Titanium Sponge From Japan, Kazakhstan, Russia, and Ukraine

Investigations Nos. 751-TA-17-20

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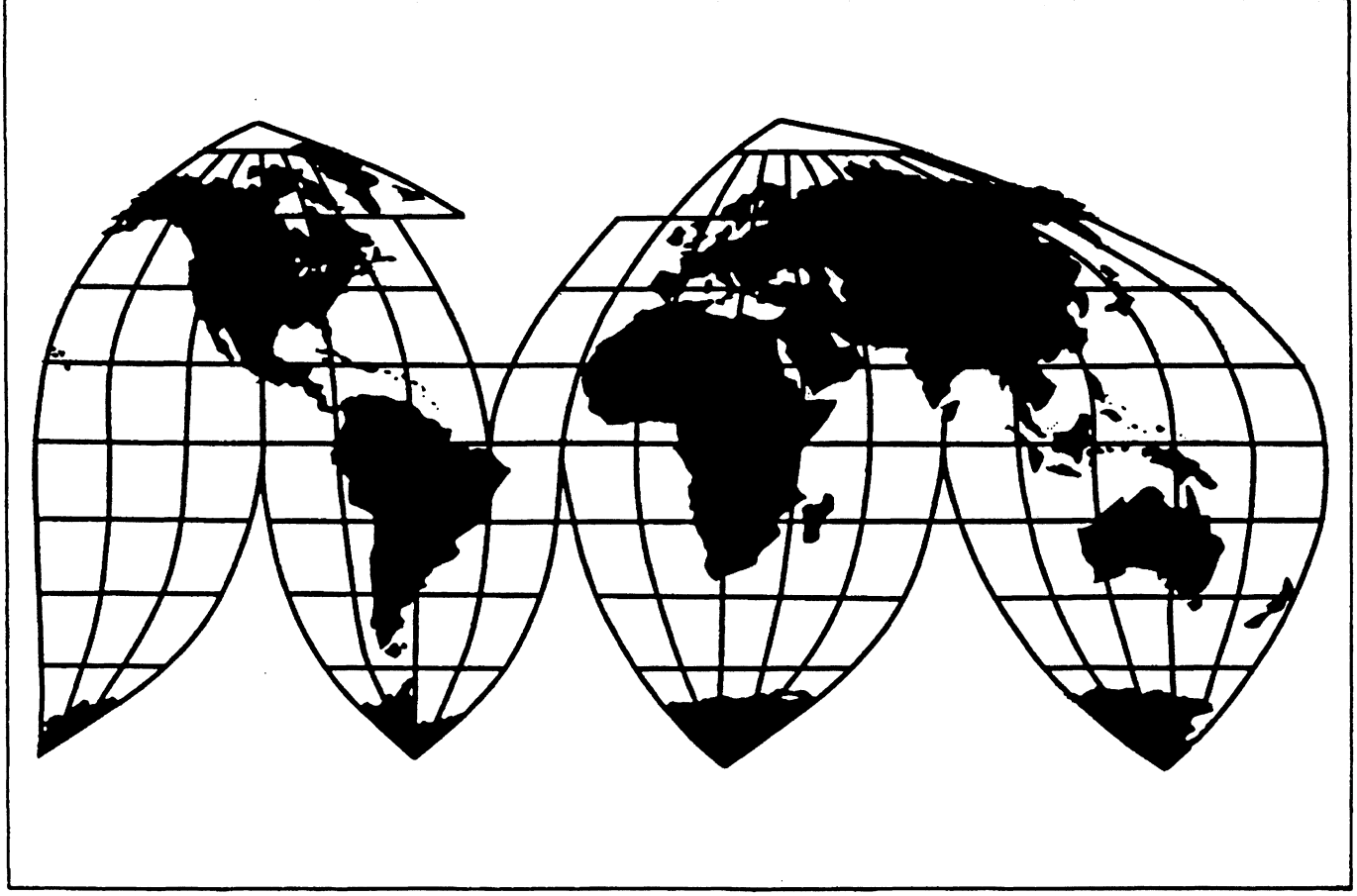
U.S. International Trade Commission



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CONTENTS

	Page
Determinations	1
Views of the Commission	3
Views of Commissioner Carol T. Crawford	27
Part I: Introduction	I-1
Background	I-1
Summary data	I-2
Nature and extent of sales at LTFV	I-2
The product	I-2
Physical characteristics and uses	I-2
Manufacturing processes	I-3
Conversion	I-3
Reduction	I-4
Finishing	I-4
Market participants	I-5
U.S. producers	I-5
U.S. importers	I-6
Part II: Conditions of competition in the U.S. market	II-1
The characteristics of the U.S. and global industry	II-1
Business/market cycles	II-2
Market segments/channels of distribution	II-3
Supply and demand considerations	II-4
U.S. supply	II-4
Domestic production	II-4
Industry capacity	II-4
Inventory levels	II-4
Export markets	II-4
Defense stockpile	II-4
Imports	II-5
Subject imports	II-5
Japan	II-5
Kazakhstan	II-6
Russia	II-6
Ukraine	II-6
Nonsubject imports	II-7
Imports under TIB	II-7
Japan	II-7
China	II-7
Other countries	II-7
U.S. demand	II-7
Substitutability issues	II-9
Factors affecting purchasing decisions	II-9
Comparison of the U.S.-produced and subject imported titanium sponge	II-10
Purchaser sourcing patterns	II-10
Purchase factors	II-12

CONTENTS

Page

Part II: Conditions of competition in the U.S. market--Continued
- Elasticity estimates ... II-12
  - Supply elasticity ... II-12
  - U.S. demand elasticity ... II-12
  - Substitution elasticity ... II-12
- The potential effects of revoking the antidumping duty orders ... II-13
  - Purchasers' comments regarding the potential impact of removing the antidumping duty orders ... II-13
    - Potential short-term effects ... II-13
    - Potential long-term effects ... II-13
    - Effects on the U.S. market ... II-14
  - Modeling the potential effects of antidumping duty order revocation ... II-14

Part III: Condition of the U.S. industry ... III-1
- U.S. producers ... III-1
- U.S. production, capacity, and capacity utilization ... III-2
- U.S. producers' shipments ... III-2
- U.S. producers' inventories ... III-3
- U.S. employment, wages, and productivity ... III-3

Part IV: U.S. imports, apparent consumption, and market shares ... IV-1
- U.S. importers ... IV-1
- U.S. imports ... IV-1
- Apparent U.S. consumption and U.S. market shares ... IV-2

Part V: Pricing and related data ... V-1
- Factors affecting pricing ... V-1
  - Raw material costs ... V-1
  - Tariff rates and antidumping duties ... V-1
  - Transportation costs to the U.S. market ... V-1
  - U.S. inland transportation costs ... V-2
  - Importer markups ... V-2
  - Exchange rates ... V-2
  - Pricing practices ... V-4
- Price data ... V-4
  - Net U.S. f.o.b. selling price data ... V-5
  - Delivered purchase prices on a non-TIB basis ... V-7
  - Delivered purchase prices on a TIB basis ... V-9

Part VI: Financial experience of the U.S. producers ... VI-1
- Background ... VI-1
- Operations on titanium sponge ... VI-2
- Operations on titanium mill products ... VI-3
- Investment in productive facilities, capital expenditures, and research and development expenses ... VI-4
- Significance of existing antidumping duty orders ... VI-4

CONTENTS

Page

Part VII: Foreign industry data VII-1
The industry in Japan VII-1
The industry in Kazakhstan VII-1
The industry in Russia VII-2
The industry in Ukraine VII-2
U.S. inventories of foreign product VII-3

Appendixes

A. *Federal Register* notice A-1
B. Calendar of public hearing B-1
C. Summary data C-1
D. Additional tables D-1

Figures

V-1. Real exchange rate index of the Japanese yen, by quarter, January 1995-December 1997 . V-3
V-2. Real exchange rate indexes of the Kazakh tenge, Russian ruble, and Ukrainian hryvnias, by quarter, January 1995-December 1997 ..... V-3
V-3. Titanium sponge produced in the United States and Japan: Weighted-average net U.S. f.o.b. selling prices and quantities reported by U.S. producers and importers, by quarter, January 1995-December 1997 ..... V-6
V-4. Titanium sponge produced in the United States and Russia: Weighted-average net U.S. f.o.b. selling prices and quantities reported by U.S. producers and importers, by quarter, January 1995-December 1997 ..... V-7
V-5. Titanium sponge produced in Japan and Russia: Weighted-average net delivered non-TIB purchase prices of titanium sponge for internal consumption reported by U.S. importers, by quarter, January 1995-December 1997 ..... V-8
V-6. Titanium sponge produced in Japan, Kazakhstan, and Russia: Weighted-average net delivered TIB purchase prices and quantities of titanium sponge for internal consumption reported by U.S. importers, by quarter, January 1995-December 1997 .. V-10

Tables

I-1. Titanium sponge: Results of Commerce's most recent administrative reviews I-3
II-1. Titanium sponge imports: Values of imports and current antidumping duty margins, by country of origin, 1995-97 ..... II-15
III-1. Titanium sponge: U.S. producers' and related firms' shipments, imports, and purchases, by firm, 1995-97 ..... III-1
III-2. Titanium sponge: U.S. producers' capacity, production, and capacity utilization, by firm, 1995-97 ..... III-2
III-3. Titanium sponge: U.S. producers' shipments, by type and by firm, 1995-97 ..... III-3
III-4. Titanium sponge: U.S. producers' end-of-period inventories, by firm, 1995-97 ..... III-3

CONTENTS

Page

Tables--continued

III-5. Average number of production and related workers producing titanium sponge, hours worked, wages paid to such employees, and hourly wages, productivity, and unit labor costs, by firm, 1995-97 ..... III-3
IV-1. Titanium sponge: U.S. shipments of domestic product, U.S. non-TIB imports, by source, and apparent U.S. consumption, 1995-97 ..... IV-1
IV-2. Titanium sponge: Apparent U.S. consumption and market shares without TIB imports, 1995-97 ..... IV-2
V-1. Titanium sponge produced in the United States and Japan (Toho): Weighted-average net U.S. f.o.b. selling prices and quantities reported by U.S. producers and importers, and margins of under/(over)selling, by quarter, January 1995-December 1997 ..... V-6
V-2. Titanium sponge produced in the United States and Japan (Sumitomo Sitix): Weighted-average net U.S. f.o.b. selling prices and quantities reported by U.S. producers and importers, and margins of under/(over)selling, by quarter, January 1995-December 1997 ..... V-6
V-3. Titanium sponge produced in the United States and Russia: Weighted-average net U.S. f.o.b. selling prices and quantities reported by U.S. producers and importers, and margins of under/(over)selling, by quarter, January 1995-December 1997 ..... V-7
V-4. Titanium sponge produced in Japan and Russia: Weighted-average net delivered non-TIB purchase prices of titanium sponge for internal consumption reported by U.S. importers, by quarter, January 1995-December 1997 ..... V-8
V-5. Titanium sponge produced in Japan, Kazakhstan, and Russia: Weighted-average net delivered TIB purchase prices and quantities of titanium sponge for internal consumption reported by U.S. importers, by quarter, January 1995-December 1997 .. V-10
VI-1. Net sales, by type of transaction, by firm, for the U.S. producers of titanium sponge, fiscal years 1995-97 ..... VI-2
VI-2. Results of operations of U.S. producers on their operations producing titanium sponge, fiscal years 1995-97 ..... VI-2
VI-3. Results of operations of Oremet on its operations producing titanium sponge, fiscal years 1995-97 ..... VI-3
VI-4. Results of operations of Timet on its operations producing titanium sponge, fiscal years 1995-97 ..... VI-3
VI-5. Results of operations of Oremet and Timet on their U.S. operations producing titanium products, fiscal years 1995-97 ..... VI-4
VI-6. Value of assets, capital expenditures, and research and development expenses for producers of titanium sponge, by firm, 1995-97 ..... VI-4
VII-1. Titanium sponge: Japanese (Toho) capacity, production, inventories, capacity utilization, and shipments, 1995-97 and projected 1998 ..... VII-1
VII-2. Titanium sponge: Kazakh capacity, production, inventories, capacity utilization, and shipments, 1995-97 and projected 1998 ..... VII-2
VII-3. Titanium sponge: Russian capacity, production, inventories, capacity utilization, and shipments, 1995-97 and projected 1998 ..... VII-2

CONTENTS

Page

Tables--continued

VII-4. Titanium sponge: Ukrainian capacity, production, inventories, capacity utilization, and shipments, 1995-97 and projected 1998 ..... VII-2
VII-5. Titanium sponge: U.S. importers' end-of-period inventories of imports by source, 1995-97 ..... VII-3
C-1. Titanium sponge: Summary data concerning the U.S. market, 1995-97 ..... C-3
D-1. Titanium sponge: U.S. importers' imports, by source, 1995-97 ..... D-3
D-2. Titanium sponge: U.S. shipments of domestic product, U.S. imports (including TIB imports), by source, and apparent U.S. consumption, 1995-97 ..... D-3
D-3. Titanium sponge: Apparent U.S. consumption and market shares (including TIB imports), 1995-97 ..... D-3
D-4. Titanium sponge: U.S. producers' domestic commercial shipments, U.S. non-TIB imports, by source, and apparent U.S. open-market consumption, 1995-97 ..... D-3
D-5. Titanium sponge: Apparent U.S. open-market consumption and market shares of non-TIB imports, 1995-97 ..... D-3
D-6. Titanium sponge: U.S. producers' domestic commercial shipments, U.S. imports (including TIB imports), by source, and apparent U.S. open-market consumption, 1995-97 ..... D-3
D-7. Titanium sponge: Apparent U.S. open-market consumption and market shares (including TIB imports), 1995-97 ..... D-3

Note.--Information that would reveal confidential operations of individual concerns may not be published and therefore has been deleted from this report. Such deletions are indicated by asterisks.

GLOSSARY OF ABBREVIATIONS

Act	Tariff Act of 1930
Allegheny Teledyne	Allegheny Teledyne Industries, Inc.
Allvac	Teledyne Allvac
Alta Group	Alta Group, Inc.
Avisma	Avisma Titanium-Magnesium Works
Cometals	Cometals, Inc.
Commerce	U.S. Department of Commerce
Commission	U.S. International Trade Commission
DLA	U.S. Defense Logistics Agency
DOD	U.S. Department of Defense
EU	European Union
F.o.b.	Free on board
FSU	Former Soviet Union
HTS	Harmonized Tariff Schedule of the United States
Interlink	Interlink Metals, Inc.
LTFV	Less than fair value
MRAL	Magnesium reduction acid leached
Oremet	Oregon Metallurgical Corp.
RMI	RMI Titanium Company, Inc.
SG&A	Selling, general, and administrative expenses
Showa Denko	Showa Denko K.K.
Sumitomo	Sumitomo Corp. of America
Sumitomo Sitix	Sumitomo Sitix of Amagasaki, Inc.
THT	Titanium Hearth Technologies, Inc.
TIB	Temporary importation under bond
TMC	TMC USA, Inc.
Timet	Titanium Metals Corp.
Toho	Toho Titanium Co., Ltd.
UKTMP	Ust-Kamenogorsk Titanium and Magnesium Plant
USGS	U.S. Geological Survey
UTSC	Union Titanium Sponge Corp.
VDP	Vacuum distillation process
VSMPO	Verkhnyaya Salda Metal Works
Wah Chang	Teledyne Wah Chang
Wyman-Gordon	Wyman-Gordon Co.
Zaporozhie	Zaporozhie State Titanium and Magnesium Combine

UNITED STATES INTERNATIONAL TRADE COMMISSION

Investigations Nos. 751-TA-17-20

TITANIUM SPONGE FROM JAPAN, KAZAKHSTAN, RUSSIA, AND UKRAINE

DETERMINATION

On the basis of the record[1] developed in the subject investigations, the United States International Trade Commission determines, pursuant to section 751(b) of the Tariff Act of 1930 (19 U.S.C. § 1675(b)) (the Act), that revocation of the orders covering titanium sponge imports from Japan, Kazakhstan, Russia, and Ukraine is not likely to lead to continuation or recurrence of material injury to an industry in the United States. Titanium sponge is provided for in subheading 8108.10.50 of the Harmonized Tariff Schedule of the United States.

BACKGROUND

The Commission instituted these investigations effective March 23, 1998, following receipt of a request to review its affirmative determination in investigation No. AA1921-51, as it applied to imports from Russia.[2] This request was filed with the Commission on December 9, 1997, by counsel on behalf of TMC Trading International, Ltd., an Irish trading company involved in the distribution of titanium sponge from Russia, and TMC USA, Inc., its U.S. affiliate. Notice of the scheduling of the Commission's investigation and of a public hearing to be held in connection therewith was given by posting copies of the notice in the Office of the Secretary, U.S. International Trade Commission, Washington, DC, and by publishing the notice in the *Federal Register* of March 23, 1998 (63 FR 13873). The hearing was held in Washington, DC, on June 8, 1998, and all persons who requested the opportunity were permitted to appear in person or by counsel.

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

[2] The Commission also instituted, on its own initiative, review investigations covering imports of titanium sponge from Japan, Kazakhstan, and Ukraine.

VIEWS OF THE COMMISSION

Based on the record in these investigations, we determine, under section 751(b) of the Tariff Act of 1930, as amended ("the Act"), that revocation of the antidumping duty orders concerning titanium sponge from Japan, Kazakhstan, Russia, and Ukraine is not likely to lead to continuation or recurrence of material injury to an industry in the United States.[1]

I. BACKGROUND

Imports of titanium sponge from Japan, Kazakhstan, Russia, and Ukraine currently are subject to antidumping duty orders. The orders against Kazakhstan, Russia, and Ukraine originated in 1968 when the U.S. Tariff Commission "determined that an industry in the United States is being injured by reason of the importation of titanium sponge from the U.S.S.R, sold at less than fair value. . . ."[2] The Department of the Treasury issued an antidumping finding covering these imports.[3] The order against Japan was issued in 1984 when the Commission determined that an industry in the United States was threatened with material injury by reason of LTFV imports of titanium sponge from Japan.[4] Subsequently, Commerce issued an antidumping duty order covering imports from Japan.[5]

On December 9, 1997, the Commission received a request for a changed circumstances review of the affirmative determination with respect to imports of titanium sponge from Russia.[6] Because the alleged changed circumstances predominantly related to the domestic industry and not to imports from Russia, the Commission also considered self-initiating reviews of the additional outstanding orders on

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[1] Chairman Bragg notes that the result obtained in these review investigations should not be deemed as a preview of her determinations in upcoming five year review investigations. She does not agree with suggestions that there is a relationship between recent Commission review investigations and forthcoming five year review investigations.

[2] Titanium Sponge from the U.S.S.R., Inv. No. AA1921-51, TC Pub. 255 at 2 (July 1968).

[3] The Department of Treasury's responsibilities regarding antidumping investigations were transferred to the Department of Commerce ("Commerce") in 1980. In 1992, Commerce, in response to the division of the former Soviet Union, changed the original antidumping finding against the U.S.S.R. to 15 separate antidumping duty orders covering the independent states. Commerce subsequently revoked all of these orders except those on imports from Kazakhstan, Russia, and Ukraine.

[4] Titanium Sponge from Japan and the United Kingdom, Invs. Nos. 731-TA-161 and 162 (Final) , USITC Pub. 1600 (November 1984). The Commission made a negative determination with respect to imports of titanium sponge from the United Kingdom.

[5] Commerce has revoked the antidumping duty orders with respect to all but one Japanese producer/importer, Toho Titanium Co., Ltd. ("Toho"). CR/PR at Table I-1.

[6] The request was filed on behalf of TMC Trading International Ltd. and TMC USA, Inc. (collectively "TMC") a distributor and an importer of titanium sponge from Russia. The request alleged seven changed circumstances: (1) the U.S. industry, which no longer is in its early formative stages as it was in 1968, has become established and internationally competitive; (2) the U.S. industry has chosen to focus most of its investment capital away from titanium sponge capacity towards titanium melt and fabricating capacity; (3) the cessation of titanium sponge production by the original petitioner; (4) the redirection of demand for titanium sponge away from military-aerospace applications toward commercial-aerospace and new applications, which lessens cyclical volatility in demand; (5) evidence that demand for titanium sponge is expected to remain strong for at least the next two to three years, and possibly as long as five years; (6) significant declines in titanium sponge capacity in the republics of the former Soviet Union generally, and particularly in Russia, which is the republic covered by the order in question; and (7) evidence of no dumping in 1997 based on receipt of zero dumping margins for specific trading companies importing titanium sponge from Russia. See 62 Fed. Reg. 68300 (Dec. 31, 1997).

Japan, Kazakhstan, and Ukraine.[7] On March 9, 1998, the Commission determined that there were sufficient changed circumstances to warrant review of the antidumping duty orders covering titanium sponge from Japan, Kazakhstan, Russia, and Ukraine and instituted these reviews.[8]

II. DOMESTIC INDUSTRY

A. Domestic Like Product and Domestic Industry

In making its determination under section 751(b), the Commission defines "the domestic like product"[9] and the "industry."[10] [11] The imported product covered by the existing antidumping duty orders consists of unwrought titanium sponge. Consistent with the Commission determinations in both the 1968 and 1984 investigations,[12] we define the domestic like product as titanium sponge and the domestic industry as the domestic producers of titanium sponge. No party has argued for a different like product definition.

There are three domestic firms producing titanium sponge, Timet, Oregon Metallurgical Corporation ("Oremet"), and the Alta Group. Two of these firms, Timet and Oremet, accounted for

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[7] 19 C.F.R. § 207.45(c).

[8] 63 Fed. Reg. 13874 (March 23, 1998). In response to its request soliciting comments on whether there were sufficient changed circumstances to warrant review of the antidumping duty orders on titanium sponge, the Commission received nine submissions: eight submissions in support of the request; and one submission in opposition to the request. Comments in support of the request were received from: RMI Titanium Company ("RMI"), formerly a domestic producer of titanium sponge which closed its sponge operation in 1992 and now purchases titanium sponge for "downstream" titanium production; Aerospace Industries Association ("AIA"); TMC, the original requester; producers/importers of Japanese, Kazakh, and Ukrainian titanium sponge; and the Governments of Russia and Ukraine. Comments in opposition to the request were received from Titanium Metals Corporation ("Timet"), one of two major U.S. producers of titanium sponge.

[9] The Act defines "domestic like product" as: "a product which is like, or in the absence of like, most similar in characteristics and uses with, the article subject to an investigation under this subtitle." 19 U.S.C. § 1677(10). In review investigations, the articles "subject to investigation" are those subject to Commerce antidumping duty orders.

[10] 19 U.S.C. § 1677(4)(A). Section 771(4)(A) of the Act defines the relevant industry as the "producers as a [w]hole 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." Id.

[11] See Nippon Steel Corp. v. United States, 19 CIT 450, 455 (1995); Timken Co. v. United States, 913 F. Supp. 580, 584 (Ct. Int'l Trade 1996); Torrington Co. v. United States, 747 F. Supp. 744, 748-49 (Ct. Int'l Trade 1990), aff'd, 938 F.2d 1278 (Fed. Cir. 1991). See also S. Rep. No. 249, 96th Cong., 1st Sess. 90-91 (1979).

[12] In the 1968 investigation regarding the U.S.S.R., the Commission opinion did not include a separate definition of like product, but did conclude that "the sponge-producing facilities of these two producers may be characterized as the sponge industry in the United States." Titanium Sponge from the U.S.S.R., TC Pub. 255 at 5 and 16. In the 1984 determination regarding Japan, the Commission first adopted its preliminary determination that "domestically produced titanium sponge is like the imported product" and then defined the domestic industry as "the U.S. producers of titanium sponge." Titanium Sponge from Japan and the United Kingdom, USITC Pub. 1600 at 3 and 4.

about *** of U.S. production of titanium sponge during 1997.[13] Timet and Oremet are integrated producers of titanium sponge and downstream titanium mill products.

B. Related Parties

In defining the domestic industry in these reviews, we further determine whether any producers of the domestic like product should be excluded from the domestic industry pursuant to section 771(4)(B) of the Act.[14] Applying the provision involves two steps. First, the Commission must determine whether a domestic producer is either related to the exporters or importers of the subject merchandise, or is itself an importer of the subject merchandise.[15] Second, the Commission may exclude such a producer from the domestic industry if "appropriate circumstances" exist.[16] Exclusion is within the Commission's discretion based upon the facts presented in each case.[17]

In these reviews, both Timet and Oremet imported titanium sponge from subject countries during the period of investigation. Both Timet and Oremet also are related to firms that import titanium sponge from subject countries.[18] Accordingly, the Commission may exclude Timet and Oremet from the domestic industry if appropriate circumstances exist.

The domestic producers argued that they should not be excluded from the industry, but agreed that their importation of subject merchandise could be treated as a condition of competition.[19] The parties supporting review of the orders have not argued for the exclusion of Timet or Oremet.

We do not find that appropriate circumstances exist to exclude either Timet or Oremet from the domestic industry. Despite increases in subject imports in both relative and absolute terms, Timet

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[13] In 1997, Timet accounted for *** percent of reported U.S. production of titanium, while Oremet accounted for *** percent. CR/PR at III-1. The third domestic producer, Alta Group, accounting for *** of domestic titanium sponge production did not respond to the Commission's questionnaire.

[14] 19 U.S.C. § 1677(4)(B).

[15] Parties are considered to be related if one party directly or indirectly controls another party, or if both are controlled by a third party. Direct or indirect control exists when "the party is legally or operationally in a position to exercise restraint or direction over the other party." 19 U.S.C. § 1677(4)(B).

[16] 19 U.S.C. § 1677(4)(B). Factors the Commission has examined in deciding whether appropriate circumstances exist to exclude a domestic producer include the percentage of domestic production attributable to the importing producer; the reason the U.S. producer has decided to import the product subject to investigation; whether inclusion or exclusion of the domestic producer will skew the data for the rest of the industry; the ratio of import shipments to U.S. production for such producers; and whether the primary interests of the producers lie in domestic production or in importation. See, e.g., Torrington Co. v. United States, 790 F. Supp. 1161, 1168 (Ct. Int'l Trade 1992), aff'd without opinion, 991 F.2d 809 (Fed. Cir. 1993). See also, Stainless Steel Round Wire from Canada, India, Japan, Korea, Spain, and Taiwan, Invs. Nos. 731-TA-781-786 (Preliminary), USITC Pub. 3111 at 5, n.20 (June 1998).

[17] Torrington v. United States, 790 F. Supp. at 1168 (Ct. Int'l Trade 1992); Sandvik AB v. United States, 721 F. Supp. 1322, 1331-32 (Ct. Int'l Trade 1989), aff'd without opinion, 904 F.2d 46 (Fed. Cir. 1990); Empire Plow Co. v. United States, 675 F. Supp. 1348, 1352 (Ct. Int'l Trade 1987).

[18] In March 1998, Oremet and two importers of subject merchandise, Teledyne Allvac ("Allvac") and Teledyne Wah Chang ("Wah Chang"), became wholly-owned subsidiaries of Allegheny Teledyne Industries, Inc. CR at III-I; PR at III-I. Allvac and Wah Chang are producers of downstream titanium mill products.

Timet wholly owns an importer of subject merchandise, Titanium Hearth Technologies, Inc. ("THT"). CR at I-8, III-2, n. 4, and IV-1; PR at I-6, III-1, n.4, and IV-1.

[19] Timet Posthearing Brief, Attachment G at 6.

remains predominantly a domestic producer.[20] [21] Timet's ratio of subject imports (imports and purchases of imports) to domestic production increased from ***.[22] Likewise, Oremet is predominantly a domestic producer. Oremet's ratio of subject imports to domestic production was small and declined from *** percent in 1995 to *** percent in 1997.[23] [24] Accordingly, we determine not to exclude Timet or Oremet from the domestic industry.[25] [26]

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[20] Timet imported subject merchandise or purchased subject imports as follows: *** in 1996 and *** in 1997. Timet and its affiliate importer, THT, reported no subject imports or purchases of subject imports in 1995. CR/PR at Table III-1. Its total U.S. production was *** of titanium sponge in 1995, *** in 1996 and *** in 1997. Id. at Tables III-1 and III-2.

[21] Certain imports of titanium sponge entered temporarily free of duty under bond ("TIB"). For a discussion of the TIB process and the Commission's determination that imports entered under TIB are not subject imports, see section V.B.6., infra.

Timet's imports under TIB from subject countries declined in both absolute and relative terms throughout the period of investigation. Timet's imports under TIB from subject countries were: *** of titanium sponge in 1995, *** in 1996 and *** in 1997. CR/PR at Tables III-1.

[22] Calculated from CR/PR at Tables III-1 and III-2. Timet's TIB imports from subject countries as a share of its domestic production was: *** in 1997. Calculated from CR/PR at Tables III-1 and III-2.

[23] Calculated from CR/PR at Tables III-1 and III-2. Oremet imported subject merchandise as follows: *** in 1997. These ratios do not include subject imports by Oremet's affiliate importers, Allvac and Wah Chang; these importers became related to Oremet in March 1998. Subject imports by its related affiliates increased in both relative and absolute terms. When subject imports by Allvac and Wah Chang are included, the ratio of subject imports to Oremet's domestic production increased from *** in 1997. Total imported subject merchandise by Oremet, Allvac, and Wah Chang was: *** in 1997. Oremet's total U.S. production was *** of titanium sponge in 1995, *** in 1996 and *** in 1997. Neither Oremet, Allvac, nor Wah Chang reported purchases of subject imports throughout the period of investigation. Id. at Tables III-1 and III-2.

