CVD determination (88 FR 67231, September 29, 2023)
December 1, 2023	Commerce's preliminary LTFV determination (88 FR 83906, December 1, 2023); scheduling of final phase of Commission investigations (88 FR 86379, December 13, 2023)
April 15, 2024	Commerce's final LTFV determination (89 FR 29294, April 22, 2024)
April 15, 2024	Commerce's final CVD determination (89 FR 29296, April 22, 2024)
April 16, 2024	Commission's hearing
May 16, 2024	Scheduled date for the Commission's vote
May 28, 2024	Scheduled date for the Commission's views

¹ See the section entitled “The subject merchandise” in Part I of this report for a complete description of the merchandise subject in this proceeding.

² Pertinent Federal Register notices are referenced in appendix A, and may be found at the Commission's website (www.usitc.gov).

³ Appendix B is reserved for the witnesses appearing at the Commission's hearing.

Statutory criteria

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

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

Section 771(7)(C) of the Act (19 U.S.C. § 1677(7)(C)) further provides that--⁴

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

⁴ Amended by PL 114-27 (as signed, June 29, 2015), Trade Preferences Extension Act of 2015.

In addition, Section 771(7)(J) of the Act (19 U.S.C. § 1677(7)(J)) provides that—⁵

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

Organization of report

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

Market summary

NRSCs are portable, non-refillable steel tanks used to contain liquefied or compressed gases such as refrigerants or helium, or other materials such as insulating foam sealant or adhesive. The only known U.S. producer of NRSCs is Worthington Industries ("Worthington"), while leading producers of NRSCs outside the United States include Inox India Limited, Bhiwadi Cylinders Private Limited, and Mauria Udyog Limited of India. The leading U.S. importers of NRSCs from India are National Refrigerants, Inc. and Unique Industries, Inc., also the leading importers of NRSCs from ***. U.S. purchasers of NRSCs are firms that fill NRSCs with refrigerants, other gases such as helium, or foam adhesives or sealants for sale to HVAC, construction, or retail industries; leading purchasers include ***.

Apparent U.S. consumption of NRSCs totaled approximately *** units (\$***) in 2023. The sole U.S. producer's U.S. shipments of NRSCs totaled *** units (\$***) in 2023, and accounted for *** percent of apparent U.S. consumption by quantity and *** percent by value. U.S. imports from the subject source totaled ***

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

units (\$***) in 2023 and accounted for *** percent of apparent U.S. consumption by quantity and *** percent by value. U.S. imports from nonsubject sources totaled *** units (\$***) in 2023 and accounted for *** percent of apparent U.S. consumption by quantity and *** percent by value.

Summary data and data sources

A summary of data collected in these investigations is presented in appendix C, tables C-1 and C-2. Except as noted, U.S. industry data are based on questionnaire responses of one firm that accounted for 100 percent of U.S. production of NRSCs during 2023. U.S. imports are based on the questionnaire responses of 18 importers that accounted for *** percent of official import statistics for subject sources, and *** percent of official import statistics for nonsubject sources, under Harmonized Tariff Schedule of the United States statistical reporting numbers 7311.00.0060 and 7311.00.0090 in 2022.⁶

Previous and related investigations

NRSCs have been the subject of one prior countervailing and antidumping duty investigation in the United States. In March 2020, Worthington filed petitions alleging that an industry in the United States was materially injured or threatened with material injury by reason of subsidized and LTFV imports of NRSCs from China. In May 2021, antidumping and countervailing duties were imposed on imports of NRSCs from China, following an affirmative injury determination by the Commission.⁷ On March 12, 2024, Commerce determined that NRSCs with water capacities between 100 and 299 cubic inches produced in China and exported to the United States are circumventing the antidumping and countervailing duty orders on NRSCs from China.⁸

⁶ Although HTS statistical reporting numbers 7311.00.0060 and 7311.00.0090 are “basket categories” which may contain nonsubject merchandise, petitioner asserts that these categories account for the “vast majority, if not all” NRSCs entering the United States. Conference transcript, p. 88 (Ringel). For more information, see part IV of this report.

⁷ 86 FR 25839, May 11, 2021.

⁸ 89 FR 17814, March 12, 2024.

Nature and extent of subsidies and sales at LTFV

Subsidies

On April 15, 2024, Commerce published a notice in the Federal Register of its final determination of countervailable subsidies for producers and exporters of NRSCs from India.⁹ Table I-2 presents Commerce's findings of subsidization of NRSCs in India.

Table I-2
NRSCs: Commerce's final subsidy determination with respect to imports from India

Entity	Subsidy rate <i>ad valorem</i> (percent)
Bhiwadi Cylinders Private Limited ¹	2.48
Inox India Ltd	2.26
All others	2.38
¹ Commerce finds the following company is cross-owned with Bhiwadi Cylinders Private Limited: Sapphire (India) Private Limited.	

Source: 89 FR 29296, April 22, 2024.

Note: For further information on programs determined to be countervailable, see Commerce's associated Issues and Decision Memorandum for Investigation C-533-913, issued April 15, 2024.

Sales at LTFV

On April 15, 2024, Commerce published a notice in the Federal Register of its final determination of sales at LTFV with respect to imports from India.¹⁰ Table I-3 present Commerce's dumping margins with respect to imports of NRSCs from India.

Table I-3
NRSCs: Commerce's final weighted-average LTFV margins with respect to imports from India

Exporter/Producer	Weighted-average dumping margin (percent)
Bhiwadi Cylinders Private Limited; Sapphire (India) Private Limited	6.27
Inox India Limited	0.00
All others	6.27

Source: 89 FR 29294, April 22, 2024.

⁹ 89 FR 29296, April 22, 2024.

¹⁰ 89 FR 29294, April 22, 2024.

The subject merchandise

Commerce's scope

In the current proceeding, Commerce has defined the scope as follows:¹¹

The merchandise covered by this investigation is certain seamed (welded or brazed), non-refillable steel cylinders meeting the requirements of, or produced to meet the requirements of, U.S. Department of Transportation specification 39, TransportCanada specification 39M, or United Nations pressure receptacle standard ISO 11118 and otherwise meeting the description provided below (non-refillable steel cylinders). The subject non-refillable steel cylinders are portable and range from 100-cubic inch (1.6 liter) water capacity to 1,526-cubic inch (25 liter) water capacity. Subject non-refillable steel cylinders may be imported with or without a valve and/or pressure release device and are unfilled at the time of importation. Non-refillable steel cylinders filled with pressurized air otherwise meeting the physical description above are covered by this investigation.

Specifically excluded are seamless non-refillable steel cylinders.

Tariff treatment

Based upon the scope set forth by Commerce, information available to the Commission indicates that the merchandise subject to this investigation are imported under the following provisions of the Harmonized Tariff Schedule of the United States “(HTS”): 7311.00.0060 for NRSCs for compressed or liquefied gases that are certified at the producing plant prior to exportation and 7311.00.0090 for those not so certified prior to exportation. NRSCs may also be imported under HTS statistical reporting numbers 7310.29.0030 and 7310.29.0065.¹² The 2024

¹¹ 88 FR 83906, December 1, 2023.

¹² NRSCs subject to this investigation may have previously been imported under HTS statistical reporting numbers 7310.29.0025 and 7310.29.0050. As of July 1, 2020, HTS statistical reporting number 7310.29.0025 which covered subject steel containers, not closed by either soldering or crimping, of circular cross section, with a volume capacity between 11.4 liters and 26.6 liters, for the conveyance of goods, was discontinued and superseded by HTS statistical reporting numbers 7310.29.0020 for refillable stainless steel kegs with a volume capacity between 11.4 liters and 26.6 liters and 7310.29.0030 for all other steel containers of circular cross section and volume capacity between 11.4 liters and 26.6 liters not elsewhere specified or included (“nesoi”). HTS statistical reporting number 7310.29.0050, for steel containers, not closed by either soldering or crimping, or circular cross section, with a volume capacity either less than 11.4 liters or greater than 26.6 liters but less than 50 liters, for (continued...)

general rate of duty is free for HTS subheadings 7311.00.00 and 7310.29.00.¹³ Decisions on the tariff classification and treatment of imported goods are within the authority of U.S. Customs and Border Protection.¹⁴

The product

Description and applications¹⁵

NRSCs are portable, non-reusable steel containers specifically designed to store, transport, and dispense compressed or liquefied gases, or other liquid materials for a wide variety of end-use applications. Some common contents and end-uses include: (1) refrigerant gases for refrigeration and air-conditioning applications; (2) helium for inflating retail and commercial balloons; (3) gases for medical and industrial applications; and (4) various liquid chemical mixtures such as foam insulations, sealants, and adhesives for residential and commercial construction applications. Generally, the empty cylinders are sold to customers who fill them with gases or liquid chemical mixtures that are then sold to end users for each specific application.¹⁶

The two-piece welded tank of an NRSC features two ports, for the one-way dispensing valve and pressure-release device, along with a double-handled handling collar on top (table I-2). NRSCs for use in the U.S. market are typically designed to meet the requirements of USDOT Specification 39 (“DOT-39”), which provides the steel specification for the tank body, welding or brazing requirements, wall thickness, markings, testing, and other technical requirements; as well as specifying that the cylinders be non-reusable (i.e., non-refillable). Alternatively, to qualify for use in the U.S. market, NRSC can also be designed to meet the requirements of Transport Canada (“TC”) Specification 39M or United Nations pressure receptacle standard ISO 11118 for hazardous material packaging.

(...continued)

the conveyance of goods, was also discontinued as of July 1, 2020. It was superseded by HTS statistical reporting numbers 7310.29.0055 for other refillable stainless steel kegs, and 7310.29.0065 for all other steel containers, nesoi. See HTS Change Record (Revision 14), 2022.

¹³ HTSUS (2024) Revision 1, USITC Publication 5491, January 2024, p. 73-25.

¹⁴ Subject NRSC are not subject to additional duties under Section 232.

¹⁵ Unless otherwise specified, information in this section is from the following sources: Petition, part II, pp. 4-6 (PDF pp. 8-10).

¹⁶ However, some NRSC producers fill the tanks themselves for certain end-use applications. For example, Worthington fills some of its NRSC with helium for sale to party stores and other customers prior to shipment. Vimeo, “How It’s Made – Balloon Time,” retrieved March 8, 2024 <https://vimeo.com/106184683>.

In-scope NRSCs range from 100 cubic inches to 1,526 cubic inches in capacity. Common sizes of the subject NRSCs, by diameter are 7.5 inches, 9.5 inches, and 12 inches, although they can be made in other sizes. The 9.5-inch model is the most common size.¹⁷ Common service pressure ratings for in-scope NRSC are 260, 320, and 400 pounds per square inch (“PSI”).




These physical characteristics distinguish NRSCs from refillable cylinders (not allowed by the DOT-39 specification), such as those for propane gas with sturdy handling collars, foot rings, and two-way valves; smaller “hand torch” non-refillable cylinders (containing propane, propylene, or butane) having elongated bodies and only one port; aluminum cylinders for reactive gasses (e.g., ammonia, ethylene oxide, hydrogen sulfide, nitric oxide, nitrogen dioxide, or sulfur dioxide); or seamless, higher pressure steel cylinders for industrial and medical gasses (e.g., argon, nitrogen, or oxygen).¹⁸

¹⁷ Although some companies may have a preference for specific sizes, cylinder sizes do not typically differ based on application, with the exception of NRSC for helium, which are typically only sold in the 9.5 inch and 12-inch models. Conference transcript p. 81.

¹⁸ Non-Refillable Steel Cylinders from China, Investigation Nos. 701-TA-644 and 731-TA-1494 (Final), USITC Publication 5188, May 2021 (“China publication”). See also Petition vol. II, p. 15.

Table I-4

NRSCs: Appearance, dimensions, and pressure specifications for selected common cylinder sizes

Metric	Measure	7.5-inch model	9.5-inch model	12-inch model
Appearance	PNG file			
Height	Inches	14.6	16.4	17.6
Water capacity	Pounds	15.8	29.7	49.6
Diameter	Inches	7.5	9.5	12
Volume	Cubic inches	438	822	1,378
Service pressure	PSIG	260 or 400	260 or 300 or 400	260 or 320
Test pressure	PSIG	325 or 500	325 or 400 or 500	325 or 400

Source: Petition, exh. GEN 4, Certain Non-Refillable Steel Cylinders Brochures (Worthington Industries).

Note: All dimensions are approximate. Pressure is specified as “pounds per square-inch gauge” (“PSIG”). Recommended service and test pressures presented are for refrigerants and are dependent on gas type. The standard specification for all three cylinder sizes is DOT-39.

Manufacturing processes¹⁹

NRSCs are produced using low-carbon, flat-rolled (usually cold-rolled) steel. First, a collar press stamps the handling collar from cut-to-length strips of steel. Next, round disks of steel are press cut from flat-rolled steel coils. These circular disks are then drawn through a die to create cup-shaped hemispheric shells that become the top and bottom halves of the cylinder. The shell edges are trimmed to produce a precise line for welding and then holes are punched into the top shell for the dispensing valve and pressure-release device. The shells are then washed to remove any grit or particles that might impede painting or welding. The

¹⁹ Unless otherwise specified, information in this section is from the following sources: Petition, part II, pp. 6-7 (PDF pp. 10-11) and the China publication, May 2021. See also, Vimeo, “How It’s Made – Balloon Time,” retrieved March 8, 2024, <https://vimeo.com/106184683>.

pressure-release device is added to the top shell prior to both the top and bottom cylinder shells being conveyed to a welding station where the valve and handle are welded onto the top half of the cylinder (figure I-1a).

Handles are either made from stamped steel, which is welded directly to the top shell, or from a wire rod which is first welded to a plate or flange that is then welded to the top shell. The valve is also welded to the same plate or flange holding rod-style handles so that both the valve and handle can be attached to the shell at once. Stamped-style handles are attached to the shell in a separate weld from the valve.²⁰

After the handles are attached, the two shells are then cooled prior to being placed together into the welding lathe. The lathe creates a precise weld between them to bond the two pieces together (figure I-1b). Each cylinder is tested to ensure it meets government specifications, including a dry-air leak test to ensure that the tank can be filled and pressurized without either leaking or rupturing.

Figure I-1

NRSCs: Cross sections of an assembled cylinder and the weld-joint detail

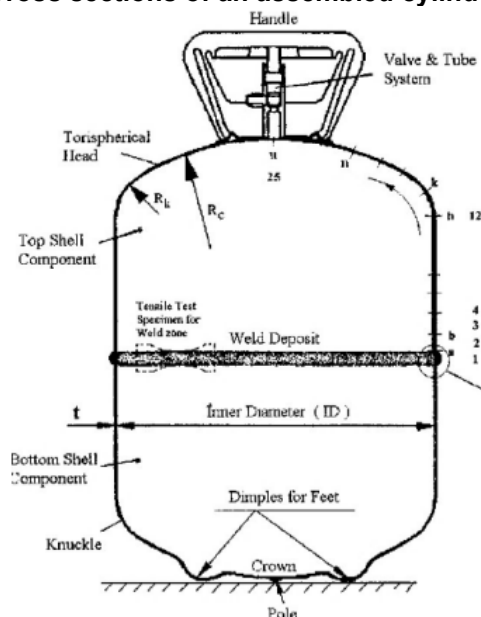


Figure I-1a: Cylinder cross-section with components and features labeled

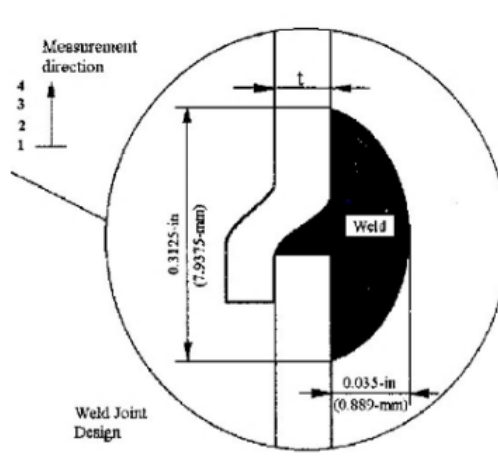


Figure I-1b: Weld-joint cross-section for joining together the top and bottom shells

Source: Petition, exhibit Gen-5.

²⁰ Beginning in 2020, Worthington began producing all of its NRSCs with a stamped-style handle due to customer preference and lower defect rates in handles of this style. Meanwhile, importer Quin Global claims that it requested rod-style handles when ordering from foreign producer Bhiwadi, as it claims these handles are stronger and less likely to break during shipping. Conference transcript pp. 52-53, 106-107.

Cylinders that pass inspections move onto the painting line, where they are coated with a liquid paint that is cured under infrared light. The choice of paint color can be decided by industry standards or customer preferences. For example, the Air-Conditioning, Heating, and Refrigeration Institute (“ACHRI”) guidelines now require that all NRSC containing refrigerant gas be painted the same standard color known as “RAL 7044” or “PMS 413.” The guidelines also require a red band to be painted on the shoulder or top of the cylinder to indicate when refrigerant cylinders contain flammable compounds.²¹ A silkscreened label is added to the cylinder with required identifying information including the USDOT, TC, or UNISO specification number, service pressure, test pressure, manufacturer’s registration number, date of manufacture and/or lot number, operating instructions, and specific penalty language against refilling the cylinder in violation of federal law. NRSCs are typically packaged in an unsealed cardboard carton specified by the customer. These cartons are purchased by the purchasers of NRSCs from corrugated-cardboard suppliers and shipped directly to the NRSCs producer’s facilities. The customer later fills the cylinders while in the carton and seals the box prior to shipment.

Although NRSCs do not have a stated shelf life, manufacturers encourage purchasers to fill cylinders as soon as practical. This is particularly important for NRSCs that will hold refrigerants. Before filling, the valve on refrigerant NRSC remains open, allowing the atmosphere to penetrate the inside of the cylinder. This can lead to degradation on the inside of the cylinder and contamination of the product going into the cylinder. While the length of time for degradation to occur varies significantly depending on atmospheric conditions, domestic producer Worthington claims that a cylinder could degrade in a matter of weeks or months in the worst-case scenario.²² While DOT regulations do not include specific shelf life requirements, cylinder degradation could impact DOT requirements on certain wall thicknesses.²³ Worthington claims that potential degradation does not impact their ability to hold inventories, as they are in control of the climate and storage conditions in their warehouses.²⁴

²¹ Petition, exhibit GEN-6.

²² Conference transcript, pp. 71-73.

²³ Conference transcript, pp. 95-96.

²⁴ Conference transcript, p. 92.

Domestic like product issues

No issues with respect to domestic like product have been raised in these investigations. In the preliminary phase of these investigations, the Commission defined a single domestic like product, coextensive with the scope.²⁵ In the final phase of these investigations, no parties requested data or other information necessary for the analysis of the domestic like product.

The AIM Act

In December 2020, Congress enacted the AIM Act, which directs the U.S. Environmental Protection Agency (“EPA”) to phasedown production and consumption of hydrofluorocarbons (“HFCs”). HFCs are greenhouse gases that are commonly used in refrigerants. In October 2021, the EPA announced its final rule establishing provisions for implementation of the phasedown. The rule establishes a timeline for the phasedown of U.S. production and consumption of HFCs. It also prohibits the importation or filling of disposable (non-refillable) cylinders filled with certain HFCs by January 1, 2025 and prohibits the sale and distribution of all disposable cylinders filled with certain HFCs by January 1, 2027.²⁶ In December 2021, Worthington filed a petition for review of the latter rule regarding the sale and distribution of NRSCs with the United States Court of Appeals for the District of Columbia.²⁷ In June 2023, that court determined that the EPA lacked statutory authority to pass two measures regulating the distribution of HFCs and vacated those parts while allowing the remainder of the rule to remain. Those vacated measures related to the EPA’s authority to mandate the use of refillable cylinders as well as its authority to require QR codes for certification and tracking of cylinders.²⁸

In March 2023, the Pipeline and Hazardous Materials Safety Administration (“PHMSA”), proposed to adopt the same prohibition on the filling and transportation of certain HFCs in NRSCs.²⁹ The agency collected comments from interested parties on the proposed legislation between March 3 and May 2, 2023. In March 2024, citing the United States Court of Appeals for

²⁵ Non-Refillable Steel Cylinders from India (Preliminary), USITC Publication 5437, June 2023, pp. 7-10.

²⁶ 86 FR 190, October 5, 2021.

²⁷ Cooling Post, “Worthington Joins Legal Challenge to Disposable Cylinder Ban,” Cooling Post, “U.S. Cylinder Firm Seeks Protection from Indian Imports,” May 10, 2023.
<https://www.coolingpost.com/world-news/us-cylinder-firm-seeks-protection-from-indian-imports/>.

²⁸ Jones Day, “D.C. Circuit Vacates Part of the EPA’s HFCs Phasedown Rule,” Jones Day, August 2023,
[https://www.jonesday.com/en/insights/2023/08/dc-circuit-vacates-part-of-the-epas-hfcs-phasedown-rule#:~:text=The%20court%20ruled%20in%20favor,ii\)%20Petitioners%20failed%20to%20properly.](https://www.jonesday.com/en/insights/2023/08/dc-circuit-vacates-part-of-the-epas-hfcs-phasedown-rule#:~:text=The%20court%20ruled%20in%20favor,ii)%20Petitioners%20failed%20to%20properly.)

²⁹ 88 FR 42, March 3, 2023.

the District of Columbia vacating of certain provisions in EPA's rule, PHMSA announced it was no longer considering adopting the EPA's prohibition.³⁰

According to preliminary conference testimony, Worthington said the EPA rule initially led to uncertainty and an increase in demand for NRSCs from customers trying to build a stock of refrigerant-filled cylinders in anticipation of the ban.³¹ This increase in demand led to extended lead times for non-contract sales.³² Worthington claims that the majority of NRSCs made by Worthington go to customers outside of the refrigerants business.³³ Indian producer Bhiwadi claims that the majority of its NRSCs are produced for the refrigerant market and anticipates the EPA rules will significantly decrease its shipments to the United States. The company claims it plans to gradually reduce NRSCs production and *** in response to these rules.³⁴ Indian producer Inox claims that the impending ban has led customers to put current orders and future offers on hold.³⁵

Helium shortage

A global helium shortage beginning in 2021 was further exacerbated in 2022 by the Russian war in Ukraine.³⁶ According to USGS, world helium production decreased by approximately four million cubic meters (2.4 percent) in 2022, compared to 2021.³⁷ According to domestic producer Worthington, the supply shortage led to higher prices for their helium inputs. However, because of their contractual commitments with helium suppliers, Worthington claims they were able to maintain supply while other helium sellers, such as those at party supply stores, were not. This led to increased demand for Worthington as customers

³⁰ 89 FR 43, March 4, 2024.

³¹ Conference transcript, pp. 19 (Bowes), 47 (Powers).

³² Conference transcript, p. 61 (Bowes).

³³ However, Worthington also stated that the largest end use for its NRSCs is refrigerants and that this segment represents a significant portion of the business. Conference transcript pp. 45-46 (Powers), 58-59 (Powers, Rosenthal, Bowes).

³⁴ Conference transcript pp. 101-102, 117 (Kaur). Bhiwadi's foreign producer/exporter questionnaire, sections II-2a, II-3f, and II-9.

³⁵ Inox, Postconference brief, p. 6 (PDF p. 12).

³⁶ DeCarlo, Samantha, and Samuel Goodman, "The Impact of Conflict on the Global Helium Shortage," *USITC Executive Briefings on Trade*, May 2022, https://usitc.gov/publications/332/executive_briefings/ebot_the_impact_of_conflict_on_the_global_helium_shortage.pdf.

³⁷ USGS, "Mineral Commodities Summaries 2023: Helium," January 2023, <https://pubs.usgs.gov/periodicals/mcs2023/mcs2023-helium.pdf>.

purchased NRSCs from Worthington to fill balloons at home rather than purchasing filled balloons from intermediaries.³⁸ Meanwhile, Indian producer Bhiwadi claims that all cylinder producers have experienced a decrease in demand due to the shortage.³⁹

³⁸ Conference transcript p. 77 (Bowes).

³⁹ Conference transcript p. 101 (Kaur).

Part II: Conditions of competition in the U.S. market

U.S. market characteristics

NRSCs are portable, non-refillable steel tanks suitable for containing liquified or compressed gases such as refrigerant, helium, or other materials such as insulating foam sealant or adhesive. NRSCs are composed of a welded tank with two ports, used with a valve and pressure release device, respectively, and a handling collar.¹ The petitioner stated that demand for NRSCs follows the strength of the U.S. economy.² Importers primarily fill NRSCs with gas or sealant and sell the NRSCs with their contents to their customers.

The sole responding U.S. producer and the majority of importers (10 of 16) reported that the market for NRSCs is ***. However, six importers and the majority of purchasers (4 of 7) indicated that the market is subject to distinctive conditions of competition. Specifically, importer *** reported that the NRSC market is unique because it is tied so heavily to the availability and price of steel. Importers *** reported that Worthington was the only U.S. producer and that there were no alternatives for domestically produced NRSCs. Importer *** reported that the regulations on refrigerants which are frequently contained in NRSCs were a condition of competition unique to the NRSC market.

