Tungsten Shot from China

Investigation Nos. 701-TA-732 and 731-TA-1701 (Preliminary)

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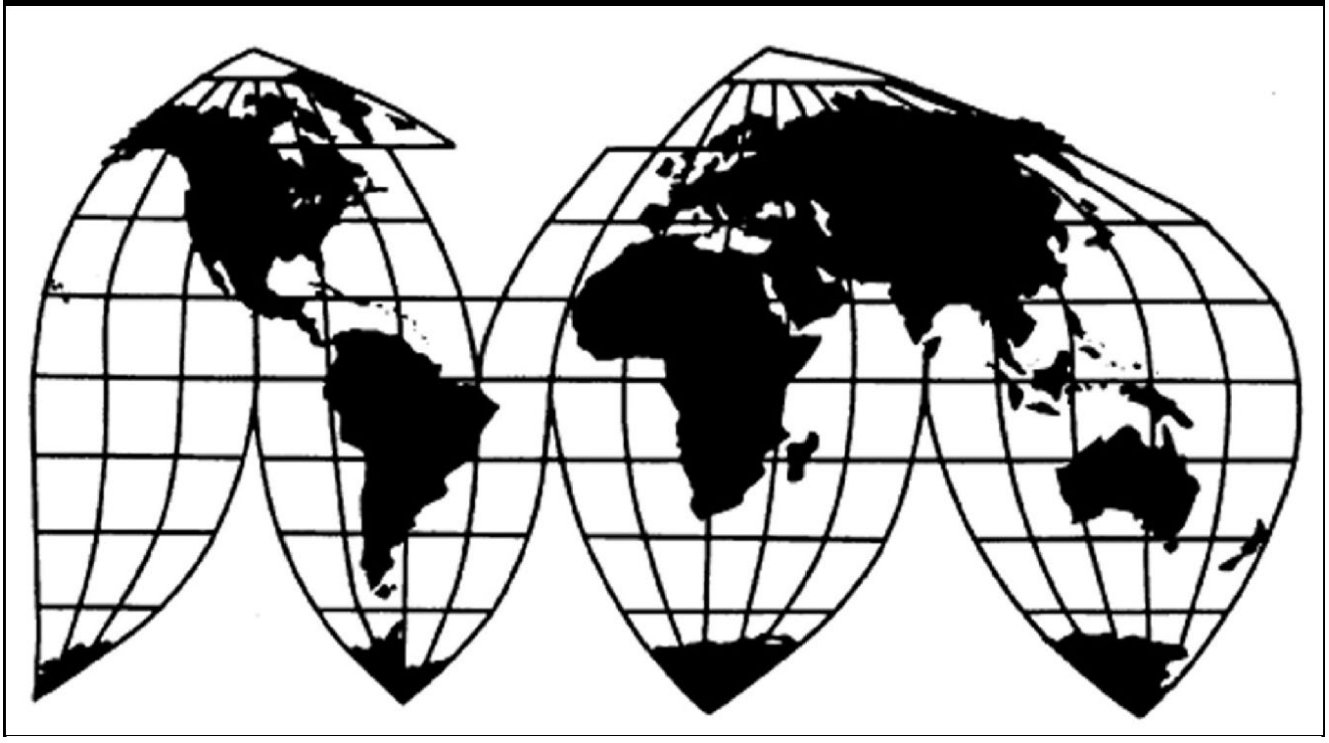
U.S. International Trade Commission



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U.S. International Trade Commission

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UNITED STATES INTERNATIONAL TRADE COMMISSION

Investigation Nos. 701-TA-732 and 731-TA-1701 (Preliminary)

Tungsten Shot from China

DETERMINATIONS

On the basis of the record[1] developed in the subject investigations, the United States International Trade Commission ("Commission") determines, pursuant to the Tariff Act of 1930 ("the Act"), that there is a reasonable indication that the establishment of an industry in the United States is materially retarded by reason of imports of tungsten shot from China, provided for in subheadings 9306.29.00 and 8101.99.80 of the Harmonized Tariff Schedule of the United States, that are alleged to be sold in the United States at less than fair value ("LTFV") and alleged to be subsidized by the government of China.[2] [3]

COMMENCEMENT OF FINAL PHASE INVESTIGATIONS

Pursuant to section 207.18 of the Commission's rules, the Commission also gives notice of the commencement of the final phase of its investigations. The Commission will issue a final phase notice of scheduling, which will be published in the *Federal Register* as provided in § 207.21 of the Commission's rules, upon notice from the U.S. Department of Commerce ("Commerce") of affirmative preliminary determinations in the investigations under §§ 703(b) or 733(b) of the Act, or, if the preliminary determinations are negative, upon notice of affirmative final determinations in those investigations under §§ 705(a) or 735(a) of the Act. Parties that filed entries of appearance in the preliminary phase of the investigations need not enter a separate appearance for the final phase of the investigations. Any other party may file an entry of appearance for the final phase of the investigations after publication of the final phase notice of scheduling. Industrial users, and, if the merchandise under investigation is sold at the retail level, representative consumer organizations have the right to appear as parties in Commission antidumping and countervailing duty investigations. The Secretary will prepare a

[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 65852 and 89 FR 65856 (August 13, 2024).

[3] Commissioner Jason E. Kearns did not participate.

public service list containing the names and addresses of all persons, or their representatives, who are parties to the investigations. As provided in section 207.20 of the Commission's rules, the Director of the Office of Investigations will circulate draft questionnaires for the final phase of the investigations to parties to the investigations, placing copies on the Commission's Electronic Document Information System (EDIS, https://edis.usitc.gov), for comment.

BACKGROUND

On July 10, 2024, Tungsten Parts Wyoming, Inc., Laramie, Wyoming, filed petitions with the Commission and Commerce, alleging that the establishment of a domestic industry is materially retarded or that an industry in the United States is materially injured or threatened with material injury by reason of subsidized and LTFV imports of tungsten shot from China. Accordingly, effective July 10, 2024, the Commission instituted countervailing duty investigation No. 701-TA-732 and antidumping duty investigation No. 731-TA-1701 (Preliminary).

Notice of the institution of the Commission's investigations and of a public conference 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* of July 16, 2024 (89 FR 57941). The Commission conducted its conference on July 31, 2024. All persons who requested the opportunity were permitted to participate.

Views of the Commission

Based on the record in the preliminary phase of these investigations, we determine that there is a reasonable indication that the establishment of an industry in the United States is materially retarded by reason of imports of tungsten shot that are allegedly sold in the United States at less than fair value and imports of the subject merchandise that are allegedly subsidized by the Government of China.

I. The Legal Standard for Preliminary Determinations

The legal standard for preliminary antidumping and countervailing duty determinations requires the Commission to determine, based upon the information available at the time of the preliminary determinations, whether there is a reasonable indication that a domestic industry is materially injured or threatened with material injury, or that the establishment of an industry is materially retarded, by reason of the allegedly unfairly traded imports.[1] In applying this standard, the Commission weighs the evidence before it and determines whether "(1) the record as a whole contains clear and convincing evidence that there is no material injury or threat of such injury; and (2) no likelihood exists that contrary evidence will arise in a final investigation."[2]

II. Background

Parties to the Investigations. Tungsten Parts Wyoming, Inc. ("TPW" or "Petitioner"), the domestic producer of tungsten shot corresponding to the scope of these investigations ("certain tungsten shot"), filed the petitions in these investigations on July 10, 2024. Petitioner appeared at the staff conference accompanied by counsel and submitted a postconference brief.

One respondent entity participated in these investigations. Zhuzhou KJ Super Materials Co., Ltd ("Zhuzhou"), a foreign producer and exporter of subject merchandise, did not appear at the conference but submitted a postconference statement.

Data Coverage. U.S. industry data are based on the questionnaire responses of one U.S. producer, TPW, accounting for all known U.S. production of certain tungsten shot in 2023. U.S. import data are based on questionnaire responses from four U.S. importers, which we find to

[1] 19 U.S.C. §§ 1671b(a), 1673b(a) (2000); *see also American Lamb Co. v. United States*, 785 F.2d 994, 1001-04 (Fed. Cir. 1986); *Aristech Chem. Corp. v. United States, 2*0 CIT 353, 354-55 (1996).

[2] *American Lamb Co.*, 785 F.2d at 1001; *see also Texas Crushed Stone Co. v. United States*, 35 F.3d 1535, 1543 (Fed. Cir. 1994).

be the best available information in the current record, despite its limitations.[3] The Commission also received responses to its questionnaires from two producers/exporters of subject merchandise, which estimated that they accounted for approximately *** percent of total exports of subject merchandise to the United States in 2023.[4]

III. Domestic Like Product

In determining whether there is a reasonable indication that an industry in the United States is materially injured or threatened with material injury, or that the establishment of an industry is materially retarded, by reason of imports of the 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 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]

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[3] Confidential Report, Memorandum INV-WW-097, ("CR"), as revised by Memorandum INV-WW-098; *Tungsten Shot from China*, Inv. Nos. 701-TA-732 and 731-TA-1701 (Preliminary), USITC Pub. 5542 (August 2024) ("PR") at IV-1. These four firms' share of total U.S. imports of tungsten shot in 2023 is presently unknown, due to uncertainties regarding the volume of imports of merchandise covered by the scope of these investigations. CR/PR at IV-1 – IV-2 n.7. We also note that TPW's estimates of the size of the U.S. market are different from the information provided to the Commission by the two responding foreign producers/exporters in their respective questionnaire responses. TPW offers differing estimates of apparent U.S. consumption of certain tungsten shot, ranging between *** pounds in 2023, which do not appear to have been adjusted to remove out-of-scope products, including military-grade tungsten shot. TPW Postconference Br. at 20, 30, Exh. 1, p. 7 and 3. The primary HTS categories identified in the scope, statistical reporting numbers 8101.99.8000 and 9306.29.0000, are "basket" categories, and, therefore, Commerce's Census import data under these reporting numbers may also contain out-of-scope merchandise. *Id.* No responding U.S. importer reported importing out-of-scope merchandise under the primary HTS categories and we are therefore unable to use adjusted import statistics as a measure of import volumes. Consequently, for purposes of the preliminary phase of these investigations, we have based U.S. import data on the questionnaire responses of the four responding firms. However, TPW identified importers of tungsten shot which did not respond to the Commission's importer questionnaires, and therefore these data likely understate the volume of subject imports. *Id.*; TPW Postconference Br. at 28. In any final phase of these investigations, we will endeavor to obtain additional responses from U.S. importers of tungsten shot.

[4] CR/PR at VII-3.

[5] 19 U.S.C. § 1677(4)(A).

[6] 19 U.S.C. § 1677(4)(A).

[7] 19 U.S.C. § 1677(10).

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(s) 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 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

[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).

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

variations.[13] The Commission may, where appropriate, include domestic articles in the domestic like product in addition to those described in the scope.[14]

In its notice of initiation, Commerce defined the imported merchandise within the scope of these investigations as follows:

> *The merchandise covered by the investigation is certain tungsten spheres or balls, also known as shot, that are 92.6 percent or greater tungsten by weight, not including the weight of any additional coating. In scope shot have a diameter ranging from 1.5 millimeters (mm) to 10.0 mm. Subject shot can be referred to as "Tungsten Super Shot." Merchandise is covered regardless of the combination of compounds that comprise the non-tungsten material and whether or not the tungsten shot is additionally coated with another material, including but not limited to copper, nickel, iron, or metallic alloys.*
>
> *Tungsten shot subject to the investigation may be classified under the following Harmonized Tariff Schedule of the United States (HTSUS) subheading: 9306.29.0000. Merchandise may also be entered under HTSUS subheading 8101.99.8000. The HTSUS subheadings are provided for convenience and customs purposes only. The written description of the scope of the investigation is dispositive.*[15]

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

[14] *See*, *e.g.*, *Pure Magnesium from China and Israel*, Inv. Nos. 701-TA-403 and 731-TA-895-96 (Final), USITC Pub. 3467 at 8 n.34 (Nov. 2001); *Torrington,* 747 F. Supp. at 748-49 (holding that the Commission is not legally required to limit the domestic like product to the product advocated by the petitioner, co-extensive with the scope).

[15] *Certain Tungsten Shot From the People's Republic of China: Initiation of Countervailing Duty Investigation*, 89 Fed. Reg. 65852 (Aug. 13, 2024); *Certain Tungsten Shot From the People's Republic of China: Initiation of Less-Than-Fair-Value Investigation*, 89 Fed. Reg. 65856 (Aug. 13, 2024). The scope included in the petitions was updated in two instances since they were filed on July 10, 2024. CR/PR at I-5 n.13. On July 18, 2024, the phrase "not including the weight of any additional coating" was added to the end of the first sentence of the scope language. *See* Certain Tungsten Shot from the People's Republic of China: Petitioner's Response to Supplemental Questions Regarding Common Issues and Injury Volume I of the Petitions, July 18, 2024, p. 1. Additionally, the scope in the petitions initially listed HTS statistical reporting numbers 8101.99.8000, 8482.91.0020, and 9306.21.0000 as tariff numbers under which merchandise may enter the United States. On July 24, 2024, the scope was revised. HTS statistical reporting numbers 8482.91.0020 and 9306.21.0000 were removed from the scope and HTS (Continued…)

Tungsten shot is a tungsten alloy material in the form of small pellets used in the production of shotgun shells. Tungsten shot has ballistic performance and environmental benefits over other types of shotgun shot. The denser tungsten metal provides greater range, tighter dispersal, and greater impact than either lead or steel shot. SAE International standard 7725F and ASTM Designation B 777 provide standard specifications for tungsten alloy metal classes based in part on tungsten nominal content, density range, and hardness.[16] Shotgun shells containing tungsten shot that are sold in the commercial market are often referred to as "Tungsten Super Shot."[17]

The manufacturing process for tungsten shot corresponding to the scope begins with mixing of a ready-to-press powder containing high-purity (99.9 percent) tungsten, nickel, iron, small amounts of other metals, and a binding agent to keep the powder together during compaction. To ensure suitability for production usage, the manufacturer first tests the powder to verify size, density, and flowability. The manufacturer then compacts the verified powder, typically in presses that cycle through the following steps: 1) powder filling of the compaction cavity; 2) pre-compression that expels the excess air from the cavity; 3) compression to form the powder into size and shape; and 4) ejection of the compressed pellet from the press.[18]

After the compaction, the pellets undergo a series of furnace operations. In the first "debinding" operation, the pellets are baked at a temperature hot enough to emit the binding agent from the product. The pellets are then sintered, which involves loading them into carriers with substances that separate them, and then heating them to temperatures that melt the nickel, iron, and other metals so that they bond with the non-melted tungsten particles in each pellet, which causes the product to shrink and harden. The resulting product is shiny, smaller sized, and extremely strong. After sintering, the resulting pellets are sent through a tumbling process to remove the substances that separated them during the sintering stage.

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statistical reporting number 9306.29.0000 was added. *See* Certain Tungsten Shot from the People's Republic of China: Petitioner's Response to Second Supplemental Questions Regarding Volume I of the Petitions, July 24, 2024, pp. 1-2.

[16] CR/PR at I-9; Petitions at Exhibit I-9; Postconference Br. Exhibit 12. Class 1 tungsten alloy has a nominal tungsten content of 90 percent, a density *** grams per cubic centimeters, and a Rockwell Hardness scale of *** HRC maximum. Class 2 tungsten alloy has a nominal tungsten content of 92.5 percent, a density *** grams per cubic centimeters, and a Rockwell Hardness scale of *** HRC maximum. Class 3 tungsten alloy has a nominal tungsten content of 95 percent, a density *** grams per cubic centimeters, and a Rockwell Hardness scale of *** HRC maximum. Class 4 tungsten alloy has a nominal tungsten content of 97 percent, a density *** grams per cubic centimeters, and a Rockwell Hardness scale of *** HRC maximum. *Id.*

[17] CR/PR at I-7.

[18] CR/PR at I-10 – I-12.

Next, they are sent through sorters to capture and remove shot that was combined during sintering. After sorting, the pellets are loaded into an annealing furnace, which removes trapped hydrogen, thereby improving their overall strength and ductility. At this point, the shot has its full mechanical properties.[19]

To achieve its final size, the shot is sent through grinding machines. Steel alloy grinding plates apply pressure and spin the shot, slowly removing material and rounding the pellets, imparting a shiny surface. The shot is ground until its size is measured to be within specifications. The ground shot is subsequently washed and dried in a rotary-drum washer. The clean product is finally sent through roller meters to verify the size of each shot and to capture those that are over- or undersized. After the tungsten shot is sized, it is checked by the quality team before packaging and shipping.[20]

A. Arguments of the Parties

Petitioner's Argument. TPW argues that the Commission should define a single domestic like product coextensive with the scope of these investigations. It contends that there are clear dividing lines between certain tungsten shot and other types of shotgun shot such as lead and steel. It further asserts that there are clear dividing lines between domestically produced certain tungsten shot and other types of tungsten shot.[21]

Respondent's Argument. Zhuzhou did not comment on the definition of the domestic like product.[22]

B. Analysis

Based on the record in the preliminary phase of these investigations, and in the absence of contrary argument, we define a single domestic like product consisting of certain tungsten shot coextensive with the scope of these investigations.[23]

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[19] CR/PR at I-11 – I-13.

[20] CR/PR at I-12.

[21] TPW Postconference Br. at 4-10; Conf. Tr. at 16-17 (Gibbs).

[22] *See generally* Zhuzhou Postconference Br.

[23] Although no party has argued to the contrary, the Commission has considered whether clear dividing lines appear to exist between tungsten shot and lead and steel shot. Based on the record in these preliminary phase investigations, we find that clear dividing lines exist between tungsten shot and lead and steel shot. In terms of physical characteristics, tungsten is a denser metal that gives tungsten shot greater range, tighter dispersal, and greater impact than either lead or steel shot. CR/PR at I-7. The higher density of tungsten shot allows it to contain more pellets of smaller shot sizes, which when fired propels the pellets farther, with less deformation, less dispersal in flight, and greater impact force (Continued…)

TPW argues that the 92.6 percent or greater tungsten content by weight set forth in the scope constitutes a "bright line in the physical characteristics of the domestic like product which is defined by SAE standards."[24] In its arguments regarding the domestic like product, TPW focuses its analysis on differences between class 2 and class 3 tungsten. It asserts that its "commercial" tungsten shot production consists exclusively of class 3 tungsten, which is defined as product containing 95 percent nominal weight of tungsten.[25] It then seeks to contrast this commercial product with its "military" shot production, which TPW asserts consists exclusively of class 2 tungsten, which is defined as containing 92.5 percent nominal weight of tungsten.[26] We also note that the scope appears to cover shot of class 4 tungsten, although the record does not indicate whether any domestic producer makes class 4 tungsten shot. Based on the current record, however, and in the absence of contrary party argument, we analyze the six factors that the Commission traditionally examines using the available information regarding the domestic like product provided by TPW, which focuses on the purported distinctions between its military-grade class 2 tungsten shot, and its commercial-grade class 3 tungsten shot. Because it is unclear whether additional domestic producers

against the target. *Id.* Additionally, tungsten shot does not readily decompose, and its compounds are generally inert, unlike lead shot, which was banned by federal law in 1991 for waterfowl hunting. CR/PR at I-7. Although lead, steel, and tungsten shot may be all be used individually and in combination in shotgun shells in "TSS blend" ammunition, interchangeability may be limited to the extent that the ballistic and environmental advantages of tungsten shot are desired or required. *See* Brad Fitzpatrick, "TSS and the Evolution of Shotgun Shells," NRA American Hunter (April 21, 2021) (cited at CR/PR at I-8). According to TPW, given the differences in physical characteristics among different types of shotgun shot, producers and customers perceive certain tungsten shot to be a unique product. TPW Postconference Br. at 6-7. TPW also asserts that its commercial-grade tungsten shot tends to be more expensive than lead or steel shot. Transcript of July 31, 2024 Staff Conference ("Conf. Tr.") at 17 (Gibbs). In sum, although there may be some overlap in the physical characteristics and end uses of tungsten shot and other shotgun shot made of lead or steel, tungsten shot possesses certain ballistic and environmental advantages that limit interchangeability. The record further indicates that these advantages cause producers and customers to view tungsten shot as a distinct type of shotgun shot, which tends to be priced higher than other types of shotgun shot. Thus, the record in the preliminary phase of these investigations supports not expanding the definition of the domestic like product to include different types of shotgun shot.

[24] TPW Postconference Br. at 4-5.

[25] TPW Postconference Br. at 4-10; Conf. Tr. at 53 (Pickard). We note that "class 2" and "class 3" refer to industry standards applicable to all products made of tungsten metal, and are not specific to tungsten shot. TPW states in its petitions that class 2 tungsten is not used exclusively in military applications, but may also be used in aerospace and medical applications. Petitions at 10.

[26] TPW Postconference Br. at 4-10; Conf. Tr. at 53 (Pickard). It is unclear from the record whether these nominal weight specifications indicate maximum amounts of tungsten or the midpoint of a range of tungsten contents. If the latter, some imports of shot made of class 2 tungsten could fall within the scope of the subject merchandise.

manufacture in-scope tungsten shot, we intend to seek additional information on this issue in any final phase of these investigations and invite the parties to address domestic like product issues in their comments on the draft questionnaires.

Physical Characteristics and Uses. The record in the preliminary phase of these investigations indicates that there are some distinctions between domestically produced certain tungsten shot and other types of tungsten shot. Although all tungsten shot shares the same physical characteristic of being made of a tungsten alloy, the record indicates that there are differences in the physical characteristics of TPW's commercial-grade class 3 tungsten shot and military-grade class 2 tungsten shot. TPW asserts that these differences enable the different products to be particularly well suited for distinct end uses.[27] According to TPW, higher tungsten levels increase density but result in a more brittle product.[28] The lower density of class 2 tungsten means that the shot of a given weight will be larger and more ductile, which will enable it to compress rather than shatter upon impact and penetrate larger and harder targets than class 3 tungsten shot.[29] Shot of a given weight made with higher-density class 3 tungsten is smaller, which allows more to be loaded into a shotgun shell, enabling a tighter spread at further distances.[30] Although class 3 tungsten shot shatters on impact more readily than class 2, commercial applications such as clay shooting or hunting involve softer targets that are less likely to cause the shot to shatter.[31] TPW also contends that military-grade and commercial-grade tungsten shot involve different data sheets, technical specifications, and drawings.[32] Class 2 tungsten shot used in military applications is also subject to certain additional specifications, although TPW states that at least some are also applicable to commercial tungsten shot.[33]

[27] It appears that the other two classes of tungsten alloy are not used in shotgun shells. Class 1 tungsten alloys are utilized in aerospace, automotive, medical engineering, and construction industries. CR/PR at I-8 – I-9; Petition at 9–10. These applications take advantage of tungsten's nontoxicity, radiation shielding, and low coefficient of thermal expansion properties. CR/PR at I-10; Conf. Tr. at 69–70 (Omanoff). Class 4 tungsten alloys are utilized in the most demanding x-ray and radiation shielding applications. CR/PR at I-9; TPW Postconference Br. at 5; Conf. Tr. at 16 (Gibbs). In any final phase of these investigations, we intend to further explore whether and to what extent there may be domestic production of other classes of certain tungsten shot corresponding to the scope.

[28] Conf. Tr. at 68 (Omanoff).

[29] Conf. Tr. at 16 (Gibbs), 52 (Pickard), 10, 54, 68 (Omanoff).

[30] Conf. Tr. at 16 (Gibbs), 52 (Pickard), 10, 54, 68 (Omanoff).

[31] Conf. Tr. at 16 (Gibbs), 52 (Pickard), 10, 54, 68 (Omanoff).

[32] Conf. Tr. at 18 (Gibbs).

[33] TPW Postconference Br. at 9.

Thus, the record in the preliminary phase of these investigations suggests that there are differences in the physical characteristics and end uses of domestically produced certain tungsten shot and other types of tungsten shot.

Manufacturing Facilities, Production Processes and Employees. As discussed above in Section III.A, TPW reports that its production of certain tungsten shot requires several stages. At least some of the processes and machinery involved in TPW's production of commercial-grade class 3 tungsten shot overlap with the production of other tungsten shot that TPW manufactures, specifically, in the de-binding and sintering stages.[34] Additionally, TPW indicates that, although ***, its commercial tungsten shot undergoes an annealing process to ameliorate the negative effects of the use of hydrogen in the sintering process.[35]

TPW claims that there are additional important differences in the production processes, machinery, and employees. It contends that the powder mixing and compaction stages are different, and in particular that ***.[36] TPW further reports that, due to the smaller size and greater density of commercial-grade tungsten shot, it uses different ***.[37] TPW also states that it ***,[38] and that washing *** are also different.[39] TPW reports that the production process of military-grade tungsten shot is also subject to certain additional requirements not necessarily applicable to commercial grade tungsten shot.[40]

TPW contends that, due to the greater variation among types of commercial tungsten shot, its employees have to undergo specialized training to produce that product.[41] However, TPW reported ***, which suggests that ***.[42]

Channels of Distribution. According to TPW, its commercial-grade tungsten shot is sold into distinct channels of distribution to manufacturers of Tungsten Super Shot, such as "big box" sporting goods retailers, and "boutique" (specialty) shooting stores, as well as individual "reloaders" who assemble rather than purchase shotgun shells.[43] In contrast, its military-grade

[34] Conf. Tr. at 80-81 (Omanoff).

[35] TPW Postconference Br. at 8; Conf. Tr. 14 (Gibbs).

[36] TPW Postconference Br. at 7; Conf. Tr. at 15 (Gibbs).