[24] Oremet's TIB imports from subject countries increased in both absolute and relative terms throughout the period of investigation. Oremet's imports under TIB from subject countries were: *** of titanium sponge in 1995, *** in 1996 and *** in 1997. CR/PR at Table III-1. Oremet's TIB imports from subject countries as a share of its domestic production was: *** in 1997. Calculated from Id. at Tables III-1 and III-2. Imports under TIB from subject countries by Oremet, Allvac, and Wah Chang combined were: *** of titanium sponge in 1995, *** in 1996 and *** in 1997. Id. at Table III-1. These total TIB imports from subject countries as a share of Oremet's domestic production was: *** in 1997. Calculated from Id. at Tables III-1 and III-2.

[25] The Commission's decision is consistent with past practice. See Sebacic Acid from the People's Republic of China, Inv. No. 731-TA-653 (Final), USITC Pub. 2793 at I-8 (July 1994)("Sebacic Acid") (Commission determined that because Union Camp was responsible for all domestic production, functioned principally as a producer rather than an importer, and did not market the subject imports but rather used them for production of a downstream product, appropriate circumstances did not exist to exclude Union Camp from the industry as a related party.). See also Nitromethane from the People's Republic of China, Inv. No. 731-TA-650 (Final), USITC Pub. 2773 at I-7-8 (May 1994); Tungsten Ore from the People's Republic of China, Inv. No. 731-TA-497 (Preliminary), USITC Pub. 2367 at 16 (March 1991)("Tungsten Ore- Preliminary"); Electrolytic Manganese Dioxide from Greece, Ireland, and Japan, Invs. Nos. 731-TA-406-408 (Preliminary), USITC Pub.2097 at 7-10 (July 1988); Frozen Concentrated Orange Juice from Brazil, Inv. No. 751-TA-10, USITC Pub. 1623 at 11, n.16 (December 1984).

[26] Commissioner Crawford concurs in the conclusion not to exclude any producer from the domestic industry, particularly in light of the determination that revocation of the orders is not likely to lead to continuation or recurrence of material injury. However, she believes that the facts of these investigations could support exclusion of one or both of the two principal producers. Specifically, only an extremely small amount of domestic production, *** percent in 1997, is sold in the merchant market and thus competes directly with the subject imports. In addition, in 1997 the two principal producers and their related firms imported and purchased *** percent of

III. CUMULATION

A. Framework and Parties' Arguments

Section 752(a)(7) of the Act provides that:

> the Commission may cumulatively assess the volume and effect of imports of the subject merchandise from all countries with respect to which reviews under section 1675(b) or (c) of this title were initiated on the same day, if such imports would be likely to compete with each other and with domestic like products in the United States market.[27]

Thus, cumulation is discretionary in changed circumstances reviews, and the Commission may exercise its discretion to cumulate, if the criteria of same day initiation[28] and likely competition between imports and domestic like product are met.

In assessing whether imports compete with each other and with the domestic like product, the Commission has generally considered four factors, including:

(1) the degree of fungibility between the imports from different countries and between imports and the domestic like product, including consideration of specific customer requirements and other quality related questions;[29]
(2) the presence of sales or offers to sell in the same geographical markets of imports from different countries and the domestic like product;
(3) the existence of common or similar channels of distribution for imports from different countries and the domestic like product; and
(4) whether the imports are simultaneously present in the market.[30]

While no single factor is necessarily determinative, and the list of factors is not exclusive, these factors are intended to provide the Commission with a framework for determining whether the imports compete with each other and with the domestic like product.[31] Only a "reasonable overlap" of competition is required.[32] Further, because of the prospective nature of Commission determinations in changed circumstances reviews, the relevant inquiry is whether there would likely be competition even if none currently exists.

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subject imports. Calculated from CR/PR at Tables III-1 and IV-1. In Commissioner Crawford's view, these facts could constitute "appropriate circumstances" contemplated by the statute.

[27] 19 U.S.C. § 1675a(a)(7).

[28] This criterion is met since all four changed circumstances review investigations were initiated on the same day, March 23, 1998.

[29] Commissioner Crawford finds that substitutability, not fungibility, is a more accurate reflection of the statute. See Dissenting Views of Commissioner Carol T. Crawford in Stainless Steel Bar from Brazil, India, Japan and Spain, Invs. Nos. 731-TA-678, 679, 681, and 682 (Final), USITC Pub. 2856 (Feb. 1995), for a description of her views on cumulation.

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

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

[32] See Mukand Ltd. v. United States, 937 F. Supp. 910, 916 (Ct. Int'l Trade 1996); Wieland Werke, AG, 718 F. Supp. at 52 ("Completely overlapping markets are not required."); United States Steel Group v. United States, 873 F. Supp. 673, 685 (Ct. Int'l Trade 1994), aff'd, 96 F.3d 1352 (Fed. Cir. 1996).

In a review investigation, however, the Commission "shall not cumulatively assess the volume and effect of imports of the subject merchandise in a case in which it determines that such imports are likely to have no discernible adverse impact on the domestic industry."[33] Neither the statute nor the Statement of Administrative Action to the Uruguay Round Agreements Act ("SAA")[34] provides further guidance on what factors the Commission is to consider in determining that imports "are likely to have no discernible adverse impact."[35] Prior to the URAA, cumulation was not required if the subject imports were "negligible," and had "no discernible adverse impact on the domestic industry."[36] Our prior practice provides some guidance in this regard, but we are mindful of the different focus for the review analysis on whether imports are "likely" to have no discernible adverse impact.[37] For these reviews, our discernible adverse impact analysis is focused on imports and competition among products that is likely to occur within a reasonably foreseeable time.

The domestic producers of titanium sponge assert that the Commission should cumulate imports from all subject countries because there is virtually a complete overlap between imports and the domestic like product.[38] The parties supporting review of the orders contend that the Commission should not cumulatively assess the volume and effect of the imports, arguing that there is no competitive overlap primarily because imports from the subject countries are not fungible with each other or the domestic product.[39]

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[33] 19 U.S.C. § 1675a(a)(7).

[34] H. Doc. No. 316, 103d Cong., 2d Sess., vol. 1 (1994).

[35] Chairman Bragg and Vice Chairman Miller note that the Senate Report concerning the URAA explained that "it is appropriate to preclude cumulation where imports are likely to be negligible" but found it not appropriate to adopt a strict numerical test "because of the extraordinary difficulty of projecting import volumes into the future with precision." S. Rep. 412, 103d Cong., 2d Sess. 51 (1994).

[36] 19 U.S.C. § 1677(7)(c)(v) (1994).

[37] The pre-URAA provision regarding treatment of negligible imports also did not include numerical criteria. Rather the pre-URAA statute directed the Commission to "evaluate all relevant economic factors regarding imports" including whether: the volume and market share of imports were negligible; sales transactions were isolated and sporadic; and the domestic market is price sensitive. 19 U.S.C. § 1677(7)(c)(v)(1994). See Certain Flat-Rolled Carbon Steel Products from Argentina, Australia, Austria, Belgium, Brazil, Canada, Finland, France, Germany, Italy, Japan, Korea, Mexico, the Netherlands, New Zealand, Poland, Romania, Spain, Sweden, and the United Kingdom, Invs. Nos. 701-TA-319-332, 334, 446-342, 344, and 347-353 (Final) and Invs. Nos. 731-TA-573-579, 581-592, 594-597, 599-609, and 612-619 (Final), USITC Pub. 2664 at 28 (Aug. 1993)("Flat-Rolled Carbon Steel").

[38] Oremet's Posthearing Brief at 15 and Exhibit 7 (Response to Commissioner Crawford's cumulation question); Oremet's Prehearing Brief at 48-50; Timet Posthearing Brief, Attachment G at 3.

[39] Japanese producer Toho asserted that the Japanese product does not compete with and is of a significantly different quality than that from the former Soviet Union and that Toho operates in a completely different economic environment than its Russian, Kazakh, and Ukrainian counterparts. Toho Prehearing Brief at 14 and 15; Toho Posthearing Brief at 3-7. The Kazakh producer contended that the imports from the subject countries are not fungible with each other or the domestic product, Ukrainian sponge is not present in the market and that imports utilize different channels of distribution. Specialty Metals/UKTMP Posthearing Brief at 8 and 9; Specialty Metals/UKTMP Prehearing Brief at 7-11. The Ukrainian producer and the Government of Ukraine contended that Ukrainian imports have no discernible adverse impact on the domestic industry because they are non-existent and thus the Commission should separately assess titanium sponge from Ukraine. Zaporozhie's Posthearing Brief at 6 and 7; Government of Ukraine ("Ukraine") Prehearing Brief at 19-23; Ukraine Posthearing Brief at 4-11. The Russian producer contended that there is no reasonable overlap between Japanese sponge, and Kazakh and Russian sponge; the lack of open-market sales by either Timet or Oremet and no imports from Ukraine mean there is no

We have determined not to cumulate potential imports from Ukraine since such imports are likely to have no discernible adverse impact on the domestic industry. We have determined to cumulatively assess the volume and effect of subject imports from Japan, Kazakhstan, and Russia for purposes of these changed circumstances reviews.[40] [41]

B. No Discernible Adverse Impact Analysis

As previously stated, the Commission may not cumulate imports of titanium sponge from subject countries that are likely to have no discernible adverse impact on the domestic industry. This issue is of particular relevance to consideration of imports from Ukraine.[42] While there have been *** of titanium sponge from Ukraine during the period of investigation,[43] this fact does not dispose of the issue. Rather, we consider whether any such future imports are likely to have a discernible adverse impact on the domestic industry within a reasonably foreseeable time. The sole Ukraine producer ***.[44] The new capacity, which is estimated to be about one-third of that prior to the start of the shutdown, is expected to service markets in Russia, Europe, and Japan.[45] This producer's production in 1998 is projected to be ***.[46] At the Commission's hearing, the producer's representative indicated that "at this time, we are not contemplating exports to the United States."[47] Prior to its shutdown in 1995, the shipments from the Ukraine producer were nearly *** to the U.S. market.[48]

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competitive overlap. RMI/Avisma's Posthearing Brief, Answers to Commission Questions at 2-4; RMI/Avisma's Prehearing Brief at 28 and 29.

[40] Chairman Bragg notes that had she cumulated potential imports from Ukraine, she would have nonetheless found that revocation of the orders covering imports (or potential imports) from all countries would not be likely to lead to continuation or recurrence of material injury to the domestic industry producing the like product within a reasonably foreseeable time. See "No Discernible Adverse Impact Analysis," infra.

[41] Commissioner Crawford has declined to exercise her discretion to cumulate the subject imports from all four countries, and thus does not join the remainder of this discussion. See Views of Commissioner Carol T. Crawford.

[42] As discussed below, while there have been no subject imports of titanium sponge from Kazakhstan during the period of investigation, there have been sizeable and continuous imports of titanium sponge under TIB. In the absence of the antidumping duty order, we believe that much of the import volume currently entered under TIB would be entered for consumption. Accordingly, we do not find that the likely imports from Kazakhstan meet the "no discernible adverse impact" test.

[43] CR/PR at Table D-1. In 1997, *** from Ukraine. Id.

[44] CR at VII-9; PR at VII-2. According to Zaporozhie, *** Id.

[45] The Ukraine producer's titanium sponge capacity was about 18,000 metric tons per year prior to January 1995. The new equipment to be installed in 1998 is estimated to have a capacity of 6,250 metric tons. Tr. at 163 and 164; CR at VII-9 and n. 12; PR at VII-2 and n. 10. Zaporozhie testified that it has received requests from past customers for almost four times the mill's current capacity. Zaporozhie's Posthearing Brief at 4 and 5. Moreover, we have considered the statement by the Ukraine producer that it would be willing to sell in the United States if an offer was received, but found no evidence of significant future imports. Tr. at 169 and 170, and CR/PR at Table D-1.

[46] CR/PR at Table VII-4.

[47] Tr. at 169-170.

[48] CR/PR at Table VII-4; CR at VII-9; PR at VII-3. Ukrainian producer Zaporozhie noted that, *** Id. At the Commission hearing, the Ukrainian producer indicated that its titanium sponge is of a "much lesser quality than Russian product . . . [and] [o]nly a small fraction of the total rehabilitated capacity would be corresponding to some grades of Russian company." Tr. at 171.

We find little likelihood of significant Ukraine production within the reasonably foreseeable future and, given the evidence regarding the Ukrainian producer's likely markets, little likelihood that a significant amount of any Ukrainian production would be exported to the U.S. market.[49] Thus, we conclude that imports of titanium sponge from Ukraine are likely to have no discernible adverse impact on the domestic industry.

C. Reasonable Overlap of Competition Analysis

While we have determined, as discussed below, that imports under TIB are not subject imports, we have considered the extent and competitive effects of such imports as a relevant economic factor in our cumulation analysis. In particular, we have considered such imports as an indicator of the ability of exporters in the subject countries to supply merchandise to the U.S. market in the future.

We find a sufficient degree of fungibility among imports from Japan, Kazakhstan, and Russia, and with the domestic like product. U.S. and Japanese titanium sponge are similar products, ranging from standard grades through high-purity grades.[50] Producers in both countries have been approved by U.S. purchasers.[51] Kazakh and Russian titanium sponge primarily is produced in standard grade, with some production of premium grade, but not of high-purity grades.[52] Thus, imports of titanium sponge from Kazakhstan and Russia generally are substitutable in standard and some premium grades with imports from Japan or domestic product, but do not appear to be substitutable in higher-purity applications.[53] There also is evidence that the imports under TIB from Japan, Kazakhstan, and Russia, which could be considered as likely future imports, have some fungibility with each other and with the domestic like product.[54]

Overall, the record shows the presence of sales or offers to sell in the same geographical markets of subject imports from Japan and Russia, and domestic product.[55] Moreover, imports under TIB from Japan, Kazakhstan, and Russia are marketed and sold in the same geographical markets as each other and the domestic product.[56]

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[49] It is estimated that it takes 3-4 years to build a titanium sponge plant and that refurbishment of moth-balled capacity is very expensive and would take more than one year to complete. CR at II-8 and II-12; PR at II-4; see also Zaporozhie's Posthearing Brief at 7.

[50] CR at II-21; PR at II-11. During the period of investigation, Toho, the Japanese producer subject to the antidumping duty order, exported primarily premium grade titanium sponge to the United States. Id. at n. 63. However, as Toho noted *** of all of Toho's titanium sponge shipments to the United States in 1997 were of standard or low-grade sponge. Toho Posthearing Brief at 3-7.

[51] CR at II-21; PR at II-11. Certification generally is required for purchases of titanium sponge. Domestically produced and imported titanium sponge largely overlap in their ability to meet U.S. downstream industry requirements for sponge purity and other chemical characteristics.

[52] CR at II-21; PR at II-11.

[53] CR at II-21; PR at II-11.

[54] CR at II-21 to II-23; PR at II-11.

[55] CR at I-8 and I-9; PR at I-6. Over 30 companies throughout the United States purchase or internally transfer titanium sponge to produce titanium mill products and castings. Id. at I-7.

[56] CR at I-8 and I-9; PR at I-6.

The record shows that the primary channel of distribution for both domestically-produced titanium sponge and the imported product generally is directly to the end-users, producers of titanium metal products.[57]

Import statistics and questionnaire responses indicate that subject imports of titanium sponge from Japan and Russia have been, and continue to be, simultaneously present in the U.S. market throughout the period of investigation.[58] Imports from Kazakhstan have entered the United States under TIB throughout the period of investigation.[59]

Based on the evidence in the record of the general fungibility among the subject and TIB imports and the domestic like product, nationwide sales, similar channels of distribution, and the simultaneous presence of imports from Japan, Kazakhstan, and Russia in the U.S. market, we find a reasonable overlap of competition among such imports and the domestic like product. Therefore, we find that such imports would likely compete with each other and with the domestic like product in the U.S. market. Consequently, we cumulatively assess the likely volume and effect of imports from Japan, Kazakhstan, and Russia for purposes of these changed circumstances reviews.

V. REVOCATION OF THE ORDERS ON TITANIUM SPONGE IS NOT LIKELY TO LEAD TO CONTINUATION OR RECURRENCE OF MATERIAL INJURY

A. Legal Standard

Section 751(b) of the Act, as amended by the Uruguay Round Agreements Act of 1994 ("URAA"),[60] requires the Commission to conduct a review of an affirmative antidumping or countervailing duty determination whenever it receives a request that "shows changed circumstances sufficient to warrant a review."[61] In the URAA, Congress established a substantive standard -- section 752 of the Act -- to be applied by the Commission in conducting changed circumstances reviews. These reviews represent the first opportunity for the Commission to apply the new standard. The legislative history indicates that the new standard "is consistent with Commission practice" regarding changed circumstances reviews.[62] Under prior law, it was well established that a review investigation does not begin on a clean slate as though it were an original investigation.[63] Moreover, as under pre-existing law, the requesting party continues to bear the burden of persuasion as to whether changed circumstances exist to warrant revocation of an order.[64] [65]

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[57] CR at II-6 and II-7; PR at II-4. The channel of distribution for about *** CR at II-6; PR at II-3.

[58] CR/PR at Table D-1.

[59] CR/PR at Table D-1.

[60] P.L. 103-465 (Dec. 8, 1994).

[61] 19 U.S.C. § 1675(b)(1).

[62] SAA at 878.

[63] Matsushita Elec. Indus. Co. v. United States, 750 F.2d 927, 932 (Fed. Cir. 1984); see also H.R. Conf. Rep. No. 1156, 98th Cong., 2d Sess. 182 (1984) ("a section 751 review does not begin from an entirely neutral starting point"). Congress intended that the Commission's original determination be afforded deference so that such determinations would not be in a constant state of flux. Avesta AB v. United States, 689 F. Supp. 1173, 1180 (Ct. Int'l Trade 1988) (Avesta I) (the "underlying finding of injury . . . is entitled to deference and should not be disturbed lightly").

[64] SAA at 878; 19 U.S.C. § 1675(b)(3). See also Avesta I, 689 F. Supp. at 1180, 1181; Avesta AB v. United States, 724 F. Supp. 974, 978 (Ct. Int'l Trade 1988) (Avesta II), aff'd, 914 F.2d 233 (Fed. Cir. 1990), cert. denied,

In conducting a changed circumstances review, section 752(a) provides that "the Commission shall determine whether revocation of an order . . . would be likely to lead to continuation or recurrence of material injury within a reasonably foreseeable time." In making this determination, the Commission is to "consider the likely volume, price effect, and impact of imports of the subject merchandise on the industry if the order is revoked" taking into account its prior injury determination, whether any improvement in the state of the industry is related to the order under review, and whether the industry is vulnerable to material injury if the order is revoked.[66]

The statute further provides that the presence or absence of any factor that the Commission is required to consider shall not necessarily give decisive guidance with respect to the Commission's determination.[67] While the Commission must consider all factors, no one factor is necessarily dispositive.[68]

Although the standard in a changed circumstances review is not the same as the standard applied in original Title VII investigations, it contains some of the same elements.[69] The Commission's determination in a review investigation differs from that in original title VII investigations in that it is

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111 S.Ct. 1308 (1991); A Hirsh, Inc. v. United States, 729 F. Supp. 1360, 1363 (Ct. Int'l Trade 1990) (Hirsh I), aff'd following remand, 737 F. Supp. 1186, 1187 (Ct. Int'l Trade 1990) (Hirsh II).

[65] Chairman Bragg notes that the Federal Circuit has held that, for the purposes of a section 751 review, the ITC must begin its analysis of imports subject to an order with the presumption "that dumping will resume if the antidumping duty order is revoked or canceled . . . . based on the bifurcated nature of the administration of the antidumping laws wherein" Commerce determines whether dumping is taking place and issues or revokes the order, and the ITC determines whether the U.S. industry will be injured by reason of such imports. American Permac, Inc. v. United States, 831 F.2d 269, 274 (Fed. Cir. 1987), citing, Matsushita Electric Industrial Co., Ltd. v. United States, 569 F. Supp. 853, 856 (Ct. Int'l Trade 1983) While this Federal Circuit decision is pre-URAA, Congress indicated that the substantive standard in the URAA "is consistent with Commission practice" regarding changed circumstances reviews. SAA at 878.

[66] 19 U.S.C. § 1675a(a)(1). The statute states in relevant part:

> (1) In general
> In a review conducted under section 1675(b) or (c) of this title, the Commission shall determine whether revocation of an order . . . would be likely to lead to continuation or recurrence of material injury within a reasonably foreseeable time. The Commission shall consider the likely volume, price effect, and impact of imports of the subject merchandise on the industry if the order is revoked . . . . The Commission shall take into account -
> (A) its prior injury determinations, including the volume, price effect, and impact of imports of the subject merchandise on the industry before the order was issued . . .
> (B) whether any improvement in the state of the industry is related to the order . . .
> (C) whether the industry is vulnerable to material injury if the order is revoked . . . .

Id. See also SAA at 884 and 885. Three of the four general factors in the statute are relevant to a changed circumstances review, with the fourth factor regarding duty absorption findings only applicable to five-year reviews under section 751(c).

[67] 19 U.S.C. § 1675a(a)(5).

[68] SAA at 886.

[69] While the SAA states that "a separate determination regarding current material injury is not necessary," it indicates that "the Commission may consider relevant factors such as current and likely continued depressed shipment levels and current and likely continued prices for the domestic like product in the U.S. market in making its determination of the likelihood of continuation or recurrence of material if the order is revoked." SAA at 884.

prospective in nature. Under the likelihood standard, the Commission engages "in a counter-factual analysis: it must decide the likely impact in the reasonably foreseeable future of an important change in the status quo -- the revocation [of the order] . . . and the elimination of its restraining effects on volumes and prices of imports."[70] The Commission "shall consider that the effects of revocation . . . may not be imminent, but may manifest themselves only over a longer period of time."[71]

For the reasons stated below, we determine that revocation of the orders would not be likely to lead to continuation or recurrence of material injury to the domestic titanium sponge industry within a reasonably foreseeable time.[72] [73] [74]

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[70] SAA at 884.

[71] 19 U.S.C. § 1675a(a)(5). Congressional intent indicates that the "reasonably foreseeable time" will vary from case-to-case, but normally will exceed the "imminent" timeframe applicable in evaluating threat of material injury in original investigations. SAA at 887. The SAA directs the Commission to consider fungibility or differentiation within the product in question, the level of substitutability between the imported and domestic products, the channels of distribution used, the methods of contracting (such as spot sales or long-term contracts), and lead times for delivery of goods, as well as other factors that may only manifest themselves in the longer term, such as planned investment and the shifting of production facilities. Id. In these reviews, we have also considered the existence of detailed industry forecasts for titanium demand.

[72] The statute, 19 U.S.C. § 1675a(a)(6), indicates that "the Commission may consider the magnitude of the margin of dumping" in making its determination of the likely continuation or recurrence of injury in a changed circumstances review investigation. The statute defines that "magnitude of the margin of dumping" to be used by the Commission in changed circumstances review investigations as "the most recent dumping margin or margins determined by the administering authority under section 1675a(c)(3) of this title, if any, or under section 1673b(b) or 1673d(a) of this title." 19 U.S.C. § 1677(35)(C)(iii). See also SAA at 887.

The original antidumping duty margin for imports of titanium sponge from the former U.S.S.R. was *** and for Japanese producer/importer, Toho Titanium Co., Ltd. (Toho), the original margin was 34.25 percent. Confidential Report to Tariff Commission in Inv. No. AA-1921-51 at 2 and USITC Pub. 1600 at A-7. The outstanding country-wide antidumping duty orders for imports of titanium sponge from Kazakhstan, Russia, and Ukraine in the most recent administrative reviews each have margins of 83.96 percent. Three importers of Russian subject imports have obtained lower margins through administrative reviews: Cometals, 28.31 percent; Interlink, 0 percent; and TMC, 0 percent. Commerce subsequently revoked the antidumping duty order with respect to all but one Japanese producer/importer, Toho, which has received a zero dumping margin in its last three administrative reviews the most recent of which covers 1991. CR/PR at Table I-1.

[73] Chairman Bragg notes that in original or "underlying" antidumping investigations, she does not ordinarily consider the margin of dumping to be of particular significance in evaluating the effects of subject imports on domestic producers. See Separate and Dissenting Views of Commissioner Lynn M. Bragg in Bicycles from China, Inv. No. 731-TA-731 (Final), USITC Pub. 2968 at 33 (June 1996). In the context of a changed circumstances review, Chairman Bragg does not expect the magnitude of the margin of dumping to be any more or less probative or helpful than in an original investigation.

[74] As noted above, the Commission may consider dumping margins in making its determinations in a changed circumstances review. The statute allows the Commission to choose among different margins, including the most recent dumping margin determined by Commerce. In Commissioner Crawford's view, the statute and the SAA therefore allow the Commission to consider the margins calculated by Commerce in the most recent administrative review, which is consistent with Commission practice in prior changed circumstances reviews. See 19 U.S.C. § 1675a(a)(6), 19 U.S.C. § 1677(35)(C)(iii), and SAA at 850, 851 and 878.

B. Conditions of Competition

In evaluating the likely impact of the subject imports on the domestic industry, the statute directs the Commission to consider all relevant economic factors "within the context of the business cycle and conditions of competition that are distinctive to the affected industry."[75] Given the 14 to 30 years since the Commission's original determinations regarding titanium sponge, there have been many changes affecting the titanium sponge industry, and a number of conditions of competition pertinent to these investigations warrant discussion.

1. Worldwide and Domestic Capacity for Titanium Sponge Production

Global titanium sponge production capacity has declined significantly over the last decade. Commerce has reported that plant closures in Japan, Britain, Ukraine, and the United States have resulted in reductions in world titanium sponge capacity of 25 percent since 1991.[76] While there were modest increases in production capacity in 1996 and 1997, worldwide capacity to produce titanium was estimated by both the domestic industry and those seeking to revoke the orders to be between 99,500 to *** in 1997.[77]

Domestic sponge production capacity declined sharply with the closure of RMI's sponge facility in 1992, and no domestic producer has increased capacity by a comparable amount.[78] With RMI's exit from titanium sponge production, the domestic industry decreased from three to two principal producers.[79] While Timet opened its new *** facility in 1993, it halted production at its *** facility in 1994; this resulted in a further reduction in overall domestic capacity, which totaled ***. Timet gradually returned about *** to operational capacity in 1996 and 1997.[80] Thus, domestic sponge capacity has declined by over *** from about *** in 1997.[81]

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[75] 19 U.S.C. § 1675a(4).

[76] U.S. Industry & Trade Outlook, '98, U.S. Department of Commerce, at 14-13 to 14-16. Worldwide plant closures include: ***. CR at II-1; PR at II-1.

[77] CR at II-2; PR at II-1. Based on Commission questionnaire responses, total worldwide production capacity is estimated to have been *** in 1997. See TMC Prehearing Brief at 42. In September 1997, Timet provided to the Commerce Department an estimate of world titanium sponge capacity that totaled 99,500 metric tons. Id. at 43 and Attachment 10 (Timet Document).

[78] RMI's facility had about 11,000 metric tons of titanium sponge production capacity. Tr. at 113; CR/PR at II-1. Thus, with RMI's exit, domestic capacity for titanium sponge declined from about ***. Calculated from capacity reported for Timet's MRAL facility prior to its shutdown in 1994, *** and Oremet's reported capacity, ***. See also TMC's Prehearing Brief at Attachment 3.

[79] While a third U.S. producer began titanium sponge production in *** metallurgical grade. CR/PR at III-1.

[80] CR/PR at II-1 and Table III-2. Moreover, while domestic production capacity increased by *** from its low point of *** in 1995 to *** in 1997, domestic industry production during that period increased by ***, resulting in an increase in capacity utilization ***. CR/PR at Table III-2; CR at II-8; PR at II-4.

[81] CR/PR at II-1 and Table III-2.

2. Captive Consumption and Limited Open Market Sales

Another significant condition of competition is that there are virtually no open market sales by the domestic producers.[82] The two primary U.S. producers of titanium sponge are integrated titanium mill products producers that captively consume almost all of the sponge they produce. In 1997, Oremet *** of its total shipments.[83] In addition, *** were shipped to RMI under a toll agreement.[84] Thus, *** of Oremet's total shipments are open-market or commercial shipments.[85] Similarly, in 1997 Timet *** of its total shipments of titanium sponge, while the majority of its other shipments, or ***.[86] Thus, *** of Timet's total shipments of titanium sponge are open-market shipments.[87] For these two producers, *** of their combined total shipments in 1997 were open-market shipments.[88] Moreover, in contrast to the situation found in prior titanium sponge investigations, the record reflects that the domestic industry has increased titanium sponge production to meet some internal needs and not demonstrated an interest in competing in the merchant market in a significant way despite the existence of the antidumping orders.[89] In fact, the domestic producers meet some of their internal needs with a significant amount of imported titanium sponge, both TIB imports and non-TIB imports from the subject countries, as well as from non-subject countries.

3. Changes in Composition of Demand for Titanium Sponge

U.S. demand for titanium sponge, an intermediate product, is derived from demand for the downstream titanium metal products produced from sponge. Thus, increasing demand for titanium mill products is expected to translate into an increased derived demand for titanium sponge. The largest component of this downstream demand is civilian aerospace consumption of titanium metal products.

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[82] We note that the captive production provision, 19 U.S.C. § 1671(7)(C)(iv), is not applicable to a changed circumstances review. However, it is within the Commission's discretion to consider the impact of captive consumption in its analysis of whether the industry is likely to be materially injured by subject imports if the orders are revoked. See generally, Flat-Rolled Carbon Steel, USITC Pub. 2664 at 15, 17, 22 and 23 (August 1993), aff'd, U.S. Steel Group v. United States, 873 F. Supp 673 (Ct. Int'l Trade 1994).

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

[84] CR/PR at Table III-3; CR at III-7 and III-8; PR at III-2. ***. Id.

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

[86] CR/PR at Table III-3; CR at II-4 and III-8; PR at II-2 and III-2. *** as part of an agreement for UTSC's investment in Timet's sponge production facility in 1992. Id.

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

[88] Calculated from CR/PR at Table III-3.