Apparent total market U.S. consumption of NRSCs decreased in terms of quantity and value during 2021 to 2023. Overall, apparent U.S. consumption in 2023 was *** percent lower in terms of quantity and *** percent lower in terms of value in 2023 than in 2021.

U.S. purchasers

The Commission received seven usable questionnaire responses from firms that had purchased NRSCs during January 2021-December 2023.^{3 4 5} Six responding purchasers are fillers of refrigerants, and one is a filler of adhesives. Six of the responding purchasers are importers in addition to being purchasers. In general, responding U.S. purchasers were located in the

¹ Petition, pp. 4-5.

² Conference transcript, p. 92 (Bowes).

³ The following firms provided purchaser questionnaire responses: ***.

⁴ Of the seven responding purchasers, six purchased the domestic NRSCs, six purchased imports of the subject merchandise from India, five purchased NRSCs from China and three purchased imports of NRSCs from other sources.

⁵ Seven purchasers indicated they had marketing/pricing knowledge of domestic product, seven of Indian product, and six of nonsubject countries.

Northeast, Southeast, and Midwest regions of the United States. Large purchasers of NRSCs include *** and *** who were responsible for 67.0 percent of total reported purchases over the period of investigation.

Impact of section 232 tariffs

U.S. producer Worthington, importers, and purchasers were asked to report the impact of section 232 tariffs on the overall demand, supply, prices, and raw material costs (table II-1). U.S. producer Worthington reported that the section 232 tariffs had *** the overall demand, supply, price, or raw material cost of NRSCs. The majority of importers and purchasers reported that section 232 tariffs had no impact or that they did not know the impact of section 232 tariffs on the overall demand, supply, price, or raw material costs of NRSCs. Importer *** reported that it noticed a significant cost impact on NRSCs and since then has minimized purchases of Chinese NRSCs. Importer *** reported that section 232 tariffs increased the cost of steel. Importer *** reported that the duties on steel increased the cost and price of NRSCs in the U.S. market. Purchaser *** reported that section 232 tariffs increased demand on U.S. suppliers by limiting the number of suppliers in the U.S. market which led to longer lead times and increased costs.

Table II-1

NRSC: Count of firms' responses regarding the impact of the 232 tariffs on steel and aluminum imports

Count in number of firms reporting

Firm type	Yes	No	Don't know
U.S. producer	***	***	***
Importers	3	6	7
Purchasers	2	2	3

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

Channels of distribution

U.S. producer Worthington and importers sold mainly to *** throughout the period of investigation, as shown in table II-2.

Table II-2**NRSC: Share of U.S. shipments by source, channel of distribution, and period**

Shares in percent

Source	Channel	2021	2022	2023
United States	Distributor	***	***	***
United States	End user	***	***	***
India	Distributor	***	***	***
India	End user	***	***	***
China	Distributor	***	***	***
China	End user	***	***	***
All other sources	Distributor	***	***	***
All other sources	End user	***	***	***
Nonsubject	Distributor	***	***	***
Nonsubject	End user	***	***	***
All imports	Distributor	***	***	***
All imports	End user	***	***	***

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

Geographic distribution

U.S. producer Worthington reported selling NRSCs to *** in the United States. Importers reported selling NRSCs to all regions in the United States (table II-3). For U.S. producer Worthington, *** 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 did not report commercial shipments in 2023.

Table II-3**NRSC: Count of U.S. producer's and U.S. importers' geographic markets**

Count in number of firms reporting

Region	U.S. producer	India
Northeast	***	4
Midwest	***	3
Southeast	***	3
Central Southwest	***	5
Mountain	***	2
Pacific Coast	***	1
Other	***	1
All regions (except Other)	***	1
Reporting firms	1	8

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 II-4 provides a summary of the supply factors regarding NRSCs from U.S. producer Worthington and producers in India.

Table II-4
NRSC: Supply factors that affect the ability to increase shipments to the U.S. market, by country

Quantity in units; ratios and shares in percent; count in number of firms reporting

Factor	Measure	United States	India
Capacity 2021	Quantity	***	***
Capacity 2023	Quantity	***	***
Capacity utilization 2021	Ratio	***	***
Capacity utilization 2023	Ratio	***	***
Inventories to total shipments 2021	Ratio	***	***
Inventories to total shipments 2023	Ratio	***	***
Home market shipments 2023	Share	***	***
Non-US export market shipments 2023	Share	***	***
Ability to shift production (firms reporting “yes”)	Count	***	***

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

Note: Responding U.S. producer Worthington accounted for all of U.S. production of NRSCs in 2023. Responding foreign producer/exporter firms accounted for approximately 75 percent of U.S. imports of NRSCs from India during 2023. For additional data on the number of responding firms and their share of U.S. production and of U.S. imports from each subject country, please refer to Part I, “Summary Data and Data Sources.”

Domestic production

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

U.S. producer Worthington reported increased production capacity from 2021 to 2023. This increased production capacity and decreases in production led to a decrease in capacity utilization from 2021 to 2023. U.S. producer Worthington’s inventories relative to total

shipments increased from 2021 to 2023. U.S. producer Worthington reported that NRSCs degrade over time as they are exposed to the open air until filled. This can introduce contaminants to products that are stored in NRSCs.⁶ U.S. producer Worthington reported that it controls the climate in its storage facilities and NRSCs degrading over time does not impact Worthington's decision or ability to hold inventories of NRSCs.⁷ Exports remained less than *** percent of Worthington's reported shipments throughout the period. U.S. producer Worthington reported it was *** to produce other products on the same equipment used to produce NRSCs.

Subject imports from India

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

Indian producers reported decreased production and production capacity that led to a decrease in capacity utilization from 2021 to 2023. Indian producers' inventories relative to total shipments remained low throughout the period. Responding Indian producers reported selling just over *** of shipments in their home market but under *** percent of shipments to markets other than the United States in 2023. *** responding Indian producers reported being able to produce other products on the same equipment used to produce NRSCs. Foreign producer *** reported producing cylinders for LPG, ammonia, and chlorine on the same equipment used to produce NRSCs. Foreign producer *** reported producing LPG and propane tanks on the same equipment used to produce NRSCs.

Imports from nonsubject sources

Based on official import statistics, nonsubject imports accounted for 97.3 percent of total U.S. imports in 2023. Per official import statistics, the largest sources of nonsubject imports during 2023 were China and Mexico. Combined, these countries accounted for 89.6 percent of nonsubject imports in 2023.

⁶ Conference transcript, pp. 71-73 (Powers).

⁷ Conference transcript, p. 92 (Powers).

Supply constraints

U.S. producer Worthington reported that *** since January 1, 2021. Worthington reported that ***. U.S. producer Worthington reported that it *** supply constraints since filing the petition on April 27, 2023.

The majority of importers reported that they had not experienced supply constraints since January 1, 2021. Importer *** reported it had experienced long lead times in 2022 that caused it to scale back filling capacity in its plant. The majority of importers reported that they had not experienced supply constraints since the petition was filed on April 27, 2023.

The majority of purchasers reported that they had experienced supply constraints since January 1, 2021. Purchaser *** reported that it experienced supply constraints when Worthington put them on a supply schedule in 2021. Purchaser *** reported that Worthington increased lead times to 12 months and could not fulfill orders. Purchaser *** reported that Worthington increased lead times from 4-6 weeks to 12 months in 2021 and was not able to meet its requirements in 2021 and 2022. Purchaser *** reported that the domestic manufacturer imposed NRSC allocation restrictions in 2021 and 2022. Purchaser *** reported that starting in July 2021, Worthington did not accept orders for any quantities with lead times less than 12 to 15 months and that these lead times had grown to 15 to 18 months by March 2022. Purchaser *** also reported that Worthington had stated it had “booked up capacity” or the “production was maxed out completely” and that this was the reason for increased lead times. None of the responding purchasers reported that they had experienced supply constraints since the petition was filed on April 27, 2023.

New suppliers

Three of seven purchasers indicated that new suppliers entered the U.S. market since January 1, 2021. Purchasers *** reported that Bhiwadi Cylinders entered the U.S. market since January 1, 2021. Purchaser *** reported that SMMIL entered the U.S. market since January 1, 2021.

U.S. demand

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

End uses and cost share

U.S. demand for NRSCs depends on the demand for U.S.-produced downstream products that fill NRSCs, such as refrigerants, helium, and foam adhesives. Reported end uses include applications such as in HVAC systems and construction. NRSCs account for a small-to-moderate share of the cost of the end-use products in which they are used. Reported cost shares for some end uses were as follows:

- Construction applications ***
- Helium gas ***⁸
- HVAC systems ***
- Refrigerant gas R404A ***
- Refrigerant gas R407C ***
- Refrigerant gas R410A ***
- Refrigerant gas R134a ***
- Unspecified refrigerant gas ***

Shelf life and storage

U.S. producer Worthington, importers, and purchasers were asked about the shelf life of NRSCs and the conditions that can affect the shelf life of NRSCs. U.S. producer Worthington reported that ***. U.S. producer Worthington reported that ***.

Importers reported a wide range of shelf lives for NRSCs. Importer *** reported that NRSCs can have a shelf life of up to 10 years, while importer *** reported that NRSCs have a shelf life of as little as 3 months. Importer *** reported

⁸ Petitioner postconference brief p. 66.

that it does not like to store NRSCs for more than 6 months and ideally stores them for less than one month because hot and humid storage conditions impact how long they could be stored. Importer *** reported that the U.S. producer Worthington's instructions indicate that NRSCs should be filled immediately to prevent the introduction of dirt, dust, or moisture. Importer *** also reported that NRSCs are shipped with the valve open which leaves the inside of the NRSC exposed to materials that adversely affect the strength of the steel and can contaminate refrigerant gases.

Purchasers reported a wide range of shelf lives for NRSCs ranging from 3 months to 10 years. Purchaser *** reported that domestic vendors offer a one-year warranty on empty NRSCs.

Business cycles

U.S. producer Worthington reported that ***.

Half of responding importers reported that there are no business cycles in the NRSC market. However, the other half of responding importers reported that the NRSC market is seasonal and demand increases from spring through fall when air-conditioning units need servicing and repair.

The majority of purchasers indicated that the market for NRSCs was subject to business cycles. These purchasers reported that demand for NRSCs was seasonal as demand for refrigerant for stationary and automotive air conditioning increases in spring and summer.

Demand trends

U.S. producer Worthington reported that U.S. demand for NRSCs remained *** since January 1, 2021. At least half of importers reported that U.S. and foreign demand for NRSCs remained constant since January 1, 2021 (table II-5). Purchaser responses on U.S. demand and demand for end use products were mixed, while a majority of responding purchasers reported that foreign demand for NRSCs fluctuated up.

Table II-5
NRSC: Count of firms' responses regarding overall domestic and foreign demand, by firm type

Count in number of firms

Market	Firm type	Steadily Increase	Fluctuate Up	No change	Fluctuate Down	Steadily Decrease
Domestic demand	U.S. producer	***	***	***	***	***
Domestic demand	Importers	2	0	7	4	1
Domestic demand	Purchasers	1	1	2	1	2
Foreign demand	U.S. producer	***	***	***	***	***
Foreign demand	Importers	0	1	3	0	1
Foreign demand	Purchasers	0	2	0	0	1
Demand for end use products	Purchasers	1	1	2	1	2

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

EPA HFC rule

U.S. producer Worthington, importers, and purchasers were asked about the impact on demand of the EPA's announcement of the phase out of HFCs which also imposed a prohibition on the use of NRSCs to store and transport HFCs.

U.S. producer Worthington reported that the EPA announcement *** the demand for NRSCs since September 30, 2023 and *** future demand. U.S. producer Worthington also reported that the U.S. Court of Appeals for the District of Columbia Circuit striking down the portion of the EPA's rule prohibiting the use of NRSCs ***. U.S. producer Worthington reported that the EPA's original rule ***. U.S. producer Worthington also reported that since the EPA's rule has ultimately been struck down, the future demand for NRSCs ***.

The majority of importers reported that the EPA's announcement had no impact on demand during the period of investigation or future demand for NRSCs. Also, the majority of importers reported that the Court of Appeals ruling had no impact on the demand for NRSCs. Importer *** reported that the timeline for the EPA's regulation would have increased demand for NRSCs in the first and second quarters of 2024 but then cause demand to drop by the fourth quarter. Importer *** reported that the court's decision should result in the demand for NRSCs remaining relatively constant.

All responding purchasers reported that the EPA announcement had no impact on demand during the period of investigation or future demand for NRSCs. The majority of purchasers reported that the court's ruling on the EPA's announcement had no impact on the demand for NRSCs.

Substitute products

U.S. producer Worthington, all importers, and all purchasers reported that there were *** for NRSCs.

Substitutability issues

This section assesses the degree to which U.S.-produced NRSCs and NRSCs imported from India can be substituted for one another by examining the importance of certain purchasing factors and the comparability of NRSCs from domestic and imported sources based on those factors. Based on available data, staff believes that there is a moderate-to-high degree of substitutability between domestically produced NRSCs and NRSCs imported from India.⁹ Factors contributing to this level of substitutability include that U.S. producer Worthington and importers ***. Factors mitigating substitutability include quality, supply continuity, and lead times.

Factors affecting purchasing decisions

Purchaser decisions based on source

As shown in table II-6, most purchasers and their customers never make purchasing decisions based on the producer or country of origin. The sole purchaser, ***, that reported it always makes decisions based on the manufacturer, reported that it only buys from producers with a demonstrated quality and delivery performance which is primarily U.S. producer Worthington. Purchaser *** reported that it usually made purchasing decisions based on the producer because it had to pre-qualify NRSCs for construction and valving details. Purchaser *** reported that it sometimes based purchasing decisions based on the manufacturer because, until recently, only U.S. producer Worthington produced NRSCs with a resealable pressure relief device for flammable refrigerants.

⁹ The degree of substitution between domestic and imported NRSCs depends upon the extent of product differentiation between the domestic and imported products and reflects how easily purchasers can switch from domestically produced NRSCs to the NRSCs imported from subject countries (or vice versa) when prices change. The degree of substitution may include such factors as relative prices (discounts/rebates), 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.).

Table II-6

NRSC: Count of purchasers' responses regarding frequency of purchasing decisions based on producer and country of origin

Count in number of firms

Firm making decision	Decision based on	Always	Usually	Sometimes	Never
Purchaser	Producer	1	1	1	4
Customer	Producer	0	0	1	5
Purchaser	Country	0	0	1	6
Customer	Country	0	0	0	6

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

Importance of purchasing domestic product

All responding purchasers reported that most or all of their purchases did not require purchasing U.S.-produced product. One purchaser, ***, reported that domestic product was required by law for 2.0 percent of its purchases, none of the responding purchasers reported it was required by their customers, and one reported other preferences for domestic product. Reasons cited for preferring domestic product included: having a business strategy with diversified sources of supply and not relying on one supplier.

Most important purchase factors

The most often cited top three factors firms consider in their purchasing decisions for NRSCs were quality (7 firms), availability/supply (6 firms), and price (5 firms) as shown in table II-7. Quality was the most frequently cited first-most important factor (cited by 5 firms), followed by availability/supply (2 firms); availability/supply was the most frequently reported second-most important factor (3 firms); and price was the most frequently reported third-most important factor (5 firms).

Table II-7

NRSC: Count of ranking of factors used in purchasing decisions as reported by purchasers, by factor

Count in number of firms

Factor	First	Second	Third	Total
Quality	5	1	1	7
Availability / Supply	2	3	1	6
Price / Cost	0	0	5	5
All other factors	0	3	0	NA

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

Note: Other factors include lead time.

The majority of purchasers (5 of 7) reported that they sometimes purchase the lowest-priced product.

Importance of specified purchase factors

Purchasers were asked to rate the importance of 17 factors in their purchasing decisions (table II-8). The factors rated as very important by more than half of responding purchasers were availability, default or failure rates, product consistency, quality meets industry standards, and reliability of supply (7 firms each); and delivery time (6 firms).

Table II-8

NRSC: Count of purchasers' responses regarding importance of purchase factors, by factor

Count in number of firms

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

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

Lead times

U.S. producer Worthington reported selling the majority of NRSCs from *** through the period of investigation (table II-9). While the share of U.S. producer Worthington's sales sold *** decreased over the period, Worthington's share of sales that were ***. U.S. producer Worthington's sales from *** over the period of investigation. U.S. producer Worthington's lead times generally *** from 2021 to 2023, with the exception of NRSCs produced-to-order and sold under contract where lead times remained constant throughout the period of investigation.

Table II-9
NRSC: U.S. producer lead times by sales type

Shares in percent, lead times in days.

Year	Measure	From inventories: Contract	From inventories: Spot	Produced-to-order: Contract	Produced-to-order: Spot
2021	Share	***	***	***	***
2022	Share	***	***	***	***
2023	Share	***	***	***	***
2021	Days	***	***	***	***
2022	Days	***	***	***	***
2023	Days	***	***	***	***

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

Importers reported that they sold *** NRSCs as produced-to-order spot sales in 2021 and 2022. Lead times increased from *** days in 2021 to *** days in 2022 (table II-10). Importers did not report commercial shipments in 2023.

Table II-10
NRSC: Importer lead times by sales type

Shares in percent, lead times in days.

Year	Measure	From inventories: Contract	From inventories: Spot	Produced-to-order: Contract	Produced-to-order: Spot
2021	Share	***	***	***	***
2022	Share	***	***	***	***
2023	Share	***	***	***	***
2021	Days	***	***	***	***
2022	Days	***	***	***	***
2023	Days	***	***	***	***

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

Supplier certification

Five of seven responding purchasers require their suppliers to become certified or qualified to sell NRSCs to their firm. Purchasers reported that the time to qualify a new supplier ranged from 20 to 180 days. Purchasers reported requiring DOT and quality certifications from their suppliers. Several purchasers reported that they perform their own certification process in addition to the DOT certification that included inspections of production facilities and a technical review of the NRSCs' physical properties (such as the valves, interior service, and leak testing).

Two purchasers reported that a domestic or foreign supplier had failed in its attempt to qualify NRSCs or had lost its approved status since 2021. Purchaser *** reported that Bhiwadi had lost its approved status due to increased defect rates. Purchaser *** reported that Indian producer Mauria had been disqualified due to product inconsistency.

Minimum quality specifications

As shown in table II-11, all responding purchasers reported that domestically produced product always or usually met minimum quality specifications. The majority of responding purchasers reported that Indian NRSCs always or usually met minimum quality specifications. All responding purchasers reported that NRSC imported from nonsubject sources always or usually met minimum quality specifications.

Table II-11
NRSC: Count of purchasers' responses regarding suppliers' ability to meet minimum quality specifications, by source

Count in number of firms reporting

Source of purchases	Always	Usually	Sometimes	Rarely or never	Don't Know
United States	2	5	0	0	0
India	2	4	0	0	1
Nonsubject sources	3	2	0	0	0

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

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

Responding purchasers reported factors that determined quality were carton print quality, fitting quality, no defects or leaks, the lack of contaminants in the cylinders, the measurements of the cylinders, passing pressure and flattening tests, passing pressure relief device tests, x-ray tests, appearance upon delivery, smooth surface finish, proper cap placement on valve outlet, shelf life, and proper alignment of welding seams.

Changes in purchasing patterns

Four purchasers reported that they had changed suppliers since January 1, 2021 while three reported that they had not. Specifically, firms dropped or reduced purchases from Worthington because of supply shortages, supply constraints, and increased wait times of up to 15 months. Firms added or increased purchases from Indian and Chinese firms in response to these supply shortages and increased lead times. Purchaser *** reported that it began sourcing NRSCs from Bhiwadi Cylinders, Mauria Udyog Limited, and Inox India Limited in response to domestic supply constraints and AD/CVD duties on imported NRSCs from China. Purchaser *** reported that it increased purchases from Bhiwadi Cylinders in late 2021 as Worthington extended lead times to 12-15 months.

Purchasers were also asked about changes in their purchasing patterns from different countries since January 1, 2021 (table II-12). Purchasers were mixed with respect to their purchasing pattern of domestic and Chinese NRSCs. The majority of responding purchasers reported that purchases of NRSCs from India fluctuated down or steadily decreased since January 1, 2021.

Table II-12
NRSC: Count of purchasers' responses regarding changes in purchase patterns from U.S., subject, and nonsubject countries

Count in number of firms reporting

Source of purchases	Steadily Increase	Fluctuate Up	No change	Fluctuate Down	Steadily Decrease	Did not purchase
United States	2	1	0	2	1	1
India, subject	1	0	0	2	2	2
China	0	1	1	1	2	2
All other sources	0	0	0	0	1	6
Sources unknown	0	0	0	0	0	7

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 NRSCs produced in the United States, India, and nonsubject countries. First, purchasers were asked for a country-by-country comparison on the same 17 factors (table II-13) for which they were asked to rate the importance.

At least half of responding purchasers reported that U.S., Indian, and nonsubject NRSCs were comparable on the majority of factors. Half of responding purchasers reported that U.S.-produced NRSCs were superior to Indian NRSCs in terms of delivery time and a majority of purchasers reported that U.S.-produced NRSCs were superior to Indian NRSCs in terms of payment terms. Half of responding purchasers reported that U.S.-produced NRSCs were superior to Indian NRSCs in terms of technical support/service while the remaining half reported U.S.-produced NRSCs were comparable to Indian NRSCs in terms of technical support/service. Half of responding purchasers reported that U.S.-produced NRSCs were inferior to Indian NRSCs in terms of reliability of supply while the remaining half reported that U.S.-produced NRSCs were comparable to Indian NRSCs in terms of reliability of supply.

At least half of responding purchasers reported that U.S. and nonsubject NRSCs were comparable on the majority of factors. Half of responding purchasers reported that U.S.-produced NRSCs were superior to nonsubject NRSCs in terms of payment terms and technical support/service. The majority of purchasers reported that U.S.-produced NRSCs were superior to nonsubject NRSCs in terms of delivery time.

The majority of responding purchasers reported that subject Indian and nonsubject NRSCs were comparable on the majority of factors, with the exception of price where responses were mixed.

Table II-13**NRSC: Count of purchasers' responses comparing U.S.-produced and imported product, by factor and country pair**

Count in number of firms reporting

Factor	Country pair	Superior	Comparable	Inferior
Availability	U.S. vs India	0	4	2
Default or failure rates	U.S. vs India	2	3	1
Delivery terms	U.S. vs India	1	4	1
Delivery time	U.S. vs India	3	2	1
Discounts offered	U.S. vs India	0	5	0
Minimum quantity requirements	U.S. vs India	0	5	1
Packaging	U.S. vs India	0	4	2
Payment terms	U.S. vs India	4	2	0
Price	U.S. vs India	0	4	2
Product consistency	U.S. vs India	1	5	0
Product range	U.S. vs India	0	5	1
Quality meets industry standards	U.S. vs India	1	5	0
Quality exceeds industry standards	U.S. vs India	1	4	1
Reliability of supply	U.S. vs India	0	3	3
Shelf life	U.S. vs India	0	5	1
Technical support/service	U.S. vs India	3	3	0
U.S. transportation costs	U.S. vs India	1	4	1

Table continued.

Table II-13 Continued**NRSC: Count of purchasers' responses comparing U.S.-produced and imported product, by factor and country pair**

Count in number of firms reporting

Factor	Country pair	Superior	Comparable	Inferior
Availability	U.S. vs Nonsubject sources	0	5	1
Default or failure rates	U.S. vs Nonsubject sources	1	4	1
Delivery terms	U.S. vs Nonsubject sources	1	5	0
Delivery time	U.S. vs Nonsubject sources	4	2	0
Discounts offered	U.S. vs Nonsubject sources	0	4	1
Minimum quantity requirements	U.S. vs Nonsubject sources	0	6	0
Packaging	U.S. vs Nonsubject sources	0	4	2
Payment terms	U.S. vs Nonsubject sources	3	3	0
Price	U.S. vs Nonsubject sources	0	4	2
Product consistency	U.S. vs Nonsubject sources	1	5	0
Product range	U.S. vs Nonsubject sources	0	6	0
Quality meets industry standards	U.S. vs Nonsubject sources	1	5	0
Quality exceeds industry standards	U.S. vs Nonsubject sources	1	4	1
Reliability of supply	U.S. vs Nonsubject sources	0	4	2
Shelf life	U.S. vs Nonsubject sources	0	5	1
Technical support/service	U.S. vs Nonsubject sources	3	3	0
U.S. transportation costs	U.S. vs Nonsubject sources	1	4	1

Table continued.