[37] TPW Postconference Br. at 7-8; Conf. Tr. at 15 (Gibbs).

[38] TPW Postconference Br. at 8.

[39] TPW Postconference Br. at 8.

[40] TPW Postconference Br. at 6, 9; Conf. Tr. at 50 (Omanoff), 50-51 (Pickard). According to TPW, production of military-grade tungsten shot is subject to additional requirements under the Defense Federal Acquisition Regulations and International Traffic in Arms Regulations. *Id.*

[41] TPW Postconference Br. at 9; Conf. Tr. at 47 (Omanoff).

[42] CR/PR at Table III-8.

[43] TPW Postconference Br. at 6; Conf. Tr. at 34–35, 55, 62, 85 (Omanoff).

tungsten shot is sold primarily to defense contractors, such as Northrup Grumman or Lockheed Martin.[44]

Interchangeability. TPW states that, due to the differences in physical characteristics of military and commercial grades of tungsten shot, which make each particularly suitable to distinct end uses, as well as additional requirements imposed in military applications, military customers cannot use commercial-grade tungsten shot.[45]

Producer and Customer Perceptions. Due to the distinct physical characteristics and end uses of military-grade tungsten shot, as well as the additional requirements applicable to the manufacture and sale of such products, TPW avers that producers and customers perceive commercial-grade tungsten shot to be a distinct product from other types of tungsten shot.[46]

Price. According to TPW, its military-grade tungsten shot tends to be more expensive than commercial-grade tungsten shot.[47]

Conclusion. The current record indicates that there are both similarities and differences between TPW's domestically produced commercial-grade class 3 tungsten shot and its military-grade class 2 tungsten shot. Domestically produced commercial-grade tungsten shot is similar to military-grade tungsten shot in that both consist of tungsten alloy and share at least some common manufacturing facilities, machinery, and production processes. The current record indicates, however, that the different tungsten content makes TPW's domestically produced commercial-grade tungsten shot and military-grade tungsten shot suitable for distinct end uses and limits their interchangeability with each other. As a result, TPW's domestically produced certain tungsten shot and military-grade tungsten shot are sold through different channels of distribution, perceived by producers and customers to be distinct products, and priced differently. Thus, based on the record of the preliminary phase of the investigations, the differences between TPW's domestically produced commercial-grade tungsten shot and military-grade tungsten shot support finding a clear dividing line between the two products. Moreover, no party argues for a different domestic like product definition for purposes of the Commission's preliminary determinations. For these reasons, we define a single domestic like product consisting of commercial-grade tungsten shot, coextensive with the scope of the investigations.[48]

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[44] TPW Postconference Br. at 6; Conf. Tr. at 31-32 (Omanoff).

[45] TPW Postconference Br. at 5-6, 9; Conf. Tr. at 15-16, 18 (Gibbs).

[46] TPW Postconference Br. at 6-7.

[47] TPW Postconference Br. at 10.

[48] Although for purposes of the Commission's preliminary determination we are defining a single domestic like product coextensive with the scope, in any final phase we intend to investigate whether (Continued…)

IV. Domestic Industry

A. Defining the Actual or Potential 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."[49] 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.

TPW argues that there is a single domestic industry consisting of itself as the only U.S. producer of certain tungsten shot.[50] In these investigations, there are no related party issues.[51] Accordingly, consistent with our definition of the domestic like product, we define the actual or potential domestic industry to include TPW as the only known domestic producer of certain tungsten shot.

B. Whether the Domestic Industry is Established

In antidumping and countervailing duty investigations, the statute provides that as an alternative to material injury and threat of material injury determinations, the Commission may make a determination concerning whether "the establishment of an industry in the United States is materially retarded" by reason of subject imports.[52] The Commission has previously found that material retardation and material injury/threat forms of injury are mutually exclusive standards, whereby a determination concerning whether the domestic industry is materially retarded is appropriate only when the Commission finds that the domestic industry is not yet established.[53] If a domestic industry is found to be established, however, then it no longer qualifies as a "nascent" industry, and the analysis instead turns on the issues of material injury or threat thereof.

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there is domestic production of merchandise that could make a different definition appropriate. We invite parties to provide comments on the draft questionnaires concerning any information that they would propose that the Commission collect concerning these issues in any final phase of these investigations.

[49] 19 U.S.C. § 1677(4)(A).

[50] TPW Postconference Br. at 10.

[51] TPW ***. CR/PR at III-10. ***. CR/PR at III-2 n. 2; TPW Domestic Producer Questionnaire Response at I-6, I-7, EDIS Doc. No. 827081.

[52] 19 U.S.C. § 1671d(b)(1)(B); 19 U.S.C. § 1673d(b)(1)(B).

[53] *Laminated Woven Sacks from China*, Inv. Nos. 701-TA-450 and 731-TA-1122 (Preliminary), USITC Pub. 3942 (Aug. 2007) at 21.

1. Historical Overview

The issue of material retardation has arisen infrequently in antidumping and countervailing duty original investigations, and the Commission has reached the question of material retardation in approximately six investigations.[54]

Injury provisions under the United States' first antidumping laws included a concept similar to material retardation: the prevention of the establishment of a domestic industry. The antidumping provisions of the Revenue Act of 1916 provided for relief when imports "prevented the establishment of an industry," and the Antidumping Act of 1921 ("1921 Act") required a determination as to whether "an industry in the United States…is prevented from being established" by reason of dumped imports.[55] The Trade Agreements Act of 1979 ("1979 Act") adopted the current language of the statute, requiring that the Commission determine whether "the establishment of an industry in the United States is materially retarded" by

[54] The Commission made affirmative material retardation determinations in three investigations and reached negative determinations in the other three. *See Benzyl Paraben from Japan*, Inv. No. 731-TA-462 (Final), USITC Pub. 2355 (Feb. 1991) ("*Benzyl Paraben*"); *Certain Dried Codfish from Canada*, Inv. No. 731-TA-199 (Final), USITC Pub. 1711 (Jul. 1985) ("*Dry Salted Codfish*"), *aff'd*, *BMT Commodity Corp. v. United States*, 667 F. Supp. 880 (Ct. Int'l Trade 1987), *aff'd*, 852 F.2d 1285 (Fed. Cir.), *cert denied*, 489 U.S. 1012 (1989); *Refillable Stainless Steel Kegs from Mexico*, Inv. No. 731-TA-1427 (Final), USITC Pub. 4976 (Oct. 2019) ("*Steel Kegs"*) at 8. *See also 53-Foot Domestic Dry Containers from China*, Inv. Nos. 701-TA-514 and 731-TA-1250 (Final), USITC Pub. 4537 (June 2015) ("*Domestic Dry Containers*"); *Certain Copier Toner from Japan*, Inv. No. 731-TA-373 (Preliminary), USITC Pub. 1960 (March 1987) ("*Copier Toner*"); *Certain Commuter Airplanes from France and Italy*, Inv. Nos. 701-TA-174-175 (Preliminary), USITC Pub. 1269 (July 1982). The issue of material retardation has also arisen in three changed circumstances reviews, *see, e.g., Salmon Gill Fish Netting of Manmade Fibers from Japan*, Inv. No. 751-TA-5, USITC Pub. 1234 (March 1982), and the related question of the "prevention of the establishment of a domestic industry" arose under the Antidumping Act of 1921, *see Regenerative Blower/Pumps from West Germany*, Inv. No. AA1921-140, TC Pub. 676 (May 1974).

[55] Act of May 27, 1921, ch. 14, sec. 201(a), 42 Stat. 11, 19 § U.S.C. 160. The "prevention" standard appears to have evolved from concerns regarding the U.S. chemical and dyestuffs industry and competition from imports from Germany following World War I. This historical context provides insight into Congress' original intent, given that the U.S. chemical industry had been in existence for a number of years at the time of the passage of the 1921 Act and had reached significant production levels; the industry was nonetheless considered "nascent" relative to German firms because of U.S. producers' lesser technical expertise, inability to make certain products, and their less efficient/higher costs of production. *See generally* Steen, Kathryn, The American Synthetic Organic Chemicals Industry: War and Politics, 1910-1930 (2014) at 191-95. Congressional statements from this time indicate that the "prevention" standard could also apply to industries not yet in production. *See, e.g.,* 61 Cong. Rec. 1101 (1920).

reason of subject imports.[56] The change from "prevention" to "material retardation" in the standard to be applied in investigations was not considered a substantive difference.[57] The statutory language concerning "material retardation" has remained unchanged since the 1979 Act, and Congress has not further addressed the meaning of this provision since that time.

Neither the statute nor the legislative history provides a framework for how the Commission should apply this provision. The Commission has applied the material retardation provision to both domestic producers that have not yet engaged in U.S. production and those that have begun to engage in domestic production. If there is or was at least some domestic production, which is the case in these investigations, then the Commission has applied a two-step framework in which it first determines whether the domestic industry is established. If producers have made a substantial commitment to production but the domestic industry is not yet established, then the Commission moves to the second step of its analysis and examines whether a potential domestic industry has been materially retarded by reason of subject imports.[58] If the industry is established, then the Commission has instead examined whether the domestic industry is materially injured or threatened with material injury by reason of subject imports. The Commission has not reached the question of material retardation in the majority of investigations in which the issue has arisen, either because it found the domestic industry to be established (and thus applied the material injury or threat standard),[59] or

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[56] P.L. 96-39, approved July 26, 1979. The 1979 Act amended U.S. trade laws to conform with international commitments in the Tokyo Round of negotiations under the General Agreement on Tariffs and Trade ("GATT 1947"), and the change from "prevention" to "material retardation" reflected the language adopted in the GATT 1947. GATT 1947 Art. VI(1), providing that dumping was to be condemned if it "materially retards the establishment of a domestic industry."

[57] Negotiators to the GATT 1947 appear to have adopted the "material retardation" standard out of the same historical context as the "prevention" standard under the 1921 Act. *See* John H. Jackson, *World Trade and the Law of GATT* (1969), at 419-20 (citing United Nations documents concerning the negotiation of the GATT 1947). Additionally, an executive branch analysis found that "material retardation" was a "reasonable interpretation" of the "prevention" standard. *See* Hearing on the International Dumping Code, Sen. Comm. on Finance, 90th Cong., 2d Sess. 287 (1968) ("The notion of "material retardation" is a reasonable interpretation of the idea of prevention and would permit injury to be found even though it is not shown that dumped imports absolutely prevent the establishment of an industry.").

[58] *See Domestic Dry Containers,* USITC Pub. 4537 at 10-11.

[59] *See Fabric and Expanded Neoprene Laminate from Japan*, Inv. No. 731-TA-206 (Preliminary), USITC Pub. 1608 (Nov. 1984) ("*Neoprene Laminate*"); *Lime Oil from Peru*, Inv. No. 303-TA-16, USITC Pub. 1723 (July 1985) ("*Lime Oil*"); *Certain All-Terrain Vehicles from Japan*, Inv. No. 731-TA-388 (Preliminary), USITC Pub. 2071 (March 1988); *Pressure-Sensitive PVC Battery Covers from West Germany*, Inv. No. 731-TA-452 (Preliminary), USITC Pub. 2265 (March 1990) ("*PVC Battery Covers*"); *Fresh and Chilled Atlantic Salmon from Norway*, Inv. No. 701-TA-302 (Preliminary), USITC Pub. 2272 (April 1990) ("*Salmon*"); (Continued…)

because it found that producers had not made a substantial commitment to commence production (and thus reached a negative determination).[60]

2. Whether the Domestic Industry Is Established

In applying the first step of the framework where there is domestic production, which is the case in these investigations, the Commission determines whether a domestic industry is established. In making this determination, the Commission considers the following criteria: (1) the length of domestic production operations; (2) the characteristics of domestic production; (3) the size of domestic operations; (4) whether the proposed domestic industry has reached a reasonable financial "break-even" point; and (5) whether the activity is more in the nature of introducing a new product line by an already established business.[61] The Commission makes this determination on a case-by-case basis according to the record of each investigation.[62]

a. The Length of Domestic Operations

The Commission has regularly focused on when domestic producers began their U.S. production of the domestic like product. In general, where domestic producers have produced fewer than two to three years, the Commission has found this favored finding a nascent domestic industry.[63] Where some or all of the domestic producers have produced for longer periods of time, then the Commission found this factor favored finding an established

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Tungsten Ore Concentrates from the People's Republic of China, Inv. No. 731-TA-497 (Preliminary), USITC Pub. 2367 (March 1991); *Certain Gene Amplification Thermal Cyclers and Subassemblies Thereof from the United Kingdom*, Inv. No. 731-TA-485 (Final), USITC Pub. 2412 (Aug. 1991) ("*Gene Amplification Thermal Cyclers*"); *Wheel Inserts from Taiwan*, Inv. No. 731-TA-721 (Preliminary), USITC Pub. 2824 (Oct. 1994) ("*Wheel Inserts*"); *Laminated Woven Sacks from China*, Inv. Nos. 701-TA-450 and 731-TA-1122 (Final), USITC Pub. 4025 (July 2008) ("*Laminated Woven Sacks*").

[60] *See Synthetic L-Methionine from Japan*, Inv. No. 751-TA-4, USITC Pub. 1167 (July 1981); *Motorcycle Batteries from Taiwan*, Inv. No. 731-TA-42 (Final), USITC Pub. 1228 (Oct. 1981); *Thin Sheet Glass from Switzerland, Belgium, and Germany*, Inv. Nos. 731-TA-127-129 (Preliminary), USITC Pub. 1376 (May 1983); *Liquid Crystal Display Television Receivers from Japan*, Inv. No. 751-TA-14, USITC Pub. 2042 (Dec. 1987) ("*Liquid Crystal Displays*") (dissenting views).

[61] *Laminated Woven Sacks*, USITC Pub. 4025 at 19; *see also Benzyl Paraben*, USITC Pub. 2355 at 8-9 (enumerating these five factors).

[62] *Steel Kegs*, USITC Pub. 4976 at 12; *Domestic Dry Containers*, USITC Pub. 4537 at 11.

[63] *See, e.g.*, *Benzyl Paraben*, USITC Pub. 2355 (Feb. 1991) (firm produced for 15 months, shut down, began again, shut down less than a year later, and then supplied customers out of inventory); *Dried Salted Codfish*, USITC Pub. 1711 at 6 (codfish production suspended after two years with intent to resume production); *Copier Toner*, USITC Pub. 1960 at 9-10 (domestic production began about three years earlier).

industry.[64] Nonetheless, the Commission has rejected defining a specific time period for production that favors an industry being established, given that each industry may be distinct and require varying lengths of production for a firm to become established.[65] Thus, the Commission has characterized four years of domestic production as being "relatively limited" and favoring that a domestic industry is not established in some circumstances.[66] It is also noteworthy that the original legislative context for the "prevention" standard concerned an industry that had been producing for at least six years, but was considered not to be established.[67]

Parties' Arguments. TPW argues that it is the sole U.S. producer of certain tungsten shot and only began production of the domestic like product in 2023. TPW argues that this factor supports finding that the domestic certain tungsten shot industry is nascent and not established.[68] Zhuzhou did not address this factor.

Analysis. TPW's Laramie, Wyoming plant has been operational since 2019, although TPW explains that it previously produced only military-grade tungsten shot products.[69] According to TPW, it commenced commercial-scale production of commercial-grade tungsten shot on ***, which means it had been in production for slightly more than a year when it filed the petitions.[70] We consider that this factor favors a finding that the industry is not established.

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[64] *See, e.g.*, *Laminated Woven Sacks*, USITC Pub. 4025 at 20-22 (one or more domestic producers had supplied the major types of products to the U.S. market long enough to weigh in favor of established industry); *Wheel Inserts*, USITC Pub. 2824 (steady production throughout the period of investigation by at least three producers and since the late 1980s by at least two U.S. producers); *Gene Amplification Thermal Cyclers,* USITC Pub. 2412 (domestic production for more than three years); *Liquid Crystal Displays*, USITC Pub. 2413 at 18-19 (domestic production began before the period of investigation); *Tungsten Ore Concentrates*, USITC Pub. 2367 at 18 n.49 (continuous production over a long period of time); *Salmon*, USITC Pub. 2272 at 16-18 (domestic producers had been engaging in activities leading to production for a number of years, and some had recently produced the product); *PVC Battery Covers*, USITC Pub. 2265 at 12 (production began three to four years prior to investigation); *Fabric and Expanded Neoprene Laminate*, USITC Pub. 1608 at 8 n.24 (producing for several years).

[65] *Benzyl Paraben*, USITC Pub. 2303 at 12-13 ("…we have never stated that any specific period of production would 'establish' an industry.").

[66] *Domestic Dry Containers*, USITC Pub. 4537 at 13 (describing four years of domestic production as a "relatively limited time period" and finding that this length of production favored the industry not being established).

[67] Seo, Dong Woo, *Material Retardation in the U.S. Antidumping Law*, 24 Law & Pol'y Int'l Bus. 835, 843-44 (1993) (describing U.S. chemical dye industry at time of 1921 Act).

[68] TPW Postconference Br. at 17-18.

[69] CR/PR at III-2.

[70] CR/PR at III-2.

b. The Nature of Domestic Production

In examining the characteristics of domestic production, the Commission has asked whether domestic production has been "modest," continuous, or more akin to start and stop.[71] In previous investigations, when domestic production was "modest" or domestic production began but halted and domestic producers were not producing at the time of the Commission's vote, the Commission concluded that this factor supported finding the domestic industry was not established.[72] Where domestic production was continuous or even continuous and growing, the Commission has concluded that factor supported finding an established domestic industry.[73] The Commission has also considered the number of firms engaged in domestic production and whether new entrants have commenced domestic production, finding that more firms engaging in or beginning domestic production supported a finding that the domestic industry was established.[74]

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[71] *See, e.g.*, *Laminated Woven Sacks*, USITC Pub. 4025 at 24 (considering the specific circumstances of individual producers as well as the circumstances of domestic producers as a whole); *High Information Content Flat Panel Displays*, USITC Pub. 2413 at 18-19 (conducting inquiry on an industry-wide basis).

[72] *See, e.g.*, *Benzyl Paraben*, USITC Pub. 2355 at 9-10 (petitioner produced for 15 months, shut down production, resumed production but shut down less than a year later and supplied the U.S. market out of inventory); *Copier Toner*, USITC Pub. 1960 at 9 n.24 (domestic production was "modest"); *Codfish*, USITC Pub. 1711 at 4-5 & n.8, *aff'd*, *BMT*, 667 F. Supp. 880, *aff'd*, 852 F.2d 1285, *cert. denied*, 1009 U.S. 1120 (domestic producer began production in late 1982 but suspended operations in November 1984 with the intent to reopen the plant in summer 1985 pending conclusion of negotiations with the FDIC concerning certain loans from an eventually bankrupt bank and the receipt of additional financing from another source); *Domestic Dry Containers*, USITC Pub. 4537 at 13-14 (domestic producer's production had been intermittent and supported industry not being established).

[73] *See, e.g.*, *Laminated Woven Sacks*, USITC Pub. 4025 at 22-24 (domestic producers as a whole have been continuously supplying the U.S. market throughout the period of investigation and since mid-2003, even if some reported intermittent or suspended production operations); *Wheel Inserts*, USITC Pub. 2824 (Oct. 1994) (steady production throughout the period of investigation by at least three producers and since the late 1980s by at least two producers); *Gene Amplification Thermal Cyclers*, USITC Pub. 2412 (steady and substantial increases in domestic production capacity and production); *Flat Panels*, USITC Pub. 2413 at 18-19 (steady rather than start-up production); *Salmon,* USITC Pub. 2272 at 16-18 (substantial U.S. shipments); *PVC Battery Covers*, USITC Pub. 2265 at 12 (production was increasing).

[74] *See, e.g.*, *Benzyl Paraben,* USITC Pub. 2355 at 11 (noting only a single domestic producer, which supported that the domestic industry was not established); *Laminated Woven Sacks from China*, USITC Pub. 4025 at 23-24 (multiple firms engaged in domestic production supported that the domestic industry was established); *Certain Gene Amplification Thermal Cyclers*, USITC Pub. 2412 at 11-12 (new entrants commenced domestic production during POI, which supported that the domestic industry was established).

Parties' Arguments. TPW characterizes domestic production of certain tungsten shot as "modest and episodic."[75] It notes that it is the sole domestic producer and reiterates that it only commenced production in 2023.[76] TPW also contends that its level of production is small and that its market share is *** compared to the total U.S. certain tungsten shot market, which it claims is "dominated" by subject imports.[77] TPW further contends that its operations have been "episodic," in that there has been "an element of stop and start of commercial production."[78] Zhuzhou did not address this factor.

Analysis. TPW produced *** pounds of certain tungsten shot in 2023 and *** pounds in January-March 2024 ("interim 2024").[79] TPW does not explain how this production was, in fact, "episodic." However, the limited volume of production occurred only in the final *** months of the January 2021 through March 2024 period of investigation ("POI") and was made by ***. We consider that this factor favors a finding that the industry is not established.

c. The Size of Domestic Operations

The Commission has sometimes considered the size of domestic operations, with larger operation levels generally supporting a finding that the domestic industry was established,[80] and lower operation levels sometimes suggesting the domestic industry was not established.[81] In one instance, the Commission found the domestic industry was established where the

[75] TPW Postconference Br. at 18-19.

[76] TPW Postconference Br. at 18-19.

[77] TPW Postconference Br. at 19.

[78] TPW Postconference Br. at 19 (citing Conf. Tr. at 17 (Omanoff)).

[79] CR/PR at Table III-3.

[80] *See, e.g.*, *Gene Amplification Thermal Cyclers*, USITC Pub. 2412 (established industry where, among other factors, the vast majority of the U.S. market was supplied by the domestic industry); *Certain All-Terrain Vehicles*, USITC Pub. 2071 at A-15 (domestic industry established because, *inter alia*, domestic producers had achieved significant and increasing U.S. market share). *But see Benzyl Paraben*, USITC Pub. 2355 at 10 (industry not established even though firm had been increasing its market share, not finding market share to be particularly indicative of establishment given the small number of purchasers and findings on other factors).

[81] *See, e.g.*, *Copier Toner*, USITC Pub. 1960 at 9 n.24 (not finding established industry where, *inter alia*, domestic production was small compared to the market as a whole). *But see Flat Panels*, USITC Pub. 2413 at 18-19 (finding established industry despite finding that domestic production accounted for "at least some" if only a "small" share of total U.S. market); *Salmon*, USITC Pub. 2272 at 17 (finding established industry despite low domestic market share); *Domestic Dry Containers*, USITC Pub. 4537 at 14-15 (industry not established where, *inter alia*, domestic producer's production, production capacity, shipments, and market share were "relatively small").

domestic producers' market share was "relatively stable."[82] As the Commission previously noted, depending on the facts, production as a share of the total market, shipments as a share of the total market, capacity compared to the total market, or even share of the customer base to which domestic producers have made sales may yield different results. For example, domestic producers might be producing large quantities but shipping little, shipping relatively little compared to the total market but shipping at least some volume to each of the major customers, or possessing large capacity relative to the total market (but using little of it).[83]

Parties' Arguments. TPW argues that the domestic industry's size compared to the U.S. market is "unarguably small" and supports a finding that the domestic certain tungsten shot industry is not established.[84] Citing its estimate that the U.S. certain tungsten shot market is over *** pounds, TPW further argues that its market share is ***.[85] Zhuzhou did not address this factor.

Analysis. As discussed above, TPW produced *** pounds of certain tungsten shot in 2023 and *** pounds in interim 2024.[86] With these production levels, the domestic industry's capacity utilization was *** percent in 2023 and *** percent in interim 2024.[87] TPW's U.S. shipments were *** pounds in 2023 and *** pounds in interim 2024.[88] Based on the record in the preliminary phase of these investigations, these shipments resulted in market shares of *** percent in 2023 and *** percent in interim 2024.[89] We consider that this factor favors a finding that the industry is not established.

d. Whether the Proposed Domestic Industry Has Reached a Reasonable Financial "Break-Even" Point

In deciding whether the proposed domestic industry is already established, the Commission has also examined whether the proposed domestic industry has reached a reasonable financial "break-even" point. In some previous cases, the Commission has

[82] *See, e.g.*, *Laminated Woven Sacks*, USITC Pub. 4025 at 25-26 (finding relative capacity to be relevant but not determinative and that this factor favored finding an established industry where domestic producers clearly increased production capacity, production, and U.S. shipments); *Wheel Inserts*, USITC Pub. 2824 (finding established industry where, *inter alia*, domestic producers had relatively stable U.S. market share).

[83] *See, e.g.*, *Laminated Woven Sacks*, USITC Pub. 4025 at 24-25.

[84] TPW Postconference Br. at 20.

[85] TPW Postconference Br. at 20, Exhibit 3.

[86] CR/PR at Table III-3.

[87] CR/PR at Table III-3.

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

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

examined whether total revenues and total expenses are equal. Where possible, the Commission has calculated a break-even level of production by dividing total fixed costs and expenses by the unit contribution margin (which is equal to the unit sales price minus the unit variable cost).[90] In cases where domestic producers as a whole have not reached that level, the Commission generally found that this factor favored finding the domestic industry not to be established.[91] By contrast, where it found that domestic producers as a whole had reached a reasonable break-even point, the Commission found this factor favored finding the domestic industry to be established.[92] Where available, the Commission has also examined domestic producers' plans, assumptions and expectations in measuring firms' performance, including whether such plans and assumptions were reasonable.[93]

Parties' Arguments. TPW argues that it has not been able to "stabilize its production at a level even approaching a break-even point." It claims that its total revenue and total expenses are ***.[94] Zhuzhou did not address this factor.

