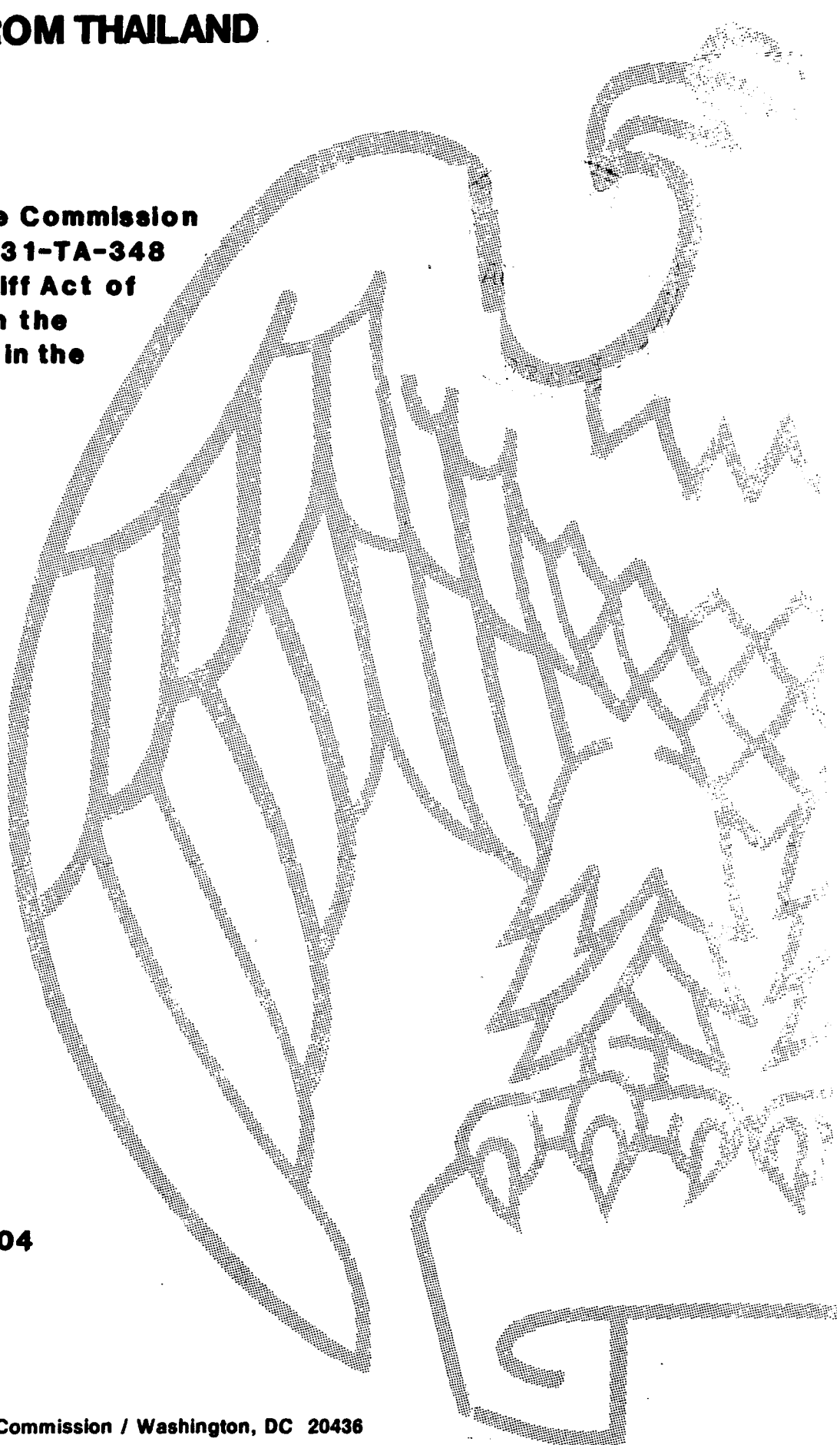


CERTAIN MALLEABLE CAST-IRON PIPE FITTINGS FROM THAILAND

**Termination of the Commission
Investigation No. 731-TA-348
(Final) Under the Tariff Act of
1930, Together With the
Information Obtained in the
Investigation**

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AUGUST 1987



UNITED STATES INTERNATIONAL TRADE COMMISSION

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Note.--Information that would reveal confidential operations of individual concerns may not be published and therefore has been deleted from this report.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

UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, DC

Investigation No. 731-TA-348 (Final)

CERTAIN MALLEABLE CAST-IRON PIPE FITTINGS FROM THAILAND

Determination

On the basis of the record 1/ developed in the subject investigation, the Commission unanimously determines, pursuant to section 735(b) of the Tariff Act of 1930 (19 U.S.C. § 1673d(b)), that an industry in the United States is materially injured by reason of imports from Thailand of nonalloy, malleable cast-iron pipe fittings, 2/ whether or not advanced in condition by operations or processes (such as threading) subsequent to the casting process, provided for in items 610.70 and 610.74 of the Tariff Schedules of the United States, that have been found by the Department of Commerce to be sold in the United States at less than fair value (LTFV).

Background

The Commission instituted this investigation effective February 13, 1987, following a preliminary determination by the Department of Commerce that imports of certain malleable cast-iron pipe fittings from Thailand were being sold at LTFV within the meaning of section 731 of the Act (19 U.S.C. § 1673). Notice of the institution of the Commission's investigation and of a public hearing to be held in connection therewith was given by posting copies of the notice in the Office of the Secretary, U.S. International Trade Commission, Washington, DC, and by publishing the notice in the Federal Register of March 4, 1987 (52 F.R. 6631). The hearing was held in Washington, DC, on April 28, 1987, 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(i) of the Commission's Rules of Practice and Procedure (19 CFR § 207.2(i)).

2/ Such fittings are those with standard pressure ratings of 150 pounds per square inch (psi) or heavy-duty pressure ratings of 300 psi. Groove-lock fittings are not included.

VIEWS OF THE COMMISSION

We determine that an industry in the United States is materially injured by reason of imports of certain malleable cast-iron pipe fittings from Thailand that are sold at less than fair value (LTFV).^{1/}

We base this determination on the overall decline in the condition of the domestic industry since 1984, apparent from the data of record and noted in our last investigation of imports of the same product^{2/} and on our assessment of the volume and effect of cumulated imports from Thailand and Japan. These imports were present in significant volumes throughout the period of investigation, increased their market share in 1986, and consistently undersold the domestic product. As a result, the domestic industry continued to experience material injury.

Like product/domestic industry

The Commission is required to define the scope of the relevant domestic industry for the purpose of assessing material injury. The term "industry" is defined by statute as "the domestic producers as a whole of a like product, or those producers whose collective output of the like product constitutes a

^{1/} Material retardation is not an issue in this investigation and will not be discussed further.

^{2/} See Certain Malleable Cast-Iron Pipe Fittings from Japan, Inv. No. 731-TA-347 (Final), USITC Pub. 1987 (June 1987).

major proportion of the total domestic production of that product."^{3/}

"Like product," in turn, is defined 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"^{4/}

In previous investigations involving the same product, we found the like product to be malleable threaded cast-iron pipe fittings and the domestic industry to be the producers of malleable threaded cast-iron pipe fittings.^{5/} In the final phase of the case, respondents continued to argue that the like product should include grooved pipe fittings and/or nonmalleable pipe fittings. They failed, however, to submit any additional information on the subject and, instead, suggested that the Commission had received questionnaire data that would allow it "to make a fully informed determination

^{3/} 19 U.S.C. § 1677(4)(A).

^{4/} 19 U.S.C. § 1677(10). See also S. Rep. No. 249, 96th Cong., 1st Sess. 90-91 (1979). The "article subject to an investigation" is defined by the scope of the Department of Commerce's (Commerce) investigation. Commerce has defined the scope of this investigation as "malleable cast iron pipe fittings, advanced in condition by operations or processes subsequent to the casting process other than with grooves, or not advanced, of cast iron other than alloy cast iron, as currently provided for in items 610.7000 and 610.7400 of the Tariff Schedules of the United States Annotated (TSUSA)." See 52 Fed. Reg. 25282 (July 6, 1987).

^{5/} See, e.g., Certain Malleable Cast-Iron Pipe Fittings from Japan, *supra*, n.2; Certain Malleable Cast-Iron Pipe Fittings from Japan and Thailand, Invs. Nos. 731-TA-347 to 348 (Preliminary), USITC Pub. 1900 (Oct. 1986); Certain Cast-Iron Pipe Fittings from Brazil, the Republic of Korea and Taiwan, Invs. Nos. 731-TA-278 to 280 (Preliminary), USITC Pub. 1753 (Sept. 1985) and (Final), USITC Pub. 1845 (May 1986); Certain Cast-Iron Pipe Fittings from Brazil, Inv. No. 701-TA-221 (Final), USITC Pub. 1681 (Apr. 1985) (finding that malleable and nonmalleable pipe fittings are separate like products and that there are separate domestic industries producing malleable and nonmalleable pipe fittings).

concerning this crucial like product issue." ^{6/} In our view, the information collected during this investigation shows a lack of interchangeability between these two types of pipe fittings due to differences in physical characteristics and methods of production and reinforces the propriety of our previous like product definition. Accordingly, we adopt the definition of like product and domestic industry made in our earlier determinations.

Condition of the domestic industry

In assessing the condition of the domestic industry, the Commission considers, among other factors, domestic consumption, U.S. production, capacity, capacity utilization, shipments, inventories, employment, and profitability. ^{7/}

In our June 1987 investigation regarding imports from Japan, we noted that the industry's difficulties worsened in 1986. ^{8/} The data in the instant investigation reveal that production, capacity utilization, shipments, employment, and the financial performance of the domestic industry all followed the same declining trends evidenced in the prior investigations. Although most of the indicators of the condition of the domestic industry recovered somewhat in January-March 1987, this recent upturn occurred after the institution of this investigation and therefore does not offset the evidence of continued declines over the entire period of investigation.

^{6/} Prehearing Brief of Thai Producers and Importers at 12.

^{7/} 19 U.S.C. § 1677(7)(C)(iii).

^{8/} Certain Malleable Cast-Iron Pipe Fittings from Japan, supra, n.2.

Apparent U.S. consumption of malleable threaded cast-iron pipe fittings decreased from 71,842 tons in 1984 to 67,792 tons in 1985, or by 6 percent, and then to 61,136 tons in 1986, or another 10 percent.^{9/} U.S. production of malleable threaded cast-iron pipe fittings decreased from 48,737 tons in 1984 to 45,013 tons in 1985, or by 8 percent, and then to 41,863 tons in 1986, or another 7 percent.^{10/} Producers' domestic shipments also dropped steadily in 1984-86, decreasing by nearly 7 percent from 1984 to 1985 and by 6 percent from 1985 to 1986.^{11/} Capacity in 1984-86 was constant at 95,260 tons.^{12/} Capacity utilization was low and declining, dropping from 51.2 percent in 1984 to 47.3 percent in 1985 and then to 43.9 percent in 1986.^{13/}

Four of the domestic producers reported significant layoffs of production and related workers during the period of investigation.^{14/} The number of employees producing malleable cast-iron pipe fittings declined significantly, from 2,048 in 1985 to 1,840 in 1986.^{15/} Hours worked, wages paid, and total compensation also declined.^{16/}

Financial data also reveal that the industry's condition has deteriorated. Net sales of malleable threaded cast-iron pipe fittings dropped from \$125.8 million in 1984 to \$121.7 million in 1985 and then to \$110 million in 1986.^{17/} Operating profits of \$1.02 million in 1985 turned into

^{9/} Report at A-11, Table 3.

^{10/} Id. at A-15, Table 4.

^{11/} Id. at A-16, Table 5.

^{12/} Id. at A-15, Table 4.

^{13/} Id.

^{14/} Id. at A-17.

^{15/} Id. at A-18, Table 7.

^{16/} Id.

^{17/} Id. at A-23, Table 10.

operating losses of \$2.64 million in 1986,^{18/} and these losses increased in interim 1987.^{19/} Operating margins followed a trend like that of operating income and loss.^{20/}

On the basis of the record in this investigation we determine that the domestic malleable threaded cast-iron pipe fittings industry is currently experiencing material injury.

Cumulation

Petitioner urged the Commission to cumulate imports from Thailand with those from Japan.^{21/} In the preliminary investigations involving imports from both Thailand and Japan, we determined that cumulation was appropriate. This final investigation involves only imports from Thailand, because Commerce postponed its final determination on the Thai imports at the respondents' request.^{22/} In the Commission's final determination on imports from Japan, which was issued in June 1987, we again decided that cumulation of imports from Japan and Thailand was appropriate.^{23/}

We apply the cumulation provisions if three requirements are met. The imports must (1) compete with each other and with the domestic like product, (2) be subject to investigation, and (3) be marketed within a reasonably

^{18/} Id.

^{19/} Id. Two firms sustained operating losses during 1984-85, whereas four firms reported such losses in 1986. Id.

^{20/} Id.

^{21/} Petitioner did not request cumulation with imports from Brazil, Korea, and Taiwan. Since we find material injury by reason of cumulated imports from Japan and Thailand, it is not necessary to consider whether cumulation with imports from Brazil, Korea, and Taiwan would be appropriate.

^{22/} Report at A-48.

^{23/} Certain Malleable Cast-Iron Pipe Fittings from Japan, supra, n.2.

24/
coincident period.

Notwithstanding the postponement of a final determination by Commerce regarding imports from Thailand and the conclusion of the Commission's investigation regarding imports of pipe fittings from Japan in June 1987, the investigation of Japanese imports is recent enough to satisfy the requirement that they are "subject to investigation." Moreover, there is no dispute that imports from Japan and Thailand were marketed within a reasonably coincident period of time. Accordingly, the only issue with respect to the appropriateness of cumulation is whether those imports compete with each other and with the domestic like product. 25/

Although there is, as respondents argued, some evidence of quality differences between certain, but not necessarily all, Japanese and Thai imports, there is also evidence that the imports and the domestic like product

24/ See 19 U.S.C. § 1677(7)(C)(iv); H.R. Rep. No. 1156, 98th Cong., 2nd Sess. 173 (1984); Welded Steel Wire Fabric for Concrete Reinforcement from Italy, Mexico, and Venezuela, Invs. Nos. 701-TA-261(A), 263(A), and 264(A) (Preliminary) and Invs. Nos. 731-TA-289(A) to 291(A) (Preliminary), USITC Pub. 1795 at 9 (Jan. 1986); Certain Steel Wire Nails from the People's Republic of China, Poland, and Yugoslavia, Invs. Nos. 731-TA-266 to 268 (Preliminary), USITC Pub. 1730 at 7 (1985).

25/ In determining whether the imported products compete with each other and with the like product in the U.S. market and whether the marketing of imports is reasonably coincident, the Commission has considered the following factors:

- (1) the degree of fungibility between imports from different countries and between imports and the domestic like product, including consideration of specific customer requirements and other quality related questions;
- (2) the presence of sales or offers to sell in the same geographical markets of imports from different countries and the domestic like product;

(Footnote Continued On Next Page)

are sufficiently comparable in quality to be interchangeable to many

end-users. ^{26/} Further, all malleable threaded cast-iron pipe fittings generally meet the same minimum quality standards. ^{27/} Finally, channels of distribution for the imports and the domestic product appear to be generally similar. ^{28/}

Respondents further argued that the imports do not compete with each other or the domestic like product because they were not sold in the same geographic or end-user markets. There is evidence, however, of an overlap in the geographic and end-user markets in which the imports and the domestic like product are sold. ^{29/} Thai imports are marketed primarily in the Gulf and Western states, while Japanese imports are sold nationwide and are present in all regions of the country, including the Gulf and Western states. ^{30/}

(Footnote Continued From Previous Page)

(3) the existence of common or similar channels of distribution of imports from different countries and the domestic like product; and

(4) whether the imports are simultaneously present in the market.

This list is not exhaustive and no single factor is determinative. This analysis is designed to provide a basis on which to decide whether the statutory criterion regarding competition is established. See, e.g., Iron Construction Castings from Canada, Inv. No. 731-TA-263 (Final), USITC Pub. 1811 at 8, n.26 (Feb. 1986) (Stern, Eckes, Lodwick, and Rohr).

^{26/} Report at A-14.

^{27/} Transcript of Conference at 85; Transcript of Hearing at 29, 31, 42, 51. Respondents argued that Japanese and Thai pipe fittings meet Japanese industry standards, while domestic pipe fittings meet ANSI standards, but admitted that such standards are very similar. Transcript at 84; Posthearing Brief of Thai Producers and Importers at 13. Respondents insist that despite the similarity, the standards "are not the same". *Id.* However, they fail to point out any differences between the standards.

^{28/} Report at A-12.

^{29/} *Id.* at A-13-A-14.

^{30/} *Id.* at A-15.

Moreover, given the low levels of the Thai imports in 1984 and their rapid growth in 1985 and 1986, it is not surprising that the Thai importers have not yet fully saturated all sectors of the U.S. market. Finally, imports from both countries are present in significant volumes in all sectors of the

end-user market. ^{31/} Consequently, we find that the criteria for cumulation are satisfied ^{32/} and base our causation analysis on cumulated imports from Japan and Thailand.

^{33/}

Material injury by reason of LTFV imports from Japan and Thailand

In determining whether the domestic industry is materially injured "by reason of" LTFV imports from Thailand and Japan, the Commission considers, among other factors, the volume of imports, the effect of imports on prices in the United States for the like product, and the impact of such imports on the relevant domestic industry. ^{34/}

We find that the substantial volume and increasing market penetration of imports from Thailand and Japan in 1986, together with evidence of consistent and significant margins of underselling by imports from Thailand, demonstrate that the subject imports are a cause of the domestic industry's continued

^{31/} Id. at A-14.

^{32/} See, e.g., Iron Construction Castings from Canada, supra, n.30, at 8; Welded Steel Wire Fabric for Concrete Reinforcement from Italy, Mexico, and Venezuela, supra n.29, at 11.

^{33/} Chairman Liebler does not join the rest of this opinion. See her Additional Views, infra.

^{34/} 19 U.S.C. § 1677(7)(B).

35/ 36/
decline.

Market penetration, by quantity, of imports from Japan and Thailand rose from 16.9 percent in 1984 to 18.9 percent in 1986. While apparent consumption declined steadily during the period of investigation, the volume of imports from Japan and Thailand remained at high levels. 37/ Thus, the subject 38/ imports succeeded in capturing a larger share of a declining market.

35/ Vice Chairman Brunsdale believes that the magnitude of the dumping margin is one factor, among others, that should be considered in determining whether LTFV imports are a cause of material injury. For a discussion of her views on the relevance of dumping margins to causation analysis, see Heavy-Walled Rectangular Welded Carbon Steel Pipes and Tubes from Canada, Inv. No. 731-TA-254 (Final), USITC Pub. 1808 at 13-14 (1986). In this case, the quantity-weighted average margin for the cumulated imports from Thailand and Japan, is 35.06 percent. This margin is calculated using the final dumping margins determined by the Department of Commerce in these investigations and from Department of Commerce statistics on the quantity of imports from these countries. Such a margin is sufficiently large to support an affirmative determination in this investigation. Large dumping margins are not by themselves sufficient to support an affirmative determination. See Certain Ethanol Alcohol from Brazil, Inv. No. 701-TA-239 (Final), USITC Pub. 1818 at 15-16 (1986). However, large margins coupled with relatively inelastic demand and import market penetration as large as the penetration in this case point to dumped imports as a cause of material injury to the domestic industry.

36/ Chairman Liebler and Vice Chairman Brunsdale note that the price evidence gathered in this investigation shows consistent "underselling" in the sense that imports had lower nominal prices than their domestic counterparts throughout the period of this investigation. Because these price differences may be accounted for by many factors (see Memorandum from the Office of Economics EC-K-308 (July 30, 1987)), they do not rely on the reported "margins of underselling" in their analysis of causation. For a more extensive discussion on the shortcomings of underselling evidence, see Certain Welded Carbon Steel Pipes and Tubes from Taiwan, Inv. No. 731-TA-349 (Final), USITC Pub. 1994 at 63-79 (July 1987) (Additional Views of Vice Chairman Brunsdale).

37/ Report at A-35-A-36, Table 15.

38/ Vice Chairman Brunsdale notes that the Report also contains information concerning the market penetration by value of the subject imports. Report at A-35-A-36, Table 15. That information also indicates an increasing percentage of market penetration by the subject imports and supports an affirmative determination. She believes that import penetration ordinarily should be measured by value data rather than by quantity data. These views are set forth more fully in Erasable Programmable Read Only Memories from Japan, Inv. No. 731-TA-288 (Final), USITC Pub. 1927 at 32-39 (1986) (Additional Views of Vice Chairman Brunsdale).

The short term drop in imports in January-March 1987, while this investigation was underway, is not significant enough to persuade us that it is anything other than a temporary disruption in the flow of imports brought about by the institution of this investigation.^{39/} Furthermore, as the subject imports decreased, the condition of the industry improved, suggesting that the unfairly traded imports were a cause of material injury.

The pricing data obtained by the Commission indicate consistent, significant underselling by the subject imports for each of the four representative products studied.^{40/} While domestic prices increased modestly during the period of investigation, the increase was more than offset by rising costs and was not sufficient to allow domestic producers to turn a profit in the face of declining demand. Thus, underselling by the subject imports was a direct cause of the continued erosion of the financial condition of the domestic industry.

Conclusion

For the foregoing reasons, we determine that the domestic industry producing malleable cast-iron pipe fittings is materially injured by reason of LTFV imports from Thailand.

^{39/} See Rhone Poulenc, S.A., v. United States, 592 F.Supp. 1318, 1324 (CIT 1984).

^{40/} Report at A-38-A-41, Tables 16-19.

ADDITIONAL VIEWS OF CHAIRMAN LIEBELER

Certain Malleable Cast-Iron Pipe Fittings from Thailand

Inv. No. 731-TA-348 (Final)

I determine that that an industry in the United States is materially injured by reason of imports of certain malleable cast-iron pipe fittings from Thailand which the Department of Commerce has determined are being sold at less than fair value. I concur with the majority in its discussions of like product, condition of the domestic industry, and cumulation.^{1/} This opinion presents my views with respect to causation.

Material Injury by Reason of Imports

In order for a domestic industry to prevail in a final investigation, the Commission must determine that the dumped or subsidized imports cause or threaten to cause material injury to the domestic industry producing the like product. First, the Commission must determine

^{1/} I have determined to cumulate imports of the subject merchandise from Japan and Thailand. See Views of the Commission, supra at 7-10.

whether the domestic industry producing the like product is materially injured or is threatened with material injury. Second, the Commission must determine whether any injury or threat thereof is by reason of the dumped or subsidized imports. Only if the Commission answers both questions in the affirmative, will it make an affirmative determination in the investigation.

Before analyzing the data, however, the first question is whether the statute is clear or whether one must resort to the legislative history in order to interpret the relevant sections of the antidumping law. The accepted rule of statutory construction is that a statute, clear and unambiguous on its face, need not and cannot be interpreted using secondary sources. Only statutes that are of doubtful meaning are subject to such statutory interpretation.^{2/}

The statutory language used for both parts of the two-part analysis is ambiguous. "Material injury" is defined as "harm which is not inconsequential, immaterial,

^{2/} C. Sands, Sutherland Statutory Construction, § 45.02 (4th ed. 1985).

or unimportant."^{3/} This definition leaves unclear what is meant by harm. As for the causation test, "by reason of" lends itself to no easy interpretation, and has been the subject of much debate by past and present commissioners. Clearly, well-informed persons may differ as to the interpretation of the causation and material injury sections of title VII. Therefore, the legislative history becomes helpful in interpreting title VII.

The ambiguity arises in part because it is clear that the presence in the United States of additional foreign supply will always make the domestic industry worse off. Any time a foreign producer exports products to the United States, the increase in supply, ceteris paribus, must result in a lower price of the product than would otherwise prevail. If a downward effect on price, accompanied by a Department of Commerce dumping or subsidy finding and a Commission finding that financial indicators were down were all that were required for an affirmative determination, there would be no need to inquire further into causation.

^{3/} 19 U.S.C. § 1977(7)(A) (1980).

But the legislative history shows that the mere presence of LTFV imports is not sufficient to establish causation. In the legislative history to the Trade Agreements Acts of 1979, Congress stated:

[T]he ITC will consider information which indicates that harm is caused by factors other^{4/} than the less-than-fair-value imports.

The Finance Committee emphasized the need for an exhaustive causation analysis, stating, "the Commission must satisfy itself that, in light of all the information presented, there is a sufficient causal link between the less-than-fair-value imports and the requisite injury."^{5/}

The Senate Finance Committee acknowledged that the causation analysis would not be easy: "The determination of the ITC with respect to causation, is under current law, and will be, under section 735, complex and difficult, and is matter for the judgment of the ITC."^{6/} Since the domestic industry is no doubt worse

^{4/} Report on the Trade Agreements Act of 1979, S. Rep. No. 249, 96th Cong. 1st Sess. 75 (1979).

^{5/} Id.

^{6/} Id.

off by the presence of any imports (whether LTFV or fairly traded) and Congress has directed that this is not enough upon which to base an affirmative determination, the Commission must delve further to find what condition Congress has attempted to remedy.

In the legislative history to the 1974 Act, the Senate Finance Committee stated:

This Act is not a 'protectionist' statute designed to bar or restrict U.S. imports; rather, it is a statute designed to free U.S. imports from unfair price discrimination practices. * * * The Antidumping Act is designed to discourage and prevent foreign suppliers from using unfair price discrimination practices to the detriment of a

United States industry.^{7/}

Thus, the focus of the analysis must be on what constitutes unfair price discrimination and what harm results therefrom:

[T]he Antidumping Act does not proscribe transactions which involve selling an imported product at a price which is not lower than that needed to make the product competitive in the U.S. market, even though the price of the imported product is lower than its home market price.^{8/}

^{7/} Trade Reform Act of 1974, S. Rep. 1298, 93rd Cong. 2d Sess. 179.

^{8/} Id.

This "difficult and complex" judgment by the Commission is aided greatly by the use of economic and financial analysis. One of the most important assumptions of traditional microeconomic theory is that firms attempt to maximize profits.^{9/} Congress was obviously familiar with the economist's tools: "[I]mporters as prudent businessmen dealing fairly would be interested in maximizing profits by selling at prices as high as the U.S. market would bear."^{10/}

An assertion of unfair price discrimination should be accompanied by a factual record that can support such a conclusion. In accord with economic theory and the legislative history, foreign firms should be presumed to behave rationally. Therefore, if the factual setting in which the unfair imports occur does not support any gain to be had by unfair price discrimination, it is reasonable

^{9/} See, e.g., P. Samuelson & W. Nordhaus, Economics 42-45 (12th ed. 1985); W. Nicholson, Intermediate Microeconomics and Its Application 7 (3rd ed. 1983).

^{10/} Trade Reform Act of 1974, S. Rep. 1298, 93rd Cong. 2d Sess. 179.

to conclude that any injury or threat of injury to the domestic industry is not "by reason of" such imports.

In many cases unfair price discrimination by a competitor would be irrational. In general, it is not rational to charge a price below that necessary to sell one's product. In certain circumstances, a firm may try to capture a sufficient market share to be able to raise its price in the future. To move from a position where the firm has no market power to a position where the firm has such power, the firm may lower its price below that which is necessary to meet competition. It is this condition which Congress must have meant when it charged us "to discourage and prevent foreign suppliers from using unfair price discrimination practices to the detriment of a United States industry."^{11/}

In Certain Red Raspberries from Canada, I set forth a framework for examining what factual setting would merit an affirmative finding under the law interpreted in light of the cited legislative history.^{12/}

^{11/} Trade Reform Act of 1974, S. Rep. 1298, 93rd Cong. 2d Sess. 179.

^{12/} Inv. No. 731-TA-196 (Final), USITC Pub. 1680, at 11-19 (1985) (Additional Views of Vice Chairman Liebeler).

The stronger the evidence of the following . . . the more likely that an affirmative determination will be made: (1) large and increasing market share, (2) high dumping margins, (3) homogeneous products, (4) declining prices and (5) barriers to entry to other foreign producers (low elasticity of supply of other imports).^{13/}

The statute requires the Commission to examine the volume of imports, the effect of imports on prices, and the general impact of imports on domestic producers.^{14/}

The legislative history provides some guidance for applying these criteria. The factors incorporate both the statutory criteria and the guidance provided by the legislative history. Each of these factors is evaluated in turn.