Table II-13 Continued**NRSC: Count of purchasers' responses comparing U.S.-produced and imported product, by factor and country pair**

Count in number of firms reporting

Factor	Country pair	Superior	Comparable	Inferior
Availability	India vs Nonsubject sources	0	5	0
Default or failure rates	India vs Nonsubject sources	0	4	1
Delivery terms	India vs Nonsubject sources	2	3	0
Delivery time	India vs Nonsubject sources	2	3	0
Discounts offered	India vs Nonsubject sources	0	4	0
Minimum quantity requirements	India vs Nonsubject sources	0	5	0
Packaging	India vs Nonsubject sources	0	5	0
Payment terms	India vs Nonsubject sources	0	5	0
Price	India vs Nonsubject sources	2	2	1
Product consistency	India vs Nonsubject sources	0	5	0
Product range	India vs Nonsubject sources	0	5	0
Quality meets industry standards	India vs Nonsubject sources	0	5	0
Quality exceeds industry standards	India vs Nonsubject sources	0	4	1
Reliability of supply	India vs Nonsubject sources	0	5	0
Shelf life	India vs Nonsubject sources	0	5	0
Technical support/service	India vs Nonsubject sources	0	5	0
U.S. transportation costs	India vs Nonsubject sources	0	5	0

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

Note: For price and U.S. transportation costs, a rating of superior means that price/U.S. transportation cost is generally lower. For example, if a firm reported "U.S. superior," it meant that the U.S. product was generally priced lower than the imported product.

Comparison of U.S.-produced and imported NRSCs

In order to determine whether U.S.-produced NRSCs can generally be used in the same applications as imports from India or other sources, U.S. producer Worthington, importers, and purchasers were asked whether the products can always, frequently, sometimes, or never be used interchangeably. As shown in tables II-14 to II-16, U.S. producer Worthington, the majority of importers, and the majority of purchasers reported that NRSCs from the United States, India, and nonsubject countries were always interchangeable. Importer *** reported that NRSCs from the United States, India, and nonsubject countries are sometimes interchangeable because customers can have specific requirements for cartons, handles, and paint. Purchaser *** reported that the quality for certain NRSCs manufactured in India is lower than domestically produced NRSCs. Purchaser *** reported that NRSCs produced in India were sometimes interchangeable with domestically produced NRSCs due to the pressure ratings, valve design and function, and dip tube type and function.

Table II-14

NRSC: Count of U.S. producer reporting the interchangeability between product produced in the United States and in other countries, by country pair

Count in number of firms reporting

Country pair	Always	Frequently	Sometimes	Never
United States vs. India	1	0	0	0
United States vs. Other	1	0	0	0
India vs. Other	1	0	0	0

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

Table II-15

NRSC: 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 reporting

Country pair	Always	Frequently	Sometimes	Never
United States vs. India	11	0	3	0
United States vs. Other	8	2	3	0
India vs. Other	6	1	3	0

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

Table II-16

NRSC: 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 reporting

Country pair	Always	Frequently	Sometimes	Never
United States vs. India	4	0	2	0
United States vs. Other	5	0	1	0
India vs. Other	4	0	1	0

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

In addition, U.S. producer Worthington, importers, and purchasers were asked to assess how often differences other than price were significant in sales of NRSCs from the United States, subject, or nonsubject countries. As seen in tables II-17 to II-19, Worthington reported that there are never differences other than price between NRSCs from the United States, India, and nonsubject countries. Importers' responses on the differences other than price were mixed. The majority of importers reported that there are always or frequently differences other than price between NRSCs from India and the United States, while the majority of importers reported that there were sometimes or never differences other than price between NRSCs produced in the United States and nonsubject countries. The majority of importers reported there were sometimes or never differences other than price between NRSCs produced in India and nonsubject countries. Importer *** reported that lead times and availability are some of the differences other than price between NRSCs produced in the United States,

India, and nonsubject countries. Importer *** reported that the defect rate for U.S.-produced NRSCs is higher than for Indian and Chinese NRSCs. It also reported that NRSCs from India and China have longer shelf lives prior to filling than NRSCs from the United States. Importer *** reported that lead times and quality guarantees are issues when comparing NRSCs from the United States to NRSCs from import sources.

Purchaser responses on the differences other than price were mixed. Importer *** reported that there are always differences other than price between U.S.-produced, Indian, and nonsubject NRSCs due to lead times and availability. Purchaser *** reported that availability and ease of doing business and convenience of specification were factors other than price between NRSCs produced in the United States, India, and nonsubject countries.

Table II-17

NRSC: Count of U.S. producer reporting the significance of differences other than price between product produced in the United States and in other countries, by country pair

Count in number of firms reporting

Country pair	Always	Frequently	Sometimes	Never
United States vs. India	0	0	0	1
United States vs. Other	0	0	0	1
India vs. Other	0	0	0	1

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

Table II-18

NRSC: Count of importers reporting the significance of differences other than price between product produced in the United States and in other countries, by country pair

Count in number of firms reporting

Country pair	Always	Frequently	Sometimes	Never
United States vs. India	7	1	2	3
United States vs. Other	3	2	4	3
India vs. Other	3	1	2	3

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

Table II-19

NRSC: Count of purchasers reporting the significance of differences other than price between product produced in the United States and in other countries, by country pair

Count in number of firms reporting

Country pair	Always	Frequently	Sometimes	Never
United States vs. India	2	1	1	2
United States vs. Other	2	1	1	2
India vs. Other	2	0	1	2

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

Elasticity estimates

This section discusses elasticity estimates; no parties provided comments on the elasticities.

U.S. supply elasticity

The domestic supply elasticity for NRSCs measures the sensitivity of the quantity supplied by U.S. producer Worthington to changes in the U.S. market price of NRSCs. The elasticity of domestic supply depends on several factors including the level of excess capacity, the ease with which producers can alter capacity, producers' ability to shift to production of other products, the existence of inventories, and the availability of alternate markets for U.S.-produced NRSCs. 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 8 is suggested.

U.S. demand elasticity

The U.S. demand elasticity for NRSCs measures the sensitivity of the overall quantity demanded to a change in the U.S. market price of NRSCs. 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 NRSCs in the production of any downstream products. Based on the available information, the aggregate demand for NRSCs is likely to be relatively inelastic; a range of -0.25 to -0.75 is suggested.

Substitution elasticity

The elasticity of substitution depends upon the extent of product differentiation between the domestic and imported products.¹⁰ Product differentiation, in turn, depends upon such factors as quality (e.g., overall performance, ease of handling and filling, integrity, appearance, defect rate, consistency of valve thread quality, etc.) and conditions of sale (e.g., availability, sales terms/discounts/promotions, etc.). Based on available information, the elasticity of substitution between U.S.-produced NRSCs and imported NRSCs is likely to be in the range of 3 to 5. Many firms have indicated that there are several factors other than price that are significant including quality, supply continuity, and lead times.

¹⁰ The substitution elasticity measures the responsiveness of the relative U.S. consumption levels of the subject imports and the domestic like products to changes in their relative prices. This reflects how easily purchasers switch from the U.S. product to the subject products (or vice versa) when prices change.

Part III: U.S. producer’s production, shipments, and employment

The Commission analyzes a number of factors in making injury determinations (see 19 U.S.C. §§ 1677(7)(B) and 1677(7)(C)). Information on the subsidies and dumping margins was presented in Part I of this report and information on the volume and pricing of imports of the subject merchandise is presented in Part IV and Part V. Information on the other factors specified is presented in this section and Part VI and (except as noted) is based on the questionnaire response of Worthington Industries (“Worthington”) that accounted for 100 percent of U.S. production of NRSCs during 2023.

U.S. producer

The Commission issued a U.S. producer questionnaire to one firm based on information contained in the petitions and gathered in the preliminary phase of these investigations. One firm provided usable data on their operations. Staff believes that this response represents 100 percent of U.S. production of NRSCs.

Table III-1 lists the responding U.S. producer of NRSCs, its production locations, position on the petitions, and share of total production.

Table III-1
NRSCs: U.S. producer Worthington’s position on the petition, production locations, and shares of reported production, 2023

Firm	Position on petition	Production location(s)	Share of production
Worthington	Petitioner	Columbus, Ohio Paducah, Kentucky	100.0

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

Table III-2 presents information on Worthington's ownership, related and/or affiliated firms.¹

Table III-2

NRSCs: U.S. producer Worthington's ownership, related and/or affiliated firms

Reporting firm	Relationship type and related firm	Details of relationship
Worthington	Related producer: Worthington - Amtrol-Alfa (Portugal)	Facility acquired from Amtrol by Worthington in 2017

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

As indicated in table III-2, Worthington is related to a foreign producer of in-scope products from a non-subject country and *** related to U.S. importers of the subject merchandise. In addition, as discussed in greater detail below, Worthington reported that *** the subject merchandise and reported *** purchase the subject merchandise from U.S. importers.²

Table III-3 presents events in the U.S. industry since January 1, 2021.

Table III-3

NRSCs: Important industry events since 2020

Item	Organization	Event
Facility upgrades	Worthington	2020-2022: Worthington invested *** on upgrades at their Paducah facility. This project included ***.
Expansion	Worthington	Early 2021: Worthington invested \$21 million in a new DOT-39 cylinder production line in Columbus, Ohio and hired 90 people to facilitate production. The line was completed in February 2022 and became fully operational the following month.

¹ On December 1, 2023, Worthington split into two separate public companies, Worthington Enterprises and Worthington Steel. ***. Worthington's U.S. producer questionnaire response, section II-19.

² Regarding the acquisition of the NRSCs production facilities in Portugal, Worthington stated in its conference testimony that, "Worthington was looking to diversify and strengthen its global cylinders business by adding Amtrol's foreign and domestic cylinders businesses, including its well water and expansion tanks, where Amtrol was the market leader," and that, "Along with that business came Amtrol's non-refillable cylinders line in West Warwick, Rhode Island, and Paducah, Kentucky. Amtrol also had a non-refillable cylinders production facility in Portugal which Worthington also acquired. We hoped those lines would complement and create synergies with Worthington's larger production line at its Columbus, Ohio, facility, allowing us to cut our costs and make us more competitive with the low-priced imports." Conference transcript, p. 16 (Bowes).

Item	Organization	Event
Implementation of legislation	EPA	October 2021-June 2023: The EPA, under direction of the AIM Act, announced its final rule establishing provisions for implementation of the phasedown of HFCs. The rule prohibits the importation and filling of disposable (nonrefillable) cylinders filled with HFCs by 2025 and prohibits the sale and distribution of all disposable cylinders filled with HFCs by 2027. In December 2021, Worthington filed a legal petition for review of this rule with the U.S. Court of Appeals. In June 2023, the United States Court of Appeals for the District of Columbia determined that the EPA lacked statutory authority to pass two measures regulating the distribution of HFCs and vacated those parts of the EPA's rule while allowing the remainder of the rule to remain.
Production curtailment	Worthington	2022-2023: Worthington reduced production at its Columbus facility. The new DOT-39 line was reduced from *** to *** while older lines were reduced from *** to ***. All 90 employees initially hired to work the new line have been laid off or reassigned.
Proposed regulation	PHMSA	March 2023-March 2024: The PHMSA proposed to adopt EPA's prohibition on the filling and transportation of certain HFCs in NRSC. In March, 2024, citing the United States Court of Appeals for the District of Columbia vacating of certain provisions in EPA's prohibition, PHMSA announced it was no longer considering adopting EPA's prohibition.

Source: Preliminary conference transcript pp. 10,18,21,28,75; Petitioner's postconference brief pp. 7-8,11; 86 FR 190, October 5, 2021; Cooling Post, "Worthington Joins Legal Challenge to Disposable Cylinder Ban," December 4, 2021, <https://www.coolingpost.com/world-news/worthington-joins-legal-challenge-to-disposable-cylinder-ban/>; Jones Day, "D.C. Circuit Vacates Part of the EPA's HFCs Phasedown Rule," Jones Day, August 2023, [https://www.jonesday.com/en/insights/2023/08/dc-circuit-vacates-part-of-the-epas-hfcs-phasedown-rule#:~:text=The%20court%20ruled%20in%20favor,ii\)%20Petitioners%20failed%20to%20properly](https://www.jonesday.com/en/insights/2023/08/dc-circuit-vacates-part-of-the-epas-hfcs-phasedown-rule#:~:text=The%20court%20ruled%20in%20favor,ii)%20Petitioners%20failed%20to%20properly); 88 FR 42, March 3, 2023; 89 FR 43, March 4, 2024.

Producers in the United States were asked to report any change in the character of their operations or organization relating to the production of NRSCs since 2021. Worthington indicated in its questionnaire responses that it had experienced such changes. Table III-4 presents the changes identified by Worthington.

Table III-4**NRSCs: U.S. producer Worthington's reported changes in operations, since January 1, 2021**

Item	Firm name and narrative response on changes in operations
Production curtailments	***
Expansions	***
Other	***

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

U.S. production, capacity, and capacity utilization

Table III-5 presents U.S. producer Worthington's installed and practical capacity and production on the same equipment. Production capacity at Worthington's ***. Installed overall capacity increased annually from 2021-23, first rising *** percent from 2021-22, and continuing to rise *** percent from 2022-23, for an overall rise of *** percent from 2021-23.³ As production fluctuated but declined overall from 2021-23, installed overall capacity utilization decreased annually across 2021-23, a decline of *** percentage points.⁴ Practical NRSCs capacity also increased annually from 2021-23, with the *** percent increase from 2021-22 accounting for *** of the *** percent increase in practical NRSCs capacity from 2021-23. Although production increased slightly by *** percent from 2021-22, the increase in production was outpaced by the growth in practical

³ Following the Commission's 2020 preliminary ruling in the prior investigation covering NRSCs from China, Worthington invested \$21 million in a new, DOT-39 certified NRSC production line at its Columbus, OH facility, construction of which began in 2021 and was completed in February 2022, following delays due to COVID-19. The new production line was designed to produce ***. Conference transcript, pp. 18-20 (Bowes); Worthington's U.S. producer questionnaire, section II-2a.

⁴ Worthington stated that, ***. Worthington's U.S. producer questionnaire response, section II-2a.

NRSCs capacity, resulting in a *** percentage point decline in capacity utilization from 2021-22. Production then declined from 2022-23, as capacity increased, resulting in a *** percentage points decline in capacity utilization from 2022-23, and a decline of *** percentage points from 2021-23, as production declined by *** percent from 2021-23.

Table III-5

NRSCs: U.S. producer Worthington's installed and practical capacity and production on the same equipment as in-scope production, by period

Capacity and production in units; utilization in percent

Item	Measure	2021	2022	2023
Installed overall	Capacity	***	***	***
Installed overall	Production	***	***	***
Installed overall	Utilization	***	***	***
Practical overall	Capacity	***	***	***
Practical overall	Production	***	***	***
Practical overall	Utilization	***	***	***
Practical NRSCs	Capacity	***	***	***
Practical NRSCs	Production	***	***	***
Practical NRSCs	Utilization	***	***	***

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

Figure III-1

NRSCs: U.S. producer Worthington's capacity, production, and capacity utilization, by period

* * * * *

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

Table III-6 presents U.S. producer Worthington’s reported narratives regarding practical capacity constraints.

Table III-6
NRSCs: U.S. producer Worthington’s reported capacity constraints since January 1, 2021

Item	Firm name and narrative response on constraints to practical overall capacity
***	***
***	***

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

Alternative products

Worthington ***.⁵

U.S. producer’s U.S. shipments and exports

Table III-7 presents U.S. producer Worthington’s U.S. shipments, export shipments, and total shipments. Worthington’s U.S. shipments of NRSCs, by quantity, decreased annually from 2021-23, first declining *** percent from 2021-22, and then declining a further *** percent from 2022-23, for a net 2021-23 decline of *** percent. Worthington’s U.S. shipments by value were highest in 2022, with a 2021-22 increase of *** percent, subsequently declining by *** percent from 2022-23. This resulted in an irregular decline of *** percent, by value, over the 2021-23 period. The combination of a steady decline in the quantity of Worthington’s U.S. shipments alongside fluctuations in the value of those shipments resulted in an irregular increase of *** percent in the unit value of U.S. shipments from 2021-23. As the quantity of U.S. shipments declined while the value rose, the unit value of U.S. shipments increased by *** percent from 2021-22. As the magnitude of the 2022-23 decline in value outpaced the decline in quantity, the unit value likewise declined by *** percent over the same period.

⁵ Regarding the ability to shift production at its NRSCs facilities, Worthington notes that, ***.
Worthington’s U.S. producer questionnaire response, section II-4.

Although Worthington's exports of NRSCs showed a net decline over the 2021-23 period, they first increased by *** percent from 2021-22, before declining by *** percent from 2022-23, an irregular decline of *** percent from 2021-23. As with Worthington's U.S. shipments by value, the value of export shipments peaked in 2022, with 2021-22 increase of *** percent. The value of export shipments then declined by *** percent, from 2022-23, for an irregular decline of *** percent from 2021-23. Similar to U.S. shipments, the unit value of Worthington's exports also showed an irregular increase from 2021-23. With the magnitude of the 2021-22 increase in the value of exports outpacing the simultaneous increase in quantity, the unit value of exports increased by *** percent from 2021-22. The magnitude of the 2022-23 decline in value outpaced the decline in quantity, resulting in a decline of *** percent in the unit value over the same period, though still representing a *** percent irregular increase compared to 2021.

In terms of total shipments of NRSCs, Worthington's exports never accounted for greater than *** percent of total shipments throughout the period reported.⁶ As such, the trend for U.S. shipments drove the trend for total shipments, as total shipments by quantity showed annual declines of *** percent from 2021-22 and *** percent from 2022-23, for an overall decline of *** percent from 2021-23.⁷ As Worthington's exports never accounted for greater than *** percent of the firm's total shipments by value, the trend in the value of total shipments was likewise primarily driven by the trend for U.S. shipments. The value of Worthington's total shipments increased by *** percent from 2021-22, then declined by *** percent from 2022-23, for an irregular decline of *** percent from 2021-23. Driven *** by changes in U.S. shipments, the unit value of Worthington's total shipments likewise increased irregularly from 2021, first increasing by *** percent from 2021-22, then declining *** percent from 2022-23, an irregular increase of *** percent.

⁶ Worthington's principal export markets are ***. Worthington's U.S. producer questionnaire, section II-8.

⁷ In 2022, Worthington "experienced significantly increased import competition from India, leading to falling production and sales volume, despite continuing high demand," which had increased to "historic levels" in 2021 during the rebound from COVID-19. Conference transcript, pp. 19-20, 22 (Bowes).

Table III-7
NRSCs: U.S. producer Worthington's shipments, by destination and period

Quantity in units; value in 1,000 dollars; unit value in dollars per unit; shares in percent

Item	Measure	2021	2022	2023
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.

Table III-8 presents U.S. producer Worthington's U.S. shipments by type.⁸ The quantity of Worthington's commercial U.S. shipments decreased annually from 2021-23, for an overall decline of *** percent. By value, Worthington's commercial U.S. shipments peaked in 2022, with a 2021-22 increase of *** percent, subsequently declining by *** percent from 2022-23. The magnitude of the 2022-23 decline in value resulted in an irregular decline from 2021-23 of *** percent. The unit value of Worthington's commercial U.S. shipments was highest in 2022, reporting an annual increase of *** percent, prior to a *** percent annual decline from 2022-23. As a result, the unit value of commercial U.S. shipments increased irregularly, by *** percent from 2021-23. In terms of quantity, the share of Worthington's commercial U.S. shipments decreased by *** percentage points from 2021-23, and decreased by *** percentage points, by value, over the same period.

Worthington's internal consumption, by quantity, decreased annually from 2021-23, for an overall decline of *** percent. By value, Worthington's internal consumption peaked in 2022, with a 2021-22 increase of *** percent. In 2022-23, however, the value of Worthington's internal consumption of NRSCs decreased by *** percent. Despite the 2022-23 decline, the value of internal consumption in 2023 remained *** percent higher in 2023

⁸ Worthington's internal consumption reported in table III-8 is comprised *** of helium-filled NRSCs that are sold through "retail outlets and two-party channels," and helium-filled NRSCs are the second-largest end use for Worthington's U.S. shipments of NRSCs. Worthington's U.S. producer questionnaire response, section II-16; Conference transcript, p. 46 (Powers).

relative to 2021. The unit value of Worthington's internal consumption peaked in 2022, with a 2021-22 increase of *** percent, prior to declining by *** percent from 2022-23, for a *** percent irregular increase in unit value from 2021-23.

Worthington's total U.S. shipments, by quantity, steadily declined from 2021-23, for an overall decrease of *** percent over the period, *** percent of which is accounted for by the decline in commercial U.S. shipments. The value of Worthington's total U.S. shipments increased by *** percent from 2021-22, and then declined by *** percent from 2022-23, resulting in an irregular decline of *** percent from 2021-23. As with commercial U.S. shipments and internal consumption, the unit value of Worthington's total U.S. shipments peaked in 2022, for a 2021-22 increase of *** percent, due to the simultaneous 2021-22 decline in quantity and increase in value. The decline in the value of Worthington's total U.S. shipments from 2022-23 outpaced the simultaneous decline in total U.S. shipments by quantity, resulting in a 2022-23 decrease in unit value of *** percent. Thus, the unit value of total U.S. shipments of NRSCs increased irregularly by *** percent from 2021-23.

Table III-8
NRSCs: U.S. producer Worthington's U.S. shipments, by type and period

Quantity in units; value in 1,000 dollars; unit value in dollars per unit; shares in percent

Item	Measure	2021	2022	2023
Commercial U.S. shipments	Quantity	***	***	***
Internal consumption	Quantity	***	***	***
U.S. shipments	Quantity	***	***	***
Commercial U.S. shipments	Value	***	***	***
Internal consumption	Value	***	***	***
U.S. shipments	Value	***	***	***
Commercial U.S. shipments	Unit value	***	***	***
Internal consumption	Unit value	***	***	***
U.S. shipments	Unit value	***	***	***
Commercial U.S. shipments	Share of quantity	***	***	***
Internal consumption	Share of quantity	***	***	***
U.S. shipments	Share of quantity	100.0	100.0	100.0
Commercial U.S. shipments	Share of value	***	***	***
Internal consumption	Share of value	***	***	***
U.S. shipments	Share of value	100.0	100.0	100.0

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

Table III-9 presents U.S. producer Worthington’s U.S. shipments by water capacity.⁹ Throughout the period reported, the largest share of Worthington’s U.S. shipments was comprised of medium-sized NRSCs, accounting for *** of U.S. shipments of all NRSCs by water capacity. Although the quantity of Worthington’s shipments of both medium-sized and large-sized NRSCs declined from 2021-23, the respective shares remained stable.

Table III-9
NRSCs: U.S. producer Worthington’s U.S. shipments, by water capacity and period

Quantity in units; shares in percent

Water Capacity	Measure	2021	2022	2023
Small	Quantity	***	***	***
Medium	Quantity	***	***	***
Large	Quantity	***	***	***
All water capacities	Quantity	***	***	***
Small	Share	***	***	***
Medium	Share	***	***	***
Large	Share	***	***	***
All water capacities	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 "---". Small water capacity is ≥ 100 cubic inches and < 300 cubic inches. Medium water capacity is ≥ 300 cubic inches and ≤ 915 cubic inches. Large water capacity is > 915 cubic inches and ≤ 1526 cubic inches.

⁹ In the preliminary phase of these investigations, Commission staff noted a rise in imports of NRSCs from China, despite the presence of orders on these imports from a previous investigation, which staff believed was possibly due to efforts by Chinese producers/exporters to circumvent the existing orders. Non-Refillable Steel Cylinders from India, Inv. Nos. 701-TA-689 and 731-TA-1618 (Preliminary), USITC Publication 5437, June 2023 (“Preliminary publication”), p. IV-4 and appendix D. On March 12, 2024, Commerce determined that NRSCs with water capacities between 100 and 299 cubic inches (i.e., “small” sized NRSCs as labeled in table III-9, above) produced in China and exported to the United States are circumventing the antidumping and countervailing duty orders on NRSCs from China. 89 FR 17814, March 12, 2024.

Captive consumption

Section 771(7)(C)(iv) of the Act states that—¹⁰

If domestic producers internally transfer significant production of the domestic like product for the production of a downstream article and sell significant production of the domestic like product in the merchant market, and the Commission finds that—

- (I) the domestic like product produced that is internally transferred for processing into that downstream article does not enter the merchant market for the domestic like product, and*
- (II) the domestic like product is the predominant material input in the production of that downstream article,*

then the Commission, in determining market share and the factors affecting financial performance . . . , shall focus primarily on the merchant market for the domestic like product.

Transfers and sales

As reported in table III-8 above, internal consumption accounted for between *** percent and *** percent, by quantity, and between *** percent and *** percent, by value, of Worthington's U.S. shipments of NRSCs.

First statutory criterion in captive consumption

The first requirement for application of the captive consumption provision is that the domestic like product that is internally transferred for processing into that downstream article not enter the merchant market for the domestic like product. Worthington reported internal consumption of NRSCs for the production of downstream helium-filled NRSCs.¹¹ Worthington *** diverting NRSCs intended for internal consumption to the merchant market.

Second statutory criterion in captive consumption

The second criterion of the captive consumption provision concerns whether the domestic like product is the predominant material input in the production of the downstream article that is captively produced. With respect to the downstream articles resulting from

¹⁰ Amended by PL 114-27 (as signed, June 29, 2015), Trade Preferences Extension Act of 2015.