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[90] *See, e.g.*, *Benzyl Paraben*, USITC Pub. 2355 at 10; *Laminated Woven Sacks*, USITC Pub. 4025 at 26-27.

[91] *See, e.g.*, *Benzyl Paraben*, USITC Pub. 2355 at 10 (industry not established where, *inter alia*, firm did not reach reasonable break-even point during the latest period for which the Commission had data (interim 1990)); *Codfish*, USITC Pub. 1711 at 5 (industry not established, company did not reach break-even point); *Domestic Dry Containers*, USITC Pub. 4537 at 16 (industry not established where company had not reached break-even point).

[92] *See, e.g.*, *Wheel Inserts*, USITC Pub. 2824 (industry established where, *inter alia*, producers as a whole had passed the break-even point and reached profitability during the period of investigation; they were able to cover fixed and variable costs); *Gene Amplification Thermal Cyclers*, USITC Pub. 2412 (established industry where, *inter alia*, an overwhelming majority of domestic producers already had reached a break-even point); *Salmon*, USITC Pub. 2272 at 16-18 (established industry where, *inter alia*, by 1988 a portion of the domestic producers had achieved profitability and another firm showed improvement from 1987 to 1988, even though there were no sustained profits for producers as a whole). *But see, e.g.*, *Flat Panels*, USITC Pub. 2413 at 18-19 (finding established industry without explicitly conducting a break-even analysis); *PVC Battery Covers*, USITC Pub. 2265 at 12 (finding established industry without explicitly conducting a break-even analysis).

[93] *See, e.g.*, *Laminated Woven Sacks*, USITC Pub. 4025 at 26-27 (finding this factor suggested that the domestic industry was not established where domestic producers had conducted market research, talked to prospective customers, set goals, and developed strategies for entering the market but as a whole experienced operating losses, albeit lower operating losses than reflected in the record of the preliminary phase of the investigations); *Codfish*, USITC Pub. 1711 at 6-7 (using domestic producer's "market and feasibility study" when gauging performance over POI, and finding that failure to reach break-even production volumes in study supported domestic industry not being established); *but see Copier Toner*, USITC Pub. 1960 at 11 (finding that domestic producer's projected performance was not reasonable).

[94] TPW Postconference Br. at 20-21.

Analysis. Based on the standard break-even formula (total fixed costs divided by per-unit sales price minus per-unit variable costs) and using 2023 data, TPW would have had to produce *** pounds of certain tungsten shot to break even, and it only produced *** pounds, which falls quite short of that level.[95] TPW's *** pounds of certain tungsten shot produced in the entire *** period that it was engaged in commercial production was well below its practical capacity of *** pounds in 2023.[96] We consider that this factor favors a finding that the industry is not established.

e. Whether the Start-Up Production Is More in the Nature of the Introduction of a New Product Line by an Already Established Business

In assessing whether a proposed domestic industry is already established, the Commission also has examined whether the start-up production is more in the nature of the introduction of a new product line by an already established business. In examining this factor, the Commission has focused on whether the domestic producers' production of other products aided introduction of the domestic like product. Where the Commission found the start-up production to be akin to the introduction of a new product line by an already established business, then it generally found the domestic industry was established.[97] And, in some cases

[95] CR/PR at VI-6.

[96] CR/PR at Table III-3. TPW's total production for the *** period that it was engaged in commercial production was *** pounds in 2023 and *** pounds in interim 2024. *Id.*

[97] *See, e.g.*, *Wheel Inserts*, USITC Pub. 2824 (established industry where, *inter alia*, wheel inserts were produced as just one of several product lines of established firms); *Gene Amplification Thermal Cyclers*, USITC Pub. 2412 (established industry where some producers were existing firms with other products and some producers were newly formed firms); *Battery PVC Covers*, USITC Pub. 2265 at 13 (finding pressure-sensitive battery covers were merely a new product line of an established firm that had been producing labels for 76 years); *Lime Oil*, USITC Pub. 1723 at 8 n.19 (noting in *dicta* that it would have found distilled lime oil to be an established industry because, *inter alia*, "unlike a new entrant, petitioner has been in the business of selling lime oil for years and could use existing customer contacts and distribution infrastructure in introducing distilled lime oil. Rather than establishing an industry, petitioner was introducing a new product line which has established a stable presence in the market."); *Neoprene Laminate*, USITC Pub. 1608 at 8 nn.24-26 (majority finding R-131 neoprene was merely a change in the product line of the established fabric and expanded neoprene laminate industry, but Commissioner Stern finding that "{w}hether or not the company embarking upon production of the new product is new or well-established, the statute requires the Commission to define the industry according to specific like products, not in the general business sense."); *Domestic Dry Containers*, USITC Pub. 4537 at 17 (finding that domestic producer had benefited from production of other products, including trailers, flatbeds and aluminum containers). *But see, e.g.*, *Benzyl Paraben*, USITC Pub. 2355 at 11 (even though petitioner was an established firm, its benzyl paraben operations did not appear to have derived a benefit from its other arguably 'established' operations); *Copier Toner*, USITC Pub. 1960 at 9 n.24 (not (Continued…)

where the start-up production was entirely by new firms that did not already manufacture other products, the Commission still found the domestic industry was established.[98] For example, to the extent that domestic producers already possess some of the equipment, employees, expertise, distribution systems, customer bases, and/or other components needed to produce and distribute the products and are able to leverage these assets for purposes of their new operations, then this factor would lend some support to a finding that the domestic industry is established.[99]

Parties' Arguments. TPW argues that its production of certain tungsten shot is more than just an extension of its previous production of military-grade tungsten shot. In particular, it asserts that certain tungsten shot and military grade shot are distinct products, produced by significantly different manufacturing processes, sold to entirely different customer bases for different end uses, and requiring different business models and marketing plans. In light of this, TPW characterizes its production of certain tungsten shot as akin to the start-up of a new business rather than the introduction of a new product line.[100] TPW further argues that, even if the Commission were to view its certain tungsten shot operations more along the lines of a new product line rather than start-up in nature, the Commission should weigh all factors and treat no particular one as dispositive, similar to its analysis of the relevant domestic like product factors.[101] TPW argues that, even if the Commission were to find that this factor supported a finding that the industry is established, the Commission should afford greater weight to the other factors, namely that TPW is the sole producer of certain tungsten shot, that it only recently began producing certain tungsten shot, that this production is small, and that it represents only a "tiny" share of the U.S. market.[102]

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discussing this factor but determining that the electrically resistive monocomponent toner ("ERMT") industry was "nascent" even though the ERMT producers manufactured other toners as well); *Codfish*, USITC Pub. 1711 at 7, (even though petitioner was also producing other dried salted fish such as pollock or hake, that did not prevent finding the industry was not established).

[98] *See, e.g.*, *Flat Panels*, USITC Pub. 2413 at 18-19 (finding established industry even though most domestic producers were dedicated to manufacturing this product).

[99] *Laminated Woven Sacks*, USITC Pub. 4025 at 28-29 (this factor favored finding established industry where at least for some domestic producers, there was some overlap in the production equipment and employees used to produce laminated woven sacks and other products, and at least some domestic producers were able to leverage, at least to some degree, their existing customer lists and distribution systems).

[100] TPW Postconference Br. at 22.

[101] TPW Postconference Br. at 24-25.

[102] TPW Postconference Br. at 24-25.

Zhuzhou argues that TPW's production of certain tungsten shot is not akin to a start-up operation but rather the introduction of a new product line.[103] In Zhuzhou's view, the petitions inaccurately paint TPW as a small struggling company, when it is, in fact, "a large successful company seeking to naturally expand its product line without the willingness to spend the time and energy to develop the market."[104] Zhuzhou contends that TPW produces a wide range of products, "which are very close in nature" to certain tungsten shot.[105] Zhuzhou notes that all such products are made from a powder with a high concentration of tungsten and claims that TPW also produces smaller pieces of tungsten machined and otherwise processed to precise tolerances.[106] Further, in Zhuzhou's view, the fact that Mr. Omanoff testified that commercial grade shot is "typically" smaller than military grade effectively concedes that "differences are minor changes in the production process."[107] Zhuzhou also observes that the scope covers more than one class of tungsten shot.[108] Zhuzhou concludes that TPW's production of certain tungsten shot involves "producing a slightly different size of product and a slightly different physical mix of materials {and that t}he production process follows the same basic steps with slight differences due to the raw material mix."[109]

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[103] Zhuzhou Postconference Br. at 1-7.

[104] Zhuzhou Postconference Br. at 1-2. Zhuzhou also contends that TPW's financial data set out in the petitions is "suspect" because it pertains to TPW's certain tungsten shot operations rather than the company as a whole. *Id.* at 2-5. As an initial matter, the Commission relied on questionnaire responses and additional information gathered by staff for TPW's financial data. *See generally* CR/PR at Part VI. Furthermore, Zhuzhou appears to overlook that the Commission does not examine the effects of subject imports on overall corporate operations, but only on the operations producing the like product. *See e.g.*, *General Motors Corp. v. United States*, 827 F. Supp. 774, 780 (Ct. Int'l Trade 1993) (the statute "clearly provides" that effects of dumped imports be assessed to production of the like product, in that case minivans, not other types of vehicles produced by the corporations comprising the U.S. minivan industry); *Large Residential Washers from China*, Inv. No. 731-TA-1306 (Final), USITC Pub. 4666 (Jan. 2017) at 36 (finding respondent argument that domestic industry's losses on washers compensated by profits on dryers not responsive to statutory inquiry); *Outboard Engines from Japan*, Inv. No. 731-TA-1069 (Preliminary), USITC Pub. 3673 (March 2004) at 24 n.165 (noting that consistent with the statute, the Commission was only examining financial data pertaining to operations producing the like product and "not the overall operations of its parent company"). *See also Color Television Receivers from China*, Inv. No. 731-TA-1034 (Final), USITC Pub. 3695 (May 2004) at 18 n.105 (noting the focus is on U.S. production operations, even if the firm is a multinational corporation). Thus, Zhuzhou errs in attempting to dismiss outright TPW's financial data pertaining to its certain tungsten shot operations.

[105] Zhuzhou Postconference Br. at 5-6.

[106] Zhuzhou Postconference Br. at 6.

[107] Zhuzhou Postconference Br. at 6.

[108] Zhuzhou Postconference Br. at 6.

[109] Zhuzhou Postconference Br. at 7. Zhuzhou also argues that "TPW has the profit and finances to develop the product and develop the reliability of supply needed to sell the product." *Id.* (internal footnote omitted).

Analysis. TPW began producing military-grade tungsten shot in 2019,[110] and testified that it now supplies "a significant amount of product to DoD."[111] It reports that it started doing test runs and subsequently produced commercial grade tungsten shot in 2023. The current record appears to suggest that there are at least some synergies between production of tungsten shot for military and commercial uses, as TPW indicates that major Chinese producers of military tungsten shot are also major suppliers of commercial tungsten shot and that these subject producers use "a nearly identical process to the way that {TPW} produce{s} tungsten commercial shot."[112] As discussed in Section III.A, commercial and military grade tungsten shot are alike in consisting of tungsten alloy and sharing certain processes and machinery, particularly in the de-binding, sintering, and annealing stages. However, TPW contends there are important physical differences,[113] and that the production process for commercial grade involves distinct processes, machinery, and employees, specifically with regard to the powder mixing and compaction stages, ***.[114] TPW reports that its employees have to undergo specialized training to produce commercial tungsten shot. We note that these are "additional" to existing training, and that it appears that ***. Although TPW indicates that "data sheets for commercial shot come from years of research,"[115] it reported *** research and development costs during the POI.[116] This evidence suggests that TPW's experience in manufacturing other types of tungsten shot aided its initiation of certain tungsten shot production.

However, it is unclear on the current record whether TPW's established military grade tungsten shot business aided it in obtaining sales and customers in the commercial market. As discussed above in Section III.C, according to TPW, certain tungsten shot is sold into distinct channels of distribution to manufacturers of Tungsten Super Shot, such as "big box" sporting goods retailers, "boutique" shooting stores, and "reloaders," whereas military grade tungsten shot is sold to the defense industry, particularly major contractors like Northrup Grumman or Lockheed Martin. Additionally, the differences in physical characteristics of military and commercial grades of tungsten shot, make each particularly suitable to distinct end uses, which may limit the degree to which TPW could leverage its experience selling military-grade tungsten

[110] Conf. Tr. at 8, 78 (Omanoff).

[111] Conf. Tr. at 11 (Omanoff).

[112] Conf. Tr. at 28 (Gibbs); 32 (Omanoff) ("I have toured major commercial-grade tungsten shot manufacturing operations in China. These companies are suppliers of military-grade tungsten shot to the Chinese military").

[113] Conf. Tr. at 10 (Omanoff).

[114] TPW Postconference Br. at 4-10.

[115] Conf. Tr. at 18 (Gibbs).

[116] CR/PR at Table VI-4.

shot to obtain customers for its commercial-grade product. Finally, TPW argues that its customers perceive certain tungsten shot to be a distinct product from other types of tungsten shot. Consequently, although the record in the preliminary phase of these investigations suggests that TPW was aided in the production of certain tungsten shot by its experience in producing military grade tungsten shot, it is unclear whether, or to what extent, TPW may have been able to leverage such experience to aid it in obtaining sales and customers for its certain tungsten shot.

f. Conclusion

Based on the five factors that the Commission evaluates, all but the fifth factor – whether the start-up production is more in the nature of the introduction of a new product line by an already established business – weigh in favor of finding that the industry is not established. The current record evidence with respect to the fifth factor is mixed. For purposes of these preliminary phase investigations, we find that the domestic industry producing certain tungsten shot is not established. In any final phase of these investigations, we intend to further examine whether TPW's production of certain tungsten shot is more in the nature of new product line and whether the domestic industry is established.

V. Negligible Imports

Pursuant to Section 771(24) of the Tariff Act, imports from a subject country of merchandise corresponding to a domestic like product that account for less than 3 percent of all such merchandise imported into the United States during the most recent 12 months for which data are available preceding the filing of the petition shall be deemed negligible.[117]

TPW argues that subject imports are not negligible, emphasizing that responding importers *** as well as citing a ***.[118]

Based on questionnaires responses from importers, the data for the July 2023 through June 2024 period preceding the filing of these petitions indicate that subject imports accounted for *** percent of total imports.[119] Because subject imports are above the pertinent statutory negligibility threshold, we find that these imports are not negligible.

[117] 19 U.S.C. §§ 1671b(a), 1673b(a), 1677(24)(A)(i), 1677(24)(B); *see also* 15 C.F.R. § 2013.1 (developing countries for purposes of 19 U.S.C. § 1677(36)).

[118] TPW Postconference Br. at 10-11 & Exhibit 19. The report ***. TPW Postconference Br., Exhibit 19 at 58-59.

[119] CR/PR at Table IV-3.

VI. Whether There is a Reasonable Indication that the Establishment of a Domestic Industry Has Been Materially Retarded by Reason of Subject Imports

A. Legal Standards

In the preliminary phase of antidumping and countervailing duty investigations, the Commission may be called upon to determine whether there is a reasonable indication that the establishment of an industry in the United States is materially retarded by reason of the imports under investigation.[120] In previous investigations where the Commission has determined that a domestic industry was not established, the Commission has then examined whether the establishment of the domestic industry was materially retarded by reason of the subject imports. The Commission has previously stated that, because each attempt to establish a new industry is inherently unique, it makes its determination of whether the establishment of an industry is materially retarded on a case-by-case basis.[121] The factors that the Commission has examined in assessing whether the establishment of a domestic industry is materially retarded by reason of subject imports have included many of the same factors it considers in its material injury determinations: domestic production, shipments, capacity utilization, inventories, financial condition, employment, projected performance compared to actual performance, and other market conditions.[122] We therefore consider the volume, price effects, and impact of subject imports as we would in a material injury or threat thereof investigation.[123]

Nonetheless, the Commission has noted that these criteria are not "viewed in the same light" given the unique circumstances of a material retardation analysis. For instance, the Commission has "discounted" various improvements in the domestic industry's performance when new firms have commenced production over the POI and some increases in production,

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[120] 19 U.S.C. §§ 1671b(a), 1673b(a).

[121] *See, e.g.*, *Steel Kegs*, USITC Pub. 4976 at 26-27; *Laminated Woven Sacks*, USITC Pub. 3942 at 32; *Codfish*, USITC Pub. 1711 at 4.

[122] *See, e.g., Steel Kegs*, USITC Pub. 4976 at 26-27; *Benzyl Paraben*, USITC Pub. 2355 at 9, 14; *Copier Toner*, USITC Pub. 1960 at 11-14; *Dried Salted Codfish*, USITC Pub. 1711 at 6-7. *Compare Domestic Dry Containers*, USITC Pub. 4537 at 28-32 (addressing quality inconsistencies in domestic product); *Commuter Airplanes*, USITC Pub. 1269 at 8 (addressing that domestic producers had made insufficient efforts to provide technical specifications of planes to potential customers).

[123] *See*, *e.g., Benzyl Paraben*, USITC Pub. 2355 at 17 n.1 (stating that criteria under section 1677(7)(C)(iii) apply to an analysis of material retardation); *Laminated Woven Sacks*, USITC Pub. 3942 at 33-39; *Steel Kegs*, USITC Pub. 4976 at 26-27.

shipments, and capacity utilization would thus be expected as a result.[124] Similarly, the Commission has discounted increases in the domestic industry's share of apparent U.S. consumption when the market is nonetheless dominated by subject imports, reasoning that some increase in market share is inevitable when nascent firms commence domestic production.[125]

The Commission has framed its inquiry as whether the industry's performance "reflects merely the normal start-up condition of a company entering an admittedly difficult market or, is the performance worse than what could reasonably be expected …."[126] The Commission has sometimes examined the projections of individual producers at the time of their inception to gauge whether a reasonable level of operations has been achieved.[127]

B. Conditions of Competition

The following conditions of competition inform our analysis of whether there is a reasonable indication that the establishment of a domestic industry is materially retarded by reason of subject imports from China.

1. Demand Conditions

Demand for certain tungsten shot is driven by demand for U.S.-produced downstream products.[128] The primary downstream product that is produced using certain tungsten shot is shotgun shells, but there are also reported niche end uses including scuba weights and aviation weights.[129] According to TPW, demand for commercial tungsten shot has ***.[130] TPW further asserts that increasing restrictions on the use of lead shot due to safety and environmental concerns have also contributed to increased demand for tungsten shot, which is a non-toxic

[124] *Laminated Woven Sacks*, USITC Pub. 3942 at 37-39 (noting that in examining the impact of subject imports, criteria are not viewed "in the same light" in a material retardation analysis; discounting increases in domestic industry's production, shipments, market share and capacity utilization because of new entrants commencing production during POI).

[125] *Benzyl Paraben*, USITC Pub. 2355 at 13-14 (noting that a decline in subject import market share is to be expected in an analysis of material retardation).

[126] *See, e.g.*, *Laminated Woven Sacks*, USITC Pub. 3942 at 32; *Codfish*, USITC Pub. 1711 at 5.

[127] *Copier Toner*, USITC Pub. 1960 at 9-10 (finding that domestic industry was performing better than would be expected and that producer's business plan predicting higher market share was unrealistic); *Dried Salted Codfish*, USITC Pub. 1711 at 6-7 (looking at market feasibility study done at inception of business operations).

[128] CR/PR at II-7.

[129] CR/PR at II-7; TPW Postconference Br. at 11-12.

[130] TPW Postconference Br. at 11-12 & Exhibit 19.

alternative to lead-based products.[131] Most responding market participants reported that demand for certain tungsten shot has steadily increased since January 1, 2021.[132]

Based on available information, apparent U.S. consumption initially increased from *** pounds in 2021 to *** pounds in 2022 before decreasing to *** pounds in 2023; it was higher in interim 2024 at *** pounds than in January-March 2023 period ("interim 2023") at *** pounds.[133]

2. Supply Conditions

As discussed above, TPW's Laramie, Wyoming plant has been operational since 2019, although it produced only military-grade tungsten shot products until ***, when it commenced commercial-scale production of commercial-grade tungsten shot.[134] Its practical certain tungsten shot capacity was *** pounds in 2023 and *** pounds in interim 2024.[135] However, much of its capacity was unused during this time; its capacity utilization rate was *** percent in 2023 and *** percent in interim 2024.[136] Based on the current record, its market share was *** percent in 2023 and *** percent in interim 2024,[137] although these figures may be overstated.[138]

Prior to TPW entering the market, subject imports were the *** source of certain tungsten shot in the United States, accounting for *** percent of apparent U.S. consumption in 2021 and 2022.[139] Based on the available information, subject imports' share of apparent U.S. consumption was *** percent in 2023 and *** percent in interim 2024.[140]

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[131] TPW Postconference Br. at 12.

[132] CR/PR at II-7 & Table II-4. *** importer each reported that demand did not change or fluctuated down since January 1, 2021. *Id.*

[133] CR/PR at Table IV-4. As discussed above, these data likely understate subject import U.S. shipments and therefore also understate apparent U.S. consumption.

[134] CR/PR at III-2.

[135] CR/PR at Table III-3. TPW's end-of-period inventories were *** pounds in 2023 and *** in interim 2024. CR/PR at Table III-7.

[136] CR/PR at Table III-3.

[137] CR/PR at Tables IV-4, C-1.

[138] As discussed above in Section II, these data are likely overstated due to the lack of responses from U.S. importers of subject merchandise.

[139] CR/PR at Tables IV-4, C-1.

[140] CR/PR at Tables IV-4, C-1. As noted, these figures for 2023 and interim 2024 are likely understated.

The current record indicates that nonsubject imports were *** in the U.S. market during the POI.[141] According to TPW, an importer may be sourcing certain tungsten shot from the United Kingdom.[142] Additionally, a market report submitted by TPW ***.[143]

3. Substitutability and Other Conditions

Based on the record in the preliminary phase of these investigations, we find that there is at least a moderate-to-high degree of substitutability between the domestic like product and subject imports.[144] TPW reported that domestically produced certain tungsten shot was *** interchangeable with subject imports, while *** importers reported them to be *** interchangeable.[145]

We also find that price is an important factor in purchasing decisions, among other important factors. An equal number of responding purchasers reported price and quality to be their top purchasing factor, and an equal number also reported price and quality as the second most important factor, while availability/supply was identified as a third most important factor.[146] TPW reported that differences other than price are *** significant while responding importers responses reported that such differences were *** significant.[147]

During the POI, domestically produced certain tungsten shot was sold *** to ammunition manufacturers.[148] Responding importers reported selling certain tungsten shot to mainly to ammunition manufacturers, but also reporting a small number of sales to other end users, which included ***.[149]

TPW reported selling *** percent of its certain tungsten shot *** in 2023.[150] Responding importers reported selling *** percent of their certain tungsten shot ***, with the remaining *** percent of sales ***.[151]

As described above in Section III, certain tungsten shot has a tungsten content of at least 92.6 percent by weight. Accordingly, the raw materials used in the production of certain tungsten shot are a mixture of loose metal powders consisting mainly of tungsten and a

[141] CR/PR at Tables IV-4, C-1.
[142] CR/PR at II-6.
[143] TPW Postconference Br., Exhibit 19 at 58-59.
[144] *See* CR/PR at II-8.
[145] CR/PR at Tables II-11, II-12.
[146] CR/PR at Table II-5.
[147] CR/PR at Table II-7.
[148] CR/PR at Table II-1.
[149] CR/PR at II-2, Table II-1.
[150] CR/PR at Table V-3.
[151] CR/PR at Table V-3.

metallic powder binder such as nickel, or iron.[152] U.S. producer TPW also contends that it adds minor amounts of proprietary additional components during the production process.[153] *** and most responding importers (***) reported that raw material prices have increased (either steadily or with fluctuations) since 2021.[154] According to publicly available data, the price of raw tungsten increased from 2021 to 2022, and remained relatively stable through 2023.[155]

C. Reasonable Indication that the Establishment of a Domestic Industry is Materially Retarded by Reason of Subject Imports from China

As discussed above, in evaluating whether subject imports have retarded the establishment of the domestic industry, we look to many of the same factors used to evaluate material injury by reason of subject imports. Section 771(7)(C) of the Tariff Act provides that in making a determination regarding material injury, 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."[156]

1. Volume of Subject Imports

The volume of subject imports initially increased from *** pounds in 2021 to *** pounds in 2022 before decreasing to *** pounds in 2023; it was higher in interim 2024 at *** pounds than in interim 2023 at *** pounds.[157] U.S. shipments of subject imports followed similar trends. They initially increased from *** pounds in 2021 to *** pounds in 2022 before decreasing to *** pounds in 2023; they were higher in interim 2024 at *** pounds than in interim 2023 at *** pounds.[158] Subject imports dominated the U.S. market for certain tungsten shot during the period of investigation. They were the *** source of certain tungsten shot prior to the domestic industry's entry into the U.S. market, accounting for *** percent of apparent U.S. consumption in 2021 and 2022, as well as interim 2023.[159] Subject imports continued to be the dominant source of certain tungsten shot to the United States, even after the domestic

[152] CR/PR at V-1.
[153] CR/PR at V-1.
[154] CR/PR at V-1.
[155] CR/PR at V-1.
[156] 19 U.S.C. § 1677(7)(C).
[157] CR/PR at Table IV-2.
[158] CR/PR at Table IV-4.
[159] CR/PR at Tables IV-4, C-1.

industry began production, accounting for *** percent of apparent U.S. consumption in 2023 and *** percent in interim 2024, based on the current record.[160] The ratio of subject imports to domestic production was correspondingly large – *** percent in 2023 and *** percent in interim 2024.[161]

Accordingly, the record indicates that the volume of subject imports is significant in absolute terms as well as relative to apparent U.S. consumption and domestic production.

