UNITED STATES INTERNATIONAL TRADE COMMISSION

ROUND STAINLESS STEEL WIRE

Report to the President
on Investigation No. TA-201-13
Under Section 201 of the Trade Act of 1974

USITC Publication 779
Washington, D. C.
June 1976

UNITED STATES INTERNATIONAL TRADE COMMISSION

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Note.--The whole of the Commission's report to the President may not be made public since it contains certain information that would result in the disclosure of the operations of individual concerns. This published report is the same as the report to the President, except that the above mentioned information has been omitted. Such omissions are indicated by asterisks.

REPORT TO THE PRESIDENT

United States International Trade Commission,
June 14, 1976.

To the President:

In accordance with section 201(d)(1) of the Trade Act of 1974 (88 Stat. 1978), the U.S. International Trade Commission herein reports the results of investigation No. TA-201-13 made under section 201(b)(1) of that act, relating to round stainless steel wire.

The investigation to which this report relates was undertaken to determine whether--

> round wire of stainless steel, provided for in item 609.45 of the Tariff Schedules of the United States,

is 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 an article like or directly competitive with the imported article.

The investigation was instituted on January 8, 1976, following receipt of a petition filed on December 12, 1975, by the Stainless Steel Wire Industry Committee. Notice of the investigation and hearing was duly given by publishing a notice in the Federal Register on January 15, 1976 (41 F.R. 2280). On March 4, 1976, the Commission, upon the request of importers and concurrence of the petitioner, postponed the hearing to March 23, 1976. Notice of the postponement was published in the Federal Register on March 10, 1976 (41 F.R. 10271).

A public hearing in connection with the investigation was conducted from March 23 through March 25, 1976, in the Commission's

hearing room in Washington, D.C. All interested persons were afforded an opportunity to be present, to produce evidence, and to be heard. A transcript of the hearing and copies of briefs submitted by interested parties in connection with the investigation are attached. 1/

The information contained in this report was obtained from fieldwork, from responses to questionnaires sent to domestic manufacturers, importers, and distributors, and from the Commission's files, other Government agencies, and evidence presented at the hearing and in briefs filed by interested parties.

Determination of the Commission

On the basis of its investigation, the Commission determines (Commissioner Moore dissenting 2/ and Commissioner Parker abstaining) that round wire of stainless steel, provided for in item 609.45 of the Tariff Schedules of the United States, is 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 an article like or directly competitive with the imported article.

1/ Attached to the original report sent to the President, and available for inspection at the U.S. International Trade Commission, except for material submitted in confidence.

2/ Commissioner Moore determines in the affirmative--that increased imports of the subject round wire of stainless steel are a substantial cause of the threat of serious injury to the domestic industry.

Views of Chairman Will E. Leonard
and Vice Chairman Daniel Minchew

On December 12, 1975, the United States International Trade Commission (Commission) received a petition filed by the Stainless Steel Wire Industry Committee requesting an investigation under section 201(b)(1) of the Trade Act of 1974 (Trade Act) with respect to imports of round wire of stainless steel. On January 8, 1976, the Commission instituted an investigation to determine whether round wire of stainless steel (hereinafter stainless wire), provided for in item 609.45 of the Tariff Schedules of the United States (TSUS), is 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 an article like or directly competitive with the imported article.

Section 201(b)(1) of the Trade Act requires that each of the following criteria be met if the Commission is to make an affirmative determination in this investigation and thus find a domestic industry eligible for import relief:

> (1) That imports of the article concerned are entering the United States in increased quantities;
>
> (2) That the domestic industry producing any article like or directly competitive with the imported article concerned is being seriously injured or threatened with serious injury; and
>
> (3) That increased imports are a substantial cause of the serious injury, or the threat thereof, to the domestic industry producing an article like or directly competitive with the imported article concerned.

Since these criteria are cumulative, the failure to satisfy any one of them necessitates a negative determination, i.e., that a domestic industry is not eligible for import relief.

Determination

After considering the evidence obtained by the Commission in this investigation, we have determined that round wire of stainless steel provided for in item 609.45 of the TSUS is not being imported into the United States in such increased quantities as to be a substantial cause of serious injury, or the threat of serious injury, to the domestic industry producing a like or directly competitive article. Specifically, we find that the third criterion set out above, the criterion of substantial cause, is not satisfied--i.e., that, even if imports have increased and the domestic industry is being seriously injured or threatened with serious injury, such increased imports are not a substantial cause of such serious injury, or the threat thereof.

Domestic industry

Before discussing why the statutory criteria are not satisfied in the present case, it is first appropriate to determine what constitutes the "domestic industry." The Trade Act does not specifically define the term "domestic industry," although section 201(b)(1) does provide that the domestic industry is that which produces "an article like or directly competitive with the imported article." The Trade Act provides guidelines for the Commission to use in arriving at a finding of what constitutes the domestic industry. It permits the Commission

to use its best judgment in light of those guidelines and the relevant economic factors present in a given case. The Commission determines what constitutes the domestic industry only after it has gathered revelant facts in the course of its investigation. 1/

The statutory guidelines, legislative history, and economic factors in the present investigation support the conclusion that the domestic industry relevant to this investigation consists of the domestic facilities employed in the production of stainless wire. A variety of types of wire are produced in the United States. However, domestic establishments in which stainless wire is produced generally do not produce other types of wire. Further, the production of stainless wire requires technology and equipment different from that required to produce other types of wire. Also, stainless wire serves distinct end uses for which other types of wire are not substitutable because of differences in quality and price.

Substantial cause

As stated above, we found that imports are not " a substantial cause" of serious injury, or the threat thereof, to the domestic industry. Because the Trade Act requires that all three criteria

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1/ For a further discussion of the meaning of the term "domestic industry" as used in sec. 201, see Bolts, Nuts, and Screws of Iron or Steel: Report to the President on Investigation No. TA-201-2. . ., USITC Publication 747, 1975, pp. 4-8 and 27-29; and Shrimp: Report to the President on Investigation No. TA-201-12 . . ., USITC Publication 773, 1976, pp. 19-20.

set forth in section 201 be satisfied for an affirmative determination to be made and since one of these three criteria, the "substantial cause" criterion, is not satisfied, discussion will be limited to why this criterion is not satisfied.

The criterion.--Section 201(b)(4) of the Trade Act defines the term "substantial cause" to mean "a cause which is important and not less than any other cause." Thus, a dual test must be satisfied: a cause must be both "important" and "not less than any other cause." Further, section 201(b)(2) provides that the Commission, in making its determinations, shall take into account all economic factors which it considers relevant, including (but not limited to)--

> (C) with respect to substantial cause, an increase in imports (either actual or relative to domestic production) and a decline in the proportion of the domestic market supplied by domestic producers. 1/

The report of the Senate Committee on Finance on the bill which became the Trade Act explained the term "substantial cause" and described the decision-making procedure with respect to it which the Commission should follow in this way:

1/ A more detailed analysis of the meaning of the term "substantial cause" can be found in Wrapper Tobacco: Report to the President on Investigation No. TA-201-3 . . ., USITC Publication 746, 1975, pp. 4-7.

> The Committee recognizes that "weighing" causes in a dynamic economy is not always possible. It is not intended that a mathematical test be applied by the Commission. The Commissioners will have to assure themselves that imports represent a substantial cause or threat of injury, and not just one of a multitude of equal causes or threats of injury. It is not intended that the escape clause criteria go from one extreme of excessive rigidity to complete laxity. An industry must be seriously injured or threatened by an absolute increase in imports, and the imports must be deemed to be a substantial cause of the injury before an affirmative determination should be made. 1/

Recession more important than imports in 1975 deterioration.--After considering all of the relevant economic factors, we find that increased imports, even if an important cause of any injury or the threat thereof, are a less important cause than at least one other cause. Hence, we find that the "substantial cause" criterion is not satisfied.

Before consideration is given to the evidence available with respect to causation of injury, it should be noted that the data gathered by the Commission essentially show that in only 1 year, 1975, of the last several years could the domestic industry be considered to have suffered some degree of injury. Except in 1975, all economic indicators of the health of this industry essentially point to an absence of any injury. Indeed, from 1971 through 1974 all such indicators--from capacity utilization to profits to employment levels--show that the domestic industry was not only healthy but was becoming increasingly so.

1/ Trade Reform Act of 1974: Report of the Committee on Finance . . ., S. Rept. No. 93-1298 (93d Cong., 2d sess.), 1974, pp. 120-121.

Utilization of the domestic capacity to produce stainless wire rose without interruption during the 1971-74 period. Capacity utilization even exceeded 100 percent in both 1973 and 1974, clearly indicating that serious supply shortages would have resulted in those years if increased imports had not been available. The domestic industry was generally profitable during the 1971-75 period, and several firms even remained highly profitable during the depths of the 1975 recession. Employment by U.S. producers of stainless wire rose in each year during 1971-74, the increase amounting to some 600 jobs.

In 1975, these indicators were all in a significant decline. However, even if one were to consider this downturn to constitute serious injury, a more important cause of such injury than imports has been the recent recession.