[89] In the 1968 determination, the Tariff Commission found that:

> the two major domestic sponge producers . . . now have sponge capacity in excess of their captive needs for sponge. It is clear from the record that the industry wants to sell sponge, is able to sell sponge, and plans to produce and sell sponge to all mill operators . . . .

TC Pub. 255 at 6. The significance of open market sales was highlighted by the Commission in its 1984 affirmative threat determination regarding imports of titanium sponge from Japan. In that investigation, there were four integrated producers and one non-integrated producer of sponge, and commercial sales accounted for almost 8 percent of total U.S. production annually. USITC Pub. 1600 at 4, aff'd, Philipp Brothers, Inc. v. United States, 640 F. Supp. 1340, 1345 and 1346 (Ct. Int'l Trade 1986).

Non-aerospace applications for titanium metal include oil and gas production equipment, pollution control equipment, architectural finishes, auto parts, consumer goods (e.g., golf clubs, eyeglass frames, and bicycles), medical products (e.g., implants), computer applications, and non-aerospace military uses (e.g., tank armor).[90]

The composition of demand for titanium mill products has shifted significantly from the military aerospace segment to the commercial aerospace and non-aerospace segments since the prior titanium sponge investigations.[91] In 1968, the military aerospace segment accounted for about 75 percent of total demand, and the commercial aerospace segment accounted for 15 percent, and thus aerospace applications accounted for 90 percent of total demand. In 1996, the total aerospace share was approximately 60 percent, with 15 percent held by the military aerospace segment and 45 percent held by the commercial aerospace segment.[92] The non-aerospace segment has shifted from 10 percent in 1968 to 40 percent in 1996.

This shift in the composition of demand for titanium products thus indicates greater stability in the titanium sponge market, which historically has been erratic.[93] Therefore, we find that the diversification in the uses of titanium is likely to diminish the cyclical patterns for demand experienced by the industry in the past.

4. Apparent Strong Demand for Titanium Sponge

Apparent U.S. consumption, excluding TIB imports, more than doubled from 1995 to 1997.[94] The current rise in U.S. and worldwide demand follows a downturn in the late 1980's and early 1990's that appears to have leveled off in 1992, with recovery beginning in 1993.[95]

The parties agree that demand for titanium mill products and, thus, demand for titanium sponge, increased substantially in the 1995-97 period. The parties disagree over when, or even if, there will be a significant downturn in demand.[96] Timet and Oremet contend that the 1995-97 period represented a peak in the business cycle for the titanium sponge industry, and that the industry is on the verge of another cyclical trough in demand.[97]

We find that demand is likely to remain strong in the foreseeable future. The forecast for titanium metal demand submitted by the Boeing Company, which was prepared by Boeing in

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[90] CR at II-17, PR at II-8.

[91] TC Pub. 255 at 2; USITC Pub. 1600 at 5.

[92] CR at II-3; PR at II-2. These percentages are based on USGS reports for 1996; percentages for 1997 have not been reported.

[93] TC Pub. 255 at 6 ("the erratic demand for titanium components for aerospace vehicles . . . has been the dominant factor affecting the ability of the domestic titanium sponge industry to meet the consumption needs. . . ."); USITC Pub. 1600 at 8 (Commission found that the titanium sponge industry was "plagued by a recurring pattern of sharp supply and demand shifts and . . . had to rely on demand projections (for both military and commercial markets) which have tended to be unreliable because of . . . the speculative nature of aerospace and defense demand.")

[94] CR/PR at Table IV-1. U.S. apparent consumption, excluding TIB imports, was *** from 1995 to 1997. U.S. apparent consumption, including TIB imports, was *** from 1995 to 1997. Id. at Table D-3.

[95] CR at II-1 and II-2; PR at II-1.

[96] RMI/Avisma's Posthearing Brief at 6-8; TMC's Posthearing Brief at 3-7; Zaporozhie's Posthearing Brief at 2 and 3; Toho's Prehearing Brief at 5-7.

[97] Timet's Posthearing Brief at 6-12; Oremet's Posthearing Brief at 7-11; Tr. at 40-41.

conjunction with Timet and other members of the titanium industry, shows titanium consumption increasing from 17 million pounds in 1997 to 28 million pounds in 1999 and 2000 and then declining to 25 million pounds in 2002.[98] Boeing's forecast for strong demand is supported by a recent speech by the President of Timet, Andrew Dixey, in which he predicted that overall world demand for titanium mill products would increase by 17 percent from 60,000 metric tons in 1997 to 70,000 metric tons in 2004. Mr. Dixey also predicted that worldwide titanium usage in new applications would increase from 5,000 metric tons in 1997 to 10,000 metric tons in 2004.[99] We note that other knowledgeable sources also anticipate continued strong demand for titanium metal and, therefore, for titanium sponge.[100]

5. Long-term arrangements

In the last several years there has been a substantial increase in long-term titanium sponge and metal supply contracts. These long-term arrangements -- typically 5-10 years in duration -- are intended to ameliorate the cyclical swings in demand that the industry has experienced in the past.[101] Timet has contracts for most of its sponge needs and mill products for the next 10 years. As discussed above, it is

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[98] Boeing Prehearing Brief at 6 and Hearing Charts. Boeing reportedly accounts for 80 percent of domestic consumption of aerospace-grade titanium and is the largest single purchaser of titanium products. Id.; see also Boeing Posthearing Brief at 5-12.

[99] American Metal Market at 7 (June 10, 1998), "Once unpredictable, titanium seen on steady course," reporting on the speech of Andrew R. Dixey, President and Chief Operating Officer of Timet, included in UKTMP's Posthearing Brief at Exhibit 3. Dixey reportedly indicated that new demand is appearing in at least five major areas: automotive, sporting goods, computer, medical, and armor/weapons and that new applications include such products as exhaust systems and engine parts, bicycles, skis, racquets, computer hard drives, prosthetics, dental implants and M-1 tank body armor. Id. Timet also provided estimates of increasing demand for titanium sponge through the year 2000 in its submission to the Commerce Department in September 1997 as included in TMC's Prehearing Brief at Attachment 14.

[100] CR at II-6; PR at II-3 and staff telephone and interview notes regarding conversations with ***. Although domestic sponge producers argued that demand has softened in the last 3-6 months and is about to decline substantially, other record evidence does not support these arguments. A recent Boeing press release indicates that although Boeing is planning to reduce production of its 747 and 777 models in 1999, it intends to produce larger numbers of smaller aircraft, which use greater amounts of titanium. In support of their arguments, domestic sponge producers cite forecasts of aircraft production rather than titanium usage which, therefore, do not take into account the higher percentages of titanium used in newer models or account for titanium used in refurbishing existing aircraft. In any event, these forecasts project that through 2001 commercial aircraft production will remain higher than it was in 1997. We also note that the inability of the Defense Logistics Agency to sell sponge from the government stockpile appears to reflect the poor quality of the sponge rather than a softening of the market, and recent layoffs at Oremet appear to reflect that company's consolidation of its operations with Allvac.

[101] While long-term contracts were used in the past, it appears that the number and duration of such agreements has increased. TMC's Posthearing Brief at 9 and 10; UKTMP's Posthearing Brief, Attachment A at 2-4; Toho Posthearing Brief at 13 and 14;. For example, about 40 percent of RMI's sales reportedly now are covered by long-term contracts compared to only 20 percent in the past. RMI's Posthearing Brief at Attachment 2 and Answers to Commission Questions at 1 and 2. We note that these long-term contracts usually have minimum supply levels and some may have pricing formulas which may lessen their apparent reliability. For example, Timet contended that its long-term contract to supply Boeing is a requirements contract with a minimum quantity of titanium mill products that is only about one-third of the quantity to be shipped in 1998; thus, the long term contract does not guarantee that titanium sponge shipments will not fall. However, the existence of such agreements to purchase sponge does afford a greater protection from market fluctuations than no contracts at all. Compare Timet's Posthearing Brief at 13 and 14; Oremet's Posthearing Brief at Exhibit 7.

obliged to "sell" to ***.[102] Timet has additional 5-10-year agreements to supply Boeing and Wyman-Gordon with titanium products or sponge. On the supply side, Timet has concluded a long-term contract (1998-2007) to purchase up to ***[103] Most of Oremet's non-captive sponge production is not sold in the open market but is produced under a long-term toll agreement for RMI. Boeing, the world's largest single buyer of titanium products, has entered long-term agreements with RMI and Timet to supply 85 percent of its demand for titanium metal products over the next five to ten years.[104] In addition, Boeing has entered an agreement with VSMPO, the Russian producer of downstream titanium products, to supply it with the remaining 15 percent of its titanium products;[105] Avisma supplies VSMPO with its titanium sponge.

The trend toward long-term supply agreements between integrated titanium producers and end users is intended and is likely to provide stability for domestic titanium sponge producers in the foreseeable future.

6. Imports Entered Temporarily Free of Duty Under Bond ("TIB")

Another condition of competition in these investigations is that imports of titanium sponge, particularly from Kazakhstan and Russia, entered temporarily free of duty under bond ("TIB").[106] [107] TIB imports are not covered by the outstanding antidumping duty orders, and thus are not subject imports for purposes of the Commission's determinations.[108]

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[102] CR at II-4; PR at II-2.

[103] CR at II-4, VII-5, n. 10; PR at II-2, VII-2, n.10; Tr. at 116. UKTMP's current sales to the United States are sold ***.

[104] Timet has contracted to be Boeing's "principal supplier" of titanium products throughout the term of the agreement with guaranteed minimum sales of 3,000 metric tons per year. The Boeing agreement is for five years and can be extended for another five years. Tr. at 86 and TMC's Prehearing Brief at 39; CR at II-4; PR at II-2.

[105] Tr. at 86.

[106] TIB is a procedure whereby merchandise may be temporarily entered into the U.S. customs territory free of duty by posting a bond. TIB procedures are authorized pursuant to 19 U.S.C. § 1623(a). The bond required for such entries is an amount equal to double the estimated duties had all the articles covered by the entry been entered under an ordinary consumption entry. 19 C.F.R. §§ 10.39(d)(1). Under the terms of the bond, the importer agrees to export or destroy the merchandise within a specified time (usually a year) or pay liquidated damages, generally equal to twice the normal duty. Titanium Metals Corp. v. United States, 19 CIT __, Slip Op. 95-153 at 5 (Aug. 30, 1995)(citing C.S.D. 93-21, 27 Cust. Bull. & Decs. 448, 450 (1992)(Customs' practice is to include estimated antidumping or countervailing duties in the amount of the temporary importation bond). The TIB entries of imports of titanium sponge during the period of investigation qualified for duty free treatment under the TIB procedures because they were destined for further processing into downstream products that were required to be exported within one year. See Harmonized Tariff Schedule of the United States, USITC Pub. 2690, Ch. 98, Subch. XIII, U.S. Notes at 98-39 (1998); 19 C.F.R. §§ 10.31-10.40.

[107] Questionnaire responses indicate that total imports of titanium sponge from Kazakhstan and Russia under TIB were: *** CR/PR at Table D-1. TIB imports from Kazakhstan were: *** There were *** non-TIB subject imports from Kazakhstan during the period of investigation. TIB imports from Russia were: *** Non-TIB subject imports from Russia were: *** Id. We note that there also were TIB imports from Japan during the period of investigation, but these imports were produced by a Japanese producer, Sumitomo Sitix, which is not subject to the antidumping duty order against Japan.

[108] Commerce has determined that only entries for consumption are considered merchandise subject to an antidumping duty order. In Titanium Metals Corp. v. United States, 19 CIT __, Slip Op. 95-153 at 6 (Aug. 30,

While we conclude that TIB imports are not subject imports, we have considered the extent and competitive effects of TIB entries as a condition of competition and as a relevant economic factor under 19 U.S.C. § 1675a(a)(4), as discussed below. In particular, we considered TIB imports as a partial indicator of the likely increase in the volume of titanium sponge that would be exported to the U.S. market within the reasonably foreseeable future if the orders are revoked. Moreover, we also note that about *** of the TIB imports from Russia and Kazakhstan have been purchased during the period of investigation by the two domestic producers of titanium sponge and their affiliated companies.[109]

C. Likely Cumulated Volume of Subject Imports

In evaluating the likely volume of imports of subject merchandise if the order under review is revoked, the Commission is directed to consider whether such imports would be significant either in absolute terms or relative to production or consumption in the United States.[110] In doing so, the Commission must consider "all relevant economic factors," including four discrete factors: (1) any likely increase in production capacity or existing unused production capacity in the exporting country; (2) existing inventories of the subject merchandise, or likely increases in inventories; (3) the existence of barriers to the importation of the subject merchandise in countries other than the United States; and (4) the potential for product shifting if production facilities in the foreign country, which can be used to produce the subject merchandise, are currently being used to produce other products.[111]

Cumulated subject imports of titanium sponge from Japan and Russia increased in absolute terms from 1995 to 1997, with substantial fluctuations between years,[112] and increased to a lesser degree relative to consumption[113] due to substantial increases in U.S. apparent consumption for the same period.[114] We note that the two domestic titanium sponge producers imported or purchased almost *** of the subject imports in 1997.[115]

While we have determined that imports under TIB are not subject imports, we have considered, as a relevant economic factor pursuant to 19 U.S.C. § 1675a(a)(4), such imports as an indicator of the

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1995), reprinted in 29 Cust. Bull. & Dec. 91 (Sept. 27, 1995)(the court held that "the statutory language is clear that the assessment of antidumping/countervailing duties is restricted to merchandise 'entered, or withdrawn from warehouse, for consumption.'") Since TIB imports are not entered for consumption, they are not subject imports. The CIT has upheld this determination, which was recently reaffirmed by Commerce in the context of a 751 annual review determination involving titanium sponge. Titanium Sponge From Ukraine; Final Results of Antidumping Duty Administrative Review, 61 Fed. Reg. 6350 (Feb. 20, 1996). See also Clad Steel Plate From Japan, Inv. No. 731-TA-739 (Final), USITC Pub. 2972 at 14 and 15, notes 79-81 (June 1996).

[109] Commissioner Crawford does not cumulate imports of titanium sponge from the subject countries and, thus, she does not join the remainder of this opinion. See Views of Commissioner Carol T. Crawford, infra.

[110] 19 U.S.C. § 1675a(a)(2).

[111] 19 U.S.C. § 1675(a)(2)(A)-(D).

[112] Nearly all empirical data pertaining to both the domestic industry and the subject imports in this investigation are confidential. The quantity of cumulated subject imports declined from *** in 1995 to *** in 1996 and increased to *** in 1997. The value of these imports declined from *** in 1995 to *** in 1996 and then increased to *** in 1997. CR/PR at Table IV-1.

[113] Measured by quantity, subject import market penetration (with TIB imports excluded from apparent consumption) was *** in 1995, *** in 1996, and *** in 1997. CR/PR at Table IV-2.

[114] U.S. apparent consumption, excluding TIB imports, increased from *** in 1997. CR/PR at Table IV-2.

[115] In 1997, Timet and Oremet imported non-TIB subject imports and purchased from subject sources a total of *** of total subject imports. Calculated from CR/PR at Tables III-1 and IV-1.

ability of exporters in subject countries to supply merchandise to the U.S. market.[116] In contrast to subject imports, cumulated TIB imports from subject sources in Japan, Kazakhstan, and Russia have declined steadily from 1995 to 1997.[117] Moreover, total cumulated imports of titanium sponge from subject sources (i.e., combined cumulated subject imports and TIB imports from subject sources) in absolute terms have had a stable presence in the U.S. market relative to the substantial increases in demand and the significant increases in domestic shipments in recent years.[118] Consequently, the U.S. market share of total cumulated imports of titanium sponge from subject sources has declined.[119] Moreover, while the domestic industry's market share by quantity and value also declined during this period, the market share of imports of titanium sponge that are from non-subject sources (e.g., certain imports from Japan not subject to an order) increased sharply.[120]

For the reasons discussed below, we anticipate that the volume of imports of titanium sponge is unlikely to increase substantially from present levels (i.e., combined cumulated subject imports and TIB imports from subject sources) if the order is revoked. We conclude that the likely volume of imports would not be significant.[121] [122] We note in this regard that domestic titanium sponge producers will continue to account for a significant share of the imports of titanium sponge due to long-term arrangements to import or purchase titanium sponge from subject sources.

Our examination of the factors specified in 19 U.S.C. § 1675a(a)(2) indicates that, even if subject producers in Japan, Kazakhstan, and Russia wished to increase their exports to the United States, they would have limited ability to do so. Combined titanium sponge production capacity for subject producers in these three countries has increased only modestly during the period examined. Between 1995 and 1997, the increase in capacity was only *** percent.[123] Combined capacity utilization was high

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[116] For example, we note that TIB imports from Russia have declined from 1996 to 1997 as importers of Russian titanium sponge have obtained dumping margins of zero and subject (non-TIB) imports from Russia increased. However, we note that it is not necessarily the case that all TIB imports would shift to imports for consumption if the orders are revoked, since some imports of Japanese producer Sumitomo's product currently enter under TIB even though imports from this producer are not subject to an order. See CR/PR at Table D-1.

[117] Cumulated TIB imports of titanium sponge from subject sources were *** in 1997. The value of these imports was *** in 1995, *** in 1996, and *** in 1997. CR/PR at Table D-1.

[118] Total cumulated imports of titanium sponge from subject sources were *** in 1997 for a *** increase from 1995 to 1997. CR/PR at Table D-2. Total U.S. apparent consumption was *** increase from 1995 to 1997. Id. In addition, U.S. producers' shipments of titanium sponge increased from *** in 1997, for an increase of ***. Id.

[119] Measured by quantity, market penetration by imports of subject merchandise was *** in 1997. CR/PR at Table D-3. Measured by value, market penetration by imports of subject merchandise was *** in 1997. Id.

[120] CR/PR at Table D-3. Measured by quantity, the domestic producers' market penetration (with TIB imports included in apparent consumption) was *** in 1995, *** in 1996, and *** in 1997. Measured by quantity, the market penetration for imports from non-subject sources (including TIB imports) was *** in 1995, *** in 1996, and *** in 1997. Id.

[121] Chairman Bragg notes that in her analysis, whether a particular volume of imports is "significant" will generally be a function of a variety of factors, unique to each investigation. With regard to the instant investigations, Chairman Bragg finds that the volume effects, if any, of revocation of the orders will not lead to the continuation or recurrence of material injury to the domestic industry in a reasonably foreseeable time.

[122] In making this finding in these reviews, Vice Chairman Miller has taken into account the domestic producers' strong operating performance at the current level of titanium sponge imports and the conditions of competition for this industry.

[123] Calculated from CR/PR at Tables VII-1, VII-2, and VII-3. Combined production capacity for subject sources was *** in 1998. Id. The subject Japanese producer accounted for *** in production capacity in 1997. CR/PR at

in 1997 and is projected to be higher in 1998, reaching *** percent in 1997, and is projected to be *** percent in 1998.[124] These figures indicate that important constraints exist on the ability of subject producers to increase exports to the United States by increasing production.[125] [126]

Additionally, there is no indication of any recent buildup in inventory levels of imports of subject merchandise which would indicate a likelihood of significantly increased imports. Since 1995, relative levels of inventories of titanium sponge in Japan, Kazakhstan, and Russia of subject merchandise declined or have remained generally stable, and inventory levels of the subject merchandise in the United States have increased modestly in absolute terms and declined on a relative basis.[127]

The record also indicates that subject producers from Japan, Kazakhstan, and Russia export primarily to markets other than the United States and that worldwide demand is strong.[128] The existence of such significant home and third-country export markets indicates few practical barriers to the importation of titanium sponge from subject producers into countries other than the United States. It also indicates no disproportionate reliance on exports to the United States market. Additionally, the presence of significant and increasing volumes of non-subject imports, particularly from a Japanese exporter not subject to an order, are likely to limit any increase of imports of titanium sponge from subject sources.

Finally, the record does not support a conclusion that revocation of the antidumping duty orders would lead titanium sponge producers to shift production equipment used for other products to production of titanium sponge. The record indicates that production equipment can not be shifted between use for production of titanium sponge and other products.[129]

In sum, if the antidumping duty orders on titanium sponge from Japan, Kazakhstan, and Russia are revoked, we conclude that the likely volume of imports would not be substantially greater than

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Table VII-1.

[124] Calculated from CR/PR at Tables VII-1, VII-2, and VII-3. Production capacity utilization varied but increased during the period of investigation for all subject producers. Japanese subject capacity utilization was *** in 1998. CR/PR at Table VII-1. Kazakh subject capacity utilization was *** in 1998. CR/PR at Table VII-2. Russian subject capacity utilization was *** in 1998. CR/PR at Table VII-3.

[125] RMI/Avisma reported that Avisma is producing titanium sponge at very close to its practical limit. RMI/Avisma's Posthearing Brief at 11-14. Toho contended that it is not in a position to significantly increase its volume of imports to the U.S. market because it has operated at *** for three years and, thus, poses no threat to the U.S. industry. Toho's Prehearing Brief at 9 and 10.

[126] The domestic producers argue, based on a U.S. Geological Survey, that Avisma and UKTMP have each understated their capacity by approximately 10,000 metric tons. However, the USGS estimates are based on a costly and time-consuming (over one year) refurbishment of moth-balled facilities and "extreme" operating conditions, which are not commercially feasible for any length of time. CR at II-13; PR at II-6 and II -7.

[127] The ratio of inventories of subject titanium sponge in Japan to shipments by the subject Japanese producer decreased from *** percent in 1995 to *** percent in 1997, and is projected to decline to *** percent in 1998. CR/PR at Table VII-1. The ratio of inventories of subject titanium sponge in Kazakhstan to shipments by the Kazakh producer decreased from *** percent in 1995 to *** percent in 1997, and is projected to increase to *** percent in 1998. CR/PR at Table VII-2. The ratio of inventories of subject titanium sponge in Russia to shipments by the Russian producer decreased from *** percent in 1995 to *** percent in 1997, and is projected to decrease to *** percent in 1998. CR/PR at Table VII-3. Cumulated inventories of subject merchandise in the United States increased from *** in 1997. The ratio of inventories of subject merchandise to total imports increased from *** percent in 1997. CR/PR at Table VII-5.

[128] CR/PR at Tables VII-1 to VII-3.

[129] Commission questionnaires responses from ***.

current volumes (including TIB import volumes). For the reasons discussed above, we find that the likely volume of titanium sponge imports would not be significant.[130]

D. Likely Price Effects of Subject Imports from Japan, Kazakhstan, and Russia

In evaluating the likely price effects of subject imports, the Commission is directed to consider whether there is likely to be significant underselling by the subject imports as compared to domestic like products and if the subject imports are likely to enter the United States at prices that would otherwise have a significant depressing or suppressing effect on the price of domestic like products.[131]

As discussed above, the domestic industry sold only about *** of its total production from 1995 to 1997 on the open market.[132] Thus, any changes in prices of imported product would appear to be able to have little direct effect on the prices of the domestic like product or, more importantly, impact on the domestic industry. Moreover, this market condition is not likely to change, since the domestic industry has expressed no plans to increase its open market sales by expanding production capacity or captively consuming less, even with the antidumping duty orders in place.[133]

We have analyzed the pricing data gathered by the Commission in these reviews in an effort to evaluate likely future pricing practices if the orders are revoked. It is difficult, however, to draw any firm conclusions about current market pricing. The price comparisons that are possible between the limited open market sales of domestically-produced titanium sponge and importers' sales of subject titanium sponge from Japan and Russia are not conclusive because of differences in product grades/quality or sales terms. The pricing information for titanium sponge in these investigations does not distinguish between grades or quality of sponge or between contract or spot sales. Thus, price trends and price comparisons were considered with caution.[134]

We think it is unlikely that import pricing would decrease significantly if the orders are revoked. First, the record indicates that aggregate U.S. demand for titanium sponge ranges from relatively

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[130] Chairman Bragg reiterates her views as expressed in footnote 121. She additionally notes that in the prior investigations, in contrast to these reviews, imports of subject merchandise were increasing at a greater rate than U.S. apparent consumption throughout the investigation for the 1968 case and in the latest period of the investigation in the 1984 case. TC Pub. 255 at 4 and USITC Pub. 1600 at 5 and 8, and A-11 and A-36.

[131] 19 U.S.C. § 1675a(a)(3). The SAA states that "[c]onsistent with its practice in investigations, in considering the likely price effects of imports in the event of revocation and termination, the Commission may rely on circumstantial, as well as direct, evidence of the adverse effects of unfairly traded imports on domestic prices." SAA at 886.

[132] CR at V-8, n.15; PR at V-5, n.15.

[133] 19 U.S.C. § 1675a(a)(1). In fact, the domestic industry's open market sales as a share of their production have declined with the orders in place.

[134] CR/PR at Tables V-I to V-4; CR at V-6, n. 10; PR at V-4, n. 10. In any event, the domestic producers have not argued that titanium sponge imports currently are having significant price effects. Instead, they argue that in the absence of the orders, import prices would decrease significantly. In support of their conclusion, they argue that in the last trough in the business cycle, 1991-1992, the former Soviet producers were selling sponge in the U.S. market under TIB for approximately $1-2 per pound. Timet's Posthearing Brief at 11; Timet's Prehearing Brief at 13-17; Oremet's Posthearing Brief at 12; Oremet's Prehearing Brief at 35-40; Tr. at 27-28. Compare TMC's Prehearing Brief at 52-58; TMC's Posthearing Brief at 9-11; RMI/Avisma's Prehearing Brief at 26-27; UKTMP's Posthearing Brief at 14-15; and Toho's Prehearing Brief at 10-12.

inelastic to somewhat elastic in the short run to changes in price.[135] That is, modest reductions in the price of titanium sponge would be unlikely to stimulate significant additional demand for the product. Second, demand in the U.S. market currently exceeds, and is projected to continue to exceed for the reasonably foreseeable future, the domestic supply of titanium sponge, as discussed above. The constraints on significant increases in import volumes discussed above also would militate against price declines for the titanium sponge imports. Thus, it is not likely that import prices in a market of short supply would decline. Third, a substantial amount of titanium sponge imports will enter the U.S. market under long-term contracts, which suggests that prices are not likely to decrease significantly.

We therefore conclude that if the orders are revoked, titanium sponge imports from Japan, Kazakhstan, and Russia are not likely to have significant price effects on the domestic industry.

E. Likely Impact of Cumulated Subject Imports

In evaluating the likely impact of imports of subject merchandise, the Commission is directed to consider all relevant economic factors which are likely to have a bearing on the state of the industry in the United States, including: (1) likely declines in output, sales, market share, profits, productivity, return on investments, and utilization of capacity; (2) likely negative effects on cash flow, inventories, employment, wages, growth, ability to raise capital, and investment; and (3) likely negative effects on the existing development and production efforts of the industry, including efforts to develop a derivative or more enhanced version of the domestic like product.[136] These factors are to be considered within the context of the business cycle and the conditions of competition that are distinctive for the industry.[137]

As instructed by the statute, in evaluating the likely impact of subject imports, we have considered the current state of the domestic titanium sponge industry, and whether the industry is vulnerable to material injury. We have also considered the extent to which any improvement in the state of the industry is related to the antidumping duty orders at issue.

The record does not support the conclusion that the domestic industry is vulnerable to material injury. Virtually all domestic industry performance indicators increased from 1995 to 1997. Production steadily increased from 1995 to 1997.[138] Capacity utilization followed a similar pattern.[139] Employment

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[135] See CR at II-25, PR at II-13. While titanium scrap may be substituted for sponge in the production of ingot, generally, the stricter the requirements for purity in the end use product, such as aircraft engine parts, the less scrap metal may be substituted for sponge. CR at II-20; PR at II-10. On average, titanium sponge represents a very small percentage of the price of the final product; however, sponge represents a greater percentage in several emerging applications, such as golf clubs. CR at II-19; PR at II-9 and II-10. The price elasticity of demand tends to be smaller the fewer the substitutes for titanium sponge and the downstream titanium mill products, and the more limited the share of titanium in the final product. Id.

[136] 19 U.S.C. § 1675a(a)(4).

[137] 19 U.S.C. § 1675a(a)(4).

[138] Domestic production increased from *** in 1997, for an increase of *** for the same period. CR/PR at Table III-2.

[139] Capacity utilization was *** in 1997. CR/PR at Table III-2.

steadily increased from 1995 to 1997.[140] The domestic producers' titanium products operations ***.[141] Inventory as a share of shipments steadily declined during the period of investigation.[142] [143]

As discussed earlier, the domestic producers argue that the titanium industry is about to experience a sharp decline in the business cycle. Moreover, they assert that in the absence of the orders, the volume of titanium sponge imports would increase, and the prices for such imports would decline, significantly. They argue that if prices were to drop below their costs of production on a sustained basis then they would have no choice but to reduce their domestic production of sponge (which, in turn, would lead to declines in all other major economic factors the Commission must consider) in order to remain competitive in their downstream titanium metal operations.[144]

We do not think the domestic industry is likely to face the "make or buy" dilemma in the reasonably foreseeable future. As discussed above, we think that demand is likely to remain strong. Indeed, all forecasts offered by parties indicated that demand for titanium products is likely to be higher in 2001 than 1997 when the domestic producers could not supply their own needs let alone provide sponge for merchant market sales. The Boeing forecast projects stronger demand through 2002. Thus, we see little likelihood that the domestic producers would replace their domestic production with imports in the reasonably foreseeable future. Rather, we think it is likely that imports will continue to satisfy demand that cannot be met by the domestic producers.

For the foregoing reasons, we find that the domestic titanium sponge industry is not vulnerable to material injury if the orders are revoked. We also conclude that titanium sponge imports are not likely to have a significant adverse impact on the domestic industry if the orders are revoked.