2. Price Effects of the Subject Imports

As explained in Section VI.B.3., we find there to be at least 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.

In these investigations, the Commission collected quarterly data on the total quantity and f.o.b. value of three certain tungsten shot products shipped to unrelated U.S. customers during the POI.[162] The U.S. producer and four importers provided usable pricing data for sales of the requested products, although not all firms reported pricing for all products for all quarters.[163] Pricing data reported by these firms accounted for approximately *** percent of the U.S. producers' U.S. shipments of certain tungsten shot and *** percent of reported U.S. shipments of subject imports in 2023.[164] Although there are a limited number of quarterly price comparisons, the available information shows that subject imports undersold the domestic like product in *** available comparisons, involving *** pounds of certain tungsten shot, at margins ranging from *** to *** percent, for an average of *** percent.[165] Subject imports oversold the domestic like product in the remaining *** available comparison, involving *** pounds of certain tungsten shot, with a *** percent margin.[166]

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[160] CR/PR at Tables IV-4, C-1. As discussed above in Section II, the information available on the current record likely understates the volume, U.S. shipments, and market share of subject imports, and we will endeavor to obtain additional information in any final phase of these investigations.

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

[162] CR/PR at V-3. The three pricing producers were as follows:

> **Product 1.** – Tungsten Class 3 shot, #9 Dia 2.01mm;
> **Product 2.** – Tungsten Class 3 shot, #7 Dia 2.5mm; and
> **Product 3.** – Tungsten Class 3 shot, #10 Dia 1.8mm.

Id.

[163] CR/PR at V-3.

[164] CR/PR at V-3.

[165] CR/PR at Tables V-4 – V-6, V-9.

[166] CR/PR at Tables V-5, V-9.

The Commission also collected import purchase cost data for the same three pricing products from firms that imported these products from subject sources for retail sale.[167] Purchase cost data was reported by *** firms, accounting for *** percent of subject imports in 2023.[168] Based on the import purchase cost data obtained by the Commission, landed duty-paid ("LDP") costs for cumulated subject imports were below the sales price for the domestic like product in ***, involving *** pounds, at *** percent.[169] We recognize that the import purchase cost data may not reflect the total cost of importing and therefore requested that importers for retail sale provide additional information regarding the costs and benefits of directly importing certain tungsten shot. One responding firm providing import purchase cost data reported that it incurred additional costs beyond the LDP costs associated with importing certain tungsten shot, estimating such costs to be *** percent compared to LDP value.[170] Again, although there is limited information on the current record, subject import costs were *** percent below domestic sales prices,[171] and therefore, the inclusion of the additional costs would still leave the cost of importing subject imports below the domestic sales prices.[172]

We have also considered purchaser responses to the lost sales allegations. Of the two responding purchasers that reported purchasing subject imports instead of the domestic like product, one reported that subject imports were priced lower, but indicated that the decision

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[167] CR/PR at V-4.

[168] CR/PR at V-4. Importer *** reported in its purchase cost data, but purchased them from a separate supplier company, ***. *Id.* at n.5. Staff were unable to obtain an importer questionnaire from the supplier company and so staff requested that *** submit an importer questionnaire covering the relevant transactions to the extent that the information was available to ***. *Id.* The purchase cost analysis is based on *** response. *** was able to determine when it submitted the purchase orders, but not when the imported merchandise entered the United States. *Id.* Thus, all the purchase cost data for product 1 from *** appears in the first quarter of each year. *Id.*

[169] CR/PR at Table V-4.

[170] CR/PR at V-4.

[171] *Calculated from* CR/PR at V-4, Table V-4.

[172] Firms were also asked to describe how these additional costs incurred by importing certain tungsten shot directly compare with additional costs incurred when purchasing from a U.S. producer or U.S. importer. CR/PR at V-4. Importer *** reported that its costs vary based on transport method, and that it did not compare the costs of domestic and imported tungsten shot during the POI because it was unaware of the existence of a U.S. producer. *Id.* Two other responding importers do not compare costs of purchasing from the U.S. producer and importers. *Id.* Three importers identified benefits from importing tungsten shot directly instead of purchasing from the U.S. producer or importers. Reasons include that by fostering long standing relationships they have "gained large consistency in lead times, accuracy and quality of finished goods and price points are predictable." *Id.* Two of the responding importers reported that importing was the only option for them. Importer *** reported that it did not know if local U.S. producers exist, while importer *** reported that no domestic firms responded to their requests for quotes. *Id.*

to purchase subject imports was not based on price.[173] Instead, that purchaser, ***.[174] At the staff conference, however, TPW further testified that it engaged with purchaser Remington and intended to bring its certain tungsten shot to the U.S. market with this purchaser, but that Remington ultimately required a price that was below the cost of the component powder and tungsten shot that TPW produces.[175] In any final phase of these investigations, we intend to investigate this matter further.

We find that subject imports significantly undersold the domestic like product in 2023 and interim 2024. Based on the current record, we cannot find that the underselling did not prevent the domestic industry from further increasing its sales and market share.[176]

We have also considered price trends. The limited number of quarters with domestic pricing data show domestic prices decreasing from 2023 to interim 2024.[177] Subject import prices for all three pricing products increased irregularly from the first quarter of 2021 to the first quarter of 2024.[178]

We have also considered whether subject imports prevented price increases that otherwise would have occurred. TPW argues that the presence of a large volume of low-priced subject imports had significant suppressing effects on domestic prices.[179] TPW's ratio of cost of goods sold ("COGS") to net sales was *** percent in 2023, of which raw materials as a share of net sales was *** percent and direct labor was *** percent, indicating that TPW was unable to pass these combined costs on to customers that year.[180] The record in these preliminary phase investigations shows that apparent U.S. consumption was *** in 2023 compared to 2021, and most responding firms reported that U.S. demand increased during the POI.[181] In interim 2024, however, the ratio of COGS to net sales was *** percent.[182] That TPW's ratio of COGS to net

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

[174] CR/PR at Table V-12. Purchaser *** reported that once it became aware of the availability of domestic tungsten shot in 2023, purchasing the domestic like product was ***. CR/PR at V-15. *** further reported that there ***. *Id.*

[175] TPW Postconference Br. at 35; Conf. Tr. at 10-11 (Omanoff).

[176] We note that the pricing products for which this underselling occurred represented less than *** of the domestic industry's shipments in 2023. We will seek improved coverage in any final phase.

[177] CR/PR at Tables V-4, V-5. There were only *** quarters with domestic pricing data for pricing products 1 and 2. *Id*. Domestic pricing data for pricing product 3 was available for *** quarter. *Id*. at Table V-6.

[178] CR/PR at Tables V-4 – V-6.

[179] TPW Postconference Br. at 36.

[180] CR/PR at VI-1.

[181] CR/PR at II-7, Tables II-4 and C-1.

[182] CR/PR at VI-1. As we note below, TPW's financial performance remained poor in the interim period because of the improvement in its AUVs, but was accompanied by a dramatic fall-off in the volume sold.

sales is markedly lower in interim 2024 relative to the full-year 2023 is due to a large relative increase in TPW"s net sales AUV in interim 2024, the cause of which is unaccounted for in the current record.[183] We note, however, that TPW's net sales quantity in interim 2024 was a fraction of its net sales quantity in 2023.[184] Therefore, based on this current record, including the significant underselling by subject imports at substantial margins, we cannot conclude that subject imports did not prevent the domestic industry from achieving prices that would have enabled it to cover its costs.

3. Impact of the Subject Imports[185]

In considering whether the establishment of an industry was materially retarded by reason of the subject imports, we consider the size of the domestic industry and the market in which it is competing to determine whether subject imports are adversely affecting its performance. For a start-up business in a nascent industry, we would expect it to be able to improve its performance by increasing its production and sales, while realizing efficiencies and thereby lowering its average unit costs. At the same time, we also take into consideration in our analysis that it is not unexpected for a start-up company to suffer losses for a number of years before it is able to break-even and begin earning a profit, particularly when it is competing against businesses that have established products and relationships in the marketplace.

As discussed above, TPW began producing certain tungsten shot in *** 2023. Its practical certain tungsten shot capacity that year was *** pounds and its production was *** pounds, for a capacity utilization rate of *** percent.[186] In interim 2024, TPW's practical certain tungsten shot capacity was *** pounds and its production was *** pounds, for a capacity utilization rate of *** percent.[187] TPW's U.S. shipments were *** pounds in 2023 and *** pounds in interim 2024.[188] Accordingly, its market share was *** percent in 2023 and ***

[183] CR/PR at Table VI-1.

[184] CR/PR at Table VI-1.

[185] Commerce initiated this investigation based on an estimated dumping margin of 201.32 percent. *Certain Tungsten Shot From the People's Republic of China: Initiation of Less-Than-Fair-Value Investigation*, 89 Fed. Reg. 65856 (Aug. 13, 2024).

[186] CR/PR at Table III-3.

[187] CR/PR at Table III-3. TPW's end-of-period inventories were *** pounds in 2023 and *** pounds in interim 2024. CR/PR at Table III-7.

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

percent in interim 2024,[189] although these figures may be overstated.[190] Regardless, given the absence of any nonsubject imports, subject imports from China accounted for the vast majority of the U.S. market during this period.

TPW reported employment indicators that are generally consistent with its limited production operations during the POI. TPW reported *** in 2023 and interim 2024.[191] In 2023, total hours worked were ***, total wages paid were $***, hourly wages were $***, and productivity was *** pounds per hour.[192] In interim 2024, total hours worked were ***, total wages paid were $***, hourly wages were $***, and productivity was *** pounds per hour.[193]

TPW's total net sales, by value, were $*** in 2023 and $*** in interim 2024.[194] Total COGS were $*** in 2023 and $*** in interim 2024.[195] As discussed above in Section IV.B., TPW did not reach a breakeven point in 2023. Its gross profits were *** in 2023 and *** in interim 2024.[196] TPW's operating income and operating margins were *** and *** percent in 2023 and $*** and *** percent in interim 2024.[197] Its net income and net income margins were *** and *** percent in 2023 and *** and *** percent in interim 2024.[198] TPW reported capital expenditures of $*** in 2023 and $*** in interim 2024.[199] As discussed above, TPW *** R&D expenses during the POI.[200] TPW reported a *** return on assets of approximately $*** in 2023.[201]

Based on the record in the preliminary phase of these investigations, we cannot determine that the establishment of an industry in the United States is not materially retarded by reason of the imports under investigation. The current record indicates that there is at least a moderate-to-high degree of substitutability between the domestic like product and subject imports, that price is an important factor in purchasing decisions, that subject imports significantly undersold the domestic like product, and that subject imports dominate the U.S. market for certain tungsten shot. We are unable to find on this record that subject imports did

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

[190] As discussed above in Section II, these data are likely overstated due to the lack of responses from U.S. importers of subject merchandise.

[191] CR/PR at Table III-8.

[192] CR/PR at Table III-8.

[193] CR/PR at Table III-8.

[194] CR/PR at Table VI-1.

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

[196] CR/PR at Table VI-1.

[197] CR/PR at Table VI-1.

[198] CR/PR at Table VI-1.

[199] CR/PR at Table VI-4.

[200] CR/PR at Table VI-4.

[201] CR/PR at Table VI-6.

not prevent TPW from increasing its production and sales. As discussed above, TPW has testified that it was unable to bring its product to market with purchaser Remington because Remington required a price point below its cost of production. The current record also indicates that as subject imports significantly undersold the domestic like product, TPW was unable to achieve prices that enabled it to cover its costs in 2023, and in interim 2024, although it was able to achieve operating *** and a *** operating margin, it was unable to sell sufficient volumes of certain tungsten shot to establish its operations and achieve ***. Consequently, we cannot conclude that the record as a whole in the preliminary phase of these investigations contains clear and convincing evidence that the establishment of a domestic industry is not materially retarded by reason of subject imports from China.

We have also considered whether there are other factors that may have had an impact on the domestic industry during the POI to ensure that we are not attributing injury from such other factors to subject merchandise. As discussed above in Section VI.B.3., the available information indicates that nonsubject imports maintained *** presence in the U.S. market during the POI, and therefore, do not explain the performance of the industry. Apparent U.S. consumption was *** percent lower in 2023 than in 2021, and most market participants reported that U.S demand increased during the POI, suggesting that demand trends are not responsible for the industry's poor financial performance in 2023 or inability to increase its production and sales.[202] There is also some evidence, as discussed above, that certain U.S. market participants were unaware that TPW produced certain tungsten shot and one importer reported that no domestic firm responded to its requests for quotes.[203] To the extent that this case is evaluated under a material retardation framework in any final phase of these investigations, we will further explore whether TPW's inability to produce and sell certain tungsten shot in sufficient commercial quantities is by reason of subject imports, as TPW contends, or merely the normal condition of a company entering an established market.

VII. Conclusion

For the reasons stated above, we determine that there is a reasonable indication that the establishment of an industry in the United States is materially retarded by reason of imports of tungsten shot that are allegedly sold in the United States at less than fair value and allegedly subsidized by the Government of China.

[202] CR/PR at II-7, Tables II-4 and C-1.
[203] CR/PR at V-4, Table V-12.

Part I: Introduction

Background

These investigations result from petitions filed on July 10, 2024 with the U.S. Department of Commerce ("Commerce") and the U.S. International Trade Commission ("USITC" or "Commission") by Tungsten Parts Wyoming, Inc. ("TPW" or "Petitioner"), Laramie, Wyoming, alleging that the establishment of a domestic industry is materially retarded and 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 certain tungsten shot ("tungsten shot") from China.[1] Table I-1 presents information relating to the background of these investigations.[2] [3]

Table I-1
Tungsten shot: Information relating to the background and schedule of this proceeding

Effective date	Action
July 10, 2024	Petitions filed with Commerce and the Commission; institution of the Commission's AD/CVD investigations (89 FR 57941, July 16, 2024)
July 31, 2024	Commission's conference
August 6, 2024	Commerce's notice of initiation of CVD investigation (89 FR 65852, August 13, 2024)
August 6, 2024	Commerce's notice of initiation of AD investigation (89 FR 65856, August 13, 2024)
August 23, 2024	Commission's vote
August 26, 2024	Commission's determinations
September 3, 2024	Commission's views

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. . .*

[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] A list of witnesses appearing at the conference is presented in appendix B of this report.

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.

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.

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

Organization of report

Part I of this report presents information on the subject merchandise, alleged 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. producer(s). 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

A tungsten shot is a small sphere or ball made from a high-density tungsten alloy. Tungsten shot is largely sold to ammunition manufacturers which use it to produce certain types of shotgun shells.[6] The leading, and only known, U.S. producer of tungsten shot is Tungsten Parts Wyoming, Inc., while the leading producer of product outside the United States is *** from China. The leading U.S. importers of tungsten shot from China and nonsubject sources are presently unknown. ***.[7] The leading U.S. purchasers of tungsten shot include ***.

Apparent U.S. consumption of tungsten shot totaled approximately *** pounds ($***) in 2023. U.S. producer's U.S. shipments of tungsten shot totaled *** pounds ($***) in 2023, and accounted for *** percent of apparent U.S. consumption by quantity and *** percent by value. U.S. importers' U.S. shipments of imports from China totaled *** pounds ($***) in 2023 and accounted for *** percent of apparent U.S. consumption by quantity and *** percent by value. U.S. importers' U.S. shipments of imports from nonsubject sources totaled *** pounds ($***) in 2023 and accounted for *** percent of apparent U.S. consumption by quantity and *** percent by value.

[6] Petitions, pp. 4 and 10, and exh. I-4.

[7] Conference transcript, pp. 29 (Pickard), 42 (Pickard and Omanoff); petitioner's postconference brief, pp. 1, 10-11, and exh. 19.

Summary data and data sources

A summary of data collected in this proceeding is presented in appendix C, table C-1. Except as noted, U.S. industry data are based on the questionnaire response of one firm, TPW, which accounted for all known production of tungsten shot in 2023. U.S. import data are based on the questionnaire response of four firms. These four firms' share of total U.S. imports of tungsten shot in 2023 is presently unknown.[8] U.S. purchaser data are based on the response of two firms which submitted a Lost Sales Lost Revenue survey. Data on the tungsten shot industry in China are based on the questionnaire responses of two firms which submitted a foreign producers/exporters questionnaire.

Previous and related investigations

Tungsten shot has not been the subject of any prior related antidumping or countervailing duty investigations in the United States.[9]

Nature and extent of alleged subsidies and sales at LTFV

Alleged subsidies

On August 13, 2024, Commerce published a notice in the Federal Register of the initiation of its countervailing duty investigation on tungsten shot from China.[10]

Alleged sales at LTFV

On August 13, 2024, Commerce published a notice in the Federal Register of the initiation of its antidumping duty investigation on tungsten shot from China.[11] Commerce has initiated the antidumping duty investigation based on an estimated dumping margin of 201.32 percent ad valorem.

[8] For a discussion on U.S. importers' coverage, please see note 7 in Part IV of this report.

[9] The Commission, however, has conducted several previous import injury investigations on merchandise containing tungsten. *See* Ammonium Paratungstate and Tungstic Acid from China, Inv. No. TA-406-11, USITC Publication 1982 (June 1987), pp. A-2–A-7; and Tungsten Ore Concentrates from China, Inv. No. 731-TA-497 (Final), USITC Publication 2447 (November 1991), pp. A-2–A-5.

[10] For further information on the alleged subsidy programs see Commerce's notice of initiation and related CVD Initiation Checklist. 89 FR 65852, August 13, 2024.

[11] 89 FR 65856, August 13, 2024.

The subject merchandise

Commerce's scope

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

> *The merchandise covered by the investigation is certain tungsten spheres or balls, also known as shot, that are 92.6 percent or greater tungsten by weight, not including the weight of any additional coating. In scope shot have a diameter ranging from 1.5 millimeters (mm) to 10.0 mm. Subject shot can be referred to as "Tungsten Super Shot." Merchandise is covered regardless of the combination of compounds that comprise the non-tungsten material and whether or not the tungsten shot is additionally coated with another material, including but not limited to copper, nickel, iron, or metallic alloys.*
>
> *Tungsten shot subject to the investigation may be classified under the following Harmonized Tariff Schedule of the United States (HTSUS) subheading: 9306.29.0000. Merchandise may also be entered under HTSUS subheading 8101.99.8000. The HTSUS subheadings are provided for convenience and customs purposes only. The written description of the scope of the investigation is dispositive.*[12] [13]

[12] 89 FR 65852, August 13, 2024; 89 FR 65856, August 13, 2024.

[13] The scope presented in the petitions was updated in two instances since the petitions were filed with the Commission and Commerce on July 10, 2024. On July 18, 2024, the phrase "not including the weight of any additional coating" was added to the end of the first sentence of the scope language. See *Certain Tungsten Shot from the People's Republic of China: Petitioner's Response to Supplemental Questions Regarding Common Issues and Injury Volume I of the Petitions*, July 18, 2024, p.1.

The scope presented in the petitions also listed HTS numbers 8101.99.8000, 8482.91.0020, and 9306.21.0000 as subheadings under which merchandise may enter the United States. On July 24, 2024, the scope was revised. HTS numbers 8482.91.0020 and 9306.21.0000 were removed from the scope. Moreover, HTS 9306.29.0000 was added to the scope. See *Certain Tungsten Shot from the People's Republic of China: Petitioner's Response to Second Supplemental Questions Regarding Volume I of the Petitions*, July 24, 2024, pp. 1-2.

Tariff treatment

Based upon the scope set forth by Commerce, information available to the Commission indicates that the merchandise subject to these investigations is imported under the following provision of the Harmonized Tariff Schedule of the United States ("HTS"): 9306.29.0000.[14] The 2024 general rate of duty is "Free" for HTS subheading 9306.29.00.[15] Decisions on the tariff classification and treatment of imported goods are within the authority of U.S. Customs and Border Protection.

Section 301 tariff treatment

Effective September 1, 2019, tungsten shot originating in China have been subject to an additional ad valorem duty under section 301 of the Trade Act of 1974, as amended. The current rate is 7.5 percent.[16] USTR has not excluded any imported products reported under HTS heading 9903.88.15 from these duties on tungsten shot originating in China, as of July 16, 2024.[17] Products of China subject to section 301 tariffs also continue to be subject to all applicable antidumping, countervailing, or other duties and charges, as well as the additional ad valorem rate of duty imposed by the HTS heading.[18]

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[14] Merchandise may also be imported under HTS statistical reporting numbers 8101.99.8000, 8482.91.0020, or 9306.21.0000.

[15] USITC, HTSUS (2024) Revision 7, Publication 5534, August 2024, p. 93-6.

[16] Section 301 of the Trade Act, as amended (19 U.S.C. § 2411) authorizes the Office of the United States Trade Representative ("USTR"), at the direction of the President, to take appropriate action to respond to a foreign country's unfair trade practices. Following investigations into "China's acts, policies, and practices related to technology transfer, intellectual property, and innovation" (82 FR 40213, August 24, 2017), USTR published its determination, on April 6, 2018, that the acts, policies, and practices of China under investigation are unreasonable or discriminatory and burden or restrict U.S. commerce and are thus actionable under section 301(b) of the Trade Act (83 FR 14906, April 6, 2018).

Effective September 1, 2019, USTR included HTS subheading 9306.29.00 in its $300 Billion Trade Action (List 4 or Tranche 4, Annex A) of products originating in China subject to an initial 10 percent ad valorem duty (84 FR 43304, August 20, 2019) which was subsequently raised to 15 percent ad valorem, with the same effective date of September 1, 2019 (84 FR 45821, August 30, 2019), but was more recently reduced to 7.5 percent ad valorem, effective February 14, 2020 (85 FR 3741, January 22, 2020).

See HTS heading 9903.88.15 and U.S. notes 20(r) and 20(s) to subchapter III of chapter 99 and related tariff provisions for this duty treatment. USITC, HTSUS (2024) Revision 7, Publication 5534, August 2024, pp. 93-7, 99-III-88 – 99-III-89, 99-III-101, 99-III-313, 99-III-315 – 99-III-319.

[17] See HTS heading 9903.88.69 and U.S. note 20(vvv)(iv) to subchapter III of chapter 99 and the related tariff provisions for this duty treatment. USITC, HTSUS (2024) Revision 7, Publication 5534, August 2024, pp. 99-III-256 – 99-III-257, 99-III-313, 99-III-315 – 99-III-319.

[18] See U.S. note 20(r) to subchapter III of chapter 99 and the related tariff provisions for this duty treatment. USITC, HTSUS (2024) Revision 7, Publication 5534, August 2024, pp. 99-III-88, 99-III-313.

The product

Description and applications[19]

Tungsten shot is a tungsten alloy material in the form of small pellets contained within shotgun shells (figure I-1). The U.S. shotgun shell market shifted to tungsten shot given its improved ballistic performance and environmental benefits.[20] As shotgun shot, the denser tungsten metal provides greater range, tighter dispersal, and greater impact than either lead or steel shot.[21] Tungsten shot does not readily decompose, and its compounds are generally inert, unlike lead shot which was banned by federal law in 1991 for waterfowl hunting.[22] Shotgun shells containing commercial grade tungsten shot are often referred to as "tungsten super shot" ("TSS") (figure I-2).[23]

[19] Unless noted otherwise, this section is compiled from the petitions, pp. 4, 9–10.

[20] Petitions, exh. I-4: Matthew Breuer, "Tungsten Super Shot – The Evolution of TSS Shotgun Shells," Project Upland, May 20, 2020, https://projectupland.com/shotguns-and-shooting/shotguns/tungsten-super-shot-the-evolution-of-tss-shotgun-shells.

[21] Tungsten-alloy shot has a density of 19.3 grams per cubic centimeter ("g/cc") compared to 11 g/cc for lead shot and 8 g/cc for steel shot. Bradley Kirkpatrick, "TSS and the Evolution of Shotgun Shells," American Hunter, April 21, 2021, https://www.americanhunter.org/content/tss-and-the-evolution-of-shotgun-shells.

The higher density of tungsten shot allows for packing more pellets of smaller shot sizes in shotgun shells. Firing denser and smaller sized tungsten shot propels the pellets farther, with less deformation, less dispersal in flight, and greater impact force against the target. Petitions, exh. I-4: Matthew Breuer, "Tungsten Super Shot – The Evolution of TSS Shotgun Shells," Project Upland, May 20, 2020, https://projectupland.com/shotguns-and-shooting/shotguns/tungsten-super-shot-the-evolution-of-tss-shotgun-shells; Bradley Kirkpatrick, "TSS and the Evolution of Shotgun Shells," American Hunter, April 21, 2021, https://www.americanhunter.org/content/tss-and-the-evolution-of-shotgun-shells.

[22] Bradley Kirkpatrick, "TSS and the Evolution of Shotgun Shells," American Hunter, April 21, 2021; A.J. DeRosa, "How Effective is Steel Shot?" The Upland Project, June 14, 2023.

[23] Petitioner's postconference brief, pp. 1, 5, 9; conference transcript, pp. 15 (Gibbs), 44–45 (Pickard).

Figure I-1
Tungsten shot: Cut-away view of a shotgun shell showing the individual tungsten shot pellets

Components of a shotgun shell include the base, plastic casing, primer, gunpowder, wad, and individual tungsten shot pellets.