The demand for stainless wire is derived from the demand for its end-product uses, such as wire strand and rope, woven and knitted wire products, fasteners, welding electrodes, springs, and a host of other durable goods. It is well known that cyclical fluctuations in the production of durable goods have been more pronounced than in the production of nondurable goods. Because the demand for stainless wire is derived from the demand for its use in durable end products, demand for such wire is also cyclical in nature. The decline in apparent U.S. consumption of stainless wire in 1970-71 and 1975, as well as increases during 1973 and 1974, can be directly attributed to wide fluctuations in the pace of U.S. industrial activity in those years. The high degree of

correlation between changes in consumption of stainless wire and changes in U.S. industrial production of durable manufactures is illustrated graphically in figure 7 of the accompanying report.

As has already been indicated, 1975 is the only recent year during which the domestic industry producing stainless wire appears to have incurred a degree of injury. However, the evidence clearly shows that increased imports, even if an important cause of the problems experienced by the U.S. stainless wire industry in that year, are a cause less than at least one other cause--i.e., the sharp decline in U.S. industrial activity in 1975, which resulted in a corresponding drop in consumption of such wire, whether imported or domestically produced.

The conclusion above is emphasized by comparing conditions in the 2 years 1974 and 1975. Imports reached their highest level in 1974, but, at the same time, the domestic industry enjoyed the highest levels of production, sales, employment, wages, and profits in its history. Not coincidentally, U.S. industrial activity also was at a peak in 1973 and 1974. In contrast, imports in 1975 fell by almost one-third from their level of 1974. To be sure, domestic production declined even more steeply, resulting in an increased ratio of imports to production (largely because of the time lag involved in entering imports), but such "increased" imports must be considered a less important factor in causing the decline and other evidence of injury than the most severe U.S. economic recession in recent history.

Specialty steel case distinguished.--It should be noted that the present determination with respect to stainless wire is readily distinguishable from our determinations in investigation No. TA-201-5, on stainless steel and alloy tool steel, in which we determined, inter alia, that increased imports of stainless steel bar and wire rod were a substantial cause of serious injury to the domestic industry producing stainless steel bar and wire rod. 1/ Stainless wire is, of course, drawn from stainless steel wire rod. However, in the previous investigation, we were considering an industry composed not only of facilities producing stainless steel rods, but also producing stainless steel bars, with bar production forming the bulk of the production of such industry. In the rod and bar case imports had been increasing almost without interruption over the period 1964-75, and imports were increasing to levels in 1975 above record 1974 levels despite a very substantial drop--about 30 percent--in domestic consumption and in the face of an even sharper decline in domestic production. The domestic stainless steel bar and wire rod industry operated at only 50 to 60 percent of capacity during 3 of the 5 years 1970-74 and was operating at 40 percent of capacity in 1975. 2/ Domestic stainless steel bar and rod producers had operated at a loss in 4 of the 5 prior full years, and industry employment in 1975 was the lowest since 1970. 3/

The facts, however, are different in the present case. The domestic stainless wire industry has operated at a high level of capacity in

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1/ See Stainless Steel and Alloy Tool Steel: Report to the President on Investigation No. TA-201-5 . . ., USITC Publication 756, 1976, pp. 14-34 and 35-48.

2/ Id., p. 30.

3/ Id., pp. 30-31.

recent years--with the exception of 1975--84 percent in 1972, 101 percent in 1973, and 107 percent in 1974. Except in 1971, the industry was profitable during the period 1971-75. The ratio of net operating profits to net sales was 12.0 percent in 1974 and 8.2 percent in 1975. Employment in the industry rose during most of the period, increasing irregularly from 2,212 in 1971 to 2,819 in 1974, before falling to 1,619 in 1975. Thus, while there may be cause to argue that the stainless wire industry was seriously injured in 1975, it was clearly healthy in the period 1972-74 and entered the most recent economic downturn in much better shape than the domestic stainless bar and wire rod industry, which had been hurt by the pressure of imports throughout the period. Further, and very important, U.S. imports of stainless wire fell sharply along with domestic consumption and production in 1975. Stainless wire imports did not rise in absolute terms and did not rise substantially as a percentage of consumption, in contrast with stainless bar and wire rod imports.

Substantial cause and threat of serious injury.--It should be observed that our finding with respect to the substantial cause criterion of the statute applies not only to the question of injury, but also to the question of the threat of injury. Further, with respect to the threat of injury, it is noteworthy that there is no evidence to support a conclusion that a dramatic rise in import levels is likely in the near future. Indeed, imports of stainless wire during January-March 1976 were only about half those entered during the corresponding period

of 1975. Since foreign capacity to produce such wire is limited and the economic outlook in most of the foreign producing countries is improving, it is unlikely that there will be greatly increased quantities available for export to the United States in the next several years. Also, it is highly speculative and without factual support to say that the import quotas proclaimed and the orderly marketing agreement announced by the President with respect to imports of stainless steel bar and wire rod will significantly affect stainless wire producers. The quotas and the orderly marketing agreement permit generous quantities of imports and are only temporary in nature. They could be terminated in a year's time. It should not be assumed at this point that these restrictions will shift the product mix of imports away from stainless wire rod to stainless wire.

Conclusion

Upon the basis of the evidence gathered by the Commission in the course of this investigation, we have determined that increased imports of round stainless steel wire are not a substantial cause of serious injury, or the threat thereof, to the domestic industry discussed herein.

Views of Commissioner Catherine Bedell 1/

Following receipt on December 12, 1975, of a petition filed by the Stainless Steel Wire Industry Committee, the United States International Trade Commission, on January 8, 1976, instituted an investigation under Section 201 of the Trade Act of 1974 (Trade Act) to determine whether round wire of stainless steel, provided for in item 609.45 of the Tariff Schedules of the United States, is 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 an article like or directly competitive with the imported article.

Section 201(b)(1) of the Trade Act requires that each of the following conditions be met if the Commission is to make an affirmative determination in this investigation and thus find a domestic industry eligible for import relief:

(1) Imports of the article concerned must be entering in increased quantities;

(2) The domestic industry producing an article like or directly competitive with the imported article must be experiencing serious injury or the threat thereof; and

(3) The increased imports referred to in (1) above must be a substantial cause of the injury, or the threat thereof, referred to in (2) above.

Failure to satisfy any of the statutory criteria necessitates a negative determination.

Determination

After considering the evidence collected by the Commission in this investigation, I have determined that round stainless steel wire provided

1/ Commissioner Italo H. Ablondi concurs in the result.

for in item 609.45 of the TSUS is 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 a like or directly competitive article. Specifically, I have found that even if imports have increased and there are some indicators of serious injury, such imports are not a "substantial cause" of the serious injury or the threat thereof.

Domestic industry

It is my conclusion that the relevant domestic industry in this investigation consists of the domestic facilities engaged in the production of round stainless steel wire.

Substantial cause

Section 201(b)(4) of the Trade Act defines the term "substantial cause" to mean "a cause which is important and not less than any other cause." Thus, a dual test must be satisfied: a cause must be both "important" and "not less than any other cause." Further, section 201(b)(2) provides that the Commission, in making its determinations, shall take into account all economic factors which it considers relevant, including (but not limited to)--

> (C) with respect to substantial cause, an increase in imports (either actual or relative to domestic production) and a decline in the proportion of the domestic market supplied by domestic producers.

The report of the Senate Committee on Finance on the bill which became the Trade Act of 1974 explained the term "substantial cause" and described the decision-making procedure with respect to it which the

Commission should follow in this way:

> The Committee recognizes that "weighing" causes in a dynamic economy is not always possible. It is not intended that a mathematical test be applied by the Commission. The Commissioners will have to assure themselves that imports represent a substantial cause or threat of injury, and not just one of a multitude of equal causes or threats of injury. It is not intended that the escape clause criteria go from one extreme of excessive rigidity to complete laxity. An industry must be seriously injured or threatened by an absolute increase in imports, and the imports must be deemed to be a substantial cause of the injury before an affirmative determination should be made. 1/

After considering all of the relevant economic factors, I find that increased imports, even if an important cause of any injury or the threat thereof, are a less important cause than at least one other cause, i.e., the serious economic recession of 1975.

The demand for stainless steel wire is derived from the demand for its end-product uses, such as wire strand and rope, woven and knitted wire products, fasteners, welding electrodes, springs, and a host of other durable goods. It is well known that cyclical fluctuations in the production of these goods have been more pronounced than in the production of nondurable goods. Because the demand for round stainless steel wire is derived from the demand from its use in durable goods, the demand for such wire is also cyclical in nature. The decline in apparent U.S. consumption of stainless steel wire in 1970-71 and 1975, as well as increases during 1973-74, can be directly attributed to wide fluctuations in the pace of U.S. industrial activity in those years. The high degree of correlation between changes in consumption of stainless steel wire and changes in U.S. industrial production of durable manufactures is illustrated graphically in figure 7 of the accompanying report.

1/ Trade Reform Act of 1974: Report of the Committee on Finance. . ., S. Rept. No. 93-1298 (93d Cong., 2d sess.), 1974, pp. 120-121.

The only recent year during which the domestic industry producing round stainless steel wire appears to have incurred a degree of injury was 1975. However, the evidence clearly shows that increased imports, even if an important cause of the problems experienced by the domestic industry in that year, are a cause less than at least one other cause--i.e., the sharp decline in U.S. industrial activity in 1975, which resulted in a corresponding drop in consumption of stainless steel wire, whether imported or domestically produced.