F. Ukraine

As discussed above with regard to the cumulation of Ukraine imports with other subject imports, there have been *** of titanium sponge from Ukraine during the period of investigation. Moreover, the evidence indicates that significant imports from Ukraine of titanium sponge are not likely within a reasonably foreseeable time. Consequently, any imports from Ukraine of titanium sponge are not likely

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[140] Employment of production workers increased from *** in 1997. CR/PR at Table III-5.

[141] The domestic producers' overall titanium products operations *** in 1997. *** in 1997. Moreover, cost of good sold as a share of net sales *** in 1997. CR/PR at Table VI-5.

The domestic producers of titanium sponge, which also are integrated titanium products producers, do not keep separate profitability data for their titanium sponge operations. While data was calculated for separate titanium sponge operations for the domestic industry, due to the limited number of open market sales of titanium sponge by these producers and the diversity of price, the results of operations only for titanium sponge may not be a reliable indicator of profitability. CR at VI-4 and VI-7; PR at VI-2. We note that the data regarding titanium sponge operations *** than 1995. CR/PR at Table VI-2.

[142] The U.S. producers' end-of- period inventories as a share of their total shipments declined from *** in 1997. CR/PR at Table III-4.

[143] Based on the record, Chairman Bragg finds that the industry has increasingly insulated itself from market forces by both focusing on supplying internal demands and relying more on long-term contracts.

[144] Citing the Commission's determination in Tungsten Ore, both domestic producers charged that if titanium sponge "becomes available at prices below domestic production costs, [it] would place the domestic sponge producers in a 'make or buy' dilemma" where they would have little choice but to reduce their own sponge production and import the cheaper foreign product to ensure the competitiveness of its downstream operations. Oremet's Posthearing Brief, Exhibit 7, Response to Chairman Miller's question regarding Tungsten Ore case at 2; Oremet's Prehearing Brief at 30; Timet's Posthearing Brief at 4 and 5; Tr. at 23, 36, and 58.

to have significant price effects or a significant adverse impact on the domestic industry within the reasonably foreseeable future. Thus, we determine that revocation of the antidumping duty order against Ukraine would not be likely to lead to continuation or recurrence of material injury to the domestic industry within a reasonably foreseeable time.

CONCLUSION

For the foregoing reasons, we determine that revocation of the antidumping duty orders on titanium sponge from Japan, Kazakhstan, Russia, and Ukraine would not be likely to lead to continuation or recurrence of material injury to the domestic titanium sponge industry within a reasonably foreseeable time.

VIEWS OF COMMISSIONER CAROL T. CRAWFORD

On the basis of information in the record, I determine that revocation of the antidumping duty orders concerning titanium sponge from Japan, Kazakhstan, Russia, and Ukraine is not likely to lead to continuation or recurrence of material injury to an industry in the United States. I join my colleagues in finding a single like product, in the definition of the domestic industry, and in the discussion of the conditions of competition in the U.S. market. However, I do not concur in my colleagues' decision to cumulate the subject imports from all four countries.

The statute provides that cumulation in this changed circumstances review is within the Commission's discretion.[1] Because the facts and antidumping margins differ among the respective orders, I decline to exercise my discretion to cumulate the subject imports from the four countries.[2]

The statute requires the Commission to determine "whether revocation of an order . . . would be likely to lead to continuation or recurrence of material injury within a reasonably foreseeable time."[3] In making its determination, the statute directs the Commission to consider the likely volume, price effect, and impact of the subject imports on the domestic industry if an order is revoked.[4] I have considered and taken into account all of the factors required by the statute in reaching my determination. My analysis with respect to the subject imports from each country follows.

I. REVOCATION OF THE ORDER ON TITANIUM SPONGE FROM JAPAN IS NOT LIKELY TO LEAD TO CONTINUATION OR RECURRENCE OF MATERIAL INJURY WITHIN A REASONABLY FORESEEABLE TIME

A. Volume of the Subject Imports

The volume of subject imports of titanium sponge from Japan[5] increased from *** metric tons in 1995 to *** metric tons in 1996 and then to *** metric tons in 1997. The value of subject imports from Japan was *** in 1995, *** in 1996, and nearly *** in 1997.[6] The market share on the basis of quantity increased from *** percent in 1995 to *** percent in 1996 and to *** percent in 1997. By value, the market share of subject imports from Japan increased from *** percent in 1995 to *** percent in

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[1] 19 U.S.C. § 1675a(a)(7).

[2] Even though cumulation is discretionary, the statute requires that the subject imports must be likely to "compete with each other and with domestic like products" for the Commission to cumulate. Id. Less than *** percent of domestic production is sold in the open market, and thus there is virtually no competition between the domestic product and the imports. Consequently, even if the facts in these cases were different and could support a decision to cumulate, the competition requirement in the statute would preclude cumulation.

[3] 19 U.S.C. § 1675a(a).

[4] 19 U.S.C. § 1675a(a)(1); The legislative history indicates that "the Commission will engage in a counter-factual analysis: it must decide the likely impact in the foreseeable future of an important change in the status quo – the revocation [of the order] . . . ." SAA at 884.

[5] Only one Japanese producer of titanium sponge, Toho, remains subject to the order.

[6] Table IV-1.

1996, and to *** percent in 1997.[7] Nonsubject imports from Japan[8] are a major presence in the market, holding a market share of *** percent by quantity and *** percent by value in 1997.[9]

While it is clear that the larger the volume of subject imports, the larger the effect they will have on the domestic industry, whether the volume is significant cannot be determined in a vacuum, but must be evaluated in the context of their price effects and impact. Based on the market share of the subject imports from Japan, the conditions of competition in the U.S. market, and the lack of significant price effects or impact on the domestic industry as discussed below, I find that the likely volume of subject imports of titanium sponge from Japan would not be significant if the order is revoked.

B. Price Effects of the Subject Imports

To determine the effect of subject imports on domestic prices, I evaluate whether domestic prices would be likely to decrease if the order is revoked. In doing so, I first evaluate the likely effect of revocation on the prices for subject imports.

Since 1991, subject imports from Japan have been subject to an antidumping margin of 0.00 percent.[10] If the order is revoked, it seems likely that prices for subject imports would not change, because they have been subject to a zero margin for the last six years. Furthermore, given the current and projected strong demand for titanium sponge, it does not seem likely that there is any commercial incentive to reduce prices of subject imports. Therefore, I find that prices for subject imports are not likely to decrease significantly if the order is revoked. Absent a reduction in prices, there would be no shift in demand toward the subject imports from Japan, and thus no shift in demand away from the domestic product if the order is revoked. Since there likely would be no shift in demand away from the domestic product if the order is revoked, revocation of the order would have no effect on domestic prices.[11] Consequently, I find that the subject imports are not likely to have significant effects on domestic prices if the order is revoked.

C. Impact of the Subject Imports

To assess the likely impact of the subject imports on the domestic industry, I consider all of the relevant economic factors.[12] I evaluate the effect on domestic prices, sales, and overall revenues that is likely to occur if an order is revoked. Understanding the impact of revocation on the domestic industry's

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[7] Table IV-2.

[8] Id. Sumitomo Sitix ("Sumitomo")was the only supplier of nonsubject imports from Japan between 1995 and 1997. Sumitomo was subject to the original 1984 antidumping dumping order until 1992, when the order was revoked with respect to it. Since that time, Sumitomo's imports have been nonsubject imports.

[9] Tables IV-1 and IV-2. Nonsubject imports from countries other than Japan are also present in the market, but not in significant amounts. Id.

[10] Table I-1. This margin is based on the Department of Commerce's most recent administrative review. Toho, the sole remaining Japanese producer subject to the antidumping order, has had zero margins in its last three administrative reviews conducted from November 1988 through October 31, 1991. Japan Posthearing Brief at 1.

[11] As discussed previously, less than *** percent of domestic production is sold in the open market, and thus there is virtually no competition between the domestic product and the subject imports. Therefore, changes in the prices for subject imports are not likely to have any effect on domestic prices. In fact, prices for the domestic product do not exist in any commercially meaningful sense, and therefore, it is not possible for subject imports to have any significant effects on domestic prices.

[12] 19 U.S.C. § 1675a(a)(4).

prices, sales, and overall revenues is critical, because the impact on the other industry indicators (e.g. employment, wages, etc.) is derived from the impact on the domestic industry's prices, sales, and revenues. These factors together either encompass or reflect the volume and price effects of the subject imports, and so I gauge the impact of the revocation of the order through these effects.

As discussed above, revocation of the order is not likely to lead to a shift in demand toward the subject imports from Japan. Therefore, revocation of the order would not cause a shift in demand away from the domestic product. Absent a shift in demand away from the domestic product, there likely would be no effect on the domestic industry's output, sales, and overall revenues. Consequently, revocation of the order is not likely to have a significant impact on the domestic industry.

D. Conclusion

Based on the foregoing analysis, I find that revocation of the order is not likely to have significant effects on domestic prices or a significant impact on the domestic industry. Consequently, I determine that revocation of the order on titanium sponge from Japan is not likely to lead to continuation or recurrence of material injury within a reasonably foreseeable time.

II. REVOCATION OF THE ORDER ON TITANIUM SPONGE FROM RUSSIA IS NOT LIKELY TO LEAD TO CONTINUATION OR RECURRENCE OF MATERIAL INJURY WITHIN A REASONABLY FORESEEABLE TIME

A. Volume of the Subject Imports

The volume of subject imports of titanium sponge from Russia decreased from *** metric tons in 1995 to *** metric tons in 1996 and then increased to *** metric tons in 1997. The value of subject imports from Russia was *** in 1995, *** in 1996, and *** in 1997.[13] Their market share on the basis of quantity decreased from *** percent in 1995 to *** percent in 1996 and then increased to *** percent in 1997. By value, the market share of subject imports from Russia decreased from *** percent in 1995 to *** percent in 1996, and then increased to *** percent in 1997.[14]

While it is clear that the larger the volume of subject imports, the larger the effect they will have on the domestic industry, whether the volume is significant cannot be determined in a vacuum, but must be evaluated in the context of their price effects and impact. Based on the market share of the subject imports from Russia, the conditions of competition in the U.S. market, and the lack of significant price effects or impact on the domestic industry as discussed below, I find that the likely volume of subject imports of titanium sponge from Russia would not be significant if the order is revoked.

B. Price Effects of the Subject Imports

To determine the effect of subject imports on domestic prices, I evaluate whether domestic prices would be likely to decrease if the order is revoked. In doing so, I first evaluate the likely effect of revocation on the prices for subject imports.

There is only one titanium sponge producer in Russia, and the country-wide antidumping margin for the subject imports is 83.96 percent. However, two importers have received zero antidumping margins in the most recent administrative review completed by the Department of

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[13] Table IV-1.

[14] Table IV-2.

Commerce,[15] and over 99 percent[16] of subject imports from Russia currently enter the market at zero antidumping margins.[17] If the order is revoked, it seems likely that prices for subject imports would not change, because they are subject to a zero antidumping margin. Furthermore, given the current and projected strong demand for titanium sponge, it does not seem likely that there is any commercial incentive to reduce prices of subject imports. Therefore, I find that prices for subject imports are not likely to decrease significantly if the order is revoked. Absent a reduction in prices, there would be no shift in demand toward the subject imports from Russia, and thus no shift in demand away from the domestic product if the order is revoked.

The unique facts of this case further demonstrate that there likely would be no shift in demand away from the domestic product if the order is revoked. The domestic industry is a substantial consumer of Russian titanium sponge. Titanium sponge from Russia is imported both as TIB imports and as non-TIB imports. As discussed previously, TIB imports are not "subject imports," and thus no antidumping duties are imposed on these imports, while non-TIB imports are subject imports. In 1995 TIB imports from Russia were *** metric tons while non-TIB subject imports were *** metric tons. In 1997, when non-TIB subject imports were entering at zero antidumping margins, the relationship was basically reversed: there were *** metric tons of TIB imports and *** metric tons of non-TIB imports.[18]

In 1997, the domestic industry consumed *** of the TIB imports from Russia and either imported or purchased *** percent of the non-TIB subject imports from Russia.[19] In other words, the domestic industry has been consuming a significant majority of the titanium sponge imported from Russia, without paying antidumping duties, while the order has been in place. Thus, revoking the order is not likely to alter the status quo with respect to the majority of titanium sponge imported from Russia. That is, the domestic industry is in the same position to consume titanium sponge from Russia with the order in place as with the order revoked. Therefore, any shift in demand away from the domestic product would have to occur as a result of a shift in demand toward the remaining subject imports from Russia that are not consumed by the domestic industry. As discussed above, the zero margins and lack of commercial incentive to reduce prices for subject imports indicate that demand is not likely to shift toward these subject imports and away from the domestic product if the order is revoked.[20] Since there likely would be no shift in demand away from the domestic product if the order is revoked, revocation of the order would have no effect on domestic prices.[21] Consequently, I find that the subject imports are not likely to have significant effects on domestic prices if the order is revoked.

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[15] Table I-1.

[16] Table D-1 and questionnaire responses.

[17] The facts in this case are analytically the same as in the determination reviewed by the Court of Appeals for the Federal Circuit in Gerald Metals, Inc. v. United States, 132 F.3d 716 (Fed. Cir. 1997) (rehearing denied).

[18] Table D-1.

[19] Calculated from Table IV-1 and questionnaire responses.

[20] In addition, RMI's *** indicates that demand for these imports is not likely to be affected significantly by the revocation of the order. RMI and Russian Posthearing Brief at 4 and 12.

[21] As discussed previously, less than *** percent of domestic production is sold in the open market, and thus there is virtually no competition between the domestic product and the subject imports. Therefore, changes in the prices for subject imports are not likely to have any effect on domestic prices. In fact, prices for the domestic product do not exist in any commercially meaningful sense, and therefore, it is not possible for subject imports to have any significant effects on domestic prices.

C. Impact of the Subject Imports

To assess the likely impact of the subject imports on the domestic industry, I consider all of the relevant economic factors.[22] I evaluate the effect on domestic prices, sales, and overall revenues that is likely to occur if an order is revoked. Understanding the impact of revocation on the domestic industry's prices, sales, and overall revenues is critical, because the impact on the other industry indicators (e.g. employment, wages, etc.) is derived from the impact on the domestic industry's prices, sales, and revenues. These factors together either encompass or reflect the volume and price effects of the subject imports, and so I gauge the impact of the revocation of the order through these effects.

As discussed above, revocation of the order is not likely to lead to a shift in demand toward subject imports from Russia. Therefore, revocation of the order would not cause a shift in demand away from the domestic product. Absent a shift in demand away from the domestic product, there likely would be no effect on the domestic industry's output, sales, and overall revenues. Consequently, revocation of the order is not likely to have a significant impact on the domestic industry.

D. Conclusion

Based on the foregoing analysis, I find that revocation of the order is not likely to have significant effects on domestic prices or a significant impact on the domestic industry. Consequently, I determine that revocation of the order on titanium sponge from Russia is not likely to lead to continuation or recurrence of material injury within a reasonably foreseeable time.

III. REVOCATION OF THE ORDER ON TITANIUM SPONGE FROM KAZAKHSTAN IS NOT LIKELY TO LEAD TO CONTINUATION OR RECURRENCE OF MATERIAL INJURY WITHIN A REASONABLY FORESEEABLE TIME

A. Volume of the Subject Imports

All imports of titanium sponge from Kazakhstan are TIB imports, and thus there were no subject imports from Kazakhstan from 1995 to 1997. If the order is revoked, it is possible that TIB imports could enter as "subject imports," and thus I have considered their volume in my analysis. The volume of TIB imports, which are nonsubject imports, of titanium sponge from Kazakhstan increased from *** metric tons in 1995 to *** metric tons in 1996 and then decreased to *** metric tons in 1997. The value of TIB imports from Kazakhstan was *** in 1995, *** in 1996, and *** in 1997.[23]

While it is clear that the larger the volume of subject imports, the larger the effect they will have on the domestic industry, whether the volume is significant cannot be determined in a vacuum, but must be evaluated in the context of their price effects and impact. Based on the conditions of competition in the U.S. market and the lack of significant price effects or impact on the domestic industry as discussed below, I find that the likely volume of subject imports of titanium sponge from Kazakhstan would not be significant if the order is revoked.

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[22] 19 U.S.C. § 1675a(a)(4).

[23] Table D-1.

B. Price Effects of the Subject Imports

To determine the effect of subject imports on domestic prices, I evaluate whether domestic prices would be likely to decrease if the order is revoked. In doing so, I first evaluate the likely effect of revocation on the prices for subject imports.

The country-wide antidumping margin for subject imports from Kazakhstan is 83.96 percent based on Commerce's most recent administrative review.[24] As discussed above, no subject imports entered the market from 1995 to 1997. It is possible that some of the TIB imports from Kazakhstan might enter as "subject imports" if the order is revoked. Even so, the subject imports are not likely to have significant effects on domestic prices.

Demand for imports of titanium sponge from Kazakhstan is driven by the domestic industry. The domestic industry consumed *** of the TIB imports from Kazakhstan, without paying antidumping duties, while the order has been in place.[25] Thus, revoking the order will not alter the status quo, that is, the domestic industry is in the same position to consume titanium sponge from Kazakhstan with the order in place as with the order revoked. Furthermore, one domestic producer has entered into a contract from 1998 to 2007 to purchase up to 10,000 metric tons[26] per year from the sole producer in Kazakhstan. There is no evidence that revoking the order is likely to affect this long term contract. For these reasons, the demand for titanium sponge from Kazakhstan likely will not be affected by the revocation of the order, and thus prices for titanium sponge from Kazakhstan are not likely to decrease significantly if the order is revoked. Consequently, I find that prices for subject imports are not likely to decrease significantly if the order is revoked. Absent a reduction in prices, there would be no shift in demand toward the subject imports from Kazakhstan, and thus no shift in demand away from the domestic product if the order is revoked. Since there likely would be no shift in demand away from the domestic product if the order is revoked, revocation of the order would have no effect on domestic prices.[27] Consequently, I find that the subject imports are not likely to have significant effects on domestic prices if the order is revoked.

C. Impact of the Subject Imports

To assess the likely impact of the subject imports on the domestic industry, I consider all of the relevant economic factors.[28] I evaluate the effect on domestic prices, sales, and overall revenues that is likely to occur if an order is revoked. Understanding the impact of revocation on the domestic industry's prices, sales, and overall revenues is critical, because the impact on the other industry indicators (e.g. employment, wages, etc.) is derived from the impact on the domestic industry's prices, sales, and revenues. These factors together either encompass or reflect the volume and price effects of the subject imports, and so I gauge the impact of the revocation of the order through these effects.

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[24] Table I-1.

[25] CR at VII-5, n.10; PR at VII-2, n.8.

[26] Tr. at 116 and TMC Prehearing Brief at 39.

[27] As discussed previously, less than *** percent of domestic production is sold in the open market, and thus there is virtually no competition between the domestic product and the subject imports. Therefore, changes in the prices for subject imports are not likely to have any effect on domestic prices. In fact, prices for the domestic product do not exist in any commercially meaningful sense, and therefore, it is not possible for subject imports to have any significant effects on domestic prices.

[28] 19 U.S.C. § 1675a(a)(4).

As discussed above, revocation of the order is not likely to lead to a shift in demand toward subject imports from Kazakhstan. Therefore, revocation of the order would not cause a shift in demand away from the domestic product. Absent a shift in demand away from the domestic product, there likely would be no effect on the domestic industry's output, sales, and overall revenues. Consequently, revocation of the order is not likely to have a significant impact on the domestic industry.

D. Conclusion

Based on the foregoing analysis, I find that revocation of the order is not likely to have significant effects on domestic prices or a significant impact on the domestic industry. Consequently, I determine that revocation of the order on titanium sponge from Kazakhstan is not likely to lead to continuation or recurrence of material injury within a reasonably foreseeable time.

IV. REVOCATION OF THE ORDER ON TITANIUM SPONGE FROM UKRAINE IS NOT LIKELY TO LEAD TO CONTINUATION OR RECURRENCE OF MATERIAL INJURY WITHIN A REASONABLY FORESEEABLE TIME

A. Volume of the Subject Imports

From 1995 to 1997, there have been virtually no imports of titanium sponge from Ukraine.[29] No imports are projected in 1998.[30] Based on the lack of past and projected subject imports, the conditions of competition in the market, and the lack of significant price effects or impact on the domestic industry as discussed below, I find that the volume of subject imports from Ukraine would not be significant if the order is revoked.

B. Price Effects of the Subject Imports

To determine the effect of subject imports on domestic prices, I evaluate whether domestic prices would be likely to decrease if the order is revoked.

The country-wide dumping margin for subject imports from Ukraine is 83.96 percent based on Commerce's most recent administrative review.[31] The sole producer in Ukraine had no production capacity in 1996 or 1997, and thus no production in those years. Production capacity and production are both projected to be only *** metric tons in 1998.[32] Over time, the Ukrainian producer plans to attain the capacity to produce *** metric tons and has already received requests from non-U.S. purchasers for four times its ultimate capacity.[33] Therefore, it is not likely that a significant volume of subject imports, if any, is likely to enter the U.S. market if the order is revoked, and thus a significant shift in demand toward subject imports from Ukraine is not likely. Consequently, it is not likely that there will be a shift in demand away from the domestic product if the order is revoked. Since there likely would be no shift in demand away from the domestic product if the order is revoked, revocation of the order would have no

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[29] Tables IV-1 and D-1. There has been only a minuscule amount, less than *** metric tons, of TIB imports of titanium sponge from Ukraine.

[30] Table VII-4.

[31] Table I-1.

[32] Table VII-4.

[33] CR at VII-9; PR at VII-2; Tr. at 167.

effect on domestic prices.[34] Consequently, I find that any future subject imports would not be likely to have significant effects on domestic prices if the order is revoked.

C. Impact of the Subject Imports

To assess the likely impact of the subject imports on the domestic industry, I consider all of the relevant economic factors.[35] I evaluate the effect on domestic prices, sales, and overall revenues that is likely to occur if an order is revoked. Understanding the impact of revocation on the domestic industry's prices, sales, and overall revenues is critical, because the impact on the other industry indicators (e.g. employment, wages, etc.) is derived from the impact on the domestic industry's prices, sales, and revenues. These factors together either encompass or reflect the volume and price effects of the subject imports, and so I gauge the impact of the revocation of the order through these effects.

As discussed above, revocation of the order is not likely to lead to a shift in demand toward subject imports from Ukraine. Therefore, revocation of the order would not cause a shift in demand away from the domestic product. Absent a shift in demand away from the domestic product, there likely would be no effect on the domestic industry's output, sales, and overall revenues. Consequently, revocation of the order is not likely to have a significant impact on the domestic industry.

D. Conclusion

Based on the foregoing analysis, I find that revocation of the order is not likely to have significant effects on domestic prices or a significant impact on the domestic industry. Consequently, I determine that revocation of the order on titanium sponge from Ukraine is not likely to lead to continuation or recurrence of material injury within a reasonably foreseeable time.

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[34] As discussed previously, less than *** percent of domestic production is sold in the open market, and thus there is virtually no competition between the domestic product and the subject imports. Therefore, changes in the prices for subject imports are not likely to have any effect on domestic prices. In fact, prices for the domestic product do not exist in any commercially meaningful sense, and therefore, it is not possible for subject imports to have any significant effects on domestic prices.

[35] 19 U.S.C. § 1675a(a)(4).

PART I: INTRODUCTION

BACKGROUND

These investigations result from a request filed by TMC Trading International, Ltd. and TMC USA, Inc., Englewood Cliffs, NJ, on December 9, 1997, that the Commission review the affirmative determination of the U.S. Tariff Commission in investigation No. AA1921-51, *Titanium Sponge from the U.S.S.R.*,[1] as it applied to imports from Russia, pursuant to section 751(b) of the Act.[2] The request alleges that given changed circumstances, revocation of the outstanding antidumping duty order on titanium sponge from Russia would not result in the continuation or recurrence of material injury to an industry in the United States. Information relating to the background of the investigations is provided below.

Date	*Action*
July 23, 1968	Original Tariff Commission affirmative injury determination regarding imports of titanium sponge from the U.S.S.R.
August 28, 1968	Treasury issued antidumping finding on titanium sponge from the U.S.S.R. (33 FR 12138)
November 7, 1984 ..	Original Commission affirmative threat of injury determination regarding imports of titanium sponge from Japan
November 30, 1984 .	Commerce issued antidumping duty order on titanium sponge from Japan (49 FR 47053)
January 7, 1992	Commerce revoked antidumping duty order with respect to Sumitomo Sitix (formerly Osaka Titanium) (57 FR 557)
May 2, 1994	Commerce revoked antidumping duty order with respect to Showa Denko (59 FR 9963)
December 9, 1997 ..	Request for institution of section 751(b) review investigation concerning imports of titanium sponge from Russia

Tabulation continued.

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[1] The titanium sponge covered under the existing antidumping duty orders for Kazakhstan, Russia, and Ukraine, and subject to these investigations, was defined by Commerce in its latest reviews for those countries as chiefly used for aerospace vehicles, specifically in the construction of compressor blades and wheels, stator blades, rotors, and other parts in aircraft gas turbine engines. In Mar. 1998, Commerce determined that titanium scrap fines were also covered under the Russian order. In its latest review for Japan, Commerce defined titanium sponge as a porous, brittle metal which has a high strength-to-weight ratio and is highly ductile. It is an intermediate product used to produce titanium ingots, slabs, billets, plates, and sheets. Titanium sponge subject to these antidumping duty orders is covered by statistical reporting number 8108.10.5010 of the HTS and during the period 1995-97 was subject to a column 1-general rate of duty of 15 percent *ad valorem*; that duty remains in effect.

[2] Section 751(b) of the Act provides that whenever the Commission receives a request for a review of a final affirmative determination resulting in an antidumping duty order which shows changed circumstances sufficient to warrant a review of such determination, it shall institute a review to determine whether revocation of the order or finding is likely to lead to continuation or recurrence of material injury to an industry in the United States. In addition, under Commission rule 207.45(c) the Commission determined, on its own initiative, to institute section 751(b) review investigations of the existing antidumping duty orders on titanium sponge from Japan, Kazakhstan, and Ukraine.

Continuation of tabulation.

Date	*Action*
March 20, 1998	Commerce determined titanium scrap fines are within the scope of the Russian order (63 FR 29701, June 1, 1998)
March 23, 1998	Institution of Commission investigations (63 FR 13873)[3]
June 8, 1998	Commission's hearing[4]
July 24, 1998	Date of Commission's vote
August 6, 1998	Commission determinations transmitted to Commerce

SUMMARY DATA

A summary of data collected in the investigations is presented in appendix C. Except as noted, U.S. industry data are based on questionnaire responses of two firms that accounted for virtually 100 percent of U.S. production of titanium sponge during 1997. U.S. imports are based on questionnaire responses of 10 U.S. importers that accounted for virtually 100 percent of U.S. imports from the subject countries.

NATURE AND EXTENT OF SALES AT LTFV

Each year during the anniversary month of the publication in the *Federal Register* of an antidumping duty order, interested parties to the investigation may request that Commerce conduct an administrative review of the order. The results of the most recent administrative reviews of the outstanding antidumping duty orders on titanium sponge are presented in table I-1.

THE PRODUCT

The imported product covered under the existing antidumping duty orders and subject to these investigations consists of unwrought titanium sponge. In March 1998, Commerce issued a change of scope for the Russian antidumping duty order to include titanium scrap fines.[5] Parties have not advanced any arguments that any alternative products are "like" imported titanium sponge except domestic titanium sponge.

Physical Characteristics and Uses

Titanium sponge is a porous, brittle form of titanium, a highly ductile metal with a high strength-to-weight ratio. Titanium has low thermal and electrical conductivity and is one of the most corrosion-resistant structural metals. Sponge is an intermediate product used only to produce titanium ingot, which in turn is used to make slab, billet, bar, plate, sheet, and other titanium mill products.[6]

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[3] *Federal Register* notice presented in app. A.

[4] App. B contains the list of witnesses who appeared at the public hearing.

[5] 63 FR 29701, June 1, 1998.

[6] In 1996, domestic titanium mill product shipments consisted primarily of forgings and billets (43 percent), rod and bar (12 percent), and "other" products, consisting of sheet and strip, plate, extrusions, and pipe and tubing (45 percent).

Table I-1
Titanium sponge: Results of Commerce's most recent administrative reviews

Country	Firm	Margin (in percent)	Review Period
Japan[1]	Toho	0.00	11/90-10/91
Kazakhstan	Unspecified	83.96	8/92-7/93
Russia	Country-wide	83.96	8/95-7/96
	Avisma/Cometals	28.31	8/95-7/96
	Avisma/Interlink	0.00	8/95-7/96
	Avisma/TMC	0.00	8/95-7/96
Ukraine	Zaporozhie	83.96	8/92-7/93

[1] The original 1984 affirmative determination against Japan included four producers. Since the imposition of the antidumping duty order against Japan, two of the four producers (Sumitomo Sitix, formerly Osaka Titanium, and Showa Denko) had the order revoked in 1992 and 1994, respectively, and one (Nippon Soda) ceased production of titanium sponge. Toho, the sole remaining Japanese producer subject to the antidumping duty order, has had zero margins in its last three administrative reviews conducted by Commerce.

Source: Various *Federal Register* notices.

Because of its high strength-to-weight ratio, titanium mill products and their alloys are widely used in both aerospace and non-aerospace applications. Aerospace applications include use in gas turbine engines for both military and commercial aircraft (where use of titanium mill products results in reduced engine weight while maintaining strength), airframes, and in various applications in missiles and space vehicles. In most aircraft engines, titanium-based alloy parts account for 20-30 percent of engine weight. Non-aerospace applications include use in specialty chemical, pulp and paper, oil and gas, marine, medical, and consumer goods industries. Aerospace uses for titanium mill products constitute the largest market for titanium, with commercial and military aerospace applications consuming 60 percent of titanium mill product shipments in 1996.

Manufacturing Processes

The production of titanium sponge involves a three-stage process consisting of conversion, reduction, and finishing.