Causation analysis

The Commission made an affirmative determination concerning imports of malleable cast-iron pipe fittings

^{13/} Id. at 16.

^{14/} 19 U.S.C. § 1677(7)(B)-(C) (1980 & cum. supp. 1985).

from Brazil, Korea, and Taiwan in May, 1986.^{15/} That determination has changed the trend in import penetration by Thailand and Japan. These factors will be discussed further below.

Examining import penetration data is relevant because unfair price discrimination has as its goal, and cannot take place in the absence of, market power. I have determined to cumulate imports from Japan and Thailand.^{16/} On a quantity basis, 1986 cumulated imports from these countries accounted for 18.9 percent of apparent U.S. consumption, or nearly one-third more of U.S. consumption than in 1985.^{17/} Thus, import

^{15/} Certain Cast-Iron Pipe Fittings from Brazil, the Republic of Korea and Taiwan, Invs. Nos. 278-80(Final), USITC Pub. 1845 (May 1986).

^{16/} See note 2 *supra* and Views of the Commission at 7-10.

^{17/} Report at Table 15. It should be noted that import penetration figures for the first quarter of 1987 are lower than those for the previous year. *Id.* I agree with the Commission, however, that this short term drop in imports is not significant enough to be
(Footnote continued on next page)

penetration is moderately large and generally increasing. Consequently, the first indicator is not inconsistent with a finding of unfair price discrimination.

The second factor is a high margin of dumping or subsidy. The higher the margin, ceteris paribus, the more likely it is that the product is being sold below the competitive price^{18/} and the more likely it is that the domestic producers will be adversely affected. The Department of Commerce has calculated the dumping margin for imported cast-iron pipe fittings from Thailand to be 1.70 percent.^{19/} The dumping margin for cast-iron pipe

(Footnote continued from previous page)

anything other than a temporary disruption in imports brought about by the institution of this investigation. Views of the Commission, supra at 12 &n.39. It should also be noted that there was a decrease in import penetration between 1984 and 1985. Report at Table 15. But, as noted above, the Commission's affirmative determination in Certain Cast-Iron Pipe Fittings from Brazil, the Republic of Korea and Taiwan, Invs. 278-80 (Final), USITC Pub. 1845 (May 1986) was an important intervening event.

18/ See text accompanying note 7, supra.

19/ Report at A-7.

fittings from Japan is 57.39 percent.^{20/} Because the quantity of imports from Japan has been higher than the quantity from Thailand, the weighted average margin for the two countries by quantity is closer to the higher Japanese margin.^{21/} The weighted average dumping margin based on 1986 Department of Commerce statistics is 35.06 percent.^{22/} This margin is moderately high and not inconsistent with a finding of unfair price discrimination.

The third factor is the homogeneity of the products. The more homogeneous the products, the greater will be the effect of any allegedly unfair practice on domestic producers of the like product. There is varied evidence regarding quality differences among the imports, and between some of the imports and the domestic like product.^{23/} Nevertheless, it appears that both Japanese and Thai fittings meet basic industry standards and are generally interchangeable with fittings made in

^{20/} Report at A-6n.5.

^{21/} Report at Table 15.

^{22/} Report at A-6-A-7 and Table 15.

^{23/} Report at A-13 to A-15.

the United States.^{24/} Thus, Japanese and Thai cast-iron fittings appear to be substitutes for domestic products, although imperfect ones. This factor is consistent with an affirmative determination.

As to the fourth factor, evidence of declining domestic prices, ceteris paribus, might indicate that domestic producers were lowering their prices to maintain market share. Over the period of investigation, prices rose for three of the four relevant products, and declined for one.^{25/} The price data while mixed are consistent with a negative determination.

The fifth factor in the five factor test is barriers to entry (foreign supply elasticity). If there are barriers to entry (or low foreign elasticity of supply) it is more likely that a producer can gain market power. Imports from Japan and Thailand represent a significant and increasing share of all imports of cast-iron pipe fittings into the United States. In 1985, on a quantity

^{24/} Id.

^{25/} Report at Tables 16 to 19.

basis, imports from these countries accounted for 43 percent of U.S. imports, and in 1986 they accounted for 62 percent--an increase of nearly one-half.^{26/} Since May 12, 1986 Brazilian, Korean, and Taiwanese imports have been subject to outstanding dumping orders. In 1985 Brazilian, Korean, and Taiwanese imports accounted, on a quantity basis, for 47 percent of all imports of the subject merchandise entering the United States, while in 1986 imports from these countries accounted for only 19 percent of U.S. imports-- a decline of almost two-thirds.^{27/} Therefore in this case the outstanding orders against Brazil, Korea, and Taiwan may act similarly to barriers to entry with respect to making it possible for Japanese and Thai producers to gain market

^{26/} Report at Table 15. For the first quarter of 1987 Japanese and Thai imports continued to remain approximately 62 percent of all U.S. imports. Id. On a value basis Japanese and Thai imports accounted for 45 percent of U.S. imports in 1985, and 67 percent in 1986. Id. For the first quarter of 1987 said imports constituted, on a value basis, approximately 65 percent on U.S. imports. Id.

^{27/} Report at table 14. See also Official Statistics of Department of Commerce. Office of Investigations Memorandum, INV-K-069(June 12, 1987).

power.^{28/} This factor is consistent with an affirmative determination.

These factors must be balanced in each case to reach a sound determination. While domestic product prices have increased slightly, all other factors tend to favor an affirmative determination. Cumulated import penetration is moderately large and generally increasing. Moreover, Japan and Thailand have been gaining a greater share of the import market. Indeed, while in 1985 imports from these countries on a quantity basis accounted for about 40 to 45 percent of all imports, in 1986 and during the first quarter of 1987 they accounted for over 60 percent of those imports. In this case, this increase in market share of Thailand and Japan is likely attributable, at least in part, to outstanding dumping orders against Brazil, Korea, and Taiwan acting similarly to barriers to entry. Finally, imports and domestic products are generally homogeneous, and dumping margins are moderately

^{28/} It should be noted that imports from other countries such as India, China, and Mexico also increased between 1985 and 1986, although imports from these countries constitute a relatively small share of the total import market. Report at Table 14.

high. Thus, the factors, on balance, weigh in favor of an affirmative determination.

Conclusion

Therefore, I conclude that an industry in the United States is materially injured by reason of dumped imports of certain malleable cast-iron pipe fittings from Thailand.

INFORMATION OBTAINED IN THE INVESTIGATION

Introduction

On February 13, 1987, the U.S. Department of Commerce published notice in the Federal Register (52 F.R. 4637) of its preliminary determination that certain malleable cast-iron pipe fittings 1/ from Thailand are being, or are likely to be, sold in the United States at less than fair value (LTFV) within the meaning of the Tariff Act of 1930. Accordingly, effective February 13, 1987, the U.S. International Trade Commission instituted investigation No. 731-TA-348 (Final) to determine whether an industry in the United States is materially injured, or is threatened with material injury, or the establishment of an industry is materially retarded, by reason of such imports.

The petition leading to this investigation and the Commission's preliminary affirmative determination also covered imports of the subject products from Japan. However, on March 16, 1987, at the request of counsel for the Thai respondents, Commerce extended the date for its final determination on imports from Thailand from April 21, 1987, until June 29, 1987. 2/ Consequently, the Commission's schedule for the conduct of the investigation on imports of malleable cast-iron pipe fittings from Thailand is later than that for Japan. 3/ The Commission's hearing on April 28, 1987, however, covered both Thailand and Japan, and this report includes trade data on both countries. Notice of the institution of the Commission's investigation and of a public hearing to be held in connection therewith was given by posting copies of the notice in the Office of the Secretary, U.S. International Trade Commission, Washington, DC, and by publishing the notice in the Federal Register of March 4, 1987 (52 F.R. 6631). 4/ The Commission will make its final determination with respect to the subject imports from Thailand not later than August 12, 1987.

Background

On August 29, 1986, petitions were filed with the Commission and Commerce by counsel on behalf of the Cast Iron Pipe Fittings Committee, 5/ alleging that an industry in the United States is materially injured, or is threatened with

1/ The products covered by Commerce's determination are described as "malleable cast iron pipe fittings, advanced in condition by operations or processes subsequent to the casting process other than with grooves, or not advanced, of cast iron other than alloy cast iron, as currently provided for in items 610.7000 and 610.7400 of the Tariff Schedules of the United States Annotated (TSUSA)."

2/ A copy of Commerce's extension notice is presented in app. A.

3/ On June 15, 1987, the Commission made, and transmitted to Commerce, a unanimous affirmative determination in investigation No. 731-TA-347 (Final) involving imports from Japan. The Commission's final determination was published in the Federal Register of June 24, 1987 (52 F.R. 23726).

4/ A copy of the Commission's notice is presented in app. B. A list of witnesses who appeared at the hearing is presented in app. C.

5/ The 5 member producers of this committee are Stanley G. Flagg & Co., Inc., Grinnell Corp. (successor to the fittings business of ITT Corp.), Stockham Valves & Fittings Co., U-Brand Corp., and Ward Manufacturing, Inc. (successor to Ward Foundry Division of Clevepak Corp.).

material injury, by reason of imports from Japan and Thailand of certain nonalloy, malleable cast-iron pipe fittings that are being sold in the United States at LTFV. Accordingly, the Commission instituted preliminary antidumping investigations Nos. 731-TA-347 and 348 under section 733(a) of the Tariff Act of 1930 (19 U.S.C. § 1673b(a)) to determine whether there was 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 such imports.

On October 7, 1986, the Commission unanimously determined that there was a reasonable indication that an industry in the United States is materially injured by reason of imports from Japan and Thailand of such nonalloy, malleable cast-iron pipe fittings, 1/ whether or not advanced in condition by operations or processes (such as threading) subsequent to the casting process, provided for in items 610.70 and 610.74 of the Tariff Schedules of the United States (TSUS), which were alleged to be sold in the United States at LTFV. 2/

Previous Commission Investigations

On April 13, 1977, the Commission instituted an investigation (No. TA-201-26) under section 201 of the Trade Act of 1974 concerning malleable cast-iron pipe and tube fittings, provided for in TSUS items 610.70, 610.71, and 610.74, in response to a petition filed by the American Pipe Fittings Association. On September 19, 1977, the Commission reported to the President its unanimous finding that malleable cast-iron pipe and tube fittings were not being imported into the United States in such increased quantities as to be a substantial cause of serious injury, or the threat thereof, to the domestic industry producing like or directly competitive articles.

Following Commerce's notification of its preliminary determination that certain malleable cast-iron pipe fittings exported from Japan might be subsidized, the Commission instituted, effective January 1, 1980, investigation No. 701-TA-9 (Final) under section 703(a) of the Tariff Act of 1930 to determine whether an industry in the United States was materially injured or threatened with material injury, or the establishment of an industry was materially retarded, by reason of the importation of these pipe fittings into the United States. On March 20, 1980, the Commission terminated the investigation upon written request by counsel for the petitioners, the American Pipe Fittings Association.

On September 18, 1984, the Commission instituted investigations in response to petitions filed by the Cast Iron Pipe Fittings Committee, which alleged that an industry in the United States was materially injured, or threatened with material injury, by reason of imports of cast-iron pipe fittings that were allegedly subsidized by the Governments of Brazil and India. The investigation on India was terminated on October 9, 1984,

1/ Fittings with standard pressure ratings of 150 pounds per square inch (psi) and heavy-duty pressure ratings of 300 psi. Groove-lock fittings were not included.

2/ The Commission's preliminary determinations were published in the Federal Register of Oct. 22, 1986 (51 F.R. 37498).

following withdrawal of the petition. On March 5, 1985, the Department of Commerce made its final determination that the Government of Brazil was providing such subsidies. On April 17, 1985, the Commission determined that there were two domestic industries, producers of malleable cast-iron pipe fittings and producers of nonmalleable cast-iron pipe fittings, and that there was no material injury or threat thereof to these industries by reason of imports of nonalloy, malleable or nonalloy, nonmalleable cast-iron pipe fittings that were subsidized by the Government of Brazil (50 F.R. 16173, Apr. 24, 1985). 1/ This negative determination was "based on the lack of a causal nexus between the condition of the domestic industries and the subsidized imports from Brazil." 2/

On July 31, 1985, the Commission instituted preliminary antidumping investigations Nos. 731-TA-278, 279, and 280 in response to petitions filed by the Cast Iron Pipe Fittings Committee, 3/ which alleged that an industry in the United States was materially injured, or was threatened with material injury, by reason of imports from Brazil, the Republic of Korea (Korea), and Taiwan of nonalloy, malleable cast-iron pipe fittings alleged to be sold in the United States at LTFV. 4/ On September 11, 1985, the Commission made preliminary affirmative injury determinations. On January 13, 1986, following preliminary affirmative LTFV determinations by Commerce, the Commission instituted final antidumping investigations. On March 28, 1986, Commerce notified the Commission of its final determinations that nonalloy, malleable cast-iron pipe fittings from Brazil, Korea, and Taiwan were being, or were likely to be, sold in the United States at LTFV; 5/ and on May 12, 1986, the Commission determined that an industry in the United States was materially injured by reason of imports from Brazil, Korea, and Taiwan of the subject merchandise. 6/

Pipe fittings from Thailand have not been the subject of any previous statutory investigation by the Commission.

1/ Commissioner Eckes determined that an industry in the United States was materially injured by reason of imports of malleable cast-iron pipe fittings.

2/ Certain Cast-Iron Pipe Fittings from Brazil: Determinations of the Commission in Investigation No. 701-TA-221, USITC Publication 1681, April 1985, p. 3.

3/ U-Brand Corp. did not join the other members of the Committee in filing the petitions.

4/ On the same day, a petition was also filed with respect to imports from Taiwan of nonalloy, nonmalleable cast-iron pipe fittings other than cast-iron soil pipe, provided for in TSUS items 610.62 and 610.65, which were alleged to be sold in the United States at LTFV (investigation No. 731-TA-281 (Preliminary)). The Commission made a preliminary affirmative injury determination in this investigation; however, Commerce made a preliminary negative LTFV determination. Subsequently, the petition was withdrawn and the investigation was terminated (51 F.R. 10648, Mar. 28, 1986).

5/ Commerce also determined that "critical circumstances" did not exist with respect to such imports from Taiwan.

6/ Chairman Liebelier dissented. Vice Chairman Brunsdale determined that an industry in the United States was threatened with material injury and that no material injury would have been found "but for the suspension of liquidation of entries of the merchandise."

The Products

Description and uses

Cast-iron pipe and tube fittings are used to join pipes in straight lines; to change, divert, divide, or direct the flow of liquid, gas, or steam in piping systems; to provide access for cleaning and permit branching in piping systems; and to reduce or increase the diameter of piping systems. Cast-iron fittings fall into two general categories: nonmalleable fittings, which have little tensile strength, and malleable fittings, which are lighter in weight and have more tensile strength than nonmalleable fittings. Malleable fittings are used where shock and vibration resistance is required and where fittings are subject to quick temperature changes. Only malleable cast-iron fittings are included within the scope of this investigation. 1/

Malleable fittings are available in hundreds of configurations, the most common being 90-degree elbows, tees, couplings, and unions. They are produced in both black (ungalvanized) and galvanized form and have inside diameters generally ranging from 1/2 inch to 6 inches; other sizes are available on special order. Malleable fittings may be threaded and attached to pipes by screwing, or they may have grooved ends that attach to pipes with a locking device. The grooved fittings are generally found in larger sizes than the threaded fittings. Grooved fittings are not included within the scope of this investigation. 2/

Malleable cast-iron fittings have a minimum performance rating of 150 psi for the standard pressure class, which accounts for approximately 93 percent of sales, 3/ and 300 psi for the heavy-duty pressure class. The fittings are generally manufactured to meet standards established by the American Society for Testing and Materials and the American National Standards Institute. The principal uses of malleable cast-iron fittings are in gas lines, piping systems of oil refineries, and gas and water systems of buildings.

1/ During investigation 731-TA-347 (Final), counsel for Japanese respondents alleged that malleable and nonmalleable pipe fittings are "like" the imported product because they are interchangeable for many applications. On p. 4 of the Japanese respondents' posthearing brief, it is alleged that "Not only can foreign malleable fittings be sold where cast-iron fittings are sold, they are in fact being sold in direct competition with domestic cast-iron fittings in the United States market. They are therefore clearly 'like products'."

2/ Counsel for Thai respondents alleged that grooved fittings are like the imported threaded pipe fittings. On p. 12 of the Thai respondents' prehearing brief, it is alleged, "...the products are interchangeable, produced in a similar fashion using the same materials, equipment, and labor, sold within the same systems of distribution, and may be used interchangeably by purchasers." Also see the Thai posthearing brief at pp. 5-8 of the first "Answer in response to question proposed by Stephen McLaughlin, Office of the General Counsel." See sections of this report entitled "Market Factors" and app. D for discussions of these issues.

3/ Certain Cast-Iron Pipe Fittings from Brazil: Determinations of the Commission in Investigation No. 701-TA-221, USITC Publication 1681, April 1985, p. A-4.

Manufacturing process 1/

The manufacturing process for cast-iron pipe fittings begins with the making of molten iron, usually in a cupola furnace. The principal raw materials are scrap steel, pig iron, and other materials such as ferrosilicon, coke, and limestone. The molten iron for malleable fittings contains approximately 2.5 percent carbon, 1.4 percent silicon, and 0.4 percent manganese by weight. 2/

Sand-casting is the predominant method used in the making of cast-iron fittings. The casting process begins with the making of a pattern, which is the same configuration as the desired fitting. Molding sand is mixed with a binder, spread around the pattern in a mold, and then rammed by a machine to compact the sand. The pattern is withdrawn, leaving a cavity in which molded cores are inserted to form the internal shape of the fitting. To produce the actual fitting, the two mold halves (called the "cope" and the "drag") are put together with the core in the center, and the molten iron is poured into the cavity. After the iron solidifies, the red-hot fitting is shaken out of the sand on a shaker table or belt, allowed to cool, and cleaned. Malleable fittings, unlike nonmalleable fittings, must be annealed. Annealing consists of rapidly heating the fittings to approximately 1,750° F., followed by a quick cooling and then a slower cooling. The overall cooling process, which takes from 25 to 40 hours, improves the ductility and durability of the metal by reducing its brittleness. Almost all malleable cast-iron fittings are advanced (machined) after the casting stage. Advancement usually involves threading or other similar operations.

U.S. tariff treatment

The cast-iron pipe fittings covered by this investigation are subject to the following most-favored-nation (MFN) (column 1) rates of duty: 3/

<u>TSUS item</u>	<u>Rate of duty</u>
610.70.....	5.1 percent ad valorem
610.74.....	6.2 percent ad valorem

The above rates of duty are the final rates in the series of staged reductions that began in 1980 and ended in 1987. Imports of cast-iron pipe fittings have been eligible for duty-free entry under the Generalized System of Preferences

1/ See app. D for further discussion.

2/ Certain Cast-Iron Pipe Fittings from Brazil: Determinations of the Commission in Investigation No. 701-TA-221, USITC Publication 1681, April 1985, p. A-4.

3/ Col. 1 rates of duty are applicable to imported products from all countries except those Communist countries and areas enumerated in general headnote 3(d) of the TSUS. Imports from the latter countries are assessed the col. 2 duty rates of 20 percent ad valorem for TSUS item 610.70 and 45 percent ad valorem for TSUS item 610.74. Products provided for in these tariff items, if from designated beneficiary countries, are also eligible for duty-free entry under the Caribbean Basin Economic Recovery Act (CBERA) and the U.S.-Israel Free Trade Area Implementation Act.

(GSP) since January 1, 1976. 1/ The Thai articles are eligible to receive such GSP treatment.

During final investigations Nos. 731-TA-278 through 280, national import specialists of the U.S. Customs Service reported that because of the implementation of a by-pass system for handling entries under TSUS items 610.70 and 610.74, products may have been entered under these TSUS items that should have been classified elsewhere. 2/ Under the by-pass arrangement, the entry documents for covered products are generally not presented to a U.S. Customs import specialist at the U.S. port of entry; the entries are instead immediately liquidated by a clerk. The product coverage of the by-pass system varies from port to port. Customs officers at a port of entry may determine that a product will be put on by-pass where shipments are below a specified dollar value, classified in a particular TSUS item, exported from a specified country, entered by a particular importer, or subject to a combination of conditions.

Staff has contacted national import specialists of the U.S. Customs Service in New York, NY, and customs officers at Los Angeles, CA, major ports of entry for the subject imports from Thailand. 3/ U.S. Customs officials reported that no steel products, including malleable cast-iron pipe fittings, are currently on the by-pass system. However, since Customs must rely on the importer's choice of the correct tariff provision and since it is often difficult to verify the correct classification because of the volume of imports, misclassifications of some quantities of the subject merchandise which occurred during 1984-86 may continue despite the removal of these products from by-pass. Discussion of staff inquiries into TSUS misclassifications is found in the "U.S. Imports" section of this report.

Nature and Extent of Sales at LTFV

On July 6, 1987, Commerce published notice of its final determination that certain malleable cast-iron pipe fittings from Thailand are being, or are likely to be, sold in the United States at LTFV. 4/ Commerce also determined that critical circumstances do not exist with respect to imports of the subject pipe fittings from Thailand. 5/

1/ The GSP, enacted as title V of the Trade Act of 1974, provides duty-free entry to specified eligible articles imported directly from designated beneficiary developing countries. The GSP, implemented in Executive Order No. 11888 of Nov. 24, 1975, applies to merchandise imported on or after Jan. 1, 1976, and before the close of July 4, 1993.

2/ Some degree of misclassification was present before the by-pass system was instituted.

3/ Import specialists in Baltimore, MD, were also contacted in connection with investigation No. 731-TA-347 (Final). Their findings were consistent with those of U.S. Customs officials in New York and Los Angeles.

4/ A copy of Commerce's notice is presented in app. A.

5/ The final LTFV margin determined by Commerce for Japan was 57.39 percent (52 F.R. 13855). Information on methods used by Commerce to calculate these margins is presented in USITC publication 1987 on p. A-7 and in app. A of the same report.

In making its affirmative final determination of sales at LTFV, Commerce compared the U.S. purchase price and foreign market value, which was based on home market delivered prices for identical merchandise or adjusted home market prices for similar merchandise, during the period of March 1, 1986, through August 31, 1986. Because Siam Fittings Ltd. (Siam) accounted for virtually all of the sales from Thailand, Commerce limited its investigation to this company.

Commerce found a weighted-average LTFV margin for Siam and all other manufacturers, producers, and exporters of 1.70 percent. Of the *** sales analyzed, Commerce found less than *** percent of the quantity of sales and less than *** percent of the value of these sales to be made at LTFV. The margins for those sales at LTFV ranged from a low of *** percent to a high of *** percent. In accordance with section 733(d) of the Tariff Act of 1930, Commerce directed the U.S. Customs Service to continue to suspend liquidation of all entries of the subject merchandise from Thailand that are entered, or withdrawn from warehouse, for consumption, on or after July 6, 1987, and to collect a cash deposit or bond for each entry equal to 1.70 percent of the entered value of the merchandise.

The U.S. Industry

The following five firms produce malleable pipe fittings subject to this investigation: Grinnell Corp. (a subsidiary of Tyco Laboratories, Inc.), with headquarters in Exeter, NH, and a plant in Columbia, PA; Stanley G. Flagg & Co., Inc. (a subsidiary of Amcast Industrial Corp.), Stowe, PA; Stockham Valves & Fittings Co., Birmingham, AL; U-Brand Corp. (a subsidiary of Worthington Industries, Inc.), Ashland, OH; and Ward Manufacturing, Inc., Blossburg, PA. 1/

The shares of U.S. production and apparent U.S. consumption of malleable threaded cast-iron pipe fittings accounted for by each firm in 1986 are presented in table 1. * * *, the largest producer, accounted for *** percent of U.S. production in 1986, followed by * * *, with *** percent.

Each of these firms has been producing cast-iron pipe fittings for at least 35 years and offers an essentially complete line of fittings. 2/ Clevepak Corp. offered its Ward Foundry operation for sale in October 1984 and sold it to executives at Ward on March 10, 1986. 3/ On January 31, 1986, Grinnell Corp. became a 100-percent-owned subsidiary of Tyco Laboratories, Inc.

One U.S. producer, * * *, imported malleable cast-iron pipe fittings from * * * during 1984-86. In 1986, * * * imports were equivalent to *** percent of the firm's production of malleable threaded cast-iron pipe fittings.

1/ Additional information concerning operations by these firms on other types of pipe fittings is contained in app. D.

2/ Malleable Cast-Iron Pipe and Tube Fittings, . . . , Investigation No. TA-201-26 . . . , USITC Publication 835, September 1977, p. A-12; Certain Cast-Iron Pipe Fittings from Brazil: Determinations of the Commission in Investigation No. 701-TA-221 . . . , USITC Publication 1681, April 1985, p. A-8.

3/ During a staff conversation with * * *, Apr. 15, 1986, * * * reported that * * *. Investigations Nos. 731-TA-278 through 280 (Final).

Table 1

Malleable threaded cast-iron pipe fittings: U.S. producers' shares of U.S. production and apparent U.S. consumption, by firms, 1986

Firm	(In percent)	
	Share of U.S. production	Share of apparent U.S. consumption 1/
Grinnell Corp.....	***	***
Stanley G. Flagg & Co., Inc.....	***	***
Stockham Valves & Fittings Co.....	***	***
U-Brand Corp.....	***	***
Ward Manufacturing, Inc.....	***	***
Total.....	100.0	69.3

1/ Shares are based on U.S. producers' domestic shipments of domestically produced fittings.

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.

U.S. Importers

The Commission received questionnaire responses from 12 U.S. importers of the subject merchandise from Thailand. 1/ Those responses reported more tons of imports than were reported in official statistics on imports under TSUS item 610.74 in 1986. 2/ * * *, is the largest importer of cast-iron pipe fittings from Thailand, accounting for *** percent of reported imports in 1986. * * *, is the second largest importer, accounting for *** percent of reported imports in 1986, followed by * * *, accounting for *** percent.

The Foreign Industry

All of the three known Thai manufacturers of malleable cast-iron pipe fittings, Siam Fittings Co., Ltd.; Thai Malleable Iron and Steel Co., Ltd.; and BIS Pipe Fitting Co., Ltd., export these fittings to the United States. * * *, the largest producer, accounted for *** percent of Thai production of malleable pipe fittings in 1986 (table 2).

Thai production of malleable cast-iron pipe fittings increased steadily from 1984 to 1986, rising by 28.9 percent from 1984 to 1985 and by 65.5 percent from 1985 to 1986. Thai production in January-March 1987 was 51.4 percent higher than that reported in January-March 1986. Thai capacity to produce malleable pipe fittings increased by 14 percent during 1984-86 and remained unchanged during January-March 1986 and the corresponding period of 1987. As

1/ The Commission received supplemental questionnaires covering the period January-March 1986 and January-March 1987 from 10 U.S. importers of the subject merchandise from Thailand. Imports reported in the questionnaire responses accounted for approximately 94 percent of the volume of imports reported in official statistics under TSUS item 610.74 in January-March 1987.
2/ For further discussion see section entitled "U.S. imports."

Table 2

Malleable cast-iron pipe fittings: Thai production, capacity, capacity utilization, export shipments, and home-market shipments, 1984-86, January-March 1986, and January-March 1987

Item	1984	1985	1986	Jan.-Mar.--	
				1986	1987
Production:					
Siam Fittings.....tons..	***	***	***	***	***
Thai Malleable.....do....	***	***	***	***	***
BIS Pipe Fitting.....do....	***	***	***	***	***
Total.....do....	4,389	5,658	9,362	2,014	3,050
Capacity:					
Siam Fittings.....do....	***	***	***	***	***
Thai Malleable.....do....	***	***	***	***	***
BIS Pipe Fitting.....do....	***	***	***	***	***
Total.....do....	11,791	12,783	13,444	3,361	3,361
Capacity utilization:					
Siam Fittings.....percent..	***	***	***	***	***
Thai Malleable.....do....	***	***	***	***	***
BIS Pipe Fitting.....do....	***	***	***	***	***
Average.....do....	37.2	44.3	69.6	59.9	90.7
Export shipments to:					
United States.....tons..	***	***	***	***	***
All other.....do....	***	***	***	***	***
Total exports.....do....	***	***	***	***	***
Home-market shipments.....do....	***	***	***	***	***
Total shipments.....do....	***	***	***	***	***

Source: Compiled from data submitted by counsel for Siam Fittings Co., Ltd.; Thai Malleable Iron and Steel Co., Ltd.; and BIS Pipe Fitting Co., Ltd.

a result of the increases in production, capacity utilization rose from 37.2 percent in 1984 to 44.3 percent in 1985 and to 69.6 percent in 1986. Capacity utilization jumped from 59.9 percent in January-March 1986 to 90.7 percent in January-March 1987. During 1984-85, capacity utilization for * * *.