The above conclusion is emphasized by comparing the 2 years 1974 and 1975. Imports reached their highest level in 1974, but, at the same time, the domestic industry enjoyed the highest levels of production, sales, employment, wages, and profits in its history. Not coincidentally, U.S. industrial activity also was at a peak in 1973-74. In contrast, imports in 1975 fell by almost one-third from their level in 1974. To be sure, domestic production declined even more steeply, resulting in an increased ratio of imports to production (largely because of the time lag involved in entering imports), but such "increased" imports must be considered a less important factor in causing this decline than the most severe U.S. economic recession in recent history.

Conclusion

In the basis of the evidence gathered by the Commission in the course of this investigation, I have determined that increased imports of round stainless steel wire are not a substantial cause of serious injury, or the threat thereof, to the domestic industry discussed herein.

Dissenting Views of Commissioner George Moore

I do not concur with the findings of my colleagues because I am unable to confine my consideration of this case to events which occurred in 1974 and earlier years. I shall leave it to my colleagues to rationalize their apparent conviction that the disaster which struck the domestic industry in 1975 does not portend import-related serious injury to such industry in the foreseeable future.

I have determined that the domestic industry (consisting of the facilities in the United States devoted to the production of round stainless steel wire) is threatened with serious injury and that a substantial cause of such threatened injury is increased imports of round stainless steel wire entering this country under item 609.45 of the Tariff Schedules of the United States.

The upward trend in imports of such stainless steel wire is not in dispute. In absolute quantities, imports of such wire increased from 22.7 million pounds in 1968 to 36.8 million pounds in 1975, with a peak year in 1974 of 54.2 million pounds. Imports of round stainless steel wire increased relative to domestic production from 17.5 percent in 1968 to 37.0 percent in 1975. Imports relative to wire produced for sale in the open market increased from 19.2 percent in 1968 to 46.1 percent in 1975.

The serious injury with which the domestic industry is threatened in the foreseeable future has already begun. During the extensive investigation and lengthy hearings conducted by the Commission, the following evidence was developed.

Domestic shipments of round stainless steel wire dropped from 158 million pounds in 1974 to 81 million pounds in 1975, or by almost 50 percent. The decline in sales represented a $61 million loss in revenues to the domestic industry. By comparison, in 1975, imports declined only 32 percent from 1974 levels. More specifically, in the finer wire sizes, where imports made the greatest market penetration, i.e., 53.9 percent in 1975, imports of stainless steel wire declined by only 4 million pounds.

Inventories of domestic producers continue to remain large at the present time. By the end of 1975 more than 20 million pounds of unsold stainless steel wire remained in inventory in domestic mills and warehouses. Annual inventories of imported wire, which averaged slightly more than 3 million pounds, soared to a record level of 9.5 million pounds in 1974. At the beginning of 1976, there still remained in inventory 6 million pounds of imported stainless steel wire which will eventually replace sales of domestic wire in the U.S. market place.

Domestic production of round stainless steel wire in 1975 was reduced by 50 percent from 1974 levels, dropping by more than 99 million pounds. In 1975 three integrated steel companies ceased production of such wire, the sale of a fourth integrated producer's stainless steel wire division is imminent; also, one independent producer closed its doors. Domestic facilities capable of producing 25 million pounds of round stainless steel wire thus ceased to exist in 1975.

The domestic industry producing round stainless steel wire is threatened with serious financial problems. The evidence reveals that 8 of the 13 firms reporting financial data to the Commission experienced net operating losses in 1975. These 13 firms represent 81 percent of the open-market shipments by the domestic industry.

Employment in the stainless steel wire industry suffered a severe setback in 1975. Total employment in the production of all articles by establishments producing stainless steel wire declined by 16 percent in 1975. However, in that year, employment of workers engaged solely in the production of stainless steel wire declined by 43 percent. Total man-hours declined 27 percent from 1974 to 1975. In comparison, man-hours worked exclusively in stainless steel wire production fell 48 percent.

Total wages paid to workers in the domestic industry followed the same pattern as employment from 1974 to 1975. Workers' total earned wages have suffered severely; almost $18 million in total wages were lost in 1975. There is every indication that there will be continuing unemployment and underemployment in the domestic industry in the foreseeable future, and total wages paid to workers will be reduced accordingly. Thus the stainless steel wire industry will be deprived of many highly skilled workers who are necessary to maintain the competitive position of the domestic industry in the years to come.

The direct relationship between increasing imports of round stainless steel wire and the threat of serious injury to the domestic industry is clear. Among the economic factors which threaten the

domestic industry with such injury, imports are equal to or more important than any other cause.

Between 1968 and 1975 there was a decline in the proportion of the round stainless steel wire market supplied by domestic producers. Imports increased their share of the domestic open market from 17.7 percent in 1968 to 32.4 percent in 1975.

Domestic producers of round stainless steel wire have been confronted by imports underselling domestic wire by considerable margins since 1971. The evidence shows that it has not been unusual for importers to undersell domestic producers by as much as 50 percent. Even in the peak period of 1974, importers continued to undersell U.S. producers on certain types of wire and continue to do so in 1976.

It is persuasive that productive capacity in the stainless steel wire industry expanded only very sluggishly from 1968 to 1974. It declined significantly in 1975 and early 1976. Throughout most of the 1968-75 period, the rest of the U.S. economy passed through one of the largest sustained booms in capital-plant expansion in its history. Demand for the domestic industry's end product--stainless steel wire--was rising as well. Hence, there is only one reasonable explanation for the industry's inability to expand its productive facilities, namely, import competition--in light of which investments became too risky to undertake. The wave of plant shutdowns occurring at the end of 1975 and on into 1976 confirms that we are dealing here with a persistent economic distress to a domestic industry rather than a cyclical phenomenon.

I cannot overlook the connection between the present case and an earlier Commission determination under section 201 of the Trade Act of 1974 concerning stainless steel and alloy tool steel. 1/ Round stainless steel wire--the article involved in the present case--is made from stainless steel wire rods, which were embraced among the products considered in the previous investigation. That investigation resulted in an affirmative determination by this Commission and led to the placing of restrictions on U.S. imports of stainless steel wire rods, restrictions which became effective on June 14, 1976. Hence, it is almost certain that there will be increased imports of stainless steel wire as importers and foreign exporters shift to the more highly processed and more profitable form of stainless steel in order to legitimately circumvent restrictions on imports of stainless steel wire rod. This imminence of larger imports, in turn, forbodes a great threat of serious injury to the domestic industry which produces wire from domestic and imported wire rods.

There is already evidence that importers have increased their profits by "trading up" on their product mix of stainless steel wire and rod during the period 1968 through 1975. It is clear that since 1969 importers have decided to import greater quantities of wire while deemphasizing imports of wire rod because of the higher profits earned on the sale of wire.

1/ See Stainless Steel and Alloy Tool Steel, Report to the President on Investigation No. TA-201-5 . . ., USITC Publication 756, January 1976. In that investigation the Commission determined in the affirmative by a vote of 4 to 1.

There is still another compelling reason for finding a threat of serious injury to the domestic stainless steel wire industry as presently constituted. The evidence developed during this investigation suggests quite clearly that, in the process of adapting to the actuality and the threat of rising imports, the domestic industry has been undergoing a significant structural shift. In particular, the large, integrated steel producers are losing their position in the market, yielding to the independent wire drawers and the drawing facilities of firms engaged primarily in the fashioning of products of which the wire is the raw material. In brief, the stainless steel wire market is moving away from "big steel" to "little steel," and to the domain of smaller, independent firms whose market positions and approaches to doing business are widely different from those of the giants of the U.S. steel industry.

There are discerning economists who approve the structural shift described above as indicating, on balance, an increase in the degree of competition prevailing within the steel industry as a whole. For purposes of the present case, it is unnecessary to expound on this point, except to note that the threat of serious injury, which has been shown as resulting from increasing imports, is likely to be far more dangerous for these new, smaller, weaker, participants in the market than for the large, integrated, well-financed giants of the industry. For this reason the threat of serious injury to the domestic industry from imports is intensified.

INFORMATION OBTAINED IN THE INVESTIGATION

Introduction

Following receipt on December 12, 1975, of a petition filed by the Stainless Steel Wire Industry Committee, the United States International Trade Commission, on January 8, 1976, instituted an investigation under section 201 of the Trade Act of 1974 to determine whether round wire of stainless steel, provided for in item 609.45 of the Tariff Schedules of the United States (TSUS), is 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 an article like or directly competitive with the imported article. A public hearing in connection with the investigation was held March 23-25, 1976, in the Commission's hearing room in Washington, D.C.

Public notice of the investigation and hearing were duly given by publishing a notice in the Federal Register on January 15, 1976, (41 F.R. 2280). On March 4, 1976, the Commission, upon the request of importers and concurrence of the petitioner, postponed the hearing to March 23, 1976. Notice of the postponement was published in the Federal Register on March 10, 1976 (41 F.R. 10271).

The petitioner proposes that a two-phase relief system be instituted as a remedy. The initial phase of such remedy would provide for mandatory import quotas for a 3-year period with importers assured a reasonable

share of the U.S. market. The petitioners ask that the quotas be structured along specific product lines in order to avoid upgrading and concentration of imports in particular product lines. The second phase of such remedy would involve the establishment of a government-to-government orderly marketing agreement for round stainless steel wire.