¹¹ Conference transcript, pp. 46 (Powers) and 77 (Bowes); Worthington's U.S. producer questionnaire response, section II-16.

captive production, NRSCs reportedly comprise *** percent of the finished cost of the downstream product by value, and *** percent by quantity.

Table III-10
NRSCs: U.S. producer Worthington's share of inputs into downstream products

Shares in percent

Material input	Share of value/cost	Share of quantity
NRSC	***	***
Other inputs	***	***
All material inputs	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires

U.S. producer's inventories

Table III-11 presents U.S. producer Worthington's end-of-period inventories and the ratio of these inventories to Worthington's production, U.S. shipments, and total shipments. Worthington's end-of-period inventories were *** larger in 2022 compared to 2021, prior to then decreasing by *** percent from 2022-23, resulting in an irregular increase of *** percent from 2021-23. The 2021-22 increase in Worthington's inventory occurred as Worthington's new production line was becoming fully operational, and "rather than being able to fill this new capacity in a strong market, Worthington's orders actually shrank in the second half of 2022, as our customers instead sourced from Indian suppliers."^{12 13}

Worthington's inventories as a ratio to U.S. production, U.S. shipments, and total shipments likewise peaked in 2022, increasing between *** and *** percentage points from 2021-22, followed by a 2022-23 decrease across all ratios which resulted in net increases from 2021-23 ranging from *** and *** percentage points.¹⁴

¹² Conference transcript, p. 21 (Bowes).

¹³ Regarding the overall market demand for NRSCs, Worthington noted that, ***. Worthington's U.S. producer questionnaire, section II-2b. Likewise, "over late 2021 and end of 2022, unprecedented levels of construction and remodel activity created a spike in demand for cylinders for foam and adhesives. At the same time, the EPA announced a move to phase out certain refrigerants, which led to a large increase in the demand for disposable cylinders by customers trying to build a stock of refrigerant-filled cylinders in anticipation of that ban." Conference transcript, p. 19 (Bowes).

¹⁴ Worthington is ***. Worthington's U.S. producer questionnaire response, section II-3f.

Table III-11**NRSCs: U.S. producer Worthington's inventories and their ratio to select items, by period**

Quantity in units; ratio in percent

Item	2021	2022	2023
End-of-period inventory quantity	***	***	***
Inventory ratio to U.S. production	***	***	***
Inventory ratio to U.S. shipments	***	***	***
Inventory ratio to total shipments	***	***	***

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

U.S. producer's imports from subject sources

U.S. producer Worthington's imports of NRSCs are presented in table III-12.

Worthington *** in 2021 or 2023. In ***, these imports were *** percent as a ratio to Worthington's production. As described in further detail in table III-13 below, Worthington

***.¹⁵

Table III-12**NRSCs: U.S. producer Worthington's U.S. production, subject imports, and ratio of subject imports to production, by source and period**

Quantity in units; ratio in percent

Item	Measure	2021	2022	2023
U.S. production	Quantity	***	***	***
Imports from ***	Quantity	***	***	***
Imports from *** to U.S. production	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 III-13**NRSCs: U.S. producer Worthington's reasons for importing**

Item	Narrative response on reasons for importing
Worthington's reasons for importing	***

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

¹⁵ Worthington's U.S. importer questionnaire, section II-4.

U.S. producer's purchases of imports from subject sources

Worthington ***.

U.S. employment, wages, and productivity

Table III-14 shows U.S. producer Worthington's employment-related data. Worthington reported an increase of *** percent for total production and related workers ("PRWs") from 2021-22, followed by a 2022-23 decrease of *** percent, representing an irregular decrease of *** percent in the numbers of PRWs from 2021-23.¹⁶ Total hours worked followed a similar trend, first increasing by *** percent from 2021-22, followed by a decrease of *** percent from 2022-23, for an irregular decline of *** percent. Both hourly wages and total wages paid increased from 2021-23, with hourly wages increasing annually for an overall increase of *** percent, and total wages paid fluctuating but increasing *** percent over the same period. Productivity declined irregularly by *** percent from 2021-23, as unit labor costs rose steadily, with 2023 unit labor costs being *** percent higher than in 2021.

Table III-14

NRSCs: U.S. producer Worthington's employment related information, by period

Item	2021	2022	2023
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 (units per hour)	***	***	***
Unit labor costs (dollars per unit)	***	***	***

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

¹⁶ In 2021, Worthington ***. Worthington's U.S. producer questionnaire, section II-11.

Part IV: U.S. imports, apparent U.S. consumption, and market shares

U.S. importers

The Commission issued importer questionnaires to 36 firms believed to be importers of subject NRSCs, as well as to all U.S. producers of NRSCs.¹ Usable questionnaire responses were received from eighteen companies, representing *** percent of U.S. imports from India in 2023 under HTS statistical reporting numbers 7311.00.0060 and 7311.00.0090, “basket” categories which may contain nonsubject merchandise, as well.² ³ Table IV-1 lists all responding U.S. importers of NRSC from India and other sources, their locations, and their shares of U.S. imports, in 2023.

¹ The Commission issued questionnaires to those firms identified in the petition; staff research; and proprietary, Census-edited Customs’ import records.

² Although subject merchandise may also enter under HTS statistical reporting numbers 7310.29.0030 and 7310.29.0065, petitioner believes that the “vast majority, if not all” subject imports enter under 7311.00.0060 and 7311.00.0090. Preliminary conference transcript, p. 88 (Ringel). In the final phase questionnaires, staff asked importers to list any in-scope imports of NRSCs that were not listed under the primary statistical reporting numbers of 7311.00.0060 and 7311.00.0090. One firm, ***, reported imports of subject NRSCs in 2023 not under the primary HTS statistical reporting numbers 7311.00.060 or 7311.00.090, with *** units in 2023 under HTS statistical reporting number ***, representing *** percent of importers’ total imports of in-scope NRSCs under all HTS statistical reporting numbers. *** U.S. importer questionnaire, section II-9. *** reported imports of in-scope NRSCs from nonsubject sources under HTS statistical reporting numbers other than 7311.00.060 and 7311.00.090.

³ HTS statistical reporting numbers 7310.29.0030 and 7310.29.0065 were established and effective as of July 1, 2020. Prior to July 1, 2020, in-scope merchandise may have entered under HTS statistical reporting numbers 7310.29.0025 (Tanks, casks, drums, cans, boxes and similar containers, for any material (other than compressed or liquefied gas), of iron or steel...; other; containers, of circular cross section, of a volume capacity between 11.4 liters and 26.6 liters, of a kind used for the conveyance of goods) or 7310.29.0050 (Tanks, casks, drums, cans, boxes and similar containers, for any material (other than compressed or liquefied gas), of iron or steel...; other; other). Both HTS 7310.29.0025 and 7310.29.0050 were discontinued as of July 1, 2020.

Table IV-1
NRSCs: U.S. importers, their headquarters, and share of imports within each source, 2023

Share in percent

Firm	Headquarters	India	China	All other sources	Nonsubject sources	All import sources
Ability Refrigerants	Phoenix, AZ	***	***	***	***	***
A-Gas	Bowling Green, OH	***	***	***	***	***
Bhiwadi	New Delhi, DL	***	***	***	***	***
CDN Imports	Warrenville, IL	***	***	***	***	***
The Chemours	Wilmington, DE	***	***	***	***	***
Daikin America	Orangeburg, NY	***	***	***	***	***
First Continental	Rochelle Park, NJ	***	***	***	***	***
FluoroFusion	Clayton, NC	***	***	***	***	***
Golden Refrigerant	Livonia, MI	***	***	***	***	***
Hudson Technologies	Woodcliff Lake, NJ	***	***	***	***	***
Mondy Global	San Antonio, TX	***	***	***	***	***
National Refrigerants	Philadelphia, PA	***	***	***	***	***
Pentrade	Clayton, NC	***	***	***	***	***
Summit Refrigerants	Humble, TX	***	***	***	***	***
Unique Industries	Philadelphia, PA	***	***	***	***	***
USA Refrigerants	Old Bridge, NJ	***	***	***	***	***
Weitron	Newark, DE	***	***	***	***	***
Worthington	Columbus, OH	***	***	***	***	***
All firms	Various	100.0	100.0	100.0	100.0	100.0

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

Note: Zeroes, null values, and undefined calculations are suppressed and shown as “---”.

Note: ***. Pentrade’s U.S. importer questionnaire, sections II-2a, II-11, III-25, and III-4.

U.S. imports

Tables IV-2 and IV-3 and figure IV-1 present data for U.S. imports of NRSC from India, China, and all other sources. Driven by similar trends across imports from subject and nonsubject sources, but primarily by a decline in subject imports, total imports of NRSCs peaked in 2022 and then declined in 2023 for an irregular decline of *** percent from 2021-23. Trends in the value of imports were similar to the trends for quantity, with importers reporting a peak in the value of imports from each source in 2022, followed by declines in 2023 for an irregular decline in the value of total imports of *** percent from 2021-23. The average unit values (“AUVs”) of total imports peaked in 2022 and then declined in 2023, for an irregular

decline of *** percent from 2021-23. Volume, value, and AUVs for total imports were all lower in 2023 than in 2021.

U.S. imports of NRSCs from India, by quantity, showed irregular declines from 2021-23, with an *** percent (*** unit) increase from 2021-22 followed by a *** percent (*** unit) decrease from 2022-23, for an irregular decline of *** percent (*** units) from 2021-23.⁴ The value of subject imports followed a similar, but sharper pattern, with value increasing by *** percent from 2021-2022, then declining by *** percent from 2022-23. Over the 2021-23 period the value of subject imports declined by *** percent. AUVs of shipments of subject imports rose by *** percent from 2021 to 2022, then declined by *** percent from 2022-23, for a decrease of *** percent over the period. The AUVs for shipments from India were consistently lower than the AUVs for nonsubject imports.^{5 6}

The quantity of imports of NRSCs from China increased by *** percent (*** units) from 2021-22 and then declined by *** percent (*** units), for a decline of *** percent (*** units) over the period. The total value of imports from China followed a similar pattern, rising by *** percent from 2021-22 and then decreasing by *** percent from 2022-23, for a decline of *** percent. AUVs for imports from China peaked in 2021 and decreased thereafter, down *** percent by 2023.⁷

The volume and value for imports of NRSCs from all other sources followed a similar pattern, peaking in 2022 and decreasing in 2023, for an overall decrease of *** percent from

⁴ Changes in the quantity of subject imports were driven primarily by ***, the two largest importers of subject imports throughout the period of investigation, accounting for at least *** of subject imports, by quantity, in each period reported.

⁵ Despite ***, the largest subject importer in 2021, reporting a *** percent 2021-22 decline, seven firms reported increases in their quantity of 2021-22 subject imports, driving the aggregate increase. The largest of these 2021-22 increases in terms of quantity was the *** unit, *** percent increase reported by ***, the second-largest subject importer in 2021 and subsequently the largest in 2022. The 2022-23 decline in subject imports was driven *** by declines reported by ***.

⁶ ***, which reported increases in subject imports from 2021-22, noted that, “***”. *** U.S. importer questionnaire, section III-18.

⁷ The steady decline in the unit value of imports of NRSCs from China was due to the steady increase in the share of imports from China accounted for by ***, which consistently reported lower unit values of imports from China compared to the three other firms which reported such imports.

2021-23. Unlike imports from China, AUVs of NRSCs from all other sources rose each year, ending in 2023 at *** percent above 2021.⁸

Total nonsubject imports peaked in 2022, in terms of both quantity and value, and subsequently declined from 2022-23 for irregular declines of *** percent and *** percent, respectively, from 2021-23 (*** units). Despite the steady increase in the AUVs of imports from all other sources, the AUVs of aggregate nonsubject imports nonetheless declined annually from 2021-23, a decline of *** percent, driven by the fact that imports from China accounted for the *** of nonsubject imports, by quantity and by value, in each year reported.

India remained the leading source of imports throughout 2021-2023, though its market share was lower in 2023 than in 2021. Market shares for NRSCs from China and all other sources in 2023 were similar to their shares in 2021, with peaks in 2022. In terms of quantity, the 2021-22 decline in the share of subject imports was due to simultaneous increases in the share of nonsubject imports from China and from other sources. Likewise, in 2023, the share of imports from China and from all other sources each declined, but imports from China as a share of total imports remained *** percentage points higher relative to 2021, accounting for the *** of the share lost by subject imports. Unlike with quantity, subject imports' decline as a share of the value of total imports was due *** to the increase in imports from all other sources as a share of total imports, an irregular increase of *** percentage points from 2021-23. The ratio of subject imports from India to U.S. production peaked in 2022 and was at its lowest level in 2023. Imports from China and all other sources followed similar patterns.

⁸ The *** of imports from all other sources throughout the period reported were reported by ***, whose nonsubject imports throughout the period of investigation came exclusively from its related producer's production facility in Portugal, as detailed in Part III of this report.

Table IV-2
NRSCs: U.S. imports, by source and period

Quantity in units; value in 1,000 dollars; unit value in dollars per unit; share and ratio in percent

Source	Measure	2021	2022	2023
India	Quantity	***	***	***
China	Quantity	***	***	***
All other sources	Quantity	***	***	***
Nonsubject sources	Quantity	***	***	***
All import sources	Quantity	***	***	***
India	Value	***	***	***
China	Value	***	***	***
All other sources	Value	***	***	***
Nonsubject sources	Value	***	***	***
All import sources	Value	***	***	***
India	Unit value	***	***	***
China	Unit value	***	***	***
All other sources	Unit value	***	***	***
Nonsubject sources	Unit value	***	***	***
All import sources	Unit value	***	***	***
India	Share of quantity	***	***	***
China	Share of quantity	***	***	***
All other sources	Share of quantity	***	***	***
Nonsubject sources	Share of quantity	***	***	***
All import sources	Share of quantity	100.0	100.0	100.0
India	Share of value	***	***	***
China	Share of value	***	***	***
All other sources	Share of value	***	***	***
Nonsubject sources	Share of value	***	***	***
All import sources	Share of value	100.0	100.0	100.0
India	Ratio	***	***	***
China	Ratio	***	***	***
All other sources	Ratio	***	***	***
Nonsubject sources	Ratio	***	***	***
All import sources	Ratio	***	***	***

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

Note: Share of quantity is the share of U.S. imports by quantity; share of value is the share of U.S. imports by value; ratio is the ratio of U.S. imports to U.S. production.

Table IV-3**NRSCs: Changes in import quantity, value, and unit value between comparison periods**

Changes in percent

Source	Measure	2021-23	2021-22	2022-23
India	%Δ Quantity	▼ ***	▲ ***	▼ ***
China	%Δ Quantity	▼ ***	▲ ***	▼ ***
All other sources	%Δ Quantity	▼ ***	▲ ***	▼ ***
Nonsubject sources	%Δ Quantity	▼ ***	▲ ***	▼ ***
All import sources	%Δ Quantity	▼ ***	▲ ***	▼ ***
India	%Δ Value	▼ ***	▲ ***	▼ ***
China	%Δ Value	▼ ***	▲ ***	▼ ***
All other sources	%Δ Value	▼ ***	▲ ***	▼ ***
Nonsubject sources	%Δ Value	▼ ***	▲ ***	▼ ***
All import sources	%Δ Value	▼ ***	▲ ***	▼ ***
India	%Δ Unit value	▼ ***	▲ ***	▼ ***
China	%Δ Unit value	▼ ***	▼ ***	▼ ***
All other sources	%Δ Unit value	▲ ***	▲ ***	▲ ***
Nonsubject sources	%Δ Unit value	▼ ***	▼ ***	▼ ***
All import sources	%Δ Unit value	▼ ***	▲ ***	▼ ***

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 IV-1**NRSC: U.S. import quantities and average unit values, by source and period**

* * * * *

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

Table IV-4 presents data on U.S. imports by U.S. producer Worthington. As noted earlier in table III-12 of this report, the entirety of Worthington's ***.⁹ As a result, subject imports never exceeded *** percent as a ratio to total imports of NSRCs from all importers during the period reported. Nonsubject imports consisted entirely of ***.¹⁰

Table IV-4
NRSCs: U.S. imports by U.S. producer Worthington

Quantity in units; ratio in percent

Source	Measure	2021	2022	2023
India	Quantity	***	***	***
China	Quantity	***	***	***
All other sources	Quantity	***	***	***
Nonsubject sources	Quantity	***	***	***
All import sources	Quantity	***	***	***
India	Ratio	***	***	***
China	Ratio	***	***	***
All other sources	Ratio	***	***	***
Nonsubject sources	Ratio	***	***	***
All import sources	Ratio	***	***	***

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

Note: Zeroes, null values, and undefined calculations are suppressed and shown as "---". The ratios represent the portion of U.S. imports as reported in responses to the Commission's questionnaires within the specified source that was imported by U.S. producers and/or their affiliates. These ratios are calculated off of data shown in this table (numerators) and in table IV-2 (denominators).

⁹ Worthington's U.S. importer questionnaire response, section II-4.

¹⁰ Worthington's U.S. importer questionnaire response, section II-4.

Tables IV-5 through IV-9, and figure IV-2, present data on importers' U.S. shipments of NRSCs by water capacity.¹¹ Subject imports were comprised *** of medium-sized NRSCs from 2021-22, with an increase in 2023 of U.S. shipments of small-sized NRSCs.¹² Medium-sized NRSCs also comprised the *** of U.S. shipments of imports from China from 2021-22, followed by an over *** unit increase in U.S. shipments of small-sized NRSCs from China in 2023. The increase in U.S. importers' U.S. shipments of small-sized NRSCs from China from 2021-23 resulted in the share of small-sized NRSCs from China rising from *** percent in 2021, to *** percent in 2022, and *** percent in 2023, as a share of U.S. shipments of all sizes of NRSCs from China. By contrast, there were no shipments of small-sized NRSCs from all other sources throughout the period reported. Rather, large-sized NRSCs' accounted for *** of importers U.S. shipments of imports from all other sources throughout the period reported. Due primarily to the increase in U.S. shipments of imports of small-sized NRSCs from China from 2022-23, as well as the simultaneous increase in those sourced from India, small-sized NRSCs increased by *** percentage points as a share of total U.S. shipments of imports of all NRSCs. As a result, U.S. shipments of imports of medium-sized NRSCs, which accounted for the vast majority of all such shipments in 2021, decreased by *** percentage points from 2021-23 as a share of U.S. shipments of imports of all NRSCs.

¹¹ In the preliminary phase of these investigation, Commission staff noted a rise in imports of NRSCs from China, despite the presence of orders on these imports from a previous investigation, which staff believed was possibly due to efforts by Chinese producers/exporters to circumvent the existing orders. Non-Refillable Steel Cylinders from India, Inv. Nos. 701-TA-689 and 731-TA-1618 (Preliminary), USITC Publication 5437, June 2023 ("Preliminary publication"), p. IV-4 and appendix D. On March 12, 2024, Commerce determined that NRSCs with water capacities between 100 and 299 cubic inches produced in China and exported to the United States are circumventing the antidumping and countervailing duty orders on NRSCs from China. 89 FR 17814, March 12, 2024.

¹² The 2023 increase in U.S. shipments of small-sized NRSCs imported from India is accounted for entirely by ***, who in 2021 and 2022 reported U.S. shipments of only *** imported from India, and then in 2023 reported that their U.S. shipments of NRSCs from India were comprised *** of small-sized NRSCs. *** U.S. importer questionnaire response, section II-5c.

Table IV-5
NRSCs: U.S. importers' U.S. shipments of imports from India, by water capacity and period

Quantity in units; shares in percent

Water capacity	Measure	2021	2022	2023
Small	Quantity	***	***	***
Medium	Quantity	***	***	***
Large	Quantity	***	***	***
All water capacities	Quantity	***	***	***
Small	Share	***	***	***
Medium	Share	***	***	***
Large	Share	***	***	***
All water capacities	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 "---". Small water capacity is ≥ 100 cubic inches and < 300 cubic inches. Medium water capacity is ≥ 300 cubic inches and ≤ 915 cubic inches. Large water capacity is > 915 cubic inches and ≤ 1526 cubic inches.

Table IV-6
NRSCs: U.S. importers' U.S. shipments of imports from China, by water capacity and period

Quantity in units; shares in percent

Water capacity	Measure	2021	2022	2023
Small	Quantity	***	***	***
Medium	Quantity	***	***	***
Large	Quantity	***	***	***
All water capacities	Quantity	***	***	***
Small	Share	***	***	***
Medium	Share	***	***	***
Large	Share	***	***	***
All water capacities	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 "---". Small water capacity is ≥ 100 cubic inches and < 300 cubic inches. Medium water capacity is ≥ 300 cubic inches and ≤ 915 cubic inches. Large water capacity is > 915 cubic inches and ≤ 1526 cubic inches.

Table IV-7**NRSCs: U.S. importers' U.S. shipments of imports from all other sources, by water capacity and period**

Quantity in units; shares in percent

Water capacity	Measure	2021	2022	2023
Small	Quantity	***	***	***
Medium	Quantity	***	***	***
Large	Quantity	***	***	***
All water capacities	Quantity	***	***	***
Small	Share	***	***	***
Medium	Share	***	***	***
Large	Share	***	***	***
All water capacities	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 "---". Small water capacity is ≥ 100 cubic inches and < 300 cubic inches. Medium water capacity is ≥ 300 cubic inches and ≤ 915 cubic inches. Large water capacity is > 915 cubic inches and ≤ 1526 cubic inches.

Table IV-8**NRSCs: U.S. importers' U.S. shipments of imports from nonsubject sources, by water capacity and period**

Quantity in units; shares in percent

Water capacity	Measure	2021	2022	2023
Small	Quantity	***	***	***
Medium	Quantity	***	***	***
Large	Quantity	***	***	***
All water capacities	Quantity	***	***	***
Small	Share	***	***	***
Medium	Share	***	***	***
Large	Share	***	***	***
All water capacities	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 "---". Small water capacity is ≥ 100 cubic inches and < 300 cubic inches. Medium water capacity is ≥ 300 cubic inches and ≤ 915 cubic inches. Large water capacity is > 915 cubic inches and ≤ 1526 cubic inches.

Table IV-9**NRSCs: U.S. importers' U.S. shipments of imports from all import sources, by water capacity and period**

Quantity in units; shares in percent

Water capacity	Measure	2021	2022	2023
Small	Quantity	***	***	***
Medium	Quantity	***	***	***
Large	Quantity	***	***	***
All water capacities	Quantity	***	***	***
Small	Share	***	***	***
Medium	Share	***	***	***
Large	Share	***	***	***
All water capacities	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 "---". Small water capacity is ≥ 100 cubic inches and < 300 cubic inches. Medium water capacity is ≥ 300 cubic inches and ≤ 915 cubic inches. Large water capacity is > 915 cubic inches and ≤ 1526 cubic inches.

Figure IV-2**NRSCs: U.S. producer Worthington's and U.S. importers' U.S. shipments of NRSCs, by source and water capacity, 2023**

* * * * *

Source: Compiled from data submitted in response to Commission questionnaires

Negligibility

The statute requires that an investigation be terminated without an injury determination if imports of the subject merchandise are found to be negligible.¹³ Negligible imports are generally defined in the Act, as amended, as imports from a country of merchandise corresponding to a domestic like product where such imports account for less than 3 percent of the volume of all such merchandise imported into the United States in the most recent 12-month period for which data are available that precedes the filing of the petition or the initiation of the investigation. However, if there are imports of such merchandise from a number of countries subject to investigations initiated on the same day that individually account for less than 3 percent of the total volume of the subject merchandise, and if the imports from those countries collectively account for more than 7 percent of the volume of all such merchandise imported into the United States during the applicable 12-month period, then imports from such countries are deemed not to be negligible.¹⁴ Imports from India accounted for *** percent of total imports of NRSCs by quantity from April 1, 2022 through March 31, 2023.

Table IV-10
NRSC: U.S. imports in the twelve-month period preceding the filing of the petition, April 2022 through March 2023

Quantity in units; share in percent

Source of imports	Quantity	Share of quantity
India AD	***	***
India CVD	***	***
China	***	***
All other sources	***	***
All import sources	***	100.0

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

Note: India CVD reflects all imports from India while India AD removes imports from India supplied by Inox India, Ltd. ("Inox"), as Commerce has assigned Inox a *de minimis* antidumping margin. 89 FR 29296, April 22, 2024.

¹³ Sections 703(a)(1), 705(b)(1), 733(a)(1), and 735(b)(1) of the Act (19 U.S.C. §§ 1671b(a)(1), 1671d(b)(1), 1673b(a)(1), and 1673d(b)(1)).

¹⁴ Section 771 (24) of the Act (19 U.S.C § 1677(24)).