Conversion

In the first stage, titanium ore concentrate, in the form of ilmenite ($FeTiO_3$) or rutile (TiO_2), is converted into titanium tetrachloride through the process of chlorination and reduction of titanium concentrates. These concentrates are placed into a fluidized-bed reactor, or "chlorinator," and combined with coke or tar. Heat is applied and chlorine gas is passed through the charge. The titanium ore reacts with the chlorine to form impure titanium tetrachloride ($TiCl_4$), often referred to as "tickle." This titanium tetrachloride is then refrigerated and waste gases are expelled. The crude titanium tetrachloride,

colorless and liquid in form, is then purified in a fractional distillation process in which chemicals with lower boiling points are separated before proceeding to the second stage, the reduction process.

Reduction

The reduction of the purified titanium tetrachloride into titanium sponge is typically performed using the Kroll, or magnesium reduction, process. In the Kroll process, pure titanium tetrachloride is placed into a furnace with molten magnesium and is heated to a temperature of between 800^0 and 900^0 Celsius. The ensuing chemical reaction produces titanium and magnesium chloride. The titanium, which begins to resemble a sponge-like material, is cooled in the furnace, while the magnesium chloride is tapped off to be recovered and recycled.

A small amount of titanium sponge is also reduced using the Hunter, or sodium reduction, process in which titanium tetrachloride and molten sodium chloride react with argon gas to form titanium dichloride. The titanium dichloride is then transferred to a furnace and heated to $1,000^0$ Celsius to form fine particles which agglomerate into coarser sponge at the center of the sinter pot. The titanium sponge and chloride are mechanically chipped from the reactor pot, crushed to lumps approximately 3/8 inch in diameter, and leached in dilute hydrochloric acid solution to dissolve the salt. The washed sponge is dried, screened to remove fines, and pressed into compact blocks. *** is the only known sponge producer that uses the Hunter process.

Finishing

The third stage of titanium sponge production is a finishing stage in which chlorides or alloys are separated from the titanium in one of three methods: vacuum distillation (VDP), inert gas sweep, or acid leaching. For the Kroll process, which can use any of the three finishing methods, the ability to recover magnesium from the magnesium chloride is essential for cost-effective sponge production. The Hunter process uses acid leaching to separate sodium chloride from the titanium.

In the VDP finishing method, the reactor vessel containing the titanium sponge is heated to approximately $1,000^0$ Celsius and a vacuum (less than 100 microns of mercury) is applied to recover the magnesium chloride by condensation. This process results in several cost efficiencies. Approximately 95 percent of magnesium metal can be recovered using VDP technology, significantly higher than the level of recovery achieved using acid leaching. Because of the high temperature reached in vacuum distillation, the titanium emerges from the furnace in a virtually pure state, without the residue of magnesium chloride and other metals that remains after the acid leaching. Finally, because the VDP process is fully automated, it often requires less labor input. *** use the VDP method.

In the acid leaching finishing method, the reaction vessel is cooled in a "dry" chamber to avoid reaction of retained salts in the sponge with moisture in the air. The magnesium chloride and residual magnesium metal are leached out using a buffered nitric/hydrochloric acid solution, and the titanium sponge is recovered. Acid leaching is judged to be a superior finishing method for the manufacture of certain creep-resistant titanium alloys. This is a method employed by ***.

The inert gas sweep finishing method, used by ***, involves sweeping the heated reaction pot with helium or argon so as to reduce volatile magnesium chloride and magnesium to low levels for recovery by condensation.

After the reduction and finishing stages are completed, the titanium sponge is ready for shipping or, more commonly, proceeds to a melt shop to be formed into ingot. The crushing and shearing operation prior to melting results in the accumulation of a limited volume of scrap fines, which are screened, placed into containers, and either melted to make ingots or sold, mostly to the aluminum

industry.[7] Titanium ingot is produced by blending crushed sponge with titanium scrap metal and the desired alloying elements, such as vanadium and aluminum, to ensure uniformity of composition. The ingot is melted using either electron-beam, plasma, or vacuum-arc-reduction techniques. A small percentage of titanium sponge is used, along with titanium scrap, in the manufacture of titanium powder. The sponge and scrap are melted in a furnace, reacted to form a brittle hydride, and crushed in a ball mill to create a powder. The hydride powder is then heated in a vacuum to release hydrogen and yield pure titanium powder. Titanium powder is used in the manufacture of nickel-based superalloys for the aerospace industry and in numerous medical and electronic applications. There are nearly a half-dozen manufacturers of titanium powder in the United States.

From ingot, titanium is typically converted into titanium mill products and castings. Titanium mill products are produced from the drawing, forging, and rolling of titanium ingots into products of various sizes and grades. Mill products include principally titanium billet, bar, rod, wire, plate, sheet, strip, extrusions, and pipe and tubes. Titanium castings are produced by melting titanium ingot or billet and then pouring the molten metal into a mold. Over 30 companies are known to produce titanium mill products and castings in the United States.

MARKET PARTICIPANTS

U.S. Producers

There are three domestic producers of titanium sponge: the Alta Group, Oremet, and Timet. The Alta Group, Fombell, PA, is a niche producer, producing only a small volume of high-purity titanium sponge for use in the semiconductor industry. Oremet of Albany, OR, and Timet of Denver, CO, are integrated producers of titanium sponge, ingots, and mill products for use in aerospace, industrial, and consumer goods applications. In 1992, RMI, another domestic integrated sponge producer during the 1968 and 1984 original antidumping investigations, shut down its sponge production facility, satisfying its subsequent demand for sponge through ***.

In order to meet their internal consumption needs, Oremet and Timet supplement their sponge production with imports. In 1997, these two integrated producers and their affiliates accounted for *** percent of U.S. imports from all sources. To ensure that it has a reliable supply of titanium sponge for the anticipated continued strong market, Timet has established a 10-year agreement to purchase up to 10,000 metric tons of sponge per year from the Kazakh producer, UKTMP, through its major shareholder, Specialty Metals Company of Brussels, Belgium.

Oremet and Timet have relationships with downstream users of titanium products as well. Oremet's non-captive sponge production is ***. Allegheny Teledyne's acquisition of Oremet in early 1998 has forged ties between Oremet and Allegheny Teledyne's melt facilities, Allvac (Monroe, NC) and Wah Chang (Albany, OR), increasing the amount of sponge to be consumed internally by the Oremet/Allegheny Teledyne operations. For the next 10 years, Timet already has contracts for much of its sponge and mill products with UTSC (a consortium of Japanese companies headed by Toho), Boeing, and Wyman-Gordon. The agreement this spring with Wyman-Gordon, a leading manufacturer of advanced metal products based in North Grafton, MA, increased Timet's melt capacity and established joint casting operations, resulting in increased captive and external demand for Timet's sponge.[8]

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[7] Scrap fines are small particles of residual sponge that are generated when the titanium sponge mass (typically weighing between 1 and 9 tons) that issues from the furnace is crushed and sheared to prepare the sponge for melting.

[8] Timet press release, May 21, 1998.

Timet is a publicly traded company with Tremont Corporation as the largest shareholder. *** stake in Timet has been reduced from *** percent in 1995 to *** percent by 1998. THT, a melter and manufacturer of mill products, is a wholly-owned subsidiary of Timet.

The result of these multiple agreements and relationships is a reduced likelihood of domestically produced sponge being made available to unrelated external purchasers on the open market. Neither Oremet nor Timet exported any of its titanium in sponge form during the period of investigation and only *** percent of their combined production in 1997 was sold on the open market, down from *** percent in 1995.

U.S. Importers

The great majority of titanium sponge imports are from Japan and Russia. The main importers of sponge from Japan were ***. The primary importers of Russian sponge were ***. *** were the major importers of Kazakh sponge. There were minimal imports of sponge from Ukraine during the investigation period.

Japanese imports entered the United States not subject to antidumping duties because they are imported from either Sumitomo Sitix, for whom the antidumping duty was revoked, or Toho, which has established a zero margin. Avisma's exports from Russia to the United States are also not subject to an antidumping duty because they are passed through trading companies that have achieved zero margins: Interlink and TMC. *** accounted for almost all non-TIB imports from Russia, about *** of which were sold to ***. *** accounted for the non-TIB imports from Japan. UKTMP of Kazakhstan is poised to become a major exporter to the United States given its agreement with Timet for up to 10,000 metric tons per year for the next 10 years.

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

THE CHARACTERISTICS OF THE U.S. AND GLOBAL INDUSTRY

The U.S. titanium industry[1] began to develop during World War II to satisfy the military's demand for high-strength, low-weight, heat- and corrosive- resistant metals in aircraft manufacturing. The postwar arms race provided a large-scale and long-term impetus to the development of titanium metal products,[2] particularly in the United States and the FSU. The end of the Cold War unleashed a structural change in the world titanium industry. Demand began to shift from military to civilian applications. Coincident with this development, overall demand for titanium products decreased.

As demand for titanium products began to decline in the late 1980s and early 1990s, global titanium sponge producing capacity shrank. ***.[3] ***.[4] ***.[5] ***.[6]

In 1992, falling worldwide demand for titanium products leveled off and in 1993 demand began to recover.[7] Immediately available (operational) sponge-producing capacity began to expand again. Timet resumed production at its MRAL facility in 1996. ***.[8] ***.[9]

Led by commercial aerospace and an increasing number of non-aerospace applications, world demand for titanium metal products is on the rise.[10] This increasing demand is expected to translate into an increased derived demand for titanium sponge, which, given the widespread availability of titanium-containing raw materials around the globe, is expected to be satisfied.[11] In any given period, relative changes in demand and supply will influence movements in prices. All else being equal, sponge prices would be expected to rise during periods when an increase in demand exceeds an increase in supply, and to fall when an expansion in supply exceeds an expansion in demand.

Projecting market trends in the world titanium industry is a difficult task. Some U.S. Government analysts contend that nonmarket forces (e.g., political and military considerations in the

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[1] This industry encompasses titanium sponge production, as well as the production of the downstream titanium metal products. Titanium sponge is the main feedstock used to produce titanium metal products. At present, approximately 78 percent of the total sponge used in the United States is for the production of titanium metal products, 15 percent is for ferrotitanium production, and the remaining 7 percent is for master alloy production. (Phone conversation with Graylin Presbury, Commerce, Office of Metals, Materials, and Chemicals, June 8, 1998.)

[2] During the Cold War, titanium metal was increasingly used in submarines, particularly by the FSU.

[3] UKTMP prehearing brief, exh. Q, chart 9, June 1, 1998.

[4] ***.

[5] ***.

[6] Phone conversation with counsel for Timet, June 18, 1998.

[7] UKTMP prehearing brief, exh. Q, chart 1, June 1, 1998. Timet notes that ***. Field visit, April 17, 1998.

[8] Phone conversation with economic consultant for domestic producers, June 18, 1998.

[9] ***.

[10] Andrew R. Dixey, president and chief operating officer, Timet, *American Metal Monthly*, June 10, 1998.

[11] U.S. titanium industry workshops and conferences have begun to sort out the long-run opportunities and obstacles in the development of the industry. Metal Bulletin Special edition, *Titanium & Its Markets Seminar*, San Antonio, Texas, Feb. 15-17, 1998, and American Society of Mechanical Engineers, Center for Research and Technology Development, *Final Report from Titanium Industry Workshop, July 30-31, 1997, Welches, Oregon*, vol. 46.

United States and in the FSU) dominated the global titanium industry until the end of the Cold War.[12] Since the end of the Cold War, market forces, i.e., the interplay between supply and demand, have begun to guide developments. Nonetheless, this new epoch in the industry's evolution has been too short to provide the information base necessary for a detailed, forward-looking analysis.[13] This circumstance may at least partially explain disagreements among parties to these investigations regarding the future of the titanium market.

In the United States, two companies, Timet and Oremet[14] manufacture metallurgical grade titanium sponge. They themselves import significant volumes of sponge in order to satisfy their own needs in the production of downstream products. Overall U.S. import dependence has increased significantly since 1992.

A distinguishing characteristic of the U.S. titanium industry is that, in addition to domestic production and imports, it has a third source of supply for sponge: planned sales from the National Defense Stockpile. As a result of its unique properties and importance to military applications, the U.S. Government has stockpiled titanium sponge since the early 1950s under the Strategic and Critical Materials Stockpiling Act.

Regarding U.S. demand, civilian aerospace applications account for approximately 45 percent of total U.S. consumption of titanium metal, military aerospace manufacturing accounts for 15 percent, and a variety of other applications account for the remaining 40 percent.[15]

The U.S. titanium industry is entangled in a web of business agreements, alliances, and conflicts that extend beyond national boundaries. For example, RMI, a major U.S. downstream producer of titanium products that supports the removal of the antidumping orders, ***; Oremet opposes removal of the antidumping orders. Boeing, the world's largest single buyer of titanium products, favors the removal of the antidumping orders. Timet, which has a long-term agreement to supply Boeing with titanium metal products, opposes removal of the antidumping orders. In addition, Boeing has a long-term supply agreement with VSMPO, the Russian producer of downstream titanium products. ***. No specific information has been reported on market relationships among titanium producers and consumers in Japan and Europe.

The emergence of long-term supply agreements between integrated titanium producers and end users is a new characteristic of the titanium industry.[16] It appears to reflect the confidence of end users in future demand for their products. ***.[17] ***.[18]

BUSINESS/MARKET CYCLES

U.S. demand for titanium sponge, an intermediate product, is derived from demand for the downstream titanium metal products produced from the sponge. The largest component of this

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[12] ***.

[13] ***.

[14] Allegheny Teledyne completed its acquisition of Oremet in March 1998. Phone conversation with counsel for Oremet, June 22, 1998.

[15] These data represent 1996 distribution, reported by USGS. The USGS has not yet updated these numbers to 1997 levels. Phone conversation with Joseph Gambogi, USGS, June 11, 1998.

[16] For a detailed description of some of these agreements, see UKTMP posthearing brief, pp. 2-4, and TMC posthearing brief, pp. 9 and 10.

[17] ***.

[18] Phone conversation with counsel for Timet, June 24, 1998.

downstream demand is civilian aerospace consumption of titanium metal products. When airlines have completed a buildup of their fleets, orders for aircraft decline and the demand for titanium metal falls. If the other components of downstream demand for titanium metal products remain unchanged, then fluctuations in civilian aerospace demand will largely determine changes in total U.S. demand for titanium sponge.[19] Therefore, unless compensated by non-aerospace components of demand, fluctuations in total U.S. demand for titanium sponge may roughly correspond to the product-replacement schedule for civilian airplanes.

U.S. demand for titanium sponge last declined in the early 1990s. Military cutbacks and the U.S. recession were the primary causes for the decline. Some government analysts say that a coincidental trough in the timepath of demand by commercial aircraft manufacturers was also a factor.[20] A combination of factors that included low demand for titanium sponge caused RMI, one of the three U.S. producers of titanium sponge at the time, to shut down its sponge facility in 1992.[21] As demand for titanium products began to recover, U.S. imports of titanium sponge increased significantly, rising from *** percent of U.S. consumption to *** percent in 1997.[22]

Some analysts, who assert that changes in total U.S. demand for titanium sponge are driven by changes in demand for new civilian aircraft, predict that prices of titanium sponge will fall in the near future and removal of the antidumping orders could further lower prices to a point at which all U.S. sponge production becomes unprofitable.[23]

Other industry analysts assert that changes in total U.S. demand for titanium sponge are no longer driven by changes in demand for civilian aircraft.[24] These analysts argue that non-aerospace applications are spreading so quickly, both in terms of areas of applications and amounts used, that by the time the currently-scheduled production of commercial aircraft declines, the non-aerospace demand will take up the slack, preventing a decline in overall U.S. demand for titanium products. Diversification in the uses of titanium and a reported increase in the number of countries using titanium products would offset, at least partially, any softening in U.S. titanium demand from reduced aircraft production.

MARKET SEGMENTS/CHANNELS OF DISTRIBUTION

The two principal U.S. titanium sponge producers, Timet and Oremet, used *** percent of their sponge internally during 1995-97 to produce titanium metal products for aerospace and other applications. Timet sells the rest of its sponge to *** and to producers of titanium metal products, the latter mostly on a spot basis. ***. ***. During the period under consideration, Oremet transferred about *** percent of the sponge it produced to ***, and sold about *** percent of its production on the open market to producers of titanium metal products.

Based on questionnaire responses, U.S. importers selling titanium sponge in the U.S. market ship directly from the foreign producer or from their warehouses overseas. They do not maintain inventories

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[19] Discarded aircraft increase the supply of titanium scrap metal, which, as a partial substitute for titanium sponge, tends to reduce the demand for titanium sponge. If the supply of titanium scrap metal increases while new aircraft are being built, the increase in total demand for titanium sponge from increased aerospace requirements will be dampened. On the other hand, if the scrap metal supply increases after the new aircraft are built, then the decrease in total demand for titanium sponge from decreased aerospace requirements will be heightened.

[20] ***.

[21] ***.

[22] Fax transmittal from USGS, Apr. 2, 1998.

[23] ***.

[24] ***.

of the foreign titanium sponge for sale in the United States.[25] These U.S. importers primarily sell to producers of titanium metal products. Several large U.S. producers of downstream titanium metal products, including the two principal U.S. producers of titanium sponge, import sponge for their own use and hold inventories of the imported sponge until they can be used.

U.S. buyers of titanium sponge are typically melters or integrated producers. The melters turn sponge into ingot, billets, bars, rods, and superalloys and sell them to producers of intermediate and final titanium metal products, such as aircraft parts and golf-club heads. The integrated producers also process sponge, but typically transform it into intermediate titanium metal products designed to fulfill specific functions, such as aircraft parts.

SUPPLY AND DEMAND CONSIDERATIONS

World supply and demand for titanium sponge is reportedly increasing.[26] U.S. demand for titanium sponge is increasing in both commercial aircraft manufacturing and in a growing variety of non-aerospace commercial applications.[27]

U.S. Supply

Based on the available information, U.S. producers of titanium sponge have *** ability to respond to increases in demand for titanium sponge. At present, three U.S. companies produce titanium sponge: Oremet, Timet, and the Alta Group. Oremet and Timet produce metallurgical sponge and some high-purity sponge. The Alta Group specializes in the manufacture of high-purity sponge. In addition to domestic production, the DOD intends to make annual sales from its National Defense Stockpile of titanium sponge.

Domestic Production[28]

Industry capacity

From 1995 to 1997, the average capacity of sponge production *** by *** percent. However, output *** by *** percent, causing a *** percent *** in capacity utilization, from *** percent to *** percent over the period (table III-2).

Expansion of sponge capacity is expensive. ***

Inventory levels

U.S. producer inventories, as a ratio of their shipments, ***. ***.

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[25] Any imported sponge held in the United States by importers that sell the product in the U.S. market constitutes goods in transit rather than unsold inventories.

[26] *American Metal Monthly*, June 10, 1998; UKTMP, ***.

[27] ***.

[28] Data and information on U.S. production, capacity, capacity utilization, and inventories of titanium sponge are shown in detail in Part III.

Export markets

U.S. producers reported no data on export shipments for 1995-97. ***.

Defense Stockpile

DOD intends to liquidate its titanium sponge stockpile of 31,609 metric tons through annual sales.[29] At present, sales from this stockpile are envisaged to take place over a period of *** years.[30]

The first attempt to sell from the stockpile took place in April 1998. Reportedly, DOD rejected offers by potential buyers, because the quoted offer prices were too low.[31] ***.[32]

Imports[33]

During 1995-97, Japan, Russia, and Kazakhstan together accounted for *** percent of total U.S. imports of titanium sponge in terms of quantity.[34] (The figure was *** percent in terms of value.) There were no U.S. imports of titanium sponge from Ukraine during 1995 and 1996. Imports from Ukraine during 1997 amounted to a token shipment of less than *** metric tons. Titanium sponge from the EU and from China accounted for most of the rest of U.S. imports of sponge during this period.[35] Imports subject to the antidumping duty orders, however, accounted for *** percent by quantity of total imports, ***.[36] ***.

During the period of investigation, Oremet and Timet, and Oremet's recently affiliated Allegheny Teledyne companies accounted for *** percent of total sponge imports from Russia and Kazakhstan, the only two producing countries with substantive antidumping duty orders during 1995-97. *** of these imports were brought into the United States under TIB provisions, thereby avoiding the general tariff rate of 15 percent and any antidumping duties as long as the titanium is re-exported in some form within one year.[37]

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[29] ***.

[30] ***.

[31] *Platt's Metals Price Alert*, May 6, 1998, pp. 1 and 2.

[32] ***.

[33] The percentages calculated for this section were based on table IV-2. Data and information on foreign-country production, capacity, capacity utilization, and shipments of titanium sponge are shown in detail in Part VII of the report and are briefly discussed here.

[34] ***.

[35] For details on U.S. titanium sponge imports, see tables IV-1 and IV-2.

[36] During the period under consideration, Sumitomo Sitix was the *** foreign supplier of titanium sponge to the United States. The firm accounted for *** percent of total U.S. imports in terms of quantity, and for *** percent of total U.S. imports in terms of value during the period.

[37] Additionally, U.S. companies may request extensions of up to 3 years to re-export the titanium material before they are in violation of the TIB provision and are required to pay off the tariff, the antidumping duty, and a penalty.

Subject imports

Japan.--In its response to the Commission's questionnaire, Toho reported that its end-of-period annual capacity to produce titanium sponge increased from ***.[38] ***. The U.S. market accounted for about *** percent, or *** metric tons, of Toho's total reported shipments of its Japanese-produced titanium sponge in 1997, while about *** percent of shipments, or *** metric tons, were sold in the Japanese market, and the remaining *** percent, or *** metric tons, were shipped to all other foreign country markets. Toho's end- of-period inventory of its titanium sponge stored in Japan amounted to *** metric tons in 1997.

In 1997, Toho's excess capacity and inventory of titanium sponge in Japan totaled *** metric tons, which possibly could have been shipped to the U.S. market. In addition, it may have been possible to shift, at least partially, some of the *** metric tons that were shipped to third-country markets to the United States, if relative prices were favorable. Contractual arrangements and product quality considerations, however, could have limited any such shipments. The capacity utilization figure for Toho indicates *** to respond to price increases with output increases. ***.

Kazakhstan.--In its response to the Commission's questionnaire, UKTMP reported that its annual titanium sponge producing capacity ***.

The reported operational capacity figures are *** than the 35,000 metric tons assessment by the USGS.[39] The 35,000 metric tons is based on refurbishment of moth-balled capacity and extreme operating conditions in using the current capacity.[40] Refurbishment of such facilities would be very expensive and take more than one year to complete. The extreme operating conditions, involving no recovery of the magnesium and no downtime for regular maintenance, would not be commercially feasible. The higher capacity figure, however, may be indicative of the long-run capacity potential in Kazakhstan, if growth in demand warrants such an increase in capacity.

The U.S. market accounted for *** percent, or *** metric tons, of total reported Kazakh shipments of titanium sponge in 1997, while the remaining *** percent of shipments, or *** metric tons, were shipped to all other foreign country markets.[41] End-of-period inventories of titanium sponge stored in Kazakhstan amounted to *** metric tons in 1997. All shipments from Kazakhstan during 1995-97 were under TIB; hence, they were considered nonsubject imports.

Excess Kazakh capacity and inventory of titanium sponge in 1997 totaled *** metric tons, which possibly could have been shipped to the U.S. market. In addition, it may have been possible to redirect third-country shipments to the United States if relative prices were favorable. Contractual arrangements and product quality considerations, however, could have limited any such shipments.

Russia.--In its response to the Commission's questionnaire, Avisma reported that its annual titanium sponge producing capacity ***.

The reported operational capacity figures are *** than the 35,000 metric tons assessment by the USGS.[42] The 35,000 metric tons capacity is based on refurbishment of moth-balled capacity and extreme

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[38] ***.

[39] USGS, Mineral Commodity Summaries, *Titanium and Titanium Dioxide*, Feb. 1997.

[40] In its foreign producer questionnaires, the Commission asked for production capacity under normal operating conditions.

[41] Kazakhstan reportedly has no domestic market for titanium sponge.

[42] USGS tabulation, received via mail, June 1, 1998.

operating conditions in using the current capacity.[43] Refurbishment of such facilities would be very expensive and take more than one year to complete. The extreme operating conditions, involving no recovery of the magnesium and no downtime for regular maintenance, would not be commercially feasible. The higher capacity figure, however, may be indicative of the long run capacity potential in Russia, if growth in demand warrant such an increase in capacity.

The U.S. market accounted for almost *** percent, or *** metric tons, of total reported Russian shipments of titanium sponge in 1997, while about *** percent of shipments, or *** metric tons, were sold in the Russian market, and the remaining *** percent, or *** metric tons, were shipped to all other foreign country markets.[44] End-of-period inventories of titanium sponge stored in Russia amounted to *** metric tons in 1997.

Excess Russian capacity and inventory of titanium sponge in 1997 totaled *** metric tons, which possibly could have been shipped to the U.S. market. In addition, third country shipments of *** metric tons may have possibly been shifted to the United States if relative prices were favorable. Contractual arrangements and product quality considerations, however, could have limited any such shipments.

Ukraine.--Zaporozhie ***.[45] During 1994 and 1995, Zaporozhie ***; it reported in its questionnaire response that in 1995 it sold ***. Zaporozhie also reported in its questionnaire response that ***. As a result of this planned revitalization, Zaporozhie reported that ***. ***. Prior to 1993, the Ukrainian firm's capacity was ***.[46] The past capacity figure may be indicative of the long-run capacity potential in Ukraine, if growth in demand warrant such an increase in capacity.

Nonsubject imports

Imports under TIB.--Total U.S. imports under TIB amounted to *** during 1995-97 (table IV-1). Kazakh and Russian sponge accounted for about *** percent of the total TIB imports during the period. U.S. sponge producers and their current affiliates accounted for *** percent of TIB sponge imports from Kazakhstan and Russia.

The staff was unable to determine the extent to which U.S. sponge producers' imports of titanium sponge on a TIB basis did or did not compete directly with domestically-produced sponge that is used or sold in the U.S. market.[47] Nonetheless, foreign production of downstream products from titanium ingots produced in the United States from sponge imported under TIB could be exported to the United States to compete with domestically-produced downstream products made from domestic titanium sponge. Since demand for downstream products largely determines demand for titanium sponge, competition in downstream markets affects competition in the sponge market. Imports under TIB are not considered subject imports.[48]

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[43] In its foreign producer questionnaires, the Commission asked for production capacity under normal operating conditions.

[44] These figures were based on shipment data provided by Avisma and official import statistics of Commerce. Avisma reported its export shipments by the corporate address of the buyer and, therefore, was not always aware of the ultimate destinations of its titanium sponge.

[45] ***.

[46] ***.

[47] For legal and technical details concerning TIB, see 19 CFR §10.31 et. seq.

[48] *HTS*, U.S. Note 1(a), 2 at 98-39 (1998).

Japan.--In its response to the Commission's questionnaire, Sumitomo Sitix reported that its end-of-period annual capacity to produce titanium sponge increased from ***. ***. The U.S. market accounted for about *** percent, or *** metric tons, of Sumitomo Sitix's total reported shipments of its Japanese-produced titanium sponge in 1997, while about *** percent of shipments, or *** metric tons, were sold in the Japanese market, and the remaining *** percent, or *** metric tons, were shipped to all other foreign country markets. Sumitomo Sitix's end of period inventory of its titanium sponge stored in Japan amounted to *** metric tons in 1997.

In 1997, Sumitomo Sitix's excess capacity and inventory of titanium sponge in Japan totaled *** metric tons, which possibly could have been shipped to the U.S. market. In addition, it may have been possible to shift, at least partially, some of the *** metric tons that were shipped to third country markets to the United States instead, if relative prices were favorable. Contractual arrangements and product quality considerations, however, could have limited any such shipments.

The *** capacity utilization figure of Sumitomo Sitix indicates a *** ability to respond to price increases with output increases.

China.--China's annual titanium sponge-producing capacity is estimated at 6,900 metric tons.[49] Production figures, hence estimates on capacity utilization, are not available.

Other countries.--Belgium, Canada, Finland, Germany, Ireland, Italy, the Netherlands, Switzerland, and the United Kingdom also shipped titanium sponge to the United States during 1995-97. These countries do not produce titanium sponge. Therefore, these imports represent sales of temporary surpluses in these countries or transhipments. Details on the titanium industries and trade in these countries are not available.

U.S. Demand

As measured by apparent total-market consumption, U.S. demand for titanium sponge *** (table IV-2). Demand for titanium sponge is derived from demand for the downstream products. Given the prevailing favorable economic and business conditions in the United States, U.S. demand for most nonmilitary downstream products is expected to increase. Such expectations translate into a continued growth of demand for titanium sponge.

As indicated above, the downstream products may be grouped into three broad product categories: civilian aircraft, military aerospace products, and other products. Other products include oil and gas production equipment, pollution control equipment, architectural finishes, auto parts, consumer goods (e.g., golf clubs, eyeglass frames, and bicycles); medical products (e.g., implants), and non-aerospace military uses (e.g., tank armor). A vital, emerging application is in the computer industry. Since titanium is nonmagnetic, it may be used in hard disk drives of computers without the danger of interfering with the magnetic data storage process. The golf industry seemed to be poised to become a major market for titanium, but demand for titanium in the golf sector has diminished from 10.5 million metric tons in 1996 to 3-4 million metric tons in 1997 and seems likely to stay near the 1997 level in 1998. A concern that the U.S. Golf Association was going to ban titanium clubs seems to have been averted by comments at the U.S. Open that current clubs were assumed to be within the requisite technological limitations.[50]

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[49] USGS tabulation, received via mail, June 1, 1998.

[50] "Club Conformance Fears Eased," *The Washington Post,* June 19, 1998.