Export shipments to the United States, accounting for roughly *** percent of total Thai exports of malleable pipe fittings in 1986, * * * from 1984 to 1986. In January-March 1987, export shipments to the United States increased by *** percent compared with export shipments in the corresponding period of 1986. Total exports rose * * * than exports to the United States, partly because export shipments to other countries declined *** from 1984 to 1985 before picking up during 1986; ^{1/} nonetheless, total export shipments * * *

^{1/} The petitioners argue that as a result of the antidumping duty orders imposed on fittings from Korea, Taiwan, and Japan, producers in these countries are increasing sales in Asia, Africa, and the Middle East. Consequently, "Capacity in Thailand currently devoted to third-country markets is likely to be rededicated to the U.S. market because...Thailand is facing increasing competition from Taiwan in third country markets...Thailand also faces additional competition from Japan in third country markets. This decline in export opportunities in third markets poses a real and imminent threat of further material injury to the domestic pipe fittings industry." Petitioners' posthearing brief, p. 9.

during 1984-86. Total export shipments rose by *** percent between January-March 1986 and the 1987 interim period.

Home-market shipments as a percent of total shipments decreased from *** percent in 1984 to *** percent in 1986; in nominal terms, home-market shipments decreased by *** percent over the period. The ratio of home-market shipments to total shipments decreased from *** percent in January-March 1986 to *** percent in January-March 1987, but in nominal terms home-market shipments climbed *** percent. During 1984-86, * * *, enabling total shipments of malleable cast-iron pipe fittings produced in Thailand to increase by *** percent from 1984 to 1985 and by *** percent from 1985 to 1986. Total shipments increased by *** percent in January-March 1987, compared with those in the corresponding period of 1986.

From 1984 to 1986, Thai production and shipments of malleable cast-iron pipe fittings increased at roughly the same rate, and total annual production approximately equaled total annual shipments in each year. However, between January-March 1986 and the corresponding period of 1987, the growth in Thai production of the subject fittings * * * the growth in shipments by *** percentage points; consequently, in January-March 1987, total production * * * total shipments by *** tons, or *** percent. Although the Commission did not request foreign industry data on inventories, the current trends in production and shipments may mean that Thai inventories of the subject products are * * *.

The Domestic Market

Apparent U.S. consumption 1/

Apparent U.S. consumption of malleable cast-iron pipe fittings covered by this investigation decreased by 5.6 percent from 1984 to 1985 and by 9.8 percent from 1985 to 1986 (table 3), for an overall decline of 14.9 percent between 1984 and 1986. Apparent U.S. consumption during January-March 1987 was 7.3 percent below the level of apparent consumption in the corresponding period of 1986. 2/

1/ Apparent U.S. consumption as presented in this section is calculated by adding official import statistics under TSUS item 610.74 to U.S. producers' domestic shipments. During the current investigation and final investigations Nos. 731-TA-278 through 280 and 731-TA-347, responses to staff inquiries into the products being imported under TSUS item 610.70 revealed that no imports of the subject products have entered the United States under this item. Consequently, imports under this item have been excluded from calculations in this report (see the section entitled "U.S. imports" for a description of these items).

2/ Apparent U.S. consumption calculated by eliminating items that are not covered by this investigation but that may be included in official import statistics under TSUS item 610.74 is presented in app. E. See the section entitled "U.S. imports" for a description of these items.

Table 3

Malleable threaded cast-iron pipe fittings: Imports, U.S.-produced domestic shipments, and apparent U.S. consumption, 1984-86, January-March 1986, and January-March 1987

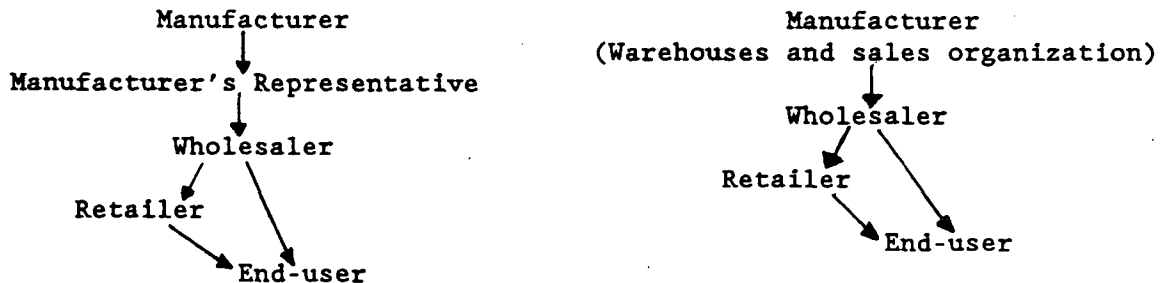
Item	(In tons)			Jan.-Mar.--	
	1984	1985	1986	1986	1987
Imports 1/.....	23,742	22,821	18,753	5,614	3,662
U.S.-produced domestic shipments.....	48,100	44,971	42,383	10,698	11,454
Apparent U.S. consumption.....	71,842	67,792	61,136	16,312	15,116

1/ Official statistics for imports are under TSUS item 610.74.

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.

Channels of distribution

U.S.-produced cast-iron pipe fittings are generally sold through one of two similar channels of distribution, diagrammed as follows:



A U.S. producer generally sells either through a manufacturer's representative or through a sales arm of its own organization. Sales generally consist of a full line of pipe fittings, including a range of the most common configurations and sizes. The manufacturer's representative is responsible for a defined territory, and the U.S. producer will usually sell to no other distributor in that territory. 1/ One manufacturer, for example, * * *. This manufacturer * * *. 2/ Manufacturer's representatives or

1/ Transcript of the conference in investigations Nos. 731-TA-278 through 281, pp. 57-58.

2/ Certain Cast-Iron Pipe Fittings from Brazil, the Republic of Korea, and Taiwan: Determinations of the Commission in Investigations Nos. 731-TA-278 through 280 (Final), USITC Publication 1845, May 1986, p. A-20.

manufacturer's warehouses stock pipe fittings (as well as other products) for large territories. The fittings are then sold to approximately 10,000 wholesalers across the country, 1/ and are resold again to retailers (such as hardware stores) or directly to large end-users (such as contractors). 2/ All U.S. producers sell throughout the United States, maintaining warehouses in various locations and selling from inventory. 3/

There are exceptions to the general statements presented above, as a review of the practices of domestic producers shows. In 1986, *** of the five U.S. producers sold all reported products exclusively to unrelated distributors. On the other hand, * * *. 4/

Channels of distribution for malleable cast-iron pipe fittings imported from Japan and Thailand tend to be similar to those for U.S.-produced fittings. In 1986, responding importers of malleable pipe fittings from Japan sold 92 percent of the subject merchandise to unrelated distributors. The remaining 8 percent were sold to unrelated end-users. Hitachi Metals America, the exclusive distributor of Hitachi, Ltd.'s pipe fittings in the United States, in turn sold *** percent of its 1986 imports to unrelated distributors and *** percent to unrelated end-users. Hitachi Metals America supplies pipe fittings nationwide through nine warehouses in the United States and provides sales and engineering support. 5/

In 1986, responding importers of the subject merchandise from Thailand sold 91 percent of their imports to unrelated distributors and 9 percent to unrelated end-users. * * *, the largest importer of Thai pipe fittings, accounting for *** percent of reported imports from Thailand in 1986, sold *** percent of its imports to unrelated distributors in 1986. * * *, accounting for *** percent of reported Thai imports in 1986, reported selling *** percent of its imports of Thai malleable cast-iron pipe fittings to unrelated distributors.

1/ Certain Cast-Iron Pipe Fittings from Brazil, the Republic of Korea, and Taiwan: Determinations of the Commission in Investigations Nos. 731-TA-278 through 280 (Final), USITC Publication 1845, May 1986, p. A-20.

2/ Transcript of the conference in investigations Nos. 731-TA-278 through 281, p. 57.

3/ Certain Cast-Iron Pipe Fittings from Brazil: Determinations of the Commission in Investigation No. 701-TA-221, USITC Publication 1681, April 1985, p. A-7.

4/ * * *.

5/ Transcript of the conference in investigations Nos. 731-TA-347 and 348 (Preliminary), p. 44.

Market factors

The petitioners in this investigation argued that imported malleable cast-iron pipe fittings compete directly with U.S.-produced fittings. 1/ Respondents, arguing that imports from Japan and Thailand do not compete with each other, alleged that imports from Japan are primarily sold to the industrial sector of the U.S. market, whereas imports from Thailand are sold primarily to residential sector. 2/ Respondents further alleged that imports from Japan are generally sold nationwide, whereas Thai imports are limited to certain geographic regions. 3/ The available data, as reported in response to the Commission's questionnaires, are discussed below.

*** is the only U.S. producer that provided estimates of the firm's domestic shipments to specified end-user markets. These shipments accounted for less than *** percent of total U.S.-produced domestic shipments in 1986. These data are presented in the tabulation below (in percent):

<u>Firm</u>	<u>Shipments to end-users in the--</u>			
	<u>Residential</u> <u>construction</u> <u>market</u>	<u>Nonresidential</u> <u>construction</u> <u>market</u>	<u>Hardware/do-</u> <u>it-yourself</u> <u>market</u>	<u>Other</u> <u>markets</u>
* * *.....	***	***	***	*** 1/

1/ Includes original equipment manufacturers (OEM's) and industrial end users.

1/ "Japanese, Thai and U.S. fittings are fungible products. They are all made to industry standards, and are, therefore, functionally interchangeable. They are also comparable in terms of commercial interchangeability. It should be noted that Thai fittings, which are relatively new in the U.S. marketplace, are gaining wider acceptance among industrial users and are already well-established in other market segments." Petitioners' posthearing brief, investigation No. 731-TA-347 (Final), p. 4.

2/ On p. 3 of Hitachi Metals America's prehearing brief, it is alleged, "Thai and Japanese pipe fittings are not fungible because they are not of equal quality or price and meet different customer requirements; a Thai pipe fitting simply is not practically interchangeable with a Japanese pipe fitting in the marketplace." On p. 9 of Hitachi's prehearing brief it is alleged, "HMA sells primarily in the industrial market. Thai fittings are sold primarily in the hardware market where HMA fittings are almost never sold." On p. 40 of counsel for Thai respondents' prehearing brief it is alleged, "The Japanese product is of the highest quality and competes with the domestic industry in the industrial market; i.e. utilities, oil and gas, nuclear power plants, chemicals, etc. The Thai product is of merchantable quality and is sold mainly in markets where price is the major consideration and only standard quality is needed."

3/ On p. 43 of counsel for Thai respondents' prehearing brief it is alleged, "The questionnaire responses submitted by our client importers all show that they are mainly regional marketers. Between 70 and 75% of their sales [are] limited to sales made within 500 miles of their warehouse." On p. 12 of Hitachi Metals America's prehearing brief it is alleged that "...HMA's distribution system (with nine warehouses) is nationwide (Tr. at 44); the Thai imports are limited to certain narrow geographic regions in the West and Northeast."

As stated above, in 1986, 92 percent of the Japanese fittings and 91 percent of the Thai fittings were sold to unrelated distributors. Eight U.S. importers of the subject merchandise from Japan reported sales of 539 tons, or 8 percent of domestic shipments of Japanese imports, to unrelated end-users in 1986. 1/ Four U.S. importers of imports from Thailand reported domestic shipments of 438 tons, or 9 percent of domestic shipments of Thai imports, to unrelated end-users in 1986. Ten U.S. purchasers of Japanese fittings reported sales of 205 tons to unrelated end-users in 1986. Four U.S. purchasers of Thai fittings reported sales of 130 tons to unrelated end-users. The data in the following tabulation are for 1986 (in percent):

<u>Country and source</u>	<u>Shipments to end-users in the--</u>			
	<u>Residential</u> <u>construction</u> <u>market</u>	<u>Nonresidential</u> <u>construction</u> <u>market</u>	<u>Hardware/do-</u> <u>it-yourself</u> <u>market</u>	<u>Other</u> <u>markets</u>
Japan:				
Importers.....	0.8	0.9	14.7	83.6 1/
Purchasers.....	22.5	24.0	5.9	47.5 2/
Thailand:				
Importers.....	0	0.2	68.7	31.1 3/
Purchasers.....	62.4	11.0	26.6	0

1/ Shipments to the following: OEM's including water heater, irrigation equipment, air compressor, mobile home, and heating/ventilating manufacturers; paper mills; municipalities and gas utilities.

2/ Shipments to the following: Industrial-oil and petrochemical refineries and irrigation equipment.

3/ Shipments to the following: OEM's including water heater, irrigation equipment, and mobile home manufacturers; paper mills and municipalities.

* * *.

Questionnaire responses from purchasers indicated that both Japanese and Thai fittings are sold in a variety of markets (see above tabulations). Opinions on the comparative product quality of malleable cast-iron pipe fittings varied. Spokesmen for several purchasers stated that they maintain separate inventories of Japanese and other imports and U.S.-produced fittings in order to service customers that request specific fittings. In contrast, some purchasers believe that there is no difference between the quality of fittings produced in the United States, Japan, and Thailand; therefore, these purchasers maintain only one inventory and sell any fitting to their customers.

1/ During investigation No. 731-TA-347 (Preliminary), Hitachi Metals America estimated that *** percent of its 1985 domestic shipments were to the nonresidential construction market, *** percent to OEM's and gas utility companies, *** percent to the residential construction market, and *** percent to the hardware/do-it-yourself (DIY) market.

* * *, accounting for *** percent of domestic shipments of Japanese imports in 1986, and * * *, accounting for *** percent of domestic shipments of imports from Thailand in 1986, reported sales nationwide. * * *, accounting for *** percent of Thai domestic shipments in 1986, reported sales to the Western and Gulf States. * * *, accounting for *** percent and *** percent of domestic shipments of Japanese and Thai fittings respectively in 1986, reported sales in the West and Gulf Coast States.

Consideration of Material Injury to an Industry in the United States

In order to evaluate the condition of the U.S. industry producing nonalloy, malleable cast-iron pipe fittings, other than grooved fittings, the Commission surveyed all known U.S. producers of such items. These producers are the five firms discussed above in the section entitled "The U.S. Industry." The information in all sections of this report describing the condition of the domestic industry includes data on all five producers, unless otherwise noted.

U.S. production, capacity, and capacity utilization

U.S. production of the subject malleable threaded cast-iron pipe fittings decreased by 7.6 percent from 1984 to 1985 and decreased again, by 7.0 percent, from 1985 to 1986 (table 4). U.S. production during January-March 1987 increased by 10.6 percent compared with the level of production in the corresponding period of 1986. Capacity to produce such fittings remained stable at 95,260 tons during 1984-86 then decreased by 1,175 tons in March 1987. ^{1/} As a result of the decreases in production during 1984-86, capacity utilization dropped from 51.2 percent in 1984 to 47.3 percent in 1985, then declined to 43.9 percent in 1986. In contrast, capacity utilization was 8 percentage points higher in January-March 1987 than in the corresponding period of 1986 as a result of the increase in production and the reduction in capacity which occurred in the 1987 interim period.

Table 4
Malleable threaded cast-iron pipe fittings: U.S. production, capacity, and capacity utilization, 1984-86, January-March 1986, and January-March 1987

Item	1984	1985	1986	Jan. - Mar. --	
				1986	1987
Production.....tons..	48,737	45,013	41,863	11,660	12,899
Capacity.....do.....	95,260	95,260	95,260	23,815	22,640
Capacity utilization...percent..	51.2	47.3	43.9	49.0	57.0

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

^{1/} * * *.

U.S. producers' shipments and inventories

Domestic shipments of U.S.-produced malleable threaded cast-iron pipe fittings decreased by 6.5 percent from 1984 to 1985 and by 5.8 percent from 1985 to 1986 (table 5). Domestic shipments of the subject fittings increased by 7.1 percent between January-March 1986 and January-March 1987. Export shipments of U.S.-produced malleable fittings, which accounted for approximately *** percent of total shipments during the period under investigation, decreased by *** percent from 1984 to 1985, then increased by *** percent from 1985 to 1986. Between January-March 1986 and the corresponding period of 1987, export shipments increased by *** percent.

During 1984-86, end-of-period inventories declined both in nominal terms and as a percent of total shipments of U.S.-produced malleable fittings. End-of-period inventories fell by 30.6 percent during 1984-86. Such inventories dropped by 20.8 percent between January-March 1986 and the corresponding period of 1987. End-of-period inventories as a ratio to total shipments fell from *** percent in 1984 to *** percent in 1986. End-of-period inventories as a ratio to total (annualized) shipments dropped from *** percent in January-March 1986 to *** percent in the 1987 interim period.

Table 5

Malleable threaded cast-iron pipe fittings: U.S.-produced domestic shipments, export shipments, and end-of-period inventories, 1984-86; January-March 1986, and January-March 1987

Item	1984	1985	1986	Jan.-Mar.--	
				1986	1987
Domestic shipments.....tons..	48,100	44,971	42,383	10,698	11,454
Export shipments.....do....	***	***	***	***	***
Total.....do....	***	***	***	***	***
End-of-period inventories..do....	14,134	12,299	9,810	12,708	10,063
Ratio of inventories to total shipments.....percent..	***	***	***	<u>1/</u> ***	<u>1/</u> ***

1/ On the basis of annualized shipments.

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

The unit values of domestic and export shipments of malleable pipe fittings as reported by four of the five producers are presented in table 6.

Table 6

Malleable threaded cast-iron pipe fittings: Domestic and export shipments of 4 U.S. producers, 1/ 1984-86, January-March 1986, and January-March 1987

* * * * *

U.S. producers' domestic purchases and imports

During the period covered by this investigation, two U.S. producers, * * * and * * *, purchased U.S.-produced malleable fittings; * * * also imported pipe fittings from * * *. The ratio of the two U.S. producers' domestic purchases of the subject merchandise to their production of malleable pipe fittings ranged from *** percent to *** percent during the period of investigation.

The ratio of * * * imports from * * * to the firm's production was *** percent in 1984, *** percent in 1985, and *** percent in 1986. Data on the producers' domestic purchases and imports, as reported in their questionnaire responses, are presented in the following tabulation (in tons):

* * * * * * *

Employment and productivity

The total number of employees in the establishments in which malleable cast-iron pipe fittings are produced decreased by 5.1 percent from 1984 to 1985, and fell by 4.2 percent from 1985 to 1986 (table 7). The number of production and related workers producing all cast-iron pipe fittings, accounting for roughly 51 percent of all establishment employees during the period of investigation, decreased steadily, by 9.6 percent, from 1984 to 1986. The number of production and related workers producing malleable threaded cast-iron pipe fittings, accounting for roughly 39 percent of all establishment employees during the period of investigation, increased by less than 2 percent from 1984 to 1985, and then decreased by 10.2 percent from 1985 to 1986. Employment of production and related workers producing malleable threaded cast-iron pipe fittings during January-March 1987 increased by 8.6 percent from the level of employment in the corresponding period of 1986.

Four unions represent the workers in this industry: the United Steel Workers of America (AFL-CIO), the International Molders and Allied Workers Union (AFL-CIO), the International Association of Machinists, and the Pattern Makers Association (AFL-CIO).

Four U.S. producers reported significant layoffs during the period of investigation. All of the layoffs were attributed to decreased orders. The dates of each layoff and the number of workers involved are shown in the following tabulation:

* * * * * * *

Total wages paid to production and related workers producing malleable threaded cast-iron pipe fittings decreased steadily during 1984-86, dropping by 2.8 percent from 1984 to 1985 and by 8.4 percent from 1985 to 1986. Total wages paid to production and related workers producing malleable threaded cast-iron pipe fittings increased by 16.1 percent between January-March 1986

Table 7

Malleable cast-iron pipe fittings: Number of employees in producing establishments and hours worked by, average wages and total compensation paid to, and productivity of production and related workers, 1984-86, 1/ January-March 1986, and January-March 1987

Item	1984	1985	1986	Jan.-Mar.--	
				1986	1987
Average employment:					
All employees.....	5,189	4,926	4,720	<u>2/</u>	<u>2/</u>
Production and related workers producing--					
All products.....	4,028	3,843	3,549	<u>2/</u>	<u>2/</u>
All cast-iron pipe fittings....	2,623	2,601	2,371	<u>2/</u>	<u>2/</u>
Malleable threaded cast-iron pipe fittings.....	2,011	2,048	1,840	1,814	1,970
Hours worked1,000 hours..	3,862	3,880	3,540	889	985
Wages paid1,000 dollars..	38,479	37,409	34,265	8,425	9,785
Total compensation paid <u>3/</u> ...do....	47,284	45,445	41,100	10,184	11,780
Average hourly wages paid.....	\$9.96	\$9.64	\$9.68	\$9.48	\$9.93
Average hourly compensation paid...	\$12.24	\$11.71	\$11.61	\$11.46	\$11.96
Productivity					
tons per 1,000 hours..	12.62	11.60	11.83	13.12	13.10

1/ Number of employees producing all cast-iron pipe fittings and malleable cast-iron pipe fittings and hours worked by, average wages and total compensation paid to production and related workers reflect revised employment data submitted by * * *.

2/ Data not collected for interim periods.

3/ * * *.

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

and January-March 1987. Total compensation paid to production and related workers producing malleable threaded cast-iron pipe fittings also generally decreased, dropping by 3.9 percent from 1984 to 1985 and by 9.6 percent from 1985 to 1986. Between January-March 1986 and the corresponding period of 1987, total compensation paid to production and related workers producing the subject fittings increased 15.7 percent.

Average hourly wages paid to production and related workers producing malleable threaded cast-iron pipe fittings decreased by 3.2 percent from 1984 to 1985, then increased by less than 1 percent from 1985 to 1986. Average hourly wages paid to such workers in January-March 1987 were 4.7 percent above those reported in the corresponding period of 1986. Average hourly compensation paid to production and related workers producing malleable threaded cast-iron pipe fittings decreased by 4.3 percent from 1984 to 1985, and decreased by slightly less than 1 percent from 1985 to 1986. Average hourly compensation increased by 4.4 percent from January-March 1986 to January-March 1987.

The productivity of workers producing malleable threaded cast-iron pipe fittings decreased irregularly, dropping by 8.1 percent from 1984 to 1985 and then increasing by 2.0 percent from 1985 to 1986. Between January-March 1986 and the corresponding period of 1987, there was virtually no change in the productivity of workers producing malleable threaded cast-iron pipe fittings.

Financial experience of U.S. producers

All five firms provided usable income-and-loss data on the overall operations of their establishments within which cast-iron pipe fittings are produced, as well as on their operations producing only malleable threaded cast-iron pipe fittings and all cast-iron pipe fittings. The five firms accounted for all known U.S. production of malleable threaded cast-iron pipe fittings during 1984-86 and January-March 1987.

Overall establishment operations.--Aggregate income-and-loss data on overall establishment operations are presented in table 8. Overall establishment sales of the five firms rose from \$333.9 million in 1984 to \$336.1 million in 1985, an increase of 0.7 percent. In 1986, however, sales declined to \$316.4 million, or by 5.9 percent.

Operating income increased from \$13.5 million in 1984 to \$15.6 million in 1985, or by 15.4 percent, but then fell to \$5.1 million in 1986, or by 67.1 percent. The operating margins for the firms during the 1984-86 period were 4.0 percent, 4.6 percent, and 1.6 percent, respectively. Two producers experienced operating losses in 1984 and 1986, and one producer incurred a loss in 1985.

During the interim period ended March 31, 1987, aggregate net sales totaled \$109.0 million, up 1.2 percent from net sales of \$107.7 million reported during interim 1986. Aggregate operating income increased significantly from \$1.4 million during interim 1986 to \$2.9 million during interim 1987. The operating margins for the 1986 and 1987 interim periods were 1.3 percent and 2.6 percent, respectively. Two firms reported operating losses during both interim periods.

Operations producing all cast-iron pipe fittings.--Sales of all cast-iron pipe fittings accounted for 50.5 percent of the five U.S. producers' overall establishment sales in 1986.

Aggregate income-and-loss data for the five firms on their operations producing all cast-iron pipe fittings are presented in table 9. Aggregate net sales declined from \$175.9 million in 1984 to \$174.2 million in 1985, or by 0.9 percent, then fell further to \$159.8 million in 1986, or by 8.3 percent.

Table 8

Income-and-loss experience of U.S. producers ^{1/} on the overall operations of their establishments within which cast-iron pipe fittings are produced, accounting years 1984-86, and interim periods ended Mar. 31, 1986, and Mar. 31, 1987

Item	1984	1985	1986	Interim period ended Mar. 31 2/--	
				1986	1987
Net sales....1,000 dollars..	333,915	336,124	316,431	107,661	108,984
Cost of goods sold....do....	276,665	274,801	264,290	92,043	91,656
Gross profit.....do....	57,250	61,323	52,141	15,618	17,328
General, selling, and admin- istrative expenses 1,000 dollars..	43,742	45,738	47,017	14,238	14,441
Operating income or (loss) 1,000 dollars..	13,508	15,585	5,124	1,380	2,887
Interest expensedo....	7,685	9,764	8,794	***	***
Other income or (expense), net.....1,000 dollars..	1,656	5,032	(637)	***	***
Net income or (loss) before income taxes 1,000 dollars..	7,479	10,853	(4,307)	***	***
Depreciation and amortiza- tion expense included above.....1,000 dollars..	16,355	17,747	15,247	5,846	5,069
Cash flow.....do....	23,834	28,600	10,940	***	***
As a share of net sales:					
Cost of goods sold percent..	82.9	81.8	83.5	85.5	84.1
Gross profit.....do....	17.1	18.2	16.5	14.5	15.9
General, selling, and administrative expenses percent..	13.1	13.6	14.9	13.2	13.3
Operating income or (loss).....percent..	4.0	4.6	1.6	1.3	2.6
Net income or (loss) before income taxes percent..	2.2	3.2	(1.4)	***	***
Number of firms reporting operating losses.....	2	1	2	2	2
Number of firms reporting...	5	5	5	5	5

^{1/} The firms are Stanley G. Flagg & Co., Inc., Grinnell Corp., U-Brand Corp., Ward Manufacturing, Inc., and Stockham Valves & Fittings Co.

^{2/} 3 firms provided 3-month interim data (Jan. 1-Mar. 31), 1 firm provided 10-month interim data (June 1-Mar. 31), and 1 firm provided 7-month interim data (Sept. 1-Mar. 31).

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

Table 9

Income-and-loss experience of U.S. producers ^{1/} on their operations producing all cast-iron pipe fittings, accounting years 1984-86, and interim periods ended Mar. 31, 1986, and Mar. 31, 1987

Item	1984	1985	1986	Interim period ended Mar. 31 2/--	
				1986	1987
Net sales....1,000 dollars..	175,857	174,244	159,831	59,719	61,364
Cost of goods sold....do....	149,393	145,718	137,783	52,502	54,801
Gross profit or (loss) 1,000 dollars..	26,464	28,526	22,048	7,217	6,563
General, selling, and admin- istrative expenses 1,000 dollars..	27,128	25,578	24,137	8,706	8,686
Operating income or (loss) 1,000 dollars..	(664)	2,948	(2,089)	(1,489)	(2,123)
Interest expensedo....	4,941	4,789	3,537	***	***
Other income or (expense), net.....1,000 dollars..	(421)	(313)	(556)	***	***
Net income or (loss) before income taxes 1,000 dollars..	(6,026)	(2,154)	(6,182)	***	***
Depreciation and amortiza- tion expense included above.....1,000 dollars..	9,239	8,571	6,909	3,296	2,771
Cash flow.....do....	3,213	6,417	727	***	***
As a share of net sales:					
Cost of goods sold percent..	85.0	83.6	86.2	87.9	89.3
Gross profit or (loss) percent..	15.0	16.4	13.8	12.1	10.7
General, selling, and administrative expenses percent..	15.4	14.7	15.1	14.6	14.2
Operating income or (loss).....percent..	(0.4)	1.7	(1.3)	(2.5)	(3.5)
Net income or (loss) before income taxes percent..	(3.4)	(1.2)	(3.9)	***	***
Number of firms reporting operating losses.....	3	2	3	4	3
Number of firms reporting...	5	5	5	5	5

^{1/} The firms are Stanley G. Flagg & Co., Inc., Grinnell Corp., U-Brand Corp., Ward Manufacturing, Inc., and Stockham Valves & Fittings Co.

