

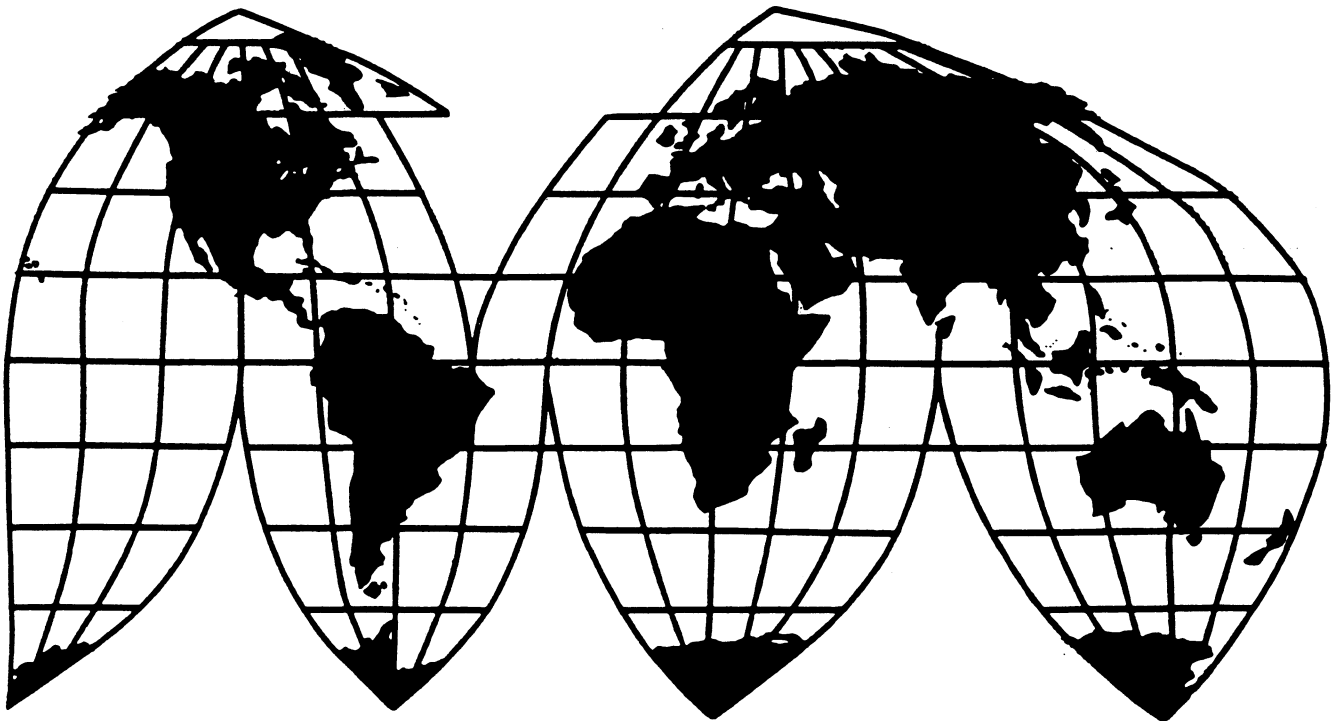
Ferrovandium and Nitrided Vandium from Russia

Investigation No. 731-TA-702 (Preliminary)

Publication 2796

July 1994

U.S. International Trade Commission



Washington, DC 20436

U.S. International Trade Commission

COMMISSIONERS

Peter S. Watson, Chairman
Janet A. Nuzum, Vice Chairman
David B. Rohr
Don E. Newquist
Carol T. Crawford
Lynn M. Bragg

Robert A. Rogowsky
Director of Operations

Staff assigned:

Larry Reavis, Investigator
Charles Yost, Commodity-Industry Analyst
Joshua Levy, Economist
John Ascienzo, Accountant
Steve McLaughlin, Attorney

Bob Eninger, Supervisory Investigator

**Address all communications to
Secretary to the Commission
United States International Trade Commission
Washington, DC 20436**

U.S. International Trade Commission

Washington, DC 20436

Ferrovandium and Nitrided Vanadium From Russia



Publication 2796

July 1994

CONTENTS

	<u>Page</u>
Part I: Determination and views of the Commission	I-1
Determination	I-3
Views of the Commission	I-5
Part II: Information obtained in the investigation	II-1
Introduction	II-3
Nature and extent of the alleged LTFV sales	II-3
The product	II-3
Summary	II-3
Description and uses	II-5
Production processes	II-6
Comparison of domestic and imported product	II-7
U.S. tariff treatment	II-7
U.S. producers and importers	II-7
U.S. market and channels of distribution	II-8
Consideration of the alleged material injury	II-9
U.S. production, capacity, capacity utilization, shipments, inventories, and employment	II-9
Financial experience of U.S. producers	II-11
Overall establishment operations	II-11
Operations on ferrovanadium and nitrided vanadium	II-12
Investment in productive facilities and return on assets	II-12
Capital expenditures	II-12
Research and development expenses	II-12
Capital and investment	II-13
Consideration of the alleged threat of material injury	II-13
Consideration of the causal relationship between the alleged LTFV imports and the alleged material injury	II-15
Imports, U.S. consumption, and market penetration	II-15
Prices	II-18
Marketing considerations	II-18
Product comparisons	II-19
Questionnaire price data	II-19
Price trends for sales of U.S.-produced ferrovanadium and nitrided vanadium	II-20
Price trends for sales of imported Russian ferrovanadium and nitrided vanadium	II-21
Input costs	II-21
Price comparisons for sales of imported Russian ferrovanadium and nitrided vanadium	II-21
Exchange rates	II-22
Lost sales and lost revenues	II-23
Appendixes	
A. <i>Federal Register</i> notices	A-1
B. Participants at the Commission's conference	B-1
C. Selected data related to the alleged material injury and the causal relationship between the alleged LTFV imports and the alleged material injury	C-1

CONTENTS

	<u>Page</u>
Appendixes--Continued	
D. Comments received from U.S. producers on the impact of imports of ferrovanadium and nitrated vanadium from Russia on their growth, investment, ability to raise capital, and development and production efforts	D-1

Figures

1. Ferrovanadium and nitrated vanadium: Weighted-average net delivered prices of U.S.-produced and imported Russian product 1 sold to end users, by quarters, Jan. 1991-Mar. 1994	II-20
2. Ferrovanadium and nitrated vanadium: Weighted-average net delivered prices of U.S.-produced and imported Russian product 2 sold to end users, by quarters, Jan. 1991-Mar. 1994	II-20
3. Ferrovanadium and nitrated vanadium: Weighted-average net delivered prices of U.S.-produced and imported Russian product 3 sold to end users, by quarters, Jan. 1991-Mar. 1994	II-20
4. Input costs: Indexes of the unit costs of vanadium residue and vanadium slag used in the production of ferrovanadium and nitrated vanadium and prices for U.S.-produced products 1-2, by quarters, Jan. 1991-Mar. 1994	II-21
5. Indexes of the nominal interbank market exchange rates between the U.S. dollar and Russian ruble, by quarters, Jan. 1992-July 1993	II-22

Tables

1. Ferrovanadium and nitrated vanadium: U.S. producers, plant locations, and respective shares of domestic production (by quantity), 1993	II-8
2. Ferrovanadium and nitrated vanadium: U.S. production, average practical capacity, capacity utilization, domestic shipments, exports, end-of-period inventories, average number of U.S. production and related workers and hours worked by and compensation paid to such workers, 1991-93, Jan.-Mar. 1993, and Jan.-Mar. 1994	II-10
3. Nitrated vanadium: U.S. production, average practical capacity, domestic shipments, exports, average number of U.S. production and related workers and hours worked by and compensation paid to such workers, 1991-93, Jan.-Mar. 1993, and Jan.-Mar. 1994	II-11
4. Income-and-loss experience of U.S. producers on the overall operations of their establishments wherein ferrovanadium and nitrated vanadium are produced, fiscal years 1991-93, Jan.-Mar. 1993, and Jan.-Mar. 1994	II-11
5. Income-and-loss experience of U.S. producers on their operations producing ferrovanadium and nitrated vanadium, fiscal years 1991-93, Jan.-Mar. 1993, and Jan.-Mar. 1994	II-12
6. Income-and-loss experience of U.S. producers on their operations producing ferrovanadium and nitrated vanadium, by firms, fiscal years 1991-93, Jan.-Mar. 1993, and Jan.-Mar. 1994	II-12
7. Value of assets and return on assets of U.S. producers' operations producing ferrovanadium and nitrated vanadium, fiscal years 1991-93, Jan.-Mar. 1993, and Jan.-Mar. 1994	II-12

CONTENTS

	<u>Page</u>
Tables--Continued	
8. Capital expenditures by U.S. producers of ferrovandium and nitrated vanadium, by products, fiscal years 1991-93, Jan.-Mar. 1993, and Jan.-Mar. 1994	II-12
9. Ferrovandium and nitrated vanadium: U.S. imports, by sources, 1991-93, Jan.-Mar. 1993, and Jan.-Mar. 1994	II-16
10. Ferrovandium and nitrated vanadium: U.S. shipments of domestic product, U.S. imports, and apparent U.S. consumption, 1991-93, Jan.-Mar. 1993, and Jan.-Mar. 1994	II-17
11. Ferrovandium and nitrated vanadium: Weighted-average net delivered prices and total quantities of U.S.-produced and imported Russian product 1 sold to end users, by quarters, Jan. 1991-Mar. 1994	II-20
12. Ferrovandium and nitrated vanadium: Weighted-average net delivered prices and total quantities of U.S.-produced and imported Russian product 2 sold to end users, by quarters, Jan. 1991-Mar. 1994	II-20
13. Ferrovandium and nitrated vanadium: Weighted-average net delivered prices and total quantities of U.S.-produced and imported Russian product 3 sold to end users, by quarters, Jan. 1991-Mar. 1994	II-20
14. Ferrovandium and nitrated vanadium: Margins of underselling/(overselling) for sales of products 1 and 2 to end users, by quarters, Jan. 1993-Mar. 1994	II-21
C-1. Ferrovandium and nitrated vanadium: Summary data concerning the U.S. market, 1991-93, Jan.-Mar. 1993, and Jan.-Mar. 1994	C-3
C-2. Nitrated vanadium: Summary data concerning the U.S. market, 1991-93, Jan.-Mar. 1993, and Jan.-Mar. 1994	C-4

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.

PART I
DETERMINATION AND VIEWS OF THE COMMISSION

UNITED STATES INTERNATIONAL TRADE COMMISSION

Investigation No. 731-TA-702 (Preliminary)

FERROVANADIUM AND NITRIDED VANADIUM FROM RUSSIA

Determination

On the basis of the record¹ developed in the subject investigation, the Commission determines, pursuant to section 733(a) of the Tariff Act of 1930 (19 U.S.C. § 1673b(a)), that there is a reasonable indication that an industry in the United States is materially injured by reason of imports from Russia of ferrovandium and nitrated vanadium, provided for in subheadings 7202.92.00 and 2850.00.20 of the Harmonized Tariff Schedule of the United States, that are alleged to be sold in the United States at less than fair value (LTFV).

Background

On May 31, 1994, a petition was filed with the Commission and the U.S. Department of Commerce by counsel on behalf of Shieldalloy Metallurgical Corp., New York, NY, alleging that imports of ferrovandium and nitrated vanadium from Russia are materially injuring and threatening to materially injure an industry in the United States. Accordingly, effective May 31, 1994, the Commission instituted antidumping investigation No. 731-TA-702 (Preliminary).

Notice of the institution of the Commission's investigation and of a public conference to be held in connection therewith was given by posting copies of the notice in the Office of the Secretary, U.S. International Trade Commission, Washington, DC, and by publishing the notice in the *Federal Register* of June 8, 1994 (59 F.R. 29617). The conference was held in Washington, DC, on June 21, 1994, and all persons who requested the opportunity were permitted to appear in person or by counsel.

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

VIEWS OF THE COMMISSION

Based on the record in this preliminary investigation, we determine that there is a reasonable indication that an industry in the United States is materially injured by reason of imports of ferrovanadium and nitrided vanadium from Russia that are allegedly sold in the United States at less than fair value ("LTFV").¹

I. THE LEGAL STANDARD FOR PRELIMINARY DETERMINATIONS

The legal standard in preliminary antidumping duty investigations requires the Commission to determine, based upon the best information available at the time of the preliminary determination, whether there is a reasonable indication that a domestic industry is materially injured or threatened with material injury by reason of the allegedly LTFV imports.² In applying this standard, the Commission weighs the evidence before it and determines whether "(1) the record as a whole contains clear and convincing evidence that there is no material injury or threat of material injury; and (2) no likelihood exists that any contrary evidence will arise in a final investigation."³

II. LIKE PRODUCT

A. In General

In determining whether there is a reasonable indication that an industry in the United States is materially injured by reason of the subject imports, the Commission must first define the "like product" and the "industry." Section 771(4)(A) of the Tariff Act of 1930 (the "Act") defines the relevant industry as the "domestic producers as a whole of a like product, or those producers whose collective output of the like product constitutes a major proportion of the total domestic production of that product."⁴ In turn, the Act defines "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."⁵

The Commission's decision regarding the appropriate like product(s) in an investigation is essentially a factual determination, and the Commission has applied the statutory standard of "like" or "most similar in characteristics and uses" on a case-by-case basis.⁶ No single factor is dispositive, and the Commission may consider other factors it deems relevant based upon the

¹ Whether there is a reasonable indication that the establishment of an industry in the United States is materially retarded is not an issue in this investigation.

² 19 U.S.C. § 1673b(a); see also American Lamb Co. v. United States, 785 F.2d 994 (Fed. Cir. 1986); Calabrian Corp. v. United States Int'l Trade Comm'n, 794 F. Supp. 377, 381 (Ct. Int'l Trade 1992).

³ American Lamb, 785 F.2d at 1001; see also Torrington Co. v. United States, 790 F. Supp. 1161, 1165 (Ct. Int'l Trade 1992), aff'd without opinion 991 F.2d 809 (Fed. Cir. 1993).

⁴ 1219 U.S.C. § 1677(4)(A).

⁵ 19 U.S.C. § 1677(10).

⁶ See Torrington Co. v. United States, 747 F. Supp. 744, 749 n.3 (Ct. Int'l Trade 1990), aff'd, 938 F.2d 1278 (Fed. Cir. 1991) ("[E]very like product determination 'must be made on the particular record at issue' and the 'unique facts of each case.'"). In analyzing like product issues, the Commission generally considers six factors including (1) physical characteristics and uses, (2) interchangeability, (3) channels of distribution, (4) customer and producer perceptions, (5) common manufacturing facilities and production employees, and (6) where appropriate, price. Calabrian, 794 F. Supp. at 382 n.4.

facts of a particular investigation. Generally the Commission requires "clear dividing lines among possible like products" and disregards minor variations.⁷

The imported articles subject to this investigation are ferrovanadium and nitrated vanadium.⁸ Both ferrovanadium and nitrated vanadium are forms of vanadium additives used to enhance the hardness, ductility, and toughness of steel.⁹ Ferrovanadium is an iron alloy usually containing by weight between forty and eighty percent of the pure metal element vanadium and at least seven percent iron.¹⁰ Nitrated vanadium is a ferrovanadium product that also contains at least five percent nitrogen.¹¹

Vanadium exists in the residue from the production or consumption of slag from iron, uranium, and phosphorus; spent catalysts from crude oil refining; and fly ash and boiler scab from oil-burning power plants.¹² The raw material must generally be converted into an intermediate product, typically vanadium pentoxide,¹³ and then reduced to ferrovanadium in a process using aluminum, carbon, and/or silicon as the chief reducing component.¹⁴ The molded bricks of ferrovanadium are then crushed into standard-sized particles of 2 inches or less in diameter.¹⁵ To produce nitrated vanadium, the raw materials are converted to vanadium pentoxide, the vanadium pentoxide powder is agglomerated into briquettes, reduced with aluminum and/or carbon, and then subjected to a high nitrogen atmosphere.¹⁶

B. Ferrovanadium and Nitrated Vanadium Constitute One Like Product

In this preliminary investigation, the principal like product issue is whether ferrovanadium and nitrated vanadium are separate like products. Petitioners argue that ferrovanadium and nitrated vanadium, regardless of grade, chemistry, form, shape, or size, constitute one like product.¹⁷ The respondents argue that there is a clear dividing line between ferrovanadium and nitrated vanadium.¹⁸ For the purposes of this preliminary investigation, we determine that ferrovanadium and nitrated vanadium comprise a single like product.¹⁹

Ferrovanadium and nitrated vanadium are both used as alloying agents in the production of certain specific types of alloy steel. The vanadium contained in the products improves the alloy steel's hardness and ductility, as well as aiding grain refining and case hardening.²⁰ Thus, customers buy both products mainly to obtain the vanadium element.²¹ While certain purchasers prefer nitrated vanadium for some applications, it cannot be substituted for ferrovanadium in

⁷ Torrington, 747 F. Supp. at 748-49.