The backbone of U.S. demand for titanium products is still commercial aerospace, and in particular Boeing, which now includes one of its major former competitors, McDonnell Douglas. Therefore, it is not surprising that the opponents and the proponents of the antidumping order revocation clash over projections regarding this vital segment of the U.S. and global titanium product demand. Opponents argue that earlier optimistic forecasts for worldwide increase of commercial aircraft production have been revised downward, mainly as a result of the East Asian financial crisis.[51] At the Commission's hearing, the economic consultant for the domestic producers formulated the domestic sponge producers' view in the following way:

> ". . .the Airline Monitor has forecasted a significant decline in aircraft production during 1999 to 2003. An independent forecasting group in Rhode Island, Forecast International, confirms this projection. Their forecast for commercial aircraft shows demand peaking during 1998, with significant declines through 2003. The graph shows the decline of commercial aircraft from 781 in 1998 to 536 in 2003."[52]

In contrast, Boeing officials do not think that the East Asian financial crisis will have a significant effect on the company's long-term output projections, and hence, on its demand for titanium products. Boeing officials stated that ***.[53]

Moreover, at the Commission's hearing, Robert L. Ecker, Director, Raw Material and Standards Material Division, Boeing, underscored Boeing's optimistic outlook concerning future demand for its airplanes and an associated stable demand for U.S.-manufactured titanium products. Mr. Ecker also pointed out that Boeing has made financial commitments to RMI[54] and Timet:

> ". . .we entered into contracts with RMI and Timet, late last year, which, for the next five to ten years -- five years guaranteed, ten years if we all decide to exercise the options -- that will really account for eighty-five percent of Boeing's usage during that time period. [Paragraph] So, basically, we are committed to Timet and to RMI for eighty-five percent of any titanium that goes on a Boeing airplane during that time period. And, we have long-term contracts in place with them. . . . we used the Boeing forecasting data, and we've made guarantees in these contracts with Timet and RMI. So, I guess, to put it bluntly, we're kind of putting our money where our mouth is."[55]

***.[56]

In addition to demand for the commercial aerospace industry, non-aerospace uses of titanium in the United States are also expected to increase as the national economy expands.[57]

On average, sponge represents a very small percentage of the price of the final product, since its main use is still airplanes. However, titanium may represent a much greater percentage in several

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[51] For details on these forecasts, see *Metal Bulletin Monthly*, Feb. 1998, pp. 60 and 61.

[52] *Hearing Transcript*, June 8, 1998, p. 40.

[53] ***.

[54] ***.

[55] *Hearing Transcript*, June 8, 1998, pp. 86 and 87.

[56] ***.

[57] Responses to Commission questionnaires; ***; Metal Bulletin Special edition, *Titanium & Its Markets Seminar*, San Antonio, TX, Feb. 15-17, 1998.

emerging applications, such as golf clubs or pollution control equipment. If these applications gain importance at the expense of aerospace applications, the overall ratio of titanium presence in the final products would increase. The price elasticity of demand tends to be greater the larger the share of titanium in the final product.

Technological solutions exist for the substitution of other metals for titanium in most nonmilitary applications. Nickel and stainless steel are the main substitutes. However, once a downstream producer sinks resources into using titanium through engineering and capital expenditures, the resubstitution of pre-titanium material may involve significant costs.[58]

Of the 16 substantive responses to purchasers' questionnaires, 5 firms involved in using titanium in downstream manufacturing reported that other metals could not be substituted easily for titanium products. Seven producing companies indicated, however, that certain other metals can be easily substituted for titanium. (The question was not applicable for 3 companies.) *** were among the companies that reported easy substitutability.

Titanium scrap metal may be substituted for sponge in the production of ingot in all applications, except in the production of master alloys. The extent of substitution in the production of ingot castings and ferrotitanium depends on the specifications for the end use.[59] Generally, the stricter the requirements for purity in the end use product, the less scrap metal may be substituted for sponge. Substitution of scrap for sponge may be the most limited in the production of aircraft engine parts. Since the price of scrap metal is generally lower than that of sponge, the ability of the ingot producers to substitute scrap for sponge could affect their relative competitive positions. The USGS survey indicated an average of 58 percent substitution of scrap for sponge in the United States during 1997.[60] The amount of scrap metal available at any moment affects the price of sponge.[61]

In the production of master alloys, the purchasers mentioned potassium fluorotitanate, doss-produced titanium cobbles, and titanium crystal as substitutes for titanium sponge.[62] The extent of substitution depends on the intended attributes of the alloy. The great variability of such attributes and the experimental nature of some of the substitutions did not allow for a detailed analysis of commercial-scale substitutability in master alloy production.

SUBSTITUTABILITY ISSUES

Factors Affecting Purchasing Decisions

Requirements of certification dictate purchases of titanium sponge. Of the 10 purchasers who responded to the question "what percent of your firm's 1997 purchases of titanium sponge required some form of certification or pre-qualification?" nine answered with "100 percent" and one answered with "80 percent." Domestically produced and imported sponge largely overlap in ability to fulfill U.S. downstream industry requirements for sponge purity and other chemical characteristics.

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[58] Phone conversations with Graylin Presbury, Commerce, Mar. 20 and June 8, 1998.

[59] ***.

[60] ***.

[61] ***.

[62] Titanium crystal is a by-product of the Hunter sodium process.

Comparison of the U.S.-produced and Subject Imported Titanium Sponge

U.S. and Japanese titanium sponge producers manufacture similar products, ranging from standard grades through high-purity grades.[63] Producers in both countries have been approved by U.S. purchasers. The Kazakh and Russian titanium sponge firms produce mainly standard, but also some premium (but not high-purity) grades of titanium sponge. Hence, imports of titanium sponge from Kazakhstan and Russia do not appear to be substitutable for imports from Japan in higher-purity applications, but generally are substitutable in standard and some premium grades.[64] Shipments of titanium sponge from Ukraine have been too limited to draw any firm conclusions about their quality.

Based on the reported price data, only the Japanese and Russian titanium sponge products were sold by importers in the U.S. market. ***.

Purchaser Sourcing Patterns

The questionnaires asked U.S. purchasers to use 14 factors to compare domestically produced and imported titanium. The firms were asked to report for each factor whether the domestic sponge was superior (S), comparable (C), or inferior (I) to the sponge produced by each of the subject countries. The following tabulation summarizes the responses, with the frequency of answers shown for each factor.

Overall, the frequencies of "comparable" dominate. The quality of U.S.-produced sponge appears to be comparable to the quality of sponge imported from Japan, and of better quality than the sponge imported from Kazakhstan or Russia. (Data on Ukrainian sponge was too sparse for making generalizations.) Compared to sponge produced in the United States or imported from Japan, delivery time is apparently an issue in importing sponge from Kazakhstan and Russia. The following tabulation compares the 14 factors shown above by pairs of subject import sources. (Lack of data prevented the comparison between Russian and Ukrainian sponge.)

The data confirm the general opinion of the surveyed firms that sponge from Japan on the average is more expensive and of higher quality than sponge from the rest of the subject countries.[65] Thus, substitutability between Japanese and FSU sources is less than perfect. The data also show a high degree of comparability between Russian and Kazakh sponge.[66]

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[63] During 1995-97, Toho exported primarily premium quality titanium sponge to the United States.

[64] For comments on this subject, see ***.

[65] The entries "lowest price," "product consistency," and "product quality" provided the basis for this statement.

[66] ***.

	U.S. titanium sponge compared to sponge from–											
	Japan			Kazakhstan			Russia			Ukraine		
Factors	S	C	I	S	C	I	S	C	I	S	C	I
Availability	0	4	1	0	3	3	1	3	4	0	1	0
Delivery terms	0	5	0	0	6	0	1	7	0	1	0	0
Delivery time	0	5	0	4	2	0	5	3	0	1	0	0
Discounts offered	0	5	0	0	4	2	0	6	2	0	1	0
Lowest price	0	3	2	1	1	4	0	1	7	0	1	0
Min. qty. req.	0	5	0	0	6	0	0	8	0	0	1	0
Packaging	0	4	1	2	4	0	2	6	0	0	1	0
Product consistency	0	5	0	1	5	0	3	5	0	0	1	0
Product quality	0	4	2	4	2	0	5	3	0	1	0	0
Product range	0	5	1	1	5	0	3	5	0	1	0	0
Reliable supply	0	3	2	2	3	0	2	5	0	0	1	0
Technical support	1	4	0	2	3	0	5	2	0	1	0	0
Transp. network	2	3	0	3	2	0	5	2	0	1	0	0
U.S. freight costs	0	4	0	1	3	1	2	4	1	1	0	0
TOTAL	3	59	9	21	49	10	34	60	14	7	7	0

	Japanese sponge compared to sponge from–									Kazakh sponge compared to sponge from--					
	Kazakhstan			Russia			Ukraine			Russia			Ukraine		
Factors	S	C	I	S	C	I	S	C	I	S	C	I	S	C	I
Availability	1	2	4	1	3	1	0	0	0	0	6	0	0	1	0
Delivery terms	0	4	0	0	5	0	0	0	0	0	6	0	0	1	0
Delivery time	2	2	0	2	3	0	0	0	0	0	6	0	0	1	0
Discounts offered	0	4	0	0	5	0	0	0	0	1	5	0	0	1	0
Lowest price	0	0	4	0	0	5	0	0	0	2	3	1	0	1	0
Min. qty. req.	0	4	0	0	5	0	0	0	0	0	6	0	0	1	0
Packaging	1	3	0	1	4	0	0	0	0	0	6	0	1	0	0
Product consistency	1	3	0	2	3	0	0	0	0	0	6	0	1	0	0
Product quality	2	2	0	4	1	0	0	0	0	2	3	1	1	0	0
Product range	1	3	0	2	3	0	0	0	0	0	6	0	0	1	0
Reliable supply	3	1	0	4	1	0	0	0	0	1	4	0	0	1	0
Technical support	3	1	0	4	1	0	0	0	0	0	5	0	0	1	0
Transp. network	1	3	0	3	2	0	0	0	0	0	5	0	0	1	0
U.S. freight costs	0	4	0	0	5	0	0	0	0	0	5	0	0	1	0
TOTAL	15	36	5	23	41	6	0	0	0	6	72	2	3	11	0

Purchase Factors

The questionnaires asked the purchasers to rank the 14 purchase factors shown in the previous section as very important (VI), somewhat important (SI), and not important (NI). As shown in the tabulation above, product quality, product consistency, and availability of supply were the most important factors considered in both the domestically produced and subject imported sponge.

Ratings of purchase factors in terms of their importance based on purchases of titanium sponge from--

Factors	U.S.			Japan			Kazakhstan			Russia			Ukraine		
	VI	SI	NI	VI	SI	NI	VI	SI	NI	VI	SI	NI	VI	SI	NI
Availability	7	1	0	5	1	0	5	1	0	6	1	0	0	0	1
Delivery terms	1	6	1	2	3	1	2	3	1	2	4	1	0	1	0
Delivery time	4	4	0	2	4	0	2	4	0	3	4	0	0	1	0
Discounts offered ..	1	4	3	1	2	3	1	2	3	1	3	3	0	0	1
Lowest price	4	4	0	4	2	0	4	2	0	4	3	0	0	1	0
Min. qty. req.	0	4	4	0	3	3	0	3	3	0	3	4	0	1	0
Packaging	2	5	1	1	3	2	2	3	1	2	4	1	1	0	0
Product consistency	6	2	0	5	1	0	5	1	0	6	1	0	1	0	0
Product quality	7	1	0	6	0	0	6	0	0	7	0	0	1	0	0
Product range	2	4	2	2	3	1	2	2	2	2	3	2	0	1	0
Reliable supply ...	7	1	0	5	1	0	5	1	0	6	1	0	0	0	1
Technical support ..	1	6	1	1	3	2	1	3	2	1	4	2	0	1	0
Transp. network ...	0	5	3	0	4	2	0	4	2	0	5	2	0	1	0
U.S. freight costs ..	0	7	1	0	3	2	0	4	2	0	5	2	0	1	0
TOTAL ...	42	54	16	34	33	16	35	33	16	10	41	17	3	8	3

ELASTICITY ESTIMATES

Supply Elasticity

The domestic supply elasticity for titanium sponge measures the sensitivity of quantity supplied by U.S. producers to a change in the U.S. market price of titanium sponge. The elasticity of domestic supply depends on several factors including U.S. producers' level of excess capacity, the ease with which U.S. producers can alter productive capacity, the existence of inventories, and the availability of alternate markets for U.S.-produced titanium sponge.[67] Analysis of these factors indicates that, overall, U.S. producers have only limited flexibility to alter their supply of titanium sponge in response to relative changes in the demand for their product; thus, the domestic supply is estimated to be inelastic, or in the range from 0.3 to 0.7.

U.S. Demand Elasticity

The U.S. price elasticity of demand for titanium sponge measures the sensitivity of the overall quantity demanded to changes in its U.S. market price. The price elasticity depends on the cost share of titanium sponge in downstream products, the price elasticity of downstream products, the substitutability of titanium for other inputs in the downstream products, and the substitutability of titanium sponge for scrap metal. Based on available information, the demand elasticity for titanium sponge is believed to be in the range of -0.9 to -2.0.

[67] Domestic supply response is assumed to be symmetrical for both in increase and a decrease in demand for the domestic product. Therefore, factors opposite to those resulting in increased quantity supplied to the U.S. market result in decreased quantity supplied to the same extent.

Substitution Elasticity[68]

The elasticity of substitution largely depends upon the degree to which there is an overlap of competition between U.S.-produced and imported titanium sponge and product differentiation. Product differentiation, in turn, depends on such factors as physical characteristics (e.g., grades and quality) and conditions of sale (e.g., delivery lead times, reliability of supply, product service, etc.). Based on available information discussed earlier, the elasticity of substitution between domestic and imported Japanese titanium sponge produced by Toho is estimated to range from 2 to 4. The elasticity of substitution between the domestic and imported Russian or imported Kazakh products is estimated to range from 3 to 5. Lack of sufficient imports from Ukraine during 1995-97 do not allow the estimation of the substitutability between domestic and Ukrainian sponge. These estimates are for the short run. The upper end of the ranges would likely be higher over the long run.

THE POTENTIAL EFFECTS OF REVOKING THE ANTIDUMPING DUTY ORDERS

This section examines the potential effects of revoking these orders. The lack of subject imports with non-zero margins in 1997 prevented the application of economic modeling.

Purchasers' Comments Regarding the Potential Impact of Removing the Antidumping Duty Orders

Purchaser questionnaires requested the responding companies to discuss, quantify, and document the anticipated effects of the revocation of antidumping duty orders covering U.S. imports of titanium sponge from Japan, Kazakhstan, Russia, and Ukraine. The purchasers were asked to elaborate on the short-term (i.e., 1998 and 1999) and on the long-term (i.e., after 1999) effects of revocation on their firm. They were also asked to assess the impact on the U.S. market as a whole.

Potential Short-Term Effects

Of the 16 purchasers responding, nine indicated that revocation of the orders would not lead to any significant short-term effects, and seven indicated that revocation would have some short-term effects. ***, one of the purchasers indicating no significant effects, indicated that revocation of the orders would have no effect on its ***. ***, two other purchasers reporting no effects, indicated that their purchase patterns would not be affected by revocation of the orders; ***. ***, another purchaser reporting no significant effects, indicated that it may get a small (*** percent) reduction in sponge price. The other five purchasers indicating no significant effects did not elaborate.

Of the seven firms indicating some short-term effects of revocation, four indicated that such effects would be beneficial, while three indicated that the effects would be detrimental. The four firms reporting beneficial effects–***–are all melt shops that make downstream titanium products. These firms cited lower input costs and improved availability of titanium sponge, ingot, and billets as a result of revocation of the orders. The three firms reporting detrimental effects–***–asserted that sponge demand began to decline in late 1997 and revocation of the orders would compound this alleged oversupply, thereby forcing U.S. producers to reduce sponge production and employment. In addition, *** asserted

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

that revocation of the orders would lead to downward pressure on sponge prices in the United States as suppliers like Cometals, Avisma, and Zaporozhie, firms that have not participated directly in the U.S. market in recent years because of the antidumping orders, will reenter the U.S. market. It is not clear, however, why Avisma would export directly and compete with TMC and Interlink, exporters marketing the Russian product outside of the Russian market. In addition, Zaporozhie indicated at the hearing that, at least in the short run, its expected production capacity was intended for sales in its home market and third countries (excluding the United States).[69]

Potential Long-Term Effects

Of the 15 purchasers responding, three indicated that revocation of the orders would not lead to any significant long-term effects, and 12 indicated that revocation would have some long-term effects. ***, two purchasers reporting no effects, indicated that their purchase patterns would not be affected by revocation of the orders; these firms cited the same reasons they discussed under the short-term effects. The other purchaser indicating no significant effects did not elaborate.

Of the 12 firms indicating some long-term effects of revocation, eight indicated that such effects would be beneficial, while five indicated the effects would be detrimental. The eight firms reporting beneficial effects–***–make downstream titanium products. These firms cited lower input costs, improved availability, and reduced lead times for titanium sponge, ingot, and billets as a result of revocation of the orders. In addition, *** stated that it would be more competitive with Japanese producers of nickel-titanium products when it sells these products in the United States, Asia, and Europe. *** indicated that revocation of the orders would allow a better balance of titanium sponge supply and demand in the U.S. market in the long-run. *** sees growth in demand for titanium sponge in non-traditional applications and increases in titanium ingot production capacity in the United States without increases in U.S. sponge capacity. As a result, *** foresees a long-term cutback in the availability of domestic sponge for its operations primarily because ***. Therefore, *** argues that over the longer run it is necessary to have new sources of foreign supply of titanium sponge (e.g., from Kazakhstan and Ukraine) to sustain ***.

The four firms reporting detrimental long-term affects– *** –asserted that revocation of the orders would lead to oversupply of titanium sponge in the U.S. market, leading to downward price pressure, and, thereby, forcing U.S. producers to reduce sponge production and employment and possibly close domestic sponge facilities. Any such long-term effects depend importantly on the long-term demand for, and supply of titanium sponge. Forecasts of world demand for titanium, including forecasts of ***, suggest substantial growth in demand for titanium products. Such increases in demand would appear to accommodate current levels of world capacity and may require capacity increases.

Effects on the U.S. Market

Of the 16 purchasers that responded, four companies (***) indicated that the U.S. market would be harmed by the revocation of the antidumping orders. *** stated: "Because there is a substantial excess capacity in the world, revocation of the AD orders will lead to increased imports of titanium sponge that will be priced without regard to the fair value of the merchandise."[70] However, two companies (***) see potential benefits for the U.S. market from the revocation. *** stated: "Revocation of the antidumping orders on sponge from Russia, Kazakhstan, Ukraine, and Japan would ease the

[69] *Hearing Transcript*, pp. 164-165.

[70] ***.

shortage of sponge on the U.S. merchant market without any adverse effect on U.S. producers that have shown no serious interest in supplying the merchant market."[71]

Two companies predicted a decline in sponge prices in the United States as a consequence of revocation; two other companies indicated no effect, and five companies either could not make an assessment or did not answer the question. ***."[72]

Modeling the Potential Effects of Antidumping Duty Order Revocation

This analysis uses a nonlinear partial equilibrium model that assumes that domestic and imported products are less than perfect substitutes. Competition in the U.S. market is characterized by measures of the sensitivity of buyers and sellers to price changes and under the assumption that the substitutability between products remains constant. Such models, also known as Armington models, are relatively standard in applied trade policy analysis, and are used extensively for the analysis of trade policy changes both in partial and general equilibrium.[73] The analysis addressed the following questions: If the current antidumping duty orders are revoked and the current level of dumping remains unchanged, what will be the likely short run impact on subject import prices and volumes in the U.S. market? And, what will be the likely short run impact on both non-subject import and U.S. producer prices and volumes of this increased competition from subject imports?

The analysis uses the most recent one-year period, 1997, as the base year. Therefore, current trends in the U.S. industry that are unrelated to the antidumping duty orders are not explicitly modeled and such trends should be taken into account when considering the implications of the results. Further, the model results suggest the possible effects of revoking the duty orders on market prices, volumes, and revenues in percentage change terms over a one-year time period only. The possible effects over a longer time period are not part of the modeling exercise. And finally, the model does not assume that all of the reduction in antidumping duties will be passed forward to U.S. prices of the subject imports.

Toho, TMC, and Interlink were the only suppliers of subject non-TIB imports to the U.S. market in 1997. Since all three companies are currently subject to zero duty margins, staff estimates that the revocation of these antidumping duty orders will have no direct affect on prices or volumes of imports or domestic products in the U.S. market. Dumping margins greater than zero currently exist for all subject imports from Kazakhstan and Ukraine; for subject Japanese imports from producers other than Toho; and for subject Russian imports from producers other than Interlink and TMC. However, non-TIB import levels in 1997 from each of these sources was zero (table II-1). While the removal of the duty orders may well lead to imports from these sources, 1997 market shares of zero prevent staff from applying the type of modeling described above to estimate the likely increase in subject imports.

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[71] ***.

[72] ***.

[73] For a discussion of the use of Armington type models of this type for trade policy analysis, see Francois, Joseph and H. Keith Hall (1997) "Partial Equilibrium Modeling," Chapter 5 of *Applied Methods for Trade Policy Analysis: A Handbook*, Joseph F. Francois and Kenneth A. Reinert, editors, Cambridge University Press, 1997. See also Armington (1969) "A Theory of Demand for Products Distinguished by Place of Production," *IMF Staff Papers,* vol. 16, pp. 159-178.

Table II-1
Titanium sponge imports: Values of imports and current antidumping duty margins, by country of origin, 1995-97

Item	1995	1996	1997	Current margin
	Value ($1,000)			*(In percent)*
Subject U.S. imports with non-zero margins from—				
Japan	***	***	***	-
Kazakhstan	***	***	***	83.96
Russia:				
Country-wide	***	***	***	83.96
Cometals	***	***	***	28.31
Ukraine	***	***	***	83.96
Total	***	***	***	
Subject U.S. imports with zero margins from—				
Japan (Toho)	***	***	***	0.00
Kazakhstan	-	-	-	-
Russia (Interlink and TMC)	***	***	***	0.00
Ukraine	-	-	-	-
Total	***	***	***	

Source: Compiled from data submitted in response to Commission questionnaires and information obtained from Commerce.

PART III: CONDITION OF THE U.S. INDUSTRY

U.S. PRODUCERS

The Commission received completed questionnaire responses from two of the three known U.S. producers of titanium sponge. These firms, Oremet and Timet, accounted for the vast majority of production of titanium sponge during the period examined. The Commission sent a questionnaire to a third firm, the Alta Group, Fombell, PA, that is known to produce small quantities of high-purity titanium sponge for use in computer applications. That firm did not respond to the Commission's questionnaire. Parties have indicated, however, that the Alta Group is not considered to be a significant producer of titanium sponge.[1]

Oremet, with *** percent of reported domestic production in 1997, produces its sponge in a plant in Albany, OR. The equipment and workers in the plant are used exclusively for sponge production. ***. Oremet, Allvac, and Wah Chang are all wholly owned by Allegheny Teledyne of Pittsburgh, PA.[2] Oremet opposes the potential revocation of the antidumping duty orders on titanium sponge, but ***.

Timet is *** the two responding producers, accounting for approximately *** percent of reported domestic production in 1997. It manufactures titanium sponge in a single facility in Henderson, NV. Timet also is *** U.S. producer of titanium mill products, the exclusive downstream application for titanium sponge; it produces these products in Toronto, OH.[3] Timet opposed the institution of these investigations and, like Oremet, opposes any potential revocation of the antidumping duty orders. Since 1996, Timet's shares have been publicly traded; as of March 1998, its majority owner, with a ***-percent stake, is Tremont Corporation.[4]

Oremet and Timet combined account for a substantial amount of foreign-sourced titanium sponge. Table III-1 presents data on their separate and combined market presence during the period for which data were collected. ***.

In terms of overall market presence, the U.S. producers and their affiliates accounted for a declining share of total apparent consumption (including TIB imports) during the period examined: *** percent in 1995, *** percent in 1996, and *** percent in 1997.

Table III-1
Titanium sponge: U.S. producers' and related firms' shipments, imports, and purchases, by firm, 1995-97

* * * * * * *

[1] Phone conversation with ***, May 12, 1998. The Alta Group has ***. Based on data presented in this section of the report, therefore, the Alta Group accounts for *** percent of total U.S. titanium sponge capacity. Phone conversations with ***.

[2] The acquisition of Oremet by Allegheny Teledyne took place in Mar. 1998, after the period for which data were collected.

[3] Timet's Nevada plant is devoted exclusively to ***.

[4] At the start of the period examined (Jan. 1995), Timet was ***-percent owned by ***. That stake was reduced to a level of *** percent by the end of 1997. In 1995, 1996, and 1997, ***.

U.S. PRODUCTION, CAPACITY, AND CAPACITY UTILIZATION

Data on U.S. firms' production capability, production levels, and capacity utilization for titanium sponge are presented in table III-2. ***.[5]

As seen in the table, ***. The firms' combined production ***. Combined capacity utilization ***.

Producers were asked to note any significant constraints on their production capability. Timet commented that ***.[6] Oremet indicated that ***.

Both firms provided details on changes in capacity during the period examined. Oremet ***.[7] Timet indicated that ***.[8] Firms were also asked to estimate the time and capital cost required to construct a new titanium sponge production facility. Given a plant with a hypothetical capacity of 10,000 metric tons per year, Timet estimated ***. Oremet provided similar estimates.

In its response, Timet also ***. It is of the view that, had the orders not been in place, ***. This is because ***.

As noted above, both Oremet and Timet use sponge to produce titanium mill products. Timet estimated that sponge costs accounted for approximately *** percent of the cost of titanium ingot, and as low as *** percent of the cost of titanium strip, a product produced further downstream. Oremet indicated that, on average, sponge accounts for *** percent of the cost of the titanium mill products it produces.

Table III-2
Titanium sponge: U.S. producers' capacity, production, and capacity utilization, by firm, 1995-97

* * * * * * *

U.S. PRODUCERS' SHIPMENTS

Both responding producers reported data on their domestic shipments and company transfers of titanium sponge. Neither producer reported any data on export shipments.[9] Reported data on company transfers were limited to shipments of sponge internally consumed in the production of downstream titanium products. For both firms, the majority of U.S. shipments were ***. For Oremet, ***. These toll shipments are presented as "Other shipments" in table III-3. With regard to Timet, the majority of "other" shipments were ***.[10]

Combined data for the two producers show *** (table III-3). Between 1996 and 1997, however, Timet's total shipments *** Oremet's ***. In particular, Timet's shipments for internal consumption ***. Trends in the value-based data were similar. Unit values for commercial shipments were *** than those for "other" or internal shipments in 1995 and 1996, but in 1997 unit values of commercial shipments *** and were *** the unit values of internal shipments.

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[5] Timet noted ***. Field visit with Timet, Apr. 17, 1998.

[6] Timet producers' questionnaire.

[7] Oremet prehearing brief, p. 33.

[8] Timet ***. Between 1992 and May 1996, ***. Timet considers ***.

[9] Timet reported ***. It indicated that ***.

[10] Field visit with Timet, Apr. 17, 1998.

Table III-3
Titanium sponge: U.S. producers' shipments, by type and by firm, 1995-97

* * * * * * *

U.S. PRODUCERS' INVENTORIES

Data on end-of-period inventories of titanium sponge during the period examined, as supplied by Timet and Oremet, are presented in table III-4. Such inventories *** when the two producers' data are aggregated. The trend was ***. Oremet's inventories ***. Inventories also ***.

Neither Timet nor Oremet ***. Timet noted that ***.[11]

Table III-4
Titanium sponge: U.S. producers' end-of-period inventories, by firm, 1995-97

* * * * * * *

U.S. EMPLOYMENT, WAGES, AND PRODUCTIVITY

Both producers provided data on the number of production and related workers (PRWs) engaged in the production of titanium sponge, the total hours worked by such workers, and the wages paid to such workers during the period examined (table III-5). The data show that the number of PRWs, hours worked by those employees, and wages paid ***. Hourly wages ***. Aggregate productivity data ***, while unit labor costs ***. In its prehearing brief, Oremet disclosed that ***.[12]

Although neither Oremet nor Timet ***, Oremet noted that, should the existing antidumping orders be revoked, it would ***. It commented that ***.

Table III-5
Average number of production and related workers producing titanium sponge, hours worked, wages paid to such employees, and hourly wages, productivity, and unit labor costs, by firm, 1995-97

* * * * * * *

[11] Field visit with Timet, Apr. 17, 1998.

[12] Oremet prehearing brief, p. 34.

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

U.S. IMPORTERS

There were 10 U.S. importers that responded to Commission questionnaires, accounting for essentially all imports from the subject countries, and almost all imports from nonsubject sources.[1] As mentioned earlier, U.S. producers accounted for a ***.

Importers are spread fairly evenly throughout the country, and there is no indication of any particular geographical concentration of imports. Several importers reporting data are subsidiaries of, or related to, larger domestic or foreign companies. These firms, and their parent companies, are presented in the tabulation below:

Firm	Parent company	Percent ownership

* * * * * * *

U.S. IMPORTS

Since imports reported in response to questionnaires were at least as large as those reported in official Commerce statistics (HTS reporting number 8108.10.5010), import data presented below are based on importers' data for the subject countries and based on official Commerce statistics only for the "Other sources."[2]

Several importers reported significant volumes of imports temporarily imported under bond (so-called "TIB imports"). As mentioned earlier, TIB imports are not subject to duties. Therefore, the tables in this section present only data for non-TIB imports. Tables containing data for all imports (TIB and non-TIB) are presented in appendix D.

