Phosphor Copper from Korea

Investigation No. 731-TA-1314 (Preliminary)

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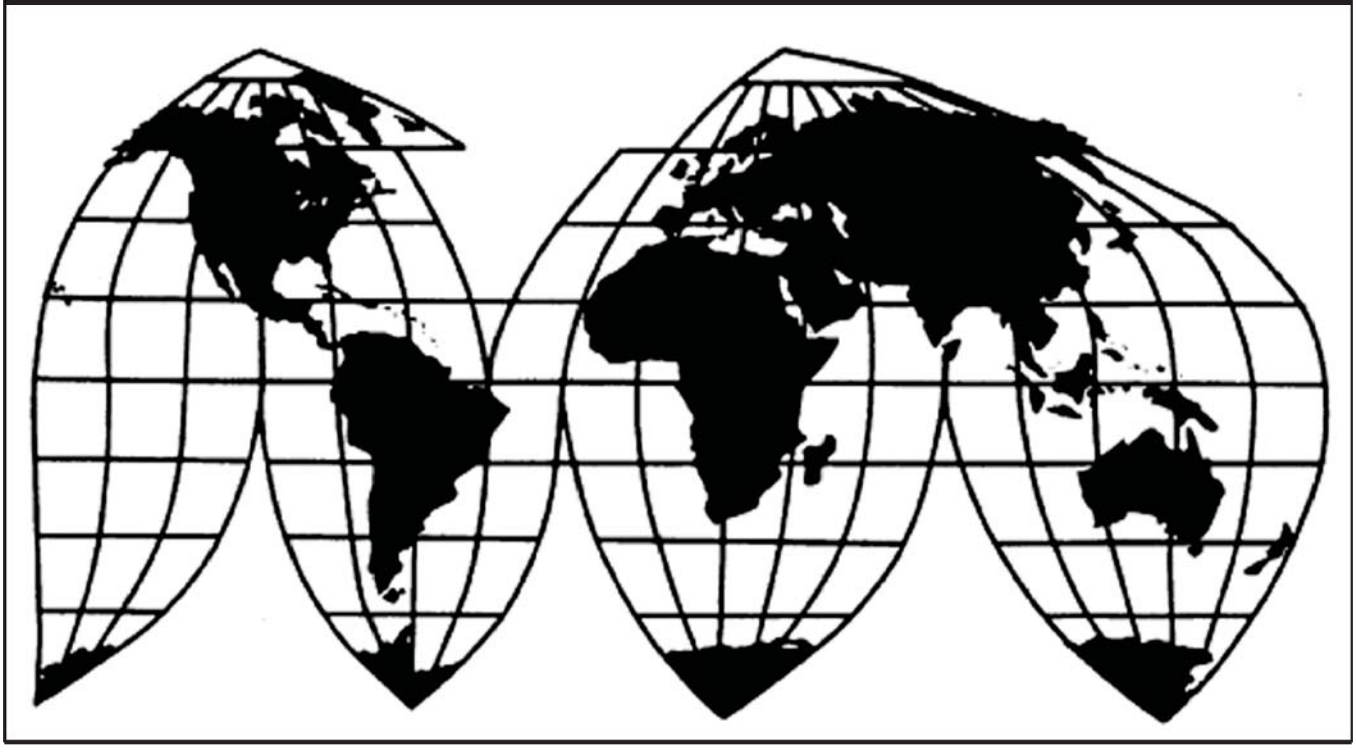
U.S. International Trade Commission



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UNITED STATES INTERNATIONAL TRADE COMMISSION

Investigation No. 731-TA-1314 (Preliminary)
Phosphor Copper from Korea

DETERMINATION

On the basis of the record[1] developed in the subject investigation, the United States International Trade Commission ("Commission") determines, pursuant to the Tariff Act of 1930 ("the Act"), that there is a reasonable indication that an industry in the United States is materially injured by reason of imports of phosphor copper from Korea, provided for in subheading 7405.00.10 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").

Pursuant to section 207.18 of the Commission's rules, the Commission also gives notice of the commencement of the final phase of its investigation. The Commission will issue a final phase notice of scheduling, which will be published in the *Federal Register* as provided in section 207.21 of the Commission's rules, upon notice from the Department of Commerce ("Commerce") of an affirmative preliminary determination in the investigation under section 733(b) of the Act, or, if the preliminary determination is negative, upon notice of an affirmative final determination in that investigation under section 735(a) of the Act. Parties that filed entries of appearance in the preliminary phase of the investigation need not enter a separate appearance for the final phase of the investigation. 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 public service list containing the names and addresses of all persons, or their representatives, who are parties to the investigation.

BACKGROUND

On March 9, 2016, Metallurgical Products Company, West Chester, PA filed a petition with the Commission and Commerce, alleging that an industry in the United States is materially injured or threatened with material injury by reason of LTFV imports of phosphor copper from Korea. Accordingly, effective March 9, 2016, the Commission, pursuant to section 733(a) of the Tariff Act of 1930 (19 U.S.C. § 1673b(a)), instituted antidumping duty investigation No. 731-TA-1314 (Preliminary).

Notice of the institution of the Commission's investigation 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 March 15, 2016 (81 FR 13822). The conference was held in Washington, DC, on March 30, 2016, and all persons who requested the opportunity were permitted to appear in person or by counsel.

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

Views of the Commission

Based on the record in the preliminary phase of this investigation, we find that there is a reasonable indication that an industry in the United States is materially injured by reason of imports of phosphor copper from Korea that are allegedly sold in the United States at less than fair value.

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

The petition in this investigation was filed on March 9, 2016 by the Metallurgical Products Company ("Metallurgical" or "MPC"), a domestic producer of phosphor copper. Petitioner appeared at the staff conference and submitted a postconference brief. While one importer of subject merchandise (The Harris Products Group) entered an appearance in this investigation, this importer did not appear at the conference or submit a postconference brief.

In this investigation, U.S. industry data are based on the questionnaire responses of three U.S. producers, accounting for 100 percent of U.S. production of phosphor copper in 2015.[3] U.S. import data are based on questionnaire responses from four U.S. importers, accounting for virtually all known imports of phosphor copper.[4] The Commission received a response to its questionnaire from the sole Korean producer of phosphor copper.[5]

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[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). No party argues that the establishment of an industry in the United States is materially retarded by the allegedly unfairly traded imports.

[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).

[3] Confidential Report ("CR") at III-1; Public Report ("PR") at III-1.

[4] CR/PR at IV-1.

[5] CR/PR at VII-3.

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 by reason of imports of the subject merchandise, the Commission first defines the "domestic like product" and the "industry."[6] 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."[7] 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."[8]

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.[9] No single factor is dispositive, and the Commission may consider other factors it deems relevant based on the facts of a particular investigation.[10] The Commission looks for clear dividing lines among possible like products and disregards minor variations.[11] Although 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,[12] the Commission determines what domestic product is like

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[6] 19 U.S.C. § 1677(4)(A).

[7] 19 U.S.C. § 1677(4)(A).

[8] 19 U.S.C. § 1677(10).

[9] *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).

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

[11] *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.").

[12] *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).

the imported articles Commerce has identified.[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 this investigation as follows:

> . . . .master alloys of copper containing between five percent and 17 percent phosphorus by nominal weight, regardless of form (including but not limited to shot, pellet, waffle, ingot, or nugget), and regardless of size or weight. Subject merchandise consists predominantly of copper (by weight), and may contain other elements, including but not limited to iron (Fe), lead (Pb), or tin (Sn), in small amounts (up to one percent by nominal weight). Phosphor copper is frequently produced to JIS H2501 and ASTM B–644, Alloy 3A standards or higher; however, merchandise covered by this investigation includes all phosphor copper, regardless of whether the merchandise meets, fails to meet, or exceeds these standards.
>
> Merchandise covered by this investigation is currently classified in the Harmonized Tariff Schedule of the United States (HTSUS) under subheading 7405.00.1000. This HTSUS subheading is provided for convenience and customs purposes; the written description of the scope of this investigation is dispositive.[15]

As explained further below, phosphor copper is composed primarily of copper and phosphorus. The most predominant – and highest – phosphorus content in phosphor copper is 15 percent. Phosphor copper is sold in the form of shot or ingot,[16] and is used as a deoxidizer, as an alloying additive, and in brazing alloys.[17]

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

[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, coextensive with the scope).

[15] *Phosphor Copper From the Republic of Korea: Initiation of Less-Than-Fair-Value Investigation*, 81 Fed. Reg. 19552 (April 5, 2016). A footnote to the definition defines a ''master alloy'' as a base metal, such as copper, to which a relatively high percentage of one or two other elements is added.

[16] Shot consists of small pellets of phosphor copper, typically a few millimeters in diameter. Ingot often is made in a waffle casting, which can be easily broken into the smaller ingot pieces. CR at I-8; PR at I-6.

Petitioner proposes a single domestic like product that is coextensive with the scope of this investigation.[18] It argues that phosphor copper and copper phosphide are distinct products, both physically and chemically, have different end uses, are not interchangeable, are sold to different end users through distinct channels of distribution, and have distinct manufacturing facilities and procedures.[19]

Based on the record, we define a single domestic like product consisting of phosphor copper, coextensive with the scope of investigation. We discuss below whether the domestic like product should be defined more broadly than the scope of investigation to include copper phosphide.[20]

Physical Characteristics and Uses. Phosphor copper is composed primarily of copper and phosphorus, but also may contain small amounts of iron, lead, tin, and other elements.[21] It is primarily sold at 15 percent phosphorus (the highest possible concentration of phosphorus in copper), but also at 8 percent phosphorus.[22] Phosphor copper generally is produced to JIS H2501 and ASTM B-644, Alloy 3A standards.[23]

Phosphor copper appears to be physically and chemically distinct from copper phosphide: (1) phosphor copper is sold in the form of shot or ingot whereas copper phosphide is sold in the form of powder;[24] (2) the chemical formula for phosphor copper is CuP and for copper phosphide is Cu_3P or Cu_3P_2;[25] and (3) the Chemical Abstracts Service ("CAS") Registry Numbers are different for phosphor copper (CAS No. 12517-41-8) and copper phosphide (CAS Nos. 12019-57-7 and 12643-19-5).[26]

Phosphor copper and copper phosphide also appear to have distinct end uses. Phosphor copper has three primary end uses: (1) as a deoxidizer; (2) as an alloying additive that increases strength, hardness, and elasticity; and (3) in brazing alloys.[27] It is used by copper tube manufacturers, brazing rod manufacturers, brass mills, foundries, and in products that are

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(…Continued)

[17] CR at I-6 – I-8; PR at I-5 – I-6.

[18] MPC Postconference Brief at 2-3 and Exhibit 1 at 2-7

[19] MPC Postconference Brief, Exhibit 1 at 2-7.

[20] In response to questions from Commerce and Commission staff, Petitioner provided additional information discussing and comparing copper phosphide to phosphor copper. *See* MPC's Supplemental Submission Regarding Scope and Domestic Like Product to the Department of Commerce (March 22, 2016) and MPC's Postconference Brief, Exhibit 1 at 2-7.

[21] CR at I-6; PR at I-5.

[22] CR at I-7 and I-8; PR at I-6. Very small quantities also are sold with other levels of phosphorus content. CR/PR at Table III-5.

[23] CR at I-6; PR at I-5.

[24] CR at I-8; PR at I-6; MPC Postconference Brief, Exhibit 1 at 2.

[25] MPC Postconference Brief, Exhibit 1 at 3.

[26] MPC Postconference Brief, Exhibit 1 at 3.

[27] CR at I-7; PR at I-5.

produced by copper and brass melting.[28] Copper phosphide, on the other hand, is used as a semiconductor in high power and high frequency applications, laser diodes, and batteries.[29]

Manufacturing Facilities, Production Processes and Employees. Phosphor copper involves a separate and distinct production process from that of copper phosphide.[30] ***.[31]

Channels of Distribution. Phosphor copper and copper phosphide appear to be sold to different customers through distinct channels of distribution. Copper phosphide is not sold to copper tube manufacturers or brazing rod manufacturers, which are the primary purchasers of phosphor copper.[32]

Interchangeability. Phosphor copper and copper phosphide have distinct end uses and do not appear to be interchangeable. None of the responding producers or importers listed copper phosphide as a substitute for phosphor copper.[33]

Producer and Customer Perceptions. Because of the differences in physical and chemical characteristics as well as the distinct end uses, producers and customers do not perceive phosphor copper and copper phosphide as interchangeable.[34] Domestic producers of phosphor copper do not produce copper phosphide and thus do not advertise it for sale.[35]

Price. There is no information on the record regarding copper phosphide pricing and thus no basis to compare its price to the price for phosphor copper.[36]

Conclusion. The record in the preliminary phase of this investigation indicates that there is a clear dividing line between phosphor copper and copper phosphide. We thus do not define the domestic like product more broadly than the scope of investigation to include copper phosphide. The evidence in the record, albeit limited, indicates that phosphor copper and copper phosphide are distinct products, both physically and chemically, have different end uses, are not interchangeable, are sold through distinct channels of distribution, and have distinct manufacturing facilities and procedures. Accordingly, we find that there is a single domestic like product coextensive with the scope of the investigation.

IV. 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

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[28] CR at I-7; PR at I-6. There is a limited market for 8 percent phosphor copper, which is used in the production of certain aluminum silicon alloys to improve the strength of those alloys. CR at I-8; PR at I-6.

[29] MPC Postconference Brief, Exhibit 1 at 4.

[30] MPC Postconference Brief, Exhibit 1 at 6.

[31] MPC Postconference Brief, Exhibit 1 at 4 and 6.

[32] CR at I-11; PR at I-8; MPC Postconference Brief, Exhibit 1 at 5.

[33] CR at II-12; CR at II-6; MPC Postconference Brief, Exhibit 1 at 4.