⁸ 59 Fed. Reg. 32952 (June 27, 1994).

⁹ Confidential Report to the Commission at I-8 to I-9 (hereinafter referred to as "CR"); Public Report at II-5 (hereinafter referred to as "PR").

¹⁰ CR at I-4; PR at II-3.

¹¹ Id.

¹² CR at I-5; PR at II-4.

¹³ The petitioner, Shieldalloy Metallurgical Corp., does not create an intermediate product when converting raw materials into ferrovanadium. See Petition at 13-14.

¹⁴ CR at I-5; PR at II-4.

¹⁵ Id.

¹⁶ CR at I-12; PR at II-7. However, nitrated vanadium could also be produced by infusing any ferrovanadium with nitrogen.

¹⁷ Department of Commerce Notice of Initiation, 59 Fed. Reg. 32952 (June 27, 1994), reprinted in Staff Report at A-5.

¹⁸ Respondent Odermet Ltd.'s Postconference Brief at 8.

¹⁹ Nitrated vanadium is no longer produced in the United States. It was produced by Strategic Mineral Corp. (Stratcor) during the period of investigation, but such production ceased in July, 1992. CR at I-14; PR at II-7 to II-8.

²⁰ CR at I-8; PR at II-5.

²¹ CR at I-4 to I-5; PR at II-3.

most cases.²² Ferrovandium, by contrast, can be used in any application that uses nitrated vandium.²³

Both ferrovandium and nitrated vandium are produced using the same raw materials, which consist of various vandium-containing residues from the production or consumption of other products.²⁴ They are produced by similar methods, but the domestic industry employed separate production lines.²⁵ Nitrated vandium is not a downstream product made from ferrovandium.²⁶

From 1991 through January-March 1994, nearly the entire domestic production of ferrovandium and nitrated vandium was sold directly to the domestic steel industry. Further, all parties appear to agree that prices for ferrovandium and nitrated vandium are related. Nitrated vandium is more expensive due to higher production costs, but for customers who use nitrated vandium the higher cost is offset by the lower amount of vandium required to achieve the same result due to the presence of nitrogen. Otherwise, prices charged for ferrovandium and nitrated vandium are based almost exclusively on the contained vandium content.²⁷ For this reason, we believe that ferrovandium and nitrated vandium share an essential physical characteristic, vandium, that is more important than the differences in their other contained elements. The high vandium content results in similar end uses — production of alloy steels with particular characteristics derived from the vandium content.²⁸

In sum, based upon the record in this preliminary investigation, we find that the common raw materials, overlapping end uses,²⁹ related prices, identical channels of distribution, and similar production processes weigh in favor of one like product. While there are some differences between ferrovandium and nitrated vandium in terms of their production processes and, to at least some degree, their end uses, we find that they share the essential characteristic of a high percentage of vandium content that clearly separates them from other steel alloying agents.³⁰ Accordingly, we find that there is a single like product consisting of all ferrovandium and nitrated vandium and we define the domestic industry to consist of all producers of ferrovandium and nitrated vandium.

²² CR at I-9; PR at II-5 to II-6.

²³ See BHP Trading, Inc.'s Importers' Questionnaire at 13a.

²⁴ CR at I-5; PR at II-4.

²⁵ CR at I-12; PR at II-7. Both ferrovandium and nitrated vandium are converted to vandium pentoxide from the same raw materials. CR at I-10 to I-12; PR at II-6 to II-7. After conversion to vandium pentoxide from the raw materials, ferrovandium is commonly produced by reducing the pentoxide using aluminum, carbon and/or silicon, along with iron scrap and a flux. CR at I-10; PR at II-6. Nitrated vandium is produced by agglomerating the vandium pentoxide powder into briquettes and reducing it with aluminum and/or carbon, then subjecting it to a high nitrogen atmosphere. CR at I-12; PR at II-7.

²⁶ For this reason we do not believe that the semi-finished product methodology is applicable to this investigation, notwithstanding the argument of Odermet. We therefore use the traditional six-factor like product analysis, rather than a vertical analysis, in this investigation.

²⁷ Ferrovandium is produced in a number of grades according to vandium content, which varies from 40 to 80 percent by weight. CR at I-7; PR at II-5. The most common grades contain 42 percent, 52 percent, and 80 percent vandium. *Id.* Nitrated vandium usually contains approximately 80 percent vandium. CR at I-7 to I-8; PR at II-5. Steel producers have the technical capability to use any grade of ferrovandium interchangeably. CR at I-9; PR at II-5.

²⁸ CR at I-34 (list of end uses for both); PR at II-18.

²⁹ The record is not clear at this time with regard to the interchangeability of ferrovandium and nitrated vandium. In any final investigation, we will revisit this like product question and will seek information from purchasers regarding the interchangeability of the products.

³⁰ Cf. Magnesium from the People's Republic of China, Russia, and Ukraine, Inv. Nos. 731-TA-696-698 (Preliminary), USITC Pub. 2775 at I-11 (May 1994).

III. RELATED PARTIES

A. **Statutory Framework**

In this investigation, there are three domestic producers of ferrovanadium and nitrated vanadium: the petitioner (Shieldalloy), Strategic Mineral Corp. (Stratcor), and Bear Metallurgical Corp. (Bear). Stratcor ceased all production of ferrovanadium in January of 1994 in favor of a tolling arrangement with Bear and importing from Russia. Bear is a toll producer that makes ferrovanadium from intermediate products such as vanadium pentoxide.³¹

Although Shieldalloy and Stratcor are domestic producers, they both imported subject merchandise from Russia. Therefore we must consider whether to exclude them from the domestic industry as related parties. The related parties provision³² allows for the exclusion of certain domestic producers from the domestic industry for the purposes of an injury determination. Applying the provision involves two steps.³³ First, the Commission must determine whether a domestic producer meets the definition of a related party. The statute defines a related party as a domestic producer that is either related to exporters or importers of the product under investigation, or is itself an importer of that product. If a company is "related" under section 771(4)(B), the Commission then determines whether "appropriate circumstances" exist for excluding the company in question from the definition of the domestic industry.³⁴ The primary factors the Commission has examined in deciding whether appropriate circumstances exist to exclude a related party include:

- (1) the percentage of domestic production attributable to the importing producer;
- (2) the reason the U.S. producer has decided to import the product subject to investigation, *i.e.*, whether the firm benefits from the LTFV sales or subsidies or whether the firm must import in order to enable it to continue production and compete in the U.S. market; and

³¹ As noted previously, Stratcor ceased production of nitrated vanadium in July, 1992. CR at I-14; PR at II-8. We find that Stratcor is a domestic producer even though it ceased production of the like product during the period of investigation. Drawing the opposite conclusion could lead to the anomalous situation in which a domestic firm that is driven out of business by dumped imports could not maintain an antidumping action because of the severity of its injury. The Commission has consistently included data from all domestic producers, regardless of whether a producer exited the industry during the period of investigation. 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). Bear is also a domestic producer, even though it is a toll producer and is not as fully integrated as Shieldalloy. Bear currently toll produces ferrovanadium for Stratcor. CR at I-14; PR at II-8. The Commission routinely includes toll producers in the domestic industry. See Aramid Fiber Formed of Poly Para-Phenylene Terephthalamide from the Netherlands, Inv. No. 731-TA-652 (Final), USITC Pub. 2783 at I-8 to I-9 (June 1994). Reduction of ferrovanadium from vanadium pentoxide is a significant operation that entails approximately 40 to 50 percent of the total cost of reducing ferrovanadium from vanadium slag or other raw materials.

³² 19 U.S.C. § 1677(4)(B).

³³ See, e.g., Stainless Steel Flanges from India and Taiwan, Inv. Nos. 731-TA-639 and 640 (Final), USITC Pub. 2724 at I-9-I-10 (Feb. 1994).

³⁴ 19 U.S.C. § 1677(4)(B).

- (3) the position of the related producer vis-a-vis the rest of the industry, *i.e.*, whether inclusion or exclusion of the related party will skew the data for the rest of the industry.³⁵

Exclusion of a related party is within the Commission's discretion based upon the facts presented in each case.³⁶ The rationale for the related parties provision is that domestic producers who are related parties may be in a position that shields them from any injury caused by subject imports.³⁷ Thus, including these parties within the domestic industry would distort the analysis of the condition of the domestic industry.³⁸

Because both Stratcor and Shieldalloy import subject merchandise from Russia, they are clearly related parties. Thus, the issue is whether appropriate circumstances exist for excluding either of these related producers from the domestic industry. We conclude, for purposes of this preliminary investigation, that such appropriate circumstances do not exist to exclude related parties.

While petitioner Shieldalloy imports the subject merchandise, its imports remain a relatively small percentage of its total production.³⁹ Shieldalloy is also the largest domestic producer of ferrovandium. It has stated that it began to import to enable it to compete in the U.S. market.⁴⁰ Finally, its production and financial information do not indicate that it has been shielded in any way from the impact of imports.

Similarly, Stratcor's imports during 1993 and interim 1994 were also low relative to its total production.⁴¹ Stratcor is also a large domestic producer that was once responsible for a significant share of domestic production.⁴² Further, it appears that Stratcor's imports did not shield its domestic operations from import competition; instead, with the exception of toll conversion by Bear, imports have almost entirely replaced domestic production.⁴³

³⁵ See, e.g., Torrington, 790 F. Supp. 1161. The Commission has also considered whether each company's books are kept separately from its "relations" and whether the primary interest of the related producer lies in domestic production or importation. Fresh Garlic from the People's Republic of China, Inv. No. 731-TA-683 (Preliminary), USITC Pub. 2755 at I-14 (Mar. 1994); Rock Salt from Canada, Inv. No. 731-TA-239 (Final), USITC Pub. 1798 at 12 (1986).

³⁶ See Torrington, 790 F. Supp. at 1168; Sandvik, 721 F. Supp. at 1331-32; Empire Plow Co. v. United States, 675 F. Supp. 1348, 1352 (Ct. Int'l Trade 1987).

³⁷ See Torrington, 790 F. Supp. at 1168; Empire Plow, 675 F. Supp. at 1353-54 (analysis of "[b]enefits accrued from the relationship" as major factor in deciding whether to exclude related party held "reasonable approach in light of the legislative history"); S. Rep. No. 249, 96th Cong. 1st Sess. at 83 (1979) ("[W]here a U.S. producer is related to a foreign exporter and the foreign exporter directs his exports to the United States so as not to compete with his related U.S. producer, this should be a case where the ITC would not consider the related U.S. producer to be a part of the domestic industry.").

³⁸ See, e.g., Sandvik, 721 F. Supp. at 1331-32 (related party appeared to benefit from dumped imports).

³⁹ See Shieldalloy's Importers' Questionnaire, Response to Question II-A.2 at 10; Shieldalloy's Producers' Questionnaire, Response to Question II-B.1 at 11. Shieldalloy's parent company, Metallurg, Inc., also owns a subsidiary plant in Germany.

⁴⁰ See Petition at 24.

⁴¹ See Stratcor's Importers' Questionnaire, Response to Question II-A.2 at 10; Stratcor's Producer's Questionnaire, Response to Question II-B.1 at 11. Stratcor produced no ferrovandium in interim 1994, but has entered into a tolling arrangement with Bear.

⁴² With respect to nitrided vanadium alone, Stratcor ceased all production in July 1992 in favor of imports from South Africa. CR at I-19; PR at II-11.

⁴³ In any final investigation, we intend to examine more closely the relationship between Stratcor's domestic operations and subject imports and the extent to which this relationship may affect our analysis of whether to exclude Stratcor from the domestic industry.

IV. CONDITION OF THE DOMESTIC INDUSTRY

In assessing whether there is a reasonable indication that the domestic industry is materially injured by reason of allegedly LTFV imports, the Commission considers all relevant economic factors that bear on the state of the industry in the United States. These factors include output, sales, inventories, capacity utilization, market share, employment, wages, productivity, profits, cash flow, return on investment, ability to raise capital, and research and development. No single factor is determinative, and we consider all relevant factors "within the context of the business cycle and conditions of competition that are distinctive to the affected industry."⁴⁴

We note at the outset several relevant conditions of competition we considered in evaluating the condition of the domestic industry. One significant condition of competition is that the subject merchandise from Russia was first sold in the U.S. market in late 1992,⁴⁵ when Russian producers began to liquidate domestic stockpiles.⁴⁶ A second condition of competition is the exit from the industry of Stratcor,⁴⁷ which ceased production of nitrated vanadium in July 1992, and ceased ferrovanadium production in January 1994, in favor of a toll arrangement with Bear.⁴⁸ Finally, we note that the domestic cost of the raw materials used in production of ferrovanadium and nitrated vanadium fell throughout the period under investigation.⁴⁹

Domestic consumption of ferrovanadium and nitrated vanadium increased 36.8 percent between 1991 and 1993, and continued to increase even more rapidly in the first quarter of 1994, compared with interim 1993.⁵⁰ Notwithstanding this rapid increase in consumption, combined U.S. industry data for ferrovanadium and nitrated vanadium show general declines in production. Capacity remained constant throughout the entire period of investigation,⁵¹ but capacity utilization fell from 37.3 percent in 1991 to 34.4 percent in 1993. In interim 1994, capacity utilization declined further, compared with interim 1993.⁵² Production from 1991 to 1993 fell from 7,888,000 pounds to 7,275,000 pounds.⁵³ In interim 1994, production also declined, compared with interim 1993.⁵⁴

⁴⁴ 18 U.S.C. § 1677(7)(C)(iii).

⁴⁵ The Commission's investigation covers the period from 1991 to January-March 1994.

⁴⁶ See Odermet's Postconference Brief at 28. While this issue does not appear to bear on whether there is material injury, it will be relevant to the question of threat of material injury that may arise in any final determination.

⁴⁷ In any final investigation, we will consider to what extent Stratcor stopped producing and began importing ferrovanadium and nitrated vanadium as a result of competition or the threat of competition from subject imports.

⁴⁸ CR at I-14; PR at II-7 to II-8. In any final determination we intend to examine the effects of Bear's tolling agreement with Stratcor, and to what extent, if any, the ferrovanadium operations of both companies were insulated from or benefitted from the allegedly LTFV Russian imports.

⁴⁹ CR at I-44; PR at II-21.