Apparent U.S. consumption and market shares

Quantity

Table IV-11 and figure IV-3 present data on apparent U.S. consumption and U.S. market shares for the total market by quantity for NRSCs. Driven by 2021-23 decreases in the quantity of total imports and Worthington's U.S. shipments, apparent consumption for the total market decreased by *** percent, by quantity, from 2021-23. From 2021-22, Worthington's U.S. shipments declined by *** percent, while total imports of NRSCs increased by *** percent. As a result, Worthington's market share declined by *** percentage points from 2021-22. The 2021-22 increase in imports of NRSCs was driven by simultaneous increases in subject imports, imports from China, and imports from all other sources. Nonsubject imports and subject imports each accounted for *** of the total increase in imports over the 2021-22 period. Worthington's U.S. shipments continued to decline from 2022-23, but also gained *** percentage points of market share across this period, due to a *** percent decline in the quantity of total imports. Among imports, only NRSCs from China reported an increase in quantity from 2022-23, although this *** percent increase was not enough to offset the decline in imports from other sources, which consisted primarily of a *** percent (***) decline in subject imports. As a result, imports from China reported a slight gain of *** percentage points of market share from 2021-23, despite the market share of total imports declining slightly by *** percentage points over the same period. Thus, despite a decrease in the quantity of Worthington's U.S. shipments from 2021-23, market shares remained relatively consistent across the period.

Table IV-11**NRSCs: Apparent U.S. consumption and market shares for the total market based on quantity, by source and period**

Quantity in units; shares in percent

Source	Measure	2021	2022	2023
U.S. producer	Quantity	***	***	***
India	Quantity	***	***	***
China	Quantity	***	***	***
All other sources	Quantity	***	***	***
Nonsubject sources	Quantity	***	***	***
All import sources	Quantity	***	***	***
All sources	Quantity	***	***	***
U.S. producer	Share	***	***	***
India	Share	***	***	***
China	Share	***	***	***
All other 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.

Figure IV-3**NRSCs: Apparent U.S. consumption for the total market based on quantity, by source and period**

* * * * *

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

Table IV-12 and figure IV-4 present data on apparent U.S. consumption and U.S. market shares for the merchant market by quantity for NRSCs. Apparent consumption in the merchant market decreased annually from 2021-23, for a decline of *** percent, driven both by declines in the quantity of imports and of Worthington's U.S. shipments over the same period. Worthington's U.S. shipments in the merchant market, by quantity, steadily declined from 2021-23, declining first by *** percent from 2021-22, and then a further *** percent from 2022-23, for a decline of *** percent from 2021-23. As with the total market, and due to the irregular decrease in total imports from 2021-23, Worthington's market share fluctuated, but ultimately remained stable across 2021-23, first declining by *** percentage points from 2021-22, before rebounding in 2023 for a slight decline of *** percentage points.

Table IV-12

NRSCs: Apparent U.S. consumption and market shares for the merchant market based on quantity, by source and period

Quantity in units; shares in percent

Source	Measure	2021	2022	2023
U.S. producer	Quantity	***	***	***
India	Quantity	***	***	***
China	Quantity	***	***	***
All other sources	Quantity	***	***	***
Nonsubject sources	Quantity	***	***	***
All import sources	Quantity	***	***	***
All sources	Quantity	***	***	***
U.S. producer	Share	***	***	***
India	Share	***	***	***
China	Share	***	***	***
All other 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.

Figure IV-4

NRSCs: Apparent U.S. consumption for the merchant market based on quantity, by source and period

* * * * *

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

Value

Table IV-13 and figure IV-5 present data on apparent U.S. consumption and U.S. market shares for the total market by value for NRSCs. Apparent consumption, by value, for the total market for NRSCs peaked in 2022, following a *** percent increase from 2021-22, and subsequently declined by *** percent from 2022-23, for an irregular decline of *** percent from 2021-23. The initial increase in apparent consumption, by value, from 2021-22 was driven by increases in the value of Worthington's U.S. shipments and all import sources over the same period, although Worthington's U.S. shipments accounted for *** of the total increase in apparent consumption. Among imports, subject imports increased by *** percent, while nonsubject imports increased by *** percent from 2021-22. The 2021-22 increase in nonsubject imports, both from China and all other sources, accounted for *** of the *** percentage points of market share lost by Worthington over the same period. The 2022-23 overall decline in apparent consumption was likewise driven by simultaneous declines across Worthington's U.S. shipments and all import sources. However, the decline in apparent consumption from 2022-23 was driven primarily by the *** percent decline in total imports, resulting in Worthington gaining *** percentage points of market share from 2022-23. Imports from China were the only import source which increased in

market share from 2022-23, and subject imports were the import source which reported the largest decline in market share from 2022-23, with a *** percentage point decline, representing an overall decline in market share of *** percentage points from 2021-23. This 2021-23 decline in the market share of subject imports accounted for *** of the *** percentage point decline in the market share of total imports from 2021-23, as nonsubject imports increased their market share over the same period.

Table IV-13

NRSCs: Apparent U.S. consumption and market shares for the total market based on value, by source and period

Value in 1,000 dollars; shares in percent

Source	Measure	2021	2022	2023
U.S. producer	Value	***	***	***
India	Value	***	***	***
China	Value	***	***	***
All other sources	Value	***	***	***
Nonsubject sources	Value	***	***	***
All import sources	Value	***	***	***
All sources	Value	***	***	***
U.S. producer	Share	***	***	***
India	Share	***	***	***
China	Share	***	***	***
All other 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.

Figure IV-5

NRSCs: Apparent U.S. consumption for the total market based on value, by source and period

* * * * *

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

Table IV-14 and figure IV-6 present data on apparent U.S. consumption and U.S. market shares for the merchant market by value for NRSCs. Apparent consumption in the merchant market, by value, increased by *** percent from 2021-22, followed by a decrease of *** percent from 2022-23, for an irregular decline of *** percent from 2021-23. The overall decline in the value of apparent consumption in the merchant market was driven both by decline in Worthington's U.S. shipments and in the value of imports over the 2021-23 period. Worthington's U.S. shipments increased by *** percent from 2021-22, then declined by *** percent from 2022-23, for an irregular decrease of *** percent from 2021-23. As in the case of the total market, Worthington's market share fluctuated, but irregularly increased across the 2021-23 period by *** percentage points, due *** to the decline in the market share of subject imports across the same period.

Table IV-14

NRSCs: Apparent U.S. consumption and market shares for the merchant market based on value, by source and period

Value in 1,000 dollars; shares in percent

Source	Measure	2021	2022	2023
U.S. producer	Value	***	***	***
India	Value	***	***	***
China	Value	***	***	***
All other sources	Value	***	***	***
Nonsubject sources	Value	***	***	***
All import sources	Value	***	***	***
All sources	Value	***	***	***
U.S. producer	Share	***	***	***
India	Share	***	***	***
China	Share	***	***	***
All other 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.

Figure IV-6

NRSCs: Apparent U.S. consumption for the merchant market based on value, by source and period

* * * * *

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

Part V: Pricing data

Factors affecting prices

Raw material costs

NRSCs are typically made from cold-rolled steel.¹ Raw materials as a share of total costs of goods sold decreased from *** percent in 2021 to *** percent in 2023. As shown in figure V-1, ***.

Figure V-1

NRSC: Raw material prices: cold-rolled steel U.S. mill fob price, monthly, January 2021 to December 2023

* * * * *

Source: ***, accessed February 2024.

¹ Petition, p. 6.

Table V-1

NRSC: Raw material prices, cold-rolled steel U.S. mill fob price monthly, January 2021 to December 2023

Prices in dollars per cwt (100 pounds)

Month	2021	2022	2023
January	***	***	***
February	***	***	***
March	***	***	***
April	***	***	***
May	***	***	***
June	***	***	***
July	***	***	***
August	***	***	***
September	***	***	***
October	***	***	***
November	***	***	***
December	***	***	***

Source: ***, accessed February 2024.

Transportation costs to the U.S. market

Transportation costs for NRSCs shipped from India to the United States averaged 12.8 percent during 2023. These estimates were derived from official import data and represent the transportation and other charges on imports.²

U.S. inland transportation costs

U.S. producer Worthington reported that *** usually arranges transportation. Worthington reported that its U.S. inland transportation costs average *** percent. The majority of responding importers reported that they typically arrange transportation to their customers. Importers reported that their U.S. inland transportation costs ranged from 0.7 to 31.0 percent.

² The estimated transportation costs were obtained by subtracting the customs value from the c.i.f. value of the imports for 2022 and then dividing by the customs value based on the HTS statistical reporting number 7311.00.0060 and 7311.00.0090.

Pricing practices

Pricing methods

U.S. producer Worthington reported setting pricing ***. Importers reported setting pricing on a transaction-by-transaction basis, using contracts, set price lists, and other methods (table V-2). Importer *** reported that other methods of setting prices included adding a transfer fee to the import costs when selling to an affiliated firm.

Table V-2

NRSC: Count of U.S. producer's and importers' reported price setting methods

Method	U.S. producer	Importers
Transaction-by-transaction	***	5
Contract	***	2
Set price list	***	2
Other	***	5
Responding firms	1	12

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. producer Worthington reported selling most of their NRSCs ***. Importers did not report any commercial shipments in 2023 (table V-3).

Table V-3

NRSC: U.S. producer's and importers' shares of commercial U.S. shipments by type of sale, 2023

Share in percent

Type of sale	U.S. producer	Importers
Long-term contracts	***	---
Short-term contracts	***	---
Spot sales	***	---
Annual contracts	***	---
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.

U.S. producer Worthington reported that it ***. U.S. producer Worthington reported that it ***. U.S. producer Worthington reported that ***.

All responding importers reported that they fixed both price and quantity in short-term contracts and none of the responding importers reported that they renegotiated prices during short-term contracts.

Two purchasers reported that they purchase product weekly, two purchase quarterly, and one purchases annually. Five of seven responding purchasers reported that their purchasing frequency has not changed since 2021. Responding purchasers typically contact one to four suppliers before making a purchase.

Sales terms and discounts

U.S. producer Worthington typically quotes prices on a ***; the majority of importers typically quote prices on a delivered basis. U.S. producer Worthington reported offering ***. The majority of responding importers reported having no discount policy. Importer *** reported offering quantity and total volume discounts for NRSCs.

Price leadership

Four purchasers reported that Worthington was a price leader. Purchaser *** reported that Worthington was the largest U.S. supplier and set the U.S. market price. Purchaser *** reported that Worthington was the sole domestic NRSC producer. Purchaser *** reported that Worthington sets the domestic prices since purchasing their last domestic competitor.

Price and purchase cost data

The Commission requested U.S. producer Worthington and importers to provide quarterly data for the total quantity and f.o.b. value of the following NRSCs products shipped to unrelated U.S. customers during January 2021-December 2023. Firms that imported these products from India and China for their own use were requested to provide import purchase cost data.

Product 1.-- Non-refillable steel cylinder, 9.5-inches in diameter, with 260 PSIG service pressure rating, unfilled, meeting the requirements of U.S. Department of Transportation specification 39.

Product 2.-- Non-refillable steel cylinder, 9.5-inches in diameter, with 400 PSIG service pressure rating, unfilled, meeting the requirements of U.S. Department of Transportation specification 39.

Price data

U.S. producer Worthington and two importers provided usable pricing data for sales of the requested products, although not all firms reported pricing for all products for all quarters.³ ⁴ Pricing data reported by these firms accounted for approximately *** percent of U.S. producer Worthington's commercial shipments of NRSCs in 2023. Importers did not report any commercial shipments in 2023 but pricing data reported by importers accounted for *** percent of U.S. commercial shipments of imports from India in 2022.⁵

Price data for products 1-2 are presented in tables V-4 to V-5 and figures V-2 to V-3. Nonsubject country prices are presented in Appendix D.

³ Per-unit pricing data are calculated from total quantity and total value data provided by U.S. producer Worthington and importers. The precision and variation of these figures may be affected by rounding, limited quantities, and producer or importer estimates.

⁴ U.S. producer Worthington ***.

⁵ Importer ***'s pricing data was revised to exclude quantities and values that fell outside the pricing product definitions.

Table V-4

NRSC: 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	US price	US quantity	India price	India quantity	India margin
2021 Q1	***	***	***	***	***
2021 Q2	***	***	***	***	***
2021 Q3	***	***	***	***	***
2021 Q4	***	***	***	***	***
2022 Q1	***	***	***	***	***
2022 Q2	***	***	***	***	***
2022 Q3	***	***	***	***	***
2022 Q4	***	***	***	***	***
2023 Q1	***	***	***	***	***
2023 Q2	***	***	***	***	***
2023 Q3	***	***	***	***	***
2023 Q4	***	***	***	***	***

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 "---".

Note: Product 1: Non-refillable steel cylinder, 9.5-inches in diameter, with 260 PSIG service pressure rating, unfilled, meeting the requirements of U.S. Department of Transportation specification 39.

Figure V-2

NRSC: Weighted-average prices and quantities 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: Non-refillable steel cylinder, 9.5-inches in diameter, with 260 PSIG service pressure rating, unfilled, meeting the requirements of U.S. Department of Transportation specification 39.

Table V-5

NRSC: 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	US price	US quantity	India price	India quantity	India margin
2021 Q1	***	***	***	***	***
2021 Q2	***	***	***	***	***
2021 Q3	***	***	***	***	***
2021 Q4	***	***	***	***	***
2022 Q1	***	***	***	***	***
2022 Q2	***	***	***	***	***
2022 Q3	***	***	***	***	***
2022 Q4	***	***	***	***	***
2023 Q1	***	***	***	***	***
2023 Q2	***	***	***	***	***
2023 Q3	***	***	***	***	***
2023 Q4	***	***	***	***	***

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 "---".

Note: Product 2: Non-refillable steel cylinder, 9.5-inches in diameter, with 400 PSIG service pressure rating, unfilled, meeting the requirements of U.S. Department of Transportation specification 39.

Figure V-3
NRSC: Weighted-average prices and quantities 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: Non-refillable steel cylinder, 9.5-inches in diameter, with 400 PSIG service pressure rating, unfilled, meeting the requirements of U.S. Department of Transportation specification 39.

Import purchase cost data

Thirteen importers reported useable import purchase cost data for products 1 and 2. Purchase cost data reported by these firms accounted for *** percent of imports for internal consumption from India in 2023. *** and *** were the largest importers for internal consumption. Landed, duty-paid purchase cost data for imports from India are presented in tables V-6 to V-7, along with U.S. producer's sales prices.⁶

Importers reporting import purchase cost data were asked to provide additional information regarding the costs and benefits of importing NRSCs themselves.

Four of 13 importers reported that they incurred additional costs beyond landed, duty-paid costs by importing NRSCs for their own use rather than purchasing from a U.S. producer or U.S. importer. Of these, three importers estimated the total additional cost incurred; estimates ranged from 0.7 to 31.0 percent compared to the landed, duty-paid value. Firms were also asked to identify specific additional costs they incurred as a result of importing NRSCs. Reported costs include quality management, financing, shipping, and storage costs. Importer *** reported that inland freight costs, chassis rentals, and demurrage fees incurred between 14 and 21 percent additional costs as a result of importing NRSCs, while financing costs were between 1-3 percent.

Firms were also asked to describe how these additional costs incurred by importing NRSCs for their own use compares with additional costs incurred when purchasing from a U.S. producer or U.S. importer. Importer *** reported that after including costs incurred from supply chain management and inbound inspection, the per unit costs of imported NRSCs was comparable to the cost of NRSCs it purchased from the sole U.S. producer. Importer *** reported that purchasing domestic NRSCs was far more costly than importing NRSCs themselves as U.S. producer Worthington is the only domestic manufacturer and a monopoly.

Two importers reported that they compare costs of importing to the cost of purchasing from U.S. importers in determining whether to import NRSCs, 11 importers compare costs to purchasing from a U.S. producer, and three importers do not compare costs of purchasing from either U.S. producer Worthington or importers.

⁶ 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.

Thirteen importers identified benefits from importing NRSCs themselves instead of purchasing from U.S. producer Worthington or importers, including greater availability of NRSCs, lower lead times, and lower costs.

Firms were also asked whether the import cost (both excluding and including additional costs) of NRSCs they imported are lower than the price of purchasing NRSCs from a U.S. producer or importer.

Nine importers reported that the price of NRSCs imported for their own use from India were lower than purchasing from an importer or U.S. producer including the additional costs associated with importing the product. Importers estimated that they saved between *** percent of the purchase price by importing NRSCs rather than purchasing from a U.S. importer, and saving between *** percent compared to purchasing the product from a U.S. producer.⁷

⁷ Nine firms reported that they based their estimates on previous company transactions, five reported basing their estimates on market research, and one reported another basis for their estimates, including the pricing quote from a manufacturer.

Table V-6

NRSC: Import landed duty-paid purchase costs and domestic prices, quantities of product 1, and price-cost differentials, by source and quarter

Price and LDP value in dollars per unit, quantity in units, margin and price-cost differential in percent.

Period	US price	US quantity	India unit LDP value	India cost quantity	India differential
2021 Q1	***	***	***	***	***
2021 Q2	***	***	***	***	***
2021 Q3	***	***	***	***	***
2021 Q4	***	***	***	***	***
2022 Q1	***	***	***	***	***
2022 Q2	***	***	***	***	***
2022 Q3	***	***	***	***	***
2022 Q4	***	***	***	***	***
2023 Q1	***	***	***	***	***
2023 Q2	***	***	***	***	***
2023 Q3	***	***	***	***	***
2023 Q4	***	***	***	***	***

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 "---".

Note: Product 1: Non-refillable steel cylinder, 9.5-inches in diameter, with 260 PSIG service pressure rating, unfilled, meeting the requirements of U.S. Department of Transportation specification 39.

Note: U.S. producer price data is the same as that presented in table V-4.

Figure V-4

NRSC: U.S. producer prices and import purchase costs, and quantities, of product 1, by source and quarter

U.S. price and import purchase cost of product 1

* * * * *

Volume of product 1

* * * * *

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

Note: Product 1: Non-refillable steel cylinder, 9.5-inches in diameter, with 260 PSIG service pressure rating, unfilled, meeting the requirements of U.S. Department of Transportation specification 39.

Table V-7

NRSC: Import landed duty-paid purchase costs and domestic prices, quantities of product 2, and price-cost differentials, by source and quarter

Price and LDP value in dollars per unit, quantity in units, margin and price-cost differential in percent.

Period	US price	US quantity	India unit LDP value	India cost quantity	India differential
2021 Q1	***	***	***	***	***
2021 Q2	***	***	***	***	***
2021 Q3	***	***	***	***	***
2021 Q4	***	***	***	***	***
2022 Q1	***	***	***	***	***
2022 Q2	***	***	***	***	***
2022 Q3	***	***	***	***	***
2022 Q4	***	***	***	***	***
2023 Q1	***	***	***	***	***
2023 Q2	***	***	***	***	***
2023 Q3	***	***	***	***	***
2023 Q4	***	***	***	***	***

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 "---".

Note: Product 2: Non-refillable steel cylinder, 9.5-inches in diameter, with 400 PSIG service pressure rating, unfilled, meeting the requirements of U.S. Department of Transportation specification 39.

Note: U.S. producer price data is the same as that presented in table V-5.

Figure V-5

NRSC: U.S. producer prices and import purchase costs, and quantities, of product 2, by source and quarter

U.S. price and import purchase cost of product 2

* * * * *

Volume of product 2

* * * * *

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

Note: Product 2: Non-refillable steel cylinder, 9.5-inches in diameter, with 400 PSIG service pressure rating, unfilled, meeting the requirements of U.S. Department of Transportation specification 39.

Price and purchase cost trends

In general, prices increased during January 2021-December 2023. Table V-8 summarizes the price trends, by country and by product. As shown in the table, domestic price increases ranged from *** to *** percent during January 2021-December 2023. There were insufficient pricing data to determine price trends for NRSCs imported from India. Landed duty-paid costs trends range from a *** percent decrease to a *** percent increase.

Table V-8
NRSC: Summary of price and cost data, by product and source

Quantity in units, price and cost in dollars per unit, change in percent

Product	Source	Number of quarters	Volume of shipments	Low price/cost	High price/cost	First quarter price/cost	Last quarter price/cost	Percent change in price/cost over period
Product 1	United States	***	***	***	***	***	***	***
Product 1	India price	***	***	***	***	***	***	***
Product 1	India cost	***	***	***	***	***	***	***
Product 2	United States	***	***	***	***	***	***	***
Product 2	India price	***	***	***	***	***	***	***
Product 2	India cost	***	***	***	***	***	***	***

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 "---".

Note: Percentage change from the first quarter in which data were available in 2021 to the last quarter in which data were available in 2023.

Figure V-6
NRSC: Indexed U.S. producer prices, by quarter

* * * * *

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

Figure V-7
NRSC: Indexed subject U.S. importer purchase costs, by quarter

* * * * *

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

Table V-9
NRSC: Indexed subject U.S. producer prices by quarter

Indexed prices in percent

Period	Product 1	Product 2
2021 Q1	***	***
2021 Q2	***	***
2021 Q3	***	***
2021 Q4	***	***
2022 Q1	***	***
2022 Q2	***	***
2022 Q3	***	***
2022 Q4	***	***
2023 Q1	***	***
2023 Q2	***	***
2023 Q3	***	***
2023 Q4	***	***

Table V-10
NRSC: Indexed subject U.S. importer prices and purchase costs, by quarter

Indexed price/cost in percent

Period	Product 1 - Price	Product 2 - Price	Product 1 - Cost	Product 2 - Cost
2021 Q1	***	***	***	***
2021 Q2	***	***	***	***
2021 Q3	***	***	***	***
2021 Q4	***	***	***	***
2022 Q1	***	***	***	***
2022 Q2	***	***	***	***
2022 Q3	***	***	***	***
2022 Q4	***	***	***	***
2023 Q1	***	***	***	***
2023 Q2	***	***	***	***
2023 Q3	***	***	***	***
2023 Q4	***	***	***	***

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 "---".

Price and purchase cost comparisons

Price comparisons

As shown in table V-11, prices for product imported from India were below those for U.S.-produced product in 2 of 8 instances (***) units); margins of underselling ranged from 7.7 to 14.2 percent. In the remaining six instances (***) units), prices for product from India were between 1.8 and 87.3 percent above prices for the domestic product.

Table V-11
NRSC: Instances of underselling and overselling and the range and average of margins, by product

Quantity in units; margin in percent

Product	Type	Number of quarters	Quantity	Average margin	Min margin	Max margin
Product 1	Underselling	---	***	***	***	***
Product 2	Underselling	2	***	***	***	***
Total	Underselling	2	18,000	10.9	7.7	14.2
Product 1	Overselling	4	***	***	***	***
Product 2	Overselling	2	***	***	***	***
Total	Overselling	6	38,920	(18.8)	(1.8)	(87.3)

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 "---".

Note: These data include only quarters in which there is a comparison between the U.S. and subject product.

Price-cost comparisons

As shown in table V-12, landed duty-paid costs for NRSCs imported from India were below the sales price for U.S.-produced product in 17 of 24 instances (***) units); price-cost differentials ranged from 0.5 to 35.4 percent. In the remaining 7 instances (***) units), landed duty-paid costs for NRSCs from India were between close to 0.0 and 23.8 percent above sales prices for the domestic product.

Table V-12

NRSC: Instances of lower and higher import purchase costs and the range and average of price-cost differentials, by product

Quantity in units; price-cost differential in percent

Product	Type	Number of quarters	Quantity	Average price-cost differential	Min price-cost differential	Max price-cost differential
Product 1	Lower than U.S. price	5	***	***	***	***
Product 2	Lower than U.S. price	12	***	***	***	***
Total	Lower than U.S. price	17	2,764,836	22.9	0.5	35.4
Product 1	Higher than U.S. price	7	***	***	***	***
Product 2	Higher than U.S. price	---	***	***	***	***
Total	Higher than U.S. price	7	1,030,243	(10.4)	(0.0)	(23.8)

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.

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 "---".

Lost sales and lost revenue

In the preliminary phase of the investigation, the Commission requested that U.S. producer Worthington of NRSCs report purchasers with which they experienced instances of lost sales or revenue due to competition from imports of NRSCs from India during January 2021-December 2023. U.S. producer Worthington submitted lost sales and lost revenue allegations identifying 12 firms consisting of both lost sales and lost revenues of allegations. In the final phase of the investigation, U.S. producer Worthington reported that it ***.

Staff contacted 15 purchasers and received responses from seven purchasers.⁸ Responding purchasers reported purchasing *** units of NRSCs during January 2021-December 2023 (table V-13).

Of the seven responding purchasers, six reported that, since January 2021, they had purchased imported NRSCs from India instead of U.S.-produced product. Five of these purchasers reported that subject import prices were lower than U.S.-produced product. None of the responding purchasers reported that price was the primary reason they had purchased NRSCs from India instead of domestic product. Responding purchasers reported that they had purchased NRSCs from India instead of domestic product for increased availability of NRSCs, a diversified supply chain, decreased wait times, and increased ease of doing business (table V-14).

Of the six responding purchasers, one reported that U.S. producer Worthington had reduced prices in order to compete with lower-priced imports from India; three reported that they did not know. Purchaser *** reported that prices decreased by 29 percent from 2021 to the first half of 2022.

⁸ Two purchasers submitted lost sales lost revenue survey responses in the preliminary phase, but did not submit purchaser questionnaire responses in the final phase.