[34] CR at I-11; PR at I-8; MPC Postconference Brief, Exhibit 1 at 5-6.

[35] MPC Postconference Brief, Exhibit 1 at 5. Petitioner indicated that it has never been asked by its customers to supply copper phosphide. *Id*.

[36] CR at I-12: PR at I-9.

a major proportion of the total domestic production of the product."[37] 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. In light of our domestic like product definition, we define one domestic industry consisting of all domestic producers of phosphor copper.[38]

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.[39] Based on official import statistics, subject imports from Korea accounted for 99.0 percent of total imports of phosphor copper by quantity for the 12-month period of March 2015 – February 2016,[40] and thus exceed the requisite 3 percent statutory negligibility threshold.

VI. Reasonable Indication of Material Injury by Reason of Subject Imports

A. Legal Standard

In the preliminary phase of antidumping and countervailing duty investigations, the Commission determines whether there is a reasonable indication that an industry in the United States is materially injured or threatened with material injury by reason of the imports under investigation.[41] In making this determination, the Commission must consider the volume of subject imports, their effect on prices for the domestic like product, and their impact on domestic producers of the domestic like product, but only in the context of U.S. production operations.[42] The statute defines "material injury" as "harm which is not inconsequential, immaterial, or unimportant."[43] In assessing whether there is a reasonable indication that the domestic industry is materially injured by reason of subject imports, we consider all relevant

[37] 19 U.S.C. § 1677(4)(A).

[38] There are no related parties issues in this investigation. ***. CR/PR at III-2.

[39] 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)).

[40] CR at IV-8; PR at IV-3.

[41] 19 U.S.C. §§ 1671b(a), 1673b(a). The Trade Preferences Extension Act of 2015, Pub. L. 114-27, amended the provisions of the Tariff Act pertaining to Commission determinations of reasonable indication of material injury and threat of material injury by reason of subject imports in certain respects. We have applied these amendments here.

[42] 19 U.S.C. § 1677(7)(B). The Commission "may consider such other economic factors as are relevant to the determination" but shall "identify each {such} factor ... {a}nd explain in full its relevance to the determination." 19 U.S.C. § 1677(7)(B).

[43] 19 U.S.C. § 1677(7)(A).

economic factors that bear on the state of the industry in the United States.[44] No single factor is dispositive, and all relevant factors are considered "within the context of the business cycle and conditions of competition that are distinctive to the affected industry."[45]

Although the statute requires the Commission to determine whether there is a reasonable indication that the domestic industry is "materially injured by reason of" unfairly traded imports,[46] it does not define the phrase "by reason of," indicating that this aspect of the injury analysis is left to the Commission's reasonable exercise of its discretion.[47] In identifying a causal link, if any, between subject imports and material injury to the domestic industry, the Commission examines the facts of record that relate to the significance of the volume and price effects of the subject imports and any impact of those imports on the condition of the domestic industry. This evaluation under the "by reason of" standard must ensure that subject imports are more than a minimal or tangential cause of injury and that there is a sufficient causal, not merely a temporal, nexus between subject imports and material injury.[48]

In many investigations, there are other economic factors at work, some or all of which may also be having adverse effects on the domestic industry. Such economic factors might include nonsubject imports; changes in technology, demand, or consumer tastes; competition among domestic producers; or management decisions by domestic producers. The legislative history explains that the Commission must examine factors other than subject imports to ensure that it is not attributing injury from other factors to the subject imports, thereby inflating an otherwise tangential cause of injury into one that satisfies the statutory material injury threshold.[49] In performing its examination, however, the Commission need not isolate

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[44] 19 U.S.C. § 1677(7)(C)(iii).

[45] 19 U.S.C. § 1677(7)(C)(iii).

[46] 19 U.S.C. §§ 1671b(a), 1673b(a).

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

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

[49] SAA, H.R. Rep. 103-316, Vol. I at 851-52 (1994) ("{T}he Commission must examine other factors to ensure that it is not attributing injury from other sources to the subject imports."); S. Rep. 96-249 at 75 (1979) (the Commission "will consider information which indicates that harm is caused by factors other than less-than-fair-value imports."); H.R. Rep. 96-317 at 47 (1979) ("in examining the overall injury being experienced by a domestic industry, the ITC will take into account evidence presented to it which demonstrates that the harm attributed by the petitioner to the subsidized or dumped imports is attributable to such other factors;" those factors include "the volume and prices of (Continued…)

the injury caused by other factors from injury caused by unfairly traded imports.[50] Nor does the "by reason of" standard require that unfairly traded imports be the "principal" cause of injury or contemplate that injury from unfairly traded imports be weighed against other factors, such as nonsubject imports, which may be contributing to overall injury to an industry.[51] It is clear that the existence of injury caused by other factors does not compel a negative determination.[52]

Assessment of whether material injury to the domestic industry is "by reason of" subject imports "does not require the Commission to address the causation issue in any particular way" as long as "the injury to the domestic industry can reasonably be attributed to the subject imports" and the Commission "ensure{s} that it is not attributing injury from other sources to the subject imports."[53] [54] Indeed, the Federal Circuit has examined and affirmed various

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(…Continued)
nonsubsidized imports or imports sold at fair value, contraction in demand or changes in patterns of consumption, trade restrictive practices of and competition between the foreign and domestic producers, developments in technology and the export performance and productivity of the domestic industry"); *accord Mittal Steel*, 542 F.3d at 877.

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

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

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

[53] *Mittal Steel*, 542 F.3d at 877-78; *see also id.* at 873 ("While the Commission may not enter an affirmative determination unless it finds that a domestic industry is materially injured 'by reason of' subject imports, the Commission is not required to follow a single methodology for making that determination ... {and has} broad discretion with respect to its choice of methodology.") *citing United States Steel Group v. United States*, 96 F.3d 1352, 1362 (Fed. Cir. 1996) and S. Rep. 96-249 at 75. In its decision in *Swiff-Train v. United States*, 792 F.3d 1355 (Fed. Cir. 2015), the Federal Circuit affirmed the Commission's causation analysis as comporting with the Court's guidance in *Mittal*.

[54] Vice Chairman Pinkert and Commissioner Kieff do not join this paragraph or the following three paragraphs. They point out that the Federal Circuit, in *Bratsk*, 444 F.3d 1369, and *Mittal Steel*, held that the Commission is *required*, in certain circumstances when analyzing present material injury, (Continued…)

Commission methodologies and has disavowed "rigid adherence to a specific formula."[55]

The Federal Circuit's decisions in *Gerald Metals*, *Bratsk,* and *Mittal Steel* all involved cases in which the relevant "other factor" was the presence in the market of significant volumes of price-competitive nonsubject imports. The Commission interpreted the Federal Circuit's guidance in *Bratsk* as requiring it to apply a particular additional methodology following its finding of material injury in cases involving commodity products and a significant market presence of price-competitive nonsubject imports.[56] The additional "replacement/benefit" test looked at whether nonsubject imports might have replaced subject imports without any benefit to the U.S. industry. The Commission applied that specific additional test in subsequent cases, including the *Carbon and Certain Alloy Steel Wire Rod from Trinidad and Tobago* determination that underlies the *Mittal Steel* litigation.

Mittal Steel clarifies that the Commission's interpretation of *Bratsk* was too rigid and makes clear that the Federal Circuit does not require the Commission to apply an additional test nor any one specific methodology; instead, the court requires the Commission to have "evidence in the record 'to show that the harm occurred 'by reason of' the LTFV imports,'" and requires that the Commission not attribute injury from nonsubject imports or other factors to subject imports.[57] Accordingly, we do not consider ourselves required to apply the replacement/benefit test that was included in Commission opinions subsequent to *Bratsk*.

The progression of *Gerald Metals*, *Bratsk*, and *Mittal Steel* clarifies that, in cases involving commodity products where price-competitive nonsubject imports are a significant factor in the U.S. market, the Court will require the Commission to give full consideration, with

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(…Continued)
to consider a particular issue with respect to the role of nonsubject imports, without reliance upon presumptions or rigid formulas. The Court has not prescribed a specific method of exposition for this consideration. *Mittal Steel* explains as follows:

> What *Bratsk* held is that "where commodity products are at issue and fairly traded, price competitive, non-subject imports are in the market," the Commission would not fulfill its obligation to consider an important aspect of the problem if it failed to consider whether non-subject or non-LTFV imports would have replaced LTFV subject imports during the period of investigation without a continuing benefit to the domestic industry. 444 F.3d at 1369. Under those circumstances, *Bratsk* requires the Commission to consider whether replacement of the LTFV subject imports might have occurred during the period of investigation, and it requires the Commission to provide an explanation of its conclusion with respect to that factor.

542 F.3d at 878.

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

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

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

adequate explanation, to non-attribution issues when it performs its causation analysis.[58]

The question of whether the material injury threshold for subject imports is satisfied notwithstanding any injury from other factors is factual, subject to review under the substantial evidence standard.[59] Congress has delegated this factual finding to the Commission because of the agency's institutional expertise in resolving injury issues.[60]

B. Conditions of Competition and the Business Cycle

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

1. Demand Conditions

Phosphor copper demand is driven primarily by the consumption of copper products, in which it is used as a deoxidizer, as an alloying additive, and in brazing alloys. It is used primarily by copper tube manufacturers, but also by brazing rod and alloy manufacturers, and for other specialty copper uses.[61] Apparent U.S. consumption of phosphor copper fluctuated annually during the period of investigation, but was at relatively the same level in 2015 as in 2013.[62] Responses from U.S. producers and importers differed on whether U.S. demand for phosphor copper has changed since 2013.[63] According to data from the Copper Development Association, refined copper consumption by U.S. copper-using industries has not changed appreciably since 2013.[64]

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

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

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

[61] CR at II-8 and II-9; PR at II-4 and II-5.

[62] CR/PR at Table IV-7. Apparent U.S. consumption of phosphor copper increased from *** pounds in 2013 to *** pounds in 2014, then decreased to *** pounds in 2015, for an overall decrease of *** from 2013 to 2015. *Id*.

[63] CR/PR at Table II-3. ***. *Id*.

[64] MPC Postconference Brief at 3 and Exhibit 3 at Table 1, Item 16 (showing consumption of refined copper by brass mills, ingot makers, foundries, powder plants, and other industries). By (Continued…)

2. Supply Conditions

The domestic industry is the largest supplier of phosphor copper to the U.S. market, although its share of apparent U.S. consumption declined from *** in 2013 to *** in 2015.[65] There are three U.S. producers of phosphor copper.[66] While the capacity of the domestic phosphor copper industry remained stable between 2013 and 2015, the U.S. industry was operating well below full capacity and there have been no supply disruptions or constraints by U.S. producers during the period of investigation.[67]

Subject imports from Korea are the next largest source of supply to the U.S. phosphor copper market after the domestic industry. Their share of apparent U.S. consumption increased from *** in 2013 to *** in 2015.[68] Petitioner states that prior to 2012, very little phosphor copper was imported into the United States, and there were no subject imports from Korea until 2011.[69] However, in 2012, the Harris Products Group began purchasing phosphor copper from Korea; subject imports from Korea increased dramatically from 2011 to 2012, and have continued to increase thereafter.[70]

Nonsubject imports were a very small and decreasing source of supply to the U.S. market in 2013 and 2014, and were not present in 2015. The share of apparent U.S. consumption held by nonsubject imports declined from *** in 2013 to *** in 2014 and *** in 2015.[71]

3. Substitutability and Other Conditions

We find that there is a moderate to high degree of substitutability between domestically produced phosphor copper and subject imports,[72] and that price is an important factor in purchasing decisions.[73] Domestic and imported phosphor copper generally are produced to the same standard specifications -- JIS H2501 and ASTM B-644, Alloy 3A standards.[74] U.S. producers and importers of phosphor copper reported that phosphor copper is always or

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(…Continued)
contrast, data from the International Copper Study Group showed that global copper usage, excluding China, had declined by four percent in the first 11 months of 2015. CR at II-11; PR at II-6.

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

[66] CR/PR at Table III-1. The U.S. producers and their share of U.S. production in 2015 are: Metallurgical (***), H. Kramer (***), and Milward Alloys (***). *Id.*

[67] CR at II-6 and Table III-2 ; PR at II- and Table III-2; Conf. Tr. at 71.

[68] CR/PR at Tables IV-7 and C-1.

[69] CR/PR at IV-2 n.4. According to official import statistics, there were no imports of phosphor copper from Korea in 2010, 265,699 pounds in 2011, and 1.17 million pounds in 2012. *Id*.

[70] Conf. Tr. at 12-13.

[71] CR/PR at Table IV-7. Nonsubject import sources included Japan, India, China, Belgium, and Luxembourg. CR at II-8; PR at II-4.

[72] CR at II-12; PR at II-6. Responding U.S. producers and importers reported that there were no substitutes for phosphor copper. *Id*.

[73] MPC Postconference Brief at 6-8.