⁵⁰ CR at C-3, Table C-1 (U.S. consumption quantity: Amount). Demand for ferrovanadium and nitrated vanadium is derived from demand for alloy steel, because the steel industry consumes virtually all ferrovanadium and nitrated vanadium. In any final investigation, we will consider whether the increased domestic consumption of ferrovanadium resulted from increased steel production, shifts in demand away from substitute products (e.g., ferrocolumbium and ferromolybdenum), or consumer inventory build-up caused by lower prices.

⁵¹ CR at I-17, Table 2 (Capacity).

⁵² CR at I-17, Table 2 (Ratio of production to capacity). We will examine more closely in any final investigation whether these levels of capacity utilization are consistent with past industry performance, or whether they are regarded as unnaturally low, and the significance of such capacity rates to the industry's financial performance.

⁵³ CR at I-17, Table 2 (Production).

⁵⁴ Id.

From 1991 to 1993, U.S. shipments fell from 7,573,000 pounds to 6,862,000 pounds.⁵⁵ In interim 1994, U.S. shipments declined to 1,754,000 pounds, compared with 1,825,000 pounds in interim 1993.⁵⁶ From 1991 to interim 1994, the average unit value of the subject product declined from \$7.03 per pound of contained vanadium to \$3.83 per pound.⁵⁷ The ratio of inventories to shipments remained relatively stable throughout the period.⁵⁸ During this same period, the average number of production and related workers fell from 207 in 1991 to 154 in 1993 and fell further in interim 1994, compared with interim 1993.⁵⁹ Hours worked fell by similar amounts.⁶⁰

Net sales of ferrovanadium and nitrated vanadium declined substantially throughout the period of investigation.⁶¹ Operating profits/losses worsened throughout the period of investigation.⁶² On September 2, 1993, Shiedalloy filed a voluntary petition for relief under Chapter 11 of the Bankruptcy Code.^{63 64}

In their questionnaire responses, two domestic producers indicated that their firms were experiencing negative effects on growth, investment, ability to raise capital, or existing development or production efforts since 1991 as a result of imports of Russian ferrovanadium. A third domestic producer stated that it had not experienced any such negative effects.⁶⁵

V. REASONABLE INDICATION OF MATERIAL INJURY BY REASON OF ALLEGEDLY LTFV IMPORTS OF FERROVANADIUM AND NITRIDED VANADIUM FROM RUSSIA

A. **Legal Standard**

In making a determination in preliminary antidumping investigations, the Commission determines whether there is a reasonable indication of material injury "by reason of" the allegedly LTFV imports.⁶⁶ The Commission must consider the volume of imports, their effect on prices for the like product, and their impact on domestic producers of the like product, but only in the context of U.S. production operations.⁶⁷ Although the Commission may consider

⁵⁵ CR at C-3, Table C-1 (U.S. shipments: Quantity).

⁵⁶ Id.

⁵⁷ CR at I-17 to I-18 & Table 2 (Domestic shipments: Unit value (per pound)).

⁵⁸ CR at I-17, Table 2 (Inventories).

⁵⁹ CR at I-17, Table 2 (Average number of production and related workers).

⁶⁰ CR at I-17, Table 2 (Hours worked by production and related workers).

⁶¹ CR at I-23, Table 5 (Net sales (Value)). The specific data are confidential.

⁶² CR at C-3, Table C-1 (Operating income (loss)/sales).

⁶³ CR at D-3; PR at D-3.

⁶⁴ CR at I-20; PR at II-11.

⁶⁵ Based on their analysis of these indicators, Commissioners Rohr and Newquist find a reasonable indication that the domestic industry is experiencing material injury.

⁶⁶ 19 U.S.C. §§ 1673b(a), 1671b(a).

⁶⁷ 19 U.S.C. § 1677(7)(B)(i).

alternative causes of injury,⁶⁸ it does not weigh causes.⁶⁹ The statutory language regarding causation has been interpreted differently by different Commissioners.^{70 71 72}

B. Volume of Subject Imports

The volume of allegedly LTFV imports measured by both quantity and value is significant, and increased substantially during the period of investigation.⁷³ While there were no subject imports in 1991, imports increased to 23,000 pounds in 1992, then to 1,547,000 pounds in 1993.⁷⁴ Subject imports increased from 23,000 pounds in interim 1993 to 1,157,000 pounds in interim 1994.⁷⁵ The value of the subject imports likewise increased rapidly, from zero in 1991, to \$89,000 in 1992, to \$4,817,000 in 1993.⁷⁶ In interim 1994 alone, import value was \$2,911,000, which is more than half the value of subject imports for all of 1993.⁷⁷

Market penetration of subject imports also increased dramatically during the period of investigation, while the market share of the domestic industry declined.⁷⁸ As a share of

⁶⁸ 19 U.S.C. § 1677(B).

⁶⁹ See, e.g., Citrosuco Paulista, S.A. v. United States, 704 F. Supp. 1075, 1101 (Ct. Int'l Trade 1988). Alternative causes may include the following:

[T]he volume and prices of imports sold at fair value, contraction in demand or changes in patterns of consumption, trade, restrictive practices of and competition between the foreign and domestic producers, developments in technology, and the export performance and productivity of the domestic industry.

S. Rep. No. 249, 96th Cong., 1st Sess. 74 (1979). Similar language is contained in the House Report. H.R. Rep. No. 317, 96th Cong., 1st Sess. 47 (1979).

⁷⁰ For Chairman Watson's interpretation of the statutory requirement regarding causation, see Certain Calcium Aluminate Cement and Cement Clinker from France, Inv. No. 731-TA-645 (Final), USITC Pub. 2772 at I-14 n.68 (May 1994).

⁷¹ Vice Chairman Nuzum, Commissioner Rohr, and Commissioner Newquist further note that the Commission need not determine that imports are "the principal, a substantial, or a significant cause of material injury." S. Rep. No. 249, at 57, 74. Rather, a finding that imports are a cause of material injury is sufficient. See, e.g., Metallwerken Nederland B.V. v. United States, 728 F. Supp. 730, 741 (Ct. Int'l Trade 1989); Citrusoco Paulista, 704 F. Supp. at 1101.

⁷² Commissioner Crawford notes that the statute requires that the Commission determine whether a domestic industry is "materially injured by reason of" the LTFV imports. She finds that the clear meaning of the statute is to require a determination whether the domestic industry is materially injured by reason of LTFV imports, not by reason of LTFV imports among other things. Many, if not most, domestic industries are subject to injury from more than one economic factor. Of these factors, there may be more than one that independently is causing material injury to the domestic industry. It is assumed in the legislative history that the "ITC will consider information which indicates that harm is caused by factors other than less-than-fair-value imports." S. Rep. No. 249 at 75. However, the legislative history makes it clear that the Commission is not to weigh or prioritize the factors that are independently causing material injury. Id. at 74; H.R. Rep. No. 317 at 46-47. The Commission is not to determine if the LTFV imports are "the principal, a substantial or a significant cause of material injury." S. Rep. No. 249 at 74. Rather, it is to determine whether any injury "by reason of" the LTFV imports is material. That is, the Commission must determine if the subject imports are causing material injury to the domestic industry. "When determining the effect of imports on the domestic industry, the Commission must consider all relevant factors that can demonstrate if unfairly traded imports are materially injuring the domestic industry." S. Rep. No. 71, 100th Cong., 1st Sess. 116 (1987) (emphasis added).

⁷³ CR at C-3, Table C-1 (U.S. importers' imports from Russia: Imports quantity).

⁷⁴ Id.

⁷⁵ Id.

⁷⁶ CR at C-3, Table C-1 (U.S. importers' imports from Russia: Imports value).

⁷⁷ Id.

⁷⁸ CR at I-33; PR at II-15.

consumption, the quantity of U.S. producers' shipments fell from 88 percent in 1991 to 58 percent in 1993, and declined further to 48 percent in interim 1994, compared with 71 percent in interim 1993.⁷⁹ During the period of investigation, Russian imports went from zero to 32 percent of domestic consumption.⁸⁰

C. Effects of Allegedly LTFV Imports on Domestic Prices

Most U.S.-produced and imported Russian ferrovanadium and nitrided vanadium is sold on a bid basis.⁸¹ Prices are generally negotiated on an individual sale basis and are not based on list prices.⁸² Information in the record suggests that domestically-produced ferrovanadium and the subject imports are close substitutes.⁸³ Russian ferrovanadium differs from domestically produced ferrovanadium because the Russian product requires crushing and repackaging before being sold on the domestic market. This process adds 3 to 8 percent to the overall cost of the imports.⁸⁴ ⁸⁵ Other factors, including lead times, give the domestic product a small price premium. These minor differences do not significantly limit substitutability or invalidate price comparisons, however. Moreover, lost sales data indicate competition between imported and domestic products based on price.⁸⁶ ⁸⁷

The available pricing data indicate that domestic and import prices declined throughout the period of investigation. Although unit production costs declined throughout the period of investigation, domestic prices declined at a faster rate.⁸⁸ Because the subject imports only began entering the United States toward the end of 1992, pricing data for imports are only available beginning in the third quarter of 1993. Subject imports undersold U.S.-produced crushed ferrovanadium of the most popular grade (40-60 percent) in all reported quarterly transactions for 1993 and 1994.⁸⁹ ⁹⁰ U.S. producers lowered their prices significantly every quarter but were still undersold.⁹¹ Prices for U.S.-produced crushed ferrovanadium of 78-82 percent grade also fell significantly every quarter.⁹² Although Russian prices for 78-82 percent grade ferrovanadium remained somewhat higher than U.S. prices for that grade, the Russian price of 78-82 percent ferrovanadium in the last quarter of 1993 was lower than the U.S. price of 40-

⁷⁹ CR at I-33; PR at II-15.

⁸⁰ Id.

⁸¹ CR at I-35; PR at II-18.

⁸² Id.

⁸³ See CR at I-36; PR at II-19. In any final investigation, we will consider further the level of substitutability, particularly through purchaser questionnaire responses.

⁸⁴ CR at I-14; PR at II-7.

⁸⁵ Chairman Watson and Commissioner Bragg note that prices for the imported Russian ferrovanadium and nitrided vanadium were approximately 7 percent below comparable U.S. prices, indicating that the underselling may be due, in part, to differences in stages of production between the U.S. and Russian products. In any final investigation, they will have more data to examine this issue more closely.

⁸⁶ CR at I-45; PR at II-23 to II-24.

⁸⁷ Commissioner Crawford does not rely on anecdotal evidence of lost sales and revenues in reaching her determination.

⁸⁸ Compare CR at I-38 (price trends for sales of U.S.-produced ferrovanadium and nitrided vanadium) with CR at C-3, Table C-1 (unit cost of goods sold 1991-1993, Jan.-Mar. 1993-1994).

⁸⁹ CR at I-38 to I-39, Table 9.

⁹⁰ Commissioner Crawford does not place great weight on evidence of underselling in determining the impact of the subject imports on the domestic industry because it usually reflects quality or other nonprice differences, or fluctuations in the market during the period in which prices were sought.

⁹¹ CR at I-39, Table 9. Prices were already declining prior to the introduction of imports from Russia. In any final investigation, we will consider the extent of the impact of imports from nonsubject countries upon domestic prices, as well as other factors that may have contributed to declining prices.

⁹² CR at I-38 to I-39, Table 10.

60 percent ferrovanadium until the first quarter of 1994, when U.S. producers lowered their prices further.⁹³ No direct price comparisons between domestic nitrated vanadium and Russian nitrated vanadium are available because domestic production of nitrated vanadium ceased in 1992. Nevertheless, we note that the 1993 and 1994 prices of Russian nitrated vanadium undersold U.S.-produced ferrovanadium of all grades in all quarters except for 78-82 percent ferrovanadium in the last quarter of 1993.⁹⁴ This evidence provides a reasonable indication that the lower-priced imports depressed U.S. prices to a significant degree.

D. Impact on the Domestic Industry

Given the dramatic increase in subject imports, declining prices, declining U.S. market share, the degree of substitutability of between U.S. and Russian ferrovanadium, and the poor financial condition of U.S. ferrovanadium producers, we determine that there is a reasonable indication that the domestic industry producing ferrovanadium is materially injured by reason of the subject imports of ferrovanadium and nitrated vanadium.⁹⁵ Even though domestic industry production, sales, and unit prices declined prior to the arrival of imports from Russia, the declines continued in 1993 and interim 1994.⁹⁶

Despite significant cuts in their prices, shorter delivery lead times,⁹⁷ possibly lower minimum size orders, less impurities, and superior reliability,⁹⁸ the U.S. producers' market share declined while domestic consumption was increasing.⁹⁹ Further, it appears that Shieldalloy's bankruptcy filing may have been precipitated, at least in part, by LTFV imports of Russian ferrovanadium.¹⁰⁰ There is also evidence on the record that Stratcor closed its

⁹³ Id.

⁹⁴ CR at I-38 to I-40, Tables 9-11.

⁹⁵ In her analysis of material injury, Commissioner Crawford determines whether the price, sales and revenue effects of the dumping, either separately or together, demonstrate that the domestic industry would have been materially better off if the allegedly LTFV imports had been priced fairly. If the imports from Russia had not been dumped, it is likely that they would have sold in the U.S. at much higher prices. In fact, given the level of substitutability between the allegedly dumped imports and the domestic product suggested by the evidence in the record, it is unlikely that any significant volume of imports from Russia would have entered the U.S. market. Because the domestic product and the allegedly LTFV imports are good substitutes, purchasers would have reduced their purchases of the imports, and demand for the domestic product would have increased significantly. In a market characterized by significant excess production capacity and competition between the domestic product and fairly traded imports, domestic producers would have increased significantly their production of ferrovanadium but would have been unable to sustain significant price increases.

Domestic producers would have been able to increase the quantity of their production and sales if the allegedly LTFV imports had been fairly priced. Their revenues and profits would have increased significantly. Accordingly, Commissioner Crawford concludes that there is a reasonable indication that the domestic industry would have been materially better off if the allegedly dumped imports had been priced fairly. Therefore, she determines that there is a reasonable indication of material injury to the domestic industry by reason of the allegedly LTFV imports of ferrovanadium and nitrated vanadium from Russia.

⁹⁶ The experience of different producers varied considerably. In any final investigation we will consider the significance of these differences further.

⁹⁷ CR at I-36; PR at II-19.

⁹⁸ CR at I-36 to I-37; PR at II-19.

⁹⁹ CR at I-33b, Table 10.

¹⁰⁰ In any final investigation we will consider further the relationship between the bankruptcy filing and subject imports.

ferrovanadium production facilities in favor of importing Russian ferrovanadium because of increased competition or the threat of increased competition from Russian imports.¹⁰¹

Respondents argue that the large influx of Russian ferrovanadium into the U.S. market in 1993 and 1994 resulted from an abnormal one-time occurrence, *i.e.*, the chaotic selling from stockpiles after the opening of Russian borders to foreign trade.¹⁰² However, our analysis of whether there is a reasonable indication of present material injury to a domestic industry by reason of allegedly LTFV imports does not depend on whether present material injury was caused by one or many shiploads of the imported product.¹⁰³ We find that the available data regarding the rapid depletion of the stockpile supports an affirmative determination of a reasonable indication of material injury.

Conclusion

In light of the significant and increasing volumes of subject imports of ferrovanadium from Russia, as well as the adverse price effects and the adverse impact on the domestic industry's financial condition, we find that there is a reasonable indication of material injury to the domestic industry producing ferrovanadium by reason of allegedly LTFV imports of ferrovanadium and nitrided vanadium from Russia.