Source: Conference transcript, pp. 34–35 (Omanoff); Bradley Fitzpatrick, "TSS and the Evolution of Shotgun Shells," American Hunter, April 21, 2021, https://www.americanhunter.org/content/tss-and-the-evolution-of-shotgun-shells.

Figure I-2
Tungsten shot: Tungsten super shot ("TSS") shotgun shell and individual tungsten shot pellets

Source: Bradley Fitzpatrick, "TSS and the Evolution of Shotgun Shells," American Hunter, April 21, 2021, https://www.americanhunter.org/content/tss-and-the-evolution-of-shotgun-shells.

Commercial grade tungsten shot is predominantly available as Class 3 tungsten alloys as defined by SAE International standard 7725F (table I-2).[24] Other classes of tungsten alloys are not used for commercial tungsten shot.[25] Class 1 tungsten alloys are utilized in aerospace, automotive, medical engineering, and construction industries.[26] Military grade tungsten shot is predominantly available as Class 2 tungsten alloys.[27] Class 2 tungsten shot is preferred for military applications because its higher ductility will penetrate more targets without shattering than less-ductile Class 3 tungsten shot.[28] Class 2 tungsten alloys are also utilized in medical engineering and aerospace applications. Class 4 tungsten alloys are utilized in the most demanding x-ray and radiation shielding applications.[29]

Table I-2
Tungsten heavy alloy shapes: Tungsten content, density, and hardness properties

Class	Nominal tungsten content (weight percent)	Density (grams per cubic centimeters)	Hardness (Rockwell Hardness scale, HRC maximum)	Ultimate tensile strength (MPa)	Yield strength at 0.2 percent offset (MPa)	Elongation at fracture (percent)
1	90	***	***	*** (type 1) *** (type 2)	***	*** (type 1) *** (type 2)
2	92.5	***	***	*** (type 1) *** (type 2)	***	*** (type 1) *** (type 2)
3	95	***	***	*** (type 1) *** (type 2)	***	*** (type 1) *** (type 2)
4	97	***	***	*** (type 2)	***	*** (type 2)

Source: Petitions, exh. 9: SAE International, "Aerospace Material Specification 7725, Revision F," November 2020.

[24] Conference transcript, p. 53 (Gibbs).
[25] Petitioner's postconference brief, p. 5.
[26] Petitions, pp. 9–10. These applications take advantage of tungsten's nontoxicity, radiation shielding, and low coefficient of thermal expansion properties. Conference transcript, pp. 69–70 (Omanoff).
[27] Conference transcript, p. 53 (Gibbs).
[28] Petitioner's postconference brief, p. 5; conference transcript, p. 16 (Gibbs).
[29] Petitioner's postconference brief, p. 5; conference transcript, p. 16 (Gibbs).

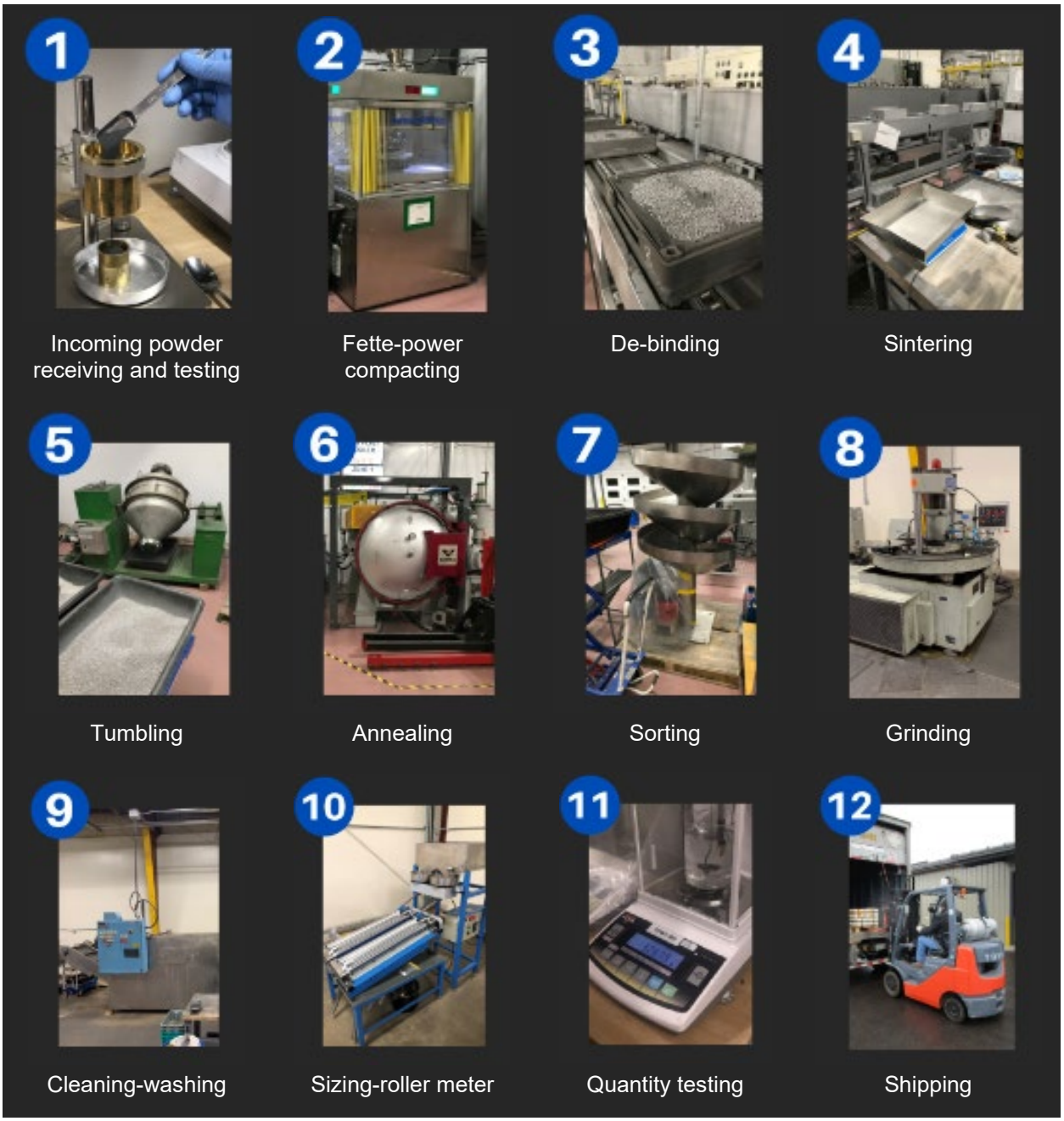
Commercial grade tungsten shot is sold to TSS shotgun shell manufacturers, including "big box" sporting goods retailers and "boutique" (specialty) shooting stores, as well as individual "reloaders" who assemble rather than purchase shotgun shells.[30] Military grade tungsten shot is of larger sizes and different shapes than commercial grade tungsten shot for shotgun shells.[31] Moreover, commercial grade tungsten shot is not subject to the design, performance, testing, manufacture, traceability, and numerous other certification requirements for military grade tungsten shot sold to defense contractors.[32] According to a petitioner's witness, tungsten shot represents about 90 percent of the cost of a TSS shotgun shell.[33]

Manufacturing processes[34]

The manufacturing process for in-scope tungsten shot is a powder metallurgy rather than a casting process[35] due to the high melting point of tungsten metal.[36] The petitioner utilizes a 12-stage process to manufacture, certify, and ship tungsten shot (figure I-3).

[30] Petitioner's postconference brief, p. 6; conference transcript, pp. 34–35, 55, 62, 85 (Omanoff).
[31] Conference transcript, pp. 10, 31, 52, 78 (Omanoff).
[32] Petitioner's postconference brief, pp. 6, 9; conference transcript, p. 50 (Omanoff).
[33] Conference transcript, p. 9 (Omanoff).
[34] Unless noted otherwise, this section is compiled from the petitions, pp. 4–6, 10; conference transcript, pp. 14–15 (Gibbs).
[35] Conference transcript, p. 46 (Gibbs).
[36] The melting point for tungsten is 3,400 degrees Celsius (6,150 degrees Fahrenheit), the highest of any common metal. OnlineMetals.com, "Melting Point," June 6, 2024, https://www.onlinemetals.com/en/melting-points#full-list_of_all-metals_and_their_melting_temperatures.

Figure I-3
Tungsten shot: Manufacturing process stages



Source: Compiled by USITC staff from TPW, "Tungsten Manufacturing Operations" webpage, ©2024, https://tungstenparts.com/tungsten-manufacturing-operations, retrieved July 8, 2024.

The manufacturing process begins with mixing of a ready-to-press ("RTP") powder containing high-purity (99.9 percent) tungsten,[37] nickel, iron, small amounts of other metals,[38] [39] and a binding agent to keep the powder together during compaction. The powder undergoes tests to verify size, density, and flowability to be approved for the next production usage.

The verified powder undergoes compaction, typically in presses which cycle between the following steps: 1) powder filling of the compaction cavity; 2) pre-compression that expels the excess air from the cavity; 3) compression to form the powder into size and shape; and 4) ejection of compressed product from the press.

After the compaction, the product undergoes a series of furnace operations. In the first "debinding" operation, the product is baked at a temperature hot enough to emit the binding agent from the product. This is necessary because any remnant binding agent can damage the internal surfaces of the sintering furnace in the following stage.

Next, the product is sintered, during which it shrinks, hardens, and gains its full density and mechanical properties. The product is loaded into carriers with ceramic sand or other substances, to separate the product and prevent it from sintering together. Sintering temperatures are significantly higher than debinding temperatures. The sintering step melts the nickel, iron, and other metals, which bond with the non-melted tungsten particles. The resulting product is shiny, smaller sized, and extremely strong.

After sintering, the product is sent through a tumbling process to remove the ceramic sand or other substances in the sintering stage from the product's surface. Next, the product is sent through sorters to capture and remove shot that was combined during sintering.

After sorting, the tungsten shot is loaded into an annealing furnace to eliminate "hydrogen embrittlement," a negative consequence resulting from sintering under a hydrogen atmosphere. Annealing removes trapped hydrogen from the product, thereby improving its overall strength and ductility.

[37] Conference transcript, p. 86 (Gibbs).

[38] Tungsten is the highest cost input material, followed by nickel. By contrast, iron is lower cost. Conference transcript, p. 77 (Omanoff).

[39] The petitioner certifies that its tungsten shot is cobalt free, in contrast to some subject product originating in China. Conference transcript, pp. 9, 11, 13, 77 (Omanoff).

The product now has its full mechanical properties, with only final sizing and cleaning needed to complete the production process. To achieve its final size, the shot is sent through grinding machines. Steel alloy grinding plates apply pressure and spin the shot, slowly removing material and rounding it out, while imparting a shiny surface. The shot is ground until its size is measured to be within specifications.[40]

The ground shot is subsequently washed and dried in a rotary-drum washer. The clean product is finally sent through roller meters to verify the size of each shot and to capture those that are over- or undersized. After the tungsten shot is sized, it is checked by the quality team before packaging and shipping.

Although there are some similarities, in-scope tungsten shot is manufactured by some different processes and equipment from those used for military grade tungsten shot. Production of commercial grade shot requires different powder mixing and compaction processes than for military grade shot due to the higher tungsten content of the former. Since commercial grade shot is smaller size and denser than military grade shot, smaller grinders are utilized for commercial shot.[41] More specifically, the petitioner utilizes *** to manufacture in-scope merchandise.[42]

Subject producers in China produce commercial grade tungsten shot with nearly identical processes as does the petitioner. Likewise, petitioner's witnesses testified to personally observing Chinese production standards as substantively identical to those for domestic production.[43] Although there may be some similarities in some equipment, they also produce military grade shot on different equipment than for producing commercial grade shot.[44]

[40] The recovered mixed tungsten-steel particles (referred to as "swarf") is processed by a filtration system to produce it into a cake. The swarf is sent to a reclamation company that recovers and processes the tungsten. Conference transcript, pp. 81–82 (Omanoff).

[41] Petitioner's postconference brief, exh. 1, p. 1; conference transcript, pp. 15–16 (Gibbs).

[42] Petitioner's postconference brief, pp. 7–8.

[43] Petitioner's postconference brief, pp. 11–12 (Omanoff), 28 (Gibbs).

[44] Conference transcript, p. 28 (Gibbs).

Domestic like product issues

No issues with respect to the domestic like product have been raised in these investigations. The petitioner proposes one domestic like product coextensive with Commerce's scope.[45] Respondent Zhuzhou KJ Super Materials Co. Ltd. ("Zhuzhou") did not comment on the domestic like product.[46]

[45] Petitioner, however, identified four tungsten shot class types (i.e., Class 1 though Class 4). Tungsten shot is classified as Class 3. Petitioner argues that tungsten shot Class 3 comprises a single domestic like product, distinct from other classes of tungsten shot. Petitioner's analysis follows:

(1) Physical characteristics: Tungsten shot Class 1 is comprised of 90.0 percent of tungsten by weight; Class 2, 92.5 percent; Class 3, 95.0 percent; and Class 4, 97.0 percent (see table I-2). Petitioner argues that there is a bright line in the physical characteristics of tungsten shot Class 3 versus other classes in terms of the relevant tungsten content as defined by SAE standards. Moreover, petitioner argues that tungsten shot Class 3 is used in shotgun shells. By contrast, Class 1 and Class 2 are not used for shotgun shells: Class 1 is used in aerospace, automotive, medical engineering, and construction industries; Class 2 is used in medical engineering, aerospace applications, and military applications. Petitions, pp. 9-10; petitioner's postconference brief, pp. 4-5.

(2) Interchangeability: Petitioner argues that tungsten shot Class 3 is not interchangeable with the other classes of tungsten shot. Tungsten shot Class 3 is used in Tungsten Super Shot shotgun shells. Other classes of tungsten shot cannot be used for the purpose of Tungsten Super Shot shells. Petitions, p. 10; petitioner's postconference brief, p. 5.

(3) Channels of distribution: Petitioner argues that tungsten shot Class 3 follows different channels of distribution from the other classes. Tungsten shot Class 3 is sold to shotgun shell manufacturers for the creation of Tungsten Super Shot. Because the other classes are not used for shotgun shell manufacturing, they are distributed through other channels of distribution. Petitions, p. 10; petitioner's postconference brief, p. 6.

(4) Common manufacturing facilities, production process, and production employees: While there are some similarities, petitioner argues that tungsten shot Class 3 is made in manufacturing processes distinct from those used for the creation of Classes 1 and Class 2 shot. The properties and uses of the other classes of tungsten differ markedly from the properties and uses of Class 3. As one example, petitioner had to purchase *** in order to manufacture tungsten shot Class 3, which is not required for the production of military grade tungsten product (Class 2). Petitions, p. 10.; petitioner's postconference brief, pp. 7-9.

(5) Customer and Producer Expectations: Petitioner argues that customers and producers alike have divergent expectations from Class 3 shot than from Class 1 and Class 2 shot. Customers expect to purchase Class 3 shot in order to manufacture Tungsten Super Shot shotgun shells. Petitions, p. 10; petitioner's postconference brief, pp. 6-7.

(6) Price: Because the four classes of tungsten shot are manufactured into different types of products with differing percentages of tungsten content, petitioner argues that prices among Class 3 shot and other classes vary widely. Specifically, Class 2 tungsten shot is sold ***. Petitions, p. 11; petitioner's postconference brief, p. 10.

[46] See generally Zhuzhou's postconference brief.

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

U.S. market characteristics

The United States is the largest market in the world for shotgun shells and the shot that fills these shells can be made of several materials, one of which is commercial tungsten shot. The major purchasers in the United States' domestic market of commercial tungsten are domestic shotgun shell manufacturers.[1] Tungsten shot is a popular choice for the production of shotgun shot, as it results in tight patterns and greater range when used in ammunition compared to lighter metals. Tungsten shot does not decompose easily, and its compounds are generally inert, which makes it attractive for ammunition manufacturers and hunters as there is less environmental impact. Tungsten shot uses a nontoxic tungsten-composite.[2] Many states and the federal government have banned the use of lead shot for hunting on public land for its negative environmental impact and tungsten is an alternative metal with superior qualities (i.e., range and grouping) to both lead and the more common non-toxic steel shot.[3]

TPW is the only known domestic supplier of commercial tungsten shot and began production of subject merchandise in 2023.[4]

Two of 4 importers indicated that the market was subject to distinctive conditions of competition. Specifically, importer *** reported that the tungsten shot market has been challenged by other substitutes, especially bismuth shot in the last few years. Importer *** reported that the quality of tungsten shot in the U.S. market is very high and competitive with other shot material.

Apparent U.S. consumption of tungsten shot decreased irregularly during January 2021-December 2023 with a spike in the first quarter of 2024. Overall, apparent U.S. consumption in 2023 was lower in 2023 than in 2021.

Impact of section 301 tariffs

The U.S. producer and importers were asked to report the impact of section 301 tariffs on overall demand, supply, prices, or raw material costs. *** reported that the 301 tariffs *** while *** importers reported that ***. Importer *** reported that section 301 tariffs had an impact,

[1] Petitioner's postconference brief, p. 11.
[2] Petitions, p. 8.
[3] Conference transcript, p. 17 (Gibbs).
[4] TPW reported ***. Petitioner's postconference brief, p. 18.

explaining that landed costs were higher, which resulted in price adjustments on its finished goods.

Channels of distribution

As shown in table II-1, the U.S. producer sold *** to ammunition manufacturers for the creation of Tungsten Super Shot[5] while importers sold mainly to ammunition manufacturers, with a small number of sales to other end uses which were reported as ***.

Table II-1
Tungsten shot: Share of U.S. shipments by source, channel of distribution, and period

Shares in percent

Source	Channel	2021	2022	2023	Jan-Mar 2023	Jan-Mar 2024
United States	Distributors	***	***	***	***	***
United States	Retailers	***	***	***	***	***
United States	Ammunition manufacturers	***	***	***	***	***
United States	Other end users	***	***	***	***	***
China	Distributors	***	***	***	***	***
China	Retailers	***	***	***	***	***
China	Ammunition manufacturers	***	***	***	***	***
China	Other end users	***	***	***	***	***
Nonsubject	Distributors	***	***	***	***	***
Nonsubject	Retailers	***	***	***	***	***
Nonsubject	Ammunition manufacturers	***	***	***	***	***
Nonsubject	Other end users	***	***	***	***	***
All imports	Distributors	***	***	***	***	***
All imports	Retailers	***	***	***	***	***
All imports	Ammunition manufacturers	***	***	***	***	***
All imports	Other end users	***	***	***	***	***

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 “---“.

[5] Petitioner’s postconference brief, p. 6.

Geographic distribution

The U.S. producer reported selling tungsten shot to *** (table II-2). Importers reported selling to all regions of the United States. The U.S. producer *** percent of sales were between 101 and 1,000 miles of its production facility and *** percent over 1,000 miles of its production facility. Importers sold *** percent within 100 miles of their U.S. point of shipment, *** percent between 101 and 1,000 miles, and *** percent over 1,000 miles.

Table II-2
Tungsten shot: Count of U.S. producers' and U.S. importers' geographic markets

Count in number of firms reporting

Region	U.S. producer	China
Northeast	***	3
Midwest	***	3
Southeast	***	2
Central Southwest	***	3
Mountains	***	3
Pacific Coast	***	3
Other	***	1
All regions (except Other)	***	2
Reporting firms	1	3

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-3 provides a summary of the supply factors regarding tungsten shot from the U.S. producer and producers in China. U.S. and Chinese producers reported low inventories since production is largely made-to-order. Chinese producers exported the vast majority of their product to the United States.

Table II-3
Tungsten shot: Supply factors that affect the ability to increase shipments to the U.S. market, by country

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

Factor	Measure	United States	China
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	Ratio	***	***
Non-US export market shipments 2023	Ratio	***	***
Ability to shift production	Count	***	***

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

Note: The responding U.S. producer accounted for all known U.S. production of tungsten shot in 2023. Responding subject foreign producers' exports as a share of total U.S. imports of tungsten shot in 2023 is presently unknown. 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, the U.S. producer of tungsten shot has the ability to respond to changes in demand with large changes in the quantity of shipments of U.S.-produced tungsten shot to the U.S. market. The main contributing factors to this degree of responsiveness of supply are the availability of unused capacity and ability to shift production to or from alternate products, such as military grade tungsten shot. Factors mitigating responsiveness of supply include minimal availability of inventories and limited ability to shift shipments from alternate markets.

TPW began production of subject merchandise in 2023, with the petitioner describing its manufacturing operations as both modest and episodic.[6] Other products that reportedly can be partially produced on the same equipment as commercial tungsten shot are military grade tungsten shot. U.S. producer TPW testified that some equipment is similar between the production of Class 2 tungsten shot, which is typically used for out-of-scope military applications and in-scope Class 3 tungsten[7] shot, which is used for commercial shot. Factors affecting the U.S. producer's ability to shift production include different steps in the manufacturing processes which require different tools, machines, setups, and components.[8]

Subject imports from China

Importers were asked about the availability of shot sizes and whether they were able to import, or have the ability to import, all in-scope sizes of tungsten shot (i.e., between 1.5 and 10 mm) from China during January 2021-March 2024. *** importers reported that they were able to import all sizes. Importer *** reported that it has the ability to import all sizes in the range, but that most sizes are not popular.

Based on available information, producers of tungsten shot from China have the ability to respond to changes in demand with moderate-to-large changes in the quantity of shipments of tungsten shot to the U.S. market. The main contributing factors to this degree of responsiveness of supply are the availability of unused capacity, and the partial ability to shift production to or from alternate products such as military grade tungsten shot. Factors

[6] Petitioner's postconference brief, p. 19.

[7] Class 2 tungsten is typically comprised of 92.5 percent tungsten and the rest a mixture of other metals such as nickel, iron, or copper. Class 3 tungsten is comprised of 92.6 percent or greater of tungsten; typically, around 95% tungsten. Petitioner's postconference brief, pp. 11, 139.

[8] *** Petitioner's postconference brief, p. 9.

mitigating responsiveness of supply include limited inventories, and limited ability to shift shipments to or from alternate markets.

Other products that responding foreign producers reportedly can produce on the same equipment as tungsten shot are ***. Factors affecting foreign producers' ability to shift production include cost, time, and the lack of demand for out of out-of-scope products.

Imports from nonsubject sources

*** nonsubject imports since January 1, 2021. Petitioner is aware of one company which reports publicly that it is sourcing tungsten shot from the United Kingdom.[9]

Supply constraints

The sole U.S. producer and *** importers reported that they had not experienced any supply constraints since January 1, 2021. Importer ***.

U.S. demand

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

One of the key drivers of the shotgun shell market is the widespread popularity of shotguns themselves. As a result, there is a consistent seasonal demand for shotgun shells across different segments of the market with many specialty ammunitions designed for specific purposes. The market has seen increased demand for premium shotgun shells, often targeted at discerning shooters willing to pay a premium for superior performance.[10]

[9] ***. Petitioner's postconference brief, exh. 1, p. 4.

[10] Petitioner's postconference brief, exh. 19, p. 199.

End uses and cost share

U.S. demand for tungsten shot depends on the demand for U.S.-produced downstream products. Reported end uses include shot shell ammunition, and more niche end uses reported were scuba weights and aviation weights. Tungsten shot accounts for a large share of the cost of the end-use products in which it is used. Reported cost shares for shot shell ammunition ranged from 70 and 90 percent while cost shares for scuba weights and aviation weights were reported at 95 percent and 98 percent, respectively.

Business cycles

*** importers, indicated that the market *** subject to business cycles. Specifically, importer *** reported that tungsten shot and the shotshell market in general is highly affected by U.S. domestic economic ups and downs. Importers *** and *** reported that there are increased sales during hunting seasons in the fall and spring.

Demand trends

According to petitioner, the U.S. tungsten shot market tracks demand for tungsten super shot ammunition, which has seen increasing domestic demand due to the widespread popularity of hunting and clay shooting.[11] Most firms reported an increase in U.S. demand for tungsten shot since January 1, 2021 (table II-4). Importer *** reported demand has been steadily increasing, reporting that it has seen more customers hand-loading their own shotgun shells. Importer *** reported that the demand trend had been ***.

Table II-4
Tungsten shot: Count of firms' responses regarding overall domestic and foreign demand, by firm type

Market	Firm type	Steadily Increase	Fluctuate Up	No change	Fluctuate Down	Steadily Decrease
Domestic demand	U.S. producers	***	***	***	***	***
Domestic demand	Importers	***	***	***	***	***
Foreign demand	U.S. producers	***	***	***	***	***
Foreign demand	Importers	***	***	***	***	***

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

[11] Petitioner's postconference brief, p. 1.

Substitute products

The U.S. producer, and *** importers reported that there were no substitutes. Importer *** reported that the closest substitutes would be bismuth shot and then hunting shotshell made of lead or steel, but these products do not have the same ballistic characteristics as tungsten shot. Tungsten shot is denser than lead or steel shot, which leads to tighter patterns and smaller pellets, which are less affected by wind, leading to greater accuracy, especially at longer distances.[12]

Substitutability issues

This section assesses the degree to which U.S.-produced tungsten shot and imports of tungsten shot from the subject country can be substituted for one another by examining the importance of certain purchasing factors and the comparability of tungsten shot from domestic and imported source based on those factors. Based on available data, staff believes that there is a high degree of substitutability between domestically produced tungsten shot and tungsten shot imported from China.[13] Factors contributing to this level of substitutability include, interchangeability between domestic and subject source, and limited significant factors other than price.