[74] CR at I-6 and II-13; PR at I-5 and II-7.

frequently interchangeable, regardless of source.[75] They also reported that differences other than price were sometimes or never important in purchasing decisions.[76] Purchasers that responded to the lost sales and lost revenue surveys most frequently reported price and quality among the top factors considered in purchasing decisions.[77]

Phosphor copper is composed primarily of copper and phosphorus,[78] and is purchased primarily for the phosphorus content.[79] While copper product manufacturers prefer the product with 15 percent phosphorus content (the highest possible concentration of phosphorus in copper), aluminum product manufacturers prefer the product with 8 percent phosphorus content because it allows for a lower melting temperature.[80] Raw materials are a large component of phosphor copper costs, representing between *** of the costs of goods sold for phosphor copper between 2013 and 2015.[81] *** reported that raw material prices had fallen since January 1, 2013, usually referencing declining copper prices.[82]

U.S. producers set prices for phosphor copper both on a transaction-by-transaction basis as well as by contract, while responding importers set prices primarily on a transaction-by-transaction basis.[83] Phosphor copper contracts generally set prices based on the COMEX price of copper plus a negotiated premium; if the contract has a meet-or-release provision, the premium can be adjusted downward.[84] U.S. producers reported that *** of their sales were on the spot market and importers reported that *** of their sales were on the spot market.[85] In addition, U.S. producers reported that *** of their sales were based on annual contracts and *** on short-term contracts.[86]

C. Volume of Subject Imports

Section 771(7)(C)(i) of the Tariff Act provides that the "Commission shall consider whether the volume of imports of the merchandise, or any increase in that volume, either in absolute terms or relative to production or consumption in the United States, is significant."[87]

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

[76] CR/PR at Table II-5.

[77] CR at II-14; PR at II-7.

[78] CR at I-6; PR at I-5.

[79] CR at II-9; PR at II-5.

[80] CR at I-7 - I-8 and II-9 – II-10; PR at I-5 - I-6 and II-5. Very small quantities also are sold with other levels of phosphorus content. *Id*. at Table III-5.

[81] CR/PR at V-1.

[82] CR/PR at V-1 and Figure V-1. Copper prices in the United States generally are set by the Commodity Exchange (COMEX) and in the rest of the world by the London Metal Exchange (LME). *Id*. at V-1.

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

[84] CR at V-4; PR at V- 2; Conf. Tr. at 45-46.

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

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

[87] 19 U.S.C. § 1677(7)(C)(i).

Subject imports from Korea increased during the period of investigation, with the most substantial increase in their volume – by *** – from 2014 to 2015.[88] The volume of subject imports rose from *** pounds in 2013 to *** pounds in 2014, then to *** pounds in 2015.[89] Subject import market share rose from *** in 2013 to *** in 2014 and *** in 2015.[90] From 2014 to 2015, as apparent U.S. consumption declined,[91] subject imports experienced significant gains in market share largely at the expense of the domestic industry.[92] [93]

For purposes of this preliminary determination, we find that the volume of subject imports and the increase in that volume are significant both in absolute terms and relative to consumption in the United States.

D. Price Effects of the Subject Imports

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

> (I) there has been significant price underselling by the imported merchandise as compared with the price of domestic like products of the United States, and
>
> (II) the effect of imports of such merchandise otherwise depresses prices to a significant degree or prevents price increases, which otherwise would have occurred, to a significant degree.[94]

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

All three domestic producers and three importers of subject merchandise provided usable data for the two pricing products,[95] although not all firms reported pricing data for all

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[88] Calculated from CR/PR at Table IV-2.

[89] CR/PR at Table IV-2. Subject import did not enter the U.S. market until 2011 and increased substantially from 265,699 pounds in 2011 to 1.17 million pounds in 2012 (based on official import statistics). CR at IV-2 n.4.

[90] CR/PR at Tables IV-7 and C-1.

[91] Apparent U.S. consumption fluctuated annually and remained relatively stable with only a slight decline between 2013 and 2015. CR/PR at Tables IV-7 and C-1. However, apparent U.S. consumption declined from *** pounds in 2014 to *** pounds in 2015, or by ***. *Id*.

[92] The domestic industry's market share, as measured by quantity, was *** in 2013, *** in 2014, and *** in 2015. CR/PR at Tables IV-7 and C-1.

[93] The ratio of subject imports to U.S. production fluctuated annually but increased between 2013 and 2015. It was *** in 2013, *** in 2014 and *** in 2015. CR/PR at Table IV-2.

[94] 19 U.S.C. § 1677(7)(C)(ii).

[95] CR at V-5; PR at V-3. Pricing product 1 is 15% phosphor copper shot that meets or exceeds JIS H2501 Grade 1, Class A, 15 P Cu A, P content approximately 14.8%. P 14.7% to 14.9%, P+Cu>99.75%, Fe<0.03%, Pb<0.01%, Sn<0.01%, in drums or comparable containers. Product 2 is 15% phosphor copper ingot/waffle that meets or exceeds JIS H2501 Grade 1, Class A, 15 P Cu A, P content approximately (Continued…)

products for all quarters.[96] The data show a consistent pattern of underselling by subject imports during the period of investigation.[97] Specifically, subject imports undersold the domestic like product in 11 of 13 quarterly comparisons, or 85 percent of total comparisons.[98] The margins of underselling ranged from ***, and the average underselling margin was ***.[99] There were *** pounds of subject import shipments involved in the underselling comparisons, equivalent to *** of reported total subject import shipments.[100] In light of the importance of price in purchasing decisions, we find this underselling to be significant.

We have also examined price trends. Prices for both domestically produced pricing products *** from 2013 to 2015.[101] As the volume of subject imports increased substantially from 2014 to 2015, prices for domestically produced phosphor copper ***, and reached period *** during the fourth quarter of 2015.[102] U.S. producers' raw material costs, particularly for copper, also *** during the latter portion of the period of investigation.[103] Thus, to some extent *** in phosphor copper prices may be a result of *** in raw material costs since the contract prices for phosphor copper generally are based on the COMEX price for copper plus a negotiated premium.[104] Nevertheless, by some measures, the *** in U.S. prices outpaced the *** in raw material costs while demand as measured by apparent U.S. consumption remained relatively stable.[105] In any final phase of this investigation, we will examine further the extent to which *** in raw material costs were responsible for *** in prices.[106] [107]

(…Continued)
14.8%. P 14.7% to 14.9%, P+Cu>99.75%, Fe<0.03%, Pb<0.01%, Sn<0.01%, in drums or comparable containers . *Id.*

[96] CR at V-6; PR at V-3. Reported pricing data was equivalent to approximately *** of U.S. producers' U.S. shipments and *** of U.S. shipments of subject imports from Korea from 2013 to 2015. *Id*. There was *** reported for U.S. shipments of subject imports for Product 2 (phosphor copper in ingot/waffle form). In any final phase of this investigation, we will explore competition between products in shot and ingot/waffle form and whether prices of subject imports in shot form have an effect on the prices of domestic product in ingot/waffle form.

[97] CR/PR at Table V-6.

[98] CR/PR at Table V-6.

[99] CR/PR at Table V-6.

[100] CR/PR at Table V-6. There were *** pounds of subject import shipments involved in the overselling comparisons. *Id*.

[101] CR/PR at Tables V-3-4.

[102] CR/PR at Tables IV-7, V-3-4.

[103] CR/PR at V-1 –V-2 and Figure V-1. *See also* CR/PR at Table VI-1 (*** average unit raw materials costs, and *** raw materials costs as a ratio to net sales).

[104] CR at V-4; PR at V-2.

[105] The *** in the average unit value of net sales (***) from 2013 to 2015 was greater than the *** in the average unit value of raw material costs (***). CR/PR at Table VI-1. We note that the rate of *** for these two measures (***) was nearly identical. *Id*. However, quarterly U.S. prices for phosphor copper *** by *** over the period of investigation, and therefore outpaced the *** in the average unit value of raw material costs. CR/PR at Table V-5.

We note that the COMEX price for copper declined by *** between January 2013 and December 2015. In any final phase of this investigation, we will further examine the relationship between (Continued…)

We recognize that the cost of goods sold (COGS) to net sales ratio *** from *** in 2014 to *** in 2015, at the same time as subject imports substantially increased.[108] However, with the *** in both the average unit COGS and raw material values and relatively stable demand, price *** would not have been likely. Consequently, the subject imports did not prevent price *** that otherwise would have occurred to a significant degree.

In response to the Commission's survey regarding domestic producers' allegations of lost sales and lost revenue, five of the nine responding purchasers reported that U.S. producers had reduced prices during the period of investigation, by estimates ranging from 3.0 to 27.0 percent, to compete with subject imports.[109] Six of the nine responding purchasers reported that they had shifted purchases from U.S.-produced phosphor copper to subject imports since 2013, with the estimated share of purchases shifted ranging from 5.3 to 34.3 percent. [110] Three of these purchasers identified price as the reason for the shift.[111] We find that these responses support our conclusion that the significant underselling enabled subject imports to gain market share at the expense of the domestic industry.[112]

Accordingly, based on the record in the preliminary phase of this investigation, we find that the substantially increasing subject imports had significant price effects. The significant price underselling of the domestic like product by the subject imports had the effect of increasing subject import market share at the expense of the domestic industry.

(…Continued)
published copper prices, including the COMEX price, and prices of phosphor copper, including phosphor copper sold in spot sales.

[106] Commissioners Williamson and Schmidtlein find significant price depression by reason of subject imports. They note that domestic price *** outpaced the *** in raw material costs during the period of investigation while demand as measured by apparent U.S. consumption remained relatively stable. Specifically, the cost of raw materials per pound *** by *** during the period of investigation (CR/PR at Table VI-1), while pricing products 1 and 2, which accounted for virtually all U.S. shipments, each *** by more than *** during the period of investigation (CR/PR at Table V-5).

[107] Vice Chairman Pinkert does not find significant price depression on this preliminary record because the data show substantially the same price *** for Product 2 (ingot) where there is very limited subject import competition as for Product 1 (shot) where there is widespread subject import competition.

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

[109] CR at V-18 and Table V-9; PR at V-6 and Table V-9. Three of the nine purchasers reported that they did not know if domestic producers had reduced prices to compete with subject imports. *Id*.

[110] CR/PR at Table V-7.

[111] CR/PR at Table V-8. We note that the total volume of purchases reported to be shifted on the basis of price was *** pounds. *Id.* Other identified reasons for shifting from U.S. producers included ***. CR at V-15 and Table V-8; PR at V-6 and Table V-8.

[112] *See also* Conf. Tr. at 13 (According to Metallurgical, "{i}n November 2011, we submitted our offer for {Harris'} 2012's business. When it came to award the business, we were told that we would receive less business than in the previous years, and a portion of 2012's business would be purchased 'offshore'. . . .This wasn't about quality or dependability. It was about price. We were told that the offshore price was lower than ours, and that this warranted Harris giving a foreign competitor a portion of business that Metallurgical had been supplying for years.")

E. Impact of the Subject Imports[113]

Section 771(7)(C)(iii) of the Tariff Act provides that the Commission, in examining the impact of the subject imports on the domestic industry, "shall evaluate all relevant economic factors which have a bearing on the state of the industry." These factors include output, sales, inventories, capacity utilization, market share, employment, wages, productivity, gross profits, net profits, operating profits, cash flow, return on investment, return on capital, ability to raise capital, ability to service debt, research and development, and factors affecting domestic prices. No single factor is dispositive and all relevant factors are considered "within the context of the business cycle and conditions of competition that are distinctive to the affected industry."[114]

Over the period of investigation, virtually all trade and financial indicators for the domestic industry ***. Production fluctuated annually but *** from 2013 to 2015, and was *** in 2015 than in 2013.[115] The domestic industry's capacity remained the same each year from 2013 to 2015.[116] Capacity utilization fluctuated from year to year and *** overall from 2013 to 2015.[117]

The domestic industry's U.S. shipments showed patterns similar to those for production. Total U.S. shipments *** during the period of investigation and were *** in 2015 than in 2013.[118] Inventories relative to U.S. production fluctuated annually but *** overall from *** in 2013 to *** in 2015.[119] Although the domestic industry accounted for the majority of apparent U.S. consumption, its market share declined over the period of investigation.[120]

The number of production and related workers employed in the domestic industry, the total hours worked, and hours worked per worker *** each year.[121] Wages paid and the industry's productivity fluctuated from year to year and *** overall from 2013 to 2015.[122]

The financial performance of the domestic industry displayed substantial *** during the period of investigation, particularly from 2014 to 2015. The domestic producers' total net sales

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[113] In its notice initiating the antidumping duty investigation, Commerce reported estimated antidumping duty margins ranging from 12.55 to 66.54 percent for imports of phosphor copper from Korea. 81 Fed. Reg. 19552, 19555 (April 5, 2016).

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

[115] CR/PR at Tables III-2 and C-1. The domestic industry's production was *** pounds in 2013, *** pounds in 2014, and *** pounds in 2015. *Id*.

[116] CR/PR at Tables III-2 and C-1. The domestic industry's production capacity was *** pounds each year of the period of investigation. *Id*.

[117] CR/PR at Tables III-2 and C-1. The domestic industry's capacity utilization was *** in 2013, *** in 2014, and *** in 2015. *Id*.

[118] CR/PR at Tables III-4 and C-1. The domestic industry's U.S. shipments were *** pounds in 2013, *** pounds in 2014, and *** pounds in 2015. *Id*.

[119] CR/PR at Table III-6.

[120] CR/PR at Tables IV-7 and C-1. The U.S. industry's market share was *** in 2013, *** in 2014, and *** in 2015. *Id*.

[121] CR/PR at Tables III-7 and C-1.

[122] CR/PR at Tables III-7 and C-1. Unit labor costs *** from 2014 to 2015. *Id*.

values *** each year from *** in 2013 to *** in 2014 and *** in 2015.[123] Similarly, the domestic industry's unit net sales value *** each year.[124] The domestic producers' ratio of COGS to net sales *** from *** in both 2013 and 2014 to *** in 2015.[125] Moreover, the domestic industry's operating *** from 2014 to 2015.[126] The domestic industry's ratio of operating income to net sales *** from *** in 2013 to *** in 2014, and *** in 2015.[127] The industry's gross profit and net income followed similar trends.[128] The industry's capital expenditures fluctuated annually and *** overall.[129]

Despite relatively stable apparent U.S. consumption, the domestic industry's trade and financial performance *** over the period of investigation, particularly from 2014 to 2015. As discussed above, based on the record in this preliminary phase, we have found the volume and market share of subject imports to have increased significantly over the period of investigation, and that there has been significant underselling that resulted in the domestic industry losing market share. Consequently, we find, for purposes of the preliminary phase of this investigation, that the large and increasing volume of low-priced subject imports had a significant impact on the domestic industry.