¹⁰¹ Cf. CR at I-20; PR at II-11; Shieldalloy's Postconference Brief at 18; U.S. Vanadium Corp.'s (Stratcor's) Producers' Questionnaire Response to Question I.2 at 5 & attachment, 36. Stratcor's questionnaire responses are revealing in this regard. U.S. Vanadium Corp.'s Producers' Questionnaire, Response to Question I.2 at 5 & attachment.

¹⁰² Odermet's Postconference Brief at 28, 38. Given the lack of data regarding the Russian industry, we are unable to determine whether imports from Russia were from inventory or from current production. Should a final investigation occur, the Commission expects that respondents, including Russian producers and exporters of subject merchandise, will provide more data regarding production and inventories in Russia.

¹⁰³ See Magnesium from the People's Republic of China, Russia, and Ukraine, Inv. No. 731-TA-696-698 (Preliminary), USITC Pub. 2775 at I-22; Fresh Kiwifruit from New Zealand, Inv. No. 731-TA-516 (Preliminary), USITC Pub. 2394 at 18, n.69. An increase in import volume caused by an aberrant incident that will not be repeated may, however, be relevant to a threat determination.

PART II
INFORMATION OBTAINED IN THE INVESTIGATION

INTRODUCTION

On May 31, 1994, a petition was filed with the U.S. International Trade Commission and the U.S. Department of Commerce by counsel on behalf of Shieldalloy Metallurgical Corp. (Shieldalloy), New York, NY, alleging that imports of ferrovanadium and nitrided vanadium from Russia are being sold in the United States at less than fair value (LTFV) and that an industry in the United States is materially injured and threatened with material injury by reason of such imports. Accordingly, effective May 31, 1994, the Commission instituted antidumping investigation No. 731-TA-702 (Preliminary) under section 733(a) of the Tariff Act of 1930 (the Act) (19 U.S.C. 1673b(a)) to determine whether there is a reasonable indication that an industry in the United States is materially injured or threatened with material injury, or the establishment of an industry in the United States is materially retarded, by reason of such imports.

Notice of the institution of the Commission's investigation and of a public conference to be held in connection therewith was posted in the Office of the Secretary, U.S. International Trade Commission, Washington, DC, and published in the *Federal Register* on June 8, 1994 (59 F.R. 29617).¹ The public conference was held in Washington, DC, on June 21, 1994,² and the vote was held on July 12. Neither ferrovanadium nor nitrided vanadium has been the subject of previous Commission investigations.

NATURE AND EXTENT OF THE ALLEGED LTFV SALES

There are no calculations relating to the nature and extent of the alleged LTFV sales other than those of the petitioner. The petitioner identified two producers that it believes account for the bulk of exports, if not the bulk of production, in Russia: Novo-Tulskiy (Tulachermet) Kombinat, Tula District (south of Moscow) and Chusovskoy Metallurgichskiy Zavod (Chusovskoy), Perm District (north and east of Moscow). (The petitioner noted that at least two other producers may be producing, or may have the capacity to produce, ferrovanadium and nitrided vanadium, but it was unable to provide any substantiation). On the basis of a constructed value for the Russian producers, based on the estimated cost of ferrovanadium production in Brazil, and U.S. prices based on actual sales quotes to U.S. distributors in March and April 1994, the petitioner calculated dumping margins ranging from 95.2 to 110.3 percent. (The LTFV margins as subsequently adjusted by Commerce range from 92.6 to 108 percent).

THE PRODUCT

Summary

Vanadium is a pure metal element that is used chiefly as an additive to steel and other metals to improve their strength. Ferrovanadium, the subject product, is the chief product by which vanadium is consumed for this purpose. It is a man-made metal alloy consisting predominantly of vanadium, usually 40 to 80 percent by weight, and at least 7 percent by weight of iron. Nitrided vanadium (or nitrided ferrovanadium) is basically ferrovanadium that is infused with 5 percent or more by weight of nitrogen and is a preferred substitute for some applications. It should be noted that it is the vanadium in these products that the steel and other metal-making industries desire and consume--ferrovanadium and nitrided vanadium are simply the most economical means of providing vanadium for these uses, given the way it naturally occurs in the ground and the methods in place for extracting it.

¹ Copies of the Commission's and Commerce's notices of institution are shown in app. A.

² A list of participants at the conference is presented in app. B.

Vanadium naturally occurs in mineral ores--mostly iron (titaniferous magnetite), uranium, and phosphorus--and in crude oil, but its quantities, while plentiful, are so diluted in these substances that it is economically unfeasible to extract it directly. It is the residue from the production or consumption of other products from these substances that forms the raw material for vanadium production: slag from iron, uranium, and phosphorus production; spent catalysts from crude oil refining; and (increasingly) fly ash and boiler scab from oil-burning power plants. To render the vanadium contained in these raw materials into a consumable form, such as ferrovanadium and nitrated vanadium, the raw material is generally first converted into an intermediate product, typically vanadium pentoxide, and is then reduced to ferrovanadium in a process using aluminum, carbon, and/or silicon as the chief reducing material. (In some cases, such as the petitioner's, no intermediate product is produced--the raw material is reduced directly). Initially in molded brick form, it is crushed into standard-sized particles of 2 inches or less in diameter. If nitrated vanadium is to be produced, nitrogen gas is infused into the bricks, at high temperature, before crushing.³ Finally, it is packaged for shipment in one of several types of containers, including bags (usually 10-25 pounds of contained vanadium), cans, drums (500 pounds gross), and "supersacks" (up to 4,000 pounds gross). At least one by-product of ferrovanadium production, calcium-aluminate slag, is marketable. It is used as a "flux"--i.e., an agent for drawing out impurities--in steel production. Other marketable by-products include nickel and iron scrap.

Depending on the production process and raw material used, the proportion of vanadium in ferrovanadium generally ranges from 40 percent to 80 percent by weight, and the industry classifies ferrovanadium into grades accordingly. Although some consumers may prefer one grade or another, for the most part the grade produced is wholly a consequence of the production process and is not indicative of consumer preference, quality, or price. In general, quantities of ferrovanadium are bought and sold solely on the basis of pounds of contained vanadium (and priced correspondingly) with no serious regard for the actual proportion of vanadium⁴ or other elements contained therein. For most users' systems, the other contained elements--which vary according to production process and raw materials used--are completely inert, and ferrovanadium from various sources is interchangeable.⁵ The exception is ferrovanadium containing nitrogen--i.e., nitrated vanadium. Depending on the specific steel-making process and the specific grade of steel desired, an equivalent strength of steel can be achieved with less vanadium if nitrogen is simultaneously present in the alloy. Nitrated vanadium, however, is more costly to produce than ferrovanadium and is correspondingly higher priced. Relatively small quantities of nitrated vanadium are used in the United States.

The U.S.- and Russian-produced products appear to be equally acceptable to consumers, except that most of the imported Russian product is larger than standard size (2 inches or less in diameter). As a result, importers have been required to crush and repackage the material before shipment. Crushing and packaging adds 3-8 percent to the total cost of selling and delivering ferrovanadium.

The only potential substitutes for vanadium in the strengthening of steel are columbium and molybdenum. According to members of the ferrovanadium industry and others, total alloy purchasing costs would be lower for these elements than for vanadium because less of these elements are needed to achieve the same result; however, total production costs would be higher because of the additional processing required. Users report that these elements would not be substituted unless the availability of vanadium were severely restricted.

³ Although, technically speaking, ferrovanadium is a necessary input for nitrated vanadium production, the ferrovanadium used for nitrated vanadium production may be different from that sold to consumers. Strategic Minerals Corp., a U.S. producer of ferrovanadium and the only producer of nitrated vanadium in the United States, produces these products simultaneously from different raw materials on dissimilar lines of equipment.

⁴ Despite the general indifference to what grade is used, the user must know what grade it is so that proportions of steel-making ingredients can be adjusted accordingly.

⁵ For a small percentage of users, mainly those in the tool-steel industry, high residual levels of aluminum, chromium, and/or nickel can have a detrimental effect on production and may be limiting factors in their purchases.

Description and Uses

Ferrovandium is an alloy of iron and vanadium used primarily by steel producers and iron casters as discussed below. It is added to steel for the alloying effects of the contained vanadium; the iron merely acts as a convenient carrier. Ferrovandium is produced in grades according to its vanadium content, which can vary from about 40 percent to about 80 percent by weight. In practice, however, relatively few grades are actually produced. The most common ferrovandium grades contain approximately 42 percent, 52 percent, and 80 percent vanadium and at least 4 percent iron (by weight). Another specialty grade, nitrided vanadium (which is a chemical compound of vanadium, nitrogen, and iron with the same uses as ferrovandium), contains approximately 80 percent vanadium and at least 5 percent (typically between 7 and 12 percent) nitrogen (by weight).⁶

Ferrovandium grades typically specify certain maximum levels of impurities (which are considered limits and may be specified within the designations published by the American Society for Testing and Materials (ASTM));⁷ ferrovandium grades may also contain elements that are considered enhancements. Most ferrovandium is sold in lumps with an upper size range of approximately 2 inches. These lumps are commonly used for alloying purposes in the ladle. Nitrided vanadium is sold in the form of briquettes measuring approximately 1 inch by 1 inch.

The principal use of ferrovandium is as an alloying agent in the production of steel. When added to molten steel, the contained vanadium (which often accounts for less than 1 percent of the steel) improves the finished product's hardness, ductility, and toughness. Vanadium also aids in grain refining and case hardening. Vanadium additions to tool steels enable such alloy steels to maintain their hardness at elevated temperatures generated during high-speed machining (these are called tungsten-vanadium or chromium-vanadium tool steels). Vanadium is added to high-strength low-alloy (HSLA) steels⁸ used in high-strength long-distance oil and gas pipelines, railway lines, reinforcing steels used in building construction, and automobiles. Ferrovandium is also used in the production of cast iron to counteract graphitization and act as a chill stabilizer. Approximately 80 percent of vanadium consumption in the United States was accounted for by steel industry use in 1992, according to the Bureau of Mines.

Steel producers have the technical capability to use any grade of ferrovandium interchangeably. The decision to use a specific grade (42 percent or 80 percent ferrovandium, for example) depends upon the steelmaker's melting and rolling practices and intended finished product. In general, steelmakers that pour their steel at lower temperatures tend to use the 42 percent material, whereas some steel grades that specify low residual chemistry or higher vanadium content may require the use of the higher grade (or 80 percent) ferrovandium. Nitrided vanadium or nitrided ferrovandium is similar to ferrovandium and is used by steel industry consumers to add nitrogen and vanadium to steel simultaneously; this is beneficial only in certain applications (some grades of steel and certain processing conditions). Because nitrogen is detrimental to certain steel properties the interchangeability of nitrided vanadium with ferrovandium is somewhat limited.

Reportedly, steelmakers do not utilize other vanadiferous bearing materials such as vanadium pentoxide (which is used by the chemical, ceramics, and glass industries), vanadium-aluminum master alloy (consumed by producers of titanium and superalloys), or vanadium-silicon-iron alloy (not produced or used in the United States). Substitution of vanadium by other ferroalloys is limited because vanadium

⁶ See petition, exhibit 1A, for a comparison of these various grades by chemical analysis.

⁷ ASTM Designation A 102-87, Standard Specification for Ferrovandium, does not cover ferrovandium with a vanadium content less than 55 percent, or approximately *** percent of U.S. consumption of ferrovandium, according to petitioner. Compare Petition p. 8 and exhibit 1B.

⁸ This is a class of structural steels which exhibit elevated yield points and which acquire their strength either after hot-rolling or normal cooling. Weight savings can be achieved through the substitution of HSLA steels for traditional structural steel grades. Some HSLA steels display a dual-phase structure, which provides good cold-forming and welding characteristics.

has specific technical advantages and other alloying agents do not possess the versatility of ferrovanadium; vanadium may be replaced by niobium (columbium) but commercial considerations of cost outweigh any advantage such substitution may provide.⁹

Production Processes

Ferrovanadium is produced commercially by the pyrochemical reduction of vanadium oxide or vanadium pentoxide anhydride, vanadium-bearing slag, or other vanadium-bearing materials (boiler residues and fly ash, and spent refinery catalysts, for example) with aluminum, carbon, or ferrosilicon.¹⁰ The processes that are more commonly used are aluminothermic and/or silicothermic, described below. In the final product, the concentration of vanadium in ferrovanadium is controlled by the amount of iron scrap added during the production process.

One such process for preparing ferrovanadium entails first the conversion of vanadium-bearing slag (resulting from the production of pig iron from magnetite ore) into vanadium pentoxide, and second, the conversion of the oxide to ferrovanadium. In this second step a mixture of vanadium pentoxide, aluminum, iron scrap, and a flux (calcium oxide or calcium fluoride) is charged into an electric furnace and a reaction between the aluminum and vanadium pentoxide is initiated. Furnace heating is required only to raise the charge temperature sufficiently to kindle the reaction because the reaction (stemming from the aluminum mixture) is highly exothermic. Temperature and reaction control are accomplished by adjusting the particle size of the reagents, or the rate of charge feeding, or by changing the charge (i.e., the quantity or quality of the reagents, flux, or quantity of vanadium oxide). Following reduction, the electric furnace is reignited to stir the ferrovanadium, which is then decanted from the furnace vessel and poured into molds.¹¹ Following cooling in the molds and separation from slag, the ferrovanadium is crushed, sized, and packaged. According to the petitioner, most Russian ferrovanadium is produced using this two-step process, as is the ferrovanadium produced by petitioner's related German company, Gesellschaft für Elektrometallurgie mbH (GfE).

In a variation on this process, the aluminothermic reduction is carried out entirely without furnace heating: the mixture of vanadium pentoxide, aluminum, iron scrap, and flux is charged into a magnesite-lined vessel and the reactants are ignited electrically.¹² This production method is currently employed by Bear Metallurgical Corp., Butler, PA, and was previously used by Shieldalloy at its Newfield, NJ, facility (production ceased in November 1992) and Stratcor (U.S. Vanadium Corp., Niagara Falls, NY, where production ceased in December 1993).¹³ The process requires a short amount of time to be complete, although cooling of the ferrovanadium slab may require several hours. Following cooling, the slab is removed from its vessel, the layer of ferrovanadium metal is separated from the layer of slag, and the ferrovanadium is conveyed to a separate part of the facility for crushing, sizing, and packaging. Either of these methods may be used to produce 40 to 80 percent ferrovanadium grades.

A modified reduction process using silicon and/or aluminum, developed by Shieldalloy, starts with vanadium-bearing iron slag alone or in combination with other vanadiferous materials (petroleum residues and fly ash) as the vanadium source instead of vanadium pentoxide. These vanadium-bearing materials are melted first in one submerged electric arc furnace to raise the material's vanadium content

⁹ According to one questionnaire response, ***.

¹⁰ For a generalized flowchart for the processing of vanadiferous raw materials (uranium-vanadium ore, spent catalysts, fuel oil, and titaniferous magnetite, for example) see, Henry E. Hilliard, *Vanadium Annual Report 1992*, U.S. Department of the Interior, Bureau of Mines, Sept. 1993, fig. 1, p. 20.

¹¹ C.K. Gupta and N. Krishnamurthy, *Extractive Metallurgy of Vanadium*, New York: Elsevier, 1992, pp. 442-443.

¹² Telephone conversation with *** on June 23, 1994. See also, Gupta and Krishnamurthy, p. 445.

¹³ Hilliard, *Vanadium Annual Report 1990*, p. 6. Petition, p. 15.

and extract certain elements. This alloy is further refined in another electric arc furnace to produce ferrovanadium containing about 42 to 48 percent vanadium.¹⁴ Molten ferrovanadium that results from this process is poured into molds, crushed to size, and packaged.