Under the adjustment assistance provision of the Trade Expansion Act of 1962, the Commission has conducted one workers' investigation with respect to stainless steel wire. The Commission made a negative determination in that case. 1/

The information contained in this report was obtained from fieldwork, from the Commission's files, questionnaires, other Government agencies, and evidence presented in the petition, the public hearing, and posthearing briefs.

1/ Stainless-Steel Wire: Production, Maintenance, and Salaried Workers, the Carpenter Technology Corporation Plant, North Brunswick, New Jersey: Report to the President on Investigation No. TEA-W-78 . . . , TC Publication 383, 1971. In addition to the Commission's investigation, the U.S. Department of Labor certified workers in the wire-drawing operations of Armco Steel Co. (Nov. 1, 1975), Joslyn Manufacturing and Supply Co. (Nov. 14, 1975), and Allegheny Ludlum Steel Co. (Jan. 31, 1976) eligible for assistance under the Trade Act of 1974. Two additional cases are pending; these petitions were received from workers of the Universal-Cyclops Specialty Steel Co. and Carpenter Technology Corp.

Description and Uses

Iron or steel wire is classified in the TSUS principally by its cross-sectional configuration and dimensions and by the type of iron or steel used in its manufacture. The term "wire" is defined in headnote 3(i) to part 2B of schedule 6 of the TSUS as "a finished, drawn, nontubular product, of any cross-sectional configuration, in coils or cut to length, and not over 0.703 inch in maximum cross-sectional dimension." The term "wire" also includes a product of "solid rectangular cross section, in coils or cut to length, with a cold-rolled finish, and not over 0.25 inch thick and not over 0.50 inch wide." The term "flat wire" applies not only to this cold-rolled product but also to drawn wire of rectangular cross section. The specifications of iron or steel wire vary considerably as to cross-sectional configuration and dimension, carbon content, alloying elements (if any), and methods of processing and treatment. These variations in specifications render such wire suitable for innumerable end-use applications.

The imported product which is the subject of this investigation is round, stainless steel wire, hereinafter sometimes referred to as stainless steel wire, i.e., a wire of round or circular cross-sectional configuration, containing, by weight, less than 1 percent carbon and over 11.5 percent chromium. 1/ Round wire is by far the principal type of stainless steel wire produced.

1/ Headnote 2(h)(iv) to part 2B of schedule 6 of the TSUS. Stainless steel wire may contain--depending upon the physical properties desired--other alloying elements in addition to the requisite chromium, such as, nickel, titanium, silicon, manganese, and molybdenum.

Manufacturing process

Round, stainless steel wire is produced by cold-drawing stainless steel wire rod 1/ (or wire) of appropriate composition through one or more carbide or diamond dies. As the steel passes through each die, the diameter is reduced and the length is necessarily increased. Variables such as initial rod diameter, final wire diameter, and end-use applications determine the number of reductions that must take place. The percent of reduction in cross-sectional area occurring at each die determines the extent of work hardening and dictates whether or not further reduction can take place prior to annealing. Annealing is required to soften the work-hardened wire. More than 30 operations may therefore be necessary in reducing a 0.25-inch wire rod to wire 0.003 inch in diameter. Most, if not all, stainless steel wire is drawn at speeds substantially below 2,000 feet per minute. Drawing wire which work hardens rapidly, as does stainless steel wire, precludes a high-speed drawing operation (10,000-12,000 feet per minute) such as can be attained in drawing certain low-carbon steel wire. The machinery used to draw stainless steel is similar to the machinery used to draw carbon steel. However, the motors and drive mechanisms are not designed to run at the higher speeds and must be changed before other steels or nonferrous wire can be drawn on the stainless steel wire-drawing equipment. Thus, optimum efficiency could not be expected if a wire-drawer were to attempt to use the same basic facility to draw stainless steel and carbon steel wire.

1/ Wire rod is a coiled, semifinished, hot-rolled product of solid cross section, approximately round in cross section, not under 0.20 inch nor over 0.74 inch in diameter. See headnote 3(f) to part 2B, schedule 6, TSUS.

Specialized heat treatments or annealings are necessary to soften stainless steel wire for progressively finer drawing operations and for certain end-use applications; usual variations of such annealing are referred to as full anneal, one-half hard or one-quarter hard. Following the final drawing operation, many wires are cleaned or burnished to provide special surface conditions or appearances. In addition, certain further processing operations require the application to the wire surfaces of metallic or nonmetallic coatings, such as lead, copper, or lime. In each instance the coating is a solid lubricant necessary in further processing operations. Another, less common, treatment is the straightening and cutting to length of stainless steel wire prior to shipment.

By virtue of (1) the various alloys contained in stainless steel (particularly chromium and nickel), (2) the slower speeds at which stainless steel must be drawn, (3) the more frequent in-process annealing necessary during drawing, and (4) other incidental operations unique to the production of stainless steel wire, the cost of production is significantly higher than the cost of producing wire of the more common grades of carbon steel.

Uses of round stainless steel wire

Although the uses of round stainless steel wire are innumerable, significant quantities are consumed in the production of fasteners and other cold-headed products, 1/ springs, strand, rope, welding wire, and

1/ Cold-heading refers to a mechanical process in which lengths of wire are deformed by impact to produce a finished or semifinished product such as a nail, bolt, or screw.

woven or knitted products. By virtue of its inherent characteristics, such as appearance, hardness, smoothness, noncorrosiveness, and resistance to elevated temperatures, stainless steel wire is required, or is preferred to other base-metal wires, for particular end-use applications.

U.S. Tariff Treatment

The round, stainless steel wire, which is the subject of this investigation, is classified under item 609.45 of the TSUS, which provides for round wire of alloy iron or steel. The present rates of duty for imports under item 609.45 are 10.5 percent ad valorem (rate col. 1) 1/ and 33 percent ad valorem (rate col. 2) 2/ plus the additional duties provided for in items 607.01, 607.02, 607.03, and 607.04 when such imports contain one or more of the following elements in the quantities, by weight, respectively indicated:

over 0.2 percent of chromium, or
over 0.1 percent of molybdenum, or
over 0.3 percent of tungsten, or
over 0.1 percent of vanadium. 3/

The additional duties are as follows:

Item	Column 1	Column 2
607.01----	0.75¢ per lb. on chromium content in excess of 0.2%	3¢ per lb. on chromium content in excess of 0.2%
607.02----	17.5¢ per lb on molybdenum content in excess of 0.1%	65¢ per lb. on molybdenum content in excess of 0.1%
607.03----	25¢ per lb. on tungsten content in excess of 0.3%	72¢ per lb. on tungsten content in excess of 0.3%
607.04	20¢ per lb. on vanadium content in excess of 0.1%	$1 per lb. on vanadium content in excess of 0.1%

1/ The col. 1 rates of duty apply to imports from countries that are entitled to most-favored-nation treatment.
2/ The col. 2 rates of duty apply to imports from all Communist-dominated countries (except Poland, Romania, and Yugoslavia).
3/ See headnote 4 to pt. 2B of schedule 6 of the TSUS.

The present column 1 rates of duty applicable to imports under TSUS item 609.45 are reduced rates proclaimed pursuant to concessions granted by the United States in the sixth round of trade negotiations under the Geneva Agreement on Tariff and Trade. 1/ The column 1 rates for imports under item 609.45 had been 12.5 percent ad valorem plus additional duties double those currently in effect.

Round wire of alloy iron or steel is not currently eligible for duty-free treatment under the Generalized System of Preferences (GSP) pursuant to section 503 of the Trade Act of 1974.

1/ Presidential Proclamation No. 3822 (Kennedy Round), Dec. 19, 1967, 32 F.R. 19002.

Domestic Producers

In the United States round stainless steel wire is produced by three relatively distinct types of firms--the integrated steel producers, the independent wire drawers, and the producers of wire end products. The integrated steel producer initially draws wire from wire rods produced within the firm (such rods have been rolled from steel also produced within the firm) or redraws wire so produced. The independent wire drawer makes wire from wire rods purchased from the integrated steel producer or from foreign sources. The independent may also purchase wire for further reduction from the integrated steel producers, from other independent wire drawers, or from foreign sources. The two types of producers described thus far make virtually all the domestic wire sold in the open market. The third type is the firm that draws wire from purchased rod or wire only for use within the firm in the manufacture of wire end products. Little, if any, of the wire produced by this type of firm is sold in the open market.

Specialization as to size range of wire drawn and/or type of customers served is discernible within each of the groups of stainless steel wire drawers. For example, one integrated producer specializes in the production of wire of types suitable for making springs; another specializes in wire suitable for making cold-headed products. Most of the integrated firms tend to concentrate in the production of gages of wire in excess of 0.060 inch in diameter. The smaller independents

frequently aim at the market for fine wire. The backward-integrated end-product producers, of course, draw only wire of types suitable for their end products.

The number of domestic firms that produce stainless steel wire for the open market has declined in the past 6 years from 33 in 1970 to 28 in 1976. Three integrated steel producers, United States Steel Corp., Joslyn Manufacturing and Supply Co., and Jones & Laughlin Steel Corp., discontinued drawing stainless steel wire during 1975. In addition, one subsidiary of an integrated steel firm and one independent wire drawer ceased production in the fall of 1970 and on January 31, 1976, respectively.