In conducting our impact analysis, we have also considered the role of other factors so as not to attribute injury from other factors to subject imports. Apparent U.S. consumption for phosphor copper decreased by only *** from 2013 to 2015, so the magnitude of *** in the domestic industry's trade and financial performance indicators cannot be explained by declines in consumption.[130] Nonsubject imports had a minimal and declining presence in 2013 and 2014, and left the U.S. market entirely in 2015,[131] so *** in the industry performance are not due to nonsubject imports. We recognize that there were significant *** in the domestic industry's export shipments from 2014 to 2015. While this factor cannot explain the *** in the domestic industry's U.S. market share, we will examine in any final phase of this investigation whether there are any effects from the *** of these shipments on the industry's performance in the U.S. market.

Accordingly, for purposes of these preliminary determinations, we conclude that subject imports have had a significant impact on the domestic industry.

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

[124] CR/PR at Table VI-1. The domestic industry's average unit net sales value *** from *** in 2013 to *** in 2014, and *** in 2015. *Id.*

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

[126] The domestic industry's operating income was *** in 2013, *** in 2014, and *** in 2015. CR/PR at Table VI-1.

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

[128] Gross profit *** from *** in 2013 to *** in 2014, and *** in 2015. Similarly, net income *** from *** in 2013 to *** in 2014, and *** in 2015. CR/PR at Table VI-1.

[129] CR/PR at Table VI-4. The *** of reported capital expenditures and assets is attributable to ***. CR at VI-8; PR at VI-3. *** U.S. producers reported research and development expenses. *Id*.

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

[131] Nonsubject import market share declined from *** in 2013 to *** in 2014, and then to *** in 2015. CR/PR at Table IV-7.

VII. Conclusion

For the reasons stated above, we determine that there is a reasonable indication that an industry in the United States is materially injured by reason of subject imports of phosphor copper from Korea that are allegedly sold in the United States at less than fair value.

PART I: INTRODUCTION

BACKGROUND

This investigation results from a petition filed with the U.S. Department of Commerce ("Commerce") and the U.S. International Trade Commission ("USITC" or "Commission") by Metallurgical Products Company ("Metallurgical Products"), West Chester, Pennsylvania, on March 9, 2016, alleging that an industry in the United States is materially injured and threatened with material injury by reason of less-than-fair-value ("LTFV") imports of phosphor copper [1] from Korea. The following tabulation provides information relating to the background of this investigation.[2] [3]

Effective date	Action
March 9, 2016	Petition filed with Commerce and the Commission; institution of Commission investigation (81 FR 13822, March 15, 2016)
March 30, 2016	Commission's conference
March 29, 2016	Commerce's notice of initiation (81 FR 19552, April 5, 2016)
April 21, 2016	Commission's vote
April 25, 2016	Commission's determination
May 2, 2016	Commission's views

[1] See the section entitled "The Subject Merchandise" in *Part I* of this report for a complete description of the merchandise subject to this/these investigation(s).

[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 app. B of this report.

STATUTORY CRITERIA AND ORGANIZATION OF THE REPORT

Statutory criteria

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

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

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

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

domestic industry, including efforts to develop a derivative or more advanced version of the domestic like product, and (V) in {an antidumping investigation}, the magnitude of the margin of dumping.

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

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

Organization of report

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

MARKET SUMMARY

Phosphor copper is generally is used as a deoxidizer, as an alloying element, and in brazing alloys. There are three U.S. producers of phosphor copper: petitioner Metallurgical Products; Milward Alloys, Inc. ("Milward Alloys"); and H. Kramer & Co. ("H. Kramer"). There is one Korean producer of phosphor copper, Bongsan Co. Ltd. ("Bongsan"). There are four importers of phosphor copper: J.W. Harris Co., Inc. ("J.W. Harris"); Lucas-Milhaupt Inc. ("Lucas-Milhaupt"); N.T. Ruddock; and Totall Metal Recycling, which combined, account for essentially all known subject and the small quantity of nonsubject imports. U.S. purchasers of phosphor copper include firms that manufacture copper tube or brazing alloys; leading purchasers include ***.

Apparent U.S. consumption of phosphor copper totaled approximately *** pounds (***) in 2015. U.S. producers' U.S. shipments of phosphor copper totaled *** pounds (***) in 2015, and accounted for *** percent of apparent U.S. consumption by quantity and *** percent by value. U.S. shipments of imports from Korea totaled *** pounds (***) in 2015 and accounted for *** percent of apparent U.S. consumption by quantity and *** percent by value. U.S.

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

imports from nonsubject sources were not present in 2015, and accounted for less than *** percent of apparent U.S. consumption in 2013 and 2014.

SUMMARY DATA AND DATA SOURCES

A summary of data collected in this investigation is presented in appendix C, table C-1. Except as noted, U.S. industry data are based on questionnaire responses of three firms that accounted for 100 percent of U.S. production of phosphor copper during 2015. U.S. imports are based on the questionnaire responses of four importers that accounted for virtually all known imports of phosphor copper. Foreign industry data are based on the questionnaire data of the sole Korean producers of phosphor copper.

PREVIOUS AND RELATED INVESTIGATIONS

Phosphor copper has not been the subject of any prior trade remedy investigation in the United States.

NATURE AND EXTENT OF ALLEGED SALES AT LTFV

Alleged sales at LTFV

On April 5, 2016, Commerce published a notice in the *Federal Register* of the initiation of its antidumping duty investigation on phosphor copper from Korea.[6] Commerce has initiated an antidumping duty investigation based on estimated dumping margins of 12.55 to 66.54 percent for phosphor copper from Korea.

THE SUBJECT MERCHANDISE

Commerce's scope

Commerce has defined the scope of this investigation as follows:

> *The merchandise covered by this investigation is master alloys[7] of copper containing between five percent and 17 percent phosphorus by nominal weight, regardless of form (including but not limited to shot, pellet, waffle, ingot, or nugget), and regardless of size or weight. Subject merchandise consists predominantly of copper (by weight), and may*

[6] *Phosphor Copper From the Republic of Korea: Initiation of Less-Than-Fair-Value Investigation*, 81 FR 19552, April 5, 2016.

[7] A ''master alloy'' is a base metal, such as copper, to which a relatively high percentage of one or two other elements is added.

contain other elements, including but not limited to iron (Fe), lead (Pb), or tin (Sn), in small amounts (up to one percent by nominal weight). Phosphor copper is frequently produced to JIS H2501 and ASTM B–644, Alloy 3A standards or higher; however, merchandise covered by this investigation includes all phosphor copper, regardless of whether the merchandise meets, fails to meet, or exceeds these standards.

Merchandise covered by this investigation is currently classified in the Harmonized Tariff Schedule of the United States (HTSUS) under subheading 7405.00.1000. This HTSUS subheading is provided for convenience and customs purposes; the written description of the scope of this investigation is dispositive.[8]

Tariff treatment

Based upon the scope set forth by the Department of Commerce, information available to the Commission indicates that the merchandise subject to this investigation are classifiable in the following provisions of the 2016 HTS: 7405.00.10, if the phosphorus content is greater than 5 percent but not greater than 15 percent by weight, and 2848.00.10, if the phosphorus content is greater than 15 percent by weight. Imports classifiable in 7405.00.10 are free of duty for normal trade relations (NTR) countries. The NTR rate of duty for 2848.00.10 is 2.6 percent ad valorem; however, U.S. imports from Korea that qualify for the preferential rate of duty under the United States-Korea Free Trade Agreement are free of duty.

THE PRODUCT

Description and applications

Phosphor copper is composed primarily of copper and phosphorus, but may contain small amounts of iron, lead, tin, and other elements. Domestically produced phosphor copper is generally produced to JIS H2501 and ASTM B-644, Alloy 3A standards. Phosphor copper is a master alloy, meaning it is not usefully malleable and is used as an additive in the manufacture of other alloys or as a deoxidizing agent. Phosphor copper has different physical and chemical characteristics than copper. Copper contains either no phosphorus or has phosphorus content of less than 1 percent by weight.[9]

Phosphor copper has three primary uses: (1) as a deoxidizer; (2) as an alloying additive that increases strength, hardness, and elasticity; and (3) in brazing alloys. Used as a deoxidizer, the phosphorus component of the phosphorus copper reacts with oxides in the copper alloy

[8] *Phosphor Copper From the Republic of Korea: Initiation of Less-Than-Fair-Value Investigation*, 81 FR 19552, April 5, 2016.

[9] ***, March 28, 2016.

that could otherwise weaken the alloy through the process of hydrogen embrittlement. As an alloying additive, phosphor copper improves the workability of the copper and allows, for example, the copper alloy to be drawn into a tube.[10] Brazing is a method of joining pieces of metal. A brazing alloy must have a melting temperature below the melting temperature of the metal pieces being joined and must easily flow to fill the gap between the metal pieces, known as "wetting." The use of phosphorus in the brazing alloy both lowers the melting temperature and improves the wettability of the alloy. Brazing alloys contain higher levels of phosphorus than other products made using phosphor copper.[11] Phosphor copper is used by copper tube manufacturers, brazing rod manufacturers, brass mills, foundries, and in products that are produced by copper and brass melting.[12]

Phosphor copper as it is most commonly sold contains approximately 15 percent phosphorus by weight. According to conference testimony, 15 percent by weight is the highest possible concentration of phosphorus because that is the maximum solubility of phosphorus in copper.[13] There is a small market for phosphor copper that is 8 percent by weight phosphorus. The 8 percent phosphorus product is used in the production of certain aluminum silicon alloys to improve the strength of those alloys.[14] The melting point of the 8 percent phosphor copper product is lower than for the 15 percent product and closer to the melting temperature of the aluminum alloy. The lower melting temperature of the 8 percent product makes it more desirable for use in that particular aluminum alloy.[15]

Phosphor copper is sold in the form of shot or ingots.[16] Shot consists of small pellets of phosphor copper, typically a few millimeters in diameter. Ingot is often made in a waffle casting, which creates lines in the ingot where it can be easily broken into smaller pieces. Both shot and ingot are loaded into steel drums and shipped by truck.[17]

Manufacturing processes

The raw materials used to make phosphor copper are copper and phosphorus. High quality, scrap copper is loaded into an electrical induction furnace and heated until molten. The phosphorus is separately heated to a molten state and then injected into the bottom of the furnace containing the molten copper. The molten phosphorus dissolves into the copper as it bubbles up to the surface. Excess phosphorus that escapes to the surface of the molten alloy reacts with oxygen in the air to form phosphorus pentoxide.[18] The phosphorus pentoxide is scrubbed from the air using water and forming a phosphoric acid. The phosphoric acid is

[10] Conference transcript, p. 34 (Goodman).
[11] ***, March 28, 2016.
[12] Petition, vol. I, p. 4.
[13] Conference transcript, p. 29 (Goodman).
[14] Conference transcript, p. 58 (Goodman).
[15] Conference transcript, p. 59 (Goodman).
[16] Conference transcript, p. 10 (Goodman).
[17] Conference transcript, p. 20 (Goodman).
[18] ***, March 28, 2016.

concentrated and sold to a fertilizer manufacturer.[19] The equipment that handles the phosphoric acid must be acid resistant and, therefore, is made using stainless steel, which makes the equipment more expensive.[20]

Once enough phosphorus has been added to make the 15-percent-by-weight product, the molten alloy is either poured into a water bath to form shot or into molds to form ingots. When the shot and ingots cool, they are packaged into drums for storage and shipment. The 8 percent phosphorus product is made in a similar way, but less phosphorus is added so the concentration does not exceed 8 percent by weight. The Korean producer of phosphor copper and other producers throughout the world likely make phosphor copper by this same process.[21]

DOMESTIC LIKE PRODUCT ISSUES

Petitioners propose that the Commission should define the like product as co-extensive with the scope of this investigation.[22] In response to requests from staff, petitioner provided a like product analysis comparing its proposed definition of the like product to copper phosphide. Petitioner has noted that it does not produce copper phosphide and has limited information regarding the product and industry.[23]

Physical characteristics and uses

Petitioner states that phosphor copper and copper phosphide differ in at least three ways. First, they are sold in different forms. Phosphor copper is sold as shot or ingots, while copper phosphide is sold as powder.[24] Second, they have distinct chemical formulas. Phosphor copper's chemical formula is CuP, and the chemical formula for copper phosphide is Cu_3P or Cu_3P_2. Third, the products have distinct Chemical Abstract Service (CAS) registry numbers. The CAS number for phosphor copper is 12517-41-8, and CAS numbers for copper phosphide are 12019-57-7 and 12643-19-5.[25]

Petitioner also notes that phosphor copper has different uses than copper phosphide. Phosphor copper is primarily used as a deoxidizer, as an alloying additive, or in brazing alloys. Copper phosphide is used as a semiconductor in high power and high frequency applications, laser diodes, and batteries.[26]

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[19] Conference transcript, p. 11 (Goodman).

[20] Conference transcript, p. 20 (Goodman).

[21] Telephone interview with ***, industry consultant, March 28, 2016.

[22] Petitioner's postconference brief, p. 2.

[23] Petitioner's Supplemental Submission Regarding Scope and Domestic Like Product to the Department of Commerce, p. 4 n.3, March 22, 2016.

[24] Petitioner's postconference brief, Exhibit 1, p. 2.

[25] Petitioner's postconference brief, Exhibit 1, p. 3.

[26] Petitioner's postconference brief, Exhibit 1, pp. 3–4.