Nitrided vanadium is produced in a manner similar to that used to produce ferrovanadium from vanadium pentoxide, described earlier. Following conversion from pentoxide, vanadium oxide powder is agglomerated into briquettes which conform to the industry size standard. The briquettes are then reduced with aluminum and/or carbon in a furnace to create briquettes containing a high percentage of vanadium by weight. They are then subjected to a nitrogen atmosphere where they absorb nitrogen, creating a vanadium-nitrogen compound containing approximately 80 percent vanadium and 7 to 12 percent nitrogen.¹⁵

Comparison of Domestic and Imported Product

There appear to be few differences between the domestically produced ferrovanadium and the ferrovanadium imported from Russia. Although several importers indicated that Russian ferrovanadium contains higher levels of impurities and thus does not dissolve as readily or provide the same level of performance of the U.S. product, most reported that it may be used interchangeably with domestically-produced ferrovanadium. Purchasers, such as ***, and importers note that this difference and differences in service conditions (historical ties, reliability of supply, and shorter lead times) provide the U.S. product with a slight premium in pricing, reportedly on the order of 25 cents per pound vanadium (5 percent).

Importers also indicated that ferrovanadium imported from Russia requires resizing and repackaging to render it commercially suitable for the U.S. market. These operations entail emptying the imported ferrovanadium from 350-kilo drums, assaying, crushing to standard sizes, blending (if necessary), check-assaying, and repacking into cans or bags and cost approximately *** to *** per pound vanadium, or about 3 to 8 percent of the final cost.

U.S. Tariff Treatment

U.S. imports of ferrovanadium (a ferroalloy) are specifically provided for in subheading 7202.92.00 of the Harmonized Tariff Schedule of the United States (HTS). The column 1-general (most-favored-nation) duty rate, applicable to imports from Russia, is 4.2 percent ad valorem. U.S. imports of nitrided vanadium, which is considered a metallic compound rather than a metal alloy, are classified in HTS subheading 2850.00.20 with a column 1-general duty rate is 16 percent ad valorem.¹⁶ Imports from Russia of nitrided vanadium are eligible for duty-free entry under the Generalized System of Preferences (effective Oct. 16, 1993, when Russia was designated under the program as an eligible beneficiary).

U.S. PRODUCERS AND IMPORTERS

In addition to Shieldalloy, two other firms produced ferrovanadium or nitrided vanadium in the United States during the period for which data were collected--Strategic Minerals Corp. (Stratcor), the only U.S. firm to have produced nitrided vanadium; and Bear Metallurgical Corp. (table 1). All three firms are multinational corporations, at least through affiliation, and all produce alloys and compounds other than ferrovanadium. Stratcor produced relatively large quantities of ferrovanadium until January 1994, when it shut down its ferrovanadium operations in favor of a toll arrangement with Bear and

¹⁴ Hilliard, *Vanadium Annual Report 1992*, p. 7. See also Petition p. 14 and exhibit 1A.

¹⁵ Petition, p. 16.

¹⁶ Under the U.S. schedule of concessions tabled in the GATT Uruguay Round, this duty is slated to be reduced in 10 equal stages to a final rate of 5.5 percent ad valorem.

Table 1

Ferrovandium and nitrated vanadium: U.S. producers, plant locations, and respective shares of domestic production (by quantity), 1993

Firm	Plant location(s)	Produced raw materials	Produced intermediate product	Share (percent) of domestic production, 1993
Shieldalloy	Cambridge, OH Newfield, NJ ²	No	No ¹ Yes	***
Stratcor ³	Niagara Falls, NY ⁴	No	Yes	***
Bear ³	Butler, PA	No	No	***

¹ Shieldalloy's Cambridge facility reduces raw material into ferrovandium without producing the standard intermediate products, such as vanadium pentoxide.

² Ceased ferrovandium operations in November 1992. In the interests of economic efficiency, the company concentrated its resources on its Cambridge facility with no loss in production capability.

³ ***.

⁴ Ceased nitrated vanadium operations in July 1992 and ferrovandium operations in December 1993.

Source: Compiled from data submitted in response to questionnaires and other requests of the U.S. International Trade Commission.

importing from Russia. The firm ceased producing nitrated vanadium in July 1992 in favor of importing from its affiliate in South Africa. Bear has also produced substantial quantities of ferrovandium, but only as a toll producer for other firms, like Stratcor, which provide it with an intermediate product such as vanadium pentoxide for this purpose.¹⁷ As mentioned previously, most of the Russian product has had to be further crushed and packaged before shipment to users, operations that account for 3-8 percent of the total cost of delivery. Bear and at least two other firms, Aero Terminals and S.H. Bell, have provided this service.

Approximately a dozen firms, including Stratcor and the petitioner, have imported ferrovandium and/or nitrated vanadium from Russia in recent periods.¹⁸ ***. Most of the importers are independent metals trading companies. All the producers and importers produce and/or deal in other, mostly metal alloy products, and all claim to serve the entire U.S. market, although most deliveries are made within 500 miles of the point of shipment.

U.S. MARKET AND CHANNELS OF DISTRIBUTION

From 1991 through January-March 1994, over 33 million pounds of ferrovandium and nitrated vanadium, valued at over \$175 million (of which about 10 percent was nitrated vanadium), was consumed in the United States. The domestic steel industry accounted for most of this consumption. Most of the ferrovandium and nitrated vanadium produced in and imported into the United States is sold directly to these users, traditionally on a contractual basis of 1, 3, or 6 months with provisions for price

¹⁷ Other firms that have supplied Bear with intermediate products for reduction, crushing, and packaging into ferrovandium are ***. Although, strictly speaking, these firms are not U.S. producers of the subject product, they are the agents of its production and competed directly with Shieldalloy and Stratcor for domestic sales.

¹⁸ ***.

renegotiation. Spot sales have increased in recent periods, however, in the wake of considerable price fluctuation. Prices and quantities are quoted in terms of pounds of contained vanadium irrespective of grade and residual content, although, as mentioned previously, these may be limiting factors for a small proportion of users.

CONSIDERATION OF THE ALLEGED MATERIAL INJURY

With the exception of financial data, which do not include Bear, data in this section represent 100 percent of U.S. production. They do not, however, include domestic operations on the repackaging and crushing of Russian or any other foreign-produced material. All references to quantity are in pounds of contained vanadium, not gross weight.

U.S. Production, Capacity, Capacity Utilization, Shipments, Inventories, and Employment

U.S. industry data for ferrovanadium and nitrated vanadium combined, summarized in table 2, show general declines in nearly every category throughout the period for which the data were collected. One of the more precipitous declines is in the unit value of domestic shipments. From 1991 to January-March 1994, the average unit value of the subject product declined from \$7.03 per pound to \$3.83 per pound. The average number of production and related workers also declined markedly. U.S. producers reported several major actions that were at least partially responsible for declines in the latter. As mentioned previously, Stratcor ceased producing nitrated vanadium in 1992 in favor of importing this product from an affiliate in South Africa, and ceased producing ferrovanadium at the end of 1993 in favor of importing and toll conversion. Both decisions were made in an effort to reduce costs in an increasingly competitive environment. The result was a *** percent reduction in its workforce of *** workers. Shieldalloy, too, shut down part of its operations. Deciding it could operate its Cambridge, OH, plant more efficiently and still meet demand, it closed its Newfield, NJ, plant in November 1992. In addition, ***. These actions resulted in a loss of *** workers--over *** percent of its 1991 workforce. Because of the additional work brought to Bear by Stratcor, Bear's workforce increased by nearly *** percent in this period, but overall the U.S. workforce producing ferrovanadium and nitrated vanadium (and hours worked by them) declined substantially. A more detailed summary of the data, showing percentage changes from period to period, is shown in appendix C, table C-1.

Citing global recession, increased competition from Russian exporters, U.S. defense cutbacks, and uncertainty about the costs of environmental compliance, Shieldalloy filed for Chapter 11 bankruptcy protection in early September 1993. The announced intention was not to liquidate its assets but to temporarily shield itself from creditors while it reorganized and bided time for better market conditions. (To retain its counsel for this petition, Shieldalloy required special authorization from the Bankruptcy Court). Its status under Chapter 11 remains in effect.

As noted above, Stratcor--the only U.S. producer of nitrated vanadium, shifted from producing to importing this product in July 1992. In any case, nitrated vanadium has never been produced or consumed in quantities as large as ferrovanadium. As a share of total U.S. production of ferrovanadium and nitrated vanadium in 1991-92, the latter accounted for *** percent. Selected industry data for nitrated vanadium alone are summarized in table 3; a more detailed summary, showing percentage changes from period to period, is shown in appendix C, table C-2.

Table 2

Ferrovandium and nitrated vanadium: U.S. production, average practical capacity, capacity utilization, domestic shipments, exports, end-of-period inventories, average number of U.S. production and related workers and hours worked by and compensation paid to such workers, 1991-93, Jan.-Mar. 1993, and Jan.-Mar. 1994¹

Item	1991	1992	1993	Jan.-Mar.--	
				1993	1994
Production (1,000 pounds)	7,888	7,225	7,275	1,929	***
Capacity ² (1,000 pounds)	21,140	21,140	21,140	5,285	5,285
Ratio of production to capacity (percent)	37.3	34.2	34.4	36.5	***
Transfer shipments:					
Quantity (1,000 pounds)	***	***	***	***	***
Value (1,000 dollars)	***	***	***	***	***
Domestic shipments:					
Quantity (1,000 pounds)	***	***	***	***	***
Value ³ (1,000 dollars)	***	***	***	***	***
Unit value (per pound)	\$7.03	\$5.93	\$4.54	\$5.10	\$3.83
Exports:					
Quantity (1,000 pounds)	***	***	***	***	***
Value ³ (1,000 dollars)	***	***	***	***	***
Total shipments:					
Quantity (1,000 pounds)	***	***	***	***	***
Value ³ (1,000 dollars)	***	***	***	***	***
Inventories (1,000 pounds)	718	560	671	618	494
Ratio of inventories to total shipments during the period (percent)	***	***	***	⁴ ***	⁴ ***
Average number of production and related workers	207	185	154	157	***
Hours worked by production and related workers (1,000 hours)	390	371	305	73	***
Pounds produced per hour worked	20.2	19.5	23.9	26.4	***
Total compensation paid to production and related workers (1,000 dollars)	7,731	7,639	6,207	1,390	***
Hourly compensation paid to production and related workers	\$19.82	\$20.59	\$20.35	\$19.04	***

¹ Quantities shown for ferrovandium and nitrated vanadium are in pounds of contained vanadium, not gross weight.

² Shieldalloy, Bear, and Stratcor estimated capacity on the basis of operating their respective facilities *** hours, *** hours, and *** hours per week, 48-52 weeks per year.

³ Net sales value, i.e., gross value less all discounts, allowances, rebates, and the value of returned goods.

⁴ Annualized.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table 3

Nitrided vanadium: U.S. production, average practical capacity, domestic shipments, exports, average number of U.S. production and related workers and hours worked by and compensation paid to such workers, 1991-93, Jan.-Mar. 1993, and Jan.-Mar. 1994

* * * * *

Financial Experience of U.S. Producers

Shieldalloy and Stratcor, which together accounted for approximately *** percent of U.S. production of ferrovanadium and nitrided vanadium in 1993, both supplied financial data on their overall establishment operations and their ferrovanadium and nitrided vanadium operations. Shieldalloy, a subsidiary of Metallurg, Inc., is a producer of metals and other ferroalloys. It currently produces ferrovanadium at its facility in Cambridge, OH; its ferrovanadium producing facility in Newfield, NJ, was closed in November 1992. On September 2, 1993, Shieldalloy and Metallurg filed separate voluntary petitions for relief under Chapter 11 of the Bankruptcy Code. Since then Shieldalloy has operated, and contemplates continuing to operate, as a going concern while its plan of reorganization is adjudicated.

Stratcor, a producer of ferrovanadium, nitrided vanadium, and other alloys, has production facilities in Hot Springs, AR, and Niagara Falls, NY. The company stopped domestic production of nitrided vanadium in July 1992, and began importing the product from its facility in South Africa. As of January 1, 1994, it stopped producing ferrovanadium on its own and began toll converting at Bear.

Bear, which accounted for the remaining *** percent of U.S. production of the subject product, also supplied financial data; however, these data were not aggregated with Shieldalloy's and Stratcor's because of a lack of comparability. As previously noted, Bear toll-produces ferrovanadium for other companies. Under such agreements it performs certain processes on raw materials or intermediate products provided by another company. Since Bear's costs (and their associated revenues) relate only to the actual processes performed, they are much less than the corresponding figures for Shieldalloy and Stratcor. For instance, in 1993 Bear's unit sales revenue and unit cost of goods sold were \$*** and \$*** per pound, respectively. The corresponding figures for Shieldalloy and Stratcor were \$*** and \$***, respectively.

Both Stratcor and Shieldalloy have fiscal years ending December 31.

Overall Establishment Operations

The data on the overall establishment operations of the two producers are shown in table 4. ***.

Table 4

Income-and-loss experience of U.S. producers on the overall operations of their establishments wherein ferrovanadium and nitrided vanadium are produced, fiscal years 1991-93, Jan.-Mar. 1993, and Jan.-Mar. 1994

* * * * *

Operations on Ferrovandium and Nitrided Vanadium

Income-and-loss data for operations on ferrovandium and nitrided vanadium are shown in table 5. ***.

Table 5

Income-and-loss experience of U.S. producers on their operations producing ferrovandium and nitrided vanadium, fiscal years 1991-93, Jan.-Mar. 1993, and Jan.-Mar. 1994

* * * * *

Table 6 presents selected income-and-loss data for both producers. ***.

Table 6

Income-and-loss experience of U.S. producers on their operations producing ferrovandium and nitrided vanadium, by firms, fiscal years 1991-93, Jan.-Mar. 1993, and Jan.-Mar. 1994

* * * * *

The tabulation below provides detail on the three components of cost of goods sold:

* * * * *

Investment in Productive Facilities and Return on Assets

Data on investment in productive facilities and return on assets are shown in table 7. ***.

Table 7

Value of assets and return on assets of U.S. producers' operations producing ferrovandium and nitrided vanadium, fiscal years 1991-93, Jan.-Mar. 1993, and Jan.-Mar. 1994

* * * * *

Capital Expenditures

The capital expenditures for both producers are shown in table 8. ***.

Table 8

Capital expenditures by U.S. producers of ferrovandium and nitrided vanadium, by products, fiscal years 1991-93, Jan.-Mar. 1993, and Jan.-Mar. 1994

* * * * *

Research and Development Expenses

***.

Capital and Investment

The Commission requested U.S. producers to describe any actual or potential negative effects of imports of ferrovanadium and nitrated vanadium from Russia on their growth, investment, ability to raise capital, or existing development and production efforts (including efforts to develop a derivative or more advanced version of the product). The responses are in appendix D.