Backward integration by users of stainless steel wire--installation of their own wire-drawing facilities--is a factor potentially confronting the firms drawing wire for sale in the open market. A trend of this kind could, in time, reduce the size of the open market available to the integrated steel producers and the independents. Several users of stainless steel wire have indicated that they have set up their own wire-drawing operations as a hedge against varying market conditions. Independent wire drawers have also reported to the Commission that changing economic and technological factors have led certain end users to consider or experiment with wire-drawing equipment in an attempt to maintain or improve their competitiveness. Stainless steel wire producers, however, do not believe that this backward integration has reached such proportions as to have had a significant effect on the market yet.

Concentration

In the course of this investigation the Commission identified 28 firms that produce stainless steel wire primarily for sale in the open market; 8 of the 28 firms produce only stainless steel wire. These 28 firms include 9 integrated steel producers and 19 independent wire drawers. Stainless steel wire producers are situated throughout the United States; however, there is a concentration of producers in the Northeastern States.

The U.S. stainless-steel wire drawing community, 1975

Type of firm	Number of firms	Percent of total production
Total	58	100
Producers for the open market	28	84
Integrated steel mills	9	60
Independent wire drawers	19	24
Wire end product producers	30	16

Source: Data supplied by producers in response to U.S. International Trade Commission questionnaires.

The nine integrated steel producers accounted for an average of approximately 72 percent of the quantity of the domestic open market shipments during the years 1968, 1970, 1972, and 1974; the 19 independent producers supplied the remainder. Combined shipments by these two categories of producers accounted for an average of 84 percent of the total estimated production of stainless steel wire by domestic producers. Shipments of stainless steel wire by the two largest domestic producers

accounted for * * * percent of total estimated production in 1974; the top four firms accounted for 31 percent of total estimated production. Approximately 30 firms produced stainless steel wire for part or all of their internal requirements in 1975. Production by these firms accounts for about 16 percent of total domestic production of stainless steel wire. A breakdown of shipments and/or production by type of producer for alternate years is shown in the following table.

Stainless steel wire shipments and/or production by U.S. wire drawers, selected years 1968 to 1974

(In thousands of pounds)

Type of producer	1968	1970	1972	1974
Integrated steel producers	82,755	74,730	86,536	107,001
Independent producer	24,139	28,060	34,607	51,122
Wire end product producers 1/	23,020	16,903	14,542	40,763
Total 2/	129,914	119,693	135,685	198,886

1/ Figures represent the difference between the estimated total and the quantities reported by integrated and independent producers.
2/ Figures estimated on the basis of apparent consumption of stainless steel wire rod with appropriate allowances for scrap (table 1).

Source: Data supplied by producers in response to U.S. International Trade Commission questionnaires.

Producers efforts to compete with imports

Efforts to improve production capabilities have been made by U.S. producers (see the section entitled "Capital expenditures and research-and-development costs"). Plant inspections by Commission personnel confirm that a wide variety of new proprietary engineering and production management techniques have been used by domestic producers in an effort to improve

quality, productivity, cost reduction, and thus competitiveness. U.S. producers also indicated, in their responses to the Commission's questionnaire, that they have used varying marketing strategies to counter import competition. Those strategies include improved technical service, an attempt to seek special niches in the stainless steel wire market, and/or an expansion of product lines or ranges of wire sizes in order to broaden their potential market. Sales programs have generally been aimed at increased customer contact, closely calculated bidding, and some additional advertising.

Raw materials

U.S. stainless steel wire producers' only raw material requirements are wire rod and/or drawn wire. Integrated steel firms draw some of their own wire rods into wire and sell the remainder of their wire rods on the open market to other wire drawers; in the latter instance, the integrated producer competes with the importer of wire rods. Integrated steel firms and importers also sell drawn wire to wire-drawing firms which do not have the ability to break down wire rods, and to firms that specialize in drawing fine wire. Certain independent producers further draw wire purchased from other independent wire drawers or foreign sources.

Raw material costs

Independent domestic stainless steel wire producers purchase wire rod and wire as the basic raw material for their production. A table is presented below which shows the index of wire rod and wire costs to the domestic wire drawer from 1971 through 1975.

Stainless steel wire: Index of average costs to independent wire drawers in the United States of domestic and imported raw material, 1971-75

(Domestic wire rod 1971=100)

Year	Wire rod		Wire suitable for redrawing	
	Domestic	Foreign	Domestic	Foreign
1971	100.0	68.4	106.8	107.6
1972	98.8	63.8	122.9	100.3
1973	103.8	87.2	168.8	138.5
1974	135.1	114.1	174.8	167.8
1975	171.1	135.6	174.8	183.1
Percentage increase, 1975 over 1971	71.1	98.3	63.7	70.2

Source: Based on data supplied in response to U.S. International Trade Commission questionnaires.

These data indicate price reductions on the part of foreign and domestic producers of wire rod in 1972 to stimulate sales. Subsequently, the world steel shortage of late 1973 and 1974 had a profound effect on unit costs and pushed the indexes significantly higher. In addition, it is clear that foreign prices rose more rapidly over the period than domestic prices.

Channels of Distribution

U.S. producers

Two principal channels of distribution are employed by domestic producers in marketing stainless steel wire. The most widely used method is direct sales to end users; both integrated and independent wire drawers use this channel, primarily because many of the orders for such wire are special orders, not high-volume reorders. Integrated mills, however, tend to accept only the larger orders because of the high costs involved in handling small orders and in drawing a partial coil of wire rod. Integrated producers generally direct small buyers to the independent wire drawers or to distributors.

The second main channel of distribution used by stainless steel wire producers utilizes the services of steel service centers and distributors. Distributors situated in various market areas are able to offer timely delivery and cater to the small buyer, whereas wire drawers must necessarily fit the orders placed with them into the production schedule and then ship the finished product. Certain integrated producers sell part of their production of stainless steel wire to distributors, but the independent wire drawers primarily sell their product directly to end users.

Producers' shipments of stainless steel wire to the various general markets are shown on the following page. The actual quantities shipped changed considerably during the 3 selected years as the overall market expanded or contracted. On a percentage basis, however, the changes in shipments to the various markets were not large. A minor

rise and subsequent fall did occur in the percentage of shipments going to steel service centers and distributors; these changes probably reflected the inventory building and reduction programs normally going on at such firms as a reflection of the strengthening or weakening of the economy.

Stainless steel wire: Percentage distribution of U.S. producers' shipments, by type of customer, 1971, 1973, and 1975

Type of customer	1971	1973	1975
End users	72.6	72.3	73.4
Steel service centers and distributors	23.4	24.1	20.6
Wire drawers	3.8	3.6	5.8
Others	.2	.1	.2
Total	100.0	100.0	100.0

Source: Data supplied in response to U.S. International Trade Commission questionnaires.

Importers

Numerous import and import-export firms, trading houses, domestic wire drawers, and manufacturers of wire products import stainless steel wire for consumption each year. Customs' consumption entry documents disclose that during the first 9 months of 1975 more than 125 firms were actively importing stainless steel wire into the United States. These firms are scattered throughout the country, with the majority on the east coast. Some of the larger firms, especially the Japanese trading houses, are situated on both coasts, as well as in the midwest. Ranked by number of firms, the private domestic importers are the most numerous, followed by the Japanese trading houses, domestic manufacturers

of wire products, foreign steel firms, and others. The size of the firms ranges from small owner-operated businesses to large multinational corporations.

Importers distribute stainless steel wire through the same channels used by domestic producers. The bulk of the imported product is sold directly to end users, and the remainder, chiefly to distributors. Importers' shipments of stainless steel wire by type of customer are shown in the table below. Compared with domestic producers' shipments to the same market segments, some change of direction or market concentration by importers occurred between 1971 and 1975. The most pronounced shift was an increase in the importance of end users relative to steel service centers and wire drawers.

Stainless steel wire: Percentage distribution of U.S. importers' shipments, by type of customer, 1971, 1973, and 1975

Type of customer	1971	1973	1975
End users	42.9	59.1	59.0
Steel service centers and distributors	38.9	33.7	32.2
Wire drawers	16.8	5.8	7.6
Others	1.4	1.4	1.2
Total	100.0	100.0	100.0

Source: Data supplied in response to U.S. International Trade Commission questionnaires.

The Question of Increased Imports

U.S. imports

U.S. imports of stainless steel wire have trended upward in recent years, rising at an average annual rate of 9.1 percent during 1968-75. Figure 1 in appendix B shows that, except in 1974 and 1975, annual imports fit the positively sloping trend line relatively closely during this period. 1/ From 1968 to 1973, imports increased from 23 million pounds to 42 million pounds, or by almost 83 percent (table 1 in appendix A). In 1974 imports surged above the trend line to an all-time high of 54 million pounds, while in 1975 imports fell to 37 million pounds, considerably below the trend line but higher than those in any year prior to 1973.

Not only has there been an absolute increase in imports of stainless steel wire in recent years, but there has also been an increase relative to domestic production of such wire. As table 2 indicates, the ratio of imports to total domestic production (based on quantity) increased without interruption from 17.5 percent in 1968 to 29.7 percent in 1971, declined to 22.3 percent in 1973, rose again during 1974 and 1975, reaching 37.0 percent in the latter year.