Manufacturing facilities and production employees

According to the petitioner, phosphor copper involves a separate and distinct production process from that of copper phosphide.[27] ***[28]

Interchangeability

Petitioner argues that phosphor copper is not interchangeable with copper phosphide. None of the responding importers lists copper phosphide as a substitute for phosphor copper.[29] Also, producers of phosphor copper do not produce copper phosphide and vice versa.[30]

Customer and producer perceptions

Because of differences in the chemical and physical characteristics between phosphor copper and copper phosphide, consumers do not perceive these products as interchangeable.[31] While consumers typically buy phosphor copper in shot or ingot form, copper phosphides are sold in powder form.[32] Producers also view phosphor copper as a distinct product from copper phosphides. Domestic producers of phosphor copper do not advertise that they produce copper phosphide.[33]

Channels of distribution

The petitioner argues that it does not compete with producers of copper phosphide and therefore believes that the channels of distribution for copper phosphide are distinct from that of phosphor copper.[34] Producers of copper phosphide appear to sell to different customers than the copper tube manufacturers and brazing rod manufacturers who are the traditional purchasers of phosphor copper.[35]

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[27] Petitioner's postconference brief, Exhibit 1, p. 6.
[28] Petitioner's postconference brief, Exhibit 1, p. 6.
[29] Petitioner's postconference brief, Exhibit 1, p. 4.
[30] Petitioner's postconference brief, Exhibit 1, p. 4.
[31] Petitioner's postconference brief, Exhibit 1, pp. 5–6.
[32] Petitioner's postconference brief, Exhibit 1, p. 6.
[33] Petitioner's postconference brief, Exhibit 1, p. 6.
[34] Petitioner's postconference brief, Exhibit 1, p. 5.
[35] Petitioner's postconference brief, Exhibit 1, p. 5.

Price

Pricing data were not collected for copper phosphide. Accordingly petitioner notes that there is no evidence on the record that suggests that phosphor copper and copper phosphides are not distinguishable on the basis of price.[36]

[36] Petitioner's postconference brief, Exhibit 1, p. 7.

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

U.S. MARKET CHARACTERISTICS

Phosphor copper is an alloy of copper and phosphorus designed to deliver phosphorus primarily to copper users (especially manufacturers of copper tube and brazing alloys).[1] Apparent U.S. consumption of phosphor copper was mostly unchanged during 2013- 2015, rising somewhat over 2013 to 2014 before returning to approximately its 2013 level in 2015.

U.S. producer Metallurgical Products described the U.S. phosphor copper market as competitive among the three U.S. producers until 2011/2012, when its customer J.W. Harris began purchasing lower-priced Korean phosphor copper. In 2015, another customer, Lucas-Milhaupt, also began purchasing Korean product. In the same year, Totall Metal Recycling, which distributed Korean product not only to large but also to small U.S. customers, began importing phosphor copper from Korea as well.[2]

Producers and importers were asked to list their ten largest customers for phosphor copper in 2015. ***. ***. ***.[3]

Three producers and two importers reported that there had been no changes in the product range, mix, or marketing of phosphor copper since January 1, 2013. However, *** indicated that there had been large price increases by domestic producers.

CHANNELS OF DISTRIBUTION

U.S. producers and importers sold mainly to ***, as shown in table II-1. ***.

Table II-1
Phosphor copper: U.S. producers' and importers' U.S. commercial shipments, by sources and channels of distribution, 2013-2015

* * * * * * *

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GEOGRAPHIC DISTRIBUTION

U.S. producers reported selling phosphor copper to *** (table II-2). ***. For U.S. producers, *** percent of sales were within 100 miles of their production facility, *** percent were between 101 and 1,000 miles, and *** percent were over 1,000 miles. Importer *** sold ***.

[1] Conference transcript, p. 10 (Goodman), and petitioner's postconference brief, p. 10.
[2] Conference transcript, pp. 13-16 (Goodman), and petitioners' postconference brief, p. 10.
[3] See email from ***.

Table II-2
Phosphor copper: Geographic market areas in the United States served by U.S. producers and importers of product from Korea

* * * * * * *

SUPPLY AND DEMAND CONSIDERATIONS

U.S. supply

Domestic production

Based on available information, U.S. producers of phosphor copper have the ability to respond to changes in demand with large changes in the quantity of shipments of U.S.-produced phosphor copper to the U.S. market. The main contributing factors to this degree of responsiveness of supply are the availability of unused capacity and the existence of alternate markets, constrained by low levels of inventories and limited ability to produce alternate products.

Industry capacity

Domestic capacity utilization remained under *** percent over 2013-2015, but after being relatively stable at *** over 2013-2014, *** by approximately *** percent in 2015. The relatively low level of capacity utilization suggests that U.S. producers may have substantial ability to increase production of phosphor copper in response to an increase in prices.

Alternative markets

U.S. producers' exports, as a percentage of total shipments, were somewhat over *** of U.S. commercial shipments over 2013-2014, but *** to under *** of U.S. commercial shipments in 2015. This *** share of export shipments in total shipments indicates that U.S. producers may have a moderate-to-large ability to shift shipments between the U.S. market and other markets in response to price changes.

Metallurgical Products described export markets as demanding the same types of phosphor copper as the U.S. market.[4] It added that its main competitors for export sales are a European producer and Bongsan.[5]

[4] Conference transcript, pp. 87-88 (Goodman).
[5] Conference transcript, pp. 75-77 (Goodman).

Inventory levels

U.S. producers' inventories *** from 2013 to 2015, and were always under *** percent of U.S. shipments. These inventory levels suggest that U.S. producers may have limited ability to respond to changes in demand with changes in the quantity shipped from inventories.

Production alternatives

*** responding U.S. producers stated that they could not switch production from phosphor copper to other products. *** stated that it could switch to ***. *** stated that it takes about ***. It added that demand for these other products was not sufficient to sustain its operations.

Supply constraints

*** stated that they had not been subject to any supply constraints since January 1, 2013. However, *** stated that lower prices for phosphor copper had led to cash-flow problems that in turn had led to vendors tightening credit to ***.[6]

Subject imports from Korea[7]

Based on available information, producers of phosphor copper from Korea have the ability to respond to changes in demand with small-to-moderate changes in the quantity of shipments of phosphor copper to the U.S. market. The main contributing factors to this degree of responsiveness of supply ***.

Metallurgical Products stated that imports from Korea began with direct sales to end users J.W. Harris in 2011/12 and then Lucas-Milhaupt in 2015. It continued that in 2015, Totall Metal Recycling, a distributor, began importing phosphor copper from Korea for resale to not only large customers but also smaller customers.[8]

Industry capacity

*** reported capacity utilization rates of approximately *** percent in 2013 and 2014, rising to over *** percent in 2015. However, Metallurgical Products' representative has toured

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[6] Metallurgical Products stated that it was not aware of any supply disruptions for itself or its competitors. Conference transcript, pp. 41-42 (Goodman).

[7] Petitioner indicated that there is only one Korean producer of phosphor copper. For more information, please refer to Part I, "Summary Data and Data Sources" and petition, p. 2.

[8] Conference transcript, pp. 15, 48-49 (Goodman). See also petitioner's postconference brief at pp. 9-11.

the Bongsan facility in Korea and described it as using the same production process as the petitioner's facility, and as having substantial excess capacity.[9]

Alternative markets

***. Petitioner described Korean producer Bongsan as having "captured" the entire Korean market, supported by past Korean tariffs, and now expanding into export markets.[10] It added that Bongsan is related to some of its Korean customers.[11]

Inventory levels

Over 2013-2015, ***.

Production alternatives

***.

Nonsubject imports

Korea was the predominant import source for phosphor copper in the U.S. market over 2013-2015. Over the period, other import sources included Japan, India, China, Belgium, and Luxembourg, but Korean imports were always at least *** percent of shipments of imports over 2013-2015.

U.S. demand

Based on available information, the overall demand for phosphor copper is likely to experience small-to-moderate changes in response to changes in price. The main contributing factors are the limited range of substitute products and the overall moderate (with some variation) cost share of phosphor copper in most of its end-use products.

End uses

Phosphor copper is used as a deoxidizer and as an alloying additive (to increase strength, hardness, and elasticity). It is also used in brazing alloys to lower the melting temperatures and improve wetting characteristics. Phosphor copper has the ability to conduct heat, so it can be used as a conductor in electrical wires, roofing and plumbing, and in industrial

[9] Conference transcript, p. 17 (Goodman).
[10] Conference transcript, p. 8 (Neelakantan).
[11] Conference transcript, p. 79 (Goodman). ***. Petitioner's postconference brief, answers to staff questions, pp. 15 and 18.

machinery, such as HVAC appliances.[12] The largest end-use segment is copper tubing, followed by brazing rods and alloys, and then other specialty copper uses.[13] Additionally, some aluminum end uses (see below) account for a small share of total phosphor copper shipments.[14]

Metallurgical Alloys stated that while U.S. producer Milward Alloys has described itself as specializing in producing phosphor copper for brazing uses, in general, all three U.S. producers produce phosphor copper for all end uses.[15] However, ***.[16]

The primary reason consumers purchase phosphor copper is for the phosphorus content. Copper products producers prefer phosphor copper with the maximum phosphorus content chemically possible (about 15 percent), while aluminum products producers prefer phosphor copper with an 8 percent phosphorus content because it allows adding phosphorus while keeping the required melting temperature lower.[17]

Producers and importers were asked about the differences in uses for 8-percent phosphor versus 15-percent phosphor copper.[18] *** indicated that there were differences, with *** elaborating that while 15- percent phosphor copper is used in copper tubing and brazing applications, 8-percent phosphor copper is used by the aluminum industry as a grain refiner.[19]

Cost share

Producers and importers mostly reported brazing rod and copper tubing as end uses. *** indicated that phosphor copper was *** percent of the cost of copper tubing but *** percent of the cost of brazing rods. *** described phosphor copper as representing between *** percent of the cost of brazing rods, ***.[20] ***, however, indicated that phosphor copper was only *** percent of the cost of brazing alloys.

Business cycles

Two of three U.S. producers and three of four U.S. importers indicated that the phosphor copper market was not subject to distinctive business cycles or conditions of

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[12] Petition, p. 4. "HVAC" stands for heating, ventilating, and air conditioning.

[13] Conference transcript, p. 34 (Goodman). See also staff interview with ***.

[14] Conference transcript, p. 60 (Goodman). ***. Petitioner's postconference brief, answers to staff questions, p. 12.

[15] Conference transcript, p. 36 (Goodman). Additionally, Metallurgical Products indicated that its share of sales to each end use segment is ***. Petitioner's postconference brief, answers to staff questions, p. 8.

[16] Staff interview with ***, March 28, 2016.

[17] Conference transcript, pp. 29 and 58-59 (Goodman).

[18] *** indicated that they did not know, and *** responded to the question.

[19] Metallurgical Products explained that grain refining shrinks the "grain" of the aluminum, making it stronger. Conference transcript, pp. 58-59 (Goodman).

[20] See ***.

competition. However, *** stated that demand increases in the summer months as HVACs are more likely to be repaired for increased air-conditioning usage.

One of these responding firms, ***, indicated that there had not been any changes to the conditions of competition in the U.S. phosphor copper market since January 1, 2013. *** stated that U.S. producers had raised prices significantly, while *** stated that it had been forced to lower its prices due to domestic and foreign competition, and that its competitors had been lowering prices to maintain market share when faced with lower-priced competition.

Demand trends

Firms reported different descriptions of U.S. demand for phosphor copper since January 1, 2013 (table II-3). *** described data from the Copper Development Association as showing that consumption of copper by U.S. copper-using industries had not changed,[21] but added that data from the International Copper Study Group showed that global copper usage, excluding China, had fallen 4 percent in the first 11 months of 2015. *** stated that PVC tubing is replacing copper tubing, affecting its customers' sales of copper tubing. Regarding both domestic and foreign demand, *** stated that increasing use of aluminum in HVAC applications as well as decreased commercial construction activity had reduced demand for phosphor copper.

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

Item	Increase	No change	Decrease	Fluctuate
Demand in the United States				
U.S. producers	0	2	1	0
Importers	1	1	0	0
Demand outside the United States				
U.S. producers	0	1	1	0
Importers	1	1	0	0

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

Substitute products

Of the four responding firms, two U.S. producers and two importers reported that there were no substitutes for phosphor copper.

SUBSTITUTABILITY ISSUES

The degree of substitution between domestic and imported phosphor copper depends upon such factors as relative prices, quality (e.g., grade standards, reliability of supply, defect rates, etc.), and conditions of sale (e.g., price discounts/rebates, lead times between order and delivery dates, payment terms, product services, etc.). Based on available data, staff believes

[21] ***. ***.

that there is a moderate-to-high degree of substitutability, depending somewhat on producer, between domestically produced phosphor copper and phosphor copper imported from subject sources.

Lead times

U.S. producers 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. ***.

Packaging

Producers and importers were asked what type of packaging they used for their sales of phosphor copper. ***. *** reported using ***. *** indicated that it used ***. *** stated that it used ***.

Factors affecting purchasing decisions

Phosphor copper is generally manufactured to meet JIS H2501 and ASTM B-644, Alloy 3A standards. Metallurgical Products indicated that it is able to meet (and exceed) these specifications "easily."[22] It added that Korean product also meets or exceeds these industry specifications and is completely interchangeable with product from Metallurgical Products.[23] It further stated that purchasers generally do not require certification beyond ASTM or JIS standards.[24]

U.S. producer Metallurgical Products' production facility has been ISO-certified[25] since 1996.[26] It stated that of the three U.S. producers, only H. Kramer is not ISO-certified. It continued that lack of ISO certification may mean more paperwork for a supplier but does not deter customers from buying from a supplier.[27]

Purchasers responding to lost sales lost revenue allegations[28] were asked to identify the main purchasing factors their firm considered in their purchasing decisions for phosphor copper. The major purchasing factors identified by firms included quality, price, alternative supplier, and delivery.