CONSIDERATION OF THE ALLEGED THREAT OF MATERIAL INJURY

Section 771(7)(F)(i) of the Tariff Act of 1930 (19 U.S.C. 1677(7)(F)(i)) provides that--

In determining whether an industry in the United States is threatened with material injury by reason of imports (or sales for importation) of the merchandise, the Commission shall consider, among other relevant economic factors¹⁹--

- (I) If a subsidy is involved, such information as may be presented to it by the administering authority as to the nature of the subsidy (particularly as to whether the subsidy is an export subsidy inconsistent with the Agreement),
- (II) any increase in production capacity or existing unused capacity in the exporting country likely to result in a significant increase in imports of the merchandise to the United States,
- (III) any rapid increase in United States market penetration and the likelihood that the penetration will increase to an injurious level,
- (IV) the probability that imports of the merchandise will enter the United States at prices that will have a depressing or suppressing effect on domestic prices of the merchandise,
- (V) any substantial increase in inventories of the merchandise in the United States,
- (VI) the presence of underutilized capacity for producing the merchandise in the exporting country,
- (VII) any other demonstrable adverse trends that indicate the probability that the importation (or sale for importation) of the merchandise (whether or not it is actually being imported at the time) will be the cause of actual injury,
- (VIII) the potential for product-shifting if production facilities owned or controlled by the foreign manufacturers, which can be used to produce products subject to investigation(s) under section 701 or 731 or to final orders under section 706 or 736, are also used to produce the merchandise under investigation,
- (IX) in any investigation under this title which involves imports of both a raw agricultural product (within the meaning of paragraph (4)(E)(iv)) and any product processed from such raw

¹⁹ Section 771(7)(F)(ii) of the Act (19 U.S.C. 1677(7)(F)(ii)) provides that "Any determination by the Commission under this title that an industry in the United States is threatened with material injury shall be made on the basis of evidence that the threat of material injury is real and that actual injury is imminent. Such a determination may not be made on the basis of mere conjecture or supposition."

agricultural product, the likelihood that there will be increased imports, by reason of product shifting, if there is an affirmative determination by the Commission under section 705(b)(1) or 735(b)(i) with respect to either the raw agricultural product or the processed agricultural product (but not both), and

(X) the actual and potential negative effects on the existing development and production efforts of the domestic industry, including efforts to develop a derivative or more advanced version of the like product.²⁰

Available information on the volume, U.S. market penetration, and pricing of imports of the subject merchandise (items (III) and (IV) above) is presented in the section entitled "Consideration of the Causal Relationship Between the Alleged LTFV Imports and the Alleged Material Injury;" and information on the effects of imports of the subject merchandise on U.S. producers' existing development and production efforts (item (X)) is presented in appendix D. Available information on U.S. inventories of the subject product (item (V)); foreign producers' operations, including the potential for "product-shifting" (items (II), (VI), and (VIII) above); and any other threat indicators, if applicable (item (VII) above), is discussed below.

Information was received from importers representing about 87 percent of imports from Russia during the period for which data were collected. Their combined data show an increase in end-of-period inventories from 657,000 pounds in 1993 to 799,000 pounds in January-March 1994 (appendix C, table C-1).

Data on the Russian market and production are not currently available; however, some information is available on the Russian industry. The information was provided by Oder Met, Ltd., London, England, an exporter of the subject merchandise from Russia. Oder Met, based in the United Kingdom, reports that under an agreement and joint relationship with Concern Roscomtech of Moscow, a partial owner of Tulachermet and Tagil (a Russian source of vanadium slag and vanadium oxide), it has become a major buyer and exporter of vanadium-bearing raw material, intermediate products, and ferrovanadium produced in Russia. Because of Tulachermet's and Chusovskoy's dependence on local sources of raw material, Oder Met is in a position to partially control, or at least have significant influence on, Russian ferrovanadium and nitrided vanadium production, and reports that there is nowhere near the raw material in Russia to make the 20,000 metric tons of ferrovanadium that the petitioner alleges is produced in Russia annually.²¹ Oder Met further reports that, at least currently, there are no vast stockpiles of ferrovanadium in Russia. (At least one U.S. producer, ***, has suggested that until 1994 most of the imports from Russia were indiscriminantly sold from government strategic stockpiles). It does acknowledge, however, that considerable inventories existed in Russia prior to 1994, and there was no stability or centralized organization for exports prior to this time.²²

In early 1994, when most company stockpiles were depleted and the Russian producers sought more control over the distribution of their products, Oder Met agreed to become an exporter for the

²⁰ Section 771(7)(F)(iii) of the Act (19 U.S.C. 1677(7)(F)(iii)) further provides that, in antidumping investigations, "...the Commission shall consider whether dumping in the markets of foreign countries (as evidenced by dumping findings or antidumping remedies in other GATT member markets against the same class or kind of merchandise manufactured or exported by the same party as under investigation) suggests a threat of material injury to the domestic industry."

²¹ Petitioner estimates that total Russian capacity to produce ferrovanadium is approximately 34,000 metric tons annually (petition, p. 46).

²² In Oder Met's postconference brief (exh. 7), a statement is made by Mel Waskow, President of Metal Elements, Ltd. (in reference to "specific transactions which (he) helped to negotiate between Oder Met and Stratcor") that "...in mid-1993, a large volume of un-needed inventory was exported out of Russia, stored in Rotterdam, and sold both in Europe and the USA." However, no information is available on such inventories, if any, of Russian material still held in Rotterdam or elsewhere outside the United States.

Russian producers; and their worldwide exports of ferrovanadium, according to Oder Met, came under better control. By another arrangement, Stratcor became Oder Met's only importer of ferrovanadium in the United States. Stratcor, however, only accounted for about *** percent of ferrovanadium imports from Russia through March 1994, which suggests other exporters account for most of the Russian material. So far as it is known, Russian-produced ferrovanadium and/or nitrated vanadium are not subject to any remedies under the unfair-trade laws of any other country.

CONSIDERATION OF THE CAUSAL RELATIONSHIP BETWEEN THE ALLEGED LTFV IMPORTS AND THE ALLEGED MATERIAL INJURY

Imports, U.S. Consumption, and Market Penetration

Imports of ferrovanadium and nitrated vanadium have increased at a considerable rate since 1991, rising nearly 4-fold from 1991 to 1993 and nearly tripling from January-March 1993 to January-March 1994 (table 9). Much of this increase was due to imports from Russia, which increased from nothing to over 60 percent of total imports (in terms of quantity) in this period.²³ While imports increased, unit values dropped precipitously. For all countries other than Russia combined, unit values of imported ferrovanadium fell from \$5.30 per pound in 1992 to \$3.66 per pound in January-March 1994. Unit values for Russia fell from \$3.80 per pound to \$2.52 per pound in the same period. Corresponding unit values for U.S. producers' domestic shipments were \$5.93 per pound and \$3.83 per pound, respectively.

Fed by the rapid increase in imports, domestic consumption, at least in terms of quantity, increased substantially--by 37 percent from 1991 to 1993 and by 42 percent from January-March 1993 to January-March 1994 (table 10). In terms of value, however, consumption steadily declined, reflecting overall declines in unit values. As a share of consumption, the quantity of U.S. producers' shipments fell markedly--from 88 percent in 1991 to 48 percent in January-March 1994. In the same period and in marked contrast, imports' share increased from 12 percent to 52 percent, of which 32 percent is attributable to Russia alone.

A summary of related data concerning nitrated vanadium separately is presented in appendix C, table C-2. Only small quantities of this material were imported from Russia.

²³ Of nitrated vanadium, only relatively small quantities of imports from Russia and South Africa are known (app. C, table C-2).

Table 9
 Ferrovandium and nitrided vanadium: U.S. imports, by sources, 1991-93, Jan.-Mar. 1993, and Jan.-Mar. 1994

Item	1991	1992	1993	Jan.-Mar.--	
				1993	1994
Quantity (1,000 pounds)					
Russia	0	23	1,547	23	1,157
Other sources	1,037	2,405	3,368	732	757
Total	1,037	2,428	4,915	755	1,914
Value (1,000 dollars)					
Russia	0	89	4,817	86	2,911
Other sources	6,279	12,754	13,546	3,551	2,768
Total	6,279	12,842	18,363	3,637	5,678
Unit value (per pound)					
Russia	⁽¹⁾	\$3.80	\$3.11	\$3.68	\$2.52
Other sources	6.06	5.30	4.02	4.85	3.66
Average	6.06	5.29	3.74	4.82	2.97
Share of total quantity (percent)					
Russia	0	.9	31.5	3.0	60.4
Other sources	100.0	99.1	68.5	97.0	39.6
Average	100.0	100.0	100.0	100.0	100.0
Share of total value (percent)					
Russia	0	.7	26.2	2.4	51.3
Other sources	100.0	99.3	73.8	97.6	48.7
Average	100.0	100.0	100.0	100.0	100.0

¹ Not applicable.

Note.--Because of rounding, figures may not add to the totals shown; unit values are calculated from unrounded figures.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission (nitrided vanadium) and from official statistics of the U.S. Department of Commerce (ferrovandium).

Table 10

Ferrovandium and nitrided vanadium: U.S. shipments of domestic product, U.S. imports, and apparent U.S. consumption, 1991-93, Jan.-Mar. 1993, and Jan.-Mar. 1994

Item	1991	1992	1993	Jan.-Mar.--	
				1993	1994
<u>Quantity (1,000 pounds)</u>					
Producers' U.S. shipments	7,573	6,908	6,862	1,825	1,754
Imports from--					
Russia	0	23	1,547	23	1,157
Other sources	1,037	2,405	3,368	732	757
Total imports	1,037	2,428	4,915	755	1,914
Apparent consumption	8,610	9,336	11,777	2,580	3,668
<u>Value (1,000 dollars)</u>					
Producers' U.S. shipments	53,202	40,967	31,181	9,314	6,717
Imports from--					
Russia	0	89	4,817	86	2,911
Other sources	6,279	12,754	13,546	3,551	2,768
Total imports	6,279	12,842	18,363	3,637	5,678
Apparent consumption	59,481	53,809	49,544	12,951	12,395
<u>Share of the quantity of consumption (percent)</u>					
Producers' U.S. shipments	88.0	74.0	58.3	70.7	47.8
Imports from--					
Russia	0	0.2	13.1	0.9	31.5
Other sources	12.0	25.8	28.6	28.4	20.6
Total imports	12.0	26.0	41.7	29.3	52.2
<u>Share of the value of consumption (percent)</u>					
Producers' U.S. shipments	89.4	76.1	62.9	71.9	54.2
Imports from--					
Russia	0	0.2	9.7	0.7	23.5
Other sources	10.6	23.7	27.3	27.4	22.3
Total imports	10.6	23.9	37.1	28.1	45.8

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission and from official statistics of the U.S. Department of Commerce.

Prices

Marketing Considerations

Ferrovandium and nitrated vandium are used as alloying agents in the production of certain types of alloy steels. Ferrovandium and nitrated vandium alloy steels are used in the production of a wide range of products including arctic-grade natural gas transmission line pipe, bridges, the framework for high-rise buildings, ship plates, steel pilings in docks and along riverbanks, forged automobile components, high-strength steel rails, turbines and steel drums in steam generating plants, machine tools and dies, transmission towers and poles, heavy-duty trucks, construction equipment, and armor plate used in the production of military tanks, naval vessels, and other defense applications.²⁴ Therefore, demand for ferrovandium and nitrated vandium depends on industrial demand for the products that require ferrovandium and nitrated vandium alloy steels in their construction. Demand for ferrovandium and nitrated vandium increased during 1991-93, largely due to increasing demand for the downstream U.S. steel products.

Shieldalloy is the largest U.S.-producer of ferrovandium and nitrated vandium, accounting for *** percent of domestic production in 1993. Bear, accounting for *** percent of 1993 U.S. ferrovandium production, produces ferrovandium on a toll basis. Stratcor produced ferrovandium and nitrated vandium through 1993, then began importing and reselling Russian-produced ferrovandium and nitrated vandium in 1994. Six importers (***) accounted for 73 percent of U.S. imports of Russian ferrovandium and nitrated vandium in 1993.²⁵ *** sell imported Russian ferrovandium and nitrated vandium primarily to alloy steel producers, whereas *** sell their subject product to either *** or ***.

U.S. producers market ferrovandium and nitrated vandium nationwide, but sales are concentrated in the northeast, southeast, and midwest regions. Most sales of U.S.-produced subject product are shipped to customers located 100 miles or further from the U.S. production facilities. U.S. producers maintain that transportation costs, which account for between 1.2 and 1.5 percent of the delivered price, are not an important factor in their customers' purchasing decision.

Importers of the Russian subject product also sell primarily to the northeast, southeast, and midwest regions and similarly make most of their sales to customers located 100 miles or further from the U.S. point of entry. Importers reported that transportation costs are an important consideration in their customers' purchasing decision, accounting for between 1.2 and 5.0 percent of the delivered price.

Most U.S.-produced and imported Russian ferrovandium and nitrated vandium is sold on a bid basis. Sales of or prices for the subject product are typically negotiated either monthly or quarterly; longer term agreements are uncommon since prices have been steadily declining during the past 3 years. Prices are generally negotiated on an individual sale basis and are not based on set list prices. Prices depend on a variety of factors including the quantity, quality, and size of the ferrovandium and nitrated vandium being purchased, packaging and delivery costs, costs of production, availability of the product to the supplier, and current market conditions. Prices for both U.S.-produced and imported Russian ferrovandium and nitrated vandium are generally quoted on a delivered basis, and typical payment terms are net 30 days.

U.S. producers and importers reported that ferrocolumbium is a viable substitute for ferrovandium and nitrated vandium, but only if the price of the subject product exceeds that for ferrocolumbium. Most customers prefer the density and melting point of ferrovandium and nitrated vandium to those of ferrocolumbium. Furthermore, steel alloyed with vandium is generally easier to convert to shapes than steel alloyed with columbium. Currently, prices for ferrocolumbium range from

²⁴ Conference transcript, p. 16.

²⁵ Shieldalloy also imported Russian ferrovandium during 1992-93. Shieldalloy's imports of Russian ferrovandium accounted for about *** percent of U.S. imports of Russian ferrovandium during 1993.

\$6.30 to \$6.58 per pound contained columbium, whereas prices for ferrovanadium and nitrated vanadium are approximately \$3.70 per pound contained vanadium.²⁶

Product Comparisons

Sales of ferrovanadium and nitrated vanadium are differentiated by factors such as delivery lead times and reliability, minimum quantity order size, and quality. U.S. producers reported average delivery lead times of 1 to 3 days, whereas importers' average delivery lead times are significantly longer, typically ranging from 1 to 2 weeks. *** reported that Russian imports are a less reliable source of supply, but *** reported no difference between Russian and domestic supply reliability. *** reported that its minimum order size requirements are lower than those of its competitors.

Most U.S. producers reported that quality differences between U.S.-produced and imported Russian ferrovanadium and nitrated vanadium are not significant. Stratcor, a firm that used to produce the subject product in the United States, but which now imports and resells Russian ferrovanadium and nitrated vanadium, reported that imported Russian nitrated vanadium does not perform as well as Nitrovan, a U.S.-produced nitrated vanadium product.

Importers reported that quality differences are significant. However, they reported mixed opinions as to whether these differences constitute an advantage or a disadvantage to their firms. *** maintains that their imported Russian ferrovanadium and nitrated vanadium have lower levels of nickel and chrome than the U.S.-produced subject product, and therefore can be used in tool steel applications that cannot use the U.S. product. Conversely, *** reports that their imported Russian ferrovanadium and nitrated vanadium have higher levels of impurities than the U.S.-produced subject product.

Questionnaire Price Data

The Commission requested U.S. producers and importers of Russian ferrovanadium and nitrated vanadium to provide net delivered prices and total quantities and values of three representative subject products. For each product listed below, the Commission requested price data for the largest sale to unrelated U.S. end users for each quarter during January 1991-March 1994. The price and quantity information are based on units of contained vanadium.

Product 1: Grade 40-60 percent ferrovanadium, 2" by down

Product 2: Grade 78-82 percent ferrovanadium, 2" by down

Product 3: Nitrated vanadium, 2" by down

Two U.S. producers and three importers provided pricing data, although not necessarily for all products or quarters during January 1991-March 1994. The responding U.S. producers accounted for *** percent of the reported U.S. shipments of U.S.-produced ferrovanadium and nitrated vanadium in 1993.²⁷ The responding importers accounted for 43 percent of U.S. shipments of imported Russian subject product in 1993. Weighted-average net delivered prices for sales of U.S.-produced and imported Russian products 1-3 are presented in tables 11-13 and figures 1-3.