Round stainless steel wire enters the United States under two item numbers of the Tariff Schedules of the United States Annotated (TSUSA)--609.4510 and 609.4540--depending on the diameter of the wire. Trends in imports of stainless steel wire by TSUSA category were

1/ All trend lines shown in this report were fitted by least-squares regression techniques. The slope of the trend line shown in fig. 1 is statistically significant at the 95-percent level of confidence (the "t" statistic was 3.65).

similar the trend in total imports. Imports of wire drawn to a diameter of under 0.060 inch (TSUSA item 609.4510) increased irregularly from 7 million pounds in 1968 to 11 million pounds in 1975, while imports of wire 0.060 inch or more in diameter (TSUSA item 609.4540) rose from 16 million pounds to 26 million pounds during the same period. There was no discernible shift between these two categories of imports during 1968-75; the finer wire accounted for 25 to 30 percent of the total quantity of stainless steel wire imported in each year (basic data are shown in tables 3, 4, 7, and 8; figures 2 and 3).

U.S. imports of stainless steel wire were received from 17 foreign countries during 1975; however, three major suppliers have accounted for more than 85 percent of total imports in recent years. The relative ranking, by quantity, of these three suppliers--Japan, Sweden, and France --remained roughly the same throughout the 1968-75 period at a 7:2:1 ratio (table 5).

Factors affecting imports

In a later section of this report (that on U.S. consumption) it is shown that the predominant cause of expansions or contractions in the aggregate demand in the United States for stainless steel wire is the corresponding fluctuation in domestic industrial production. Thus at least three principal factors may be expected to affect the demand for stainless steel wire in general and imports of such wire in particular: (1) The price of imported wire; (2) the price of domestically produced wire; and (3) the level of industrial activity in the United States. In a normally functioning market, imports should be negatively

correlated with their own prices but positively correlated with the prices of domestic substitutes and with the level of industrial activity.

Two other factors that appear to have influenced U.S. imports of stainless steel wire in recent years were the Voluntary Restraint Agreements (VRA) under which Japanese and European steel producers agreed to limit their exports of steel-mill products to the United States, and major strikes occurring at U.S. docks in early 1969 and late 1971. 1/ Dock strikes in the United States would be expected to be negatively correlated with imports. The first phase of the VRA (1969-71) did not specifically apply to stainless steel and could be expected to exert a positive influence on U.S. imports of all stainless steel products, including wire. The effect of the second phase of the VRA (1972-74) on imports of wire is more difficult to judge a priori. Although its effect was apparently to discourage aggregate U.S. imports of stainless steel products, at least during 1972-73, it may have had the corollary effect of encouraging foreign participants to upgrade

1/ For a description of the VRA, see Stainless Steel and Alloy Tool Steel, Investigation No. TA-201-5, USITC Publication 756 (January 1976), pp. A-30 and A-31. The first dock strike, roughly lasting from late December 1968 through February 1969, affected east and gulf coast ports; the second, which extended intermittently from July 1971 through February 1972, primarily affected west coast ports.

their product mix from other stainless steel products to wire with a higher unit value in order to maximize foreign exchange earnings. 1/

In order to better understand and empirically assess the relative importance of the above-mentioned factors in contributing to increased U.S. imports of stainless steel wire during 1968-75, the standard technique of multiple regression analysis was used. The results of the regression, which are shown more fully in appendix C, were generally satisfactory from a statistical point of view. 2/ The principal conclusions to be drawn from the analysis were the following. After controlling for the influence of other factors, a 1-percent increase in the average unit value of imports of stainless steel wire will cause a decrease of about 1.35 percent in U.S. imports of such wire. On the other hand, a 1-percent increase in domestic prices will induce an increase of almost 3 percent in imports, while a change of 1 percent in U.S. industrial production of durable manufactures will cause imports to change by 2 percent in the same direction. Although the

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1/ The ratio of U.S. imports of stainless steel wire to total U.S. imports of the stainless steel and alloy tool steel products included in the Commission's investigation No. TA-201-5 rose from 6.8 percent in 1968 to an average of 9.1 percent in 1969-71, and then jumped to an average of 17.9 percent during 1972-74. The VRA may also have spurred imports of finished products made from stainless steel wire, thereby reducing aggregate domestic demand for such wire, whether imported or domestically produced. As noted in a later section of this report, U.S. imports of stainless steel wire rope and wire cloth have increased substantially since 1971. Although such imports are less in absolute terms than those of stainless steel wire, fig. 4 shows that they have increased more rapidly.

2/ All coefficients had the anticipated signs, and most were statistically highly significant. The value obtained for R^2 was 0.734, indicating that some 73 percent of the variation in quarterly imports during 1968-75 was accounted for by the explanatory variables.

VRA apparently acted as a stimulus and the dock strikes as a deterrent, little can confidently be said about the degree to which U.S. imports of stainless steel wire responded to these influences.

The quantity of stainless steel wire imported appears to be more responsive to price changes of domestic substitutes than to changes in import prices. This is not particularly surprising, or uncommon, 1/ in light of the fact that, on the average, purchasers obtain most of their wire from domestic sources (the ratio of imports to consumption ranged from 15.0 percent to 27.8 percent during 1968-75). Thus a price change in domestically produced wire would have a greater effect on the budget of the purchaser than an equal percentage change in the price of imported wire.

1/ Foreign Trade Elasticities for Twenty Industries, Investigation 332-65 . . . , USITC Publication 738, August 1975, p. 16.

The Question of Serious Injury, or the Threat Thereof, to the Domestic Industry

Capacity

U.S. producers of stainless steel wire were requested by the Commission to report their wire-drawing capacity from 1971 to 1975 based on two shifts a day, a 5-day week, and a production mix similar to that experienced in 1974. Of the 28 producers representing 93.5 percent of 1974 open-market shipments, 22 submitted capacity data. The table presented below shows that the capacity of these 22 producers increased from 149.1 million pounds in 1971 to 153.0 million pounds in 1974, then declined slightly to 152.3 million pounds in 1975, an increase for the period of 3.2 million pounds, or 2.1 percent.

Stainless steel wire: U.S. producers' capacity, production, 1/ and apparent open market consumption, 1971-75

Year	Capacity	Production	Apparent open-market consumption	Ratio of production to capacity	Ratio of consumption to capacity
	1,000 pounds	1,000 pounds	1,000 pounds	Percent	Percent
1971	149,076	104,783	131,412	70.3	88.2
1972	150,589	126,379	151,968	83.9	100.9
1973	152,178	153,718	193,261	101.0	127.0
1974	152,987	163,163	207,653	106.7	135.7
1975	152,327	78,306	113,646	50.1	72.7

1/ Capacity and production as reported by 22 of the 28 wire drawers that accounted for 93.5 percent of open-market shipments in 1974.

Source: Compiled from data supplied by producers in response to U.S. International Trade Commission questionnaires.

The ratio of production to capacity indicates considerable under utilization of capacity in 1971 and 1972 followed by 2 years in which capacity utilization exceeded 100 percent. These over-100-percent ratios

reflect the addition of third-shift operations by a number of producers during the 1973-74 period of rapidly increasing demand for stainless steel wire. A higher ratio of capacity utilization could have been possible had all wire drawers made the decision to add additional shifts. Such a decision, however, involves sharply higher costs--for raw materials, labor and its managers, equipment maintenance, and certain production bottlenecks. In 1975, capacity utilization fell to only 50.1 percent as a result of diminished demand.

The ratio of apparent open-market consumption to capacity follows a trend similar to that of the production-to-capacity ratio. The ratios indicate that during the years 1973-74 domestic producers had insufficient capacity to supply the level of demand attained during a peak period; in 1971, 1972, and 1975 domestic capacity roughly equaled or exceeded total market demand (consumption).

The growth of capacity among domestic producers has not been dynamic. From 1971 through 1974, capacity rose by only about 1 percent annually, and in 1975 it fell by 660,000 pounds, or about 0.4 percent. Recently, a number of producers have left the market entirely, while others have ceased production in specific areas, i.e., integrated producers have generally left the fine-wire market. Moreover, in excess of 25 million pounds (about 17 percent) of capacity is thought to have been lost by the closing of the five firms mentioned in the section of this report on producers.

Domestic production

Domestic production of stainless steel wire increased irregularly from 129.9 million pounds in 1968 to 198.9 million pounds in 1974, representing an increase of 53.1 percent over the 7-year period, before falling to a period low of 99.6 million pounds in 1975 (table 1). 1/ The trend during that period, however, was interrupted during the 1970-71 economic recession, when production declined by 33.2 million pounds from the high of 146.7 million pounds in 1969. Production increased annually, from the low of 1971 (113.6 million pounds) to 1974. Then, during 1975, U.S. producers experienced a total decrease in production to 99.6 million pounds, 49.9 percent below the 1974 level and 23.3 percent below the level at the start of the period.