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[22] Petition p. 4, and exhibits I-4 and I-5. JIS is the Japanese Industry Standard and ASTM is the American Society for Testing and Materials. See also conference transcript, pp. 10 and 51 (Goodman).

[23] Conference transcript, p. 16 (Goodman).

[24] Conference transcript, p. 82 (Goodman).

[25] "ISO" stands for International Standards Organization.

[26] Conference transcript, p. 22 (Goodman).

[27] Conference transcript, pp. 55-56 (Goodman).

[28] This information is compiled from responses by purchasers identified by Petitioners or other U.S. producers to the lost sales lost revenue allegations. See Part V for additional information.

Comparison of U.S.-produced and imported product

In order to determine whether U.S.-produced phosphor copper can generally be used in the same applications as imports from Korea, U.S. producers and importers were asked whether the products can "always," "frequently," "sometimes," or "never" be used interchangeably. As shown in table II-4, responding producers and importers reported that phosphor copper from different country sources was "always" or "frequently" interchangeable.[29]

Table II-4
Phosphor copper: Interchangeability between phosphor copper produced in the United States and in other countries, by country pairs

* * * * * * *

In addition, producers and importers were asked to assess how often differences other than price were significant in sales of phosphor copper from the United States, Korea, or nonsubject countries. As seen in table II-5, producers and importers that were able to answer the question described factors other than price as "sometimes" or "never" significant in sales of phosphor copper from different sources.

Table II-5
Phosphor copper: Significance of differences other than price between product produced in the United States and in other countries, by country pairs

* * * * * * *

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[29] *** did not respond to the question, but indicated that it knows U.S. purchasers find Korean phosphor copper acceptable because they are using it.

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

The Commission analyzes a number of factors in making injury determinations (see 19 U.S.C. §§ 1677(7)(B) and 1677(7)(C)). Information on the dumping margins was presented in *Part I* of this report and information on the volume and pricing of imports of the subject merchandise is presented in *Part IV* and *Part V*. Information on the other factors specified is presented in this section and/or *Part VI* and (except as noted) is based on the questionnaire responses of three firms that accounted for the all of U.S. production of phosphor copper during 2015.

U.S. PRODUCERS

The Commission issued a U.S. producer questionnaire to three firms based on information contained in the petition. Three firms provided useable data on their productive operations. Based on conference testimony, and the questionnaire responses of producers, importers, and purchasers, staff believes that these responses represent all of U.S. production of phosphor copper.

Table III-1 lists U.S. producers of phosphor copper, positions on the petition, their production locations, and shares of total production in 2015.

Table III-1
Phosphor copper: U.S. producers of phosphor copper, their positions on the petition, production locations, and shares of reported production, 2015

Firm	Position on petition	Production location(s)	Share of production (percent)
H. Kramer	Oppose	Chicago, IL	***
Metallurgical Products	Support	West Chester, PA	***
Milward Alloys	***	Lockport, NY	***
Total			***

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

***. Further, ***. In addition, *** U.S. producers directly import the subject merchandise or purchase the subject merchandise from U.S. importers.

U.S. PRODUCTION, CAPACITY, AND CAPACITY UTILIZATION

Table III-2 present U.S. producers' production, capacity, and capacity utilization. U.S. producers' capacity *** but production *** by *** percent, approximately *** pounds. Metallurgical Products, the *** U.S. producer of phosphor copper, accounted for *** pounds of

the *** with Milward Alloys ***, *** H. Kramer reported ***. From 2013 to 2014, U.S. production *** by *** pounds. ***. *** ***.[1]

Table III-2
Phosphor copper: U.S. producers' production, capacity, and capacity utilization, 2013-15

* * * * * * *

Alternative products

Table III-3 presents U.S. producers' overall capacity and production. *** produced other products on the same equipment and machinery used to produce phosphor copper. Accordingly, the larger overall capacity and overall production volume figures compared to the phosphor copper capacity and production figures ***. ***. Total production of *** combined accounted for no more than *** percent of U.S. producers' total production for any year during 2013-15.

Table III-3
Phosphor copper: U.S. producers' overall capacity and production, 2013-15

* * * * * * *

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

Table III-4 presents U.S. producers' U.S. shipments, export shipments, and total shipments. U.S. producers ship *** of their phosphor copper domestically. Total shipments *** from 2013 to 2015.

U.S. producers' U.S. commercial shipments[2] *** percent from 2013 to 2015. U.S. producers' U.S. commercial shipments *** by *** percent from 2013 to 2014, largely attributable to ***, which reported that the ***. U.S. producers' U.S. commercial shipments then *** percent from 2014 to 2015. *** ***.[3]

U.S. producers' export shipments *** by *** percent (***) pounds during 2013-15. The *** in export shipments is attributed to ***.[4] *** sales to ***.[5] Prior to ***.[6] Metallurgical Products reported that its ***. Metallurgical Products also claims ***. Sales to ***.[7]

---

[1] Email from ***. April 7, 2016.
[2] Internal consumption ***.
[3] Petitioner's postconference brief, p. 10.
[4] Email from ***. April 7, 2016.
[5] Email from ***. April 7, 2016.
[6] "New Opportunities for U.S. Exporters Under the U.S.-Korea Trade Agreement," Office of the United States Trade Representative. Found at https://ustr.gov/trade-agreements/free-trade-agreements/korus-fta. Accessed April 8, 2016. Email from ***. April 7, 2016.

Table III-4
Phosphor copper: U.S. producers' U.S. shipments, exports shipments, and total shipments, 2013-15

* * * * * * *

Table III-5 presents U.S. producers' U.S. shipments of phosphor copper by phosphorus content. Phosphor copper with 15 percent phosphorus content accounts for the large majority of U.S. producers' shipments. Phosphor copper with 8 percent phosphorus content accounted for *** to *** percent of U.S. producers' shipments. Phosphor copper with other phosphorus content ***.

Table III-5
Phosphor copper: U.S. producers' U.S. shipments by phosphorus content, 2013-15

* * * * * * *

U.S. PRODUCERS' INVENTORIES

Table III-6 presents U.S. producers' end-of-period inventories and the ratio of these inventories to U.S. producers' production, U.S. shipments, and total shipments. U.S. producers' end-of-period inventories ***. The ratios of end-of-period inventories to production and shipments ***, even as production and shipments ***.

Table III-6
Phosphor copper: U.S. producers' inventories, 2013-15

* * * * * * *

U.S. PRODUCERS' IMPORTS AND PURCHASES

No U.S. producer reported importing subject merchandise or purchasing subject merchandise from an importer.

U.S. EMPLOYMENT, WAGES, AND PRODUCTIVITY

Table III-7 shows U.S. producers' employment-related data. The total number of production-related workers *** during 2013-15 whereas total hours worked *** percent, resulting in *** hours worked per production-related worker. Wages paid *** while hourly wages fluctuated within one dollar per hour. Productivity *** from 2013 to 2014 then *** from

[7] Email from ***. April 7, 2016.

2014 to 2015 reflecting the changes in *** but essentially ***. Unit labor costs *** percent from 2013 to 2015.

Table III-7
Phosphor copper: Average number of production and related workers, hours worked, wages paid to such employees, hourly wages, productivity, and unit labor costs, 2013-15

* * * * * * *

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

U.S. IMPORTERS

The Commission issued importer questionnaires to 10 firms believed to be importers of subject phosphor copper,[1] as well as to all U.S. producers of phosphor copper.[2] Usable questionnaire responses were received from four companies, representing all U.S. subject imports from Korea between 2013-15 under HTS statistical reporting number 7405.00.1000.[3] Table IV-1 lists all responding U.S. importers of phosphor copper from Korea and other sources, their locations, type of importer, type of firm, and their shares of U.S. imports, in 2015.

---

[1] One firm provided a no response.

[2] The Commission issued questionnaires to those firms identified in the petition, along with firms that, based on a review of data provided by ***, may have imported product under HTS statistical reporting number 7405.00.1000 during 2013-15.

*** data revealed that ***. Bongsan provided a foreign producers' questionnaire response but did not respond to staff's request to complete an importers' response. Furthermore, ***. Consignees of Bongsan's imports were identified in the *** data and were issued the importers' questionnaire. These firms include ***. ***. Although these firms do not clear Customs (i.e., act as the importer of record) for import entries of subject merchandise, they do purchase directly from Bongsan (which identified in its foreign producers' questionnaire response these firms as the importers of its phosphor copper in 2015). As such, import data provided by the consignees are deemed to be reliable and complete. Finally, because the importers' questionnaire responses account for essentially all known imports of phosphor copper, the report relies on questionnaire response data rather than official import statistics.

[3] *** was identified in *** data as importing product under HTS subheading 7405.00.1000 from *** but reported that these entries were for product other than phosphor copper. The *** data for this subheading also identified several other firms that imported product under HTS subheading from nonsubject sources (i.e., India and Japan). These firms did not provide importers' questionnaire responses, but are not believed to have actually imported much or any phosphor copper in light of testimony provided at the Staff Conference that nonsubject imports are not present in the marketplace. Conference transcript, p. 73 (Goodman). Finally, HTS statistical reporting number 2848.00.1000 appears to have also been used by *** for entries of phosphor copper from ***. Other entries of phosphor copper under HTS statistical reporting number 2848.00.1000 are unlikely to be of meaningful quantities, since *** accounted for *** percent of total imports during 2013-15 under this number and the other foreign producers and importers identified by *** under this number do not appear to participate in the phosphor copper market.

Table IV-1
Phosphor copper: U.S. importers by source, 2015

Firm	Headquarters	Type of importer	Type of firm	Share of imports by source (percent)		
				Korea	All other sources	Total imports
J.W. Harris[1]	Mason, OH	***	***	***	***	***
Lucas-Milhaupt[2]	Cudahy, WI	***	***	***	***	***
N.T. Ruddock[3]	Cleveland, OH	***	***	***	***	***
Totall Metal Recycling	Granite City, IL	***	***	***	***	***
Total				***	***	***

[1] J.W. Harris is owned by the The Lincoln Electric Company (U.S.A.).
[2] Lucas-Milhaupt is owned by Handy & Harman (U.S.A.).
[3] N.T. Ruddock ***.

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

U.S. IMPORTS

Table IV-2 presents data for U.S. imports of phosphor copper from Korea and all other sources. Imports from Korea account for the vast majority of total U.S. imports of phosphor copper. The quantity of U.S. imports from Korea increased by *** percent during 2013-15. In 2013 and 2014, ***.[4] ***. *** percent of imports then. ***. ***.

Table IV-2
Phosphor copper: U.S. imports by source, 2013-15

* * * * * * *

[4] Petitioners note that prior to 2012, very little phosphor copper was imported into the United and there were no imports from Korea. J.W. Harris began purchasing phosphor copper from Korea in 2012. Conference transcript, pp. 12-13 (Goodman). According to official import statistics, there were no imports of phosphor copper from Korea in 2010, 265,699 pounds in 2011, and 1,170,397 pounds in 2012.

Table IV-3 presents data for U.S. importers' shipments of phosphor copper from Korea. ***. ***.[5]

Table IV-3
Phosphor copper: U.S. importers' U.S. shipments, export shipments, and total shipments of U.S. imports from Korea, 2013-15

* * * * * * *

Table IV-4 presents data for U.S. importers' shipments of phosphor copper from all other sources.

Table IV-4
Phosphor copper: U.S. importers' U.S. shipments, export shipments, and total shipments of U.S. imports from all other sources (AOS), 2013-15

* * * * * * *

Table IV-5 presents data for U.S. importers' shipments (to include internal consumption) of phosphor copper from Korea, by phosphorus content. All phosphor copper from Korea is product with 15 percent phosphorus content.

Table IV-5
Phosphor copper: U.S. importers U.S. shipments of phosphor copper from Korea, by phosphorus content, 2013-15

* * * * * * *

Table IV-6 presents data for U.S. importers' shipments of phosphor copper from all other sources, by phosphorus content.

Table IV-6
Phosphor copper: U.S. importers U.S. shipments of phosphor copper from all other sources, by phosphorus content, 2013-15

* * * * * * *

NEGLIGIBILITY

The statute requires that an investigation be terminated without an injury determination if imports of the subject merchandise are found to be negligible.[6] Negligible imports are generally defined in the Tariff Act of 1930, as amended, as imports from a country

[5] Email from ***, April 11, 2016.

[6] 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)).

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.[7] Imports from Korea accounted for 99.0 percent of total imports of phosphor copper by quantity during March 2015-February 2016.[8]

APPARENT U.S. CONSUMPTION AND U.S. MARKET SHARES

Table IV-7 presents data on apparent U.S. consumption and U.S. market shares for phosphor copper. The quantity of apparent consumption remained stable during 2013-15, decreasing by only *** percent during this period. U.S. producers' U.S. shipments accounted for the largest, but ***, share of U.S. apparent consumption during 2013-15, showing a *** percentage point *** during this period. Shipments of subject imports accounted for *** percent of the quantity of apparent consumption during 2013 and *** to *** percent in 2015. Nonsubject imports accounted for a very small share of apparent consumption in 2013 and were not even present in 2015.

U.S. producers' U.S. shipment average unit value *** steadily during 2013-15, from $*** in 2013, to $*** in 2014, and to $*** in 21015. Likewise, U.S. shipments of subject imports average unit values (to include internal consumption) decreased from $*** in 2013, to $*** in 2014, and to $*** in 2015. Unlike subject imports which are exclusively phosphor copper with 15 percent phosphor content, U.S. producers' U.S. shipments also include product with 8 percent phosphor content and other phosphor content, albeit in relatively small quantities relative to its shipments of product with 15 percent phosphor content.[9]

Table IV-7
Phosphor copper: U.S. shipments of domestic product, U.S. shipments of imports, and apparent U.S. consumption, 2013-15

* * * * * * *

[7] Section 771 (24) of the Act (19 U.S.C § 1677(24)).
[8] Based on official import statistics for entries under HTS number 7405.00.1000.
[9] See table III-6.