²⁶ *** reported that customers made many substitutions of ferrocolumbium for ferrovanadium and nitrated vanadium when U.S. producers raised the prices for the subject products to \$20 per pound contained vanadium levels in 1988.

²⁷ A third U.S. producer, Bear, provided pricing information but no price data for sales of the subject product since it produces ferrovanadium and nitrated vanadium on a toll basis. Bear accounted for *** percent of U.S. shipments of U.S.-produced ferrovanadium and nitrated vanadium in 1993.

Table 11

Ferrovandium and nitrated vanadium: Weighted-average net delivered prices and total quantities of U.S.-produced and imported Russian product 1 sold to end users, by quarters, Jan. 1991-Mar. 1994

* * * * *

Table 12

Ferrovandium and nitrated vanadium: Weighted-average net delivered prices and total quantities of U.S.-produced and imported Russian product 2 sold to end users, by quarters, Jan. 1991-Mar. 1994

* * * * *

Table 13

Ferrovandium and nitrated vanadium: Weighted-average net delivered prices and total quantities of U.S.-produced and imported Russian product 3 sold to end users, by quarters, Jan. 1991-Mar. 1994

* * * * *

Figure 1

Ferrovandium and nitrated vanadium: Weighted-average net delivered prices of U.S.-produced and imported Russian product 1 sold to end users, by quarters, Jan. 1991-Mar. 1994

* * * * *

Figure 2

Ferrovandium and nitrated vanadium: Weighted-average net delivered prices of U.S.-produced and imported Russian product 2 sold to end users, by quarters, Jan. 1991-Mar. 1994

* * * * *

Figure 3

Ferrovandium and nitrated vanadium: Weighted-average net delivered prices of U.S.-produced and imported Russian product 3 sold to end users, by quarters, Jan. 1991-Mar. 1994

* * * * *

Price trends for sales of U.S.-produced ferrovandium and nitrated vanadium

Delivered prices for sales of U.S.-produced products 1-3 generally declined during January 1991-March 1994. Prices for product 1 (the most popular of the U.S.-produced subject products) fell each quarter, declining by 49.0 percent over the period. Product 2 prices fluctuated downward, falling by 50.1 percent during January 1991-March 1994. U.S. producers reportedly sold product 3 only during 1991-92. The available price data fluctuated widely during this period and did not show a consistent trend.

Price trends for sales of imported Russian ferrovanadium and nitrated vanadium

Importers of Russian ferrovanadium and nitrated vanadium only reported price data for sales during the last two quarters of 1993 and the first quarter of 1994. The limited available price data show that prices for imported Russian product 1 fell by 15.2 percent during the period July 1993-March 1994.²⁸ Prices for product 2 did not change between the last quarter of 1993 and the first quarter of 1994, the only quarters for which data were available.²⁹ Product 3 prices fell by 7.6 percent over the last two quarters of 1993 and the first quarter of 1994.³⁰

Input costs

Quarterly indexes of Shieldalloy's unit costs for vanadium residue and vanadium slag (***)³¹ and prices for U.S.-produced products 1 and 2 are shown in figure 4.

* * * * *

Figure 4

Input costs: Indexes of the unit costs of vanadium residue and vanadium slag used in the production of ferrovanadium and nitrated vanadium and prices for U.S.-produced products 1-2, by quarters, Jan. 1991-Mar. 1994

* * * * *

Price comparisons for sales of imported Russian ferrovanadium and nitrated vanadium

Importers only reported price data for sales of Russian ferrovanadium and nitrated vanadium during the last two quarters of 1993 and the first quarter of 1994. Therefore, the available price comparison data are very limited.

The available price data for sales of imported Russian ferrovanadium and nitrated vanadium allowed only five price comparisons (table 14). Imported Russian product 1 was priced below U.S. product 1 in all three available quarters, by an average of 7.1 percent. Conversely, imported Russian product 2 was priced above U.S. product 2 in both available quarters, by an average of 7.5 percent. During January 1991-March 1994, U.S.-produced and imported Russian product 3 were not sold in the same quarter.

Table 14

Ferrovanadium and nitrated vanadium: Margins of underselling/(overselling) for sales of products 1 and 2 to end users, by quarters, Jan. 1993-Mar. 1994

* * * * *

²⁸ During the same period, prices for U.S.-produced product 1 fell by 11.3 percent.

²⁹ During the same period, prices for U.S.-produced product 2 increased by 4.2 percent.

³⁰ U.S. producers did not report any sales of product 3 during July 1993-March 1994.

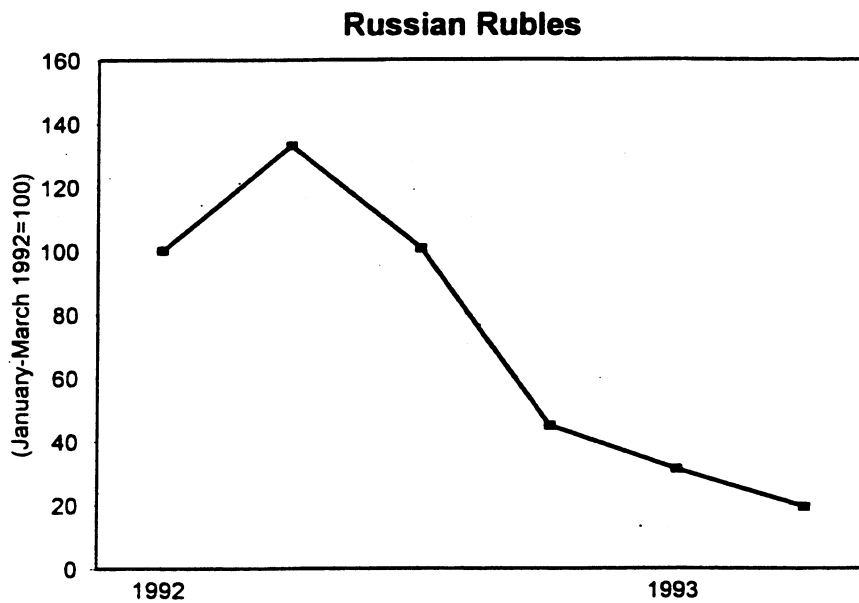
³¹ On average, Shieldalloy's costs for vanadium residue and slag accounted for approximately *** percent of its total raw materials cost during the period January 1991-March 1994. Raw materials accounted for about *** percent of total costs of goods sold during the period.

Exchange Rates

The International Monetary Fund (IMF) does not regularly publish quarterly exchange rates for the Russian ruble. However, in a supplement to its International Financial Statistics series, the IMF reported interbank market exchange rates for the period January 1992-June 1993. During this period, the nominal value of the Russian ruble depreciated by 80.7 percent relative to the dollar (figure 5). The IMF does not publish Russian producer price indexes; therefore real exchange rates could not be calculated.

Figure 5

Indexes of the nominal interbank market exchange rates between the U.S. dollar and Russian ruble, by quarters, Jan. 1992-July 1993



Source: International Monetary Fund, *International Financial Statistics*, Feb. 1994.

Lost Sales and Lost Revenues

The responding U.S. producers reported lost sales and lost revenues allegations as shown in the tabulation below.

	<u>Customers</u>	<u>Sales</u>	<u>Quantity</u> (Pounds contained V)	<u>Value</u>
Lost revenues	***	***	***	\$***
Lost sales	***	***	***	\$***

The Commission interviewed six purchasers named in five of the lost revenue allegations worth *** and four of the lost sales allegations concerning *** pounds of contained vanadium worth ***. The information obtained from these purchasers is discussed below.

*** was named by *** in a *** lost revenue allegation worth ***. *** could neither confirm nor deny the specific allegation. *** reported that they do not always know the country of origin of the ferrovanadium they purchase. Last year *** bought approximately *** percent of its ferrovanadium from *** and the remaining *** percent from ***. Importers have approached *** with quotes for the Russian product, but *** is not really interested in foreign product because of their loyalty to domestic producers. *** only uses *** percent ferrovanadium because *** percent ferrovanadium does not mix into solution as well. *** has not used and is not familiar with nitrated vanadium.

*** was named by *** in a *** lost revenue allegation valued at *** and a *** lost revenue allegation worth ***. *** could neither confirm nor deny the specific allegation. *** reported that *** buys approximately *** pounds of contained vanadium a year. Prior to ***, *** bought all of its ferrovanadium from ***. On ***, *** received quotes from three suppliers and chose ***, a supplier of imported Russian ferrovanadium, largely based on price. At the time, offered prices for imported Russian ferrovanadium were 25 to 30 cents per pound lower than prices for domestic material. Since then, *** has switched back to domestic product because *** is now pricing its product more aggressively. *** maintained that there are no discernible differences between the quality of U.S.-produced and imported Russian ferrovanadium. *** typically uses *** percent ferrovanadium because that is what their specifications call for. *** has tried nitrated vanadium, but it did not work very well.

*** was named by *** in a *** lost sales allegation concerning *** pounds of ferrovanadium valued at ***. ***, a representative of ***, confirmed the allegation. *** reported that *** buys approximately *** pounds of contained vanadium a year. All of the ferrovanadium *** purchased in *** was of Russian origin. *** does not care if the ferrovanadium is 42-48 percent grade, 80 percent grade, or of a different size--all that matters is the amount of contained vanadium. There are no significant quality differences between U.S.-produced and imported Russian ferrovanadium. *** typically solicits quotes from a variety of sources and its purchasing decisions are generally based on price and delivery requirements--price is usually the main consideration. *** has never used nitrated vanadium but it probably could if necessary.

*** was named by *** in a *** lost sales allegation concerning *** pounds of contained vanadium worth ***. *** could neither confirm nor deny the specific allegation. *** reported that *** typically buys *** pounds of contained vanadium a year. So far during 1994, *** has purchased *** of imported Russian ferrovanadium. *** maintained that quality differences between U.S.-produced and imported Russian ferrovanadium are negligible. *** can use either 42-48 percent grade or 80 percent grade as long as the ferrovanadium is ***. When purchasing ferrovanadium, *** typically receives quotes from several approved suppliers and pricing is a very important factor in the purchasing decision. *** has never used nitrated vanadium.

*** was named by *** in an *** lost revenue allegation valued at *** and a *** lost sales allegation concerning *** pounds of contained vanadium worth ***. *** could neither confirm nor deny the specific allegations. *** reported that *** typically buys *** tons of contained vanadium per year. Last year, about *** of *** ferrovanadium purchases were of Russian origin; this year, about *** of its ferrovanadium comes from Russia. *** maintains that during the latter part of 1993 and the beginning of 1994 the U.S. market was inundated by imports of Russian ferrovanadium. *** claims that several times last year suppliers of Russian ferrovanadium drove the U.S. market price down to a level so low that one of *** U.S. suppliers was forced to quote a price below its cost of production. *** typically solicits quotes from approximately *** approved suppliers in order to get the best price and quality. In general, there are no discernible differences between the quality of U.S.-produced ferrovanadium and that of the imported Russian subject product. *** typically uses *** percent grade ferrovanadium; *** has used *** percent grade but its recovery of the vanadium from the higher-grade ferrovanadium was not as consistent. *** bought nitrided vanadium from *** during the last two years. Because of metallurgical specifications, it is not really interchangeable with ferrovanadium.

*** was named by *** in a *** lost revenue allegation valued at *** and a *** lost sales allegation concerning *** pounds of contained vanadium worth ***. *** could neither confirm nor deny the specific allegation. *** reported that *** buys approximately *** pounds of contained vanadium a year, and bought imported Russian ferrovanadium every quarter during 1993 and into 1994. For each purchase *** typically requests quotes from *** sources, and chooses one or two sources from this group. *** stated that as long as the ferrovanadium meets *** specifications, any quality differences are immaterial and the purchasing decision is mainly based on price. *** typically buys *** percent ferrovanadium and has never used nitrided vanadium.

APPENDIX A
FEDERAL REGISTER NOTICES

1673b(a)) to determine whether there is a reasonable indication that an industry in the United States is materially injured, or is threatened with material injury, or the establishment of an industry in the United States is materially retarded, by reason of imports from Russia of ferrovanadium and nitrated vanadium, provided for in subheadings 7202.92.00 and 8112.40.60 of the Harmonized Tariff Schedule of the United States, that are alleged to be sold in the United States at less than fair value. The Commission must complete preliminary antidumping investigations in 45 days, or in this case by July 15, 1994.

For further information concerning the conduct of this investigation 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 and B (19 CFR part 207).

EFFECTIVE DATE: May 31, 1994.

FOR FURTHER INFORMATION CONTACT: Larry Reavis (202-205-3185), Office of Investigations, U.S. International Trade Commission, 500 E Street SW., 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. Information can also be obtained by calling the Office of Investigations' remote bulletin board system for personal computers at 202-205-1895 (N.8.1).

SUPPLEMENTARY INFORMATION:

Background

This investigation is being instituted in response to a petition filed on May 31, 1994, by counsel on behalf of Shieldalloy Metallurgical Corp., New York, NY.

Participation in the Investigation and Public Service List

Persons (other than petitioners) wishing to participate in the investigation as parties must file an entry of appearance with the Secretary to the Commission, as provided in §§ 201.11 and 207.10 of the Commission's rules, not later than seven (7) days after publication of this notice in the **Federal Register**. The Secretary will prepare a public service list containing the names and addresses of all persons, or their representatives, who are parties to this investigation

[Investigation No. 731-TA-702
(Preliminary)]

**Ferrovanadium and Nitrated Vanadium
From Russia**

AGENCY: International Trade
Commission.

ACTION: Institution and scheduling of a
preliminary antidumping investigation.

SUMMARY: The Commission hereby gives
notice of the institution of preliminary
antidumping investigation No. 731-TA-
702 (Preliminary) under section 733(a)
of the Tariff Act of 1930 (19 U.S.C.

upon the expiration of the period for filing entries of appearance.

Limited Disclosure of Business Proprietary Information (BPI) Under an Administrative Protective Order (APO) and BPI Service List

Pursuant to § 207.7(a) of the Commission's rules, the Secretary will make BPI gathered in this preliminary investigation available to authorized applicants under the APO issued in the investigation, provided that the application is made not later than seven (7) days after the publication of this notice in the **Federal Register**. A separate service list will be maintained by the Secretary for those parties authorized to receive BPI under the APO.

Conference

The Commission's Director of Operations has scheduled a conference in connection with this investigation for 9:30 a.m. on June 21, 1994, at the U.S. International Trade Commission Building, 500 E Street SW., Washington, DC. Parties wishing to participate in the conference should contact Larry Reavis (202-205-3185) not later than June 17 to arrange for their appearance. Parties in support of the imposition of antidumping duties in this investigation and parties in opposition to the imposition of such duties will each be collectively allocated one hour within which to make an oral presentation at the conference. A nonparty who has testimony that may aid the Commission's deliberations may request permission to present a short statement at the conference.

Written Submissions

As provided in §§ 201.8 and 207.15 of the Commission's rules, any person may submit to the Commission on or before June 24, 1994, a written brief containing information and arguments pertinent to the subject matter of the investigation. Parties may file written testimony in connection with their presentation at the conference no later than three (3) days before the conference. If briefs or written testimony contain BPI, they must conform with the requirements of §§ 201.6, 207.3, and 207.7 of the Commission's rules.

In accordance with §§ 201.16(c) and 207.3 of the rules, each document filed by a party to the investigation must be served on all other parties to the investigation (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: This investigation is being conducted under authority of the Tariff Act of 1930, title VII. This notice is published pursuant to § 207.12 of the Commission's rules.