U.S. producers' shipments

U.S. producers' open-market shipments of stainless-steel wire increased irregularly from 106.9 million pounds in 1968 to 158.1 million pounds in 1974 (table 1). During this period, shipments peaked twice; the first peak--120.8 million pounds--occurred in 1969, and the second--158.1 million pounds--in 1974. Producers' shipments fell precipitously in 1975 to 80.6 million pounds. This level of shipments was 24.6

1/ A comparison was made of the data provided by stainless steel-wire-producing firms in response to Commission questionnaires and the total domestic production of stainless steel wire as calculated by the Commission. This coverage ratio ranged from a low of 83.6 percent in 1975 to a high of 97.4 percent in 1971 and averaged 88.8 percent for the 8-year period. This coverage is considered quite good in light of the total number of small firms thought to be producing small quantities of stainless steel wire for captive consumption--many of which firms did not return Commission questionnaires.

percent below the 1968 level, 19.1 percent below the previous low of 1971, and 49.0 percent below the period high of 1974.

Shipments of stainless steel wire by size range are shown in appendix tables 6-8. The data indicate that while shipments have varied over time, the percentage of each size range to the total shipments in each year has remained relatively stable. 1/ Wire 0.060 inch or more in diameter accounted, on average, for 88 percent of the total annual shipments from 1968 through 1975, whereas wire 0.019 to 0.0595 inch in diameter amounted to only 8 percent of total shipments. The remainder, 4 percent, went to fine wire, that is, under 0.019 inch in diameter.

Intracompany shipments of stainless steel wire by domestic producers have generally been small, averaging less than 1.5 percent of total domestic production from 1968 through 1971, and roughly 5 percent of production during the following 4 years, 1972-75. * * *.

1/ Stability in the level of shipments can be misleading because of possible changes in the mix of wire sizes within a size range, i.e., the number of pounds of wire could remain unchanged but the length double or triple simply by drawing the wire one or two holes smaller.

2/ * * *.

U.S. exports

U.S. exports of domestically produced stainless steel wire increased gradually throughout the period 1968 through 1974 (from 1.4 million to 4.7 million pounds); a slight decline in exports, less than 65,000 pounds, occurred in 1970 (table 9). Exports in 1975 dropped sharply from 1974, by more than 832,000 pounds. Exports of stainless steel wire were slightly under one-twelfth the volume of similar imports in the peak year of 1974. 1/ Since 1968, Canadian buyers have purchased one-fifth or more of the total exports of stainless steel wire from the United States; no other country approached this quantity of purchase of U.S.-made stainless steel wire.

Table 10 in appendix A shows the international trade in stainless steel wire among the major wire-exporting countries (Japan, Sweden, France, United States, Belgium, West Germany, and the United Kingdom) during 1974. It is apparent that trade between Japan and the European countries shown is virtually nonexistent. The United States is far and away the largest single export market for most of the foreign producers of stainless steel wire, accounting for 58.3 percent of total exports within the countries shown and 30.6 percent of the total world exports of the same nations. However, the United States accounts for less than 1 percent of total export trade in stainless steel wire among the countries listed.

1/ Statistics on exports include flat and shaped wire.

Unshipped orders and average lead times

As shown in table 11, U.S. producers' unshipped orders of stainless steel wire rose without interruption during 1971-73, peaked during the first two quarters of 1974, decreased rather sharply during the fourth quarter of 1974, and continued to decline throughout 1975. Such orders were extremely high throughout 1974 in relation to those in the other years shown. To a considerable extent the abrupt increase in unshipped orders by U.S. producers during 1974 probably resulted from the practice of many domestic consumers of placing multiple orders during periods of short supply. The subsequent drop in demand during late 1974 and 1975 consequently resulted in the cancellation of many of these multiple orders placed earlier in 1974.

Unshipped orders of stainless steel wire by importers generally followed the trend in unshipped orders by domestic producers. However, importers' unshipped orders peaked about 6 months later than did those of the U.S. producers, that is, about October 1, 1974. In addition, although importers' unshipped orders increased without interruption during 1971-74 and then declined, neither the increase nor the subsequent decline approached the magnitude of the corresponding changes reported by domestic producers.

U.S. producers' average lead times between orders and deliveries ranged between 3 and 39 weeks during January-September 1974. As shown in table 12, the overall average lead time reported by all producers during that period was about 13 weeks. Beginning in the fourth quarter of 1974, producers' lead times began to decline consistently. As of

January 1, 1976, individual producers had average lead times ranging from 2 to 11 weeks, with an overall average of 5 weeks.

U.S. importers' average lead times for delivery of stainless steel wire ranged from 10 to 44 weeks during January-September 1974, depending on the particular importer and the country from which the wire was sourced. The overall average reported by all importers during that period was about 22 weeks, almost twice that of U.S. producers. Similar to the situation among domestic producers, lead times of importers began to decline beginning in the fourth quarter of 1974; however, importers lead times declined more slowly than those of domestic producers. As of January 1, 1976, individual importers' average lead times ranged from 5 to 28 weeks; the overall average of 15 weeks was three times that of domestic producers as of the same date.

As indicated above, domestic producers enjoy a considerable advantage over most importers insofar as lead time for delivery is concerned. This advantage has been mentioned frequently by industry sources both as a reason for maintaining a domestic source of supply (in the event of a rush order, for example) and as one explanation of why consumers of stainless steel wire normally are apparently willing to pay somewhat more for the domestic product than for the imported product.

Inventories

No trend is discernible in inventories of stainless steel wire held by U.S. producers during the period 1968-75. Producers' inventories--the vast bulk of which were held by the integrated steel

companies--fluctuated only moderately, ranging from a high of 26 million pounds on January 1, 1973, to a low of 20 million pounds on January 1, 1976 (table 13). Domestic producers of stainless steel wire customarily reduce production during periods of decreased demand--such as 1970, 1971, and 1975--in order to keep inventories in line with sales. Inventories held by U.S. producers averaged about 20 percent of their annual shipments during the 1968-75 period.

U.S. importers' inventories of stainless steel wire increased during 1971, remained relatively stable during 1972-73, rose greatly in 1974, and then declined during 1975. As shown in table 13, the peak in importers' inventories reached on January 1, 1975, was roughly three times the amounts prevailing during the earlier years shown. Only about half of the importers reported carrying inventories in the United States during the period shown. Many importers, in particular most large Japanese trading companies, import stainless steel wire only after it has already been contracted for by the importers' customers. Such importers are thus able to avoid the expense of maintaining their own inventory in this country, but their average lead times for delivery are lengthened as a consequence.

Employment

Data for 1971-75 on the average number of persons employed in U.S. establishments in which stainless steel wire was produced, as well as on man-hours worked by and wages paid to production and related workers in such establishments, are shown in table 14. As indicated earlier, domestic producers of such wire range from small companies

manufacturing wire as their sole or major product to large integrated steel companies for which stainless steel wire represents a relatively minor part of their overall operations. There is likewise a large variation in employment patterns among domestic producers. Only about one-tenth of the total number of production and related workers shown in table 14 were engaged in the production of stainless steel wire, and a like proportion of the total number of man-hours worked by such employees were spent in making such wire. This figure is, of course, greatly affected by the inclusion of several integrated steel mills.

Trends.--The trend in U.S. employment on stainless steel wire operations during 1971-75 closely followed the trend in domestic production of such wire, that is, an uninterrupted gradual increase from 1971 to 1974 was followed by a precipitous decline in 1975. The average number of production and related workers engaged in the manufacture of stainless steel wire increased regularly from 2,212 in 1971 to 2,819 in 1974, but then fell to 1,619 in 1975. Man-hours worked by such employees similarly rose from 4.4 million in 1971 to 6.0 million in 1974 and then dropped to 3.1 million in 1975. Estimated wages paid to workers producing stainless steel wire followed the same trend, rising from $20 million in 1971 to $37 million in 1974, then declining to $19 million in 1975. 1/ Trends in total employment and man-hours worked by all production and related workers in U.S. establishments in which stainless steel wire was produced followed the

1/ Average wage rates compiled from data obtained from J. K. Lasser and Co. were used by the U.S. International Trade Commission, in conjunction with responses to the Commission's own questionnaires to domestic producers, to estimate total wages paid.

same trend, except that the fluctuations were less pronounced. The following tabulation, derived from the data in tables 1 and 14, highlights the changes that occurred during the 1971-75 period.

Item	Change from 1971 to 1974 (percent)	Change from 1974 to 1975 (percent)
Average number employed in U.S. establishments producing stainless steel wire:		
All persons	+11.0	-15.6
Production and related workers producing--		
All products	+15.4	-18.9
Stainless steel wire	+27.4	-42.6
Man-hours worked by production and related workers on--		
All products	+28.3	-27.1
Stainless steel wire	+36.6	-47.8
U.S. production of stainless steel wire	+75.1	-49.9

Productivity.--The average annual output of stainless steel wire per production worker and the average output per man-hour worked by such employees are shown in the following table.

Output per production worker and per man-hour worked in the production of stainless steel wire in the United States, 1971-75

Year	Output per--			
	Production worker		Man-hour worked	
	Quantity	Index (1971=100)	Quantity	Index (1971=100)
	Pounds		Pounds	
1971	48,794	100.0	24.5	100.0
1972	56,344	115.5	27.1	110.6
1973	61,635	126.3	28.3	115.5
1974	59,920	122.9	28.0	114.3
1975	51,214	105.0	26.4	107.8

Source: Compiled from responses to questionnaires of the U.S. International Trade Commission.