^{2/} 3 firms provided 3-month interim data (Jan. 1-Mar. 31), 1 firm provided 10-month interim data (June 1-Mar. 31), and 1 firm provided 7-month interim data (Sept. 1-Mar. 31).

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

Operating income improved to \$2.9 million in 1985, up from a loss of \$664,000 incurred in 1984, but then fell in 1986 to a loss of \$2.1 million. The operating income (loss) margins during the 1984-86 period were as follows: (0.4) percent, 1.7 percent, and (1.3) percent, respectively. Three of the producers reported operating losses in 1984 and 1986, and two firms experienced operating losses in 1985.

Net sales increased from \$59.7 million in interim 1986 to \$61.4 million in interim 1987, an increase of 2.8 percent. Operating losses, however, worsened from \$1.5 million during interim 1986 to \$2.1 million during interim 1987. The operating (loss) margins for the 1986 and 1987 interim periods were (2.5) percent and (3.5) percent, respectively. Four firms reported operating losses in interim 1986, and three firms experienced losses in interim 1987.

Operations on all cast-iron pipe fittings (which account for approximately 50 percent of 1986 overall establishment sales value) seem to be doing much worse than the overall establishment operations--showing no operating profitability whatsoever in most of the periods surveyed.

Operations producing malleable threaded cast-iron pipe fittings.--Sales of malleable threaded cast-iron pipe fittings accounted for approximately 35 percent of the 1986 sales value of overall establishment operations, and 69 percent of the 1986 sales value of all cast-iron pipe fittings.

Aggregate income-and-loss data for the five firms on their operations producing malleable threaded cast-iron pipe fittings are presented in table 10. Aggregate net sales declined from \$125.8 million in 1984 to \$121.7 million in 1985, or by 3.3 percent, then fell further to \$110.0 million in 1986, or by 9.6 percent.

Operating income improved to \$1.0 million in 1985, up from a loss of \$237,000 incurred during 1984, but then fell to a loss of \$2.6 million in 1986. The operating income (loss) margins during the 1984-86 period were as follows: (0.2) percent, 0.8 percent, and (2.4) percent, respectively. Two of the firms reported operating losses in 1984 and 1985 and four firms reported losses in 1986.

Net sales increased from \$43.3 million in interim 1986 to \$45.3 million in interim 1987, an increase of 4.5 percent. Operating losses, however, worsened from \$1.7 million in interim 1986 to \$2.7 million during interim 1987. The operating (loss) margins for the 1986 and 1987 interim periods were (3.9) percent and (6.0) percent, respectively. Three firms reported operating losses during both interim periods.

Table 10

Income-and-loss experience of U.S. producers ^{1/} on their operations producing malleable threaded cast-iron pipe fittings, accounting years 1984-86, and interim periods ended Mar. 31, 1986, and Mar. 31, 1987

Item	1984	1985	1986	Interim period ended Mar. 31 2/--	
				1986	1987
Net sales....1,000 dollars..	125,799	121,680	109,993	43,293	45,250
Cost of goods sold....do....	107,677	102,837	96,768	39,211	42,111
Gross profit or (loss) 1,000 dollars..	18,122	18,843	13,225	4,082	3,139
General, selling, and admin- istrative expenses 1,000 dollars..	18,359	17,819	15,863	5,790	5,842
Operating income or (loss) 1,000 dollars..	(237)	1,024	(2,638)	(1,708)	(2,703)
Interest expensedo....	3,301	3,280	2,400	***	***
Other income or (expense), net.....1,000 dollars..	(418)	(305)	(429)	***	***
Net income or (loss) before income taxes 1,000 dollars..	(3,956)	(2,561)	(5,467)	***	***
Depreciation and amortiza- tion expense included above.....1,000 dollars..	5,798	5,899	4,722	2,418	2,070
Cash flow.....do....	1,842	3,338	(745)	***	***
As a share of net sales:					
Cost of goods sold percent..	85.6	84.5	88.0	90.6	93.1
Gross profit or (loss) percent..	14.4	15.5	12.0	9.4	6.9
General, selling, and administrative expenses percent..	14.6	14.6	14.4	13.4	12.9
Operating income or (loss).....percent..	(0.2)	0.8	(2.4)	(3.9)	(6.0)
Net income or (loss) before income taxes percent..	(3.1)	(2.1)	(5.0)	***	***
Number of firms reporting operating losses.....	2	2	4	3	3
Number of firms reporting...	5	5	5	5	5

^{1/} The firms are Stanley G. Flagg & Co., Inc., Grinnell Corp., U-Brand Corp., Ward Manufacturing, Inc., and Stockham Valves & Fittings Co.

^{2/} 3 firms provided 3-month interim data (Jan. 1-Mar. 31), 1 firm provided 10-month interim data (June 1-Mar. 31), and 1 firm provided 7-month interim data (Sept. 1-Mar. 31).

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

Due to varying interim periods used by the individual U.S. producers, the operating data for the 1986-87 interim periods are widely divergent, as shown in the following tabulation:

Item	Interim period ended Mar. 31--	
	1986	1987
<u>Net sales:</u>		
3 producers 1/.....1,000 dollars..	***	***
2 producers 2/.....do....	***	***
Total.....do....	43,293	45,250
<u>Operating income (loss):</u>		
3 producers 1/.....1,000 dollars..	***	***
2 producers 2/.....do....	***	***
Total.....do....	(1,708)	(2,703)
<u>Operating income (loss) as a percentage of sales:</u>		
3 producers 1/.....percent..	***	***
2 producers 2/.....do....	***	***
Weighted average.....do....	(3.9)	(6.0)

1/ Three firms (Stockham, Ward, and Grinnell) provided 3-month interim data (Jan. 1-Mar. 31).

2/ One firm (U-Brand) provided 10-month interim data (June 1-Mar. 31), and 1 firm (Stanley Flagg) provided 7-month interim data (Sept. 1-Mar. 31).

The sales, operating income, and operating margin data for malleable threaded cast-iron pipe fittings followed very closely the same trends as did such indicators of operations on all cast-iron pipe fittings.

The value, 1/ quantity, and unit value of sales of malleable threaded cast-iron pipe fittings are shown in the following tabulation:

Item	1984	1985	1986
Value.....1,000 dollars..	123,413	117,414	106,757
Quantity.....tons..	50,572	46,848	44,352
Unit value.....per ton..	\$2,440	\$2,506	\$2,407

1/ The values reported for shipments (domestic shipments plus exports) do not exactly match the values reported for sales in table 10 because one producer's sales of malleable threaded cast-iron pipe fittings accounted for more than 85 percent of the sales value of all products produced by that firm in its establishment and, therefore, the producer did not have to break out separate income-and-loss data on malleable threaded cast-iron pipe fittings.

Value of plant, property, and equipment.--The data provided by the five firms on their end-of-period investment in productive facilities in which cast-iron pipe fittings are produced are shown in table 11. The aggregate investment in productive facilities for malleable threaded cast-iron pipe fittings, valued at cost, increased from \$97.6 million in 1984 to \$102.6 million in 1985 but then fell to \$97.4 million in 1986. The book value of such assets increased from \$46.3 million in 1984 to \$46.7 million in 1985, then fell to \$38.9 million in 1986. 1/

The aggregate investment by two of the five firms in productive facilities for malleable threaded cast-iron pipe fittings, valued at original cost, increased from *** as of February 28, 1986, to *** as of February 28, 1987. The book value of such assets similarly increased from *** at the end of interim 1986 to *** at the end of interim 1987.

Table 11

Cast-iron pipe fittings: Value of property, plant, and equipment of U.S. producers, 1/ accounting years 1984-86 and interim periods ended Feb. 28, 1986, and Feb. 28, 1987

Item	1984	1985	3/ 1986	Interim period ended Feb. 28 2/	
				1986	1987
All products of establishment:					
Original cost..1,000 dollars..	274,440	285,000	267,544	***	***
Book value.....do....	131,348	132,196	113,346	***	***
Number of firms reporting.....	5	5	5	***	***
All cast-iron pipe fittings:					
Original cost..1,000 dollars..	163,104	162,062	155,544	***	***
Book value.....do....	80,645	77,973	67,139	***	***
Number of firms reporting.....	5	5	5	***	***
Malleable threaded cast-iron pipe fittings:					
Original cost..1,000 dollars..	97,615	102,578	97,395	***	***
Book value.....do....	46,266	46,655	38,872	***	***
Number of firms reporting.....	5	5	5	***	***

1/ The firms are Stanley G. Flagg & Co., Inc., Grinnell Corp., U-Brand Corp., Ward Manufacturing, Inc., and Stockham Valves & Fittings Co.

2/ 1 firm provided 9-month interim data (June 1-Feb. 28), and 1 firm provided 6-month interim data (Sept. 1-Feb. 28).

3/ The asset valuations of * * * were * * *.

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

1/ The asset valuations of Ward Manufacturing Co. were written down in 1986 as a result of a leveraged buyout and therefore affect the 1986 data.

Capital expenditures.--The data provided by the five firms relative to their capital expenditures for land, buildings, and machinery and equipment used in the manufacture of cast-iron pipe fittings are shown in table 12. Capital expenditures relating only to malleable threaded cast-iron pipe fittings declined from \$6.4 million in 1984 to \$6.1 million in 1985 and then to \$3.8 million in 1986.

Total capital expenditures by two of the producers relating to malleable threaded cast-iron pipe fittings declined from *** during the interim period ended February 28, 1986, to *** during interim 1987.

Research and development expenses.--Research and development expenses relating to cast-iron pipe fittings for four reporting firms 1/ are shown in the following tabulation for 1984-86 and interim periods 1986-87 (in thousands of dollars):

* * * * * *

1/ One producer was unable to break out its research and development expenses.

Table 12

Cast-iron pipe fittings: Capital expenditures by U.S. producers, 1/ accounting years 1984-86 and interim periods ended Feb. 28, 1986, and Feb. 28, 1987

Item	1984	1985	1986	Interim period ended Feb. 28 2/	
				1986	1987
All products of the establishments:					
Land and land improvements 1,000 dollars..	***	***	***	***	***
Building or leasehold improvements.....do....	***	***	***	***	***
Machinery, equipment, and fixtures.....do....	***	10,461	10,585	***	***
Total.....do....	12,297	11,163	11,070	***	***
Number of firms reporting..	5	5	5	2	2
All cast iron pipe fittings:					
Land and land improvements 1,000 dollars..	***	***	***	***	***
Building or leasehold improvements.....do....	***	***	***	***	***
Machinery, equipment, and fixtures.....do....	***	***	6,884	***	***
Total.....do....	9,957	8,308	7,119	***	***
Number of firms reporting..	5	5	5	2	2
Malleable threaded cast- iron pipe fittings:					
Land and land improvements 1,000 dollars..	***	***	***	***	***
Building or leasehold improvements.....do....	***	***	***	***	***
Machinery, equipment, and fixtures.....do....	6,119	***	***	***	***
Total.....do....	6,366	6,113	3,838	***	***
Number of firms reporting..	5	5	5	2	2

1/ The firms are Stanley G. Flagg & Co., Inc., Grinnell Corp., U-Brand Corp., Ward Manufacturing, Inc., and Stockham Valves & Fittings Co.

2/ 1 firm provided 9-month interim data (June 1-Feb. 28), and 1 firm provided 6-month interim data (Sept. 1-Feb. 28).

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

The Question of Threat of Material Injury
to an Industry in the United States

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 any merchandise, the Commission shall consider, among other relevant factors 1/--

(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, and

1/ 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."

(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 736, are also used to produce the merchandise under investigation.

The available data on foreign producers' operations (items (II) and (VI) above) are presented in the section entitled "The Foreign Industry"; and 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 Alleged Material Injury or the Threat Thereof and Imports Sold at LTFV." The potential for "product-shifting" (item VIII) is not an issue in this investigation since there are no known products subject to investigation(s) or to final orders which use production facilities that can be shifted to produce malleable cast-iron pipe fittings. Available information on U.S. inventories of the subject products (item (V)) follows.

U.S. inventories of malleable cast-iron pipe fittings from Thailand

Nine importers of malleable threaded cast-iron pipe fittings from Thailand reported end-of-period inventories during the period of investigation. From 1984 to 1986, end-of-period inventories of Thai fittings increased steadily, rising by *** percent from 1984 to 1985, and by *** percent from 1985 to 1986 (table 13). Six importers of the subject fittings from Thailand reported end-of-period inventories of the subject merchandise for the interim periods of 1986 and 1987. Such inventories decreased by *** percent in January-March 1987 compared with those in the corresponding period of 1986. The ratio of end-of-period inventories to reported imports from Thailand decreased irregularly from *** percent in 1984 to *** percent in 1986. Between January-March 1986 and the interim 1987 period, the ratio of inventories to reported (annualized) imports dropped from *** percent to *** percent.

Table 13

Malleable threaded cast-iron pipe fittings: End-of-period inventories of Thai imports held in the United States, reported imports from Thailand, and ratios of end-of-period inventories to reported Thai imports, 1984-86, January-March 1986, and January-March 1987

* * * * *

Consideration of the Causal Relationship Between Alleged Material
Injury or the Threat Thereof and Imports Sold at LTFV

U.S. imports

U.S. imports of malleable cast-iron pipe fittings covered by this investigation are presented in table 14. These data, compiled from official statistics, include certain products which do not meet the definition of the articles covered by the investigation. This investigation includes imports of malleable cast-iron pipe fittings, not of alloy cast-iron, whether or not advanced in condition by operations or processes (such as threading) subsequent to the casting process, other than grooved fittings, as provided for in TSUS items 610.70 and 610.74. As stated in the "U.S. tariff treatment" section of this report, U.S. Customs import specialists informed staff that TSUS items 610.70 and 610.74 have been treated as by-pass items at most U.S. ports of entry and product misclassifications may be frequent.

During the current investigation, the Commission received questionnaire responses from more than 18 firms that appeared on the U.S. Customs net import file as being the importers of record for products entering under TSUS item 610.70, which is intended to include products not further processed after casting. Unthreaded, unfinished malleable pipe fittings, if any, should enter under this item. Not one of the responding firms reported importing malleable pipe fittings that were not further processed after casting, or that would be properly classified under TSUS item 610.70. ^{1/} Accordingly, for the purposes of this report, official and adjusted import statistics relate only to imports under TSUS item 610.74. However, there may be imports of threaded malleable pipe fittings which have been improperly classified under item 610.70 and thus are not represented in the official statistics presented in this report.

In addition, during other recent final investigations, responses to Commission questionnaires indicated that some imports from Korea and Taiwan entering the United States under TSUS item 610.74 were not products covered by the investigations. These imports included tea, flanges, couplings, brass, and ductile products. In 1985, such unrelated products accounted for 6 percent of imports from Taiwan and 5 percent of imports from Korea, as reported in

^{1/} During investigations 731-TA-278 through 280 (Final), the Commission received questionnaire responses from more than 25 firms that appeared on the U.S. Customs net import file as being the importers of record for products entering under TSUS item 610.70. Firms reported importing ductile products, valve boxes, tires, brass, and other products under TSUS item 610.70. In the petitions to the instant investigation (at p. 3), petitioners recognized the Commission's misclassification findings but, nevertheless, included imports entered under TSUS item 610.70 because "merchandise properly classified in TSUSA item 610.7000 (i.e., unfinished malleable iron pipe fittings) is the same class or kind as finished malleable iron pipe fittings imported under Item 610.7400" and "an Antidumping Duty Order limited to Item 610.7400 could easily be circumvented merely by importing unfinished pipe fittings and performing the process of advancing them beyond casting in the United States."

Table 14

Malleable cast-iron pipe fittings: U.S. imports for consumption, 1/ 1984-86, January-March 1986, and January-March 1987

Source	1984	1985	1986	Jan. - Mar. --	
				1986	1987
Quantity (tons)					
Thailand.....	1,266	2,794	4,631	841	2/ 1,633
Japan.....	10,870	7,047	6,919	2,225	2/ 642
Taiwan.....	4,388	5,516	1,905	1,116	195
India.....	1,543	1,224	1,350	502	286
Korea 3/.....	3,395	5,048	1,333	611	258
China.....	160	216	597	98	0
Mexico.....	0	0	421	0	480
Brazil.....	1,637	238	408	71	24
All other.....	483	738	1,189	149	143
Total.....	23,742	22,821	18,753	5,614	3,662
CIF plus calculated duties (1,000 dollars)					
Thailand.....	1,552	3,396	5,534	972	2/ 1,998
Japan.....	17,284	11,083	11,667	3,897	2/ 1,041
Taiwan.....	6,606	8,606	2,986	1,779	289
India.....	996	866	913	282	342
Korea 3/.....	3,752	5,779	1,592	675	325
China.....	93	117	303	73	0
Mexico.....	0	0	396	0	407
Brazil.....	1,959	281	527	94	34
All other.....	1,048	1,733	1,834	269	249
Total.....	33,290	31,860	25,752	8,042	4,685
Unit value (per pound)					
Thailand.....	\$0.61	\$0.61	\$0.60	\$0.58	\$0.61
Japan.....	.80	.79	.84	.88	.81
Taiwan.....	.75	.78	.78	.80	.74
India.....	.32	.35	.34	.28	.60
Korea 3/.....	.55	.57	.60	.55	.63
China.....	.29	.27	.25	.37	-
Mexico.....	-	-	.47	-	.42
Brazil.....	.60	.59	.65	.66	.71
All other.....	1.08	1.17	.77	.90	.87
Average.....	.70	.70	.69	.72	.64

See footnotes at end of table.

Table 14

Malleable cast-iron pipe fittings: U.S. imports for consumption, 1/ 1984-86, January-March 1986, and January-March 1987--Continued

Source	1984	1985	1986	Jan.-Mar.--	
				1986	1987
	Percent of total quantity				
Thailand.....	5.3	12.2	24.7	15.0	44.6
Japan.....	45.8	30.9	36.9	39.6	17.5
Taiwan.....	18.5	24.2	10.2	19.9	5.3
India.....	6.5	5.4	7.2	8.9	7.8
Korea <u>3/</u>	14.3	22.1	7.1	10.9	7.1
China.....	0.7	0.9	3.2	1.7	0
Mexico.....	0	0	2.2	0	13.1
Brazil.....	6.9	1.0	2.2	1.3	.7
All other.....	2.0	3.2	6.3	2.7	3.9
Total.....	100.0	100.0	100.0	100.0	100.0

1/ Includes imports entered under TSUS item 610.74. Data for Japan, India, Korea, Taiwan, and Thailand include certain products not covered by this investigation.

2/ Because of a lag in reporting, official import statistics include some "carry-over" data for merchandise imported, but not reported, in prior periods (usually the previous month). Beginning in 1987, Commerce extended its monthly data compilation cutoff date by about 2 weeks in order to significantly reduce the amount of carry-over. Therefore, official statistics for January 1987 include data that would previously have been carried over to February 1987. However, in order to avoid an apparent overstatement of the January 1987 data, official statistics as of the previous cutoff date have been excluded. Commerce isolated these 1986 carry-over data and has not included them in official statistics for 1986 or January 1987, since their inclusion in either period would result in an apparent overstatement. With respect to imports from Thailand and Japan, this carry-over amounted to 17 tons and 178 tons, respectively, valued at \$23,000 and \$287,000 (c.i.f. plus calculated duties), respectively.

3/ Republic of Korea.

Note.--Because of rounding, figures may not add to the totals shown.

Source: Compiled from official statistics of the U.S. Department of Commerce.

official statistics. Similarly, responses to the Commission questionnaires revealed that some imports from Japan and Thailand entering under TSUS item 610.74 were not malleable cast-iron pipe fittings. 1/ Conversely, some

1/ Official statistics (reported in table 14) on imports from India, Korea, and Taiwan, may overstate actual imports of cast-iron pipe fittings under TSUS item 610.74. In app. E, apparent U.S. consumption and market penetration of imports are calculated using official import statistics under TSUS item 610.74 adjusted to exclude any known imports of products not subject to this investigation for 1984-86.

imports of the subject fittings may have been entered under item 610.70 and are therefore not accounted for in the official statistics presented in table 14.

According to the official import statistics, the quantity of imports of malleable cast-iron pipe fittings from Thailand increased steadily during the period of investigation, rising by 120.7 percent from 1984 to 1985 and by 65.7 percent from 1985 to 1986. The value of the subject imports from Thailand increased by 118.8 percent between 1984 and 1985 and by 63.0 percent during 1985-86. The quantity of imports from Japan declined by 35.2 percent from 1984 to 1985 and by 1.8 percent from 1985 to 1986, while the value of such imports dropped by 35.9 percent and then increased by 5.3 percent, respectively. The quantity of imports of the subject merchandise from all other countries rose by 11.8 percent from 1984 to 1985, and then plunged by 44.5 percent from 1985 to 1986. The value of imports from all other countries increased by 20.3 percent between 1984 and 1985 and then decreased by 50.8 percent between 1985 and 1986. Between January-March 1986 and January-March 1987, the quantity of imports from Thailand increased by 94.2 percent, imports from Japan decreased by 71.1 percent, and imports from all other countries decreased by 45.6 percent; the value of imports from Thailand rose by 105.6 percent, while those from Japan and all other countries fell by 73.3 percent and 48.1 percent, respectively.

The vast majority of imports of malleable cast-iron pipe fittings from Thailand entered the United States through three customs districts in 1986. The following tabulation presents data on the principal districts through which such imports from Thailand entered under TSUS item 610.74 in 1986, by percent of total quantity:

<u>Port</u>	<u>Percentage distribution</u>
Los Angeles.....	63
New York.....	8
Tampa.....	8
12 other districts.....	<u>21</u>
Total.....	100

Pursuant to section 304(a)(3)(J) of the Tariff Act of 1930 and Treasury Decision 71-89, imported cast-iron pipe fittings covered by the investigation were, until recently, excepted from country-of-origin marking requirements. This exception was revoked under section 207 of the Trade and Tariff Act of 1984, which requires that imports of these articles entering on or after November 14, 1984, have country-of-origin markings by means of die stamping, cast-in-mold lettering, etching, or engraving.

Market penetration of imports 1/

U.S.-produced domestic shipments of the subject merchandise as a share of apparent U.S. consumption generally increased during the period of investigation (table 15). However, in terms of quantity, the market penetration of imports from Thailand increased steadily from 1.8 percent in 1984 to 7.6 percent in 1986. From January-March 1986 to January-March 1987, the market penetration of imports from Thailand doubled, rising from 5.2 percent to 10.8 percent. Over the same period, the market penetration of imports from Japan dropped from 15.1 percent in 1984 to 10.4 percent in 1985, but rose to 11.3 percent in 1986. The market penetration of imports from Japan fell from 13.6 percent in January-March 1986 to 4.2 percent in the corresponding period of 1987. The combined share of the U.S. market held by imports from Japan and Thailand increased irregularly from 16.9 percent in 1984 to 18.9 percent in 1986. This combined share fell from 18.8 percent in January-March 1986 to 15.1 percent in the interim period of 1987.

The trends in the market penetration of imports of malleable cast-iron pipe fittings, in terms of value, were similar to the trends in the market penetration in terms of quantity. Throughout the period under investigation, however, market penetration was lower in terms of value than in terms of quantity. Between 1984 and 1986, the ratio of the quantity of imports from Thailand to apparent U.S. consumption increased by a greater amount than the ratio in terms of value; the ratio of the quantity of imports from Japan to apparent U.S. consumption decreased by more than the ratio in terms of value. Similarly, from January-March 1986 to the corresponding period of 1987, the market penetration of imports from Thailand, from Japan, and from all other countries changed more in terms of quantity than in terms of value.

Prices

Domestic producers and most importers of malleable cast-iron pipe fittings quote prices on both f.o.b. and delivered bases, with actual transaction prices generally discounted from the published list prices on all sales. Within the industry, producers and importers apply a complex discounting structure on sales of pipe fittings. A base discount of 55 percent is commonly applied to all sales. Trailing discounts, in intervals of 5, 7.5, or 10 percent, can then be added to the base discount; for example, a discount of "55 plus 4 10's" applied to a \$100 list price would equal a final transaction price of \$29.52. 2/ All five U.S. producers and eight importers reported that the discounting structure is related to the quantity of the sale, with the trailing discount increasing as the quantity of pipe fittings that are purchased increases. 3/

1/ Market penetration information calculated by eliminating items that are not covered by this investigation, but which may be included in official import statistics for TSUS item 610.74, is presented in app. E for 1984-86. See the section entitled "U.S. imports" for a description of these items.

2/ More specifically, the following formula would be used in calculating the transaction price: $\text{price} = \$100(.45)(.9)(.9)(.9)(.9)$.

3/ For example, a discount of "55 plus 3 10's" may be applied to sales of 1,000-5,000 pounds and the discount may then increase to "55 plus 4 10's" for a sale of 5,000-10,000 pounds.

Table 15

Malleable threaded cast-iron pipe fittings: U.S. imports, U.S.-produced domestic shipments, 1/ and apparent U.S. consumption, by quantity and value, 2/ 1984-86, January-March 1986, and January-March 1987

Item	1984	1985	1986	Jan.-Mar.--	
				1986	1987
Quantity					
Imports from-- 1/					
Thailand.....tons..	1,266	2,794	4,631	3/ 841	3/ 1,633
Japan.....do....	10,870	7,047	6,919	2,225	642
Subtotal.....do....	12,136	9,841	11,550	3,066	2,275
All other countries.....do....	11,606	12,980	7,203	2,548	1,387
Total, all imports.....do....	23,742	22,821	18,753	5,614	3,662
U.S.-produced domestic shipments.....do....	48,100	44,971	42,383	10,698	11,454
Apparent U.S. consumption..do....	71,842	67,792	61,136	16,312	15,116
Ratio to consumption of--					
Imports from:					
Thailand.....percent..	1.8	4.1	7.6	5.2	10.8
Japan.....do....	15.1	10.4	11.3	13.6	4.2
Subtotal.....do....	16.9	14.5	18.9	18.8	15.1
All other countries.....do....	16.2	19.1	11.8	15.6	9.2
Total, all imports...do....	33.0	33.7	30.7	34.4	24.2
U.S.-produced domestic shipments.....do....	67.0	66.3	69.3	65.6	75.8
Total.....do....	100.0	100.0	100.0	100.0	100.0
Value					
Imports from-- 2/					
Thailand.....1,000 dollars..	1,552	3,396	5,534	3/ 972	3/ 1,998
Japan.....do....	17,284	11,083	11,667	3,897	1,041
Subtotal.....do....	18,836	14,479	17,201	4,870	3,039
All other countries.....do....	14,454	17,381	8,551	3,172	1,645
Total, all imports.....do....	33,290	31,860	25,752	8,042	4,685
U.S.-produced domestic shipments 4/.....do....	119,779	101,520	93,553	23,806	24,667
Total.....do....	153,069	133,380	119,305	31,848	29,352
Ratio to consumption of--					
Imports from:					
Thailand.....percent..	1.0	2.5	4.6	3.1	6.8
Japan.....do....	11.3	8.3	9.8	12.2	3.5
Subtotal.....do....	12.3	10.8	14.4	15.3	10.4
All other countries.....do....	9.4	13.0	7.2	10.0	5.6
Total, all imports...do....	21.7	23.9	21.6	25.3	16.0
U.S.-produced domestic shipments.....do....	78.3	76.1	78.4	74.7	84.0
Total.....do....	100.0	100.0	100.0	100.0	100.0

See footnotes on next page

Footnotes for Table 15

1/ Import quantities are U.S. official statistics under TSUS item 610.74.

2/ Import values are C.I.F. duty-paid under TSUS item 610.74.