Table V-13**NRSC: Purchasers' reported purchases and imports, by firm and source**

Quantity in units, share in percent

Purchaser	Domestic quantity	Subject quantity	All other quantity	Change in domestic share	Change in subject country share
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
All firms	***	***	***	***	***

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

Note: All other includes all other sources and unknown sources. Change is the percentage point change in the share of the firm's total purchases of domestic and/or subject country imports between first and last years.

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 V-14

NRSC: Purchasers' responses to purchasing subject imports instead of domestic product, by firm

Quantity in units

Purchaser	Purchased subject imports instead of domestic	Imports priced lower	Choice based on price	Quantity	Narrative on reasons for purchasing imports
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***

Table V-14--Continued

NRSC: Purchasers' responses to purchasing subject imports instead of domestic product, by firm

Quantity in units

Purchaser	Purchased subject imports instead of domestic	Imports priced lower	Choice based on price	Quantity	Narrative on reasons for purchasing imports
***	***	***	***	***	***
All firms	Yes--6; No--1	Yes--5; No--1	Yes--0; No--6	***	NA

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 "---".

Part VI: Financial experience of the U.S. producer

Background¹

Worthington, the only U.S. producer of NRSCs during the period of investigation, is a publicly traded company, which operated four reportable business segments throughout most of the period (Consumer Products, Building Products, Steel Processing, and Sustainable Energy Solutions).² The NRSC financial results and related information reported to the Commission are based on information from an accounting system designed to generate/report overall financial results on a U.S. GAAP basis.³ Staff conducted a verification of Worthington's financial results and related information on March 6-7, 2024.⁴

As described in Part III of this report and with regard to changes in Worthington's NRSC operations during the period, the company added a new manufacturing line at its Columbus, Ohio facility; construction began in early 2021 and the new manufacturing line was in commercial production by March 2022.⁵ In response to declining NRSC sales, Worthington *** in the second half of 2022 and during 2023.⁶

¹ The following abbreviations may be 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 expenses ("R&D expenses"), and return on assets ("ROA").

² Worthington Steel became a separate publicly traded company on December 1, 2023 at which time the predecessor company (Worthington Industries) became Worthington Enterprises. Worthington FY 2024 (Q2) 10-Q, p. 1. ***. Petitioner's postconference brief, Exhibit 15, p. 1. Worthington FY 2023 10-K, pp. 2-4.

³ Worthington U.S. producer questionnaire, section III-2. While Worthington's consolidated financial results are based on fiscal years ending May 31, the NRSC financial results reported to the Commission are based on calendar-year periods.

⁴ ***. Verification report, p. 3.

⁵ Conference transcript, pp. 20-21 (Bowes). An important distinguishing aspect of the new NRSC production line, reflecting a \$21 million investment, was a higher level of automation as compared to the company's existing NRSC production lines. Conference transcript, pp. 75-76 (Bowes).

⁶ Worthington U.S. producer questionnaire, section II-2a. With regard to reduced NRSC operations/activity, Worthington stated that the new NRSC line at the Columbus, Ohio facility is "... down to *** shifts and the company is currently running at reduced rates across its operations." Petitioner's postconference brief, p. 40.

Operations on non-refillable steel cylinders

Table VI-1 and table VI-2 present income-and-loss data for the U.S. producer's NRSC total market operations and corresponding changes in AUVs, respectively. Table VI-3 presents a variance analysis of total market financial results.⁷ Table VI-4 and table VI-5 present income-and-loss data for the U.S. producer's NRSC open market operations and corresponding changes in AUVs, respectively. Table VI-6 presents a variance analysis of open market financial results.

Table VI-1
NRSC (Total market operations): U.S. producer's results of operations, by item and period

Quantity in units; Value in 1,000 dollars

Item	Measure	2021	2022	2023
Commercial sales	Quantity	***	***	***
Internal consumption	Quantity	***	***	***
Total net sales	Quantity	***	***	***
Commercial sales	Value	***	***	***
Internal consumption	Value	***	***	***
Total net sales	Value	***	***	***
COGS: Raw materials	Value	***	***	***
COGS: Direct labor	Value	***	***	***
COGS: Other factory costs	Value	***	***	***
COGS: Total	Value	***	***	***
Gross profit or (loss)	Value	***	***	***
SG&A expenses	Value	***	***	***
Operating income or (loss)	Value	***	***	***
Interest expense	Value	***	***	***
All other expenses	Value	***	***	***
All other income	Value	***	***	***
Net income or (loss)	Value	***	***	***
Depreciation expense included above	Value	***	***	***
Estimated cash flow from operations	Value	***	***	***

Table continued.

⁷ The Commission's variance analysis is calculated in three parts: sales variance, COGS variance, and SG&A expenses variance. Each part consists of a price variance (in the case of the sales variance) or a cost or expense variance (in the case of the COGS and SG&A expenses variance), and a volume variance. The sales or cost/expense variance is calculated as the change in unit price or per-unit cost/expense times the new volume, while the volume variance is calculated as the change in volume times the old unit price or per-unit cost/expense. As summarized at the bottom of the variance analysis, the price variance is from sales, the cost/expense variance is the sum of those items from COGS and SG&A variances, respectively, and the volume variance is the sum of the volume components of the net sales, COGS, and SG&A expenses variances. The Commission's variance analysis is more meaningful when product mix remains the same throughout the period. Changes in NRSC product mix during the period (see footnote 14) do not appear substantial enough to undermine the utility of the variance analysis.

Table VI-1 Continued**NRSC (Total market operations): U.S. producer's results of operations, by item and period**

Ratios in percent; Shares in percent; Average values in dollars per unit; Count in number of firms reporting

Item	Measure	2021	2022	2023
COGS: Raw materials	Ratio to NS	***	***	***
COGS: Direct labor	Ratio to NS	***	***	***
COGS: Other factory costs	Ratio to NS	***	***	***
COGS: Total	Ratio to NS	***	***	***
Gross profit or (loss)	Ratio to NS	***	***	***
SG&A expenses	Ratio to NS	***	***	***
Operating income or (loss)	Ratio to NS	***	***	***
Net income or (loss)	Ratio to NS	***	***	***
COGS: Raw materials	Share	***	***	***
COGS: Direct labor	Share	***	***	***
COGS: Other factory costs	Share	***	***	***
COGS: Total	Share	***	***	***
Commercial sales	Unit value	***	***	***
Internal consumption	Unit value	***	***	***
Total net sales	Unit value	***	***	***
COGS: Raw materials	Unit value	***	***	***
COGS: Direct labor	Unit value	***	***	***
COGS: Other factory costs	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	1	1	1

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

Note: Shares represent the share of COGS. Zeroes, null values, and undefined calculations are suppressed and shown as "---".

Table VI-2**NRSC (Total market operations): Changes in AUVs between comparison periods**

Changes in percent

Item	2021-23	2021-22	2022-23
Commercial sales	***	***	***
Internal consumption	***	***	***
Total net sales	***	***	***
COGS: Raw materials	***	***	***
COGS: Direct labor	***	***	***
COGS: Other factory costs	***	***	***
COGS: Total	***	***	***

Table continued.

Table VI-2 Continued**NRSC (Total market operations): Changes in AUVs between comparison periods**

Changes in dollars per unit

Item	2021-23	2021-22	2022-23
Commercial sales	***	***	***
Internal consumption	***	***	***
Total net sales	***	***	***
COGS: Raw materials	***	***	***
COGS: Direct labor	***	***	***
COGS: Other factory costs	***	***	***
COGS: Total	***	***	***
Gross profit or (loss)	***	***	***
SG&A expenses	***	***	***
Operating income or (loss)	***	***	***
Net income or (loss)	***	***	***

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

Note: Period changes preceded by a “▲” represent an increase, while period changes preceded by a “▼” represent a decrease.

Table VI-3**NRSC (Total market operations): Variance analysis on the operations of the U.S. producer between comparison periods**

Value in 1,000 dollars

Item	2021-23	2021-22	2022-23
Net sales price variance	***	***	***
Net sales volume variance	***	***	***
Total net sales variance	***	***	***
COGS cost variance	***	***	***
COGS volume variance	***	***	***
COGS total variance	***	***	***
Gross profit variance	***	***	***
SG&A cost variance	***	***	***
SG&A volume variance	***	***	***
SG&A total variance	***	***	***
Operating income price variance	***	***	***
Operating income expense/cost variance	***	***	***
Operating income expense/cost volume variance	***	***	***
Operating income or (loss) total variance	***	***	***

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

Note: These data are derived from the data in table VI-1. Unfavorable variances (which are negative) are shown in parentheses, all others are favorable (positive).

Table VI-4**NRSC (Open market operations): U.S. producer's results of operations, by item and period**

Quantity in units; Value in 1,000 dollars; Ratios in percent; Shares in percent; Average values in dollars per unit; Count in number of firms reporting

Item	Measure	2021	2022	2023
Commercial sales	Quantity	***	***	***
Commercial sales	Value	***	***	***
COGS: Raw materials	Value	***	***	***
COGS: Direct labor	Value	***	***	***
COGS: Other factory costs	Value	***	***	***
COGS: Total	Value	***	***	***
Gross profit or (loss)	Value	***	***	***
SG&A expenses	Value	***	***	***
Operating income or (loss)	Value	***	***	***
Interest expense	Value	***	***	***
All other expenses	Value	***	***	***
All other income	Value	***	***	***
Net income or (loss)	Value	***	***	***
Depreciation expense included above	Value	***	***	***
Estimated cash flow from operations	Value	***	***	***
COGS: Raw materials	Ratio to NS	***	***	***
COGS: Direct labor	Ratio to NS	***	***	***
COGS: Other factory costs	Ratio to NS	***	***	***
COGS: Total	Ratio to NS	***	***	***
Gross profit or (loss)	Ratio to NS	***	***	***
SG&A expenses	Ratio to NS	***	***	***
Operating income or (loss)	Ratio to NS	***	***	***
Net income or (loss)	Ratio to NS	***	***	***
COGS: Raw materials	Share	***	***	***
COGS: Direct labor	Share	***	***	***
COGS: Other factory costs	Share	***	***	***
COGS: Total	Share	***	***	***
Commercial sales	Unit value	***	***	***
COGS: Raw materials	Unit value	***	***	***
COGS: Direct labor	Unit value	***	***	***
COGS: Other factory costs	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	1	1	1

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

Note: Shares represent the share of COGS. Zeroes, null values, and undefined calculations are suppressed and shown as “---”.

Table VI-5
NRSC (Open market operations): Changes in AUVs between comparison periods

Changes in percent

Item	2021-23	2021-22	2022-23
Commercial sales	***	***	***
COGS: Raw materials	***	***	***
COGS: Direct labor	***	***	***
COGS: Other factory costs	***	***	***
COGS: Total	***	***	***

Table continued.

Table VI-5 Continued
NRSC (Open market operations): Changes in AUVs between comparison periods

Changes in dollars per unit

Item	2021-23	2021-22	2022-23
Commercial sales	***	***	***
COGS: Raw materials	***	***	***
COGS: Direct labor	***	***	***
COGS: Other factory costs	***	***	***
COGS: Total	***	***	***
Gross profit or (loss)	***	***	***
SG&A expenses	***	***	***
Operating income or (loss)	***	***	***
Net income or (loss)	***	***	***

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

Note: Period changes preceded by a “▲” represent an increase, while period changes preceded by a “▼” represent a decrease.

Table VI-6**NRSC (Open market operations): Variance analysis on the operations of the U.S. producer between comparison periods**

Value in 1,000 dollars

Item	2021-23	2021-22	2022-23
Net sales price variance	***	***	***
Net sales volume variance	***	***	***
Total net sales variance	***	***	***
COGS cost variance	***	***	***
COGS volume variance	***	***	***
COGS total variance	***	***	***
Gross profit variance	***	***	***
SG&A cost variance	***	***	***
SG&A volume variance	***	***	***
SG&A total variance	***	***	***
Operating income price variance	***	***	***
Operating income expense/cost variance	***	***	***
Operating income expense/cost volume variance	***	***	***
Operating income or (loss) total variance	***	***	***

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

Note: These data are derived from the data in table VI-4. Unfavorable variances (which are negative) are shown in parentheses, all others are favorable (positive).

Net sales

For the period as a whole, NRSC commercial sales accounted for the majority of Worthington's total sales quantity (***) percent on a cumulative basis) with internal consumption accounting for the remainder (***) percent).⁸ The shares of NRSC commercial sales and internal consumption, respectively, decreased and increased modestly during the period. *** transfer sales to related firms were reported.⁹

⁸ ***. Petitioner's postconference brief, Exhibit 15, p. 3. ***. Verification report, p. 3.

⁹ Percentage changes for the period of all primary financial items (net sales, COGS, SG&A expenses, gross, operating, and net results) are presented in the financial sections of table C-1 (total market operations) and table C-2 (open market operations).

Quantity

On an overall basis total sales quantity was at its highest level in 2021, a year reportedly characterized by “extraordinary demand,”¹⁰ and then declined in 2022 and 2023. While the sales quantities of commercial sales and internal consumption were directionally the same, both declining in 2022 and 2023, the changes in commercial sales quantity were more pronounced.¹¹

Value

The majority of NRSC commercial sales are made pursuant to contracts, which reflect different pricing mechanisms (e.g., locked prices or indexed pricing to incorporate changes in primary raw material costs).¹² The remainder of NRSC commercial sales are generally understood to be spot sales. Average unit commercial sales and internal consumption values increased in 2022 and then declined in 2023, respectively, with internal consumption unit values lower than corresponding commercial unit sales throughout the period.¹³

As shown in the sales sections of the total market and open market variance analysis tables (table VI-3 and table VI-6), the increases in total sales value in 2022 reflect positive price variances that were partially offset by negative volume variances. The subsequent declines in total sales value in 2023 reflect negative price and volume variances of similar magnitudes. In general, price variances (commercial sales and internal consumption) reflect a combination of

¹⁰ Conference transcript, p. 61 (Powers). With respect to the period examined (2021-23), peak NRSC demand reportedly occurred in late 2021 and early 2022. Petitioner’s postconference brief, p. 12.

¹¹ ***. Verification report, p. 4.

¹² Conference transcript, p. 63 (Bowes). ***. Petitioner’s postconference brief, Exhibit 1, pp. 5-6.

¹³ ***. Petitioner’s postconference brief, Exhibit 15, p. 2. ***. Verification report, p. 6.

changes in underlying sales values, including the impact of input costs, as well as changes in product mix.¹⁴

Cost of goods sold and gross profit or loss

Raw materials

Raw material costs are the largest component of NRSC COGS (for total market operations ranging from a low of *** percent of COGS (2023) to a high of *** percent (2022); for open market operations ranging from *** percent (2023) to *** percent (2021 and 2022)). With regard to total market operations during 2023, cold-rolled steel accounted for *** percent of total raw material costs with the remainder accounted for by other material inputs (***).¹⁵ A relatively *** share of Worthington's COGS includes inputs sourced from related suppliers.¹⁶

In addition to contracted sales values indexed to steel costs ***, as noted above, Worthington uses financial hedges for steel purchases, which the company indicated

¹⁴ ***. Email from *** on behalf of Worthington to USITC staff, February 20, 2024.

¹⁵ Worthington U.S. producer questionnaire, section III-9d. ***. Verification report, p. 4. ***. Ibid.

¹⁶ Worthington U.S. producer questionnaire, sections III-6 and III-7a. As noted previously, Worthington Steel became a separate publicly traded company on December 1, 2023. ***. Petitioner's postconference brief, Exhibit 15, p. 1.

allows it to protect its gross margin (from the impact of steel price volatility) while offering fixed prices to its customers.¹⁷

For total market operations and open market operations, average unit raw material costs increased notably in 2022 and then declined in 2023 but remained above the level reported in 2021 (see table VI-2 and table VI-5). Worthington attributed this pattern to higher and then lower ***.¹⁸ While differences were minimal throughout the period, open market operations unit raw material cost, as compared to total market operations, was *** in 2021 and 2023 and *** in 2022.

Direct labor cost and other factory costs

Direct labor cost is the smallest component of NRSC COGS (for total market operations ranging from a low of *** percent of COGS (2021) to a high of *** percent (2023); for open market operations ranging from *** percent (2021) to *** percent (2023)). Average unit direct labor cost for total market operations and open market operations followed the same directional pattern in 2022, both increasing, but diverged somewhat in 2023 with total market operations unit direct labor cost increasing while open market operations unit direct labor was essentially unchanged. In general, Worthington attributed the overall increase in unit direct labor cost ***.¹⁹

¹⁷ Petitioner's postconference brief, Exhibit 1, p. 7. ***. Ibid. ***. Verification report, p. 7.

¹⁸ ***. Verification report, pp. 7-8.

¹⁹ Email from *** on behalf of Worthington to USITC staff, February 20, 2024. ***. Verification report, p. 7.

Other factory costs, consistent with a capital intensive manufacturing process,²⁰ are the second largest component of NRSC COGS (for total market operations ranging from a low of *** percent of COGS (2022) to a high of *** percent (2023); for open market operations ranging from *** percent (2022) to *** percent (2023)). Total market operations and open market operations average unit other factory costs both increased in 2022 and 2023. ***.²¹

Gross profit or loss

Notwithstanding the decline in NRSC sales volume, total gross profit for total market operations and open market operations increased to their highest levels in 2022, reflecting a relatively large increase in total sales value in conjunction with a modestly lower (total market operations) or static (open market operations) gross profit ratio (total gross profit divided by total net sales value). Reflecting pronounced contractions in gross profit ratio (total market operations and open market operations) in 2023, along with lower total sales (volume and value), total market operations and open market operations gross profit declined in that year.

As indicated by the percentage changes in average unit sales value and COGS presented in table VI-2 (total market operations) and table VI-5 (open market operations), in 2022 the modest decline in total market operations gross profit ratio and static open market operations gross profit ratio reflect percentage increases in unit COGS that were either marginally larger (total market operations) or the same (open market operations) compared with corresponding percentage increases in unit sales values. In 2023 the pronounced contractions in total market

²⁰ Noting that the company's new NRSC line at its Columbus, Ohio facility represented a \$21 million investment, a Worthington company official stated "... all cylinders that we manufacture are capital intensive." Conference transcript, p. 78 (Bowes).

²¹ Email from *** on behalf of Worthington to USITC staff, February 20, 2024. ***. Verification report, p. 8.

operations and open market operations gross profit ratios reflect percentage declines in unit sales value that exceeded the percentage declines in unit COGS.²²

SG&A expenses and operating income or loss

As shown in table VI-1 and table VI-4, total SG&A expenses for total market operations and open market operations were at their highest levels in 2021. Corresponding SG&A expense ratios (total SG&A expenses divided by total net sales value) for both categories declined in 2022 (reflecting higher total sales value) and then increased in 2023 (reflecting the subsequent decline in total sales value).²³

The SG&A expense ratios for total market operations and open market operations exceeded corresponding gross profit ratios by varying magnitudes in 2021 and 2023, yielding operating losses in those years. In 2022, total market operations and open market operations SG&A expense ratios declined, to levels somewhat below corresponding gross profit ratios, yielding the period's only positive operating results (for either category).

Interest expense, other expenses and income, and net income or loss

Interest expense was the *** item reported below operating results for both total market operations and open market operations.²⁴ Differing *** by the amount of interest expense reported, total market operations and open market operations operating and net

²² While the gross profit ratios for total market operations and open market operations were essentially the same in 2021 and 2022, they diverged somewhat in 2023 with the open market operations gross profit ratio declining more notably. ***. Email from *** on behalf of Worthington to USITC staff, February 20, 2024.

²³ The methodology used by Worthington to assign SG&A expenses to NRSC activity was reviewed at verification ***. Verification report, pp. 8-9. Prior to the spin-off of the Steel Segment in December 2023 (see footnote 2), Worthington's consolidated SG&A expense ratios were *** than the SG&A expense ratios calculated for NRSC operations. After the spin-off, Worthington's consolidated SG&A expense ratios, reflecting three remaining segments (Consumer Products, Building Products, Sustainable Energy Solutions), are *** as compared to the SG&A expense ratios calculated for NRSC operations. USITC auditor notes (prehearing).

²⁴ ***. Worthington U.S. producer questionnaire, section III-10a. ***. Verification report, p. 7. Worthington FY 2024 (Q2) 10-Q, p. 7.

results were both negative in 2021 and 2023. In 2022, total market operations and open market operations operating results were positive, while net results were negative.

Capital expenditures, R&D expenses, total net assets and ROA

Table VI-7 presents Worthington's NRSC-related capital expenditures, R&D expenses, net assets, and ROA.²⁵ Table VI-8 presents corresponding narrative explanations of the nature, focus, and significance of capital expenditures, R&D expenses, and any notable changes in asset levels over time.²⁶

Table VI-7
NRSC: U.S. producer's capital expenditures, R&D expenses, total net assets, and ROA, by item and period

Value in 1,000 dollars, ratio in percent

Firm	2021	2022	2023
Capital expenditures	***	***	***
R&D expenses	***	***	***
Net assets	***	***	***
ROA	***	***	***

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

Table VI-8
NRSC: U.S. producer's narrative description of its capital expenditures, R&D expenses, and net assets

Firm	Narrative
Capital expenditures	***
R&D expenses	***
Net assets	***

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

²⁵ ROA is calculated here as operating results divided by total assets. With regard to a company's overall operations, staff notes that a total asset value (i.e., the bottom line value on the asset side of a company's balance sheet) reflects an aggregation of a number of current and non-current assets, which, in many instances, are not product specific. The ability of the U.S. producer to assign total asset values to a discrete product line affects the meaningfulness of calculated operating return on net assets.

²⁶ Percentage changes for the period of the above noted items (capital expenditures, R&D expenses, and total assets) are presented in the financial section of table C-1 (total market operations).

The higher level of Worthington’s capital expenditures in 2021 and 2022 generally reflects the investment narratively described in table VI-8 and also generally accounts for the increasing levels of depreciation expense reported in table VI-1 and table VI-4.²⁷ Worthington’s total net assets increased irregularly during the period, which was generally attributed to corresponding capital expenditures. In conjunction with its description of the impact of reduced fixed cost absorption during the period, Worthington also noted that the ***.²⁸ As shown in table VI-7, total net assets were at their highest level in 2022.

Capital and investment

The Commission requested the U.S. producer to describe any actual or potential negative effects of imports of NRSCs from India on its growth, investment, ability to raise capital, development and production efforts, or the scale of capital investments. Table VI-9 presents the effects reported and table VI-10 provides the U.S. producer’s narrative descriptions.

Table VI-9

NRSC: Count indicating actual and anticipated negative effects of imports from subject sources on investment, growth, and development since January 1, 2021, by effect

Number of firms reporting

Effect	Category	Count
Cancellation, postponement, or rejection of expansion projects	Investment	***
Denial or rejection of investment proposal	Investment	***
Reduction in the size of capital investments	Investment	***
Return on specific investments negatively impacted	Investment	***
Other investment effects	Investment	***
Any negative effects on investment	Investment	***
Rejection of bank loans	Growth	***
Lowering of credit rating	Growth	***
Problem related to the issue of stocks or bonds	Growth	***
Ability to service debt	Growth	***
Other growth and development effects	Growth	***
Any negative effects on growth and development	Growth	***
Anticipated negative effects of imports	Future	***

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

²⁷ Petitioner’s postconference brief, Exhibit 15, p. 2.

²⁸ Petitioner’s postconference brief, Exhibit 1, pp. 9-10.

Table VI-10

NRSC: U.S. producer's narratives relating to actual and anticipated negative effects of imports on investment, growth, and development, since January 1, 2021

Item	Firm name and accompanying narrative response
Denial or rejection of investment proposal	***
Return on specific investments negatively impacted	***
Other (effects of imports on growth and development)	***
Anticipated effects of imports	***

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

Part VII: Threat considerations and information on nonsubject countries

Section 771(7)(F)(i) of the Act (19 U.S.C. § 1677(7)(F)(i)) provides that—

In determining whether an industry in the United States is threatened with material injury by reason of imports (or sales for importation) of the subject merchandise, the Commission shall consider, among other relevant economic factors¹--

- (I) if a countervailable subsidy is involved, such information as may be presented to it by the administering authority as to the nature of the subsidy (particularly as to whether the countervailable subsidy is a subsidy described in Article 3 or 6.1 of the Subsidies Agreement), and whether imports of the subject merchandise are likely to increase,*
- (II) any existing unused production capacity or imminent, substantial increase in production capacity in the exporting country indicating the likelihood of substantially increased imports of the subject merchandise into the United States, taking into account the availability of other export markets to absorb any additional exports,*
- (III) a significant rate of increase of the volume or market penetration of imports of the subject merchandise indicating the likelihood of substantially increased imports,*
- (IV) whether imports of the subject merchandise are entering at prices that are likely to have a significant depressing or suppressing effect on domestic prices, and are likely to increase demand for further imports,*
- (V) inventories of the subject merchandise,*
- (VI) the potential for product-shifting if production facilities in the foreign country, which can be used to produce the subject merchandise, are currently being used to produce other products,*

¹ Section 771(7)(F)(ii) of the Act (19 U.S.C. § 1677(7)(F)(ii)) provides that “The Commission shall consider {these factors} . . . as a whole in making a determination of whether further dumped or subsidized imports are imminent and whether material injury by reason of imports would occur unless an order is issued or a suspension agreement is accepted under this title. The presence or absence of any factor which the Commission is required to consider . . . shall not necessarily give decisive guidance with respect to the determination. Such a determination may not be made on the basis of mere conjecture or supposition.”