Factors affecting purchasing decisions

Purchasers responding to lost sales lost revenue allegations[14] were asked to identify the main purchasing factors their firm considered in their purchasing decisions for tungsten shot. The major purchasing factors identified by firms include product quality, price, qualified supplier, consistent supply, lead times, predictability, and supply reliability.

Most important purchase factors

The most often cited factors that firms consider in their purchasing decisions for tungsten shot were quality *** and price ***, as shown in table II-5. Quality was

[12] Conference transcript, pp. 67-69 (Omanoff).

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

[14] This information is compiled from responses by purchasers identified by petitioner to the lost sales lost revenue allegations. See Part V for additional information.

again tied with price for the most frequently reported second-most important factor ***. Consistent availability and predictability were the most frequently reported third-most important factor ***.

Table II-5
Tungsten shot: Count of ranking of factors used in purchasing decisions as reported by U.S. purchasers, by factor

Factor	First	Second	Third	Total
Price / Cost	***	***	***	***
Quality	***	***	***	***
Availability / Supply	***	***	***	***
All other factors	***	***	***	NA

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

Lead times

Tungsten shot is primarily produced-to-order. The U.S. producer reported that *** percent of their commercial shipments were produced-to-order, with lead times averaging *** days. The remaining *** percent of their commercial shipments came from inventories, with lead times averaging *** days. Importers reported that *** percent of their commercial shipments were produced-to-order, with lead times averaging *** days. The remaining *** percent came from foreign inventories with lead times averaging *** days and, *** percent came from U.S. inventories with lead times averaging *** days.

Comparison of U.S.-produced and imported tungsten shot

In order to determine whether U.S.-produced tungsten shot can generally be used in the same applications as imports from China, the U.S. producer, importers, and purchasers were asked whether the products can always, frequently, sometimes, or never be used interchangeably. As shown in table II-6, the U.S. producer reported that products from the United States were *** interchangeable with tungsten shot from China while *** importers reported that the products were only sometimes interchangeable. Importer *** reported that ***.

Table II-6
Tungsten shot: Count of U.S. producers and U.S. importers reporting the interchangeability between product produced in the United States and in other countries, by country pair and firm type

Country pair	Firm type	Always	Frequently	Sometimes	Never
United States vs. China	U.S. producers	***	***	***	***
United States vs. China	Importers	***	***	***	***

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

In addition, the U.S. producer, importers, and purchasers were asked to assess how often differences other than price were significant in sales of tungsten shot from the United States, subject, or nonsubject countries. As shown in table II-7, the U.S. producer reported that differences other than price were *** significant. *** importers reported that differences other than price were always significant while *** importer reported that the differences were only sometimes significant. Importer *** reported that Chinese tungsten shot "seems to always have stock available and it is of the highest quality." Importer *** reported that it "cannot obtain a domestic quote."

Table II-7
Tungsten shot: Count of U.S. producers and U.S. importers reporting the significance of differences other than price between product produced in the United States and in other countries, by country pair and firm type

Country pair	Firm type	Always	Frequently	Sometimes	Never
United States vs. China	U.S. producers	***	***	***	***
United States vs. China	Importers	***	***	***	***

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

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/or Part VI and (except as noted) is based on the questionnaire response of one firm which accounted for all known production of tungsten shot in the United States in 2023.

U.S. producer

The Commission issued one U.S. producer questionnaire to petitioner Tungsten Parts Wyoming, Inc. ("TPW"), which identified itself as the sole U.S. producer of tungsten shot in 2023.[1] Table III-1 lists the U.S. producer, its production locations, and share of total production in 2023.

Table III-1
Tungsten shot: U.S. producer, its position on the petitions, location of production, and share of reported production, 2023

Shares in percent

Firm	Position on petition	Production location(s)	Share of production
TPW	Petitioner	Laramie, WY (North Plant) Laramie, WY (West Plant)	100.0

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

[1] Petitions, p. 2 and exh. I-2; conference transcript, pp. 5, 18, and 27 (Pickard). Additional firms, including ***, were identified as possible U.S. producers of tungsten shot. Petitioner, however, argues that none of these identified companies are U.S. producers of in-scope tungsten shot. Petitions, exh. I-3; petitions (supplemental), July 18, 2024, pp. 2-3; conference transcript, p. 31 (Omanoff); petitioner's postconference brief, exh.1, p. 4.

U.S. producer's commencement of commercial operations

As discussed above, TPW reported that it is the sole U.S. producer of tungsten shot.[2] Moreover, TPW reported that it began production of tungsten shot starting *** 2023. Given its recent entry into the market, TPW was asked to provide additional information regarding its lead-up and commencement of commercial tungsten shot operations.

TPW reported that it commenced commercial production of in-scope tungsten shot on *** 2023. However, it noted that its Laramie, Wyoming plant has been operational since 2019, producing military-class tungsten shot products including cubes and balls.[3] When asked how production of these out-of-scope products differed from the production of in-scope tungsten shot, TPW reported that ***.[4] In addition to ***, TPW reported that the commencement of commercial tungsten shot operations ***.

When asked to elaborate on it marketing strategy, TPW reported that ***. When asked to discuss whether it had prepared and/or commissioned any studies, business plans, cost or sales projections, engineering test results, or correspondence concerning the feasibility, cost, and/or desirability of manufacturing tungsten shot, TPW reported that ***.

TPW was also asked to explain whether it had reached a financial breakeven point for its sales of tungsten shot in 2023 and 2024. TPW reported that break even did not occur ***. Part VI of this report contains additional information and a detailed discussion on TPW's financial experience.

[2] TPW reported that ***. It further reported that it ***.

[3] Conference transcript, pp. 8 and 78 (Omanoff).

[4] TPW further elaborated that "***." Email from ***, August 2, 2024; EDIS # 828743.

Table III-2 presents events in the U.S. industry since January 1, 2021.

Table III-2
Tungsten shot: Events in the industry since January 1, 2021

Item	Firm	Event
Initial production	TPW	2023— TPW, a producer of military-grade tungsten shot, undertook test runs prior to commencing initial production of commercial grade tungsten shot at its facility in Laramie, Wyoming.
Corporate growth announcement	TPW	February 2024— TPW announced exceptional growth across all measures since fourth-quarter 2023. During 2023, the firm's backlogged orders exceeded $1 million, employment rose five-fold, and production capacity expanded to 1.6 million kilograms (1,764 short tons) of tungsten fragments per year.
New product	TPW	Late-February–early-March 2024— At the Internationale Waffenausstellung ("IWA") OutdoorClassics Exhibition for the European hunting and target sports industry, held in Nuremburg, Germany, TPW introduced its new "Made-in-America" line of Tungsten Super Shot that is claimed by the firm to provide superior weight retention, increased downrange velocity, and unmatched accuracy for hunters and recreational shooters. TPW's Chief Executive Officer ("CEO"), Dennis Omanoff, also announced the firm's forthcoming proprietary tungsten-copper blend for shot that is "…designed to be competitive not only in price but will outperform steel and lead while also being eco-friendly."

Source: Conference transcript, pp. 10 (Omanoff), 17 (Gibbs), 20 (Pickard); petitioner's posthearing brief, p. 23, exh. 1, pp. 1, 12;
Zhuzhou's postconference brief, exh. 1: TPW, "Tungsten Parts Wyoming Announces Substantial Gains in 2023," February 8, 2024, https://tungstenparts.com/tungsten-parts-wyoming-announces-substantial-gains-in-2023;
TPW, "Tungsten Parts Wyoming Unloads 'Made in America' Tungsten Super Shot Line at IWA '24, Hints at New Tungsten Copper Blend," February 22, 2024, https://tungstenparts.com/tungsten-parts-wyoming-unloads-made-in-america-tungsten-super-shot-line-at-iwa-24-hints-at-new-tungsten-copper-blend;
IWA, "A Wealth of Highlights at the Anniversary Edition: The IWA OutdoorClassics 2024 Supporting Programme," Press release, January 26, 2024, https://www.iwa.info/en/press/press-releases/2024/highlights-at-the-anniversary-edition.

U.S. production, capacity, and capacity utilization

Table III-3 and figure III-1 present TPW's practical tungsten shot capacity, production, and capacity utilization. As discussed above, TPW commenced commercial tungsten shot production in 2023. During that period, its practical tungsten shot capacity was *** pounds.[5] It produced *** pounds and its capacity utilization was *** percent. TPW *** during January-March 2023. During January-March 2024, however, TPW's practical tungsten shot capacity was *** pounds, its production was *** pounds, and its capacity utilization was *** percent.

Table III-3 also presents TPW's installed and practical capacity and production on the same equipment.[6] Both installed and practical overall capacity increased during 2021-23, while both installed and practical overall production irregularly decreased during the same period. Consequently, both installed and practical overall utilization decreased during 2021-23. In terms of interim periods, installed and practical overall capacity were the same in January-March 2023 and January-March 2024, while both installed and practical overall production were lower in January-March 2024 compared with January-March 2023.

[5] In its original questionnaire response ***.

[6] TPW reported *** practical overall capacity.

Table III-3
Tungsten shot: U.S. producer's installed and practical capacity, production, and utilization on the same equipment as subject production, by period

Capacity and production in pounds; utilization in percent

Item	Measure	2021	2022	2023	Jan-Mar 2023	Jan-Mar 2024
Installed overall	Capacity	***	***	***	***	***
Installed overall	Production	***	***	***	***	***
Installed overall	Utilization	***	***	***	***	***
Practical overall	Capacity	***	***	***	***	***
Practical overall	Production	***	***	***	***	***
Practical overall	Utilization	***	***	***	***	***
Practical Tungsten shot	Capacity	---	---	***	***	***
Practical Tungsten shot	Production	---	---	***	***	***
Practical Tungsten shot	Utilization	---	---	***	***	***

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 III-1
Tungsten shot: U.S. producer's practical capacity, production, and capacity utilization, by period

* * * * * * *

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

In this proceeding, TPW was asked to provide additional information regarding its tungsten shot operations beyond 2023. Table III-4 and figure III-2 presents TPW's projected practical tungsten shot capacity, production, and capacity utilization for 2024 and 2025. TPW projects practical tungsten shot capacity to be *** pounds in both 2024 and 2025. The firm further projects that its production of tungsten shot will be *** pounds in both 2024 and 2025. Consequently, capacity utilization is projected to be *** percent in both 2024 and 2025.

Table III-4
Tungsten shot: U.S. producer's projected practical capacity and production, by period

Quantity in pounds; share and ratios in percent

Item	Measure	2024	2025
Practical tungsten shot capacity	Quantity	***	***
Trial production	Quantity	***	***
Commercial production	Quantity	***	***
All production	Quantity	***	***
Practical capacity utilization	Ratio	***	***
Trial production	Share	***	***
Commercial production	Share	***	***
All production	Share	100.0	100.0

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

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

Figure III-2
Tungsten shot: U.S. producer's projected practical capacity, production, and capacity utilization, by period

* * * * * * *

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

Alternative products

TPW reported that it can produce ***[7] on the same equipment and machinery used to produce tungsten shot (table III-5). During 2021-23, TPW's production of *** decreased by *** percent from *** pounds in 2021 to *** pounds in 2023. *** was lower in January-March 2024 compared with January-March 2023. In 2023, TPW's production of *** accounted for *** percent of its total production on the same equipment used to produce in-scope tungsten shot.

Table III-5
Tungsten shot: U.S. producer's overall production on the same equipment as subject production, by product type and period

Quantities in pounds; shares in percent

Product type	Measure	2021	2022	2023	Jan-Mar 2023	Jan-Mar 2024
In-scope tungsten shot	Quantity	---	---	***	***	***
Out-of-scope tungsten shot	Quantity	***	***	***	***	***
Other shot (steel, lead, other)	Quantity	***	***	***	***	***
Other products	Quantity	***	***	***	***	***
Out-of-scope products	Quantity	***	***	***	***	***
All products	Quantity	***	***	***	***	***
In-scope tungsten shot	Share	---	---	***	***	***
Out-of-scope tungsten shot	Share	***	***	***	***	***
Other shot (steel, lead, other)	Share	***	***	***	***	***
Other products	Share	***	***	***	***	***
Out-of-scope products	Share	***	***	***	***	***
All products	Share	100.0	100.0	100.0	100.0	100.0

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

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

[7] ***.

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

Table III-6 presents TPW's U.S. shipments,[8] export shipments,[9] and total shipments. In 2023, the year TPW commenced commercial production, its total shipment equaled *** pounds ($***). TPW reported *** shipments during January-March 2023. Total shipments equaled *** pounds ($***) during January-March 2024.

In 2023, TPW's average unit value (AUV) for tungsten shot was $*** per pound. *** during January-March 2023. Its tungsten shot AUV was $*** per pound during January-March 2024.

Table III-6
Tungsten shot: U.S. producers' total shipments, by destination and period

Quantity in pounds; value in dollars; unit values in dollars per pound; shares in percent

Item	Measure	2021	2022	2023	Jan-Mar 2023	Jan-Mar 2024
U.S. shipments	Quantity	---	---	***	***	***
Export shipments	Quantity	---	---	***	***	***
Total shipments	Quantity	---	---	***	***	***
U.S. shipments	Value	---	---	***	***	***
Export shipments	Value	---	---	***	***	***
Total shipments	Value	---	---	***	***	***
U.S. shipments	Unit value	---	---	***	***	***
Export shipments	Unit value	---	---	***	***	***
Total shipments	Unit value	---	---	***	***	***
U.S. shipments	Share of quantity	---	---	***	***	***
Export shipments	Share of quantity	---	---	***	***	***
Total shipments	Share of quantity	---	---	***	***	***
U.S. shipments	Share of value	---	---	***	***	***
Export shipments	Share of value	---	---	***	***	***
Total shipments	Share of 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 "---."

[8] TPW reported *** internal consumption *** transfers to related firms.

[9] TPW reported *** export shipments.

U.S. producer's inventories

Table III-7 presents TPW's end-of-period inventories and the ratio of these inventories to its production, U.S. shipments, and total shipments. In 2023, TPW had *** pounds in inventories. The ratio of inventories to production and the ratio of inventories to total shipments were both *** percent. TPW reported *** during January-March 2023. TPW reported *** pounds in inventories during January-March 2024. ***.

Table III-7
Tungsten shot: U.S. producer's inventories and their ratio to select items, by period

Quantity in pounds; inventory ratios in percent

Item	2021	2022	2023	Jan-Mar 2023	Jan-Mar 2024
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.

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

U.S. producer's imports and purchases of imports from China

TPW reported ***.

U.S. employment, wages, and productivity

Table III-8 presents TPW's employment-related data. In 2023, TPW reported it had ***.

Table III-8
Tungsten shot: U.S. producer's employment related information, by item and period

Item	2021	2022	2023	Jan-Mar 2023	Jan-Mar 2024
Production and related workers (PRWs) (number)	---	---	***	***	***
Total hours worked (hours)	---	---	***	***	***
Hours worked per PRW (hours)	---	---	***	***	***
Wages paid (dollars)	---	---	***	***	***
Hourly wages (dollars per hour)	---	---	***	***	***
Productivity (pounds per hour)	---	---	***	***	***
Unit labor costs (dollars per pound)	---	---	***	***	***

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

U.S. importers

The Commission issued importer questionnaires to 60 firms believed to be possible importers of tungsten shot.[1] Usable questionnaire responses were received from four companies:[2] [3] [4] Apex Ammunition ("Apex"),[5] Agescan International Inc. ("Agescan"),[6] Midwest Tungsten Service, Inc. ("Midwest Tungsten"), and Triple B Metals. These four firms' share of

[1] These firms were identified in the petitions, through staff research, and/or were identified to have accounted for more that 1.0 percent of imports in proprietary, Census-edited Customs' import records, under HTS statistical reporting number 8101.99.8000.

[2] In addition, the Commission received a questionnaire response from ***, which included data on the firm's volume of imports of merchandise under HTS 8101.99.8000. However, the firm could not determine if the merchandise imported was within the scope of these investigations. As a result, staff did not include the firm's questionnaire in its importer dataset.

[3] The Commission also received a questionnaire response from 11 firms which certified that they had not imported tungsten shot from any country at any time since January 1, 2021. These firms were: ***.

[4] Staff also contacted ***. The firm, however, declined to submit an importer questionnaire to the Commission. ***.

[5] Apex ***.

[6] Agescan ***. As a result, the data provided by Agescan in its importer questionnaire ***.

total U.S. imports of tungsten shot in 2023 is presently unknown.[7] For purposes of the preliminary phase of these investigations, U.S. import data and related information are based on questionnaire responses.[8] Table IV-1 lists all responding importers of tungsten shot, their headquarter locations, and their shares of U.S. imports, in 2023.

[7] Petitioner argues that apparent U.S. consumption of tungsten shot ranged between *** pounds in 2023. Petitioner's postconference brief, pp. 20, 30, exh. 1, p. 7 and exh. 3. Petitioner also contends that apparent U.S. consumption is largely supplied by imports of tungsten shot from China, ***. *Id*. Petitioner's larger estimate of apparent U.S. consumption is based on Commerce's Census import data under HTS statistical reporting numbers 8101.99.8000 and 9306.29.0000, the primary HTS numbers identified in the scope. *Id*. These HTS numbers, however, are "basket" categories that may contain large volumes of out-of-scope merchandise. In 2023, approximately *** pounds of merchandise entered the United States under these two HTS numbers. This figure is markedly *** compared with the figures presented by petitioner. Moreover, petitioner noted that ***. However, Census data showed that in 2023 approximately *** percent of merchandise imported under the two primary HTS numbers ***. Accordingly, staff does not rely on petitioner's larger estimate of apparent consumption for purposes of the preliminary phase of these investigations. If petitioner's more conservative estimate of apparent U.S. consumption figure of *** pounds is accurate, in 2023 the four responding firms accounted for approximately *** percent of tungsten shot imports from China, *** percent of imports from nonsubject sources, and, consequently, *** percent of imports from all sources.

Petitioner's figures are markedly different from the information provided to the Commission by the two responding foreign producers/exporters, which estimated that they accounted for *** percent of total exports of subject merchandise in 2023 and reported a combined total of *** pounds of subject merchandise exported to the United States that year. Based on this information, total U.S. imports of tungsten shot would equal *** pounds in 2023. ***. If U.S. imports were indeed *** pounds according to the data provided by subject producers/exporters, in 2023 the four responding firms accounted for approximately *** percent of tungsten shot imports from China, *** percent of imports from nonsubject sources, and, consequently, *** percent of imports from all sources.

Petitioner disagrees with foreign producers'/exporters' estimates ***. Petitioner's postconference brief, exh. 1. p. 7.

[8] As discussed above, the primary HTS numbers are "basket" categories that may contain large quantities of out-of-scope merchandise ***. Consequently, for purposes of the preliminary phase of these investigations, U.S. import data are based on the questionnaire responses of the four responding firms, although these data may understate the volume of subject imports.

Table IV-1
Tungsten shot: U.S. importers, their headquarters, and share of total imports within a given source by firm, 2023

Shares in percent

Firm	Headquarters	China	Nonsubject sources	All import sources
Agescan	Richmond Hill, ON	***	***	***
Apex	Columbus, MS	***	***	***
Midwest Tungsten	Willowbrook, IL	***	***	***
Triple B Metals	Barry, IL	***	***	***
All firms	Various	***	***	***

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

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

U.S. imports

Table IV-2 and figure IV-1 presents data for U.S. imports of tungsten shot from China and nonsubject sources. *** imports of tungsten shot from nonsubject sources during 2021-23, January-March 2023, and January-March 2024. Imports of tungsten shot from China irregularly decreased by *** percent during 2021-23. Imports from China were *** pounds in 2021, they increased to *** pounds in 2022, and then they decreased to *** pounds in 2023. Imports from China were higher by *** percent in January-March 2024 (*** pounds) compared with January-March 2023 (*** pounds).

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

Quantity in pounds; value in dollars; unit values in dollars per pound

Source	Measure	2021	2022	2023	Jan-Mar 2023	Jan-Mar 2024
China	Quantity	***	***	***	***	***
Nonsubject sources	Quantity	***	***	***	***	***
All import sources	Quantity	***	***	***	***	***
China	Value	***	***	***	***	***
Nonsubject sources	Value	***	***	***	***	***
All import sources	Value	***	***	***	***	***
China	Unit value	***	***	***	***	***
Nonsubject sources	Unit value	***	***	***	***	***
All import sources	Unit value	***	***	***	***	***
China	Share of quantity	***	***	***	***	***
Nonsubject sources	Share of quantity	***	***	***	***	***
All import sources	Share of quantity	100.0	100.0	100.0	100.0	100.0
China	Share of value	***	***	***	***	***
Nonsubject sources	Share of value	***	***	***	***	***
All import sources	Share of value	100.0	100.0	100.0	100.0	100.0
China	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 are U.S. imports to production.

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
Tungsten shot: U.S. import quantities and average unit values, by source and period

* * * * * * *

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.[9] 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.[10]

Table IV-3 presents U.S. imports in the twelve-month period preceding the filing of the petitions. During July 2023 through June 2024, *** pounds of tungsten shot from China entered the United States, representing *** percent of imports from all sources during that period.

Table IV-3
Tungsten shot: U.S. imports in the twelve-month period preceding the filing of the petitions, July 2023 through June 2024

Quantity in pounds; share of quantity in percent

Source of imports	Quantity	Share of quantity
China	***	***
Nonsubject sources	***	***
All import sources	***	***

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 "---".

[9] 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)).

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

Apparent U.S. consumption and market shares

Quantity

Table IV-4 and figure IV-2 presents data on apparent U.S. consumption and U.S. market shares by quantity for tungsten shot. As discussed in Part III of this report, TPW is the sole and only known U.S. producer of tungsten shot. TPW commenced commercial operations in 2023 and produced *** pounds of tungsten shot, accounting for *** percent of apparent U.S. consumption that year. TPW's market share was *** percent in January-March 2023 and *** percent January-March 2024.

Imports of tungsten shot, by comparison, were reported in each period examined. Imports of tungsten shot, and consequently apparent U.S. consumption, irregularly decreased during 2021-23. Apparent U.S. consumption was *** pounds in 2021, it increased to *** pounds in 2022 and then decreased to *** pounds in 2023, a total decrease of *** percent during 2021-23. Apparent U.S. consumption was higher by *** percent in January-March 2024 (*** pounds) compared with January-March 2023 (*** pounds).

Table IV-4
Tungsten shot: Apparent U.S. consumption and market shares based on quantity data, by source and period

Quantity in pounds; shares in percent

Source	Measure	2021	2022	2023	Jan-Mar 2023	Jan-Mar 2024
U.S. producers	Quantity	---	---	***	***	***
China	Quantity	***	***	***	***	***
Nonsubject sources	Quantity	***	***	***	***	***
All import sources	Quantity	***	***	***	***	***
All sources	Quantity	***	***	***	***	***
U.S. producers	Share	---	---	***	***	***
China	Share	***	***	***	***	***
Nonsubject sources	Share	***	***	***	***	***
All import sources	Share	***	***	***	***	***
All sources	Share	100.0	100.0	100.0	100.0	100.0

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

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

Figure IV-2
Tungsten shot: Apparent U.S. consumption based on quantity data, by source and period

* * * * * * *

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

Value

Table IV-5 and figure IV-3 presents data on apparent U.S. consumption and U.S. market shares by value for tungsten shot. The value of apparent U.S. consumption followed the same trend as the quantity of apparent U.S. consumption (presented above). Apparent U.S. consumption by value irregularly decreased by *** percent from $*** in 2021, increasing to $*** in 2023, and then declining to $*** in 2023. Apparent U.S. consumption was higher by *** percent in January-March 2024 ($***) compared with January-March 2023 ($***).

Table IV-5
Tungsten shot: Apparent U.S. consumption and market shares based on value data, by source and period

Value in dollars; shares in percent

Source	Measure	2021	2022	2023	Jan-Mar 2023	Jan-Mar 2024
U.S. producers	Value	---	---	***	***	***
China	Value	***	***	***	***	***
Nonsubject sources	Value	***	***	***	***	***
All import sources	Value	***	***	***	***	***
All sources	Value	***	***	***	***	***
U.S. producers	Share	---	---	***	***	***
China	Share	***	***	***	***	***
Nonsubject sources	Share	***	***	***	***	***
All import sources	Share	***	***	***	***	***
All sources	Share	100.0	100.0	100.0	100.0	100.0

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

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

Figure IV-3
Tungsten shot: Apparent U.S. consumption based on value data, by source and period

* * * * * * *

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

Part V: Pricing data

Factors affecting prices

Raw material costs

The raw materials are a mixture of loose metal powders consisting mainly of tungsten and a metallic powder binder such as nickel, or iron. U.S. producer TPW also mentioned that minor amounts of proprietary additional components are also added during the production process.[1] The in-scope tungsten shot must be at least 92.6 percent tungsten by weight.

*** and importers *** reported that raw material prices have increased (either steadily or with fluctuations) since 2021. According to publicly available data (table V-1), raw tungsten was priced at approximately 250 dollars per metric ton unit (MTU) worldwide at the beginning of 2021, rising in 2022 to 275 dollars per MTU, and remained relatively constant through 2023 at 260 dollars per MTU.

Table V-1
Tungsten shot: Price of tungsten worldwide between 2021 and 2023

Item	2021	2022	2023
Price of tungsten in dollars per metric ton	225	275	260

Source: Petitioner's postconference brief, p. 158, exh. 15, https://www.statista.com/statistics/1009446/tungsten-price.