3/ In response to questionnaires of the U.S. International Trade Commission, the staff received data on imports from Thailand for the January-March period of 1986 and 1987. Reported imports from Thailand were *** tons in January-March 1986 and *** tons in January-March 1987, valued at *** and ***, respectively.

4/ Data are understated to the extent that values for domestic shipments by * * *.

Note.--Because of rounding, figures may not add to the totals shown.

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.

Some producers and importers maintain minimum quantity purchase policies, based on weight, container load, or dollar value of the purchase. In addition, four importers reported price premiums of *** percent on subminimum purchases. Whereas lead times on orders from producer or importer warehouses vary depending on inventories, they generally average 2 days to 2 weeks. Indent orders, which are produced to a customer's specification and shipped direct from the production location, average 1 to 4 months.

The Commission requested f.o.b. and delivered price data from U.S. producers and importers of cast-iron pipe fittings, for each firm's largest sale to distributors in each quarter during the period January 1984 to March 1987. Producers and importers generally were not able to provide f.o.b. price data; thus, only delivered-price data were compiled. Although pipe fittings are available in hundreds of configurations, the following products, for which price data were collected, are considered to be high volume products by both producers and importers:

Product 1: 1/2-inch, malleable, black, threaded, standard pressure (150 psi), 90-degree elbow ("L").

Product 2: 1/2-inch, malleable, galvanized, threaded, standard pressure (150 psi), 90-degree elbow ("L").

Product 3: 1/2-inch, malleable, black, threaded, standard pressure (150 psi), "T"-fitting.

Product 4: 1/2-inch, malleable, black, standard pressure (150 psi), union. 1/

Questionnaires with usable price data were received from all five domestic producers and seven importers of malleable cast-iron pipe fittings from Thailand. Importers reporting price data accounted for 5,058 tons or more than 100 percent of official imports from Thailand in 1986. 2/

1/ Standard unions are commonly referred to as ground joint or brass seated unions.

2/ For further discussion see section entitled "U.S. imports" pp. A-30-A-33.

Summary.--During the period of investigation, January 1984 to March 1987, domestic prices increased for three of the four products (tables 16-19). Weighted-average prices for product 1 increased by 5 percent, and prices for both product 3 and product 4 increased by 8 percent. Domestic prices for product 2 fluctuated throughout the period and had an overall decrease of 5 percent. Thai prices for the four products had different trends during the period. Prices for products 1 and 3 increased, whereas prices for product 4 decreased. Prices for product 2 had no overall change during the period.

Domestic price trends.--U.S. producers' weighted-average prices for 1/2-inch 90° black "L's" (product 1) increased by *** per unit during the investigation period. Prices were *** per unit during 1984 and increased to a high of *** in July-September 1985. Prices remained stable at *** for the rest of the period, for an overall increase of 5 percent.

Weighted-average prices for U.S.-produced 1/2-inch galvanized 90° "L's" (product 2) decreased by 10 percent from the initial price of *** per unit in January-March 1984 to *** in July-September 1984. Prices increased to *** in October-December 1985 and then declined to a level of *** in January-March 1986, where they generally remained through the corresponding quarter of 1987, for an overall decrease of 5 percent during the period of investigation.

Prices for domestically produced 1/2-inch black "T" fittings (product 3) moved from *** in most of 1984 to *** per unit by April-June 1985, and remained at that level throughout 1985. After a slight increase of *** in January-June 1986 to *** per unit, prices declined to a level of *** per unit, for an overall increase of 8 percent.

U.S. producers' weighted-average prices for 1/2-inch black, standard unions (product 4) were stable at *** per unit throughout 1984 and increased to a level of *** in April-December 1985. Prices increased by *** in January-March 1986 to *** per unit and remained at that level throughout most of the remainder of the period of investigation, for an overall increase of 8 percent.

Thai price trends and comparisons. 1/--Thai 1/2-inch black 90° "L's" (product 1) prices increased from *** to *** per unit from January-March 1984 to the corresponding quarter in 1986, an increase of 17 percent. Prices decreased to *** in January-March 1987, for an overall increase of 8 percent.

1/ Thai respondents argue that price differentials between domestic and Thai products are due to differences in product weight and quality. (Post-conference brief of Thai respondents, "Answers in response to questions from the Commissioners and Commission staff", p. 2). During a staff visit to * * *, company officials stated that * * * fittings are generally made close to the minimum weight standards set by ANSI and that it is unlikely that fittings weighing less than these standards would be accepted in the U.S. market. Pricing data are presented in this report on a per unit basis because fittings are sold by the unit, not by the pound in the marketplace. Respondents further argued that domestic manufacturers' costs are higher because U.S. producers use a higher grade of malleable iron. (Ibid., p. 7). U.S. producers stated that they use grade A-197 malleable iron, the same grade of malleable iron used for Thai fittings. (Hearing transcript, pp. 99-100).

Table 16.--Weighted-average delivered prices reported by U.S. producers and importers of the Thai product for sales to distributors of 1/2-inch malleable, black, threaded, standard pressure (150 psi), 90 degree elbows (product 1), by quarters, January 1984-March 1987

Period	(Per unit)			
	U.S. product	Thai product	Imports' margin of underselling	
			Amount	Percent
1984:				
Jan.-Mar....	***	***	***	37.3
Apr.-June...	***	***	***	38.8
July-Sept...	***	***	***	39.0
Oct.-Dec....	***	***	***	41.9
1985:				
Jan.-Mar....	***	***	***	36.4
Apr.-June...	***	***	***	36.0
July-Sept...	***	***	***	39.4
Oct.-Dec....	***	***	***	39.2
1986:				
Jan.-Mar....	***	***	***	36.4
Apr.-June...	***	***	***	39.4
July-Sept...	***	***	***	33.0
Oct.-Dec....	***	***	***	34.3
1987:				
Jan.-Mar....	***	***	***	37.1

Note.--Percentage margins are calculated from unrounded figures, thus margins cannot always be directly calculated from the rounded prices in the table.

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

Table 17.--Weighted-average delivered prices reported by U.S. producers and importers of the Thai product for sales to distributors of 1/2-inch malleable, galvanized, threaded, standard pressure (150 psi), 90 degree elbows (product 2), by quarters, January 1984-March 1987

(Per unit)				
Period	U.S. product	Thai product	Imports' margin of underselling	
			Amount	Percent
1984:				
Jan.-Mar....	***	***	***	42.8
Apr.-June...	***	***	***	37.2
July-Sept...	***	***	***	32.9
Oct.-Dec....	***	***	***	38.4
1985:				
Jan.-Mar....	***	***	***	30.5
Apr.-June...	***	***	***	34.0
July-Sept...	***	***	***	33.1
Oct.-Dec....	***	***	***	33.9
1986:				
Jan.-Mar....	***	***	***	36.3
Apr.-June...	***	***	***	40.7
July-Sept...	***	***	***	28.0
Oct.-Dec....	***	***	***	28.4
1987:				
Jan.-Mar....	***	***	***	38.1

Note.--Percentage margins are calculated from unrounded figures, thus margins cannot always be directly calculated from the rounded prices in the table.

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

Table 18.--Weighted-average delivered prices reported by U.S. producers and importers of the Thai product for sales to distributors of 1/2-inch malleable, black, threaded, standard pressure (150 psi), "T" fittings (product 3), by quarters, January 1984-March 1987

(Per unit)				
Period	U.S. product	Thai product	Imports' margin of underselling	
			Amount	Percent
1984:				
Jan.-Mar....	***	***	***	30.5
July-Sep....	***	***	***	31.2
Oct.-Dec....	***	***	***	31.2
1985:				
Jan.-Mar....	***	***	***	27.4
Apr.-June...	***	***	***	30.7
July-Sep....	***	***	***	33.8
Oct.-Dec....	***	***	***	29.0
1986:				
Jan.-Mar....	***	***	***	32.1
Apr.-June...	***	***	***	32.2
July-Sep....	***	***	***	26.9
Oct.-Dec....	***	***	***	29.7
1987:				
Jan.-Mar....	***	***	***	28.3

Note.--Percentage margins are calculated from unrounded figures, thus margins cannot always be directly calculated from the rounded prices in the table.

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

Table 19

Weighted-average delivered prices reported by U.S. producers and importers of the Thai product for sales to distributors of 1/2-inch malleable, black, standard pressure (150 psi), unions 1/ (product 4), by quarters, January 1984-March 1987

(Per unit)				
Period	U.S. product	Thai product	Imports' margin of underselling	
			Amount	Percent
1984:				
Jan.-Mar....	***	-	-	-
Apr.-June...	***	-	-	-
July-Sep....	***	-	-	-
Oct.-Dec....	***	-	-	-
1985:				
Jan.-Mar....	***	***	***	9.8
Apr.-June...	***	***	***	11.8
July-Sep....	***	***	***	16.2
Oct.-Dec....	***	***	***	12.8
1986:				
Jan.-Mar....	***	***	***	18.5
Apr.-June...	***	***	***	18.4
July-Sep....	***	***	***	14.5
Oct.-Dec....	***	***	***	16.2
1987:				
Jan.-Mar....	***	***	***	23.6

1/ Standard unions are commonly referred to as ground joint or brass seated unions.

Note.--Percentage margins are calculated from unrounded figures, thus margins cannot always be directly calculated from the rounded prices in the tables.

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

Thai fittings were priced below U.S. fittings in all quarters in which comparisons could be made, with margins ranging from 33 to 42 percent.

Prices for Thai 1/2-inch galvanized 90° "L's" (product 2) fluctuated throughout the period of investigation, moving from an initial level of *** per unit in January-March 1984 to a high of *** in July-December 1986, before returning to the original level of ***. As with product 1, these fittings were priced lower than domestic fittings in all quarters, with margins ranging from 28 to 43 percent.

Prices for 1/2-inch black "T" fittings (product 3) produced in Thailand increased 12 percent during the investigation period. Prices moved from *** per unit in January-March 1984 to *** in January-March 1985 and generally remained at that level through the first quarter of 1987. Margins by which the Thai fittings were priced below the domestic product ranged from 27 to 34 percent.

Thai 1/2-inch black, standard union prices (product 4) decreased irregularly by 9 percent, from *** per unit in January-March 1985 to *** in January-March 1987. These fittings were priced below the domestic product in all nine quarters in which comparisons could be made. Margins ranged from 10 to 24 percent.

Purchaser responses.--Purchaser questionnaires were sent to approximately 80 establishments thought to be purchasers of malleable cast-iron pipe fittings. Questionnaire responses were received from 24 of these establishments; 15 provided usable data. These purchasers, 14 of which are wholesalers/distributors and 1 of which is a manufacturer of lawn sprinklers, reported purchases of 130 tons of Thai fittings in 1986. Data were also reported on fittings produced in the United States, Japan, and Korea.

Purchasers were asked to rank several factors that were considered in most purchasing decisions. Thirteen of these purchasers listed price and quality as the two most important factors. Two other purchasers gave more consideration to prompt delivery, reliability of vendor firm, and warranty or service terms. Other factors listed include whether the vendor is a traditional or alternate source of supply, the availability of a complete product line, and transport costs.

No purchaser reported having a "Buy American" policy with respect to malleable threaded cast-iron pipe fittings. Several purchasers stated that when price and quality are comparable, they would prefer to buy domestic products; however, in some instances they are forced to purchase the less expensive Thai products in order to remain competitive. Other reasons given for purchasing domestic fittings included fulfilling customer requests for U.S. produced fittings, compensating for a deteriorating supply of imports, and the ability to purchase domestic fittings in smaller quantities, thus avoiding the necessity for large inventories.

Purchasers were requested to provide information concerning prices, quality, and competition between U.S. produced pipe fittings and imported fittings. Of the 15 purchasers that responded, all but 1 reported that import prices were generally lower than U.S. producers' prices for comparable products; 6 firms found Thai prices to be lower than domestic prices, and the

other purchasers compared domestic and Japanese prices, with 10 firms stating that Japanese prices were lower than domestic prices. Many purchasers stated that it is difficult to remain competitive if other companies are purchasing lower priced imports. However, several respondents commented that recently the gap between domestic prices and import prices has been closing due to increases in import prices.

Purchasers were also asked if they had purchased domestic fittings during 1986, given the availability of Thai fittings of comparable quality at lower delivered prices. Four respondents reported purchasing domestic fittings when Thai products were available at lower delivered prices. These four purchasers stated that the Thai fittings were less expensive than domestic fittings by approximately 10 percent or more. Two of these purchasers stated that the quality of the Thai fittings was equal to that of the domestic fittings. One of the above respondents further explained that his firm's purchases of domestic fittings involved types that are not imported in the United States, such as locknut fittings. ^{1/} Another of these respondents included among the reasons for purchasing domestic fittings the need for a reliable source of supply in order to service in turn a major OEM manufacturer; the availability of product support personnel; and the desire to be consistent with the Buy American policies of some customers.

Additionally, one purchaser commented that although the quality of the Thai fitting was not the same as that of the domestic fitting, there was not a significant difference, whereas the price differential between the two was large. This purchaser stated that some customers request domestic products because they perceive them to be better fittings; however, for those customers concerned with prices the firm will buy Thai fittings.

Information received from telephone interviews in reference to the quality of Thai fittings was inconclusive. About half of the purchasers felt that Thai fittings were equal to domestic fittings in terms of quality; the other purchasers stated that Thai fittings were a lower quality fitting. * * *, one of the largest purchasers of malleable iron pipe fittings, stated that customers concerned with the country of origin are mainly utilities and OEMs. He estimates that these types of customers account for 10-15 percent of the total market for malleable fittings.

Information was also obtained concerning malleable grooved fittings, nonmalleable grooved fittings, and nonmalleable threaded fittings. Only one of these purchasers indicated that malleable grooved fittings were purchased by their company. Several purchasers commented that the grooved and threaded fittings are not interchangeable because of the different applications for the two fittings. Malleable grooved fittings are normally used in high-volume, low-pressure applications, such as on sprinkler systems and those for fire protection, whereas malleable threaded fittings are most commonly used in low-volume, high-pressure applications, such as for gas piping. Additional information obtained from telephone interviews with purchasers supported the same conclusions. Only one purchaser claimed that there may be some interchangeability between grooved and threaded fittings, but stated that this is only true for larger size pipes because grooved fittings are not made in smaller sizes.

^{1/} Staff conversation with * * * on May 14, 1987.

Nonmalleable pipe fittings, both threaded and grooved, were reported as being different from malleable threaded fittings in usage and in material composition. None of the purchasers stated that malleable and nonmalleable fittings were interchangeable; therefore, none would offer a customer a nonmalleable fitting in place of a malleable one. One purchaser commented that nonmalleable fittings have a somewhat higher incidence of cracks and leaks and therefore can not be used on gas piping, which is the most common application of malleable iron fittings. Instead, nonmalleable threaded fittings are usually used on steam piping and nonmalleable grooved fittings are used on sprinkler systems.

Transportation costs

Trucks provide the primary mode of transportation for producers and importers to deliver pipe fittings to customers. Transportation costs average 5 to 7 percent of the delivered price. Data obtained through questionnaire responses indicate that producers and importers absorb most freight costs--all five producers and five importers reported that they absorb such costs for at least 70 percent of total shipments. Domestic producers indicated no specific geographic market area for their firms' sales of pipe fittings, whereas importers often ship within a specific market area, such as the southeast, northeast, east coast, or west coast. Five importers reported that at least 95 percent of their shipments are delivered to customers located within a 500-mile radius of their warehouse. Two importers of Thai fittings reported nationwide sales.

Exchange rates

Quarterly data reported by the International Monetary Fund ^{1/} indicate that the Thai baht maintained its value relative to the U.S. dollar during January-September 1984 ^{2/} and then depreciated 11.2 percent through March 1987 (table 20). In response to similar levels of inflation in Thailand and the United States over the 13-quarter period for which data were collected, movements in the real value of the baht were not significantly different from movements in the nominal Thai exchange rate. The value of the baht adjusted for differences in relative inflation rates decreased from January 1984 through March 1985 and then increased erratically from April-June 1985 through April-June 1987, ending the period at 10.2 percent below its January-March 1984 level.

^{1/} International Financial Statistics, June 1987.

^{2/} During this period the value of the baht was fixed at a ratio of 23.0 to 1 U.S. dollar.

Table 20.--Nominal and real exchange-rate equivalents of the Thai baht in U.S. dollars, real exchange-rate equivalents, and producer-price indicators in the United States and Thailand, 1/ by quarters, January 1984-March 1987

(January-March 1984=100.0)				
Period	U.S. Producer- Price Index	Thai Producer- Price Index	Nominal exchange- rate index -----US dollars/baht-----	Real exchange- rate index 2/
1984:				
January-March.....	100.0	100.0	100.0	100.0
April-June.....	100.7	99.0	100.0	98.3
July-September.....	100.4	98.6	100.0	98.2
October-December....	100.2	98.0	90.0	88.1
1985:				
January-March.....	100.0	97.7	82.8	80.9
April-June.....	100.1	98.6	83.8	82.6
July-September.....	99.4	99.3	85.3	85.3
October-December....	100.0	99.8	86.9	86.7
1986:				
January-March.....	98.5	99.1	86.8	87.3
April-June.....	96.6	98.0	87.2	88.5
July-September.....	96.2	98.3	88.0	90.0
October-December....	96.5	98.6	87.8	89.6
1987: January- March 3/.....	97.7	98.9	88.8	89.8

1/ Producer-price indicators--intended to measure final product prices--are based on average quarterly indexes presented in line 63 of the International Financial Statistics.

2/ The indexed real exchange rate represents the nominal exchange rate adjusted for the relative economic movement of each currency as measured here by the Producer-Price Index in the United States and Thailand. Producer prices in the United States decreased 2.3 percent during the period January 1984 through March 1987, compared with a 1.1-percent decrease in Thai prices during the period under investigation.

3/ The real exchange rate for January-March 1987 is derived from Thai Producer-Price Indices reported for January-February only.

Source: International Monetary Fund, International Financial Statistics, June 1987.

Lost sales and lost revenues

* * *, reported three sales allegedly lost as a result of competition from Thai fittings. These three allegations involved *** tons, valued at ***, and occurred during 1986. Staff contacted all three of the purchasers named in these allegations; a summary of the information obtained follows. 1/

* * * cited * * *, in a ***-ton lost sales allegation involving *** of malleable cast-iron pipe fittings purchased from Thai suppliers in 1986. The spokesman for * * * reported that there was a good possibility that the company did purchase that amount of Thai pipe fittings in 1986. This representative stated that Thai products are less expensive than comparable domestic products and that there is not too much difference in the quality. The major purchasing determinants for * * * are price, quality, and availability.

* * * cited a lost sale of *** tons to * * *, in 1986, which involved *** of malleable cast-iron pipe fittings allegedly purchased from Thai suppliers. The spokesman for * * * stated that the company does not make purchases of that size at one time; however, this amount could represent yearly purchases for the company. The spokesman reported that * * * does purchase malleable cast-iron pipe fittings from Thailand, and that those fittings are lower priced than comparable domestic products by approximately 30 to 40 percent. The spokesman stated that if the price were right the company would purchase the domestic product. The representative added that the gap between the domestic prices and import prices was closing.

* * * was named by * * * in a ***-ton lost sales allegation as a result of competition from Thai pipe fittings. This allegation involved *** of fittings and allegedly occurred in 1986. Although the spokesman for * * * denied this specific allegation, he stated that * * * did buy more Thai and fewer domestic pipe fittings during 1986. The spokesman reported that the lower price of the Thai fittings caused the company to buy fewer domestic fittings. The spokesman added that the quality of Thai fittings was not as good as that of domestic fittings but for most applications the Thai product was adequate. If there were no price differential, the spokesman stated that he would purchase the domestic product; however, a price differential of 5 to 10 percent would cause him to purchase Thai fittings. The spokesman commented that availability also affects the company's purchasing decision, and he has not experienced any difference in the lead time for domestic or Thai fittings.

1/ In the preliminary investigation, * * * alleged a lost sale of *** and * * * reported lost revenues of *** as a result of competition from Thai pipe fittings. These allegations were documented in Certain Malleable Cast-Iron Pipe Fittings from Japan and Thailand: Determinations of the Commission in Investigations Nos. 731-TA-347 and 348 (Preliminary), USITC Publication 1900, October 1986, pp. 40-41.

APPENDIX A

COMMERCE'S FEDERAL REGISTER NOTICES

8088

Notices

Federal Register

Vol. 52, No. 50

Monday, March 16, 1987

This section of the FEDERAL REGISTER contains documents other than rules or proposed rules that are applicable to the public. Notices of hearings and investigations, committee meetings, agency decisions and rulings, delegations of authority, filing of petitions and applications and agency statements of organization and functions are examples of documents appearing in this section.

DEPARTMENT OF COMMERCE

International Trade Administration

(A-549-801)

Postponement of Final Antidumping Duty Determination; Malleable Cast Iron Pipe Fittings From Thailand

AGENCY: International Trade Administration, Import Administration, Commerce.

ACTION: Notice.

SUMMARY: This notice informs the public that we have received a request from the respondent in this investigation that the final antidumping duty determination be postponed for not less than 105, and not greater than 135, days from publication of our antidumping duty preliminary determination, as provided for in section 735d(a)(2)(A) of the Tariff Act of 1930, as amended (the Act) (19 U.S.C. 1673d(a)(2)(A)); and that we have postponed our final determination as to whether sales of malleable cast iron pipe fittings from Thailand have occurred at less than fair value until not later than June 28, 1987. In addition, we are rescheduling the public hearing in this investigation.

EFFECTIVE DATE: March 16, 1987.

FOR FURTHER INFORMATION CONTACT: James Riggs or Charles Wilson, Office of Investigations, Import Administration, International Trade Administration, United States Department of Commerce, 14th Street and Constitution Avenue, NW., Washington, DC 20230; telephone (202) 377-4929 or 377-5288.

Case History

On August 29, 1986, we received an antidumping duty petition filed by the Cast Iron Pipe Fittings Committee on malleable cast iron pipe fittings from Thailand. In compliance with the filing

requirements of § 353.36 of our regulation (19 CFR 353.36), the petition alleged that imports of malleable cast iron pipe fittings from Thailand 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 these imports materially injure, or threaten material injury to, a U.S. industry.

We found that the petition contained sufficient grounds upon which to initiate an antidumping duty investigation, and on September 18, 1986, we initiated such an investigation (51 FR 34111, September 25, 1986). The preliminary affirmative determination in this antidumping investigation was made on February 5, 1987 (52 FR 4637, February 13, 1987).

On February 17, 1987, counsel for respondent requested that the Department extend the period for the final determination on this investigation to not less than 105 days, and not more than 135 days from the publication date of our preliminary antidumping duty determination in accordance with section 735(a)(2)(A) of the Act.

The respondent is qualified to make such a request since it accounts for the majority of exports of the merchandise under investigation. If a qualified exporter properly requests an extension after an affirmative preliminary determination, the Department is required, absent compelling reasons to the contrary, to grant the request. Accordingly, the Department will issue its final determination in this case not later than June 28, 1987.

The public hearing in this case is being postponed until 10:00 a.m. on April 27, 1987, at the U.S. Department of Commerce, Room 3708, 14th Street and Constitution Avenue, NW., Washington, DC 20230.

Accordingly, prehearing briefs must be submitted to the Deputy Assistant Secretary by April 17, 1987. Oral presentations in these hearings will be limited to issues raised in the briefs. Posthearing briefs are due no later than 10 days after transcripts of these hearings are made available. All written views should be filed in accordance with 19 CFR 46, no later than 30 days before the final determination is due, at the above address in at least 10 copies.

This notice is published pursuant to section 745(d) of the Act.

Gilbert B. Kaplan,

Deputy Assistant Secretary for Import Administration.

March 9, 1987.

[FR Doc. 87-5620 Filed 3-13-87; 8:45 am]

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be sold in the United States at less than fair value, as provided in section 735(a) of the Tariff Act of 1930, as amended (the Act) (19 U.S.C. 1673d(a)). We made fair value comparisons on sales of the class or kind of merchandise to the United States by the sole respondent during the period of investigation, March 1, 1986 through August 31, 1986. The weighted-average margins are listed in the "Continuation of Suspension of Liquidation" section of this notice.

Case History

On February 5, 1987, we made an affirmative preliminary determination (52 FR 4637, February 13, 1987) which included a case history. Since then, the following events have occurred:

On February 17, 1987, the respondent requested a postponement of the final determination. We granted that request on March 9, 1987, and postponed the due date of the final determination until June 29, 1987 (52 FR 8088, March 16, 1987). We conducted verification in Bangkok, Thailand from April 6 through April 9, 1987. On April 20, 1987, we made a negative preliminary determination of "critical circumstances" (52 FR 13734, April 24, 1987). A public hearing was held on April 27, 1987. As required by the Act, we afforded interested parties an opportunity to submit written comments to address the issues arising in this investigation.

Scope of Investigation

The products covered by this investigation are malleable cast iron pipe fittings, advanced in condition by operations or processes subsequent to the casting process other than with grooves, or not advanced, of cast iron other than alloy cast iron, as currently provided for in items 610.7000 and 610.7400 of the *Tariff Schedules of the United States Annotated* (TSUSA).

Fair Value Comparisons

Because Siam Fittings Ltd. (Siam) accounted for virtually all of the sales of this merchandise from Thailand, we limited our investigation to this company.

To determine whether sales of the subject merchandise in the United States were made at less than fair value, we compared the United States price with the foreign market value.

United States Price

As provided in section 772(b) of the Act, we used the purchase price of the subject merchandise to represent the United States price since the merchandise was purchased by unrelated U.S. customers directly from

[A-549-601]

Final Determination of Sales at Less Than Fair Value: Malleable Cast Iron Pipe Fittings From Thailand

AGENCY: Import Administration, International Trade Administration, Commerce.

ACTION: Notice.

SUMMARY: We have determined that certain malleable cast iron pipe fittings from Thailand (pipe fittings) are being, or are likely to be sold in the United States at less than fair value, and have notified the U.S. International Trade Commission (ITC) of our determination.

EFFECTIVE DATE: July 6, 1987.

FOR FURTHER INFORMATION CONTACT: James Riggs or Charles Wilson, Office of Investigations, Import Administration, International Trade Administration, U.S. Department of Commerce, 14th Street and Constitution Avenue, NW., Washington, DC 20230; telephone (202) 377-1766 or 377-5288.

SUPPLEMENTARY INFORMATION

Final Determination

We have determined that pipe fittings from Thailand are being, or are likely to

the foreign manufacture prior to importation. We calculated purchase price based on the packed c. & f., c.i.f. or f.o.b. prices to unrelated purchasers in the United States. We made deductions, where appropriate, for foreign inland freight and insurance, handling charges, ocean freight, and marine insurance. We made additions to purchase price for duty drawback (i.e., import duties which were rebated, or not collected, by reason of the exportation of the merchandise to the United States) pursuant to section 772(d)(1)(B) of the Act.

Foreign Market Value

As provided in section 773(a) of the Act, we used home market delivered prices of such or similar merchandise to determine foreign market value. We based our calculation of foreign market value on delivered packed prices to unrelated purchasers. We made a deduction, where appropriate, for inland freight. We made an adjustment for differences in circumstances of sales in accordance with § 353.15 of our regulations for differences in credit terms between the two markets.

For those pipe fittings where there were no identical products in the home market with which to compare products sold to the United States, we made adjustments to similar merchandise to account for differences in the physical characteristics of the merchandise, in accordance with section 773(a)(4)(C) of the Act. These adjustments were based on differences in the costs of materials, direct labor and directly related factory overhead.

We deducted home market packing costs and added the packing costs incurred on sales to the United States.

In accordance with current Departmental policy, we also deducted from foreign market value a business or sales tax which is levied on domestic sales of pipe fittings at a 5.5 percent rate.

We made currency conversions from Thai baht to U.S. dollars in accordance with § 353.56(a)(1) of our regulations.

Negative Determination of Critical Circumstances

The petitioner alleges that "critical circumstances" exist within the meaning of section 735(a)(3) of the Act with respect to imports of malleable cast iron pipe fittings from Thailand. In determining if critical circumstances exist, we must examine whether:

(A)(i) there is a history of dumping in the United States or elsewhere of the class or kind of merchandise which is the subject of investigation of less than fair value; or

(ii) the person by whom, or for whose account, the merchandise was imported knew or should have known that the exporter was selling the merchandise which is the subject of the investigation at less than fair value; and

(B) there have been massive imports of the merchandise which is subject to the investigation over a relatively short period.