- (VII) *in any investigation under this title which involves imports of both a raw agricultural product (within the meaning of paragraph (4)(E)(iv)) and any product processed from such raw agricultural product, the likelihood that there will be increased imports, by reason of product shifting, if there is an affirmative determination by the Commission under section 705(b)(1) or 735(b)(1) with respect to either the raw agricultural product or the processed agricultural product (but not both),*
- (VIII) *the actual and potential negative effects on the existing development and production efforts of the domestic industry, including efforts to develop a derivative or more advanced version of the domestic like product, and*
- (IX) *any other demonstrable adverse trends that indicate the probability that there is likely to be material injury by reason of imports (or sale for importation) of the subject merchandise (whether or not it is actually being imported at the time).²*

Information on the nature of the subsidies was presented earlier in this report; information on the volume and pricing of imports of the subject merchandise is presented in Parts IV and V; and information on the effects of imports of the subject merchandise on U.S. producers' existing development and production efforts is presented in Part VI. Information on inventories of the subject merchandise; foreign producers' operations, including the potential for "product-shifting"; any other threat indicators, if applicable; and any dumping in third-country markets, follows. Also presented in this section of the report is information obtained for consideration by the Commission on nonsubject countries.

² Section 771(7)(F)(iii) of the Act (19 U.S.C. § 1677(7)(F)(iii)) further provides that, in antidumping investigations, "... the Commission shall consider whether dumping in the markets of foreign countries (as evidenced by dumping findings or antidumping remedies in other WTO member markets against the same class or kind of merchandise manufactured or exported by the same party as under investigation) suggests a threat of material injury to the domestic industry."

The industry in India

The Commission issued foreign producers' or exporters' questionnaires to eight firms believed to produce and/or export NRSC from India.³ Usable responses to the Commission's questionnaires were received from three firms: Bhiwadi Cylinders Private Limited ("Bhiwadi"), Inox India Limited ("Inox"), and Mauria Udyog Limited ("Mauria").⁴ These firms' exports to the United States accounted for approximately *** U.S. imports of NRSCs from India in 2023.⁵ According to estimates requested of the responding producers in India, the production of NRSCs in India reported in questionnaires accounts for approximately *** percent of overall production of NRSCs in India. Table VII-1 presents information on the NRSCs operations of the responding producers and exporters in India.

Table VII-1
NRSCs: Summary data for producers in India, 2023

Quantity in units; share in percent

Firm	Production (units)	Share of reported production (percent)	Exports to the United States (units)	Share of reported exports to the United States (percent)	Total shipments (units)	Share of firm's total shipments exported to the United States (percent)
Bhiwadi	***	***	***	***	***	***
Inox	***	***	***	***	***	***
Mauria	***	***	***	***	***	***
All firms	2,999,693	100.0	1,180,991	100.0	3,011,263	39.2

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

³ These firms were identified through a review of information submitted in the petition and presented in third-party sources.

⁴ The Commission also received foreign producer/exporter questionnaire responses from ***, who indicated that it had not produced or exported NRSCs from India at any time since January 1, 2021. Foreign producer/exporter questionnaire responses. In the preliminary phase of these investigations, the Commission received a response from ***, who indicated that it had not produced or exported NRSCs from India at any time since January 1, 2020. *** did not submit a foreign producer/exporter questionnaire in these final phase investigations. *** preliminary phase foreign producer/exporter questionnaire response.

⁵ As detailed in table VII-3, four subject manufacturers of NRSCs have USDOT-39 approval in good standing, which provides them with eligibility to export their NRSCs to the U.S. market: Bhiwadi, Inox, Mauria, and Sapphire (India) Pvt. Ltd ("Sapphire"). Sapphire is a wholly owned subsidiary of Bhiwadi, and ***. Bhiwadi's foreign producer/exporter questionnaire, section I-2, II-2a. Commerce's Preliminary Issues and Decision Memorandum for Investigation C-533-913, issued September 25, 2023, p. 5.

Three subject manufacturers of NRSCs have USDOT-39 approval in good standing, which provides them with eligibility to export their NRSCs to the U.S. market (table VII-2).⁶ Since the preliminary phase of these investigations, one firm, Gasolec, has had their USDOT-39 approval terminated.

Table VII-2

NRSCs: Subject foreign manufacturers of steel cylinders in India, USDOT approval status (as of January 2024)

Manufacturer	Status
Inox India Ltd.	Good standing (pending renewal)
Inox India Pvt. Ltd.	Good standing
Mauria Udyog, Ltd.	Good standing (pending renewal)
Bhiwadi Cylinder Pvt. Ltd.	Good standing
Sapphire (India) Private Limited.	Good standing
Gasolec Appliances Pvt. Ltd.	Terminated (December 7, 2023)
Bhiwadi Cylinders Pvt. Ltd.	Conditional approval

Source: PHMSA, “Foreign Manufacturers Listing Hazmat Approvals: Cylinders (Updated January 2024), March 9, 2024, <https://www.phmsa.dot.gov/hazmat/pressure-vessels-approvals/foreign-manufacturers-listing-hazmat-approvals-cylinders-january-2024>.

Note: As of February 2023, no Indian manufacturers are listed as having valid registration to produce cylinders under Transport Canada’s TC-39M specifications. See Transport Canada, “Cylinder and Tube Manufacturers – Results, TC Cylinder Specifications: TC-39M,” February 13, 2023, <https://fdr-ric.tdg-tmd.tc.canada.ca/en/tdg/registrations#registrationTable>. The separate approval statuses for Bhiwadi Cylinder Pvt., Ltd., and Bhiwadi Cylinders, Pvt. Ltd., refer to multiple production facilities owned and operated by Bhiwadi.

Table VII-3 presents events in India’s industry since January 1, 2021.

Table VII-3

NRSCs: Important industry events in India since 2021

Item	Firm	Event
Certification	Bhiwadi	2021: Bhiwadi received approval to produce DOT-39 cylinders at a second unit.
New customer	Bhiwadi	2021: After initial discussions in July 2021 and the development of a customized cylinder, domestic producer Quin Global began purchasing NRSCs from Bhiwadi.

Source: Conference transcript, pp. 107-108 (Peterson), 133 (Chopra).

⁶ Sapphire is a wholly-owned subsidiary of Bhiwadi, but is listed separately here to account for the separate production facilities, which each require separate USDOT-39 approval status. Commerce’s Preliminary Issues and Decision Memorandum for Investigation C-533-913, issued September 25, 2023, p. 5.

Changes in operations

Producers in India were asked to report any change in the character of their operations or organization relating to the production of NRSC since 2021. *** indicated in their questionnaires that they had experienced such changes. Table VII-4 presents the changes identified by these producers.

Table VII-4
NRSCs: Reported changes in operations in India since January 1, 2021, by firm

Item	Firm name and accompanying narrative response on changes in operations
Production curtailments	***.
Expansions	***.
Expansions	***.
Consolidations	***.

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

Operations on NRSCs

Table VII-5 presents data on India producers' installed capacity, practical overall capacity, and practical NRSC capacity and production on the same equipment. Indian producers' installed overall capacity was stable from 2021-22, then declined 5.7 percent from 2022-23. The 2022-23 decline was due entirely to the 2022-23 decline reported by ***, which represented a *** percent decline in *** installed overall capacity, as neither *** reported any changes in installed capacity over the period reported.

Indian producers' practical overall capacity also declined from 2021-23, by 4.3 percent. Unlike installed overall capacity, practical overall capacity first increased slightly by 0.5 percent from 2021-22, and then decreased by 4.8 percent from 2022-23, resulting in an irregular

decline.⁷ As with installed overall and practical overall capacity, practical NRSCs capacity also decreased from 2021-23, declining annually for an overall decline of 7.4 percent.⁸

Table VII-5
NRSCs: Producers in India installed and practical capacity and production on the same equipment as in-scope production, by period

Quantity in units

Item	Measure	2021	2022	2023
Installed overall	Capacity	8,700,000	8,700,000	8,200,000
Installed overall	Production	5,353,965	***	3,367,149
Installed overall	Utilization	61.5	***	41.1
Practical overall	Capacity	6,316,000	6,348,000	6,042,000
Practical overall	Production	5,353,965	***	3,367,149
Practical overall	Utilization	84.8	***	55.7
Practical NRSCs	Capacity	6,036,000	6,008,000	5,592,000
Practical NRSCs	Production	5,105,944	***	2,999,693
Practical NRSCs	Utilization	84.6	***	53.6

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

Table VII-6 presents Indian producers' reported capacity constraints since January 1, 2021.

⁷ Both *** reported 2021-23 declines in practical capacity of *** percent and *** percent, respectively, with no increases across any period reported. In contrast, *** reported annual increases in practical overall capacity from 2021-22 and 2022-23, for an overall increase of *** percent. In the case of ***, which does not produce other products using the same machinery or workers as those used to produce NRSCs, practical overall capacity is identical to practical NRSCs capacity. The increase in practical overall capacity from 2021-23 was due to ***. *** foreign producer/exporter questionnaire, section II-2a.

⁸ Only *** reported differences in practical overall capacity relative to practical NRSCs capacity, reporting annual declines of *** percent and *** percent from 2021-22 and 2022-23, respectively, for practical NRSCs capacity.

Table VII-6**NRSCs: India producers' reported capacity constraints since January 1, 2021**

Item	Firm name and narrative response on constraints to practical overall capacity
Production bottlenecks	***
Existing labor force	***
Existing labor force	***
Other constraints	***

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

Table VII-7 presents information on the NRSCs operations of the responding producers and exporters in India. The aggregate NRSCs capacity of responding producers/exporters in India declined each year from 2021-23, for a decrease of 7.4 percent. Capacity is then projected to remain stable in 2024 and 2025, as *** projected changes in practical NRSCs capacity in either 2024 or 2025. While *** and *** reported net decreases in capacity from 2021-23, of *** percent and *** percent, respectively, *** reported a steady increase in capacity across the same period, a capacity increase of *** percent from 2021-23.^{9 10 11}

⁹ Although *** was the second-largest producer in terms of capacity in 2021, the simultaneous capacity growth of *** capacity and the decline in capacity of *** and of *** resulted in *** being the largest producer in terms of capacity in 2023, accounting for *** percent of total practical NRSCs capacity. ***". *** foreign producer/exporter questionnaire, section II-2a.

¹⁰ Mauria reported that, ***. The drop in demand was attributed to a ***. Mauria's foreign producer/exporter questionnaire, section II-2a.

¹¹ Bhiwadi reported that, in 2021, ***. Bhiwadi's foreign producer/exporter questionnaire, sections II-2a and II-3f.

Indian producers' production of NSRCs declined annually from 2021-23 for a decrease of 41.3 percent, with *** reporting net declines in production.¹² However, production of NRSCs is projected to increase 21.3 percent from 2023-24, and to then increase a further 5.1 percent from 2024-25, with *** projecting net increases in production from 2023-25.¹³ Despite the projected increases in production in 2024 and 2025, projected 2025 production still represents a 25.1 percent decrease from 2021. Although both capacity and production declined overall from 2021-23, the magnitude of the decline in production outpaced the decline in capacity, resulting in a drop of 30.9 percentage points in capacity utilization. With capacity projected to remain steady in 2024 and 2025, while production is projected to increase, capacity utilization is projected to increase by 14.7 percentage points in 2025 relative to 2023, nonetheless representing a 16.2 percentage point decline relative to 2021.

Indian producers' exports to the United States declined annually from 2021-23, a decline of 62.1 percent, with *** reporting net declines in exports to the United States across 2021-23, ranging in magnitude from *** percent and *** percent.¹⁴ The 54.1 percent decline in exports to the United States reported by Indian producers from 2022-23 accounted for 72.0 percent of the overall decline from 2021-23. Although subject producers in India project aggregate increases in exports to the United States from 2023-24 and 2024-25, of 5.8 percent and 0.8 percent, respectively, projected 2025 exports to the United States still represent a 59.6 percent decline relative to 2021.¹⁵ Indian producers' home market shipments ***, which first declined *** percent from 2021-22, then increased *** percent from 2022-23, an irregular decrease of ***

¹² *** reported the largest decline in production from 2021-23, both relative to 2021 production levels and in terms of absolute units, with a decline in production across the 2021-23 period of *** units, equivalent to a *** percent decline. *** foreign producer/exporter questionnaire, section II-9. The decline in production from 2021-23 reported by *** accounted for fully *** percent of the aggregate production decline of Indian producers over that period.

¹³ Although *** projected net increases in production of NRSCs from 2023-25, only *** projects a net increase in production in 2025 compared to 2021, the earliest year on record, projecting a slight increase of *** percent. *** foreign producer/exporter questionnaire, section II-9.

¹⁴ Although *** reported net declines in exports of NRSCs to the United States from 2021-23, *** first reported a *** percent increase from 2021-22, followed by a *** percent decrease from 2022-23. *** foreign producer/exporter questionnaire, section II-9. ***.

¹⁵ The projected increase in exports to the United States relative to 2023 is accounted for solely by projected increases by ***, as *** projected that exports to the United States would decrease and be stable, respectively, over the same period. Foreign producer/exporter questionnaire, section II-9.

percent from 2021-23.¹⁶ ¹⁷ Indian producers project an increase of *** percent in home market shipments from 2023-24, and an increase of *** percent from 2024-25, with projected 2025 home market shipments representing a *** percent increase relative to 2021.¹⁸

The irregular decline in home market shipments and the steady decline in exports to the United States from 2021-23 resulted in a 40.0 percent decline in total shipments from 2021-23.¹⁹ Over this same period, exports to all other markets increased by over *** but remained no greater than *** percent of total shipments in 2023. As the magnitude of the 2021-23 decrease in home market shipments was outpaced by the decline in exports to the United States, exports to the United States decreased by 22.8 percentage points as a ratio to total shipments from 2021-23, and home market shipments increased by *** percentage points, accounting for *** of total shipments in 2023. This trend is projected to continue in 2024 and 2025, as exports to the United States are projected to decline 6.7 percentage points as a ratio to total shipments, and home market shipments are projected to increase by *** percentage points in 2025 relative to 2023. Exports to all other markets are projected to increase as a ratio to total shipments over the same 2023-25 period, though remaining no greater than *** percent.²⁰ Meanwhile, total shipments are projected to increase from 2023-

¹⁶ Home market shipments consist entirely of NRSCs that are sold to Indian firms which fill the NRSCs for export. NRSCs are prohibited by government mandate to be sold to end users domestically. Conference transcript, p. 115 (Acharya); Bhiwadi and Mauria conference testimony, p. 3.

¹⁷ Despite *** reporting net increases in home market shipments from 2021-23, the *** percent decline reported by *** drove the decline for Indian producers as a whole. Whereas ***, the producer with the largest quantity of home market shipments in 2021, reported a slight increase of *** percent from 2021-23, *** reported an increase from *** units of home market shipments in 2021 to *** units in 2023. Foreign producer/exporter questionnaire, section II-9.

¹⁸ With the exception of *** forecast increases in home market shipments during the periods 2023-24 and 2024-25. Bhiwadi cited “sizeable and growing home market sales for empty {NRSCs},” as a factor behind projections for the growth of home market shipments, and Inox cited a new, long-term supply arrangement with its largest customer that would allocate increased monthly sales to the home market. Conference transcript, p. 103 (Kaur), and p. 113 (Raghuwanshi).

¹⁹ Bhiwadi noted the impact of a helium shortage on global demand 2022, stating that “helium from Russia is no longer available because of the war and sanctions, as well as fires and explosions at a large helium plant in Siberia in 2021 and 2022. Helium is one of the gases used to fill the NRSCs. As such, all cylinder producers experienced a decrease in demand – especially those who are in the helium cylinder business.” Conference transcript, pp. 100-101 (Kaur); Bhiwadi postconference brief, exh. 2.

²⁰ *** reported exports to other markets during the period of investigation. *** listed the *** as its principal export markets, *** listed the ***, and *** listed ***. Although it reported *** exports to all other markets in 2021 and 2022, *** accounted for the *** of exports to all other markets in 2023, and projects that it will increase its exports to all other markets annually from 2023-25, for an increase of *** percent.

24 and 2024-25 by 19.8 percent and 7.2 percent, respectively, driven by growth in home market shipments, exports to the United States, and exports to all other markets. From 2021-23, inventories of NRCSs steadily declined, and did not exceed *** percent as a ratio to production and total shipments. Indian producers' inventories are projected to reach their lowest levels in 2025, at *** percent as a ratio to production and total shipments.

Table VII-7
NRCSs: Data on industry in India, by period

Quantity in units; ratio and share in percent

Item	Measure	2021	2022	2023	Projection 2024	Projection 2025
Capacity	Quantity	6,036,000	6,008,000	5,592,000	5,592,000	5,592,000
Production	Quantity	5,105,944	***	2,999,693	3,637,236	3,823,338
End-of-period inventories	Quantity	121,896	***	35,491	65,791	***
Internal consumption	Quantity	***	***	***	***	***
Commercial home market shipments	Quantity	***	***	***	***	***
Home market shipments	Quantity	***	***	***	***	***
Exports to the United States	Quantity	3,112,169	2,570,890	1,180,991	1,249,122	1,258,622
Exports to all other markets	Quantity	***	***	***	***	***
Export shipments	Quantity	***	***	***	***	***
Total shipments	Quantity	5,018,064	***	3,011,263	3,606,936	3,867,118
Capacity utilization ratio	Ratio	84.6	***	53.6	65.0	68.4
Inventory ratio to production	Ratio	2.4	***	1.2	1.8	***
Inventory ratio to total shipments	Ratio	2.4	***	1.2	1.8	***
Internal consumption share	Share	***	***	***	***	***
Commercial home market shipments share	Share	***	***	***	***	***
Home market shipments share	Share	***	***	***	***	***
Exports to the United States share	Share	62.0	***	39.2	34.6	32.5
Exports to all other markets share	Share	***	***	***	***	***
Export shipments share	Share	***	***	***	***	***
Total shipments share	Share	100.0	100.0	100.0	100.0	100.0

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

Alternative products

As shown in table VII-8, responding firms in India produced other products on the same equipment and machinery used to produce NRSCs.²¹ As shown in table VII-8, the combined production of other products by *** grew steadily across 2021-23, for an increase of *** percent. *** reported production of other products in 2021 and 2022, and reported a decrease of *** percent in the production of other products from 2022-23.²² The overall increase in Indian producers' production of other products contrasted with a decrease of 41.3 percent in the production of NRSCs across the same 2021-23 period. Consequently, other products' share of total production on the same equipment and machinery showed a net increase of *** percentage points from 2021-23, due primarily to the steady decrease in production volumes of NRSCs during that period.

Table VII-8
NRSCs: Producers' in India overall production on the same equipment as in-scope production, by period

Quantity in units; ratio and share in percent

Product type	Measure	2021	2022	2023
NRSCs	Quantity	5,105,944	***	2,999,693
Other products	Quantity	***	***	***
All products	Quantity	***	***	***
NRSCs	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 GTA, the leading export markets for NRSCs from India are the United States, Thailand, and Indonesia (table IV-9). During 2023, the United States was the top export market for NRSCs from India, by value, accounting for 23.4 percent, followed by Thailand, accounting for 6.3 percent, and South Africa, accounting for 5.4 percent.

²¹ *** reports that it is able to switch production from NRSCs to ***. *** foreign producer/exporter response, sections II-4a and II-4b. *** reports that it is able to switch production from NRSCs to ***. *** foreign producer/exporter response, sections II-4a and II-4b.

²² The overall 2022-23 increase of *** percent in Indian producers' production of other products is due solely to ***, which only reported production of other products in 2023. *** reported that, ***. *** foreign producer/exporter questionnaire response, sections II-2a and II-3d.

Table VII-9**Iron or steel containers for compressed or liquified gas or other materials: Exports from India, by destination market and by period**

Value in 1,000 dollars; share in percent

Destination market	Measure	2021	2022	2023
United States	Value	44,584	59,245	53,383
Thailand	Value	12,152	14,049	14,413
South Africa	Value	6,470	6,223	12,311
Indonesia	Value	13,816	12,432	11,223
South Korea	Value	1,249	2,151	11,072
United Arab Emirates	Value	5,297	4,352	10,512
Japan	Value	1,984	3,257	10,282
Saudi Arabia	Value	8,073	6,150	8,753
Antigua & Barbuda	Value	---	---	6,102
All other destination markets	Value	78,079	88,594	90,141
All destination markets	Value	171,704	196,454	228,191
United States	Share	26.0	30.2	23.4
Thailand	Share	7.1	7.2	6.3
South Africa	Share	3.8	3.2	5.4
Indonesia	Share	8.0	6.3	4.9
South Korea	Share	0.7	1.1	4.9
United Arab Emirates	Share	3.1	2.2	4.6
Japan	Share	1.2	1.7	4.5
Saudi Arabia	Share	4.7	3.1	3.8
Antigua & Barbuda	Share	---	---	2.7
All other destination markets	Share	45.5	45.1	39.5
All destination markets	Share	100.0	100.0	100.0

Source: Official exports statistics under HS subheading 7311.00 and 7310.29 as reported by Indian Ministry of Commerce in the Global Trade Atlas Suite database, accessed March 22, 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 "---". United States is shown at the top, all remaining top export destinations shown in descending order of 2023 data.

U.S. inventories of imported merchandise

Table VII-10 presents data on U.S. importers' reported inventories of NRSCs.

Table VII-10
NRSCs: U.S. importers' inventories and their ratio to select items, by source and period

Quantity in units; ratio in percent

Measure	Source	2021	2022	2023
Inventories quantity	India	***	***	***
Ratio to imports	India	***	***	***
Ratio to U.S. shipments of imports	India	***	***	***
Ratio to total shipments of imports	India	***	***	***
Inventories quantity	China	***	***	***
Ratio to imports	China	***	***	***
Ratio to U.S. shipments of imports	China	***	***	***
Ratio to total shipments of imports	China	***	***	***
Inventories quantity	All other sources	***	***	***
Ratio to imports	All other sources	***	***	***
Ratio to U.S. shipments of imports	All other sources	***	***	***
Ratio to total shipments of imports	All other sources	***	***	***
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	416,504	768,971	367,201
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.

U.S. importers' inventories of NRSCs from India increased by *** percent from 2021-22, and then decreased by *** percent from 2022-23, for an irregular increase of *** percent from 2021-23.²³ The 2021-22 increase in subject inventories was driven primarily by *** twenty-fold increase over the period, as both *** and *** reported declines in subject inventories of *** percent and ***

²³ Of the five firms which reported subject inventories from 2021-23, three firms (***) accounted for the vast majority of subject inventories in each year. *** reported inventories of subject imports only from ***, while *** reported inventories of subject imports from ***, and *** reported inventories of subject imports from ***. U.S. importer questionnaire, sections II-5a and II-6a.

percent, respectively, during 2021-22.²⁴ ²⁵ As subject inventories increased irregularly from 2021-23, subject inventories as a ratio to total imports increased steadily over the same period, an increase of *** percentage points from 2021-23. Subject inventories both as a ratio to U.S. shipments and total shipments of imports likewise increased annually across 2021-23, for an increase of *** percentage points.

As *** reported inventories of imports from all other sources, nonsubject inventories *** of imports from China.²⁶ Inventories of imports from China first increased *** percent during 2021-22, before then decreasing *** percent during 2022-23, for an overall decline of *** percent during 2021-23.²⁷ ²⁸ The ratio of inventories from China to total imports first increased by *** percentage points during 2021-22, then declined from 2022-23, for a net decrease of *** percentage points from 2021-23. The ratio of inventories of imports from China to both U.S. shipments of imports and total shipments of imports followed the same pattern, first increasing by *** percentage points from 2021-22, then declining from 2022-23, for an irregular decrease of *** percentage points from 2021-23.

The simultaneous rise in subject and nonsubject inventories from 2021-22 resulted in an 84.6 percent increase in total inventories across the same period. From 2022-23, the simultaneous decline in subject and nonsubject inventories likewise led to a year-on-year decline of 52.2 percent in total inventories, resulting in an irregular decrease of 11.8 percent in

²⁴ The increases in *** inventories of subject imports from 2021-22 came as *** increased both subject imports and U.S. shipments of subject imports, by *** percent and *** percent, respectively, over the period. *** U.S. importer questionnaire response, section II-6a. The 2021-22 decline in *** subject inventories was driven by a *** percent decline in U.S. shipments and a *** percent decline in subject imports over the same period, with these trends continuing from 2022-23. *** U.S. importer questionnaire, sections II-5a and II-6a.