Transportation costs to the U.S. market

Transportation costs for tungsten shot shipped from China to the United States averaged 2.7 percent during 2023 for products imported under HTS statistical reporting number 8101.99.8000 and averaged 6.7 percent for products imported under 9306.29.0000. These estimates were derived from official import data and represent the transportation and other charges on imports.[2]

[1] Conference transcript, p. 61 (Gibbs).

[2] The estimated transportation costs were obtained by subtracting the customs value from the c.i.f. value of the imports for 2023 and then dividing by the customs value based on the HTS statistical reporting number 8101.99.8000 and 9306.29.0000.

U.S. inland transportation costs

*** importers reported that they typically have the purchaser arrange transportation. *** reported that U.S. inland transportation costs averaged *** percent while most importers reported costs of *** to *** percent.

Pricing practices

Pricing methods

*** and a majority of importers (***) reported setting prices using transaction-by-transaction negotiations, while only *** importer reported using contracts or price lists (table V-2).

Table V-2
Tungsten shot: Count of U.S. producer's and importers' reported price setting methods

Count in number of firms reporting

Method	U.S. producers	U.S. importers
Transaction-by-transaction	***	3
Contract	***	1
Set price list	***	1
Other	***	0
Responding firms	1	3

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.

The U.S. producer reported selling *** its tungsten shot in the spot market (table V-3). Importers reported selling the vast majority of their tungsten shot under annual contracts.

Table V-3
Tungsten shot: U.S. producer's and subject U.S. importers' shares of commercial U.S. shipments by type of sale, 2023

Share in percent

Sale type	U.S. producers	Subject U.S. importers
Long-term contracts	***	***
Annual contract	***	***
Short-term contracts	***	***
Spot sales	***	***
All sales types	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.

Sales terms and discounts

The U.S. producer typically quoted prices ***, while importers were split on quoting prices on an f.o.b. or delivered basis. The responding U.S. producer ***, while three importers reported offering quantity discounts, one (***) also offered a total volume discount, and one importer (***) offered no discount policy.

Price and purchase cost data

The Commission requested U.S. producers and importers to provide quarterly data for the total quantity and f.o.b. value of the following tungsten shot products shipped to unrelated U.S. customers during January 2021 through March 2024. Firms that imported these products from subject source for own use were requested to provide import purchase cost data.

Product 1.-- Tungsten Class 3 shot, #9 Dia 2.01mm

Product 2.-- Tungsten Class 3 shot, #7 Dia 2.5mm

Product 3.-- Tungsten Class 3 shot, #10 Dia 1.8mm

Price data

The U.S. producer and *** importers provided usable pricing data for sales of the requested products, although not all firms reported pricing for all products for all quarters.[3] Pricing data reported by these firms accounted for approximately *** percent of U.S. producer's U.S. shipments of tungsten shot and *** percent of U.S. imports from China in 2023.[4]

Price data for products 1-3 are presented in tables V-4 to V-6 and figures V-1 to V-3.

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

[4] Pricing coverage is based on U.S. shipments reported in questionnaires.

Import purchase cost data

Two importers reported useable import purchase cost data for products 1-3.[5] Purchase cost data reported by these firms accounted for *** percent of imports from China in 2023. Landed duty paid purchase cost data for imports from China are presented in tables V-4 to V-6 and figures V-1 to V-3, along with the 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 directly importing tungsten shot.

One *** of three importers reported that it incurred additional costs beyond landed duty-paid costs by importing tungsten shot directly rather than purchasing from a U.S. producer or U.S. importer. The importer estimated the total additional cost incurred; estimating *** percent compared to the landed-duty paid value, citing airfreight costs.

Firms were also asked to describe how these additional costs incurred by importing tungsten shot directly compare with additional costs incurred when purchasing from a U.S. producer or U.S. importer. Importer *** reported that it varies based on transport method and that there is no direct comparison because it was unaware of the existence of a U.S. producer.

Two responding importers do not compare costs of purchasing from either the U.S. producer or importers. Three importers identified benefits from importing tungsten shot directly instead of purchasing from the U.S. producer or importers: reasons including fostering longstanding relationships they have "gained large consistency in lead times, accuracy and quality of finished goods and price points are predictable." Two of the responding importers reported that importing was the only option for them. Importer *** reported that it did not know if local U.S. producers exist, while Importer *** reported that no domestic firms responded to their requests for quotes.

[5] Importer *** reported purchase cost data, but purchased it from a separate supplier company ***. Staff were unable to receive an importer questionnaire from the supplier company *** and so staff had *** complete an importer questionnaire so as to not lose the purchase cost data that it was able to provide. A limitation to the data *** provided was that it was unable to break down when the imports entered the United States, only when the firm submitted the purchase orders. Thus, all the purchase cost data for product 1 from *** appears in Q1 for each year it had purchases ***. For additional information ***, see Part IV of this report.

[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.

Firms were also asked whether the import costs (both excluding and including additional costs) of tungsten shot they imported are lower than the price of purchasing tungsten shot from a U.S. producer or importer. One importer, ***, estimated that it saved *** percent of the purchase price by importing tungsten shot directly rather than purchasing from a U.S. importer.[7]

Table V-4
Tungsten shot: Weighted-average f.o.b. prices and quantities of domestic and imported product 1, and margins of underselling/(overselling), by source and quarter

Quantity in pounds; prices in dollars per pound; margins in percent

Period	U.S. price	U.S. quantity	China price	China quantity	China margin	China unit LDP value	China cost quantity	China 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	***	***	***	***	***	***	***	***
2024 Q1	***	***	***	***	***	***	***	***

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

Note: Product 1: Tungsten Class 3 shot, #9 Dia 2.01mm.

[7] One firm, ***, reported that it had based its estimates on previous company transactions.

Figure V-1
Tungsten shot: Weighted-average f.o.b. 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: Tungsten Class 3 shot, #9 Dia 2.01mm.

Table V-5
Tungsten shot: Weighted-average f.o.b. prices and quantities of domestic and imported product 2, and margins of underselling/(overselling), by source and quarter

Quantity in pounds; prices in dollars per pound; margins in percent

Period	U.S. price	U.S. quantity	China price	China quantity	China margin	China unit LDP value	China cost quantity	China 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	***	***	***	***	***	***	***	***
2024 Q1	***	***	***	***	***	***	***	***

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

Note: Product 2: Tungsten Class 3 shot, #7 Dia 2.5mm

Figure V-2
Tungsten shot: Weighted-average f.o.b. 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: Tungsten Class 3 shot, #7 Dia 2.5mm

Table V-6
Tungsten shot: Weighted-average f.o.b. prices and quantities of domestic and imported product 3, and margins of underselling/(overselling), by source and quarter

Quantity in pounds; prices in dollars per pound; margins in percent

Period	U.S. price	U.S. quantity	China price	China quantity	China margin	China unit LDP value	China cost quantity	China 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	***	***	***	***	***	***	***	***
2024 Q1	***	***	***	***	***	***	***	***

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

Note: Product 3: Tungsten Class 3 shot, #10 Dia 1.8mm

Figure V-3
Tungsten shot: Weighted-average f.o.b. prices and quantities of domestic and imported product 3, by source and quarter

Price of product 3

* * * * * * *

Volume of product 3

* * * * * * *

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

Note: Product 3: Tungsten Class 3 shot, #10 Dia 1.8mm

Price and purchase cost trends

In general, prices increased for Chinese subject products and decreased for domestic subject products during January 2021 through March 2024. Table V-7 summarizes the price trends, by country and by product. As shown in the table, domestic price decreases ranged from *** to *** percent from the second and third quarters of 2023 through March 2024, while import price increases ranged from *** to *** percent. Landed duty-paid costs increases ranged from *** to *** percent.

Table V-8 and figure V-4 present indexed U.S. importer prices of tungsten shot, by quarter.

Table V-7
Tungsten shot: Summary of price and purchase cost data, by product and source, January 2021 through March 2024

Prices and unit LDP values in dollars per pound; quantity in pounds; change in percent

Product	Source	Number of quarters	Quantity	Low price	High price	First quarter price	Last quarter price	Quarterly change from first to last available quarter (percent)	Change over period
Product 1	United States	***	***	***	***	***	***	***	***
Product 1	China price	***	***	***	***	***	***	***	***
Product 1	China cost	***	***	***	***	***	***	***	***
Product 2	United States	***	***	***	***	***	***	***	***
Product 2	China price	***	***	***	***	***	***	***	***
Product 2	China cost	***	***	***	***	***	***	***	***
Product 3	United States	***	***	***	***	***	***	---	***
Product 3	China price	***	***	***	***	***	***	***	***
Product 3	China 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. Percent change is the change from the first quarter to the last quarter of the data collection period.

Table V-8
Tungsten shot: Indexed subject U.S. importer prices, by quarter

Indexed prices in percent

Period	Product 1	Product 2	Product 3
2021 Q1	100.0	100.0	100.0
2021 Q2	***	***	***
2021 Q3	***	***	***
2021 Q4	***	***	***
2022 Q1	***	***	***
2022 Q2	***	***	***
2022 Q3	***	***	***
2022 Q4	***	***	***
2023 Q1	***	***	***
2023 Q2	***	***	***
2023 Q3	***	***	***
2023 Q4	***	***	***
2024 Q1	***	***	***

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

Figure V-4
Tungsten shot: Indexed subject U.S. importer prices, by quarter

* * * * * * *

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

Price and purchase cost comparisons

Price comparisons

As shown in tables V-9 to V-10, prices for product imported from China were below those for U.S.-produced product in 6 of 7 instances where comparisons are available (*** pounds); margins of underselling ranged from *** to *** percent. In the remaining instance (*** pounds), prices for product from China were *** percent above prices for the domestic product.

Table V-9
Tungsten shot: Instances and quantities of underselling/overselling and the range and average of margins, by product

Quantity in pounds; margins in percent

Products	Type	Number of quarters	Quantity	Average margin	Min margin	Max margin
Product 1	Underselling	3	***	***	***	***
Product 2	Underselling	2	***	***	***	***
Product 3	Underselling	1	***	***	***	***
All products	Underselling	6	***	***	***	***
Product 1	Overselling	---	***	***	***	***
Product 2	Overselling	1	***	***	***	***
Product 3	Overselling	---	***	***	***	***
All products	Overselling	1	***	***	***	***

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

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

Table V-10
Tungsten shot: Instances and quantities of underselling/overselling and the range and average of margins, by period

Quantity in pounds; margins in percent

Period	Type	Number of quarters	Quantity	Average margin	Min margin	Max margin
2021	Underselling	---	***	***	***	***
2022	Underselling	---	***	***	***	***
2023	Underselling	4	***	***	***	***
Jan-Mar 2024	Underselling	2	***	***	***	***
All periods	Underselling	6	***	***	***	***
2021	Overselling	---	***	***	***	***
2022	Overselling	---	***	***	***	***
2023	Overselling	---	***	***	***	***
Jan-Mar 2024	Overselling	1	***	***	***	***
All periods	Overselling	1	***	***	***	***

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.

Price-cost comparisons

Landed duty-paid costs for tungsten shot imported from China were below the sales price for U.S.-produced product in a single instance during January - March 2024 (*** pounds); the price-cost differential was *** percent.

Lost sales and lost revenue

The Commission requested that the U.S. producer of tungsten shot report purchasers with which it experienced instances of lost sales or revenue due to competition from imports of tungsten shot from China during January 2021 through March 2024. The single responding U.S. producer reported that it had to ***. The U.S. producer submitted lost sales and lost revenue allegations. The U.S. producer identified *** firms with which it lost sales or revenue (***). All were reported to have occurred in 2023.

Staff contacted four purchasers and received responses from two purchasers. Responding purchasers reported purchasing and importing *** pounds of tungsten shot during January 2021 through March 2024 (table V-11). Neither purchaser reported purchases from domestic producers nor ***.

Of the two responding purchasers, both reported that, since 2021, they had purchased imported tungsten shot from China instead of U.S.-produced product. Purchaser ***

reported that subject import prices were lower than U.S.-produced product but reported that price was not a primary reason for the decision to purchase imported product rather than U.S.-produced product (table V-12). Purchaser *** reported that once they became aware of domestic tungsten shot in 2023 it was ***. *** reported that the non-price reason for purchasing imported rather than U.S.-produced product was that the ***.

Of the two responding purchasers, *** reported that the U.S. producer had not reduced prices in order to compete with lower-priced imports from China; while *** reported that it did not know.

Table V-11
Tungsten shot: U.S. purchasers' reported purchases and imports, by firm and source

Quantity in pounds; change in share in percentage points

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

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

Table V-12
Tungsten shot: U.S. purchasers' responses to purchasing subject imports instead of domestic product, by firm

Quantity in pounds

Firm	Purchased subject imports instead of domestic	Imports priced lower	Choice based on price	Quantity	Narrative on reasons for purchasing imports
***	***	***	***	***	***
***	***	***	***	***	***
All firms	Yes--2; No--0	Yes--1; No--1	Yes--0; No--2	***	

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

Changes in purchasing patterns

Purchasers were also asked about changes in their purchasing patterns from different countries since January 1, 2021 (table V-13). Both purchasers reported increases in purchases of Chinese product.

Table V-13
Tungsten shot: Count of 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	***	***	***	***	***	***
China	***	***	***	***	***	***
All other sources	***	***	***	***	***	***
Sources unknown	***	***	***	***	***	***

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

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

Background[1]

One U.S. producer, TPW, provided usable financial results on its tungsten shot operations. It reported financial data for a fiscal year ending December 31.[2] TPW reported its financial data on the basis of ***. TPW commissioned its factory in 2019 for the production of out-of-scope products.[3] TPW began commercial production of in-scope tungsten shot at its Laramie, Wyoming plant on *** 2023.[4]

Operations on tungsten shot

Table VI-1 presents data on the U.S. producer's operations in relation to tungsten shot, while table VI-2 presents corresponding fixed and variable costs.[5]

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

[2] The trade and financial sections reconciled.

[3] Out-of-scope products include the production of tungsten cubes that are primarily for the U.S. Department of Defense ("DoD") and utilized in shooting down drones. Conference transcript, pp. 10, 78 (Omanoff). Additionally, for out-of-scope products, TPW is one of the largest producers for the precision strike missile program and the Guided Multiple Launch Rocket System that goes to Northrop Grumman and Lockheed Martin for DoD-specified military-grade material. Conference transcript, p. 31 (Omanoff).

[4] Conference transcript, pp. 8, 10 (Omanoff), 17 (Gibbs); U.S. producer questionnaire responses to questions I-2a and V-1. TPW currently produces in-scope tungsten shot, which accounted for *** percent of the share of its net sales in 2023. It also produces tungsten cubes and other out-of-scope tungsten shot products, which accounted for *** percent of net sales in 2023. U.S. producer questionnaire response to question III-4.

[5] ***. Email from ***, August 12, 2024.

Table VI-1
Tungsten shot: U.S. producer's results of operations, by item and period

Quantity in pounds; value in dollars; ratios in percent

Item	Measure	2021	2022	2023	Jan-Mar 2023	Jan-Mar 2024
Total net sales	Quantity	---	---	***	***	***
Total net sales	Value	---	---	***	***	***
COGS: Raw materials	Value	---	---	***	***	***
COGS: Direct labor	Value	---	---	***	***	***
COGS: Other factory	Value	---	---	***	***	***
COGS: Total	Value	---	---	***	***	***
Gross profit or (loss)	Value	---	---	***	***	***
SG&A expenses	Value	---	---	***	***	***
Operating income or (loss)	Value	---	---	***	***	***
Interest expense	Value	---	---	***	***	***
All other expenses	Value	---	---	***	***	***
All other income	Value	---	---	***	***	***
Net income or (loss)	Value	---	---	***	***	***
Depreciation/amortization	Value	---	---	***	***	***
Estimated cash flow	Value	---	---	***	***	***
COGS: Raw materials	Ratio to NS	---	---	***	***	***
COGS: Direct labor	Ratio to NS	---	---	***	***	***
COGS: Other factory	Ratio to NS	---	---	***	***	***
COGS: Total	Ratio to NS	---	---	***	***	***
Gross profit	Ratio to NS	---	---	***	***	***
SG&A expense	Ratio to NS	---	---	***	***	***
Operating income or (loss)	Ratio to NS	---	---	***	***	***
Net income or (loss)	Ratio to NS	---	---	***	***	***

Table continued.

Table VI-1 Continued
Tungsten shot: U.S. producer's results of operations, by item and period

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

Item	Measure	2021	2022	2023	Jan-Mar 2023	Jan-Mar 2024
COGS: Raw materials	Share	---	---	***	***	***
COGS: Direct labor	Share	---	---	***	***	***
COGS: Other factory	Share	---	---	***	***	***
COGS: Total	Share	---	---	***	***	***
Total net sales	Unit value	---	---	***	***	***
COGS: Raw materials	Unit value	---	---	***	***	***
COGS: Direct labor	Unit value	---	---	***	***	***
COGS: Other factory	Unit value	---	---	***	***	***
COGS: Total	Unit value	---	---	***	***	***
Gross profit or (loss)	Unit value	---	---	***	***	***
SG&A expenses	Unit value	---	---	***	***	***
Operating income or (loss)	Unit value	---	---	***	***	***
Net income or (loss)	Unit value	---	---	***	***	***
Operating losses	Count	---	---	***	***	***
Net losses	Count	---	---	***	***	***
Data	Count	---	---	***	***	***

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

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

Table VI-2
Tungsten shot: U.S. producer's variable and fixed costs in 2023, by type and classification

Value in dollars; share in percent

Item	Measure	COGS	SG&A	Total operating expenses
Variable costs	Value	***	***	***
Fixed costs	Value	***	***	***
Variable and fixed costs	Value	***	***	***
Variable costs	Share	***	***	***
Fixed costs	Share	***	***	***
Variable and fixed costs	Share	100.0	100.0	100.0

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

Net sales

Total net sales were *** pounds and $*** in 2023 and *** pounds and $*** in the quarter from January to March 2024 ("interim 2024"). *** from January to March 2023. The unit values were $*** per pound in 2023 and $*** per

pound in interim 2024. The industry totals reflected the nature of a firm that began production within the period for which data were requested.

Cost of goods sold and gross profit or loss

Raw material costs were the largest component of COGS in 2023 and interim 2024, accounting for *** percent in 2023 and *** percent in interim 2024. On a per-pound basis, raw material costs were $*** in 2023 and $*** in interim 2024; as a ratio to total net sales, raw material costs were *** percent in 2023 and *** in interim 2024.[6]

Of the raw materials, tungsten is the highest cost, followed by nickel.[7] Also utilized are iron, which is of lower cost, and a binding agent that is proprietary.[8] Table VI-3 presents raw material costs in 2023, by type. Tungsten is the largest of raw material inputs (accounting for *** percent of cost, followed by nickel, iron, and other metals (which accounted for *** percent of cost), followed by binding agent (which accounted for *** percent of cost) in 2023.[9]

Tungsten shot is comprised of 95 percent tungsten, and the leading source of the tungsten raw material globally is China.[10] TPW states that China controls tungsten cost and it controls 85 percent of the global supply of tungsten.[11] Additionally, there is no production in the United States, which makes raw material sourcing more challenging.[12] TPW has sources of tungsten from Austria and Bolivia.[13]

In the process of making tungsten shot, there is a small amount of byproduct of a mixture of steel and tungsten produced that is made into a cake called swarf.[14] It is sold in the commercial market.[15] A ceramic media is also used in the production of tungsten shot that is sold as a sand-blasting media.[16] In 2023, the recycled swarf and sand represented less than *** percent of sales values.[17]

[6] This largely reflects the notable higher net sales AUV in interim 2024 compared to full year 2023.
[7] Conference transcript, p. 77 (Omanoff).
[8] Conference transcript, p. 77 (Omanoff).
[9] ***. Email from ***, August 12, 2024.
[10] Conference transcript, p. 83 (Omanoff).
[11] Conference transcript, pp. 76, 83 (Omanoff). TPW states that China dominates the market and has established a price level that is below raw material costs. Conference transcript, p. 11 (Omanoff).
[12] Conference transcript, pp. 75-76, 83 (Omanoff).
[13] Conference transcript, p. 83 (Omanoff).
[14] Conference transcript, pp. 81, 88 (Omanoff); 87 (Gibbs).
[15] Conference transcript, p. 88 (Omanoff).
[16] Conference transcript, p. 89 (Gibbs).
[17] Petitioner's postconference brief, exh. 1, p. 18.

Table VI-3
Tungsten shot: U.S. producer's raw material costs in 2023

Value in dollars; unit values in dollars per pound; share of value in percent

Item	Value	Unit value	Share of value
Tungsten	***	***	***
Nickel, iron, other metals	***	***	***
Binding agent	***	***	***
Other material inputs	***	***	***
All raw materials	***	***	100.0

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

The second largest component of COGS, direct labor, accounted for *** percent in 2023 and *** percent of total COGS in interim 2024. On a per-pound basis, direct labor costs were $*** in 2023 and $*** in interim 2024. As a ratio to total net sales, direct labor was *** percent in 2023 and *** in interim 2024 (see note 19). TPW notes that employees have different and specialized training on in-scope tungsten shot product compared to other, out-of-scope products manufactured at the plant.[18]

The smallest component of COGS, other factory costs, accounted for *** percent of COGS in 2023 and *** percent of COGS in interim 2024. On a per-pound basis, other factory costs were $*** in 2023 and $*** in interim 2024. As a ratio to total net sales, other factory costs were *** percent in 2023 and *** in interim 2024.[19] Factory maintenance includes heating a furnace to 5,000 degrees using hydrogen and nitrogen gases, and the equipment heated to such high temperatures needs to be repaired and maintained. Additionally, plates used in grinding operations wear out and must be re-sharpened.[20]

Total COGS values were $*** in 2023 and $*** in interim 2024, and total COGS unit values were $*** in 2023 and $*** in interim 2024 on a per-pound basis. As a ratio to net sales, COGS was *** percent in 2023 and *** percent in interim 2024. As shown in table VI-1, the industry reported *** in 2023 and *** in interim 2024. Table VI-2 presents fixed and variable costs, and COGS had a value of $*** in 2023, of which *** percent was variable and *** percent was fixed.

[18] Conference transcript, p. 47 (Omanoff).
[19] ***. Email from ***, August 12, 2024 and August 17, 2024.
[20] Conference transcript, p. 90 (Omanoff).

TPW characterizes tungsten shot as a high fixed cost and capital-intensive industry,[21] which is pertinent to its ability to generate a profit. The firm stated that it has not yet reached a reasonable breakeven point and consistently lost money due to ***.[22] For the year 2023, TPW would have had to produce *** pounds of tungsten shot, based on the standard breakeven formula.[23] The quantity it would have had to produce was within its production capability, as its practical tungsten shot capacity for 2023 was *** pounds.[24]

SG&A expenses and operating income or loss

The U.S. producer's SG&A expenses were $*** in 2023 and $*** in interim 2024; the ratio of SG&A expenses to total net sales was *** percent in 2023 and *** percent in interim 2024, while SG&A expenses on a per-pound basis were $*** in 2023 and $*** in interim 2024. Table VI-2 presents fixed and variables costs, and for SG&A expenses, *** percent were variable and *** percent were fixed in 2023.

The industry reported *** in 2023 and an *** in interim 2024. The industry's operating income ratio reflected the underlying value data, at *** percent in 2023 and *** percent in interim 2024. The per-pound value of operating income or loss was *** in 2023 and *** in interim 2024.

All other expenses and net income or loss

Table VI-1 presents interest expense, other expense, and other income, which are classified below the operating income level and often allocated to the product line from high levels in the corporation. ***.[25]

[21] Conference transcript, pp. 47, 90 (Omanoff).

[22] Petitions, pp. 16-18; U.S. producer questionnaire response to question V-12; Petitioner's postconference brief, pp. 20-22.

[23] The calculation made by staff was based on the per-unit fixed and variable operating costs presented in table VI-2 and represents the standard breakeven formula used in cost accounting. The total fixed costs were divided by the per-unit sales value minus the per-unit variable costs. The costs are based on actual costs and actual quantities sold for 2023.

[24] U.S. producer questionnaire response to question II-3a. TPW actually commercially produced *** pounds.

[25] ***

(*continued*...)

The industry's net income was *** in 2023 and *** in interim 2024.[26]

Capital expenditures and research and development expenses

Table VI-4 presents capital expenditures and R&D expenses. Tables VI-5 presents the firm's narrative explanations of the nature, focus, and significance of its capital expenditures and R&D expenses. For capital expenditures, there were $*** in 2023 and $*** for interim 2024.[27] For R&D expenses, there were *** for 2023 and interim 2024.

Table VI-4
Tungsten shot: U.S. producer's capital expenditures and R&D expenses, by period

Value in 1,000 dollars

Firm	2021	2022	2023	Jan-Mar 2023	Jan-Mar 2024
Capital expenditures	***	***	***	***	***
R&D expenses	***	***	***	***	***

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

Table VI-5
Tungsten shot: U.S. producer's narrative descriptions of its capital expenditures and R&D expenses, by item

Item	Narrative on capital expenditures and R&D expenses
Capital expenditures	***[28]
R&D expenses	***

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

***. Email from ***, August 12, 2024. ***. Email from ***, August 17, 2024.

[26] A variance analysis is not presented here because ***.

[27] TPW ***. U.S. producer questionnaire responses to questions II-2a, V-6, and V-8.

[28] ***. Email from ***, August 12, 2024.