To determine whether imports have been massive over a relatively short period, we analyzed recent Department of Commerce IM-146 trade statistics on imports of this merchandise for equal periods immediately preceding and following the filing of the petition, from April 1986 through January 1987. Based on this analysis, we find that imports of the subject merchandise have not been massive over a short period.

Since we do not find that there have been massive imports we do not need to consider whether there is a history of dumping or whether importers of this product knew or should have known that it is being sold at less than fair value.

Therefore, we determine that critical circumstances do not exist with respect to imports of pipe fittings from Thailand.

Verification

As provided in section 776(a) of the Act, we verified all information provided by respondent, using standard verification procedures, including examination of accounting records and original source documents containing relevant information on selected sales.

Petitioner's Comments

Comment 1: Petitioner states that freight, insurance and packing charges were allocated on the basis of value rather than by weight, even though some of these charges were probably incurred on a weight basis. Also, petitioner contends that rather than calculating these charges for each shipment, respondent averaged them over the period of investigation. This methodology, according to petitioner, is improper. These charges must be calculated by shipment and then allocated according to the weight of individual fittings.

DOC response: All U.S. charges were re-submitted on a per shipment/invoice basis and not averaged over the period of investigation. Siam averaged home market charges over the period of investigation because they were incurred on a monthly basis, not on a per invoice basis. Additionally, because home market prices and charges do not vary, and are weight averaged in the Department's foreign market value calculations, Siam's averaging of these

charges is acceptable. All charges per unit were allocated on the basis of value due to the simplicity of the product, the overall correlation between weight and value, and the fact that respondent's records were kept on the basis of value. We deemed this methodology reasonable and have therefore used respondent's verified U.S. and home market information for our final determination.

Comment 2: Petitioner argues that no adjustment should be made to either U.S. price of foreign market value for non-collection of the Thai Business Tax, because Siam could not demonstrate the extent to which the tax was passed through to its customers.

DOC position: The issue of whether the Department must measure the extent to which taxes are "passed through" to home market customers is currently before the Court of International Trade. Because the litigation is still pending, we have followed our standard practice and, for the reasons stated in our *Final Determination of Sales At Less Than Fair Value: Grand and Upright Pianos From Korea* (50 FR 37561 (1985)), we have assumed that the full amount of these taxes was passed through to home market customers.

Comment 3: Petitioner states that respondent's claim for an adjustment to foreign market value to account for advertising expenses is unjust and must be denied.

DOC position: The claimed advertising expenses are for advertisements placed by Siam in the Bangkok phone book and for an advertisement in a university yearbook. The advertisements state that Siam is a manufacturer, wholesaler, and exporter and list Siam's phone numbers. We have determined, therefore, that the advertisements are directed at Siam's immediate customers and not at its customer's customer and do not qualify under Departmental policy, for consideration as a circumstance of sale adjustment.

Comment 4: Petitioner questions whether the adjustment to U.S. price for duty drawback was reported correctly because the response showed an *ad valorem* adjustment based on the price of the exported product. This is in contrast to the methodology used in *Final Determination of Sales At Less Than Fair Value: Circular Welded Carbon Steel Pipes and Tubes from Thailand* (51 FR 3384, January 27, 1986) where the drawback was paid on a per shipment basis and claimed as an amount per ton of the product being exported.

DOC position: Respondent submitted duty drawback information calculated on a per-invoice basis. The payments they received were based on the f.o.b. value of merchandise exported. It was therefore possible for Siam to calculate, based on a shipment's value, the exact amount of drawback received. These amounts were verified and Siam's methodology found to be accurate, therefore, we are using Siam's submitted amounts for duty drawback in our final determination.

Comment 5: Petitioner claims that the Department erred in its preliminary determination by making difference in merchandise adjustments when the home market comparison merchandise was identical to the merchandise being sold in the United States and, in some instances, by making a downward rather than upward adjustment to foreign market value where the home market merchandise was less costly to produce.

DOC position: We agree and have corrected our final calculations.

Comment 6: Petitioner argues that critical circumstances exist with respect to Thai pipe fittings.

DOC position: We disagree. (See "Negative Determination of Critical Circumstances" section of this notice.)

Respondent's Comments

Comment 1: Respondent argues that unfinished pipe fittings should not be included in the scope of this investigation as they are not of the same class or kind of merchandise as finished fittings which are exported by Siam. In the alternative, respondent also argues that the Department should calculate separate margins for the two products.

DOC position: We disagree. We are including both finished and unfinished pipe fittings within the scope of the investigation because both are within the same class or kind of merchandise. Unfinished malleable pipe fittings differ from the finished product only by a single processing stage. Unfinished malleable iron pipe fittings are unthreaded, and have no use in the unfinished state. Thus the ultimate use of unfinished malleable iron pipe fittings is the same as the finished product.

The Department has a responsibility to ensure that its orders are not capable of circumvention. In this regard, because of the similarity of the merchandise and the fact that they are only differentiated by a single processing stage, we have determined that it is proper to include both finished and unfinished malleable iron pipe fittings within the scope of this investigation.

Furthermore, the Department's practice has generally been to calculate a single margin for all products within a single class or kind. In view of the fact that the merchandise in this investigation is within a single class or kind, a single margin has been calculated for both products.

Comment 2: The Department must allow Siam an adjustment to foreign market value for home market advertising expenses, as these expenses are incurred in an effort to reach Siam's customers' customers.

DOC position: (See DOC position to petitioner's Comment 3.)

Comment 3: Respondent claims that the Department should make an adjustment to U.S. price for duty drawback because it was demonstrated that the drawback is calculated on the basis of the value of the exports and the information has been submitted on a per shipment basis.

DOC position: We agree. (See DOC position to petitioner's comment 4.)

Comment 4: Respondent argues that the Department must increase U.S. price by 5.5 percent, the verified amount of the Thai Business Tax which is collected on domestic, but not export sales. The Department may properly conclude that the entire amount of the domestic tax is passed on to their customers. If this is not apparent, respondent contends that any portion of the tax which is not passed through to the customer should be considered a circumstance of sale adjustment, as it is an expense incurred only in the home market, and be deducted from foreign market value.

DOC position: (See the "Foreign Market Value" section of the notice and DOC position to petitioner's Comment 2.)

Comment 5: Respondent argues that averaging home market charges over the period of investigation will not affect Siam's overall margin because home market prices do not vary, thus charges will not vary over the period.

DOC position: We agree. (See DOC position to petitioner's Comment 1.)

Continuation of Suspension of Liquidation

We are directing the U.S. Customs Service to continue to suspend liquidation of all entries of pipe fittings from Thailand that are entered, or withdrawn from warehouse, for consumption, on or after the date of publication of this notice in the Federal Register, in accordance with section 733(d) of the Act. The Customs Service shall require a cash deposit or the

posting of a bond on all such entries equal to the estimated weighted-average amount by which the foreign market value of the merchandise subject to this investigation exceeds the United States price. The suspension of liquidation will remain in effect until further notice. The margins are as follows:

	Weighted-average margin percentage
Manufacturer/Seller/Exporter:	
Siam fittings	1.70
All others	1.70

ITC Notification

In accordance with section 735(d) of the Act, we have notified the ITC of our determination. In addition, we are making available to the ITC all nonprivileged and nonproprietary information relating to this investigation. We will allow the ITC access to all privileged and business proprietary information in our files, provided the ITC confirms in writing that it will not disclose such information either publicly or under an administrative protective order without the written consent of the Deputy Assistant Secretary for Import Administration. The ITC will determine whether these imports materially injure, or threaten material injury to, a U.S. industry within 45 days of the publication of this notice. If the ITC determines that material injury or threat of material injury does not exist, this proceeding will be terminated and all securities posted as a result of the suspension of liquidation will be refunded or cancelled. However, if the ITC determines that such injury does exist, we will issue an antidumping duty order directing Customs officers to assess an antidumping duty on pipe fittings from Thailand entered, or withdrawn from warehouse, for consumption on or after the suspension of liquidation, equal to the amount by which the foreign market value exceeds the United States price.

This determination is being published pursuant to section 735(d) of the Act (19 U.S.C. 1673d(d)).

Paul Freedenberg,

Assistant Secretary for Trade Administration,
June 29, 1987.

[FR Doc. 87-15240 Filed 7-2-87; 8:45 am]

BILLING CODE 3510-02-M

APPENDIX B

THE COMMISSION'S FEDERAL REGISTER NOTICE

[Investigations Nos. 731-TA-347 and 348
(Final)]

**Certain Malleable Cast-Iron Pipe
Fittings From Japan and Thailand**

AGENCY: International Trade
Commission.

ACTION: Institution of final antidumping
investigations and scheduling of a
hearing to be held in connection with
the investigations.

SUMMARY: The Commission hereby gives
notice of the institution of final
antidumping investigations Nos. 731-
TA-347 and 348 (Final) under section
735(b) of the Tariff Act of 1930 (19 U.S.C.
1673d(b)) to determine whether 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 Japan and Thailand of nonalloy, malleable cast-iron pipe fittings,¹ whether or not advanced in condition by operations or processes (such as threading) subsequent to the casting process, provided for in items 610.70 and 610.74 of the Tariff Schedules of the United States, which have been found by the Department of Commerce, in preliminary determinations, to be sold in the United States at less than fair value (LTFV). Unless the investigations are extended, Commerce will make its final LTFV determinations on or before April 21, 1987 and the Commission will make its final injury determinations by June 15, 1987 (see sections 735(a) and 735(b) of the Act (19 U.S.C. 1673d(a) and 1673(b))).

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

EFFECTIVE DATE: February 13, 1987.

FOR FURTHER INFORMATION CONTACT: Martha Mitchell (202-523-0291), Office of Investigations, U.S. International Trade Commission, 701 E Street NW., Washington, DC 20436. Hearing-impaired individuals may obtain information on this matter by contacting the Commission's TDD terminal on 202-724-0002. Information may also be obtained via electronic mail by accessing the Office of Investigation's remote bulletin board system for personal computers at 202-523-0103.

SUPPLEMENTARY INFORMATION:

Background

These investigations are being instituted as a result of affirmative preliminary determinations by the Department of Commerce that imports of certain malleable cast-iron pipe fittings from Japan and Thailand are being sold in the United States at less than fair value within the meaning of section 731 of the act (19 U.S.C. 1673). The investigations were requested in petitions filed on August 29, 1986 by the Cast-Iron Pipe Fittings Committee.² In

response to those petitions the Commission conducted preliminary antidumping investigations and, on the basis of information developed during the course of those investigations, determined that there was a reasonable indication that an industry in the United States was materially injured by reason of imports of the subject merchandise (FR 37498, October 22, 1986).

Participation in the Investigations

Persons wishing to participate in these investigations as parties must file an entry of appearance with the Secretary to the Commission, as provided in § 201.11 of the Commission's rules (19 CFR 201.11), not later than twenty-one (21) days after the publication of this notice in the Federal Register. Any entry of appearance filed after this date will be referred to the Chairman, who will determine whether to accept the late entry for good cause shown by the person desiring to file the entry.

Service List

Pursuant to § 201.11(d) of the Commission's rules (19 CFR 201.11(d)), the secretary will prepare a service list containing the names and addresses of all persons, or their representatives, who are parties to these investigations upon the expiration of the period for filing entries of appearance. In accordance with §§ 201.16(c) and 207.3 of the rules (19 CFR 201.16(c) and 207.3), each document filed by a party to the investigations must be served on all other parties to the investigations (as identified by the service list), and a certificate of service must accompany the document. The Secretary will not accept a document for filing without a certificate of service.

Staff Report

A public version of the prehearing staff report in these investigations will be placed in the public record on April 17, 1987, pursuant to § 207.21 of the Commission's rules (19 CFR 207.21).

Hearing

The Commission will hold a hearing in connection with these investigations beginning at 9:30 a.m. on April 28, 1987, at the U.S. International Trade Commission Building, 701 E Street NW., Washington, DC. Requests to appear at the hearing should be filed in writing with the Secretary to the Commission not later than the close of business (5:15 p.m.) on April 20, 1987. All persons desiring to appear at the hearing and make oral presentations should file prehearing briefs and attend a prehearing conference to be held at 10:00 a.m. on April 21, 1987, in room 117

of the U.S. International Trade Commission Building. The deadline for filing prehearing briefs is April 21, 1987.

Testimony at the public hearing is governed by § 207.23 of the Commission's rules (19 CFR 207.23). This rule requires that testimony be limited to a nonconfidential summary and analysis of material contained in prehearing briefs and to information not available at the time the prehearing brief was submitted. Any written materials submitted at the hearing must be filed in accordance with the procedures described below and any confidential materials must be submitted at least three (3) working days prior to the hearing (see § 201.6(b)(2) of the Commission's rules (19 CFR 201.6(b)(2))).

Written Submissions

All legal arguments, economic analyses, and factual materials relevant to the public hearing should be included in prehearing briefs in accordance with § 207.22 of the Commission's rules (19 CFR 207.22). Posthearing briefs must conform with the provisions of § 207.24 (19 CFR 207.24) and must be submitted not later than the close of business on May 5, 1987. In addition, any person who has not entered an appearance as a party to the investigations may submit a written statement of information pertinent to the subject of the investigation on or before May 5, 1987.

A signed original and fourteen (14) copies of each submission must be filed with the Secretary to the Commission in accordance with § 201.8 of the Commission's rules (19 CFR 201.8). All written submissions except for confidential business data will be available for public inspection during regular business hours (8:45 a.m. to 5:15 p.m.) in the Office of the Secretary to the Commission.

Any business information for which confidential treatment is desired must be submitted separately. The envelope and all pages of such submissions must be clearly labeled "Confidential Business Information." Confidential submissions and requests for confidential treatment must conform with the requirements of section § 201.6 of the Commission's rules (19 CFR § 201.6).

Authority

These investigations are being conducted under authority of the Tariff Act of 1930, title VII. This notice is published pursuant to section 207.20 of the Commission's rules (19 CFR 207.20).

Issued: February 24, 1987.

¹ The malleable cast-iron pipe fittings covered by these investigations are those with standard pressure ratings of 150 pounds per square inch (psi) or heavy-duty pressure ratings of 300 psi. Groove-lock fittings are not included.

² The 5 member producers of this committee are Stanley G. Flagg & Co., Inc., Grinnell Corp. (successor to the fittings business of ITT Corp.), Stockham Valves & Fittings Co., U-Brand Corp., and Ward Manufacturing, Inc. (successor to Ward Foundry Division of Clevepak Corp.)

By order of the Commission.

Kenneth R. Mason,

Secretary.

[FR Doc. 87-4542 Filed 3-3-87; 8:45 am]

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APPENDIX C

CALENDAR OF PUBLIC HEARING

CALENDAR OF PUBLIC HEARING

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

Subject : Certain Malleable Cast-Iron Pipe
Fittings from Japan and Thailand

Inv. Nos. : 731-TA-347 and 348 (Final)

Date and time: April 28, 1987 - 9:30 a.m.

Sessions were held in connection with the investigation in the Hearing Room of the United States International Trade Commission, 701 E Street, N.W., in Washington.

In support of the imposition of antidumping duties:

Rose, Schmidt, Chapman, Duff & Hasley--Counsel
Washington, D.C.
on behalf of

Cast-Iron Pipe Fittings Committee

Robert G. Vick, Vice President - Marketing,
Stockham Valves & Fittings Co.

Bruce F. Eilenberger, President - Ward
Manufacturing, Inc.

Dennis Bunting, Vice President of Manufacturing,
Grinnell Corporation

Ray E. Carey, Vice President of Sales, Grinnell
Corporation

George M. Moser, Vice President, Marketing and
Planning, Stanley G. Flagg & Co., Inc.

Peter Buck Feller)
Lawrence J. Bogard)
Michael K. Tomenga)--OF COUNSEL
John C. Lindsey)

- more -

In opposition to the imposition of antidumping duties:

Graham and James--Counsel
Washington, D.C.
on behalf of

Hitachi Metals America Division of Hitachi
Metals International, Ltd.

Neil Ruebens, Director of Piping Components,
Hitachi Metals America Division of Hitachi
Metals International, Ltd.

Michael A. Hertzberg)
Mary Dennison }--OF COUNSEL
Stuart E. Benson }

Brownstein, Zeidman and Schomer--Counsel
Washington, D.C.
on behalf of

Siam Fittings Co., Ltd.

Richard Hummel, Vice President, Norca Corporation

David R. Amerine)--OF COUNSEL
Ronald M. Wisla)

APPENDIX D

ADDITIONAL INFORMATION CONCERNING THE PRODUCTS

Additional Information Concerning the Products

Counsel for Thai respondents argued that, "...the like product in this case should include both threaded malleable cast-iron pipe fittings and malleable cast-iron groove lock pipe fittings." Prehearing brief of Thai respondents, p. 12. Counsel for Hitachi Metals America stated that "because groove lock fittings compete with threaded fittings, excluding data on domestic production of groove-lock fittings will artificially understate domestic production." Postconference brief of Hitachi Metals America, p. 26. Counsel for Hitachi Metals America stated that "The Commission must include domestic cast-iron fittings (nonmalleable) as a 'like product' in the domestic industry because malleable pipe fitting imports compete directly with them." Posthearing brief of Hitachi Metals America, p. 3.

The products

End users use malleable, nonmalleable, and ductile pipe fittings in piping systems to do three specific things: 1. change, divert, divide, or direct the flow of liquid, gas or steam; 2. provide access for cleaning and branching; 3. reduce or increase the diameter of the systems.

Although malleable and nonmalleable pipe fittings are made from the same type of gray iron, malleable pipe fittings have gone through an annealing process, making them lighter in weight and giving them greater tensile strength.

Ductile pipe fittings can either be annealed or nonannealed. They are different from both malleable and nonmalleable pipe fittings because they are made from molten iron that has been treated with magnesium alloys. This treatment gives ductile pipe fittings relatively higher strength, more corrosion resistance, and better ductility than fittings made from ordinary gray iron. Ductile fittings can be made in the same molds as both malleable and nonmalleable fittings so the size ranges for all three types of fittings are comparable.

All malleable, nonmalleable and ductile fittings are either grooved or threaded. Grooved and threaded fittings differ in several ways. First, grooved fittings contain a rubber gasket that is placed over the pipe joint before the couplings are bolted together around the pipes, whereas threaded fittings are machined in such a way that pipe with threaded ends can be screwed into the fittings. Grooved fittings require no onsite finishing operations other than assembly. For large commercial construction projects, the installation of threaded fittings is labor intensive and requires an onsite threading operation. Finally, because of the presence of the rubber gasket, which is susceptible to heat, and to their ability to join very large pipes, grooved fittings are primarily used in high-volume, low-pressure applications, such as sprinkler systems. Threaded fittings are able to withstand high heat and pressure and are less bulky than grooved fittings; as such, they are primarily used in high-pressure, low-volume applications.

Nonmalleable fittings have little or no ductility and can be broken with the blow of a hammer. These fittings will not stretch when a piping system is assembled and consequently are not likely to leak. They are usually available in inside diameters ranging from 1/4 inch to 6 inches. Common varieties of nonmalleable fittings include bends, branches, traps, drains, and reducers.

Although there are thousands of individual patterns for such fittings, fewer than 50 basic patterns account for the vast majority of nonmalleable fittings manufactured. Nonmalleable fittings are produced to pressure ratings of 125 psi for the standard pressure class, which accounts for approximately 99 percent of sales of nonmalleable fittings, and 250 psi for the heavy-duty pressure class, as established by the American Society for Testing and Materials (ASTM) and the American National Standards Institute (ANSI). Nonmalleable fittings are almost entirely used as pressure pipe fittings for cast-iron pipes, although some are used with steel pipes. The predominant use of nonmalleable fittings is in sprinkler and heating systems for commercial buildings.

Malleable fittings can be machined and subjected to stress with less likelihood of fracture than nonmalleable fittings. The major advantages of malleable fittings are that they are lighter in weight and more ductile than nonmalleable fittings. They are used where shock and vibration resistance is required and where fittings are subject to quick temperature changes. Malleable fittings are available in hundreds of configurations, the most common being 90-degree elbows, tees, couplings, and unions. They are produced in both black (ungalvanized) and galvanized form. Malleable fittings are commonly produced with inside diameters of 1/2 inch to 6 inches; other sizes are available on special order. Malleable fittings have a minimum performance rating of 150 psi for the standard pressure class, which accounts for approximately 93 percent of sales of malleable fittings, and 300 psi for the heavy-duty pressure class, as rated by the ASTM and the ANSI. The principal uses of malleable cast-iron fittings are in gas lines, piping systems of oil refineries, and gas and water systems of buildings.

Ductile iron is used for fittings having sections from 1/8 inch up to 40 inches thick. Ductile fittings are usually used where environmental conditions are likely to be harsh, such as underground water and waste water distribution systems. Ductile fittings are also used by the petroleum and chemical industries because of their corrosion resistance. A standard specification for ductile iron is ASTM A-536.

"The vast majority of [threaded] malleable iron fittings produced in the United States are 2 inches or less in diameter, while the vast majority of malleable groove-lock fittings are 4 inches and over in diameter. The quantity of these two types of fittings sold in common sizes is very small" (Investigations Nos. 731-TA-347 and 348 (P), petitioners' postconference brief, p. 6). In certain circumstances, grooved fittings compete directly with threaded fittings for certain types of sprinkler systems and water treatment applications (Investigations Nos. 731-TA-347 and 348 (P), petitioners' postconference brief, attachment A). Such competition may be characterized as "peripheral," occurring in "very limited circumstances" (Investigations Nos. 731-TA-347 and 348 (P), petitioners' postconference brief, attachment A).

Manufacturing processes

The manufacturing process for cast-iron pipe fittings begins with the making of molten iron, usually in a cupola furnace. The raw materials are scrap steel, pig iron, and other materials such as ferrosilicon, coke, and limestone. The molten iron for malleable fittings contains approximately 2.5 percent carbon, 1.4 percent silicon, and 0.4 percent manganese by weight.

Sand-casting is the predominant method used in the making of pipe fittings. The casting process begins with the making of a pattern, which is the same configuration as the desired pipe fitting. Molding sand is mixed with a binder, spread around the pattern in a mold, and then rammed by a machine to compact the sand. Because the final pipe fitting must be hollow, a special mold (called a "core") is required to produce the cavity in the filling.

To produce the actual pipe fitting, the two mold halves (called the "cope" and the "drag") are put together with the core in the center, and the molten iron is poured into the cavity. After the iron solidifies, the red-hot fitting is shaken out of the sand on a shaker table or belt, allowed to cool, and cleaned. Malleable pipe fittings, unlike nonmalleable pipe fittings, must be annealed.

Annealing consists of rapidly heating the pipe fittings to approximately 1,750° F., followed by a quick cooling and then a slower cooling. The overall cooling process, which takes from 25 to 40 hours, improves the ductility and durability of the metal by reducing its brittleness. Atmospherically controlled annealing in which no oxygen is present, is considered the state-of-the-art method for annealing malleable pipe fittings.

Almost all malleable pipe fittings are advanced (machined) after the casting and annealing stages. Advancement usually involves threading or other similar operations. Advanced methods of finishing include an automated process that combines leak testing, threading, and facing (smoothing the end of the fitting).

At the public hearing, Dennis Bunting, a representative of Grinnell Corp., described some changes in a producer's operations that are necessary in order to switch from producing threaded to grooved fittings. He stated that while the foundry melting, foundry molding, cleaning, etc., are very similar, the core machines and pattern configurations may be different. The major difference is in the finishing processes. "Obviously, the machines one would need to thread products such as screwed malleable pipe fittings are altogether different than the machines one would need to make a grooved lock product, rolled grooves and fittings, coin grooved block and so on." 1/

1/ Transcript of the hearing, pp. 34-35.

Cast-iron pipe fittings are produced in English dimensions for the North American market, and metric dimensions for most other markets. English-sized and metric-sized fittings differ in overall dimensions, wall thicknesses, and threadings. Metric-sized fittings are uncommon in the United States, because metric-sized pipe is rarely used in U.S. construction. Foreign producers that export cast-iron fittings to the United States often produce both metric and English-sized fittings. The patterns, core-boxes, and tooling for the threading machines used in the production process are different for English and metric standards, thus retooling a metric plant to produce English fittings, or vice versa, requires the building or acquisition of additional equipment. The more capital intensive equipment (e.g. furnaces, molding lines, sand systems, and threading machines) does not change. Since metric fittings use less hot metal than English fittings, a conversion requires a rescheduling of the furnace to account for the fittings' particular iron requirements. The costs of patterns, core boxes, threading taps, and furnace reschedulings preclude frequent conversions of production facilities between English and metric fittings. However, these costs are small enough to make a conversion attractive if the alternatives were an extended plant shutdown and/or a long term shift in the relative profitability of english and metric fittings.

U.S. producers of malleable threaded pipe fittings

* * * * *

Table D-1

Nonmalleable threaded and malleable grooved cast-iron pipe fittings:
 Petitioners' reported U.S. production, domestic shipments, export shipments,
 total shipments, and end-of-period inventories, 1984-86 1/

Item	1984	1985	1986
Nonmalleable threaded cast-iron pipe fittings: <u>2/</u>			
Production.....tons..	31,917	37,118	34,875
Domestic shipments.....do....	***	***	***
Export shipments.....do....	***	***	***
Total shipments.....do....	35,295	37,189	36,235
End-of-period inventories...do....	10,073	10,002	8,642
Ratio of inventories to total shipments.....percent..	28.5	26.9	23.8
Malleable grooved cast-iron pipe fittings: <u>3/</u>			
Production.....tons..	***	***	***
Domestic shipments.....do....	***	***	***
Export shipments.....do....	***	***	***
Total shipments.....do....	***	***	***
End-of-period inventories...do....	***	***	***
Ratio of inventories to total shipments.....percent..	***	***	***

1/ Data are for petitioners in these investigations only and do not include other U.S. producers of these products; therefore totals are not for the U.S. industries.

2/ Petitioners reporting data are Stanley G. Flagg & Co., Inc.; Grinnell Corp.; Stockham Valves & Fittings Co.; U-Brand Corp.; and Ward Manufacturing, Inc.

3/ Petitioners reporting data are * * * and * * *.

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

Table D-2

Nonmalleable threaded and malleable grooved cast-iron pipe fittings:
 Petitioners' shares of reported production, 1986

Firm	(In percent)	
	Nonmalleable threaded	Malleable grooved
Grinnell Corp.....	***	***
Stockham Valves & Fittings Co.....	***	***
Ward Manufacturing, Inc.....	***	***
Stanley G. Flagg & Co., Inc.....	***	***
U-Brand Corp.....	***	***
Total.....	100.0	100.0

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

APPENDIX E

ALTERNATIVE CALCULATION OF APPARENT U.S. CONSUMPTION
AND MARKET PENETRATION OF IMPORTS

Table E-1

Malleable cast-iron pipe fittings: U.S. imports and U.S.-produced domestic shipments, 1/ by quantity and value, 1984-86

Item	1984	1985	1986
<hr/>			
Imports from--	Quantity		
Thailand.....tons..	***	***	***
Japan.....do....	***	***	***
Subtotal.....do....	***	***	***
All other countries.....do....	9,472	11,602	5,881
Total, all imports.....do....	***	***	***
U.S.-produced domestic shipments.....do....	48,100	44,971	42,383
Total.....do....	***	***	***
Ratio to consumption of--			
Imports from:			
Thailand.....percent..	***	***	***
Japan.....do....	***	***	***
Subtotal.....do....	***	***	***
All other countries.....do....	***	***	***
Total, all imports.....do....	***	***	***
U.S.-produced domestic shipments.....do....	***	***	***
Total.....do....	100.0	100.0	100.0
<hr/>			
Imports from--	Value		
Thailand 2/.....1,000 dollars..	***	***	***
Japan 2/.....do....	***	***	***
Subtotal 2/.....do....	***	***	***
All other countries 3/.....do....	11,589	14,675	7,194
Total, all imports.....do....	***	***	***
U.S.-produced domestic shipments 4/.....do....	119,779	101,520	93,553
Total.....do....	***	***	***
Ratio to consumption of--			
Imports from:			
Thailand.....percent..	***	***	***
Japan.....do....	***	***	***
Subtotal.....do....	***	***	***
All other countries.....do....	***	***	***
Total, all imports.....do....	***	***	***
U.S.-produced domestic shipments.....do....	***	***	***
Total.....do....	100.0	100.0	100.0

See footnotes on next page

Footnotes for Table E-1

1/ Imports for Japan and Thailand are data submitted in response to questionnaires of the U.S. International Trade Commission. Imports from all other countries are official import statistics under TSUS item 610.74, and are adjusted to eliminate known misclassifications for India, Korea, and Taiwan. These adjusted import statistics are shown below:

	1984	1985	1986
Imports from India.....tons..	241	191	211
Imports from Korea.....do....	3,208	5,023	1,260
Imports from Taiwan.....do....	3,743	5,196	1,795

2/ Import values are data submitted in response to questionnaires of the U.S. International Trade Commission.