²⁵ The 2022-23 decrease was driven primarily by declines in the subject inventories reported by *** and ***, who reported declines of *** percent and *** percent, respectively, during 2022-23.

²⁶ Two firms, *** accounted for the vast majority of inventories of imports from China reported during the period of investigation.

²⁷ The 2021-22 increase was driven primarily by ***, with *** reporting a *** percent increase, and *** reporting *** units of inventories in 2022 having reported *** units in 2021. *** likewise drove the 2022-23 decrease in inventories of imports from ***, with both firms reporting *** in 2023. Both *** reported beginning of period inventories of imports of NRSCs from China in 2023, and internally consumed *** percent of beginning of period inventories of NRSCs from China.

²⁸ Only *** reported inventories of imports from *** in 2023. *** also reported inventories of imports from China in 2021 and 2023, accounting for *** percent and *** percent of total inventories of imports from China, respectively, in each year.

total inventories from 2021-23. While total inventories as a ratio to imports increased steadily by *** percentage points from 2021-23, as a ratio to U.S. shipments and total shipments of imports, total inventories increased irregularly by *** percentage points over the same period.

U.S. importers' outstanding orders

The Commission requested importers to indicate whether they imported or arranged for the importation of NRSCs from India after December 31, 2023. Their reported data is presented in table VII-11. Five importers reported outstanding orders through the fourth quarter of 2024, with subject imports from India accounting for *** percent of outstanding orders reported between January and December 2024. Outstanding orders from nonsubject sources comprised *** percent of arranged imports from all import sources in the first quarter of 2024.²⁹ *** of the total arranged imports from subject sources were reported in the first quarter of 2024.³⁰

Table VII-11
NRSCs: U.S. importers' arranged imports, by source and period

Quantity in units

Source	Jan-Mar 2024	Apr-Jun 2024	Jul-Sept 2024	Oct-Dec 2024	Total
India	***	***	***	***	***
China	***	***	***	***	***
All other sources	***	***	***	***	***
Nonsubject sources	***	***	***	***	***
All import sources	***	***	***	***	***

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

²⁹ *** accounted for *** outstanding orders from nonsubject sources. *** did not report arranged imports of NRSCs from subject sources. *** U.S. importer questionnaire, section II-3a.

³⁰ *** accounted for *** percent of arranged imports from India in first quarter of 2024, the entirety of which consisted of arranged imports from ***.

Third-country trade actions

Based on available information, NRSCs from India have not been subject to other antidumping or countervailing duty investigations outside the United States.

Information on nonsubject countries

Worthington has one NRSCs production facility in Guimaraes, Portugal, as part of its June 2017 acquisition of Amtrol-Alfa Metalomecanica S.A.³¹ Fifteen nonsubject foreign manufacturers have USDOT-39 or UNISO 11118 certification approval in good standing, TC-39M valid registration, or both, which provides them with eligibility to export their NRSCs to the U.S. market (table VII-12).

Table VII-12

NRSCs: Nonsubject foreign manufacturers of steel cylinders, USDOT approval (as of January 2024) or Transport Canada registration (as of March 2024) status

Manufacturer	Location	Specification	Status
Gas Cylinder Technologies, Inc.	Canada	DOT-39	Terminated
AMTROL-ALFA Metalomecanica, S.A.	Portugal	DOT-39	Good Standing
LBM Techno Gas GmbH	Germany	DOT-39	Terminated
Worthington Cylinders-Portugal/ Embalagens Industriais de Gas, SA (EIG)	Portugal	DOT-39	Expired
Yongkang Hua Er Cylinder Mfg. Co. (Flying Eagle)	China	DOT-39	N/A
Zhejiang Jucheng Cylinder Co.	China	DOT-39	Good Standing
Zhejiang Kin-Shine Technology Co. Ltd.	China	DOT-39	Good Standing
WuYi Xilinde Machinery Manufacture Co. Ltd	China	DOT-39	Good Standing
Shanghai Ronghua High-Pressure Vessel Co. Ltd.	China	DOT-39	Terminated
Zhejiang Ansheng Mechanical Manufacture Co. Ltd.	China	DOT-39	Good Standing
Sanjiang Kaiyuan Co. Ltd.	China	DOT-39	Good Standing
Shandong Xinhao Special Equipment Co., Ltd.	China	DOT-39	Expired
Ningbo Runkey CGA Cylinders Co., Ltd.	China	DOT-39, TC-39M	Good Standing, TC registered
Jinhua Sinoblue Machinery Manufacturing Co. Ltd	China	DOT-39	Good Standing
Ningbo ZhengXin Fire-Fighting Equipment Co., Ltd.	China	DOT-39	Good Standing
KY Industrial Co., Ltd.	South Korea	DOT-39	Good Standing
Jiangsu Kasidi Chemical Machinery Co., LTD.	China	DOT-39	Good Standing

³¹ LPGas Magazine, "Worthington Industries Acquires Pressure Cylinder Manufacturer," July 11, 2017, <https://www.lpgasmagazine.com/worthington-industries-acquires-pressure-cylinder-manufacturer/>.

Manufacturer	Location	Specification	Status
Zhejiang Huijin Machinery Manufacture Co., Ltd.	China	DOT-39	Good Standing
Cixi Longfa Aluminum Jar-Making Co, Ltd.	China	DOT-39	Good Standing
Ningbo D&H Machinery Mfg Co., Ltd.	China	DOT-39	Good Standing
Zhejiang Meenyu Can Industry Co., Ltd.	China	DOT-39	Good Standing
Arrowhead Industrial Services, Ltd.	United Kingdom	TC-39M	TC registered
G-Shang Metal Corporation	Taiwan	TC-39M	TC registered
TUV Rheinland Taiwan Ltd.	Taiwan	TC-39M	TC registered
Superview Metals Manufacturing Industry Ltd.	United Arab Emirates	DOT-39	Conditional Approval
Ningbo Tianbo Fire Fighting Equipment Co.	China	DOT-39	Conditional Approval
Quzhou Yong An New Energy Technology Co., Ltd.	China	DOT-39	Conditional Approval
Xinchang Country Burong Machinery Co. - LTD.	China	DOT-39	Conditional Approval

Source: PHMSA, “Foreign Manufacturers Listing Hazmat Approvals: Cylinders (Updated January 204), March 8, 2024, <https://www.phmsa.dot.gov/hazmat/pressure-vessels-approvals/foreign-manufacturers-listing-hazmat-approvals-cylinders-january-2024>; Transport Canada, “Transport Canada Registered Means of Containment Facilities” March 8, 2024, <https://fdr-ric.tdg-tmd.tc.canada.ca/>.

Data on global exports of iron or steel containers for compressed or liquefied gas, or other materials (including NRSCs), during 2021-23 are presented in table VII-13. In 2023, China (23.8 percent), the United States (9.3 percent), Italy (8.9 percent), and Germany (8.0 percent) were the largest exporters by value, together accounting for 50.0 percent of all global exports. India accounted for 3.2 percent.

Table VII-13**Iron or steel containers for compressed or liquefied gas or other materials: Global exports by exporter and period**

Value in 1,000 dollars; share in percent

Exporting country	Measure	2021	2022	2023
United States	Value	662,739	735,254	654,647
India	Value	171,704	196,454	228,191
China	Value	1,715,546	1,747,341	1,675,339
Italy	Value	526,452	556,315	626,722
Germany	Value	481,080	536,215	567,307
South Korea	Value	367,805	346,849	321,475
Czech Republic	Value	293,885	309,045	291,192
Turkey	Value	277,736	325,731	322,069
Thailand	Value	269,418	245,424	209,315
Poland	Value	204,500	251,802	242,347
United Kingdom	Value	204,495	145,321	160,121
All other exporters	Value	2,002,250	2,075,771	1,751,583
All reporting exporters	Value	7,177,608	7,471,520	7,050,307
United States	Share	9.2	9.8	9.3
India	Share	2.4	2.6	3.2
China	Share	23.9	23.4	23.8
Italy	Share	7.3	7.4	8.9
Germany	Share	6.7	7.2	8.0
South Korea	Share	5.1	4.6	4.6
Czech Republic	Share	4.1	4.1	4.1
Turkey	Share	3.9	4.4	4.6
Thailand	Share	3.8	3.3	3.0
Poland	Share	2.8	3.4	3.4
United Kingdom	Share	2.8	1.9	2.3
All other exporters	Share	27.9	27.8	24.8
All reporting exporters	Share	100.0	100.0	100.0

Source: Official exports statistics under HS subheading 7311.00 and 7310.29 as reported in the Global Trade Atlas Suite database, accessed March 22, 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 "---". United States is shown at the top followed by the countries under investigation, all remaining top exporting countries in descending order of 2023 data.

The industry in China

China was the largest global exporter of iron or steel containers for compressed or liquefied gas or other materials (including NRSCs) in 2023,³² and the largest source of U.S. imports, by value, accounting for 23.8 percent.³³ During the 2021 investigation on NRSCs from China, the Commission identified 16 firms believed to produce and/or export NRSCs from China. The Commission determined that the United States was materially injured by imports of NRSCs from China that had been found by the Department of Commerce to be subsidized and sold at less than fair value.³⁴ As of May 2021, NRSCs from China are subject to antidumping margins between 74.32 percent and 112.21 percent, and countervailing duty margins between 18.37 percent and 186.18 percent.³⁵ Table VII-14 presents exports of iron or steel containers for compressed or liquefied gas or other materials (including NRSCs) from China for the years 2021-2023. In 2023, the United States was the largest destination market for these exports, accounting for 15.2 percent. Japan and Vietnam were the second and third largest destinations markets, accounting for 4.2 percent and 3.4 percent, respectively.

³² Official export statistics under HS subheadings 7310.29 and 7311.00, as reported by China customs in the S&P Global Trade Atlas database, accessed March 22, 2024.

³³ Official U.S. import statistics under HTS statistical reporting numbers 7310.29.0030, 7310.29.0065, 7311.00.0060, and 7311.00.0090, as reported by DataWeb/Census, accessed March 22, 2024.

³⁴ Non-Refillable Steel Cylinders from China, Investigation Nos. 701-TA-644 and 731-TA-1494 (Final), USITC Publication 5188, May 2021.

³⁵ 86 FR 25839, May 11, 2021. On May 26, 2023, Commerce initiated a circumvention inquiry to determine whether imports of non-refillable cylinders with a water capacity between 100 and 299 cubic inches are circumventing AD/CVD orders on NRSCs from China. 88 FR 35839, June 1, 2023. On March 12, 2024, Commerce issued an affirmative determination that non-refillable cylinders with water capacities between 100 and 299 cubic inches produced in China and exported to the United States constitute merchandise altered in form or appearance in such minor respects that they should be included within the scope of the Orders. 89 FR 17814, March 12, 2024.

Table VII-14**Iron or steel containers for compressed or liquefied gas or other materials: Exports from China, by destination market and by period**

Value in 1,000 dollars; shares in percent

Destination market	Measure	2021	2022	2023
United States	Value	254,879	268,414	254,621
Japan	Value	37,196	53,653	70,120
Vietnam	Value	51,196	61,766	56,594
Australia	Value	36,319	40,717	52,197
Nigeria	Value	33,752	48,405	51,625
Philippines	Value	72,292	45,390	50,364
Germany	Value	70,892	63,049	49,673
South Korea	Value	80,050	49,708	48,282
Poland	Value	31,903	39,037	47,992
All other destination markets	Value	1,047,067	1,077,201	993,870
All destination markets	Value	1,715,546	1,747,341	1,675,339
United States	Share	14.9	15.4	15.2
Japan	Share	2.2	3.1	4.2
Vietnam	Share	3.0	3.5	3.4
Australia	Share	2.1	2.3	3.1
Nigeria	Share	2.0	2.8	3.1
Philippines	Share	4.2	2.6	3.0
Germany	Share	4.1	3.6	3.0
South Korea	Share	4.7	2.8	2.9
Poland	Share	1.9	2.2	2.9
All other destination markets	Share	61.0	61.6	59.3
All destination markets	Share	100.0	100.0	100.0

Source: Official exports statistics under HS subheading 7311.00 and 7310.29 as reported by China Customs in the Global Trade Atlas Suite database, accessed March 22, 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 "---". United States is shown at the top followed by the countries under investigation, all remaining top exporting countries in descending order of 2023 data.

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
88 FR 27920, May 3, 2023	<i>Non-Refillable Steel Cylinders From India; Institution of Anti-Dumping and Countervailing Duty Investigations and Scheduling of Preliminary Phase Investigations</i>	https://www.govinfo.gov/content/pkg/FR-2023-05-03/pdf/2023-09364.pdf
88 FR 33571, May 24, 2023	<i>Certain Non-Refillable Steel Cylinders from India: Initiation of Less-Than-Fair-Value Investigation</i>	https://www.govinfo.gov/content/pkg/FR-2023-05-24/pdf/2023-11003.pdf
88 FR 33580, May 24, 2023	<i>Certain Non-Refillable Steel Cylinders from India: Initiation of Countervailing Duty Investigation</i>	https://www.govinfo.gov/content/pkg/FR-2023-05-24/pdf/2023-11004.pdf
88 FR 39476, June 16, 2023	<i>Non-Refillable Steel Cylinders From India</i>	https://www.govinfo.gov/content/pkg/FR-2023-06-16/pdf/2023-12889.pdf
88 FR 43295, July 7, 2023	<i>Certain Non-Refillable Steel Cylinders From India: Postponement of Preliminary Determination in the Countervailing Duty Investigation</i>	https://www.govinfo.gov/content/pkg/FR-2023-07-07/pdf/2023-14427.pdf
88 FR 62771, September 13, 2023	<i>Certain Non-Refillable Steel Cylinders From India: Postponement of Preliminary Determination in the Less-Than-Fair-Value Investigation</i>	https://www.govinfo.gov/content/pkg/FR-2023-09-13/pdf/2023-19794.pdf
88 FR67231, September 29, 2023	<i>Certain Non-Refillable Steel Cylinders From India: Preliminary Affirmative Countervailing Duty Determination and Alignment of Final Determination With Final Antidumping Duty Determination</i>	https://www.govinfo.gov/content/pkg/FR-2023-09-29/pdf/2023-21552.pdf
88 FR 83908, December 1, 2023	<i>Certain Non-Refillable Steel Cylinders From India: Preliminary Affirmative Determination of Sales at Less Than Fair Value, Postponement of Final Determination, and Extension of Provisional Measures</i>	https://www.govinfo.gov/content/pkg/FR-2023-12-01/pdf/2023-26409.pdf

Citation	Title	Link
88 FR 86379, December 13, 2023	<i>Non-Refillable Steel Cylinders From India; Scheduling of the Final Phase of Countervailing Duty and Antidumping Duty Investigations</i>	https://www.govinfo.gov/content/pkg/FR-2023-12-13/pdf/2023-27358.pdf
89 FR 29294, April 22, 2024	<i>Final Affirmative Determination in the Less-Than-Fair-Value Investigation of Certain Non-Refillable Steel Cylinders From India</i>	https://www.govinfo.gov/content/pkg/FR-2024-04-22/pdf/2024-08450.pdf
89 FR 29296, April 22, 2024	<i>Certain Non-Refillable Steel Cylinders From India: Final Affirmative Countervailing Duty Determination</i>	https://www.govinfo.gov/content/pkg/FR-2024-04-22/pdf/2024-08451.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: Non-Refillable Steel Cylinders from India
Inv. Nos.: 701-TA-689 and 731-TA-1618 (Final)
Date and Time: April 16, 2024 - 9:30 a.m.

Sessions were held in connection with these investigations in the Main Hearing Room (Room 101), 500 E Street, SW., Washington, DC.

OPENING REMARKS:

In Support of Imposition (**Paul C. Rosenthal**, Kelley Drye & Warren LLP)

In Support of the Imposition of the
Antidumping and Countervailing Duty Orders:

Kelley Drye & Warren
Washington, DC
on behalf of

Worthington Enterprises

James Bowes, President, Building Products, Worthington Enterprises

Wayne Powers, Director of Sales, Worthington Enterprises

Michael T. Kerwin, Assistant Director, Georgetown Economic Services, LLC

Nereus A. Joubert, Trade Analyst, Georgetown Economic Services, LLC

Paul C. Rosenthal)
R. Alan Luberda)
) – OF COUNSEL
Brooke M. Ringel)
Matthew T. Martin)

CLOSING REMARKS:

In Support of Imposition (**Paul C. Rosenthal**, Kelley Drye & Warren LLP)

APPENDIX C
SUMMARY DATA

Table C-1: NRSCs: Summary data concerning the total U.S. market	C-3
Table C-2: NRSCs: Summary data concerning the merchant U.S. market	C-5

Total market

Table C-1

NRSC: Summary data concerning the U.S. total market, by item and period

Quantity=units; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per unit; Period changes=percent--exceptions noted

Item	Reported data			Period changes		
	Calendar year			Comparison years		
	2021	2022	2023	2021-23	2021-22	2022-23
U.S. total market consumption quantity:						
Amount.....	***	***	***	▼***	▼***	▼***
Producers' share (fn1).....	***	***	***	▲***	▼***	▲***
Importers' share (fn1):						
India.....	***	***	***	▼***	▲***	▼***
China.....	***	***	***	▲***	▲***	▲***
All other sources.....	***	***	***	▼***	▲***	▼***
Nonsubject sources.....	***	***	***	▲***	▲***	▼***
All import sources.....	***	***	***	▼***	▲***	▼***
U.S. total market consumption value:						
Amount.....	***	***	***	▼***	▲***	▼***
Producers' share (fn1).....	***	***	***	▲***	▼***	▲***
Importers' share (fn1):						
India.....	***	***	***	▼***	▲***	▼***
China.....	***	***	***	▲***	▲***	▲***
All other sources.....	***	***	***	▼***	▲***	▼***
Nonsubject sources.....	***	***	***	▲***	▲***	▼***
All import sources.....	***	***	***	▼***	▲***	▼***
U.S. importers' U.S. shipments of imports from:						
India:						
Quantity.....	***	***	***	▼***	▲***	▼***
Value.....	***	***	***	▼***	▲***	▼***
Unit value.....	***	***	***	▼***	▲***	▼***
Ending inventory quantity.....	***	***	***	▲***	▲***	▼***
China:						
Quantity.....	***	***	***	▲***	▲***	▲***
Value.....	***	***	***	▲***	▲***	▼***
Unit value.....	***	***	***	▼***	▲***	▼***
Ending inventory quantity.....	***	***	***	▼***	▲***	▼***
All other 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

NRSC: Summary data concerning the U.S. total market, by item and period

Quantity=units; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per unit; Period changes=percent--exceptions noted

Item	Reported data			Period changes		
	Calendar year			Comparison years		
	2021	2022	2023	2021-23	2021-22	2022-23
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 (units 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. 508-compliant tables containing these data are contained in parts III, IV, VI, and VII of this report.

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.

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.

Merchant market

Table C-2

NRSC: Summary data concerning the U.S. merchant market, by item and period

(Quantity=units; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per unit; Period changes=percent--exceptions noted)

Item	Reported data			Period changes		
	2021	2022	2023	2021-23	2021-22	2022-23
U.S. merchant market consumption quantity:						
Amount.....	***	***	***	▼***	▼***	▼***
Producers' share (fn1).....	***	***	***	▼***	▼***	▲***
Importers' share (fn1):						
India.....	***	***	***	▼***	▲***	▼***
China.....	***	***	***	▲***	▲***	▲***
All other sources.....	***	***	***	▼***	▲***	▼***
Nonsubject sources.....	***	***	***	▲***	▲***	▼***
All import sources	***	***	***	▲***	▲***	▼***
U.S. merchant market consumption value:						
Amount.....	***	***	***	▼***	▲***	▼***
Producers' share (fn1).....	***	***	***	▲***	▼***	▲***
Importers' share (fn1):						
India.....	***	***	***	▼***	▼***	▼***
China.....	***	***	***	▲***	▲***	▲***
All other sources.....	***	***	***	▼***	▲***	▼***
Nonsubject sources.....	***	***	***	▲***	▲***	▼***
All import sources	***	***	***	▼***	▲***	▼***
U.S. importers' U.S. shipments of imports from:						
India:						
Quantity.....	***	***	***	▼***	▲***	▼***
Value.....	***	***	***	▼***	▲***	▼***
Unit value.....	***	***	***	▼***	▲***	▼***
Ending inventory quantity.....	***	***	***	▲***	▲***	▼***
China:						
Quantity.....	***	***	***	▲***	▲***	▲***
Value.....	***	***	***	▲***	▲***	▼***
Unit value.....	***	***	***	▼***	▲***	▼***
Ending inventory quantity.....	***	***	***	▼***	▲***	▼***
All other 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-2 Continued

NRSC: Summary data concerning the U.S. merchant market, by item and period

(Quantity=units; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per unit; Period changes=percent--exceptions noted)

Item	Reported data			Period changes		
	2021	2022	2023	2021-23	2021-22	2022-23
U.S. producers':						
Commercial U.S. shipments:						
Quantity.....	***	***	***	▼***	▼***	▼***
Value.....	***	***	***	▼***	▲***	▼***
Unit value.....	***	***	***	▲***	▲***	▼***
Commercial sales:						
Quantity.....	***	***	***	▼***	▼***	▼***
Value.....	***	***	***	▼***	▲***	▼***
Unit value.....	***	***	***	▲***	▲***	▼***
Cost of goods sold (COGS).....	***	***	***	▲***	▲***	▼***
Gross profit or (loss) (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).....	***	***	***	▼***	▲***	▼***

Source: Compiled from data submitted in response to Commission questionnaires. 508-compliant tables containing these data are contained in parts III, IV, VI, and VII of this report.

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.

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.

APPENDIX D

NONSUBJECT COUNTRY PRICE DATA

Four importers reported nonsubject purchase cost data for China, accounting for approximately *** percent of Chinese imports of NRSCs. These price items and accompanying data are comparable to those presented in tables V-6 to V-7. Import purchase cost and quantity data for China are shown in tables D-1 to D-2 and figures D-1 to D-2 (with domestic and subject sources).

In comparing nonsubject country purchase cost data with domestic sales prices and Indian purchase cost data, purchase cost for product imported from China were higher than import purchase cost for product imported from India and the sales price of NRSCs produced in the United States in all *** instances. A summary of price-cost differentials is presented in table D-3.

Table D-1

NRSC: Weighted-average f.o.b. prices, unit LDP values and quantities of domestic and imported product 1, by source and quarter

Price and LDP value in dollars per unit, quantity in units.

Period	U.S. price	U.S. quantity	China unit LDP value	China cost quantity
2021 Q1	***	***	***	***
2021 Q2	***	***	***	***
2021 Q3	***	***	***	***
2021 Q4	***	***	***	***
2022 Q1	***	***	***	***
2022 Q2	***	***	***	***
2022 Q3	***	***	***	***
2022 Q4	***	***	***	***
2023 Q1	***	***	***	***
2023 Q2	***	***	***	***
2023 Q3	***	***	***	***
2023 Q4	***	***	***	***

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

Note: Indian purchase cost data are presented in Table V-6.

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 "---".

Note: Product 1: Non-refillable steel cylinder, 9.5-inches in diameter, with 260 PSIG service pressure rating, unfilled, meeting the requirements of U.S. Department of Transportation specification 39.

Figure D-1

NRSC: Weighted-average f.o.b. prices, unit LDP values and quantities 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: Non-refillable steel cylinder, 9.5-inches in diameter, with 260 PSIG service pressure rating, unfilled, meeting the requirements of U.S. Department of Transportation specification 39.

Table D-2

NRSC: Weighted-average f.o.b. prices, unit LDP values and quantities of domestic and imported product 2, by source and quarter

Price and LDP value in dollars per unit, quantity in units, margin and price-cost differential in percent.

Period	U.S. price	U.S. quantity	China unit LDP value	China cost quantity
2021 Q1	***	***	***	***
2021 Q2	***	***	***	***
2021 Q3	***	***	***	***
2021 Q4	***	***	***	***
2022 Q1	***	***	***	***
2022 Q2	***	***	***	***
2022 Q3	***	***	***	***
2022 Q4	***	***	***	***
2023 Q1	***	***	***	***
2023 Q2	***	***	***	***
2023 Q3	***	***	***	***
2023 Q4	***	***	***	***

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

Note: Indian purchase cost data are presented in Table V-7.

Note: Product 2: Non-refillable steel cylinder, 9.5-inches in diameter, with 400 PSIG service pressure rating, unfilled, meeting the requirements of U.S. Department of Transportation specification 39.

Figure D-2

NRSC: Weighted-average f.o.b. prices, unit LDP values and quantities 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: Non-refillable steel cylinder, 9.5-inches in diameter, with 400 PSIG service pressure rating, unfilled, meeting the requirements of U.S. Department of Transportation specification 39

Table D-3

NRSC: Summary of higher/(lower) unit values for nonsubject price data, by source, January 2021 through December 2023

Quantity in units

Comparison	Benchmark source	Number of quarters lower	Quantity lower	Number of quarters higher	Quantity higher
China cost	United States price	***	***	***	***
China cost	India cost	***	***	***	***

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