As shown in table IV-1, subject imports were much smaller than nonsubject imports during the period examined. Imports from nonsubject sources were mainly from Japan (Sumitomo) and China. Of the subject imports, zero antidumping duty margins were achieved in administrative reviews for all imports from Japan (Toho) and most imports from Russia (Interlink and TMC). There were no subject imports from Kazakhstan and Ukraine. Subject imports increased from *** metric tons in 1995 to *** metric tons in 1997.

Total, including TIB, imports are presented in appendix D. TIB imports from Russia and Kazakhstan were significant but decreased during 1995-97, as ***.

Table IV-1
Titanium sponge: U.S. shipments of domestic product, U.S. non-TIB imports, by source, and apparent U.S. consumption, 1995-97

* * * * * * *

[1] The only imports not fully covered by questionnaire responses were from China. Therefore, imports from other sources presented in this section are from official Commerce statistics.

[2] Imports from Ukraine amounted to *** metric tons in 1997. This figure, reported by the exporter, was not included in official Commerce statistics.

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

Apparent U.S. consumption and market shares of U.S. producers and importers are shown in table IV-2. U.S. producers' shares declined during the period for which data were collected, while the shares of subject imports fluctuated sharply downward in 1996 and upward in 1997. The shares of nonsubject imports fluctuated in an opposite direction, but the overall increase in nonsubject imports' shares was very significant.

Apparent U.S. consumption and market shares including TIB imports are shown in appendix D. The trends in shares were similar to table IV-2, but with a different order of magnitude. Specifically, U.S. producers' shares were much smaller and the shares of subject imports were much larger. Market shares for nonsubject imports were very similar.

Table IV-2
Titanium sponge: Apparent U.S. consumption and market shares without TIB imports, 1995-97

* * * * * * *

PART V: PRICING AND RELATED DATA

FACTORS AFFECTING PRICING

Prices of titanium sponge purchased by U.S. downstream producers depend on the quality requirements for the finished titanium product. Pricing data were collected for metallurgical quality sponge.[1] Metallurgical sponge may be classified as premium and various categories of standard sponge, with premium carrying a higher price than the standard categories. Weighted-average prices of domestic and subject imported titanium sponge in the U.S. market, discussed later in this report, ranged from *** per pound to *** per pound. Prices ranging from *** per pound to approximately *** per pound generally represent standard metallurgical sponge, whereas prices ranging from approximately *** per pound to *** per pound represent premium metallurgical sponge.[2]

Raw Material Costs

***.[3] ***. Raw material costs of Oremet averaged *** percent of its total costs to produce titanium sponge during 1995-97, while raw material costs of Timet averaged *** percent of its total costs to produce titanium sponge during this period.

Tariff Rates and Antidumping Duties

All of the subject titanium sponge imports into the United States were subject to a 15 percent column-1 general rate of duty during 1995-97.[4] In addition to regular tariffs, importers of titanium sponge from the subject countries may have to pay dumping duties as discussed earlier in this report. The TIB system plays a significant role in the U.S. titanium industry,[5] allowing U.S. firms to import and use foreign-produced sponge in the production of downstream products for export and bypass existing import duties and fees, including any antidumping duties.

Transportation Costs to the U.S. Market

Transportation costs to export titanium sponge to the U.S. ports of entry from Japan, Kazakhstan, Russia, and Ukraine averaged 2.25 percent, 2.17 percent, 2.65 percent, and 4.90 percent, respectively, of the landed duty-paid value of titanium sponge during 1995-97. These figures were calculated from official U.S. import data.

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[1] High-purity quality sponge, which is used primarily in electronic and computer applications, is believed to account for a very small part of the U.S. market for sponge. The price of high-purity sponge reportedly runs as high as *** per pound. ***.

[2] ***.

[3] ***.

[4] In its foreign producer questionnaire response, UKTMP stated that the U.S. import duty rate on titanium sponge is one of the highest among the major consuming countries.

[5] For legal and technical details concerning TIB, see 19 CFR § 10.31et . seq., and the discussion earlier in this report.

U.S. Inland Transportation Costs

Based on U.S. producers' and importers' questionnaire responses, the domestic and imported titanium sponge is shipped most frequently over a distance in excess of *** miles. During 1995-97, U.S. inland transportation costs were 2 percent or less of total delivered costs, regardless of the distance shipped.

The order lead time for U.S. producers of titanium sponge averaged *** weeks from their production facilities during 1995-97. Timet reported that shipments from inventories had a ***-week lead time. ***. Order lead times for the subject imported titanium sponge from the foreign production facilities ranged from *** weeks to *** months. None of the importers reported shipments from U.S. inventories.

Importer Markups

U.S. imports of titanium sponge from the subject countries generally are not subject to importer markups, primarily because U.S. manufacturers of downstream titanium products, including the two principal U.S. titanium sponge producers, import a significant amount of the subject foreign sponge for their own use. Titanium sponge from Japan is also imported into the United States by ***. ***.[6] *** sales markup margins (net of all discounts, allowances, and premiums) averaged *** percent in 1995, *** percent in 1996, and *** percent in 1997. Titanium sponge from Russia is also imported by *** who sell the imported sponge to U.S. users of the product. TMC and Interlink, who act as sales agents for their respective affiliated foreign export firms that market the Russian titanium sponge, indicated that ***.[7]

Although no importer markup information was reported for titanium sponge imported from Kazakhstan and Ukraine, none would be expected. All of the Kazakh sponge was imported by U.S. users of the product,[8] and official U.S. statistics on imported sponge from Ukraine are so small as to make any markup margin inconsequential.

Exchange Rates

Figures V-1 and V-2 show quarterly real exchange rate indices (nominal exchange rates adjusted for relative rates of inflation)[9] between the U.S. dollar and the currencies of Japan, Kazakhstan, Russia, and Ukraine during January 1995-December 1997. Although the nominal exchange rates of all four countries fell against the U.S. dollar during this period, relatively high rates of inflation in Russia, Ukraine, and Kazakhstan led to sharp appreciations of these currencies in real terms against the dollar. Relatively modest inflation in Japan led to a sharp depreciation of the yen in real terms against the dollar. The value of the Japanese yen depreciated in real terms against the U.S. dollar by 25.0 percent during this period (figure V-1). The value of the Kazakh tenge, Russian ruble, and the Ukranian hryvnias

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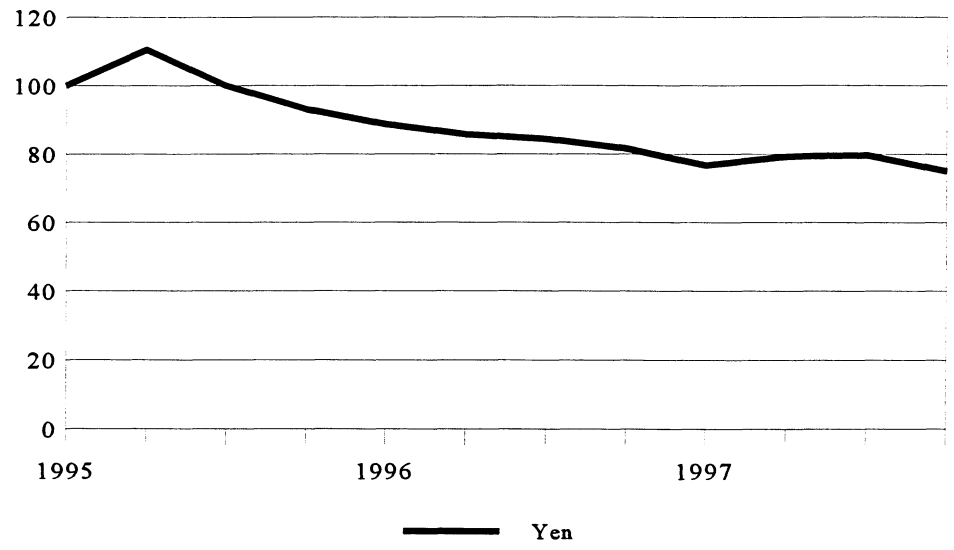
[6] Exports of titanium sponge from Sumitomo Sitix to the United States have not been subject to the antidumping order on Japanese sponge since 1992.

[7] ***.

[8] All U.S. imports of titanium sponge from Kazakhstan during 1995-97 were on a TIB basis and therefore were not subject to the antidumping order for Kazakhstan.

[9] The quarterly real exchange rate indices were calculated from nominal exchange rates and producer price indices reported by the International Monetary Fund for each country. The exchange rate indices were based on exchange rates expressed in U.S. dollars per unit of the foreign currency.

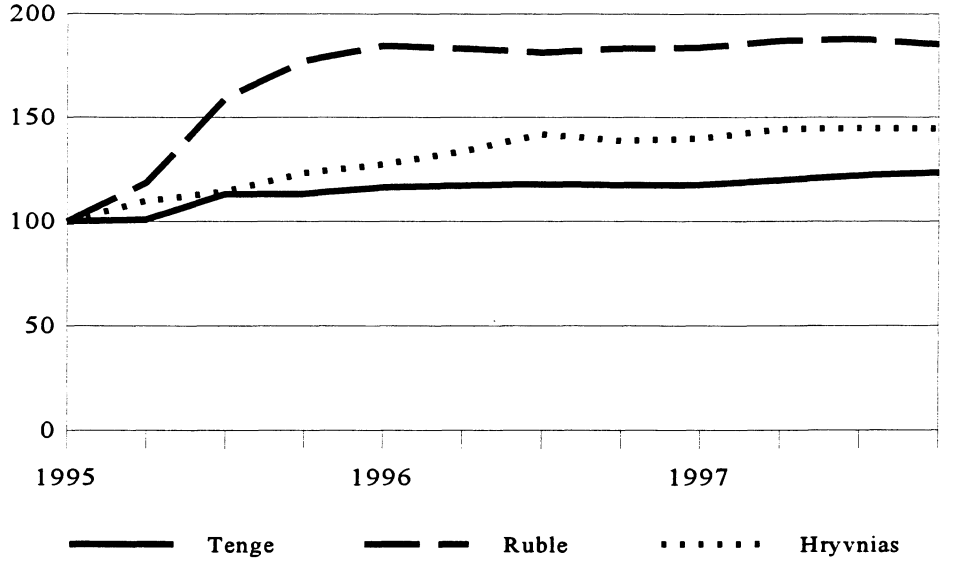
Figure V-1
Real exchange rate index of the Japanese yen, by quarter, January 1995-December 1997



Note: Index (Jan.-Mar. 1995=100). Exchange rates are in U.S. dollars per unit of foreign currency.

Source: International Monetary Fund, *International Financial Statistics*, Apr. 1998.

Figure V-2
Real exchange rate indexes of the Kazakh tenge, Russian ruble, and the Ukranian hryvnias, by quarter, January 1995-December 1997



Note: Index (Jan.-Mar. 1995=100). Exchange rates are in U.S. dollars per unit of foreign currency.

Source: International Monetary Fund, *International Financial Statistics*, Apr. 1998.

appreciated in real terms against the U.S. dollar by 23.4 percent, 85.4 percent, 44.5 percent, respectively, during January 1995-December 1997 (figure V-2). The depreciation of the yen, in real terms, vis-a-vis the U.S. dollar may lower dollar prices of Japanese exports, including exports of titanium sponge, and/or raise profit margins of Japanese producers, exporters, or U.S. importers. The currency appreciations of the three former Soviet countries, in real terms, reportedly resulted from tight monetary policies and associated high interest rates that were used to reduce the high rates of inflation in each of these countries. The indicated currency appreciations vis-a-vis the U.S. dollar may raise dollar prices of exports from these countries, including exports of titanium sponge, and/or lower profit margins of the foreign producers, exporters, or U.S. importers.

Pricing Practices

***. The subject imported titanium sponge was sold mainly on a contract basis, ***. Reported contract periods were generally 12 months for the importers. Prices typically remained fixed during the contract period.

U.S. producers and importers typically quoted delivered prices to their U.S. customers of titanium sponge. On those sales where they quoted U.S. f.o.b. prices, importers generally arranged transportation to their customers and prepaid the freight. ***. U.S. producers and importers generally offered payment terms of net 30 - 60 days.

PRICE DATA[10]

The Commission requested quarterly net U.S. f.o.b. price and quantity information from U.S. producers and importers for their total arms-length U.S. sales of titanium sponge during January 1995-December 1997. The Commission also requested end users that imported titanium sponge for their own use to report their delivered purchase price data during this period.[11] Importers were requested to report the price data separately for their imports from Japan, Kazakhstan, Russia, and Ukraine. Such requests for the imported price data included all sponge imported from the subject countries and, therefore, included imports of Japanese sponge produced by Sumitomo Sitix, which was not subject to the antidumping order during 1995-97.[12] In addition, Commerce does not consider TIB-based U.S. imports of titanium sponge from the subject countries to be subject to the antidumping orders. The discussion of the price data treats imports subject to the antidumping orders separately from imports from the subject countries not subject to the antidumping orders. Discussion of these price data is designed to provide

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[10] Pricing information was requested for titanium sponge without any distinction between grades or quality of sponge or between contract and spot sales. As a result, price trends and price comparisons should be viewed carefully; price changes, as well as price comparisons between the domestic and imported sponge, may reflect at least partially changes or differences in product grades/quality or sales terms.

[11] U.S. firms that imported titanium sponge for production of downstream products in their U.S. processing facilities were requested to report the delivered purchase price data separately for TIB and non-TIB purchases. Imports purchased on a TIB basis are processed into downstream products, most frequently titanium ingot, and then exported; under TIB provisions, such imported sponge is not subject to any import duties.

[12] U.S. imports of titanium sponge from Japan that were produced by Toho and the Russian sponge exported by Interlink and TMC, carried zero antidumping margins during 1995-97. Other suppliers of titanium sponge from Russia and suppliers of titanium sponge from Kazakhstan and Ukraine were subject to antidumping margins ranging up to 83.96 percent during this period. Sumitomo Sitix, the other sponge producer in Japan, has not been subject to the antidumping order since January 1992.

information on the nature of competition among domestic sponge, imported subject sponge, and imported nonsubject sponge. Price competitiveness of the nonsubject imported sponge from the subject countries may indicate the pricing behavior of the subject imported sponge if the orders were removed.

The reported price data for domestic sponge and that imported from the subject countries included the following three types of transactions: (1) net f.o.b selling prices for sales to U.S. customers, (2) delivered purchase prices on a non-TIB basis for the imported sponge used captively, and (3) delivered purchase prices on a TIB basis for the imported sponge used captively and then exported as a downstream titanium product. The latter purchase prices did not include any regular import duties or antidumping duties, whereas the purchase prices on a non-TIB basis included the regular import duties. The reported import price data on a non-TIB basis were for sponge sourced from foreign suppliers that were either not subject to the antidumping orders or had zero margins; therefore, the reported non-TIB price data did not include antidumping duties.[13] The reported price data are discussed by the three types of transactions.

Usable price data were received from the two principal U.S. producers and from 11 importers of titanium sponge,[14] but each firm did not necessarily report for every period requested. No price data were reported for the limited amount of titanium sponge imported into the United States from Ukraine. The f.o.b. selling price data for domestic and *subject imported* titanium sponge, which does not include imported Japanese sponge produced by Sumitomo Sitix or TIB imports from the subject countries, accounted for about 89 percent of the total quantity of the domestic and *subject imported* sales/purchase price data reported by U.S. producers and importers for the 1995-97 period,[15] and about 8.9 percent of total U.S. apparent consumption of titanium sponge (including TIB imports) during this period. The subject imported non-TIB purchase price data accounted for the remaining 11 percent of the total quantity of the domestic and *subject imported* sales/purchase price data reported. The total quantity of domestic and *subject imported* sales/purchase price data was about *** pounds (*** metric tons). Net f.o.b. selling price and delivered non-TIB price data reported for imported Japanese sponge produced by Sumitomo Sitix involved a total quantity of about *** million pounds (*** metric tons). TIB-based price data reported for the sponge imported from Japan,[16] Kazakhstan, and Russia involved a total quantity of almost *** pounds (*** metric tons).

Net U.S. F.o.b. Selling Price Data

Selling price data were reported for the domestic titanium sponge and that imported from Japan and Russia.[17] The weighted-average net U.S. f.o.b. selling prices and quantities are shown by quarters

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[13] The non-TIB imports would have included antidumping duties if U.S. importers had sourced titanium sponge from the foreign suppliers subject to non-zero antidumping duties. All non-TIB imports of sponge from Japan were from Toho and all non-TIB imports of sponge from Russia were from Interlink and TMC. All imports of sponge from Kazakhstan were on a TIB basis.

[14] Five of the 11 responding importers consisted of ***.

[15] U.S. producers' reported selling price data accounted for *** percent, by quantity, of their total production of titanium sponge during 1995-97.

[16] TIB-based import price data for sponge imported from Japan were produced only by Sumitomo Sitix.

[17] U.S. producers' reported selling price data accounted for *** percent of the total sales quantity reported for titanium sponge selling price data, whereas selling price data for the Japanese sponge produced by Toho accounted for *** percent, selling price data of the Japanese sponge produced by Sumitomo Sitix accounted for *** percent, and selling price data for the Russian sponge accounted for the remaining *** percent. All of the selling price data for the imported sponge were reported by 5 U.S. importers, none of whom were related to U.S. producers.

during January 1995-December 1997 in tables V-1 and V-2 and in figure V-3 for the domestic and imported Japanese titanium sponge, and in table V-3 and figure V-4 for the domestic and imported Russian titanium sponge. Trends in the reported prices should be viewed cautiously because of possible changes in the grade/quality composition of products from quarter to quarter involving both the domestic and imported titanium sponge.[18] In addition, shifts in the proportion of contract and spot sales of the domestic sponge from quarter to quarter could also affect price trends.[19]

U.S. producers' selling prices fluctuated during the period of investigation, reaching a *** per pound in April-June 1996 and a *** per pound in April-June 1997. U.S. producers' selling prices ended the period at *** per pound, or *** than the price level at the beginning of the period. Domestic producers' quarterly sales quantities fluctuated during the period of investigation, with quarterly sales quantities in 1996 and 1997 generally below those in 1995.

Toho and Sumitomo were the two responding importers of the Japanese sponge that reported U.S. selling price data; both importers reported sales of sponge produced by their respective parent companies in Japan. The U.S. importer's quarterly selling prices of the subject Japanese titanium sponge produced by Toho generally *** during January 1995 through September 1996, but then generally *** through December 1997 (table V-1 and figure V-3). The U.S. importer's reported selling prices of the Japanese titanium sponge produced by Sumitomo Sitix *** (table V-2 and figure V-3). U.S. importers' selling prices of the sponge produced by Toho ended the period at *** per pound, or *** than the price level at the beginning of the period, whereas selling prices of the sponge produced by Sumitomo Sitix ended at *** per pound, or *** percent *** than the initial-period price level. Quarterly sales quantities of the Japanese titanium sponge produced by Toho *** during the period of investigation, while sales quantities of the Japanese sponge produced by Sumitomo Sitix ***. Quarterly sales of the Toho-produced sponge *** from *** pounds in January-March 1995 to *** pounds in October-December 1997, while sales of the Sumitomo Sitix-produced sponge *** from *** pounds to *** pounds.

Table V-1
Titanium sponge produced in the United States and Japan (Toho):[1] Weighted-average net U.S. f.o.b. selling prices and quantities reported by U.S. producers and importers, and margins of under/(over)selling, by quarter, January 1995-December 1997

* * * * * * *

Table V-2
Titanium sponge produced in the United States and Japan (Sumitomo Sitix):[1] Weighted-average net U.S. f.o.b. selling prices and quantities reported by U.S. producers and importers, and margins of under/(over)selling, by quarter, January 1995-December 1997

* * * * * * *

Figure V-3
Titanium sponge produced in the United States and Japan: Weighted-average net U.S. f.o.b. selling prices and quantities reported by U.S. producers and importers, by quarter, January 1995-December 1997

* * * * * * *

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[18] ***.

[19] U.S. importers reported that they sell the subject foreign titanium sponge in the U.S. market primarily on a contract basis.

Fewer quarterly selling prices of the imported Russian titanium sponge were reported, but showed a downward trend during October 1996 through December 1997, the period for which sufficient price data were reported to discuss trends (table V-3 and figure V-4). Quarterly sales quantities of the imported Russian titanium sponge also increased during October 1996-December 1997.

Table V-3
Titanium sponge produced in the United States and Russia: Weighted-average net U.S. f.o.b. selling prices and quantities reported by U.S. producers and importers, and margins of under/overselling, by quarter, January 1995-December 1997

* * * * * * *

Figure V-4
Titanium sponge produced in the United States and Russia: Weighted-average net U.S. f.o.b. selling prices and quantities reported by U.S. producers and importers, by quarter, January 1995-December 1997

* * * * * * *

Twelve quarterly price comparisons were possible between the domestic titanium sponge and the Toho-produced Japanese sponge and between the domestic sponge and the Sumitomo Sitix-produced Japanese sponge (tables V-1 and V-2, respectively), and eight quarterly price comparisons were possible between the domestic and Russian titanium sponge (table V-3). Such price comparisons should be viewed cautiously because of possible differences in product grade/quality and terms of sale between the domestic and imported products. Five of the 12 price comparisons involving the Toho-produced Japanese sponge, 7 of the 12 price comparisons involving the Sumitomo Sitix-produced Japanese sponge, and 6 of the 8 price comparisons involving the Russian titanium sponge showed the imported products to be priced less than the domestic product. Margins of the lower priced Toho-produced Japanese sponge ranged from *** percent to *** percent, margins of the lower priced Sumitomo Sitix-produced Japanese sponge ranged from *** percent to *** percent, and margins of the lower priced Russian sponge ranged from *** percent to *** percent. The remaining seven price comparisons involving the Toho-produced Japanese sponge, the remaining five price comparisons involving the Sumitomo Sitix-produced Japanese sponge, and the remaining two price comparisons involving the Russian sponge showed the imported products to be priced higher than the U.S.-produced product. Margins of the higher priced Toho-produced Japanese sponge ranged from *** percent to *** percent, margins of the higher priced Sumitomo Sitix-produced Japanese sponge ranged from *** percent to *** percent, and margins of the higher priced Russian sponge were *** percent and *** percent. The higher margins of under/overselling suggest that differences in product quality/grades likely exist for at least some of the price comparisons.

Delivered Purchase Prices on a Non-TIB Basis

These price data were reported by six U.S. importers that captively used their imported titanium sponge to produce downstream titanium products that they then used or sold in the U.S. market. The delivered purchase price data on a non-TIB basis were reported for the titanium sponge imported from

Japan and Russia.[20] The weighted-average purchase prices and purchase quantities of the imported titanium sponge are shown by quarters during January 1995-December 1997 in table V-4 and figure V-5. Trends in prices should be viewed cautiously because of possible changes in the quality composition of products from quarter to quarter.

Table V-4
Titanium sponge produced in Japan and Russia:[1] Weighted-average net delivered non-TIB purchase prices of titanium sponge for internal consumption reported by U.S. importers, by quarter, January 1995-December 1997

* * * * * * *

Figure V-5
Titanium sponge produced in Japan and Russia: Weighted-average net delivered non-TIB purchase prices of titanium sponge for internal consumption reported by U.S. importers, by quarter, January 1995-December 1997

* * * * * * *

U.S. importers' quarterly delivered purchase prices (on a non-TIB basis) of the Japanese titanium sponge produced by Toho *** during January 1995-December 1997, while prices of the Japanese sponge produced by Sumitomo Sitix ***. Prices of the Toho-produced sponge began at *** per pound in January-March 1995, the ***, then, after *** during the rest of the year, began to *** in January-March 1996 and ended at *** per pound, or almost *** percent *** the initial period value. Prices of the Sumitomo Sitix-produced sponge began at *** per pound in January-March 1995 and ended the period at *** per pound in October-December 1997, or *** percent *** the initial period value.

Fewer quarterly delivered purchase prices of the Russian titanium sponge were reported and, for 1995 and 1997 where full year price data were reported, showed fluctuating prices each year. Prices of the Russian sponge began at a *** of *** per pound in January-March 1995, reached their *** per pound in the following quarter, and ended at *** per pound in October- December 1997, or almost *** percent *** the price at the beginning of the period.

Quarterly purchase quantities of the Japanese titanium sponge produced by Toho and that produced by Sumitomo Sitix *** during the period of investigation, but the *** in the quarterly purchases of the Sumitomo Sitix-produced sponge were ***. Quarterly purchases of the Toho-produced sponge *** from *** pounds in January-March 1995 to *** pounds in October-December 1997, or by *** pounds. On the other hand, quarterly purchases of the Sumitomo Sitix-produced sponge *** from *** pounds in January-March 1995 to *** pounds in October-December 1997, or by *** pounds.

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[20] The purchase price data for imported Japanese titanium sponge produced by Toho accounted for *** percent of the total purchase quantity reported for delivered price data on a non-TIB basis, the purchase price data for imported Japanese sponge produced by Sumitomo Sitix accounted for *** percent, and reported purchase price data for titanium sponge from Russia accounted for the remaining *** percent. About *** percent of the quantity of the delivered purchase price data for the subject imports (excluding Japanese sponge produced by Sumitomo Sitix) on a non-TIB basis were reported by ***; the remaining *** percent was purchased by ***. About *** percent of the delivered import price data on a non-TIB basis for the imported Japanese sponge produced by Sumitomo Sitix was reported by ***, while the remaining *** percent was purchased by ***.

The quarterly purchase quantities of the imported Russian titanium sponge, which were much smaller than that of the Japanese sponge, generally *** during 1995 and 1997, the periods for which sufficient data were reported to discuss trends for the Russian product.

Comparisons between the f.o.b. selling prices of the domestic titanium sponge and the delivered non-TIB purchase prices of the imported Japanese and Russian titanium sponge show that the Japanese sponge was generally priced higher than the domestic product and the Russian sponge was typically priced lower than the domestic sponge. Although f.o.b. selling prices of the domestic sponge do not include U.S. transportation charges to the customers' locations, such costs are believed to be limited and any bias in the price comparisons showing the imported sponge to be priced higher than the domestic sponge is also limited.[21] Such price comparisons, however, should still be viewed cautiously because of possible differences in product grade/quality and sales terms between the domestic and imported products.

Twelve quarterly comparisons each were possible between the f.o.b. selling prices of the domestic titanium sponge and the delivered purchase prices of the Japanese titanium sponge produced by Toho and that produced by Sumitomo Sitix; in addition, 10 such quarterly price comparisons were possible between the domestic and Russian titanium sponge. One of the 12 quarterly price comparisons involving the Japanese sponge produced by Toho, 5 of the 12 price comparisons involving the Japanese sponge produced by Sumitomo Sitix, and 8 of the 10 price comparisons involving the Russian titanium sponge showed the imported products to be priced less than the domestic product. The margin of the lower priced Japanese sponge produced by Toho was *** percent, margins of the lower priced Japanese sponge produced by Sumitomo Sitix ranged from *** percent to *** percent, and margins of the lower priced Russian sponge ranged from *** percent to *** percent. The remaining 11 price comparisons involving the Japanese sponge produced by Toho, 6 of the 7 remaining price comparisons involving the Japanese sponge produced by Sumitomo Sitix,[22] and the remaining 2 price comparisons involving the Russian sponge showed the imported products to be priced higher than the U.S.-produced product. Margins of the higher priced Japanese sponge produced by Toho ranged from *** percent to *** percent, margins of the higher priced Japanese sponge produced by Sumitomo Sitix ranged from *** percent to *** percent, and margins of the higher priced Russian sponge were *** percent and *** percent. Based on the size of some of the under/overselling margins, significant quality differences likely existed between some of the domestic and imported products for which price comparisons were made.

Delivered Purchase Prices on a TIB Basis

These price data were reported by six U.S. importers that captively used their imported titanium sponge to produce downstream titanium products that they then exported. The delivered purchase price data on a TIB basis were reported for titanium sponge imported from Japan, Kazakhstan, and Russia.[23]

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[21] U.S.-inland freight for titanium sponge shipped to domestic customers' locations is considered minimal, typically 2 percent or less of the delivered purchase price. As a result, U.S. f.o.b. selling price data of titanium sponge, which exclude this inland freight, do not constitute a significantly different price basis from delivered prices in these investigations.

[22] One of the seven remaining price comparisons showed prices of the imported Japanese sponge and the domestic sponge to be equal to each other.

[23] The purchase price data for imported Japanese titanium sponge produced by Sumitomo Sitix accounted for *** percent of the total purchase quantity reported for delivered price data on a TIB basis, the purchase price data for imported Kazakh sponge accounted for *** percent, and reported purchase price data for imported Russian sponge accounted for the remaining *** percent. About *** percent of the quantity of the delivered purchase price data for

The weighted-average purchase prices and purchase quantities of the imported titanium sponge are shown by quarters during January 1995-December 1997 in table V-5 and figure V-6. Trends in the reported prices should be viewed cautiously because of possible changes in the quality composition of products from quarter to quarter.

Table V-5
Titanium sponge produced in Japan, Kazakhstan, and Russia: Weighted-average net delivered TIB purchase prices and quantities of titanium sponge for internal consumption reported by U.S. importers, by quarter, January 1995-December 1997

* * * * * * *

Figure V-6
Titanium sponge produced in Japan, Kazakhstan, and Russia: Weighted-average net delivered TIB purchase prices and quantities of titanium sponge for internal consumption reported by U.S. importers, by quarter, January 1995-December 1997

* * * * * * *

U.S. importers' quarterly delivered purchase prices (on a TIB basis) of Japanese titanium sponge produced by Sumitomo Sitix were consistently *** than prices of the Kazakh and Russian sponge during January 1995-December 1997, while prices of the Kazakh sponge were generally *** than prices of the Russian sponge during this period.[24] Imports of the Russian sponge accounted for the majority of the subject titanium sponge imported on a TIB basis.[25] The quarterly TIB prices of sponge from all three countries generally *** during the period of investigation. Quarterly TIB prices of the Japanese sponge began at *** per pound in January-March 1995 and ended at *** per pound in October-December 1997. Quarterly TIB prices of the Kazakh sponge began at a period *** per pound in January-March 1995 and ended at *** per pound in October-December 1997; prices of the Russian sponge began at *** per pound in January-March 1995 and ended at *** per pound in October-December 1997. The quantity of quarterly shipments of Japanese sponge fluctuated generally under *** pounds during much of the investigative period, before *** pounds during the last quarter of the period. Quarterly import quantities of titanium sponge from Kazakhstan initially *** and reached *** pounds in October-December 1996 and then generally *** to end the period at *** pounds, or *** percent *** the peak level and *** percent *** the initial period level. Quarterly import purchases of titanium sponge from Russia fluctuated but generally fell significantly during January 1995-December 1997 and ended the period at *** pounds, or almost *** percent below the initial period level.