Assets and return on assets

Table VI-6 presents data on the U.S. producer's total assets and its operating ROA.[29] Table VI-7 presents U.S. producer's narrative responses explaining their major asset categories and any significant changes in asset levels over time. For assets in the industry, there was *** for 2023.[30]

Table VI-6
Tungsten shot: U.S. producer's total net assets and return on assets, by period

Value in 1,000 dollars

Firm	2021	2022	2023
Total net assets	***	***	***
Return on assets	***	***	***

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

Table VI-7
Tungsten shot: U.S. producer's narrative descriptions of its total net assets

Item	Narrative on assets
Total net assets	***

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

[29] The operating ROA is calculated as operating income divided by total assets. With respect to a firm's overall operations, the total asset value reflects an aggregation of a number of assets which are generally not product specific. Thus, high-level allocations are generally required in order to report a total asset value on a product-specific basis.

[30] ***. U.S. producer questionnaire response to question III-12b.

Capital and investment

The Commission requested the U.S. producer of tungsten shot to describe any actual or potential negative effects of imports of tungsten shot from China on the firm's growth, investment, ability to raise capital, development and production efforts, or the scale of capital investments. Table VI-8 presents the impact in each category and table VI-9 provides the U.S. producer's narrative responses.[31]

Table VI-8
Tungsten shot: U.S. producer's 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.

Table VI-9
Tungsten shot: U.S. producer's narratives relating to actual and anticipated negative effects of imports on investment, growth, and development, since January 1, 2021, by effect

Item	Firm name and narrative on impact of imports
Anticipated effects of imports	***

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

Note: TPW only provided a narrative explanation for anticipated impact of imports and not the impact of imports during the period.

[31] ***. Email from ***, August 12, 2024.

Part VII: Threat considerations and information on nonsubject countries

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

> *In determining whether an industry in the United States is threatened with material injury by reason of imports (or sales for importation) of the subject merchandise, the Commission shall consider, among other relevant economic factors*[1]*--*
>
> *(I) if a countervailable subsidy is involved, such information as may be presented to it by the administering authority as to the nature of the subsidy (particularly as to whether the countervailable subsidy is a subsidy described in Article 3 or 6.1 of the Subsidies Agreement), and whether imports of the subject merchandise are likely to increase,*
>
> *(II) any existing unused production capacity or imminent, substantial increase in production capacity in the exporting country indicating the likelihood of substantially increased imports of the subject merchandise into the United States, taking into account the availability of other export markets to absorb any additional exports,*
>
> *(III) a significant rate of increase of the volume or market penetration of imports of the subject merchandise indicating the likelihood of substantially increased imports,*
>
> *(IV) whether imports of the subject merchandise are entering at prices that are likely to have a significant depressing or suppressing effect on domestic prices, and are likely to increase demand for further imports,*
>
> *(V) inventories of the subject merchandise,*

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

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

(VII) in any investigation under this title which involves imports of both a raw agricultural product (within the meaning of paragraph (4)(E)(iv)) and any product processed from such raw agricultural product, the likelihood that there will be increased imports, by reason of product shifting, if there is an affirmative determination by the Commission under section 705(b)(1) or 735(b)(1) with respect to either the raw agricultural product or the processed agricultural product (but not both),

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

(IX) any other demonstrable adverse trends that indicate the probability that there is likely to be material injury by reason of imports (or sale for importation) of the subject merchandise (whether or not it is actually being imported at the time).[2]

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

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

The industry in China

The Commission issued foreign producers' or exporters' questionnaires to 30 firms believed to produce and/or export tungsten shot from China.[3] Usable responses to the Commission's questionnaire were received from two firms: Luoyang Combat Tungsten & Molybdenum Material Co., Ltd. ("Luoyang") and Zhuzhou KJ Super Materials Co., Ltd. ("Zhuzhou"). These two firms' exports as a share of total U.S. imports of tungsten shot in 2023 is presently unknown.[4] Table VII-1 presents information on the tungsten shot operations of the responding producers and exporters in China.

Table VII-1
Tungsten shot: Summary data for producers in China, by firm, 2023

Producers	Production (pounds)	Share of reported production (percent)	Exports to the United States (pounds)	Share of reported exports to the United States (percent)	Total shipments (pounds)	Share of firm's total shipments exported to the United States (percent)
Luoyang	***	***	***	***	***	***
Zhuzhou	***	***	***	***	***	***
All individual producers	***	100.0	***	100.0	***	***

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

Industry events

There were no major developments in the Chinese industry since January 2021 identified by the petitioner and no relevant information from outside sources was found.

[3] These firms were identified through a review of information submitted in the petitions and presented in third-party sources.

[4] According to estimates provided by these firms, they accounted for approximately *** percent of tungsten shot production in China in 2023 and accounted for approximately *** percent of exports of tungsten shot from China to the United States in 2023. Petitioner disagrees with foreign producers'/exporters' estimates ***. Petitioner's postconference brief, exh. 1. p. 7. Due to the discrepancy in estimates between petitioner and the responding subject producers/exporters, a coverage figure could not be presently calculated. For a detailed discussion on tungsten shot export/import estimates, please see note 7 in Part IV of this report.

Changes in operations

Producers in China were asked to report any change in the character of their operations or organization relating to the production of tungsten shot since 2021. *** reported experiencing such changes. Table VII-2 presents the reported changes.

Table VII-2
Tungsten shot: Reported changes in operations in China since January 1, 2021, by reported change category and firm

Item	Firm name and accompanying narrative response regarding changes in operations
Relocations	***

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

Operations on tungsten shot

Table VII-3 presents data on subject foreign producers' installed and practical capacity and production on the same equipment as in-scope tungsten shot. Installed overall capacity remained consistent at *** pounds during 2021-23 and was at *** pounds in both January-March 2023 and January-March 2024. Similarly, practical overall capacity remained consistent at *** pounds during 2021-23 and was at *** pounds in both January-March 2023 and January-March 2024. Practical overall production, however, decreased by *** percent from *** pounds in 2021 to *** pounds in 2023. Practical overall production was lower in January-March 2024 (***) compared with January-March 2023 (***). Consequently, practical overall utilization decreased from *** percent in 2021 to *** percent in 2023 and it was lower in January-March 2024 (*** percent) compared with January-March 2023 (*** percent).

Table VII-3
Tungsten shot: China producers' installed and practical capacity and production on the same equipment as in-scope production, by period

Capacity and production in pounds; utilization in percent

Item	Measure	2021	2022	2023	Jan-Mar 2023	Jan-Mar 2024
Installed overall	Capacity	***	***	***	***	***
Installed overall	Production	***	***	***	***	***
Installed overall	Utilization	***	***	***	***	***
Practical overall	Capacity	***	***	***	***	***
Practical overall	Production	***	***	***	***	***
Practical overall	Utilization	***	***	***	***	***
Practical Tungsten shot	Capacity	***	***	***	***	***
Practical Tungsten shot	Production	***	***	***	***	***
Practical Tungsten shot	Utilization	***	***	***	***	***

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 VII-4 presents subject foreign producers' reported capacity constraints since January 1, 2021.

Table VII-4
Tungsten shot: China producers' reported constraints to practical overall capacity, since January 1, 2021

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

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

Table VII-5 presents information on the tungsten shot operations of the responding producers and exporters in China. Subject producers' practical tungsten shot capacity increased by *** percent from *** pounds in 2021 to *** pounds in 2023. Tungsten shot production, however, decreased by *** percent from *** pounds in 2021 to *** pounds in 2023. Although capacity increased during 2021-23, the decrease in production resulted in lower capacity utilization during the periods examined. Utilization decreased by *** percentage points from *** percent in 2021 to *** percent in 2023. Capacity, production, and utilization were all lower in January-March 2024 compared with January-March 2023. Capacity and production were *** percent and *** percent, respectively, lower in January-March 2024 compared with January-March 2023. The 2024 and 2025 projections from capacity, production, utilization, and other metrics ***.[5]

Exports to the United States accounted for the vast majority of subject producers' total shipments during 2021-23.[6] In 2021, subject producers exported *** pounds, *** percent of total shipments, to the United States. In 2022, they exported *** pounds, *** percent of total shipments, to the United States. In 2023, they exported *** pounds, *** percent of total shipments, to the United States. During January-March 2023, subject producers' exports to the United States accounted for *** percent of total shipments and in January-March 2024 they accounted for *** percent.

Subject producers' end-of-period inventories irregularly decreased by *** percent from *** pounds in 2021 to *** pounds in 2023. Inventories were lower in January-March 2024 compared with January-March 2023. Similarly, the ratio of inventories to production irregularly decreased by *** percentage points from *** percent in 2021 to *** percent in 2023; the ratio was lower in January-March 2024 compared with January-March 2023.

[5] Responding producers in China ***.

[6] Home market shipments accounted for between *** percent and *** percent of subject producers total shipments during 2021-23. Exports to all other markets accounted for between *** percent and *** percent during 2021-23. These other market sources were identified as ***.

Table VII-5
Tungsten shot: Data on producers in China, by item and period

Quantity in pounds

Item	2021	2022	2023	Jan-Mar 2023	Jan-Mar 2024	Projection 2024	Projection 2025
Capacity	***	***	***	***	***	***	***
Production	***	***	***	***	***	***	***
End-of-period inventories	***	***	***	***	***	***	***
Internal consumption	***	***	***	***	***	***	***
Commercial home market shipments	***	***	***	***	***	***	***
Home market shipments	***	***	***	***	***	***	***
Exports to the United States	***	***	***	***	***	***	***
Exports to all other markets	***	***	***	***	***	***	***
Export shipments	***	***	***	***	***	***	***
Total shipments	***	***	***	***	***	***	***

Table continued.

Table VII-5 Continued
Tungsten shot: Data on producers in China, by item and period

Ratio and share in percent

Item	2021	2022	2023	Jan-Mar 2023	Jan-Mar 2024	Projection 2024	Projection 2025
Capacity utilization ratio	***	***	***	***	***	***	***
Inventory ratio to production	***	***	***	***	***	***	***
Inventory ratio to total shipments	***	***	***	***	***	***	***
Internal consumption share	***	***	***	***	***	***	***
Commercial home market shipments share	***	***	***	***	***	***	***
Home market shipments share	***	***	***	***	***	***	***
Exports to the United States share	***	***	***	***	***	***	***
Exports to all other markets share	***	***	***	***	***	***	***
Export shipments share	***	***	***	***	***	***	***
Total shipments share	100.0	100.0	100.0	100.0	100.0	100.0	100.0

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

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

Alternative products

*** reported production of out-of-scope products on the same equipment and machinery used to produce tungsten shot (table VII-6). *** reported producing out-of-scope tungsten shot and other products on the same equipment.[7] In terms of other products, ***. Out-of-scope production accounted for between *** percent and *** percent of total production on the same equipment during 2021-23. Out-of-scope production irregularly decreased by *** percent from *** pounds in 2021 to *** pounds in 2023. It was higher in January-March 2024 (*** pounds) compared with January-March 2023 (*** pounds).

Table VII-6
Tungsten shot: China producers' overall production on the same equipment as in-scope production, by product type and period

Quantity in pounds; shares in percent

Product type	Measure	2021	2022	2023	Jan-Mar 2023	Jan-Mar 2024
In-scope tungsten shot	Quantity	***	***	***	***	***
Out-of-scope tungsten shot	Quantity	***	***	***	***	***
Other shot (steel, lead, other)	Quantity	***	***	***	***	***
Other products	Quantity	***	***	***	***	***
All out-of-scope products	Quantity	***	***	***	***	***
All products	Quantity	***	***	***	***	***
In-scope tungsten shot	Share	***	***	***	***	***
Out-of-scope tungsten shot	Share	***	***	***	***	***
Other shot (steel, lead, other)	Share	***	***	***	***	***
Other products	Share	***	***	***	***	***
All out-of-scope products	Share	***	***	***	***	***
All products	Share	100.0	100.0	100.0	100.0	100.0

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

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

[7] Out-of-scope tungsten shot is defined as merchandise that would otherwise match the definition of tungsten shot but whose tungsten content is less than 92.6 percent tungsten content but greater than or equal to 90 percent, these tungsten alloys are often referred to as Class 1 or Class 2 tungsten.

Exports

According to Global Trade Atlas ("GTA"), the leading export markets for air gun pellets and parts of shotgun cartridges, including certain tungsten shot, from China are Italy and the United States (table VII-7). In 2023, Italy was the top export market destination for product from China, accounting for 87.2 percent of China's total exports by quantity. The United States was in second place, accounting for 7.1 percent of China's total exports by quantity.

Table VII-7
Air gun pellets and parts of shotgun cartridges: Exports from China, by destination market and by period

Quantity in pounds; value in dollars

Destination market	Measure	2021	2022	2023
United States	Quantity	---	3,450	12,414
Italy	Quantity	186,352	120,485	151,325
Germany	Quantity	4,738	624	5,141
Czech Republic	Quantity	2,529	---	4,755
United Kingdom	Quantity	441	886	---
Spain	Quantity	11,023	---	---
United Arab Emirates	Quantity	1,261	---	---
All destination markets	Quantity	206,344	125,445	173,636
United States	Value	---	11,674	12,582
Italy	Value	346,736	323,294	577,715
Germany	Value	48,249	3,325	49,788
Czech Republic	Value	12,478	---	37,873
United Kingdom	Value	7,369	9,120	---
Spain	Value	13,361	---	---
United Arab Emirates	Value	74,817	---	---
All destination markets	Value	503,011	347,412	677,958

Table continued.

Table VII-7 Continued
Air gun pellets and parts of shotgun cartridges: Exports from China, by destination market and by period

Unit values in dollars per pound; shares in percent

Destination market	Measure	2021	2022	2023
United States	Unit value	---	3.38	1.01
Italy	Unit value	1.86	2.68	3.82
Germany	Unit value	10.18	5.33	9.68
Czech Republic	Unit value	4.93	---	7.96
United Kingdom	Unit value	16.71	10.29	---
Spain	Unit value	1.21	---	---
United Arab Emirates	Unit value	59.33	---	---
All destination markets	Unit value	2.44	2.77	3.90
United States	Share of quantity	---	2.8	7.1
Italy	Share of quantity	90.3	96.0	87.2
Germany	Share of quantity	2.3	0.5	3.0
Czech Republic	Share of quantity	1.2	---	2.7
United Kingdom	Share of quantity	0.2	0.7	---
Spain	Share of quantity	5.3	---	---
United Arab Emirates	Share of quantity	0.6	---	---
All destination markets	Share of quantity	100.0	100.0	100.0

Source: Official exports statistics under HS subheading 9306.29 as reported by China Customs in the Global Trade Atlas database, accessed July 30, 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-8 presents data on U.S. importers' reported inventories of tungsten shot. *** importers' inventories of tungsten shot from nonsubject sources ***. Importers' inventories of tungsten shot from China decreased by *** percent from *** pounds in 2021 to *** pounds in 2023. Importers' inventories of tungsten shot from China were lower in January-March 2024 compared with January-March 2023. The ratio of subject inventories to total shipments of imports ranged between *** and *** percent during 2021-23; they were lower in January-March 2024 compared with January-March 2023.

Table VII-8
Tungsten shot: U.S. importers' inventories and their ratio to select items, by source and period

Quantity in pounds; ratio in percent

Measure	Source	2021	2022	2023	Jan-Mar 2023	Jan-Mar 2024
Inventories quantity	China	***	***	***	***	***
Ratio to imports	China	***	***	***	***	***
Ratio to U.S. shipments of imports	China	***	***	***	***	***
Ratio to total shipments of imports	China	***	***	***	***	***
Inventories quantity	Nonsubject	***	***	***	***	***
Ratio to imports	Nonsubject	***	***	***	***	***
Ratio to U.S. shipments of imports	Nonsubject	***	***	***	***	***
Ratio to total shipments of imports	Nonsubject	***	***	***	***	***
Inventories quantity	All	***	***	***	***	***
Ratio to imports	All	***	***	***	***	***
Ratio to U.S. shipments of imports	All	***	***	***	***	***
Ratio to total shipments of imports	All	***	***	***	***	***

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

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

U.S. importers' outstanding orders

The Commission requested importers to indicate whether they imported or arranged for the importation of tungsten shot from China after June 30, 2024. Their reported data is presented in table VII-9. In total, *** pounds of tungsten shot have been arranged to be imported into the United States during April 1, 2024 through March 31, 2025, ***.

Table VII-9
Tungsten shot: U.S. importers' arranged imports, by source and period

Quantity in pounds

Source	Apr-Jun 2024	Jul-Sep 2024	Oct-Dec 2024	Jan-Mar 2025	Total
China	***	***	***	***	***
Nonsubect sources	***	***	***	***	***
All import sources	***	***	***	***	***

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 "---."

Third-country trade actions

According to the petitioner, there are no known trade remedy actions on tungsten shot from China in third-country markets.[8] Likewise, no importer or foreign producer identified any third-country trade actions in their questionnaire responses. Moreover, industry research failed to reveal any such actions.

Information on nonsubject countries

According to GTA, the leading exporters of air gun pellets and parts of shot gun cartridge, including certain tungsten shot, are predominantly Western European countries (table VII-10). During 2023, Italy was the top exporter, accounting for 21.0 percent of the total global export value, followed by France (18.7 percent), Turkey (16.6 percent), and Spain (8.9 percent). The United States was the fifth largest exporter, accounting for 7.3 percent in that year.

[8] Petitioner's postconference brief, exh. 1, p. 3; conference transcript, p. 29 (Pickard).

Table VII-10
Air gun pellets and parts of shotgun cartridges: Global exports by exporter and period

Value in dollars; shares in percent

Exporting country	Measure	2021	2022	2023
United States	Value	8,982,538	16,278,737	20,573,422
China	Value	10,002,180	7,409,419	6,449,011
Italy	Value	49,604,457	51,360,098	59,622,144
France	Value	42,387,827	42,109,918	52,939,524
Turkey	Value	35,949,938	45,193,152	46,989,715
Spain	Value	18,538,361	20,284,685	25,365,652
Germany	Value	21,205,869	19,301,252	19,761,096
Czech Republic	Value	11,596,242	13,382,305	14,457,645
Greece	Value	13,000,015	12,105,769	10,894,228
Peru	Value	5,382,444	5,811,290	5,165,474
Egypt	Value	---	---	3,606,300
Serbia	Value	257,306	74,500	3,533,036
All other exporters	Value	18,820,756	48,810,048	14,307,105
All reporting exporters	Value	235,727,933	282,121,173	283,664,352
United States	Share of value	3.8	5.8	7.3
China	Share of value	4.2	2.6	2.3
Italy	Share of value	21.0	18.2	21.0
France	Share of value	18.0	14.9	18.7
Turkey	Share of value	15.3	16.0	16.6
Spain	Share of value	7.9	7.2	8.9
Germany	Share of value	9.0	6.8	7.0
Czech Republic	Share of value	4.9	4.7	5.1
Greece	Share of value	5.5	4.3	3.8
Peru	Share of value	2.3	2.1	1.8
Egypt	Share of value	0.0	0.0	1.3
Serbia	Share of value	0.1	0.0	1.2
All other exporters	Share of value	8.0	17.3	5.0
All reporting exporters	Share of value	100.0	100.0	100.0

Source: Official export statistics under HS subheading 9306.29, as reported by various national statistical authorities in the Global Trade Atlas ("GTA") database, accessed July 26, 2024.

Note: Export quantities are not reported due to differences among the quantity units reported by exporters in the GTA database.

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as "---." The United States is shown at the top followed by the 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
89 FR 57941, July 16, 2024	*Tungsten Shot From China; Institution of Antidumping and Countervailing Duty Investigations and Scheduling of Preliminary Phase Investigations*	https://www.govinfo.gov/content/pkg/FR-2024-07-16/pdf/2024-15530.pdf
89 FR 65852, August 13, 2024	*Certain Tungsten Shot From the People's Republic of China: Initiation of Countervailing Duty Investigation*	https://www.govinfo.gov/content/pkg/FR-2024-08-13/pdf/2024-18009.pdf
89 FR 65856, August 13, 2024	*Certain Tungsten Shot From the People's Republic of China: Initiation of Less-Than-Fair-Value Investigation*	https://www.govinfo.gov/content/pkg/FR-2024-08-13/pdf/2024-18008.pdf
89 FR 70666, August 30, 2024	*Tungsten Shot From China: Determinations*	https://www.govinfo.gov/content/pkg/FR-2024-08-30/pdf/2024-19511.pdf

APPENDIX B

LIST OF STAFF CONFERENCE WITNESSES

CALENDAR OF PUBLIC PRELIMINARY CONFERENCE

Those listed below appeared in the United States International Trade Commission's Preliminary Conference:

Subject: Tungsten Shot from China

Inv. Nos.: 701-TA-732 and 731-TA-1701 (Preliminary)

Date and Time: July 31, 2024 - 9:30 a.m.

Sessions were held in connection with these preliminary phase investigations in the Main Hearing Room (Room 101), 500 E Street, SW., Washington, DC.

OPENING REMARKS:

In Support of Imposition (**Daniel B. Pickard**, Buchanan Ingersoll & Rooney PC)

In Support of the Imposition of the Antidumping and Countervailing Duty Orders:

Buchanan Ingersoll & Rooney PC
Washington,
DC
on behalf
of

Tungsten Parts Wyoming, Inc.

Dennis Omanoff, Chief Executive Officer, Tungsten Parts Wyoming, Inc.

Noah Gibbs, Process Engineer, Tungsten Parts Wyoming, Inc.

Daniel B. Pickard)
) – OF COUNSEL
Amanda L. Wetzel)

CLOSING REMARKS:

In Support of Imposition (**Daniel B. Pickard**, Buchanan Ingersoll & Rooney PC)

APPENDIX C

SUMMARY DATA

Table C-1
Tungsten shot: Summary data concerning the U.S. market, by item and period
Quantity=pounds; Value=dollars; Unit values, unit labor costs, and unit expenses=dollars per pound; Period changes=percent--exceptions noted

Item	Reported data: Calendar year 2021	2022	2023	Jan-Mar 2023	2024	Period changes: Comparison years 2021-23	2021-22	2022-23	Jan-Mar 2023-24
U.S. consumption quantity:									
Amount	***	***	***	***	***	▼***	▲***	▼***	▲***
Producers' share (fn1)	---	---	***	***	***	▲***	---	▲***	▲***
Importers' share (fn1):									
China	***	***	***	***	***	▼***	***	▼***	▼***
Nonsubject sources	***	***	***	***	***	***	***	***	***
All import sources	***	***	***	***	***	▼***	***	▼***	▼***
U.S. consumption value:									
Amount	***	***	***	***	***	▼***	▲***	▼***	▲***
Producers' share (fn1)	---	---	***	***	***	▲***	---	▲***	▲***
Importers' share (fn1):									
China	***	***	***	***	***	▼***	***	▼***	▼***
Nonsubject sources	***	***	***	***	***	***	***	***	***
All import sources	***	***	***	***	***	▼***	***	▼***	▼***
U.S. importers' U.S. shipments of imports from:									
China:									
Quantity	***	***	***	***	***	▼***	▲***	▼***	▲***
Value	***	***	***	***	***	▼***	▲***	▼***	▲***
Unit value	***	***	***	***	***	▼***	▲***	▼***	▼***
Ending inventory quantity	***	***	***	***	***	▼***	▼***	▼***	▼***
Nonsubject sources:									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***	***
All import sources:									
Quantity	***	***	***	***	***	▼***	▲***	▼***	▲***
Value	***	***	***	***	***	▼***	▲***	▼***	▲***
Unit value	***	***	***	***	***	▼***	▲***	▼***	▼***
Ending inventory quantity	***	***	***	***	***	▼***	▼***	▼***	▼***
U.S. producers':									
Practical capacity quantity	---	---	***	***	***	▲---	---	▲---	▲***
Production quantity	---	---	***	***	***	▲---	---	▲---	▲***
Capacity utilization (fn1)	---	---	***	***	***	▲---	---	▲---	▲***
U.S. shipments:									
Quantity	---	---	***	***	***	▲---	---	▲---	▲***
Value	---	---	***	***	***	▲---	---	▲---	▲***
Unit value	---	---	***	***	***	▲---	---	▲---	▲***
Export shipments:									
Quantity	---	---	***	***	***	---	---	---	***
Value	---	---	***	***	***	---	---	---	***
Unit value	---	---	***	***	***	---	---	---	***
Ending inventory quantity	---	---	***	***	***	▲---	---	▲---	▲***
Inventories/total shipments (fn1)	---	---	***	***	***	▲---	---	▲---	▲***
Production workers	---	---	***	***	***	▲---	---	▲---	▲***
Hours worked (1,000s)	---	---	***	***	***	▲---	---	▲---	▲***
Wages paid ($1,000)	---	---	***	***	***	▲---	---	▲---	▲***
Hourly wages (dollars per hour)	---	---	***	***	***	▲---	---	▲---	▲***
Productivity (pounds per hour)	---	---	***	***	***	▲---	---	▲---	▲***
Unit labor costs	---	---	***	***	***	▲---	---	▲---	▲***

Table continued.

Table C-1 Continued
Tungsten shot: Summary data concerning the U.S. market, by item and period
Quantity=pounds; Value=dollars; Unit values, unit labor costs, and unit expenses=dollars per pound; Period changes=percent--exceptions noted

Item	Reported data: Calendar year 2021	2022	2023	Reported data: Jan-Mar 2023	2024	Period changes: Comparison years 2021-23	2021-22	2022-23	Period changes: Jan-Mar 2023-24
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	---	---	***	***	***	▲---	---	▲---	***

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.

Source: Compiled from data submitted in response to Commission questionnaires. 508-compliant tables for these data are contained in parts III, IV, VI, and VII of this report.