3/ Import values from all other countries are C.I.F. duty-paid under TSUS item 610.74 and are adjusted to eliminate known misclassifications for India, Korea, and Taiwan. These adjusted import statistics are shown below (in thousands of dollars):

	1984	1985	1986
Imports from India.....	127	115	121
Imports from Korea.....	3,205	4,980	1,399
Imports from Taiwan.....	5,157	7,450	2,614

4/ Data are understated to the extent that values for domestic shipments * * *.

Note.--Because of rounding, figures may not add to the totals shown.

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

Errata Sheet

This errata sheet contains material inadvertently omitted from USITC Publication 2005, U.S. Global Competitiveness: Building-Block Petrochemicals and Competitive Implications for Automobiles, Construction, and Other Major Consuming Industries, a report to the Committee on Finance, U.S. Senate, Investigation No. 332-230, Under Section 332(g) of the Tariff Act of 1930.

The attached material contains appendixes A through E. Appendix A contains the request letter from the Senate Committee on Finance. Appendix B contains the notice of institution of investigation No. 332-230 in the Federal Register. Appendix C contains a review of the survey design and methodology. Appendix D contains a review of the literature on competitiveness and methodological concerns. Appendix E is a glossary of terms.

This material should be inserted after page 7-65 of the subject report.

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Appendix A

Request Letter From the Senate Committee on Finance

BOB PACKWOOD, OREGON CHAIRMAN

W. D. L. LAMAS
LEAH V. ROSE, JR., DELAWARE
H. C. GARNETT, MISSOURI
H. M. CLARKE, RHODE ISLAND
H. H. IRWIN, PENNSYLVANIA
H. C. WILSON, WYOMING
W. D. LAMAS, MINNESOTA
LEAH V. ROSE, COLORADO
H. C. GARNETT, IDAHO
W. D. LAMAS, IOWA

RUSSELL B. LONG, LOUISIANA
LLOYD BENNETT, TEXAS
SPARK M. MATSUNAGA, HAWAII
DANIEL PATRICK MOYNIHAN, NEW YORK
MAX BAUCUS, MONTANA
DAVID L. BOREN, OKLAHOMA
BILL BRADLEY, NEW JERSEY
GEORGE A. MITCHELL, MAINE
DAVID PRYOR, ARKANSAS

United States Senate

COMMITTEE ON FINANCE
WASHINGTON, DC 20510

WILLIAM ENFENOWIER, CHIEF OF STAFF
WILLIAM J. WELLS, MINORITY CHIEF COUNSEL

February 12, 1986

The Honorable Paula Stern
Chairwoman
U.S. International Trade Commission
701 E Street, N.W.
Washington, D.C. 20436

Dear Madam Chairwoman:

The Committee on Finance requests that the United States International Trade Commission conduct a series of investigations under section 332 of the Tariff Act of 1930, on the international competitiveness of selected major United States industries.

The 99th Congress faces important decisions regarding a wide range of trade issues, including Administration efforts to launch a new round of multilateral trade negotiations aimed at reducing international barriers to trade in goods, services, and investment flows. To guide Congress in decisions about the future of the international trading system, the Committee needs to understand the competitive strengths and viability of key U.S. industries, the extent and nature of competition facing these industries in foreign and domestic markets, and the extent to which any current trade problems result from special situations such as the strong dollar, debt and interest rate problems, or from more fundamental competitive problems.

Several witnesses appearing before this Committee have stressed that U.S. competitiveness and industrial viability must be gauged in terms of performance in international as well as domestic markets. It is important for these studies to examine the viability of these industries and U.S. trade negotiation objectives from the vantage point of the global nature of competition and the internationalization of production and ownership.

For each of these industry studies the Committee requests coverage of:

The Honorable Paula Stern
Page 2
February 12, 1986

1. Measures of the current competitiveness of the U.S. industry in domestic and foreign markets;
2. Comparative strengths of U.S. and major foreign competitors in these markets;
3. Nature of the main competitive problems facing the U.S. industry;
4. Sources of main competitive problems; to what extent from:
 - a. special transitory or reversible situations such as exchange and interest rate problems, as opposed to
 - b. fundamental or structural problems;
5. Competitive strategies; how important are foreign and U.S. markets to future competitiveness, in terms of economies of scale, growth rates, and pre-empting of market advantages.

The Committee decided not to identify specific industries or numbers of studies, but envisages up to seven studies. The Committee has instructed its staff to work out with ITC staff the specific industry selection and production schedule, depending on availability of appropriate staff to conduct them within the requested time. However, it requests that all studies be completed within 18 months and submitted to the Committee individually as completed.

The industries to be studied should be pivotal to overall U.S. industrial and technological strength, by virtue of being (a) either pathbreaking in the development of leading edge technologies that will shape future competitiveness of other U.S. industries, or (b) supplying critical equipment or materiel used in other important industries. The selection should be diverse enough that the range of their impact should reach broadly across the entire spectrum of U.S. industrial strength, represented by the seven tariff schedules. Examples would be key industrial agricultural commodities, selected synthetic organic chemicals, and textile fabrics, along with the equipment producing industries associated with each.

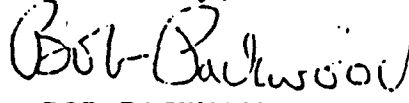
The Honorable Paula Stern

Page 3

February 12, 1986

The Committee recognizes that much of the information and data desired may not be available from secondary sources and that primary data gathering may prove essential to understanding global industry competition. It requests that in meeting the objectives of these studies the Commission develop new sources of information outside the United States through both interviews and questionnaires where possible, to assure effective assessment of the strengths and weaknesses of foreign competitors, and of the terms of competition in key foreign markets.

Sincerely,

A handwritten signature in cursive script that reads "Bob Packwood". The signature is written in dark ink and is positioned above the printed name.

BOB PACKWOOD

BOB PACKWOOD, UREGUN CHAIRMAN

BOB OULE, KANSAS
WILLIAM V. RUTH, JR., DELAWARE
JOHN C. DANFORTH, MISSOURI
JOHN H. CHAFFE, RHODE ISLAND
JOHN HENZ, PENNSYLVANIA
MALCOLM WALLOP, WYOMING
DAVID DURENBERGER, MINNESOTA
WILLIAM L. ANNETRONG, COLORADO
STEVEN D. SYMMES, IDAHO
CHARLES E. GRASSLEY, IOWA

RUSSELL B. LONG, LOUISIANA
LLOYD BENISEN, TEXAS
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DANIEL PATRICK MOYNIHAN, NEW YORK
MAX BAUCUS, MONTANA
DAVID L. BOWEN, OKLAHOMA
BRI. BRADLEY, NEW JERSEY
GEORGE J. MITCHELL, MAINE
DAVID PRYOR, ARKANSAS

United States Senate

COMMITTEE ON FINANCE
WASHINGTON, DC 20510

April 2, 1986

WILLIAM DIEFENDERFER, CHIEF OF STAFF
WILLIAM J. WILKINS, MINORITY CHIEF COUNSEL

Dr. Paula Stern
Chairwoman
United States International
Trade Commission
701 E Street, N.W.
Washington, D.C. 20436

Dear Chairwoman Stern:

Pursuant to my February 12th letter to you requesting a series of investigations on U.S. international trade competitiveness under section 332 of the Tariff Act of 1930, this is to confirm that the following specific sector studies are requested within that general heading:

Auto parts and equipment
Optical fibers and associated technology and equipment
Steel sheet and strip and associated equipment
Textile mills and associated equipment
Building-block petrochemicals: Competitive implications for construction, cars, and other major consuming industries

The Committee still has under consideration additional requests within the overall survey, and will relay those to you shortly.

The Committee understands that the International Trade Commission cannot begin and complete all the studies simultaneously, but requests that it begin them as soon as staff resources are available so the Committee will have results available as soon as possible for its consideration of the future of the trade agreements program.

Sincerely,



BOB PACKWOOD
Chairman

B-1

Appendix B

Notice of Institution of Investigation No. 332-230 in the Federal Register

concerning the building-block petrochemical industry on such end-user industries as the automotive and construction industries.

Public Hearing

The Commission will hold a public hearing on this investigation as well as the four others in this series (Inv. Nos. 332-229 through 332-233) at the United States International Trade Commission Building, 701 E Street NW Washington, DC, beginning at 10:00 a.m. on February 24, 1987.

All persons shall have the right to appear in person or by counsel, to present information and to be heard. Persons wishing to appear at the public hearing should file requests to appear and should file prehearing briefs (original and 14 copies) with the Secretary, U.S. International Trade Commission, 701 E Street NW., Washington, DC 20436, not later than noon, February 2, 1987. If the Commission decides to hold one or more hearings outside of Washington, DC, it will issue a supplemental notice of hearing by January 6, 1987.

Written Submission

Interested persons are invited to submit written statements concerning the investigation. Written statements should be received by the close of business on November 21, 1986. Commercial or financial information which a submitter desires the Commission to treat as confidential must be submitted on separate sheets of paper, each clearly marked "Confidential Business Information" at the top. All submissions requesting confidential treatment must conform with the requirements of § 201.6 of the Commission's *Rules of Practice and Procedure* (19 CFR 201.6). All written submissions, except for confidential business information, will be made available for inspection by interested persons. All submissions should be addressed to the Secretary, United States International Trade Commission, 701 E Street NW., Washington, DC 20436. Hearing-impaired individuals are advised that information on this matter can be obtained by contacting our TDD terminal on (202) 724-0002.

Issued: July 22, 1986.

By order of the Commission.

Kenneth R. Mason,
Secretary.

[FR Doc. 86-17102 Filed 7-29-86; 8:45 am]

BILLING CODE 7030-02-M

[332-233]

U.S. Global Competitiveness: Optical Fibers, Technology and Equipment

AGENCY: United States International Trade Commission.

ACTION: Institution of investigation.

EFFECTIVE DATE: July 9, 1986.

FOR FURTHER INFORMATION CONTACT: Mr. Christopher Johnson or Ms. Linda Linkins, General Manufactures Division, Office of Industries, U.S. International Trade Commission, Washington, DC 20436 (telephone 202-724-1730 or 202-724-1745, respectively).

Background and Scope of Investigation

The Commission on July 9, 1986, approved the institution of investigation No. 332-233, following receipt of letters on February 13, 1986 and April 2, 1986, from the Chairman of the Committee on Finance, United States Senate, requesting that the Commission conduct a series of investigations under section 332(b) of the Tariff Act of 1930 (19 U.S.C. 1332(b)) concerning the international competitiveness of a broad range of selected major United States industries. Institution of this study is scheduled for September 10, 1986.

The Commission investigation will examine the U.S. optical fiber industry, and its major foreign competitors, to determine the impact of global competition on the industry, and to assess how the industry is responding to these dynamic forces. As requested by the Committee, the Commission's report will analyze and address: (1) Measures of the current competitiveness of the U.S. industry in domestic and foreign markets; (2) comparative strengths of U.S. and major foreign competitors in these markets; (3) the nature of major competitive problems facing the U.S. industry; (4) the sources of these problems, including the extent to which they arise from special transitory or reversible situations or are the result of more fundamental or structural problems; and (5) the importance of U.S. and foreign markets to the future competitiveness of U.S. and foreign producers, in terms of economies of scale, growth rates, and pre-empting of market advantages.

Public Hearing

The Commission will hold a public hearing on this investigation as well as the four others in this series (Inv. Nos. 332-229 through 332-233) at the United States International Trade Commission Building, 701 E Street NW., Washington, DC, beginning at 10:00 a.m. on February 24, 1987. All persons shall have the right

to appear in person or be represented by counsel, to present information and to be heard. Persons wishing to appear at the public hearing should file requests to appear and should file prehearing briefs (original and 14 copies) with the Secretary, U.S. International Trade Commission, 701 E Street NW., Washington, DC 20436, not later than noon, February 2, 1987. If the Commission decides to hold one or more hearings outside of Washington DC, it will issue a supplemental notice of hearing by January 16, 1987.

Written Submissions

Interested persons are invited to submit written statements concerning the investigation. Written statements should be received by the close of business on March 12, 1987. Commercial or financial information which a submitter desires the Commission to treat as confidential must be submitted on separate sheets of paper, each clearly marked "Confidential Business Information" at the top. All submissions requesting confidential treatment must conform with the requirements of § 201.6 of the Commission's *Rules of Practice and Procedure* (19 CFR 201.6). All written submissions, except for confidential business information, will be made available for inspection by interested persons. All submissions should be addressed to the Secretary, United States International Trade Commission, 701 E Street NW., Washington, DC 20436. Hearing-impaired individuals are advised that information on this matter can be obtained by contacting our TDD terminal on (202) 724-0002.

Issued: July 22, 1986.

By order of the Commission

Kenneth R. Mason,
Secretary.

[FR Doc. 86-17103 Filed 7-29-86; 8:45 am]

BILLING CODE 7030-02-M

[332-231]

U.S. Global Competitiveness: Steel Sheet and Strip Industry

AGENCY: United States International Trade Commission.

ACTION: Institution of investigation.

EFFECTIVE DATE: July 9, 1986.

FOR FURTHER INFORMATION CONTACT: Ms. Nancy Flecher, Minerals and Metals Division, Office of Industries, U.S. International Trade Commission, Washington, D.C. 20436 (telephone 202-523-0341).

transmitted its report to the President on July 17, 1986. The information in the report was obtained from responses to Commission questionnaires, fieldwork and interviews by members of the Commission's staff, other agencies, information presented at the public hearing, briefs submitted by interested parties, the Commission's files, and other sources.

The view of the Commission are contained in USITC Publication 1866 (July 1986), entitled "Steel Fork Arms: Report to the President on Investigation No. TA-201-60 Under Section 201 of the Trade Act of 1974."

Issued: July 23, 1986.

By order of the Commission.

Kenneth R. Mason,
Secretary.

[I'R Doc. 86-17100 Filed 7-29-86; 8:45 am]
BILLING CODE 7020-02-01

(332-232)

U.S. Global Competitiveness; the U.S. Automotive Parts Industry

AGENCY: United States International Trade Commission.

ACTION: Institution of investigation.

EFFECTIVE DATE: July 9, 1986.

FOR FURTHER INFORMATION CONTACT: Mr. Dennis Rapkins, Machinery and Equipment Division, Office of Industries, U.S. International Trade Commission, Washington, DC 20436 (telephone 202-523-0299).

Background and Scope of Investigation

The Commission, on July 9, 1986, approved the institution of investigation No. 332-232, following receipt of letters on February 13, 1986, and April 2, 1986, from the Chairman of the Committee on Finance, United States Senate, requesting that the Commission conduct a series of investigations under section 332(b) of the Tariff Act of 1930 (19 U.S.C. 1332(b)) concerning the international competitiveness of a broad range of selected major United States industries. Institution of this study is scheduled for September 1, 1986.

The Commission investigation will examine the U.S. automotive parts industry and its major foreign competitors to determine the impact of global competition on the industry, and to assess how the industry is responding to these dynamic forces. As requested by the Committee, the Commission's report will analyze and address: (1) Measures of the current competitiveness of the U.S. industry in domestic and foreign markets; (2) comparative strengths of U.S. and major foreign

competitors in these markets; (3) the nature of major competitive problems facing the U.S. industry; (4) the sources of these problems, including the extent to which they arise from special transitory or reversible situations or are the result of more fundamental or structural problems; and (5) the importance of U.S. and foreign markets to the future competitiveness of U.S. and foreign producers, in terms of economies of scale, growth rates, and pre-empting of market advantages.

Public Hearing

The Commission will hold a public hearing on this investigation as well as the four others in this series requested by the Committee (investigation Nos. 332-229 through 332-233), at the U.S. International Trade Commission Building, 701 E Street, NW., Washington, DC, beginning at 10:00 a.m. on February 24, 1987. All persons shall have the right to appear in person or be represented by counsel, to present information and to be heard. Persons wishing to appear at the public hearing should file requests to appear and file prehearing briefs (original and 14 copies) with the Secretary, U.S. International Trade Commission, 701 E Street, NW., Washington, DC 20436, not later than noon, February 2, 1987. If the Commission decides to hold one or more hearings outside of Washington DC, it will issue a supplemental notice of hearing by January 16, 1987.

Written Submissions

Interested persons are invited to submit written statements concerning the investigation. Written statements should be received by the close of business on March 12, 1987. Commercial or financial information which a submitter desires the Commission to treat as confidential must be submitted on separate sheets of paper, each clearly marked "Confidential Business Information" at the top. All submissions requesting confidential treatment must conform with the requirements of § 201.6 of the Commission's *Rules of Practice and Procedure* (19 CFR 201.6). All written submissions, except for confidential business information, will be made available for inspection by interested persons. All submissions should be addressed to the Secretary, United States International Trade Commission, 701 E Street, NW., Washington, DC 20436. Hearing-impaired individuals are advised that information on this matter can be obtained by contacting our TDD terminal on (202) 724-0002.

Issued: July 22, 1986.

By order of the Commission.

Kenneth R. Mason,

Secretary.

[FR Doc. 86-17101 Filed 7-29-86; 8:45 am]

BILLING CODE 7020-02-01

(332-230)

U.S. Global Competitiveness: Building-Block Petrochemicals and Competitive Implications for Construction, Automobiles, and Other Major Consuming Industries

AGENCY: United States International Trade Commission.

ACTION: Institution of investigation.

EFFECTIVE DATE: July 9, 1986.

FOR FURTHER INFORMATION CONTACT: Eric Land or James P. Raftery, Energy and Chemicals Division, U.S. International Trade Commission, Washington, DC 20436, telephone (202) 523-0491 and 523-0453, respectively.

Background and Scope of Investigation

The Commission, on July 9, 1986, approved the institution of investigation No. 332-230, following receipt of letters on February 13, 1986 and April 2, 1986 from the Chairman of the Committee on Finance, United States Senate, requesting that the Commission conduct a series of investigations under section 332(b) of the Tariff Act of 1930 (19 U.S.C. 1332(b)) concerning the international competitiveness of a broad range of selected major United States industries.

The Commission investigation will examine the U.S. building-block petrochemical industry and its major foreign competitors to determine the impact of global competition on the industry and to assess how the industry is responding to these dynamic forces. As requested by the Committee, the Commission's report will analyze and address: (1) Measures of the current competitiveness of the U.S. industry in domestic and foreign markets; (2) comparative strengths of U.S. and major foreign competitors in these markets; (3) the nature of major competitive problems facing the U.S. industry; (4) the sources of these problems, including the extent to which they arise from special transitory or reversible situations or are the result of more fundamental or structural problems; and (5) the importance of U.S. and foreign markets to the future competitiveness of U.S. and foreign producers, in terms of economies of scale, growth rates, and pre-empting of market advantages. In addition, the Commission will examine the competitive implications of its findings

Appendix C

Survey Design and Methodology

Because of the limited and incomplete nature of available data on the U.S. building-block petrochemical industry, the Commission found it necessary to use questionnaires as a primary data-gathering technique in order to obtain the type of information requested by the Senate Finance Committee. Questionnaires were developed to generate statistical data on product mix and the materials produced. These questionnaires were sent to representative U.S. producers/importers of building-block petrochemicals, suppliers of materials with significant petrochemical content, and end users of materials with significant petrochemical content. Information was received, verified, and processed so that determining the identification of an individual firm would not be possible in the public report. A complete explanation of the survey design and methodology follows.

The following tabulation shows the estimated total firms (based on the most currently available data), the number of firms surveyed, and the expected response rate:

	<u>Producers/importers</u>	<u>Suppliers</u>	<u>End users</u>
Estimated total firms.....	50	<u>1/</u> 50	<u>2/</u>
Number to be surveyed.....	50	50	50
Expected response rate.....	90	60	60
Actual response rate.....	84	50	<u>3/</u> 54

1/ The number of firms that can be considered to be suppliers of materials with significant petrochemical content depends on the way these firms are defined. For the purposes of this questionnaire, the Supplier sectors being considered include those which supply materials to the Automotive, Packaging, and Construction industries. As such, an estimate of the total number of firms that may be considered to be Suppliers ranges from at least 10,000 to possibly 100,000. However, the survey is designed to reach 3 specific discrete subsectors of the industry.

2/ There are 7 firms in the Automotive subsector. However, estimates of the number of firms in the construction industry range from 10,000 upwards. An estimate of the number of firms in the packaging industry range from 1,000 to more than 20,000.

3/ The response rate for the construction industry was only 15 percent because of the unavailability of the requested information, as discussed in that section.

The universe of producers was derived from the mailing list for the Commission's Annual Synthetic Organic Chemicals Report. Each domestic producer reporting production or sales of the building-block petrochemicals received the Commission Questionnaire. The universe of firms in the specific subsectors to be surveyed was derived from available lists of producers and from membership lists of the Society of Plastics Industries. The universe for the construction and packaging sectors surveyed via the End-user Questionnaire were determined by compiling lists from Wards Directory of 51,000 Largest Corporations. Construction end users were selected primarily from a listing of the largest public and privately held contractors classified in 4-digit Standard Industrial Classification (SIC) Code 1521, Single Family Housing Contractors, found in Wards Directory of 51,000 Largest Corporations. The Commission staff developed a list of the largest packaging end users, as per advice from the Paperboard Packaging Council, from listings of the largest producers of certain consumer products in the following 3-digit SIC codes (according to Wards Directory of 51,000 Largest Corporations): SIC 284, Soaps Detergents & Cleaning Products; SIC 208, Beverages; and SIC 209, Miscellaneous Food Preparations & Kindred Products. The automobile sector was determined by examining published data. The Producer/Importer Questionnaire, the Supplier Questionnaire, and the End-User Automobile Questionnaire were sent to the universe of firms as compiled by the Commission staff. In order to minimize respondent burden, the End-user Questionnaires for the Construction and Packaging industries were only sent to the largest construction and packaging end users in clearly defined industry subsectors.

Results of the questionnaire for the supply sectors, and the packaging and construction end users will be applicable only for the firms responding, and may not be used to generalize for the entire industry.

The questionnaire responses were reviewed by Commission staff for accuracy. Since some responses were either not usable or inapplicable and because of incomplete information on the actual composition of packaging and construction end-user sectors, our effective sample size was smaller than expected. No adjustments were made to account for the discrepancy between actual and expected response rates because response rates were only substantially different for the construction sector. The following tabulation presents the usable response rate by type of questionnaire:

	<u>Producers/importers</u>	<u>Suppliers</u>	<u>End-users</u>
Applicable questionnaires..	44	30	78
Questionnaires with usable information.	37	18	28
Usable response rate <u>1/</u> percent..	84	<u>2/</u> 60	<u>3/</u> 36

1/ Usable response rate is defined as the number of questionnaires returned with usable information as a percent of total applicable questionnaires.

2/ Response rates for the individual supplier subsectors were as follows:

	<u>Producers of</u>		
	<u>Caps</u>	<u>Bottles</u>	<u>Dual-Ovenable Cookware</u>
Applicable questionnaires..	8	15	7
Questionnaires with usable information.	6	9	3
Usable response rate.....	75	60	43

3/ Response rates for the end-user sectors were as follows:

	<u>Construction</u>	<u>Packaging</u>	<u>Automotive</u>
Applicable questionnaires..	26	45	7
Questionnaires with usable information.	6	20	4
Usable response rate.....	15	44	57

Appendix D

Review of Literature on Competitiveness and
Methodological Concerns

A. Previous Studies of competitiveness

The studies discussed below are believed to be a representative sampling of the extensive recent economic literature on the issue of international competitiveness of U.S. industry. The listing should not, however, be taken to be exhaustive. The focus of the discussion will be on the basic methodologies and measures of competitiveness employed in these studies, rather than on their conclusions for the particular industries under investigation.

1. Annotated bibliography

- a. Joseph L. Bower, When Markets Quake (Boston: Harvard Business School, 1986).

This focuses on company and government strategies over the past 10 years in the world petrochemical industry. No explicit definition of competitiveness is given, but there is some discussion of changes in country trade balances and shares of world exports in petrochemicals. In addition, favorable reference is given to Chem Systems' "survival matrix," which ranked companies on the basis of relative cost, product mix, and geographic location of their facilities. The appropriate market is taken to be global because of low transport costs and homogeneous product. Shifts in currency values are seen as crucial. Emphasis is placed on political factors in determining country responses to international pressures, with a slow response observed to market forces.

- b. William H. Branson and James P. Love, "Dollar Appreciation and Manufacturing Employment and Output," NBER Working Paper No. 1972, 1986.

They estimate the responsiveness of U.S. manufacturing output and employment to changes in the real exchange rate, using quarterly data from 1963 to 1985, at the level of individual industries. Chemicals industries were found to suffer large employment losses when the dollar appreciates (a 10% real appreciation of the dollar was predicted to cause a 1.7% decline in employment in "plastics materials and resins").

- c. Dennis M. Busche, Irving B. Kravis, and Robert E. Lipsey, "Prices, Activity, and Machinery Exports: An Analysis Based on New Price Data," Review of Economics and Statistics, vol. 68 (May 1986), pp. 248-255.

Irving B. Kravis and Robert E. Lipsey, "Prices and Market Shares in the International Machinery Trade," Review of Economics and Statistics, vol. 64 (February 1982), pp. 110-116.

Robert E. Lipsey, "Recent Trends in U.S. Trade and Investment," in Miyawaki (ed.), Problems of Advanced Economies (Heidelberg: Springer-Verlag, 1984), pp. 58-79.

Robert E. Lipsey and Irving B. Kravis, "The Competitiveness and Comparative Advantage of U.S. Multinationals, 1957-83," NBER Working Paper No. 2051, 1986.

This series of papers examines changes in U.S. shares of world exports and investigates the causes. The first two listed make no explicit mention of competitiveness, but focus on determinants of the demand for U.S. exports of machinery and transport equipment. They find that changes in U.S. export prices relative to those of our competitors have a substantial effect on relative export quantities (and so shares of the world export market) but that the full effect may take up to 4 years to be felt--this suggests that it may take several years for the desirable trade balance effects of a currency depreciation to be felt.

The last two papers analyze trends in U.S. export shares, as an indicator of U.S. competitiveness. The comparative advantage of the United States and its multinational firms is measured in terms of the distribution of exports across industries (e.g., industries with larger shares of U.S. exports than of world exports are taken to be industries in which the United States has a comparative advantage vis-a-vis the rest of the world). They do point out two limitations of measuring international competitiveness by export share movements: (1) a decline in the U.S. share of world trade has accompanied declines in the U.S. share of world population and income, suggesting that a constant share "is not a reasonable norm against which to judge changes in the U.S. share of trade;" and (2) this measure of competitiveness ignores distortions in the composition of trade due to government intervention.

The paper by Lipsey and Kravis distinguishes between factors determining the competitiveness of the United States as a production location and those determining the competitiveness of U.S. firms (whatever the geographical distribution of their production). They identify two competing hypotheses for the loss of U.S. competitiveness: (1) macroeconomic factors, such as national price levels and incomes; and (2) factors internal to firms, such as research and development, technology, investment, or management strategies. These latter factors are transferable across countries, within firms, and so will be unlikely to contribute to national competitiveness or comparative advantage. Lipsey and Kravis suggest that a large difference between the trade

performance of the United States and U.S.-based firms would allow one to determine the policy relevance of the two hypotheses. They report that although the U.S. share in world manufacturing exports fell from 22 percent to 14 percent over that period, the share of U.S.-based multinationals was steady at about 18 percent. The conclusion is that American management and technology remained competitive, maintaining export shares in rapidly growing world markets, and that the decline in the U.S. country share of world exports is largely because of relative price changes determined primarily by movements in exchange-rates and inflation.