Issued: June 2, 1994.

By order of the Commission.

Donna R. Koehnke,

Secretary.

[FR Doc. 94-13901 Filed 6-7-94; 8:45 am]

BILLING CODE 7020-02-P

Notices

Federal Register

Vol. 59, No. 122

Monday, June 27, 1994

**International Trade Administration
[A-821-807]****Notice of Initiation of Antidumping
Duty Investigation: Ferrovandium and
Nitrated Vandium From the Russian
Federation****AGENCY:** Import Administration,
International Trade Administration,
Commerce.**EFFECTIVE DATE:** June 27, 1994.**FOR FURTHER INFORMATION CONTACT:**
Michelle Frederick or David Goldberger,
Office of Antidumping Investigations,
Import Administration, International
Trade Administration, U.S. Department
of Commerce, 14th Street and
Constitution Avenue, N.W.,
Washington, D.C., 20230; telephone
(202) 482-0186 or 482-4136.**Initiation of Investigation***The Petition*

On May 31, 1994, we received a petition filed in proper form by Shieldalloy Metallurgical Corporation ("Shieldalloy"). In accordance with 19 CFR 353.12, petitioner alleges that imports of ferrovandium and nitrated vandium from the Russian Federation are being, or are likely to be, sold in the United States at less than fair value within the meaning of section 731 of the Tariff Act of 1930, as amended ("the Act"), and that such imports are materially injuring, or threaten material injury to, a U.S. industry.

Petitioner states that it has standing to file the petition because it is a domestic industry producing the produce subject to this investigation. If any interested party, as described under paragraphs (C), (D), (E), or (F) of section 771(9) of the Act, wishes to register support for, or opposition to, this petition, it should file a written notification with the Assistant Secretary for Import Administration.

Scope of Investigation

The products covered by this investigation are imports of ferrovandium and nitrated vandium, regardless of grade, chemistry, form, shape, or size, unless expressly

excluded from the scope of this investigation. Ferrovandium includes alloys containing vanadium as the predominant element, by weight (*i.e.* more weight than any other element, except iron in some instances), and at least 4 percent, by weight, of iron. Nitrided vanadium includes alloys containing vanadium as the predominant element, by weight, and at least 5 percent, by weight, of nitrogen. Excluded from the scope of this investigation are vanadium additives other than ferrovandium and nitrided vanadium, such as vanadium-aluminum master alloys, vanadium chemicals, vanadium waste and scrap, vanadium-bearing raw materials such as slag, boiler residues, and fly ash, and vanadium oxides.

The products subject to this investigation are classifiable under subheadings 7202.92.00 and 2850.00.20 of the *Harmonized Tariff Schedule of the United States* ("HTSUS"). Although the HTSUS subheadings are provided for convenience and customs purposes, our written description of the scope is dispositive.

United States Price and Foreign Market Value

Petitioner based United States Price (USP) on price quotes to U.S. customers, and made adjustments for distributor mark-ups and movement expenses.

Petitioner contends that the foreign market value (FMV) of Russian-produced imports subject to this investigation must be determined in accordance with section 773(c) of the Act, which concerns non-market economy (NME) countries. The Russian Federation is presumed to be an NME within the meaning of section 771(18)(C) of the Act, because the Department has treated it as such in previous investigations (*See, e.g., Final Determination of Sales at Less Than Fair Value: Ferrosilicon from the Russian Federation*, 58 FR 29192 (May 19, 1993)).

In accordance with section 773(c) of the Act, foreign market value (FMV) in NME cases is based on NME producers' factors of production, as valued in a market economy country. Absent evidence that a particular NME country government determines which of its factories shall produce for export to the United States, we intend, for purposes of this investigation, to base FMV only on those factories that produced ferrovandium and/or nitrided vanadium sold to the United States during the period of investigation (POI).

In the course of this investigation, parties will have the opportunity to address this NME determination and

provide relevant information and argument on this issue. In addition, parties will have the opportunity in this investigation to submit comments on whether FMV should be based on prices or costs in the respective NME.

Petitioner calculated FMV on the basis of the valuation of the factors of production. The factors of production used by petitioner were based on experience at a German factory, related to the petitioner, which uses a production process similar to that used in Russia. Petitioner's FMV consisted of the sum of raw materials: labor, energy, utilities, overhead, general expenses, profit and packing.

To value the factors of production, petitioner, citing an August 11, 1992, memorandum from the Import Administration Office of Policy to David L. Binder with regard to *Ferrosilicon from Russia*, used Brazil as the surrogate country and relied on information obtained by a related party in Brazil. Where it could not obtain Brazilian data, petitioner used information on South Africa, as South Africa was also mentioned as a possible surrogate for Russia in the August 11, 1992, memorandum. Petitioner relied on the Brazilian related party's labor rate data instead of publicly available, published information because it contended that the public data were obsolete and/or less accurate. Because the Department has a clear preference for the use of publicly available, published information, and petitioner did not demonstrate conclusively that its reported labor rates were superior to the publicly available information, we have recalculated FMV using the labor rate submitted in the petition of *Pure and Alloy Magnesium from the Russian Federation*, which is based on a publicly available, published cost index for Brazil.

Fair Value Comparisons

Based on the information contained on the petition and subsequent amendments, comparisons of USP and FMV result in alleged dumping margins of 92.6 to 108 percent.

Initiation of Investigation

We have examined the petition on ferrovandium and nitrided vanadium and have found that it meets the requirements of section 732(b) of the Act. Therefore, we are initiating an antidumping duty investigation to determine whether imports of ferrovandium and nitrided vanadium from the Russian Federation are being, or are likely to be, sold in the United States at less than fair value.

ITC Notification

Section 732(d) of the Act requires us to notify the International Trade Commission (ITC) of these actions, and we have done so.

Preliminary Determination by the ITC

The ITC will determine by July 15, 1994, whether there is a reasonable indication that imports of ferrovandium and nitrided vanadium from the Russian Federation are materially injuring, or threaten material injury to, a U.S. industry. Any ITC determination which is negative will result in the termination of the investigation; otherwise, this investigation will proceed according to statutory and regulatory time limits.

This notice is published pursuant to section 732(c)(2) of the Act and 19 CFR 353.13(b).

Dated: June 20, 1994.

Susan G. Esserman,
Assistant Secretary for Import
Administration.

[FR Doc. 94-15534 Filed 6-22-94; 8:45 am]

BILLING CODE 3510-06-M

APPENDIX B
PARTICIPANTS AT THE COMMISSION'S CONFERENCE

CALENDAR OF PUBLIC CONFERENCE

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

Subject : FERROVANADIUM AND NITRIDED VANADIUM
FROM RUSSIA

Inv. No. : 731-TA-702 (Preliminary)

Date and Time : June 21, 1994 - 9:30 a.m.

Sessions were held in the Main Hearing Room of the United States International Trade Commission, 500 E St., S.W., Washington, D.C.

In support of Imposition of
Antidumping Duties:

Harris & Ellsworth
Washington, D.C.
On behalf of

Shieldalloy Metallurgical Corp.

H. Nils Schooley, President
R. James Carter, Vice President, Sales and Product Management, Alloys and Metals Division

Cheryl Ellsworth)--OF COUNSEL
Jeffery S. Levin)--OF COUNSEL

In Opposition to the Imposition of
Antidumping Duties:

Ober, Kaler, Grimes & Shriver
Washington, D.C.
On behalf of

Oder Met, Ltd.

Dieter Beckman, Advisor to the Board of Directors, Oder Met, Ltd.
Mel Waskow, President, Metal Elements, Ltd.

William E. Perry)--OF COUNSEL

In Opposition to the Imposition of
Antidumping duties--Continued

Ross & Hardies
Washington, D.C.
On behalf of

Galt Alloys, Inc.

Jeffrey S. Neeley
Roger Banks

)--OF COUNSEL
)--OF COUNSEL

APPENDIX C

**SELECTED DATA RELATED TO THE ALLEGED MATERIAL INJURY
AND THE CAUSAL RELATIONSHIP BETWEEN THE ALLEGED LTFV IMPORTS
AND THE ALLEGED MATERIAL INJURY**

Table C-1

Ferrovanadium and nitrated vanadium: Summary data concerning the U.S. market, 1991-93, Jan.-Mar. 1993, and Jan.-Mar. 1994

(Quantity=1,000 pounds; value=1,000 dollars; unit values, unit labor costs, and unit COGS are per pound; period changes=percent, except where noted)

Item	Reported data				Period changes				
	1991	1992	1993	Jan.-Mar.-- 1993	1994	1991-93	1991-92	1992-93	Jan.-Mar. 1993-94
U.S. consumption quantity:									
Amount.....	8,610	9,336	11,777	2,580	3,668	+36.8	+8.4	+26.1	+42.2
Producers' share <u>1/</u>	88.0	74.0	58.3	70.7	47.8	-29.7	-14.0	-15.7	-22.9
Importers' share: <u>1/</u>									
Russia.....	0	0.2	13.1	0.9	31.5	+13.1	+0.2	+12.9	+30.7
Other sources.....	12.0	25.8	28.6	28.4	20.6	+16.6	+13.7	+2.8	-7.7
Total.....	12.0	26.0	41.7	29.3	52.2	+29.7	+14.0	+15.7	+22.9
U.S. consumption value:									
Amount.....	59,481	53,809	49,544	12,951	12,395	-16.7	-9.5	-7.9	-4.3
Producers' share <u>1/</u>	89.4	76.1	62.9	71.9	54.2	-26.5	-13.3	-13.2	-17.7
Importers' share: <u>1/</u>									
Russia.....	0	0.2	9.7	0.7	23.5	+9.7	+0.2	+9.6	+22.8
Other sources.....	10.6	23.7	27.3	27.4	22.3	+16.8	+13.1	+3.6	-5.1
Total.....	10.6	23.9	37.1	28.1	45.8	+26.5	+13.3	+13.2	+17.7
U.S. importers' imports from--									
Russia:									
Imports quantity.....	0	23	1,547	23	1,157	<u>2/</u>	<u>2/</u>	<u>3/</u>	<u>3/</u>
Imports value.....	0	89	4,817	86	2,911	<u>2/</u>	<u>2/</u>	<u>3/</u>	<u>3/</u>
Unit value.....	<u>2/</u>	\$3.80	\$3.11	\$3.68	\$2.52	<u>2/</u>	<u>2/</u>	-18.0	-31.6
Ending inventory qty.....	0	0	657	0	799	<u>2/</u>	0	<u>2/</u>	<u>2/</u>
Other sources:									
Imports quantity.....	1,037	2,405	3,368	732	757	+224.8	+131.9	+40.0	+3.4
Imports value.....	6,279	12,754	13,546	3,551	2,768	+115.7	+103.1	+6.2	-22.1
Unit value.....	\$6.06	\$5.30	\$4.02	\$4.85	\$3.66	-33.6	-12.4	-24.1	-24.7
All sources:									
Imports quantity.....	1,037	2,428	4,915	755	1,914	+374.0	+134.1	+102.4	+153.5
Imports value.....	6,279	12,842	18,363	3,637	5,678	+192.5	+104.5	+43.0	+56.1
Unit value.....	\$6.06	\$5.29	\$3.74	\$4.82	\$2.97	-38.3	-12.7	-29.4	-38.4
U.S. producers'--									
Average capacity quantity..	21,140	21,140	21,140	5,285	5,285	0	0	0	0
Production quantity.....	7,888	7,225	7,275	1,929	***	-7.8	-8.4	+0.7	***
Capacity utilization <u>1/</u>	37.3	34.2	34.4	36.5	***	-2.9	-3.1	+0.2	***
U.S. shipments:									
Quantity.....	7,573	6,908	6,862	1,825	1,754	-9.4	-8.8	-0.7	-3.9
Value.....	53,202	40,967	31,181	9,314	6,717	-41.4	-23.0	-23.9	-27.9
Unit value.....	\$7.03	\$5.93	\$4.54	\$5.10	\$3.83	-35.3	-15.6	-23.4	-25.0
Export shipments:									
Quantity.....	***	***	***	***	***	***	***	***	***
Exports/shipments <u>1/</u>	***	***	***	***	***	***	***	***	***
Value.....	***	***	***	***	***	***	***	***	***
Unit value.....	***	***	***	***	***	***	***	***	***
Ending inventory quantity..	718	560	671	618	494	-6.5	-22.0	+19.8	-20.1
Inventory/shipments <u>1/</u>	***	***	***	***	***	***	***	***	***
Production workers.....	207	185	154	157	***	-25.6	-10.6	-16.8	***
Hours worked (1,000s).....	390	371	305	73	***	-21.8	-4.9	-17.8	***
Total comp. (\$1,000).....	7,731	7,639	6,207	1,390	***	-19.7	-1.2	-18.7	***
Hourly total compensation..	\$19.82	\$20.59	\$20.35	\$19.04	***	+2.7	+3.9	-1.2	***
Productivity (Lbs./hour)...	20.2	19.5	23.9	26.4	***	+17.9	-3.7	+22.5	***
Unit labor costs.....	\$0.98	\$1.06	\$0.85	\$0.72	***	-12.9	+7.9	-19.3	***
Net sales--									
Quantity.....	***	***	***	***	***	***	***	***	***
Value.....	***	***	***	***	***	***	***	***	***
Cost of goods sold (COGS)...	***	***	***	***	***	***	***	***	***
Gross profit (loss).....	***	***	***	***	***	***	***	***	***
SG&A expenses.....	***	***	***	***	***	***	***	***	***
Operating income (loss)....	***	***	***	***	***	***	***	***	***
Capital expenditures.....	***	***	***	***	***	***	***	***	***
Unit COGS.....	***	***	***	***	***	***	***	***	***
COGS/sales <u>1/</u>	***	***	***	***	***	***	***	***	***
Op.income (loss)/sales <u>1/</u> ..	***	***	***	***	***	***	***	***	***

1/ "Reported data" are in percent and "period changes" are in percentage points.2/ Not applicable.3/ An increase of 1,000 percent or more.

Note.--Period changes are derived from the unrounded data. Period changes involving negative period data are positive if the amount of the negativity decreases and negative if the amount of the negativity increases. Because of rounding, figures may not add to the totals shown. Unit values and other ratios are calculated from the unrounded figures, using data of firms supplying both numerator and denominator information. Part-year inventory ratios are annualized.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission and from official statistics of the U.S. Department of Commerce.

Table C-2

Nitrided vanadium: Summary data concerning the U.S. market, 1991-93, Jan.-Mar. 1993, and Jan.-Mar. 1994

* * * * *

APPENDIX D

**COMMENTS RECEIVED FROM U.S. PRODUCERS
ON THE IMPACT OF IMPORTS OF FERROVANADIUM AND NITRIDED VANADIUM
FROM RUSSIA ON THEIR GROWTH, INVESTMENT, ABILITY
TO RAISE CAPITAL, AND DEVELOPMENT
AND PRODUCTION EFFORTS**

The Commission requested U.S. producers to describe any actual or anticipated negative effects of imports of ferrovanadium and nitrided vanadium from Russia on their growth, investment, ability to raise capital, or existing development and production efforts, including efforts to develop a derivative or more advanced version of the product. ***.

1. Since January 1, 1991, has your firm experienced any actual negative effects on its growth, investment, ability to raise capital, or existing development and production efforts, including efforts to develop a derivative or more advanced version of the product, as a result of imports of ferrovanadium and nitrided vanadium from Russia?

* * * * *

2. Does your firm anticipate any negative impact of imports of ferrovanadium and nitrided vanadium from Russia?

* * * * *

3. Has the scale of capital investments undertaken been influenced by the presence of imports of ferrovanadium and nitrided vanadium from Russia?

* * * * *