PART V: PRICING DATA

FACTORS AFFECTING PRICES

Raw material costs

Raw material costs are a large component of phosphor copper prices, with raw materials representing between *** and *** percent of the costs of goods sold for phosphor copper between 2013 and 2015.

Phosphor copper primarily contains phosphorus (usually 15 percent of total chemical composition) and copper (usually 85 percent of total chemical composition), while also containing traces of iron, lead, and tin.[1] Metallurgical Products stated that it purchases its copper domestically in the form of high-grade copper scrap. It added that all phosphor copper producers now purchase phosphorus from China and Vietnam because the remaining U.S. phosphorus producer was purchased by a fertilizer company and produces phosphorus only for internal consumption.[2]

*** stated that raw material prices had fallen since January 1, 2013, usually referencing declining copper prices. Metallurgical Products described copper prices as being set by the COMEX (Commodity Exchange) in the United States and the London Metal Exchange (LME) in the rest of the world.[3] *** described *** copper prices as falling from $3.34 per pound in 2013 to $3.12 per pound in 2014 and then $2.50 per pound in 2015. Similarly, *** described *** copper prices as falling from $3.67 in January 2013 to $2.86 in January 2015. *** added that lower copper prices lower its profit margin. *** stated that raw material prices had fluctuated with no clear trend, but *** added that raw material prices had followed copper prices. Trends in copper and phosphorus prices are summarized in figure V-1.

Figure V-1
Trends in copper and phosphorus prices, January 2012-January 2016

* * * * * * *

Transportation costs to the U.S. market

Transportation costs to the U.S. market were 3.2 percent[4] for phosphor copper from Korea in 2015.

---

[1] Petition, pp. 4 and 16.

[2] Conference transcript, p. 38 (Goodman).

[3] Conference transcript, pp. 44-45 (Goodman).

[4] Transportation costs were determined by comparing the c.i.f. value of imports to the Customs value of imports for HTS code 7405.00.1000, using values from 2015.

U.S. inland transportation costs

*** responding U.S. producers and *** reported that they typically arrange transportation to their customers.[5] U.S. producers reported that their U.S. inland transportation costs ranged from *** to *** percent while *** reported costs of *** percent.

PRICING PRACTICES

Pricing methods

As presented in table V-1, U.S. producers used both transaction-by-transaction negotiation and contracts, while responding importers sold primarily on a transaction-by-transaction basis.

Table V-1
Phosphor copper: U.S. producers and importers reported price setting methods, by number of responding firms[1]

* * * * * * *

As shown in table V-2, U.S. producers reported selling *** and importers reported selling ***, while U.S. producers also reported *** contract sales in 2015.

Table V-2
Phosphor copper: U.S. producers' and importers' shares of U.S. commercial shipments by type of sale, 2015

* * * * * * *

.

*** described its *** as generally having a duration of *** days, while *** reported a typical duration of *** days for its *** contracts. *** stated that their contracts allowed for renegotiation during the contract period. *** also described their *** as ***. *** stated that its *** did so as well, but *** described its *** as fixing ***. *** described their *** as having meet-or-release provisions.

Metallurgical Products indicated that its phosphor copper contracts contain a provision in which prices are based on the COMEX price of copper plus a negotiated premium. If the contract has a meet-or-release provision, then the premium can adjust downward.[6] *** also reported such provisions, but *** indicated that their contracts did not have such provisions.

[5] ***.

[6] Conference transcript, pp. 45-46 (Goodman).

Sales terms and discounts

*** typically quote prices on a delivered basis, although *** quotes prices f.o.b. its point of shipment. *** reported no discount policy, but *** indicated that ***. *** reported sales terms of net 30 days. ***.

PRICE DATA

The Commission requested U.S. producers and importers to provide quarterly data for the total quantity and f.o.b. value of the following phosphor copper products shipped to unrelated U.S. customers during 2013-15. Metallurgical Products described these two products as representing the predominant forms of phosphor copper in the U.S. market.[7]

Product 1.-- 15% phosphor copper shot that meets or exceeds JIS H2501 Grade 1, Class A, 15 P Cu A, P content approximately 14.8%. P 14.7% to 14.9%, P+Cu>99.75%, Fe<0.03%, Pb<0.01%, Sn<0.01%, in drums or comparable containers

Product 2.-- 15% phosphor copper ingot/waffle that meets or exceeds JIS H2501 Grade 1, Class A, 15 P Cu A, P content approximately 14.8%. P 14.7% to 14.9%, P+Cu>99.75%, Fe<0.03%, Pb<0.01%, Sn<0.01%, in drums or comparable containers

Three U.S. producers and three importers provided usable pricing data for sales of the requested products, although not all firms reported pricing for all products for all quarters.[8] Pricing data reported by these firms accounted for approximately *** percent of U.S. producers' shipments of product and *** percent of U.S. shipments of subject imports from Korea from 2013-2015.[9]

Among importers, ***.[10] ***, staff believes that all importing costs are captured by the DDP value.[11] ***.

---

[7] Conference transcript, p. 78 (Goodman).

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

[9] Data were also requested for pricing products imported from Japan, but no importers provided such data.

[10] ***.

[11] "Delivered duty paid (DDP) is a transaction in which the seller must pay for all of the costs related to transporting the goods and is responsible in full for the goods until they have been received and transferred to the buyer. This includes paying for the shipping, the duties and any other expenses incurred while shipping the goods." See http://www.investopedia.com/terms/d/delivery-duty-paid.asp , downloaded April 5, 2016.

***.

Price data for products 1-2 are presented in tables V-3 to V-4 and figure V-2.

Table V-3
Phosphor copper: Weighted-average f.o.b. prices and quantities of domestic and imported product 1[1] and margins of underselling/(overselling), by quarters, January 2013-December 2015

* * * * * * *

Table V-4
Phosphor copper: Weighted-average f.o.b. prices and quantities of domestic and imported product 2[1] and margins of underselling/(overselling), by quarters, January 2013-December 2015

* * * * * * *

Figure V-2
Phosphor copper: Weighted-average prices and quantities of domestic and imported products 1 and 2, by quarters, January 2013-December 2015

* * * * * * *

Direct imports (purchase cost)

In addition to the *** cost of direct imports presented in tables V-3 thru V-4 and figure V-2, direct importers were also asked to report the factors that add to their costs of importing directly. As noted earlier, ***.

Price trends

Prices *** during 2013-15. Table V-5 summarizes the price trends, by country and by product. As shown in the table, domestic price *** ranged from *** to *** percent during 2013-15 while the import price *** was *** percent.

Table V-5
Phosphor copper: Summary of weighted-average f.o.b. prices for products 1-2 from the United States and Korea

* * * * * * *

Price comparisons

As shown in table V-6, prices for phosphor copper imported from Korea were below those for U.S.-produced product in 11 of 13 instances (*** pounds); margins of underselling ranged from *** to *** percent. In the remaining 2 instances (*** pounds), prices for phosphor copper imported from Korea were between *** and *** percent above prices for the domestic product.

Table V-6
Phosphor copper: Instances of underselling/overselling and the range and average of margins, by country, January 2013-December 2015

* * * * * * *

LOST SALES AND LOST REVENUE

The Commission requested U.S. producers of phosphor copper to report purchasers where they experienced instances of lost sales or revenue due to competition from imports of phosphor copper from Korea since January 1, 2013. Of the three responding U.S. producers, *** reported that *** had to reduce prices, while *** reported that *** had not needed to do so. *** reported that they had lost sales, ***.

*** submitted lost sale and lost revenue allegations, identifying *** firms where *** lost sales or revenue (*** consisting of lost sales allegations, *** consisting of lost revenue allegations, and *** consisting of both types of allegations). As noted in part II, Metallurgical Products described losing sales first to J.W. Harris and then Lucas-Milhaupt, before learning that Totall Metal Recycling was importing phosphor copper from Korea for distribution.

U.S. producers were also asked to provide information regarding the timing, method of sale, and product type related to the lost sales and lost revenue allegations. The allegations *** and involved *** on ***.

Staff contacted *** purchasers and received responses from *** purchasers. Responding purchasers reported purchasing 4.3 million pounds of phosphor copper during 2013-2015 (table V-10). During 2015, purchasers purchased 71.6 percent from U.S. producers, 28.4 percent from Korea, and none from nonsubject countries. Of the responding purchasers, six reported decreasing purchases from domestic producers, none reported increasing purchases, and three reported no change.[12] Explanations for decreasing purchases of domestic product included ***. ***. ***.

Of the nine responding purchasers, six reported that they had shifted purchases of phosphor copper from U.S. producers to subject imports since 2013, and the reported estimated share of purchases shifted ranged from 5.3 to 34.3 percent (tables V-7 and V-8). Three of these purchasers reported that price was the reason for the shift. Other identified reasons for shifting from U.S. producers included ***.

Table V-7
Phosphor copper: Purchasers' responses to purchasing patterns

* * * * * * *

[12] Of the *** responding purchasers, *** indicated that *** did not know the source of the phosphor copper that *** purchased.

Table V-8
Phosphor copper: Purchasers' responses to shifting supply sources

* * * * * * *

Of the nine responding purchasers, five reported that U.S. producers had reduced prices in order to compete with lower-priced imports from Korea (table V-9); three reported that they did not know. The reported estimated price reduction ranged from 3.0 to 27.0 percent.

Table V-9
Phosphor copper: Purchasers' responses to U.S. producer price reductions

* * * * * * *

In responding to the lost sales lost revenue survey, some purchasers provided additional information on purchases and market dynamics. ***.

PART VI: FINANCIAL EXPERIENCE OF U.S. PRODUCERS

INTRODUCTION

U.S. producers *** provided financial data on their operations on phosphor copper. These data are believed to account for all U.S. production of phosphor copper in 2015. *** reported sales other than commercial sales as part of their financial data. *** reported a fiscal year end of December 31, while *** reported a fiscal year end of June 30 (however, *** reported its financial data on a calendar year basis).[1]

OPERATIONS ON PHOSPHOR COPPER

Income-and-loss data for U.S. producers of phosphor copper are presented in table VI-1, while selected financial data, by firm, are presented in table VI-2. The reported profitability of the U.S. industry *** from 2013 to 2015. The reported aggregate net sales quantity *** by *** percent during this time, while the aggregate net sales value *** by *** percent.[2] Collectively, the aggregate cost of goods sold ("COGS") and selling, general, and administrative ("SG&A") expenses *** by *** percent during this time. As a result of the *** in revenue as compared to operating costs and expenses, the *** in 2015 than in either 2013 or 2014. Gross and net profitability followed generally similar trends during this time; however, all three periods show ***.

On a per pound basis, raw material costs ***, while direct labor, other factory costs, and SG&A expenses *** from 2013 to 2015. The net sales value *** by $*** from 2013 to 2015, while total operating costs and expenses (COGS and SG&A expenses, combined) *** by about $*** during this time.[3] The ***.

As a ratio to net sales, direct labor, other factory costs, total COGS, and SG&A expenses generally *** as total net sales value ***; however, raw material costs *** as a ratio to net sales.

---

[1] ***. Email from ***, April 5, 2016.

[2] As previously discussed in this report, the magnitude of the *** from 2013 to 2015 is notably impacted by ***. *See* pp. III-4 to III-6.

[3] Raw material costs *** by $*** from 2013 to 2015.

Raw material costs accounted for an average *** percent of total COGS for the reporting period,[4] and SG&A expenses accounted for an average *** percent of total operating costs and expenses for the reporting period. The U.S. industry experienced positive *** throughout 2013 to 2015; however, *** occurred in *** years as SG&A expenses ***.

Table VI-1
Phosphor copper: Results of operations of U.S. producers, 2013-15

* * * * * * *

Table VI-2
Phosphor copper: Selected results of operations of U.S. producers, by firm, 2013-15

* * * * * * *

U.S. producers were asked various questions related to raw material purchases in order to determine the effects of fluctuations in raw material costs (primarily copper costs) on reported profitability. According to H. Kramer, ***.[5]

According to Metallurgical Products, the firm's raw material costs reflect spot purchases for both copper (high purity copper scrap) and phosphorus. The firm indicated that its main suppliers of copper are U.S. firms, while its main suppliers of phosphorus are in China and Vietnam.[6] ***.[7] Metallurgical Products utilizes futures contracts to offset the market risk associated with fluctuations in copper prices.[8] ***.[9]

According to Milward Alloys, ***.[10] ***.[11]

[4] Conference testimony indicated that reported total raw material costs mirror the content of the finished goods, and are generally comprised of 85 percent copper costs and 15 percent phosphorus costs. Conference transcript (Goodman), p. 85.

[5] Email from ***, April 8, 2016.

[6] Conference transcript (Goodman), pp. 54, 69, and 84.

[7] U.S. producers' questionnaire response of Metallurgical Products, question III-3.

[8] Conference transcript (Goodman), pp. 86-87.

[9] Email from ***, April 8, 2016.

[10] Email from ***, April 11, 2016.

[11] U.S. producers' questionnaire response of Milward Alloys, question III-3, and email response from ***, March 29, 2016.

Variance analysis

The variance analysis presented in table VI-3 is based on the data in table VI-1.[12] The analysis shows that the *** in operating profitability from 2013 to 2015 is attributable to ***.