- d. James M. Jondrow, David E. Chase, and Christopher L. Gamble, "The Price Differential between Domestic and Imported Steel," Journal of Business, vol. 55 (July 1982), pp. 383-399.

They discuss reasons why imports of a seemingly homogeneous product (steel) sell for a lower price than the domestic product without rapidly increasing their share of the market. The explanation supported by evidence is unfavorable service characteristics (e.g., long lead times required and insecurity of supply). This suggests that--in the absence of specifically controlling for all such relevant characteristics--domestic and foreign product are best treated as imperfect substitutes, with the demand for imports depending on the prices of both imports and domestic goods. To the extent changes in relative costs pass through into differences in the prices of imports and domestic goods, import penetration will be affected.

- e. Robert Z. Lawrence, Can America Compete (Washington: Brookings Institution, 1984).

This study, looking only at the period up to 1980, analyzes the sources of structural change in U.S. manufacturing. The author finds changes in domestic consumption to be a more important cause of structural change than changes in international trade, with U.S. comparative advantage declining in products of unskilled labor and standardized capital-intensive products, but increasing in high-tech products. Lawrence mentions the terms "international competitiveness" and "U.S. industrial competitiveness" without explicit definition, but seems to use a country's "success" in international markets as synonymous with international competitiveness and focuses in his analysis on growth in exports compared with import growth, the trade balance, the U.S. share of world trade in manufacturing, productivity growth, investment and R&D spending, and profit rates as indicators of that success.

He compares U.S. industrial performance with that of other developed economies from 1973 to 1980, and generally the U.S. manufacturing sector fares well--in terms of growth in production, employment, R&D, and capital spending. He estimates the effects of exchange rates on U.S. manufacturing and attributes most of the changes in U.S. exports and imports during 1980-83

to the dollar appreciation; however, by measuring real-exchange-rate movements with relative export and import prices (which may be related to relative costs and industrial structure) this doesn't rule out the importance of more industry-specific explanations for changes in U.S. competitiveness.

- f. Richard Baldwin and Paul R. Krugman, "Market Access and International Competition: A Simulation Study of 16K Random Access Memories," NBER Working Paper No. 1936, 1986.

Marvin Lieberman, "Learning-By-Doing and Industrial Competitiveness: Autos and Semiconductors in the U.S. and Japan," NBER Working Paper, 1986.

John Zysman and Laura Tyson (eds.), American Industry in International Competition (Ithaca: Cornell University Press, 1983).

These works take a more dynamic view of industrial (and international) competition than that traditionally taken by economists.

Baldwin and Krugman model international competition in an oligopoly market with "strong learning effects," simulating the U.S.-Japanese rivalry in 16K RAM's from 1978 to 1983. Their results suggest that a protected home market was a crucial advantage to export performance of Japanese firms but that this policy produced more costs than benefits for Japan (through higher prices for consumers). Lieberman discusses the implications of "learning-by-doing" -- "production technology undergoing continual improvement that is largely a function of accumulated experience" -- which he claims to be a common feature of complex manufacturing industries. In these industries, the behavior of prices, profits, and shares of the market will depend on the slope of the learning curve (rate of productivity gains), the time horizon used by firms in decision making, and the rate at which learning diffuses among firms. A role for government in influencing these factors will be important in international competition.

The Zysman and Tyson volume is a series of industry case studies depicting the problems of adjustment and change in response to international competition in seven sectors: consumer electronics, steel, semiconductors, footwear, textiles, apparel, and autos. The editors, in their introductory essay, state that "[the] well-being of firms in these sectors depends on defending home markets against foreign firms and selling in markets abroad." This suggests at least an implicit view of international competitiveness in terms of export-shares and import-penetration. They do define "comparative advantage" as the relative export strength of a particular sector compared with other sectors in the same nation (and acknowledge the need to adjust for market-distorting government policies). On the other hand, "competitive advantage" is defined as the relative export strength of the firms of one country compared with the firms of other countries selling in the same sector in international markets.

Zysman and Tyson argue that in many cases a nation can create its own comparative advantage by the efforts of government and industry to create competitive advantage in the market; they refer specifically to government policies protecting a home market so as to allow either production economies of scale or learning curve economies. The case studies highlight the role of Japanese industrial policy in promoting expansion of growth-linked industries. Typical of competition between advanced countries is apparently that market success depends on the management of complex processes of product development and manufacturing, not simply national differences in factor costs such as wages or raw materials.

- g. J. David Richardson, "Constant-Market-Shares Analysis of Export Growth," Journal of International Economics, vol. 1 (May 1971), pp. 227-239.

This is a critique of the constant-market-shares analysis, both in theory and in practice. This analysis attributes any change in a country's exports in a particular sector not due to growth in the market but to changed "competitiveness." Richardson questions the use of relative prices to measure relative competitiveness (ignoring quality, service, financing differences between the products of competing nations) and suggests that a measure of "a country's true competitiveness ... might be whether the country was increasing its export shares in rapidly growing commodities and markets" (the analysis assumes the commodity and geographic distribution of exports to be unrelated to competitiveness).

- h. John W. Suomela, "The Meaning and Measurement of International Price Competitiveness," Business & Economics Section, Proceedings of the American Statistical Association, 1978.

This paper discusses the ambiguities in the term "competitiveness," as it applied to firms, industries, and countries. It reviews several empirical studies that have attempted to measure "competitiveness" or "price competitiveness"-- these have interpreted the measures employed as predictors of relative export quantities or relative export shares or the balance of trade in an industry sector. These measures include ratios of wholesale price indexes, export unit values, relative unit labor costs, import prices divided by export prices, and relative profits. An import demand model is formulated to specify theoretically correct price indexes, which unfortunately do not correspond to available data.

- i. U.S. Federal Trade Commission, Staff Report on the U.S. Steel Industry and its International Rivals: Trends and Factors Determining International Competitiveness, Bureau of Economics, 1977.

Despite the title, no definition or strict measure of international competitiveness is given. At various places the study suggests the importance of exports, import penetration, and rates of growth in production as indicators of a country's "competitive position" or "importance" in the world steel industry or "relative standing ... among the world's steel producing nations." However, in the summary chapter, the study is described as one attempting to explain the pattern of trade flows of the U.S. steel industry over a 20-year period.

Chapter 3 examines relative trends in steel-producing costs in the United States Japan and the EC, evaluating the impact of relative costs on international trade flows. Implicitly, the authors seem to have a spatial oligopoly model in mind--changes in relative production costs among countries may have a strong influence on trade flows as relative cost reductions by one country allow it to expand into areas formerly controlled by other countries. (This is not to say that relative cost changes do not play a role in spaceless models; there, cost changes imply supply shifts which are likely to lead to changes in export shares even if, in a homogeneous world market, price and marginal cost are unchanged.)

After comparing quantities and average prices for inputs involved in steelmaking in the United States and Japan, covering 70 percent of variable costs in the United States, comparisons of levels and trends in unit costs in the two countries are given. Problems with these comparisons are acknowledged: (1) the assumption that the relative cost of excluded inputs has not changed significantly over time is crucial (and no check of the realism of this assumption is given); and (2) price and quantity data are not exactly comparable for the two countries because of industry definition differences, product-mix differences, and differences in the use of spot vs. contract prices or arms-length versus transfer prices. The primary difference between U.S. and Japanese unit costs was found to be unit labor costs, mainly because of the wage-rate differential; the overall Japanese cost advantage increased from 1956 to 1968, but changed little during the 1968-76 period.

Less sophisticated methods, using product-specific average revenue less an overall-industry return on sales, were used to estimate the U.S./EC cost differential; results showed relative U.S. costs increasing from 1954 to the late 1960's and then decreasing. Some discussion of shipping costs is given but there is no analysis of changes over time.

Partly on the basis of a simple linear regression of Japanese and EC import penetration in the United States on relative costs, the study concludes that the primary explanation for increasing import penetration is relative production cost changes. It should be noted that since exchange-rate effects are incorporated in the measured cost changes there is no allowance for a separate influence for these effects.

j. U.S. Department of Labor, Office of Foreign Economic Research, Report of the President on U.S. Competitiveness, 1980.

This is essentially a study of U.S. export performance, although other indicators of international competitiveness used include the trade balance and the "terms of trade"; the latter is measured by the U.S. export/import price ratio. A long list of determining factors is considered: inflation, rates of investment, productivity growth, skilled labor resources, technological innovation, unit labor costs, tariff and nontariff barriers to U.S. exports, U.S. foreign investment and technology transfer, tax measures, energy factors, labor-management relations, the role of engineering, and other services in the export of capital goods. Of these factors, investment, technology, and productivity were seen as areas where the United States had lagged behind its competitors; in addition, nontariff barriers and exchange-rate movements had major impacts on U.S. exports. As an index of "revealed comparative advantage" the study adjusts the U.S. export-share in a particular product by the U.S. share of total world exports; similarly, for industries without much exporting, a relative import penetration ratio might be useful in judging comparative advantage among U.S. industries.

2. Summary of results

The conclusion to be drawn from these studies is that "international competitiveness" does not have a precise, theoretically derived definition, but rather is a term that different people use to mean somewhat different things. However, the unifying theme is that the interest is always in some measure of "success" in world markets. The most common measures of this success in particular product markets seem to be shares of world exports or production or the level and trends of a country's trade balance in a sector. Determinants of this success are the relative production costs and exchange rate effects predicted by a simple static model of international competition, as well as more dynamic factors such as productivity growth, investment, and management (and perhaps government) strategies. The comparison of these studies should alert one to the importance of choosing appropriate statistics to answer a question: e.g., R.Z. Lawrence finds R&D in manufacturing grew faster in the United States than in other OECD countries, and the Labor Department study finds that the U.S. ratio of R&D to GNP has declined in the United States relative to other developed nations. Both of these results are correct yet they lead a reader towards opposite conclusions on the trend of U.S. investment in technology.

B. Methodological concerns

The preceding section found that discussions of international competitiveness of U.S. industries generally fail to precisely define how competitiveness should be measured. The problem is that there is no unique measure, but rather several dimensions of the issue. The purpose of this

section is to set out an analytical framework relating several measures of competitiveness to determinants of industrial performance in world markets.

1. Definitions of competitiveness

Consider the U.S. industry facing a competing industry in world markets, with the two industries selling somewhat differentiated, though similar, products; for example, suppose the U.S. and Japanese automobile industries competed in markets throughout the world but were viewed by consumers as selling products not perfectly substitutable for each other. Separate but interrelated markets for the products of the two industries exist with prices and quantities sold determined by elements of supply and demand. Given that the U.S. and foreign products are substitutes, anything that serves to lower the price of the U.S. [foreign] product will reduce the demand for the foreign [U.S.] product. In turn, the U.S. price will be determined by marginal cost, the sensitivity of demand to price (price elasticity of demand), and the market structure and strategic behavior of the U.S. industry.

Now, what is meant by competitiveness? At the most basic level, it is simply "success" in world markets, which can be measured by the share of the combined markets for U.S. and foreign-made products held by U.S. producers (or the U.S. share of world exports); this seems to be the most commonly adopted measure of international competitiveness. Clearly, by this measure, any change that increases world sales of U.S. products while reducing (or even increasing less than proportionally) sales of foreign-made products implies an increase in U.S. competitiveness; it should be recognized that competitiveness so defined includes the effects of all governmentally imposed aids and sanctions affecting both the U.S. and foreign industries. Such a measure, if examined over a period of years, will be quite sensitive to the changing stages of economic development occurring in both competitor and consumer nations. It has been argued, for example, that with the post-war re-emergence of Japan and the European Community, followed by the rise of the newly industrializing countries of the Pacific Rim, that one would expect to see the U.S. share of world exports declining (and whether we view this as a decline in competitiveness or not may be a matter of semantics).

An alternative measure of competitiveness is simply the profitability of the domestic industry, although, again, this measure is quite sensitive to government-imposed import barriers and export aids. Finally, net investment in the domestic industry is both an indicator of competitiveness and a predictor of future profitability and market share. These latter two measures are probably more directly affected by the overall state of the domestic economy than is the share of world consumption or world exports (although this will also be affected by macroeconomic factors influencing exchange rates and inflation). While there are exceptions, generally all three of these indicators of competitiveness will move together and will be similarly affected by changes in circumstances of supply or demand.

2. Determinants and indicators

Suppose there is an increase in the cost of producing an additional unit of the domestic product; this could be because of increases in resource costs, inefficiencies in management techniques, use of outdated or inappropriate technologies, increasing interest rates, higher regulation-related costs, or a depreciation of the domestic currency value (raising the cost of imported inputs). This increase in costs will be translated into reduced supply and a higher price for the U.S. product. The higher price will stimulate increased world demand for the foreign-made product. The result will be a reduced U.S. share of the world market (and of world exports), lower profits, and (especially if the lower profits are expected to persist) reduced investment in the U.S. industry. Similar results would ensue from reduced costs to the foreign industry: a lower foreign product price would lead to reduced demand for the U.S. product, a smaller world market share, and reduced profits and investment.

If transportation costs are an important consideration in world trade of a particular product (as where the ratio of value to weight is relatively low), a reduction in costs in the industry of one country will enable it to expand the geographical area in which, including transport costs, it enjoys a cost advantage. We would expect to see this translated into increases in world export shares, profitability, and domestic investment. Similarly, a reduction in transportation costs specific to a particular producing country (as could occur if shipping cost was subsidized by the government) would expand that country's geographical marketing area and increase the three measures of competitiveness discussed above.

It should be emphasized that anything which affects the cost of production to the U.S. industry relative to foreign production will have an influence on competitiveness. The cost factors mentioned above are just examples and should not be taken to be an exhaustive list; different elements of cost will be more important in determining U.S. competitiveness in different products.

Changed conditions of demand, specific to one of the two countries' industries, would also have an impact on international competitiveness. An increase in demand for the product of the U.S. industry could be due to a change in consumer tastes or an improvement in the perceived quality either of the basic product or of service and distributional aspects related to the U.S. product; it could also be due to more rapid income growth in parts of the world targeted by the U.S. producers than in the rest of the world market. Regardless of the cause, an increase in demand for the U.S.-made product would increase sales and the price of that product. Although there may be a resulting increase in demand for the foreign-made product as well this should be of smaller magnitude, leading to the conclusion that the world market share of the domestic industry will rise, as will profits and investment. Improved technology, resulting from increased research and development in the industry,

may have the dual effect of reducing costs and improving quality (and, therefore, demand).

Finally, the nature of competition in the domestic industry may affect the industry's success in world markets. The U.S. industry will be better able to compete with imports and to sell abroad, to the extent that vigorous competition among domestic producers allows for pricing closely aligned to costs, and still allow for profits to be invested in research and development and capital equipment. Such competition may also stimulate improved management techniques, which by lowering costs will further reduce prices and enhance the U.S. industry's competitive position.

3. Summary

The brief discussion above suggests that international competitiveness is an issue that needs to be evaluated from a multidimensional perspective, examining both indicators and determinants of competitiveness. Three indicators of competitiveness are (1) world export shares (or shares of world consumption); (2) profitability of the domestic industry; and (3) trends in net investment in the domestic industry. Determinants of competitiveness are (1) cost factors, both specific to the industry (including resource costs, labor costs, interest rates) and economy-wide (such as capital costs, general input-cost inflation, exchange-rate changes); (2) demand factors, including the quality and reputation of the domestic product, as well as the growth of incomes in primary export markets; and (3) domestic market structure and conduct considerations. To the extent government actions influence any of these factors they will affect the international competitiveness of the industry. Of course, explicit nontariff barriers erected by governments will have more direct impacts on indicators of competitiveness.

Under the cost factors determining competitiveness, one may consider differing U.S./foreign trends in--

- (a) wage rates and labor productivity, or unit labor costs (which effectively combines the two);
- (b) feedstock prices;
- (d) intensity of use of inputs, which may be related to differing technologies, age of capital equipment, or the degree of vertical integration;

(e) transportation and distribution costs --their importance, and the geographical distance to major markets from U.S. and other suppliers. Note that to the extent cost measures are converted to dollar equivalents, the issues of general inflation and exchange rates are controlled for.

Under demand factors, one may consider whether the U.S. and foreign products are homogeneous or differentiated in some way, whether primary

markets of the U.S. industry have grown at different rates than primary markets of foreign competitors, patterns and changes in delivery lags, service, and quality from competing sources.

Market structure can be evaluated by looking at the number of firms in the industry, the share of the top firms, conditions of entry into the global industry, the type of ownership, and the degree of vertical integration and diversification in the industry. Some qualitative assessment on the competitive environment, the extent to which firms compete or cooperate, is useful.

Finally, government aids such as subsidies (including subsidies to related industries), tariffs, quotas, and other nontariff measures should be mentioned, with some attempt at assessing their impact.

E-1

Appendix E
Glossary of Terms

GLOSSARY OF TERMS

Petrochemicals: Those chemical materials that are based on or derived from hydrocarbon raw materials (usually petroleum or natural gas).

Primary petrochemicals: First-stage materials produced directly from a petroleum-based or a natural gas-based feedstock. The following is a list of the primary petrochemicals:

<u>Olefins</u>	<u>Aromatics</u>	<u>Other</u>
Ethylene	Benzene	Methanol
Propylene	Toluene	Ammonia
Butylenes	Xylenes	Carbon black
1,3-Butadiene	Naphthalene	
Acetylene		

Building-block petrochemicals: Those primary petrochemicals from which most, if not all other petrochemicals are produced.

Note: As this study specifically considers the olefins and aromatics, certain primary petrochemicals are excluded from consideration as "building-block petrochemicals." Among those specifically excluded are methanol and ammonia. The following are the primary olefins and primary aromatics considered in this study as "building-block petrochemicals:"

<u>Primary olefins</u>	<u>Primary aromatics</u>
Ethylene	Benzene
Propylene	Toluene
1,3-Butadiene	Mixed xylenes

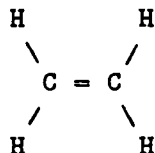
The most important of the "building-block petrochemicals" is ethylene, used in the production of plastics, textile fibers, and solvents such as ethylene glycol (anti-freeze). The following tabulation shows the end-use markets for ethylene in 1975 and 1985:

<u>End-Use Market</u>	<u>1975 Share</u>	<u>1985 Share</u>
	----- (percent) -----	
Packaging	21.3	29.8
Construction	9.5	12.8
Transportation	10.1	7.3
Coatings 1/	15.0	13.3
Surfactants	9.8	10.2
Other 1/ 2/	34.2	26.6
Total	100.0	100.0

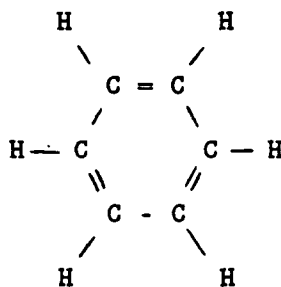
1/ A significant amount of the end-products of these markets are used in the packaging, construction and automotive industries.

2/ Includes the textile end-use market.

Olefins: Those petrochemicals that have a chemical structure including at least one carbon-to-carbon double bond. For example, the following is the chemical structure of ethylene:



Aromatics: Those petrochemicals that have a chemical structure including at least one hexagonal 6-carbon-membered ring with 3 carbon-to-carbon double bonds. The nature of the three conjugated double bonds in the circular configuration that distinguishes the aromatics gives them certain physical characteristics that are very different from the olefins. Among these characteristics are the tendency of aromatics to remain as a liquid at temperatures and pressures at which similar-weight olefins would be a gas. For example, benzene, the simplest aromatic (as shown in below) would be a liquid at 70 C while hexene, a similarly weighted olefin, would be a gas. Other differences involve the way the aromatics and olefins behave under similar reaction conditions.



Petrochemical derivatives: Those petrochemicals that are produced from the primary petrochemicals in a chemical reaction. Since there are physical difficulties associated with the transportation of some of the primary petrochemicals, related to their gaseous state at room temperatures, most of the trade in petrochemicals takes place in the form of the derivatives. The following is a list of derivatives that account for the majority of petrochemical trade:

Acrylonitrile	Polypropylene resins (PP)
Cumene	Polystyrene resins
Dimethylterephthalate (DMT)	Polyvinylchloride resins (PVC)
Ethylene dichloride (EDC)	Propylene glycol (PG)
Ethylene glycol	Propylene oxide (PO)
Ethylene oxide (EO)	Styrene
Phenol	Styrene-butadiene latexes (SB)
Phenolic resins	Synthetic elastomers <u>1/</u>
Polyester resins	Vinyl chloride monomer (VCM)
Polyethylene resins (PE)	

1/ Includes styrene-butadiene rubber (SBR), polybutadiene, nitrile rubber, neoprene, and butyl rubber.

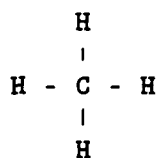
Feedstocks: Those hydrocarbon materials (i.e., natural gas, natural gas liquids, or petroleum liquids) that are used as the raw materials for production of petrochemicals. The following tabulation indicates the specific hydrocarbon raw materials that are used as "feedstocks" for petrochemicals:

<u>Natural gas</u>	<u>Natural gas liquids</u>	<u>Petroleum liquids</u>
Methane	Ethane	Naphtha
	Propane	Reformate
	Butanes	Raffinate
	LPG <u>1/</u>	Gas oil
	Natural gasoline	Crude petroleum

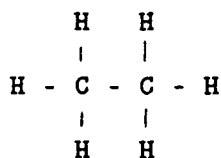
1/ Liquefied petroleum gas (LPG) contains mostly propane, with a lesser amount of butanes.

Refinery processes of interest to petrochemical producers are those that produce streams that have an economical supply of the basic building-blocks. The primary aromatics, for example, may constitute from 45 percent to 65 percent of the reformate stream. The primary olefins, however, are not found directly in the refinery streams. Instead, liquid fractions are "cracked" to yield ethylene and its coproducts (e.g., propylene, butadiene, butylenes, and pyrolysis gasoline, a source of aromatics). Larger volumes of olefins are also obtained in other refinery operations, such as from catalytic cracking and thermal units.

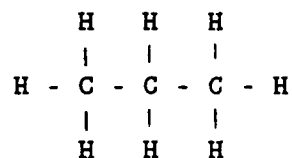
The primary U.S. source for primary aromatics, as well as methanol and ammonia, is natural gas and its components. Most components of natural gas have one to four carbon molecules and have mostly single bonds. Methane, ethane, and propane, the three primary components are shown below:



Methane

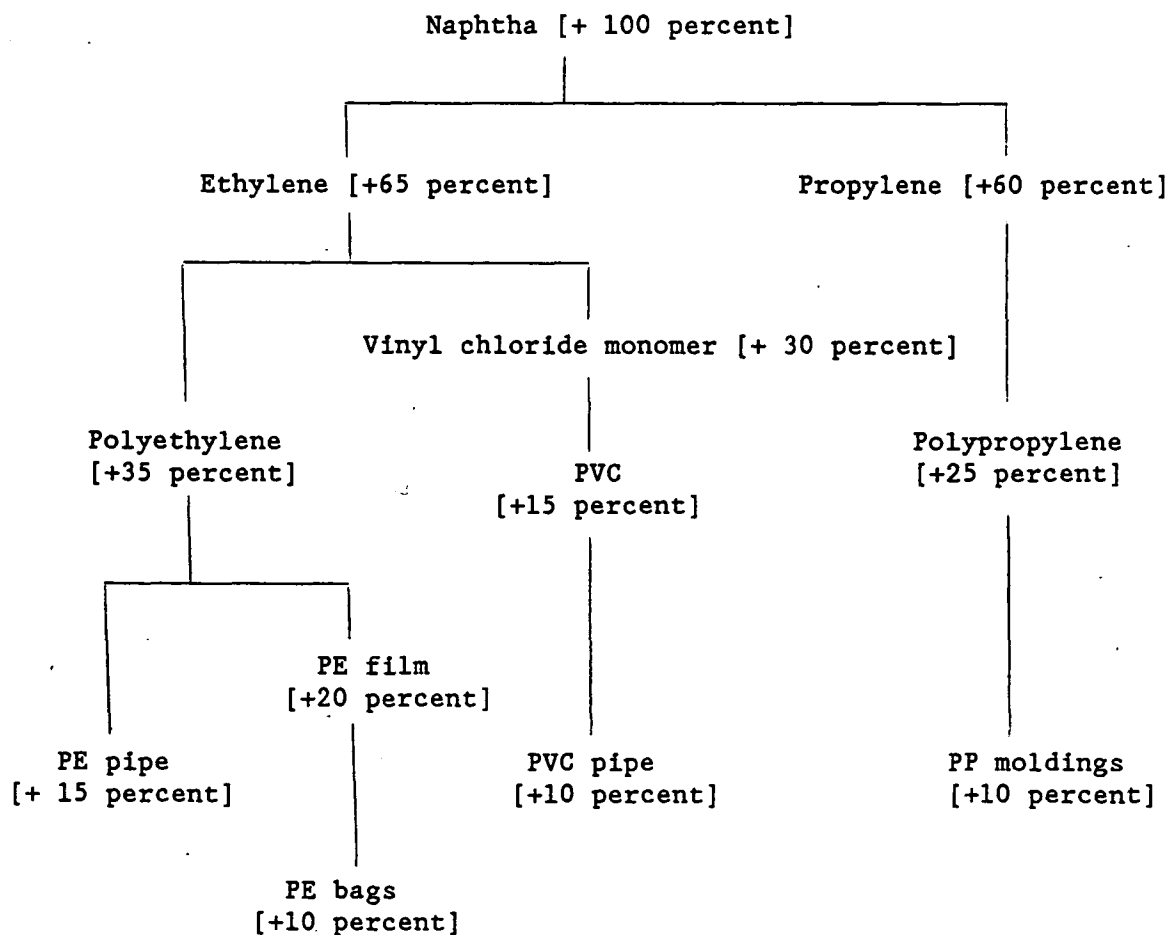


Ethane



Propane

The flowchart below shows how the actual costs of feedstock material may be transferred to the primary petrochemicals and to various downstream product materials. For example, if a price increase in naphtha to a producer of ethylene would be passed down to purchaser of PVC pipe, there would be a \$1 increase in the price of the PVC pipe for every \$10 increase in the naphtha price.



Producers of primary petrochemicals, when possible, can take advantage of the different yields of the various products and coproducts that are obtained from the use of different feedstocks and different reaction conditions (high or low cracking severity). The following tabulation shows typical yields from cracking ethane and propane and from cracking naphtha feedstocks.

<u>Products</u>	<u>Ethane and propane</u>	<u>Naphtha</u>	
		<u>Low severity</u>	<u>High severity</u>
		----- (Percent) -----	
Methane	21	10	15
Ethylene	62	26	31
Propylene	9	16	12
Butadiene	2	5	4
Butenes	1	8	3
BTX	-	10	13
C 's	5	17	9
5			
Fuel oil	-	3	6
Other	-	5	7
Total	100	100	100

Byproduct: Any of a number of products without significant commercial value that are produced in addition to the main product of the petrochemical production process.

Byproduct credit: Revenue generated by the sale of byproduct materials produced in addition to the main product of an operation.

Coproduet: Any of a number of products with significant commercial value that are produced in addition to the main product of the petrochemical production process.

Cryogenic: Science that deals with processes that occur at very low temperatures, such as the liquefaction of ethylene so that it may be transported by ship.

Plastics blends (or composites): Mixtures of different plastics materials in which each of the individual plastics materials remains a separate component.

Plastics alloys: Mixtures of plastics resins that are fully compatible with one another. These mixtures allow for new and different characteristics that are associated with the alloy, and not with any of the individual component materials. An example of this type of material is an ABS-polycarbonate alloy, which is easier to process, has high heat and impact resistance, and is less expensive than polycarbonate itself.

Thermoplastic resins: Plastics capable of being repeatedly softened by increases in temperature and hardened by decreases in temperature. The changes are physical rather than chemical. Examples of thermoplastics are ABS, nylons, polyesters, polyethylenes, and vinyls.

Thermosetting resins: Resins that are cured by chemical reaction when heated, and, once cured, cannot be softened by reheating. These resins are produced by the additional polymerization reactions, usually with polyester resins.

Blow molding: A method of fabrication of thermoplastic materials in which a tube is forced into the shape of the mold cavity by internal air pressure.

Reaction Injection Molding (RIM): A method in which the constituent resins are pumped by a metering device into a mixing head from which the reaction ingredients are rapidly injected into a closed mold.