The generally falling TIB purchases of the Japanese, Kazak, and Russian sponge occurred as Timet purchased titanium melt facilities in the United Kingdom in late 1995 and in France in 1996, and a titanium products' manufacturer and distributor in Italy in early 1998.[26] As a result, Timet, which uses a

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the imports from Kazakhstan and Russia on a TIB basis was reported by ***; the remaining *** percent was purchased by ***. About *** percent of the delivered import price data on a TIB basis for the imported Japanese sponge produced by Sumitomo Sitix was reported by ***, while the remaining *** percent was reported by ***.

[24] About *** percent of the imports of the Kazakh sponge on a TIB basis were accounted for by ***. The remaining *** percent of the imports from Kazakhstan on a TIB basis were accounted for by ***.

[25] About *** percent of the imports of the Russian sponge on a TIB basis were accounted for by ***. The remaining *** percent of the imports from Russia on a TIB basis were accounted for by ***.

[26] Kazakh prehearing brief, p. 21 and exh. L.

majority of its domestically-produced and imported sponge to produce downstream titanium products for sale domestically and for export, likely was increasingly able to meet more of the off-shore demand with the newly acquired foreign facilities. Titanium sponge could instead be imported into the countries where the foreign melt facilities were located; zero import duties and lower transportation costs for the titanium sponge from Japan, Kazakhstan, and Russia shipped to Europe compared to shipments to the United States likely constituted incentives for any such shifting of sponge processing.

Although the non-TIB imported titanium sponge from the subject countries may not always carry an antidumping duty, it is always subject to the 15 percent regular U.S. import duty on titanium sponge. Therefore, imports of the non-TIB sponge from the subject countries would likely still be more expensive than those imported on a TIB basis. In fact, the delivered TIB purchase prices of titanium sponge from Japan were consistently lower than the delivered non-TIB purchase prices of titanium sponge from Japan. This relationship held when comparisons were made with only the Sumitomo Sitix-produced sponge or between the Sumitomo Sitix-produced sponge and that produced by Toho. A comparison of delivered prices of the imported TIB and non-TIB Russian titanium sponge showed that prices of the TIB sponge were lower than prices of the non-TIB sponge in 7 of 10 price comparisons.[27] Margins of the lower T.I.B-based prices ranged from *** percent to *** percent for the imported Japanese sponge, and from *** percent to *** percent for the imported Russian sponge. Margins of the few higher TIB-based prices ranged from *** percent to *** percent for the Russian products.

[27] These price differences should be viewed cautiously because of possible differences in product grade/quality between the two types of pricing data.

PART VI: FINANCIAL EXPERIENCE OF THE U.S. PRODUCERS

BACKGROUND

Integrated producers Oremet and Timet, which accounted for ***[1] U.S. production of titanium sponge, provided financial data on their titanium sponge operations and on their overall operations.

Oremet, a public company, was acquired by Allegheny Teledyne, also a public company, in March 1998. As a result of this new relationship, Oremet and Wah Chang (an Allegheny Teledyne company that produces various titanium products, but not titanium sponge), which are both located in Albany, OR, have merged their operations. Allegheny Teledyne also acquired the aerospace division of Sheffield Forgemasters in February 1998; it has been merged with its previously owned division, Allvac (a titanium product producer) and is now known as Allvac-SMP. Sheffield Forgemasters' aerospace division includes two sales companies in the United States as well as three companies in the United Kingdom. The acquisition is expected to enhance its distribution of various products in Europe, including titanium.[2] In 1997, prior to these alliances, Allegheny Teledyne had total titanium product sales of $449.6 million.[3] [4] Oremet also produces various titanium products at Albany, OR and at other U.S. locations.

Timet, a public company, "is the world's leading integrated producer of titanium sponge and mill products and has the largest sales volume worldwide. The Company is the only integrated producer with major manufacturing facilities in both of the world's principal markets for titanium, the United States and Europe. The Company estimates that in 1997 it accounted for approximately 25 percent of worldwide industry shipments of mill products and approximately 15 percent of world sponge production."[5] In the United States, it produces titanium sponge at its Henderson, NV plant and titanium products at various locations.

Oremet discussed its titanium sponge business in its 1997 third quarter financial statement. It stated:

> TITANIUM SPONGE. During the third quarter of 1997, the Company's integrated sponge facility operated at near capacity, primarily supplying the Company's internal demand for titanium sponge as well as sales to RMI Titanium Company ("RMI") under a long-term titanium sponge conversion agreement. Sales of titanium sponge and sponge conversion services of $4.0 million, remained substantially constant between the two quarters (1997 compared to 1996). Sponge shipments decreased 5% and the average sponge price per pound increased 6%. The Company expects to continue to operate its sponge facility at near capacity with substantially all production being utilized for internal consumption or for supply to RMI (approximately 45% of capacity in 1996).

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[1] ***.

[2] Allegheny Teledyne 1997 10-K report, electronic filing, p. 93.

[3] Ibid, p. 90.

[4] ***.

[5] Timet 1997 10-K report, p. 3, electronic filing.

> The Company is presently supplementing its sponge production with purchases from foreign producers, and is not marketing its internally produced sponge.[6]

Timet also discussed its titanium sponge business in its 1997 financial report. It stated:

> While the Company is one of six major worldwide producers of titanium sponge, under current market conditions it cannot supply all of its needs for titanium sponge internally and is dependent, therefore, on third parties for a portion of its sponge needs (approximately one-half in 1997). The Company obtains sponge from suppliers in Japan and the former Soviet Union, both on a spot purchase basis and pursuant to fixed price contracts.
>
> Timet has entered into a long-term agreement for the purchase of titanium sponge produced in Kazakhstan. The sponge agreement is for ten years beginning in 1998, with firm pricing for the first five years (subject to certain adjustments). Volumes purchased under the contract will be up to 10,000 metric tons annually. The Company expects to have annual contracts with other sponge suppliers which it believes will cover the balance of its 1998 needs.[7]

OPERATIONS ON TITANIUM SPONGE

Both of the producers' data were verified by the Commission staff. Each of the companies is discussed separately. ***.[8] ***.[9]

A summary of the companies' sales data by firm and type of transaction is shown in table VI-1. ***.[10]

Table VI-1
Net sales, by type of transaction, by firm, for the U.S. producers of titanium sponge, fiscal years 1995-97

* * * * * * *

The aggregate results of operations are shown in table VI-2, Oremet's data are presented in table VI-3, and Timet's data are presented in table VI-4.[11] [12] ***.

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[6] Oremet 10-Q report for the period ending Sept. 30, 1997, p. 11, electronic filing.

[7] Timet 1997 10-K report, p. 7, electronic filing.

[8] ***.

[9] ***.

[10] ***.

[11] Financial data on the producers' overall operations are presented later in this section.

[12] The presentation here and in other financial tables may differ from that of other sections in this report.

Table VI-2
Results of operations of U.S. producers on their operations producing titanium sponge, fiscal years 1995-97

* * * * * * *

Table VI-3
Results of operations of Oremet on its operations producing titanium sponge, fiscal years 1995-97

* * * * * * *

Table VI-4
Results of operations of Timet on its operations producing titanium sponge, fiscal years 1995-97

* * * * * * *

***.[13] ***.[14] ***.[15] ***.[16] ***.[17]

OPERATIONS ON TITANIUM MILL PRODUCTS

Oremet commented as follows on its production and purchases of raw materials (that it uses for its downstream products) in its 10-K report:

> The Company is a large producer of titanium sponge and a large purchaser and processor of titanium scrap, two key materials used in the manufacture of mill products. The ability to both produce and purchase sponge or scrap allows the Company considerable flexibility in optimizing its mix of raw material purchases and reduces the Company's exposure to raw material price fluctuations. As a result of this flexibility, the Company is well positioned to control the costs of producing titanium ingot and mill products.[18]

Timet discussed the cyclicality of the titanium industry as follows:

> The cyclical nature of the aerospace industry has been the principal cause of the historical fluctuations in performance of titanium companies and contributed to cyclical peaks in titanium mill product shipments in 1980 and 1989 and cyclical lows in 1983 and 1991. The titanium industry improved dramatically during the last three years due to a combination of factors, including a resurgence in commercial aerospace demand

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[13] ***.

[14] ***.

[15] ***.

[16] ***.

[17] ***.

[18] Oremet 1996 10-K report, p. 5, electronic filing.

beginning in 1995, continuing and stable industrial demand and the emergence of new uses for titanium in diverse sectors such as military armor and consumer goods. Worldwide industry mill product shipments increased in each of the last three years. Industry shipments of approximately 60,000 metric tons in 1997 were 65% above 1994 levels.[19]

Timet has an agreement with Boeing for titanium products which it says will help it reduce its vulnerability to the industry business cycle fluctuations. This was discussed by Timet in its public reports as follows:

> The Company has an agreement with the Boeing Company under which Timet will be the principal supplier of titanium products to Boeing Commercial Airplane Group ("Boeing"), and its family of suppliers for a 10-year period beginning in 1998 (the "Boeing Agreement"). This innovative agreement with the world's largest end user of titanium provides Timet with a significantly higher market share of Boeing titanium requirements than it might otherwise have and should help mitigate cyclical fluctuations in aerospace prices and volumes.
>
> In order to meet the expected volume increases as a result of the Boeing Agreement, the Company is adding additional melting and forging capacity intended to be cost effective even in a market downturn. These capacity additions are generally expected to be completed during the second half of 1998. Timet has also entered into a long-term agreement to purchase, beginning in 1998, titanium sponge produced in Kazakhstan to help stabilize both cost and supply of this raw material.[20]

The aggregate results of operations of the two U.S. producers are presented in table VI-5.

Table VI-5
Results of operations of Oremet and Timet on their U.S. operations producing titanium products, fiscal years 1995-97

* * * * * * *

INVESTMENT IN PRODUCTIVE FACILITIES, CAPITAL EXPENDITURES, AND RESEARCH AND DEVELOPMENT EXPENSES

The value of fixed assets (property, plant, and equipment), capital expenditures, and research and development costs for titanium sponge are shown in table VI-6. ***.

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[19] Timet 1997 10-K report, p. 5, electronic filing.

[20] Ibid, p. 4.

Table VI-6
Value of assets, capital expenditures, and research and development expenses for producers of titanium sponge, by firm, 1995-97

* * * * * * *

SIGNIFICANCE OF EXISTING ANTIDUMPING DUTY ORDERS

The producers were asked to discuss the significance of the existing antidumping duty orders covering imports of titanium sponge from Japan, Kazakhstan, Russia, and Ukraine on the operations of their firms. Their comments to two specific questions were as follows--

1. Describe the significance of the existing antidumping duty orders covering imports of titanium sponge from Japan, Kazakhstan, Russia, and Ukraine to the operations (net sales, profitability, R&D efforts, capital investments, or other data) of your firm. You may wish to compare your firm's operations before and after the imposition of the orders.

* * * * * * *

2. What do you think the likely impact of any revocation of the antidumping duty orders covering imports of titanium sponge from Japan, Kazakhstan, Russia, and Ukraine will have on (1) the short-term operations of your firm, (2) the long-term operations of your firm, and (3) the U.S. market as a whole?

* * * * * * *

PART VII: FOREIGN INDUSTRY DATA

THE INDUSTRY IN JAPAN

During the period examined, there were two Japanese producers of titanium sponge: Toho and Sumitomo Sitix. Both firms submitted data in response to the Commission's foreign producers' questionnaire.[1] Sumitomo is the larger producer and larger exporter to the United States. However, since the antidumping duty order against it was revoked in 1992, Sumitomo's data are not presented. The data from Toho are presented in table VII-1.

As can be seen from the table, production *** during the period examined, resulting in ***.[2] Capacity utilization is expected to *** percent in 1998. Total exports and total shipments also ***, with exports to the United States ***.

Toho noted in its response that ***. Both Japanese producers ***.[3] Moreover, ***.[4]

According to Toho, ***. Toho indicated that ***.[5] Unlike Timet, ***. Finally, Toho reported that ***.

Table VII-1
Titanium sponge: Japanese (Toho) capacity, production, inventories, capacity utilization, and shipments, 1995-97 and projected 1998

* * * * * * *

THE INDUSTRY IN KAZAKHSTAN

According to information in the request, there is only one firm currently offering titanium sponge produced in Kazakhstan for export to the United States: UKTMP. UKTMP reported that it accounts for *** percent of Kazakh production and exports to the United States of titanium sponge. ***.

UKTMP is currently represented by counsel; accordingly, the Commission requested such counsel to provide data on the industry's capacity, production, shipments, and inventories of titanium sponge. The data obtained are presented in table VII-2.

As seen from the table, Kazakh production of titanium sponge *** from 1995 to 1997. Such production is expected to *** in calendar year 1998, but at a slower rate. Capacity *** over the period examined, resulting in a ***. Home market shipments were virtually nonexistent during the period examined. Shipments to both the United States and other markets *** over the three calendar years, with shipments to the United States ***; shipments to the United States ***.[6] *** Kazakh shipments to the United States ***. Export patterns are ***, although capacity utilization ***.

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[1] Two additional companies operating at the time of the original antidumping order, Nippon Soda and Showa Denko, have since discontinued production of titanium sponge. Toho submitted information through its counsel; Sumitomo Sitix was not required to respond to questionnaires but did so through its own offices, not through counsel.

[2] Toho noted that ***. According to Toho, ***. Toho ***.

[3] The producers acknowledged, however, that ***.

[4] Toho noted further that ***.

[5] Sumitomo Sitix stated that, for the most part, ***.

[6] Primary export markets other than the United States include ***.

UKTMP noted in its response that, subsequent to the breakup of the Soviet Union in 1991, ***. During the period examined, however, the firm has ***.[7] It plans to ***. UKTMP currently ***.

In UKTMP's view, the existing antidumping order on Kazakhstan ***. ***, according to UKTMP, in order to ***.[8] Notwithstanding ***.

Table VII-2
Titanium sponge: Kazakh capacity, production, inventories, capacity utilization, and shipments, 1995-97 and projected 1998

* * * * * * *

THE INDUSTRY IN RUSSIA

The Commission received data on the industry in Russia from the sole firm producing titanium sponge in that country: Avisma. These data are presented in table VII-3.

After a *** in 1996, Russian capacity to produce titanium sponge ***, but is expected to ***. Production *** and is expected to ***. Exports and home market shipments *** during the period examined.[9]

Avisma explained that ***. Avisma indicated in its response that ***. Recent sales have been ***. This has allowed importers to reduce their reliance on TIB imports from Russia from three-quarters of total imports in 1995 to one-quarter in 1997.

As with the Kazakh producer, Avisma ***. Avisma is the ***.

Table VII-3
Titanium sponge: Russian capacity, production, inventories, capacity utilization, and shipments, 1995-97 and projected 1998

* * * * * * *

THE INDUSTRY IN UKRAINE

Counsel for Zaporozhie, the only producer of titanium sponge in Ukraine, submitted data on its operations during the period examined. Those data are presented in table VII-4.

As seen from the table, Zaporozhie ***.[10] According to Zaporozhie, ***. It plans to ***. Zaporozhie noted that ***.

Table VII-4
Titanium sponge: Ukrainian capacity, production, inventories, capacity utilization, and shipments, 1995-97 and projected 1998

* * * * * * *

---

[7] ***.

[8] Sales to the United States are ***.

[9] No conclusions can be drawn about trends in the destination of Russian exports. Avisma indicated in its response that ***. As a result, Avisma ***.

[10] ***.

U.S. INVENTORIES OF FOREIGN PRODUCT

Of the 10 firms reporting imports of titanium sponge from Japan, Kazakhstan, Russia, and/or Ukraine, 6 carried end-of-period inventories of those imports during the period examined (table VII-5). Total end-of period inventories of imports from all four countries moved upward from 1995 to 1996 and declined slightly in 1997 compared to their 1996 level. Inventories of imports from Russia were ***, while inventories of imports from Kazakhstan were ***.

In its questionnaire the Commission requested importers to list any expected deliveries of titanium sponge from Japan, Kazakhstan, Russia, or Ukraine after December 31, 1997. Responding importers reported an approximate total of 15,820 metric tons, of which *** metric tons were specifically identified as from Japan, *** metric tons from Kazakhstan, and *** metric tons from Russia.

Table VII-5
Titanium sponge: U.S. importers' end-of-period inventories of imports, by source, 1995-97

* * * * * * *

APPENDIX A

FEDERAL REGISTER NOTICE

INTERNATIONAL TRADE COMMISSION

[Investigations Nos. 751–TA–17 through 20]

Titanium Sponge From Japan, Kazakstan, Russia, and Ukraine

AGENCY: United States International Trade Commission (Commission).

ACTION: Institution and scheduling of review investigations concerning the U.S. Tariff Commission's affirmative determination in investigation No. AA1921–51, Titanium Sponge from the U.S.S.R., and the Commission's affirmative determination in investigation No. 731–TA–161 (Final), Titanium Sponge from Japan.

SUMMARY: The Commission hereby gives notice that it has instituted investigations pursuant to section 751(b) of the Tariff Act of 1930 (19 U.S.C. 1675(b)) (the Act) to review the determination of the U.S. Tariff Commission (predecessor agency to the Commission) in investigation No. AA1921–51, Titanium Sponge from the U.S.S.R., to the extent that determination applies to imports from Kazakstan, Russia, and Ukraine, and its own determination in investigation No. 731–TA–161 (Final), Titanium Sponge from Japan. The purpose of the investigations is to determine whether revocation of the orders covering imports from Japan, Kazakstan, Russia, and Ukraine is likely to lead to continuation or recurrence of material injury to an industry in the United States. Titanium sponge is provided for in subheading 8108.10.50 of the Harmonized Tariff Schedule of the United States.

For further information concerning the conduct of these investigations, hearing procedures, and rules of general application, consult the Commission's Rules of Practice and Procedure, part 201, subparts A through E (19 CFR part 201), and part 207, subparts A, C, D, and E (19 CFR part 207).

EFFECTIVE DATE: March 23, 1998.

FOR FURTHER INFORMATION CONTACT: Jonathan Seiger (202–205–3183), Office of Investigations, U.S. International Trade Commission, 500 E Street S.W., Washington, DC 20436. Hearing-impaired persons can obtain information on this matter by contacting the Commission's TDD terminal on 202–205–1810. Persons with mobility impairments who will need special assistance in gaining access to the Commission should contact the Office of the Secretary at 202–205–2000. General information concerning the Commission may also be obtained by accessing its internet server (http://www.usitc.gov).

SUPPLEMENTARY INFORMATION:

Background.—On April 19, 1968, the Department of the Treasury (Treasury) determined that imports of titanium sponge from the U.S.S.R. were being sold in the United States at less than fair value (LTFV) within the meaning of section 201(a) of the Antidumping Act of 1921, as amended (19 U.S.C. 160(a)) (33 FR 6377, Apr. 26, 1968); and on July 23, 1968 the U.S. Tariff Commission determined that an industry in the United States was materially injured by reason of imports of such LTFV merchandise (33 FR 10769, July 27, 1968). Accordingly, Treasury ordered that dumping duties be imposed on such imports (33 FR 12138, Aug. 28, 1968).[1]

Further, on September 24, 1984, Commerce determined that imports of titanium sponge from Japan were being sold in the United States at LTFV within the meaning of section 731 of the Act (19 U.S.C. 1673) (49 FR 38684, Oct. 1, 1984); and on November 7, 1984 the Commission determined, pursuant to section 735(b)(1) of the Act (19 U.S.C. 1673d(b)(1)), that an industry in the United States was threatened with material injury by reason of imports of such LTFV merchandise. Accordingly, Commerce ordered that dumping duties be imposed on such imports (49 FR 47053, Nov. 30, 1984).

On December 9, 1997, the Commission received a request to review its affirmative determination in investigation No. AA1921–51, as it applied to imports from Russia, pursuant to section 751(b) of the Act (19 U.S.C. 1675(b)). The request was filed by counsel on behalf of TMC Trading International, Ltd., an Irish trading company involved in the distribution of titanium sponge from Russia, and TMC USA, Inc., its U.S. affiliate. On December 31, 1997, the Commission requested written comments in the **Federal Register** (62 FR 68300) as to whether the changed circumstances alleged by the petitioner were sufficient to warrant institution of review investigations.[2] After reviewing comments received in response to that request, the Commission determines that certain of the alleged changed circumstances are sufficient to warrant review investigations.

Participation in the investigations and public service list.—Persons, including industrial users of the subject merchandise and, if the merchandise is sold at the retail level, representative consumer organizations, wishing to participate in the investigations as parties must file an entry of appearance with the Secretary to the Commission, as provided in section 201.11 of the Commission's rules, no later than 21 days prior to the hearing date specified in this notice. The Secretary will maintain a public service list containing the names and addresses of all persons, or their representatives, who are parties to the investigations.

Limited disclosure of business proprietary information (BPI) under an administrative protective order (APO) and BPI service list.—Pursuant to section 207.7(a) of the Commission's rules, the Secretary will make BPI gathered in these investigations available to authorized applicants under the APO issued in the investigations, provided that the application is made no later than 21 days prior to the hearing date specified in this notice. Authorized applicants must represent interested parties, as defined by 19 U.S.C. 1677(9), who are parties to the investigations. A separate service list will be maintained by the Secretary for those parties authorized to receive BPI under the APO.

Staff report.—The prehearing staff report in these investigations will be placed in the nonpublic record on May 22, 1998, and a public version will be issued thereafter, pursuant to section 207.22 of the Commission's rules.

Hearing.—The Commission will hold a hearing in connection with these investigations beginning at 9:30 a.m. on June 8, 1998, at the U.S. International Trade Commission Building. Requests to appear at the hearing should be filed in writing with the Secretary to the Commission on or before May 29, 1998. A nonparty who has testimony that may aid the Commission's deliberations may request permission to present a short statement at the hearing. All parties and nonparties desiring to appear at the hearing and make oral presentations should attend a prehearing conference to be held at 9:30 a.m. on June 1, 1998, at the U.S. International Trade Commission Building. Oral testimony and written materials to be submitted at the public hearing are governed by sections 201.6(b)(2), 201.13(f), and 207.24 of the Commission's rules. Parties must submit any request to present a portion of their hearing testimony *in camera* no later than 7 days prior to the date of the hearing.

Written submissions.—Each party who is an interested party shall submit a prehearing brief to the Commission. Prehearing briefs must conform with the provisions of section 207.23 of the Commission's rules; the deadline for filing is June 1, 1998. Parties may also file written testimony in connection with their presentation at the hearing, as provided in section 207.24 of the Commission's rules, and posthearing briefs, which must conform with the provisions of section 207.25 of the Commission's rules. The deadline for filing posthearing briefs is June 15, 1998; witness testimony must be filed no later than three days before the hearing. In addition, any person who has not entered an appearance as a party to the investigations may submit a written statement of information pertinent to the subject of the investigations on or before June 15, 1998. On July 2, 1998, the Commission will make available to parties all information on which they have not had an opportunity to comment. Parties may submit final comments on this information on or before July 7, 1998, but such final comments must not contain new factual information and must otherwise comply with section 207.30 of the Commission's rules. All written submissions must conform with the provisions of section 201.8 of the Commission's rules; any submissions that contain BPI must also conform with the requirements of sections 201.6,

[1] In 1992, the Department of Commerce (Commerce), in response to the division of the former Soviet Union into 15 independent states, changed the original antidumping finding against the U.S.S.R. to 15 separate antidumping orders covering the Baltic states and the republics of the former Soviet Union (57 FR 36070 (1992)). Commerce has since revoked all of the orders except those on imports from Kazakstan, Russia, and Ukraine.

[2] The Commission also invited comment on whether it should institute, on its own initiative, review investigations covering imports of titanium sponge from Japan, Kazakstan, and Ukraine.

207.3, and 207.7 of the Commission's rules.

In accordance with sections 201.16(c) and 207.3 of the Commission's rules, each document filed by a party to the investigations must be served on all other parties to the investigations (as identified by either the public or BPI service list), and a certificate of service must be timely filed. The Secretary will not accept a document for filing without a certificate of service.

Authority: These investigations are being conducted under authority of title VII of the Tariff Act of 1930; this notice is published pursuant to section 207.45 of the Commission's rules.

Issued: March 11, 1998.

By order of the Commission.

Donna R. Koehnke,

Secretary.

[FR Doc. 98–7421 Filed 3–20–98; 8:45 am]

BILLING CODE 7020–02–P

APPENDIX B

CALENDAR OF PUBLIC HEARING

CALENDAR OF PUBLIC HEARING

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

Subject	:	TITANIUM SPONGE FROM JAPAN, KAZAKHSTAN, RUSSIA, AND UKRAINE
Invs. Nos.	:	751- TA-17 through 20
Date and Time	:	June 8, 1998 - 9:30 a.m.

Sessions were held in connection with the investigation in the Main Hearing Room 101, 500 E Street, S.W., Washington, DC.

OPENING REMARKS

In Opposition to Revocation (**Laurence J. Lasoff**, Collier, Shannon, Rill & Scott, PLLC)

In Support of Revocation (**Melvin S. Schwechter**, LeBoeuf, Lamb, Greene & MacRae)

In Opposition to Revocation of the Antidumping Duty Orders:

DeKieffer & Horgan
Washington, DC
on behalf of

Titanium Metals Corporation ("Timet")

J. Landis Martin, Chief Executive Officer
Michael Metz, Director, Marketing
Hoy Frakes, Director, Procurement

J. Kevin Horgan--of counsel

Collier, Shannon, Rill & Scott, PLLC
Washington, DC
on behalf of

Allegheny Teledyne, Incorporated

David Floyd, Vice President - Commercial, Oremet, Allegheny Teledyne, Incorporated
William B. Hudgens, Economic Consultant, Georgetown Economic Services

Laurence J. Lasoff)--of counsel
John B. Brew)

In Support of Revocation of the Antidumping Duty Orders:

PANEL 1

Steptoe & Johnson LLP
Washington, DC
on behalf of

Boeing Company

Robert L. Ecker, Director, Raw Material and Standards

Richard O. Cunningham--of counsel

PANEL 2

LeBoeuf, Lamb, Greene & MacRae
Washington, DC
on behalf of

TMC Trading International, Limited
TMC USA, Incorporated

Peter Bond, President, TMC USA, Incorporated
Daniel K. Klett, Consultant, Capital Trade, Incorporated

Melvin S. Schwechter--of counsel

Wilmer, Cutler & Pickering
Washington, DC
on behalf of

RMI Titanium Company
Avisma Titanium-Magnesium Works

John H. Odle, Executive Vice President, RMI Titanium Company
Dawne S. Hickton, Vice President and General Counsel, RMI Titanium Company

John D. Greenwald--of counsel

PANEL 3

Squire, Sanders & Dempsey
Washington, DC
on behalf of

Ust-Kamenogorsk Titanium and Magnesium Plant ("UKTMP")
Specialty Metals Corporation

Sylvain Gehler, Managing Director, Specialty Metals Company
Bagdat Shayakhmetov, Director, Ust-Kamenogorsk Titanium and Magnesium Plant
Mikhail P. Orlov, Translator
Bruce Malashevich, President, Economic Consulting Services
Brian Becker, Senior Economist, Economic Consulting Services

Ritchie T. Thomas--of counsel

Graham & James LLP
Washington, DC
on behalf of

Toho Titanium Company Limited

Denis H. Oyakawa--of counsel

PANEL 4

Aitken Irvin Lewin Berlin Vrooman & Cohn, LLP
Washington, DC
on behalf of

Ministry of Industrial Policy of Ukraine
Zaporozhie Titanium and Magnesium Combine

Peter V. Zheved, Commercial Director, Zaporozhie Titanium and Magnesium Combine
Oleg A. Riabokon, Translator, Magister and Partners

Embassy of Ukraine, Washington, DC

Volodymyr G. Khrebet, Deputy Head, Trade and Economic Mission

Bruce Aitken)--of counsel
Martin J. Lewin)

APPENDIX C

SUMMARY DATA

Table C-1
Titanium sponge: Summary data concerning the U.S. market, 1995-97

* * * * * * *

APPENDIX D

ADDITIONAL TABLES

Table D-1
Titanium sponge: U.S. importers' imports, by source, 1995-97

* * * * * * *

Table D-2
Titanium sponge: U.S. shipments of domestic product, U.S. imports (including TIB imports), by source, and apparent U.S. consumption, 1995-97

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Table D-3
Titanium sponge: Apparent U.S. consumption and market shares (including TIB imports), 1995-97

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Table D-4
Titanium sponge: U.S. producers' domestic commercial shipments, U.S. non-TIB imports, by source, and apparent U.S. open-market consumption, 1995-97

* * * * * * *

Table D-5
Titanium sponge: Apparent U.S. open-market consumption and market shares of non-TIB imports, 1995-97

* * * * * * *

Table D-6
Titanium sponge: U.S. producers' domestic commercial shipments, U.S. imports (including TIB imports), by source, and apparent U.S. open-market consumption, 1995-97

* * * * * * *

Table D-7
Titanium sponge: Apparent U.S. open-market consumption and market shares (including TIB imports), 1995-97

* * * * * * *