Table VI-3
Phosphor copper: Variance analysis on the operations of U.S. producers, 2013-15

* * * * * * *

Capital expenditures, total assets, and return on assets

The responding firms' aggregate data on capital expenditures, total assets, and return on assets ("ROA") are shown in table VI-4. *** reported capital expenditure data, and *** reported research and development ("R&D") expenses. Aggregate capital expenditures *** from 2013 to 2015. The *** of reported capital expenditures and assets reflect the data of ***. According to ***, the firm's capital expenditures reflect ***.[13] [14]

The total assets utilized in the production, warehousing, and sale of phosphor copper *** from $*** in 2013 to $*** in 2015, and the ROA *** from *** percent in 2013 to *** percent in 2015.[15]

---

[12] The Commission's variance analysis is calculated in three parts: sales variance, cost of sales variance (COGS variance), and SG&A expense variance. Each part consists of a price variance (in the case of the sales variance) or a cost variance (in the case of the COGS and SG&A expense variance), and a volume variance. The sales or cost variance is calculated as the change in unit price or unit cost/expense times the new volume, while the volume variance is calculated as the change in volume times the old unit price or unit cost. Summarized at the bottom of the table, the price variance is from sales; the cost/expense variance is the sum of those items from COGS and SG&A variances, respectively; and the volume variance is the sum of the volume components of the net sales, COGS, and SG&A expense variances.

[13] U.S. producers' questionnaire response of ***, question III-13. *** noted in response to this question that its reported capital expenditures reflect ***.

[14] At the conference, the president of Metallurgical Products described the firm's equipment as "state of the art," with most equipment less than five years old. Some equipment is quite expensive, as it is made entirely of stainless steel for acid resistance. Conference transcript (Goodman), pp. 19-20.

[15] The return on assets 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 for the subject product.

Table VI-4
Phosphor copper: Capital expenditures, R&D expenses, total assets, and ROA of U.S. producers, 2013-15

* * * * * * *

Capital and investment

The Commission requested that U.S. producers of phosphor copper describe any negative effects of imports of phosphor copper from Korea on their firms' return on investment or the scale of capital investments, as well as any negative effects on their firms' growth, ability to raise capital, or existing development and production efforts. Responses are shown in tables VI-5a through VI-5c.

Table VI-5a
Phosphor copper: Negative effects of imports as reported by U.S. producer *, by factor**

* * * * * * *

Table VI-5b
Phosphor copper: Negative effects of imports as reported by U.S. producer *, by factor**

* * * * * * *

Table VI-5c
Phosphor copper: Negative effects of imports as reported by U.S. producer *, by factor**

* * * * * * *

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,*

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[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 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 KOREA

The Commission issued foreign producers' or exporters' questionnaires to one firm believed to produce and/or export phosphor copper from Korea.[3] A useable response to the Commission's questionnaire was received from Bongsan, the sole producer of phosphor copper in Korea. Bongsan's exports to the United States accounted for all of U.S. imports of phosphor copper from Korea over the period being examined. According to Bongsan, it accounts for all production of phosphor copper in Korea, accordingly data reported in this Part of the report accounts for all production of phosphor copper in Korea.

Bongsan was established in 1995 and started producing phosphor copper in 1996, when its factory was completed.[4] The facility was ISO 9002 certified in 2006.[5] Bongsan promotes producing three standards of phosphor copper: Bongsan Standard, JIS H2501, and ASTM B-644.[6] The Bongsan standard requires higher purity of phosphor copper compared to the JIS and ASTM standard and lower concentrations of iron, lead, and silicon. Bongsan also promotes that it sells phosphor copper in waffle and shot forms.[7] Bongsan's prices are based on the LME price (average of previous month), production cost, and transportation. Delivery for orders below 20 tons is within two weeks after accepting the order and delivery orders for over 20 tons is four weeks after accepting the order.[8]

Table VII-1 presents information on the phosphor copper operations of Bongsan. Bongsan's capacity[9] remained at the same level during 2013-15 and is projected to remain the same in 2016 and 2017. Production increased by *** percent (*** pounds) from 2013 to 2015. Production is projected to decrease by *** percent (*** pounds) from 2015 to 2016 and not change from 2016 to 2017. Total shipments increased during 2013 to 2015 but home market shipments decreased *** percent (*** pounds) and accounted for a shrinking share of shipments during this period. The increase in total shipments was due to an increase in exports. Total exports increased by *** pounds from 2013 to 2015, with exports to the United States increasing by *** pounds and exports to all other markets[10] increasing by *** pounds. Total shipments are projected to decrease by almost *** pounds from 2015 to 2016, with home market shipments continuing to decrease along with smaller volumes projected to be exported to the United States and to all other export markets.

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

[4] Bongsan e-catalog, found at "http://www.bsan.co.kr/," retrieved April 8, 2016. Korea had an eight percent import duty imposed on phosphor copper, which was eliminated in 2012 when the United States and Korea entered into a free trade agreement. Petitioner's postconference brief, Exh. 1, p. 15.

[5] Bongsan e-catalog, found at "http://www.bsan.co.kr/," retrieved April 8, 2016.

[6] Bongsan e-catalog, found at "http://www.bsan.co.kr/," retrieved April 8, 2016.

[7] "http://www.bsan.co.kr/," retrieved April 8, 2016.

[8] Bongsan e-catalog, found at "http://www.bsan.co.kr/," retrieved April 8, 2016.

[9] Production capacity was reported based on operating *** hours per week, *** weeks per year. Capacity constraints were reported to be ***

[10] Bongsan identified its principal other export markets as ***.

Table VII-1
Phosphor copper: Data for Bongsan in Korean, 2013-15, and projected 2016 and 2017

* * * * * * *

Alternative products

Table VII-2 presents overall capacity and production for Korea producer Bongsan. Bongsan reported that it also produces *** on the same equipment and machinery used to produce phosphor copper. These products represented a *** share of Bongsan's overall production, accounting for no more than *** percent of its overall production since 2013. Indeed, phosphor copper accounted for *** percent of Bongsan's sales in its most recent fiscal year.

Table VII-2
Phosphor copper: Data for Korean producer Bongsan, overall capacity and production 2013-15

* * * * * * *

Korea exports by destination market

Table VII-3 presents data on Korea exports of phosphor copper by destination market, as reported by GTIS. The United States is the single largest destination for Korean exports of phosphor copper, accounting for 33.4 percent of its exports in 2015. Japan accounted for the second largest share of exports (15.3 percent in 2015) and all other countries accounted for 10 percent or less of exports from Korea.

Table VII-3
Phosphor copper: Korea exports by destination market, 2013-15

Item	Calendar year		
	2013	2014	2015
	Quantity (pounds)		
Korea's exports to the United States	1,212,188	1,379,387	1,726,811
Korea's exports to other major destination markets.--			
Japan	521,503	886,502	791,719
Taiwan	672,693	590,838	515,881
Turkey	348,330	266,759	460,766
United Kingdom	637,135	740,752	440,924
Poland	165,347	275,578	324,079
Malaysia	257,941	190,259	224,871
Brazil	171,960	160,937	180,779
Thailand	183,098	111,516	164,546
All other destination markets	467,644	564,943	340,539
Total Korea exports	4,637,839	5,167,471	5,170,914
	Share of quantity (percent)		
Korea's exports to the United States	26.1	26.7	33.4
Korea's exports to other major destination markets.--			
Japan	11.2	17.2	15.3
Taiwan	14.5	11.4	10.0
Turkey	7.5	5.2	8.9
United Kingdom	13.7	14.3	8.5
Poland	3.6	5.3	6.3
Malaysia	5.6	3.7	4.3
Brazil	3.7	3.1	3.5
Thailand	3.9	2.2	3.2
All other destination markets	10.1	10.9	6.6
Total Korea exports	100.0	100.0	100.0

Source: Official Korean exports statistics under HTS subheading 7405.00 as reported by Korea Customs and Trade Development Institution in the GTIS/GTA database, accessed March 15, 2016.

U.S. INVENTORIES OF IMPORTED MERCHANDISE

Table VII-4 presents data on U.S. importers' reported inventories of phosphor copper. Importers' end-of-period inventories for imports from Korea increased during 2013-15. ***. ***. ***.

Table VII-4
Phosphor copper: U.S. importers' inventories, 2013-15

* * * * * * *

U.S. IMPORTERS' OUTSTANDING ORDERS

The Commission requested importers to indicate whether they imported or arranged for the importation of phosphor copper from Korea (and all other sources) after December 31, 2015. These data are presented in table VII-5. ***. ***.

Table VII-5
Phosphor copper: U.S. importers' inventories, 2016

* * * * * * *

ACTIONS IN THIRD-COUNTRY MARKETS

There are no known trade remedy actions in third-country markets covering phosphor copper from Korea.

INFORMATION ON NONSUBJECT COUNTRIES

In assessing whether the domestic industry is materially injured or threatened with material injury "by reason of subject imports," the legislative history states "that the Commission must examine all relevant evidence, including any known factors, other than the dumped or subsidized imports, that may be injuring the domestic industry, and that the Commission must examine those other factors (including non-subject imports) 'to ensure that it is not attributing injury from other sources to the subject imports.'"[11]

Table VII-6 presents global exports of copper master alloys (HS 7405.00) by country. This HS subheading covers all master alloys of copper, not just the subject product. Belgium and the United Kingdom are the largest exporters of master alloys of copper. However, because phosphor copper is not broken out from other master alloys of copper in the HS, global trade data do not provide a sufficient amount of specificity to determine which countries produce and export phosphor copper.

[11] *Mittal Steel Point Lisas Ltd. v. United States*, Slip Op. 2007-1552 at 17 (Fed. Cir. Sept. 18, 2008), quoting from Statement of Administrative Action on Uruguay Round Agreements Act, H.R. Rep. 103-316, Vol. I at 851-52; *see also Bratsk Aluminum Smelter v. United States*, 444 F.3d 1369 (Fed. Cir. 2006).

Table VII-6
Phosphor copper: Global exports by reporting country, 2012-15

Item	Calendar year			
	2012	2013	2014	2015
	Quantity (pounds)			
United States	12,615,411	12,254,285	9,491,901	7,265,486
Korea	4,317,014	4,637,839	5,167,471	5,170,914
All other major exporting countries.--Belgium	25,728,136	25,412,214	24,542,491	27,055,758
United Kingdom	16,588,222	14,719,586	15,243,845	14,502,431
Pakistan	0	9,594,515	4,656,715	([1])
Kazakhstan	4,756,743	3,052,958	2,695,957	2,704,160
Germany	2,915,830	2,383,415	2,153,914	2,270,759
Singapore	293,369	738,283	1,787,219	65,323
India	1,944,532	1,892,942	1,644,014	1,403,651
Japan	1,314,092	1,166,890	1,406,142	1,151,345
Italy	874,793	871,927	1,159,851	727,304
Senegal	15,622	1,024,300	1,037,739	2,006,859
All other exporting countries.	9,665,846	4,626,715	3,812,028	4,651,023
Total global exports	81,029,611	82,375,869	74,799,287	68,975,013
	Share of quantity (percent)			
United States	15.6	14.9	12.7	10.5
Korea	5.3	5.6	6.9	7.5
All other major exporting countries.--Belgium	31.8	30.8	32.8	39.2
United Kingdom	20.5	17.9	20.4	21.0
Pakistan	0.0	11.6	6.2	0.0
Kazakhstan	5.9	3.7	3.6	3.9
Germany	3.6	2.9	2.9	3.3
Singapore	0.4	0.9	2.4	0.1
India	2.4	2.3	2.2	2.0
Japan	1.6	1.4	1.9	1.7
Italy	1.1	1.1	1.6	1.1
Senegal	([2])	1.2	1.4	2.9
All other exporting countries.	11.9	5.6	5.1	6.7
Total global exports	100.0	100.0	100.0	100.0

[1] Unreported.
[2] Less than 0.05 percent.

Note.--Not all statistical authorities have reported their data in the GTIS/GTA database for 2015.

Source: Official exports statistics under HTS subheading 7405.00 as reported by various national statistical authorities in the GTIS/GTA database, accessed April 14, 2016.

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
81 FR 13822, March 15, 2016	*Phosphor Copper From Korea; Institution of Antidumping Duty Investigation and Scheduling of Preliminary Phase Investigation*	https://www.federalregister.gov/articles/2016/03/15/2016-05746/phosphor-copper-from-korea-institution-of-antidumping-duty-investigation-and-scheduling-of
81 FR 19552, April 5, 2016	*Phosphor Copper from the Republic of Korea: Initiation of Less-Than-Fair-Value Investigation*	https://www.federalregister.gov/articles/2016/04/05/2016-07801/phosphor-copper-from-the-republic-of-korea-initiation-of-less-than-fair-value-investigation

APPENDIX B

STAFF CONFERENCE WITNESS LIST

CALENDAR OF PUBLIC PRELIMINARY CONFERENCE

Those listed below appeared as witnesses at the United States International Trade Commission's preliminary conference:

Subject: Phosphor Copper from Korea

Inv. No.: 731-TA-1314 (Preliminary)

Date and Time: March 30, 2016 - 9:30 a.m.

Sessions were held in connection with this preliminary phase investigation in ALJ Courtroom B (room 111), 500 E Street, S.W., Washington, DC.

OPENING REMARKS: **TIME ALLOCATION:**

Petitioner (**Usha Neelakantan**, Wiley Rein LLP)

In Support to the Imposition of Antidumping Duty Order:

Wiley Rein LLP
Washington, DC
on behalf of

Metallurgical Products Company

Michael H. Goodman, President, Metallurgical Products Company

Erica Schafer, Sales Associate, Metallurgical Products Company

Daniel B. Pickard)
) – OF COUNSEL
Usha Neelakantan)

CLOSING REMARKS:

Petitioner (**Daniel B. Pickard**, Wiley Rein LLP)

-END-

APPENDIX C

SUMMARY DATA

Table C-1
Phosphor copper: Summary data concerning the U.S. market, 2013-15

* * * * * * *