With the exception of the slight decline in productivity in 1974, output per man-hour and per production worker followed the same trend noted previously in U.S. production and employment, that is, rising in 1971-74 and falling in 1975. Although domestic producers undoubtedly increased their productivity during 1971-75 through the use of more efficient machinery and improved production processes, probably the most important determinant of output per worker or per man-hour during that period was the level of capacity utilization. One plausible explanation for the decline in productivity in 1974 is that many producers were apparently operating at or near their capacity limitations in that year. As producers strove to maximize their output in a period of exceptionally strong demand, they could do so rapidly only by adding less efficient machinery and untrained production workers.

An examination of output per man-hour among individual producers showed a fairly broad range of values, predominantly from 10 to 50

pounds per man-hour. In general, however, trends in productivity among individual firms followed the trend shown in the above table. Output per man-hour in most firms greatly increased 1972 and 1973, declined slightly in 1974, and then fell sharply in 1975.

Prices

Recipients of the Commission's questionnaires were required to provide specific price data on six types of wire thought to be representative of the stainless steel wire market in the United States and to be among those items in which there was direct competition between domestic and imported products. These items were chosen after consultation with representatives of both the U.S. industry and the importers and included several types and grades. To confirm the pricing patterns which emerged from the responses to the producer and importer questionnaires, data on the various types of wire were also gathered from a sampling of end users.

Producers and importers were requested to provide for each product type the lowest net price at which it was sold in a given period, the price at which the greatest quantity was sold, and the quantity sold regardless of price. These data were collected on an annual basis for the years 1971 through 1973 and on a quarterly basis for the years 1974 and 1975. The information received by the Commission was not uniformly complete; several sellers provided only price information without quantities, while others gave only one or the other of the two prices requested. Where possible, price sheets and price lists

were obtained in order to verify that list prices (usually higher than actual selling prices) had not been supplied in the questionnaire, causing distortions in the data. Tables 15 through 20 compare U.S. producers' and importers' prices for sales of the selected types of stainless steel wire.

Several earlier observations were supported by the data, the first being that there exists a great deal of segmentation within the domestic industry. The larger domestic firms (both integrated and nonintegrated) tended to produce the larger diameter, less processed products, whereas the remainder of the industry supplied a wider range of types and sizes and, in general, catered to those buyers demanding more exacting specifications. This is entirely consistent with the integrated producers' policy of encouraging small purchasers to buy from the smaller producers.

Second, for several of the specific items for which information was requested, only very infrequent sales were reported by importers, although the shipments have on occasion been sizable. This would indicate that some importers will make a shipment when the opportunity arises in a particular market or when sufficient small orders have been accumulated to warrant a shipment, but do not necessarily import the item on a regular basis. Furthermore, there appears to be a distinction between the practices of the importers from the various countries in this regard. The European (particularly the Swedish) importers appear to supply some items on a sustained basis, whereas the Japanese importers (with some exceptions among those that provided information) appear to enter and exit the marketplace in a far less predictable pattern. Finally, there

seems to be some evidence that importers supply mostly those high-volume items which are considered by the domestic industry to be "bread-and-butter" items.

Pricing practices.--The price structure for stainless steel wire is generally determined by production costs associated with each specific size and grade. A base price is assigned according to the type of alloy (T-302, T-304, and so forth) and is thereby dependent on the chemical analysis of the stainless steel. Higher nickel or chromium content and the addition of molybdenum, manganese, or other anticorrosive elements may raise the base price by as much as 85 percent.

Premiums are paid as the diameter of the wire is reduced, owing primarily to the increased cost of repeated drawing and annealing operations. As the diameter is reduced, these operations become more costly and require increasing attention and specialized equipment. Similarly, tolerances closer than normal and special coatings such as the copper coating required on wire to be used in cold-heading operations will increase the price by 5 to 25 percent.

Price discounts are generally available for the larger quantity purchases, or, what amounts to the same, premiums must be paid for smaller purchases; this is largely due to the economies of scale inherent in longer production runs. Premiums may range from nothing on a purchase of 4,000 to 5,000 pounds to as much as $2.00 per pound on orders of 10 pounds or less. This further encourages purchases of small quantities to buy from a distributor, if the item required

is a stock item, or from smaller producers that may negotiate more favorable terms on a small order than a large producer would.

It is current practice among most producers to quote prices without including shipping costs from their plant or warehouse. Prior to 1970, purchases of only a few hundred pounds could be made with shipping costs being absorbed by the manufacturer. A frequent practic, when the buyer can purchase similar material from a firm located closer than the actual seller, is to equalize the shipping costs to those of the nearest supplier. This means that a buyer will pay shipping costs as though he were purchasing from the nearest potential supplier, while the seller assumes all costs between that point and his own plant or warehouse. From 1970 to 1973 the quantities required for these benefits were increased to more than 2,000 pounds by many producers, and when demand reached its peak during 1974, freight absorption by producers was often eliminated completely. Currently, only the integrated and a very few of the nonintegrated firms adhere consistently to either a full- or a partial-freight-absorption policy, although several firms indicated that such freight absorption is now a negotiable part of any sale in order to make the terms more attractive to a potential customer.

Foreign suppliers, on the other hand, do not follow these patterns. Rather, they quote a price either inclusive or exclusive of shipping costs from the point of entry into the United States. Responses to the Commission's questionnaires have indicated that the Japanese importers, in particular, seldom absorb any costs after the

shipment has arrived and duty has been paid, passing all further expenses on to the purchaser. The European suppliers vary in their policy, some absorbing freight costs and some passing them on.

Financial arrangements are generally similar among all the producers and importers of stainless steel wire. Standard practice is to allow one-half of 1 percent discount for prompt payment (within 10 days of delivery). Some importers commence this period with arrival of the shipment in the United States, thereby restricting the benefits of the discount policy by not making allowances for inland freight time. The net amount is due within 30 days, although the discount practice was liberalized during 1975 in order to make the terms of sale more attractive to prospective buyers. Occasionally the period of payment allowed has been as long as 120 days.

Trends in U.S. producers' prices.--The Bureau of Labor Statistics wholesale price index for stainless steel wire indicates that domestic prices prior to 1969 had been quite stable for a number of years. Table 21 shows that from 1959 to 1968, for example, the price index (1967=100) increased only from 96.6 to 101.4. Throughtout 1969, however, prices rose rapidly in response to an increased demand coupled with a concurrent worldwide shortage of stainless steel resulting from the Canadian nickel strike during the year. As the supply of stainless steel increased in 1970 and demand eased during the recession of 1970-71, prices again stabilized.

Recovery from recession led to increased demand for stainless steel wire in 1972, but overall U.S. producers' prices showed a

slight decline from the high level of the previous year (see table on page A-40). Tables 15 through 20 show, however, that not all the items sampled by the Commission participated in this decline. The U.S. wage and price controls in effect at that time dampened price movements, although several producers maintained that these controls had little effect on their business since they were already selling at levels below those allowed by the controls owing to import pressure.

In 1973, domestic and world demand for stainless steel wire, as well as for other steel products, began a rapid increase that continued into 1974. As price controls were lifted from the industry, the prices for the full range of types and sizes began to climb. As shown in the table on the following page, overall levels rose more than 8 percent from 1972 to 1973 and an average of 10 percent in each quarter of 1974 for an annual rate of 43 percent in that year. This period was one of great confusion in the market place as buyers placed multiple orders with competing firms in order to insure their supply, causing the normal price and demand signals to be distorted. Many producers worked at or near full capacity during this time except during those period when they were unable to obtain raw materials. Some buyers turned to imports as domestic availability became questionable.

Awareness of an accelerating deterioration in domestic and international economic conditions overtook both buyers and producers in late 1974, causing large scale cancellations of orders and a decline in prices. Some product prices peaked in the last quarter of 1974, while others peaked in the first quarter of 1975. By the end of

June 1975, prices in general were about 11 percent below their levels of 6 months earlier. There was some slight recovery during the last quarter of 1975, but all prices remained substantially below the peak levels, ending the year about 45 percent above their 1971 level.

Indexes of prices of U.S.-produced and imported stainless steel wire, 1971-73 and, by quarters, 1974 and 1975

(1971=100.0)

Period	Indexes of prices of--			
	Domestic stainless steel wire		Imported stainless steel wire	
	Range	Arithmetic average	Range	Arithmetic average
1971	100.0	100.0	100.0	100.0
1972	84.4-119.1	99.2	98.0-121.7	110.0
1973	86.3-128.7	107.5	106.8-131.1	120.8
1974:				
January-March	96.6-136.2	121.3	144.9-155.8	148.9
April-June	119.0-142.6	129.8	146.3-168.8	152.3
July-September	129.4-154.1	143.3	156.5-176.6	166.9
October-December	139.5-174.1	160.0	185.9-199.3	192.7
1975:				
January-March	129.3-161.1	144.0	167.5-197.2	185.2
April-June	124.9-158.5	142.7	158.4-244.9	202.5
July-September	124.9-159.6	144.4	160.3-240.1	189.5
October-December	124.9-155.3	145.1	175.3-213.2	190.9

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

Trends in importers' prices.--Among the consumers of stainless steel wire that replied to the Commission's questionnaire, the factors most frequently mentioned as influencing their decision to purchase from a particular supplier were quality and other physical characteristics, availability, delivery on schedule, and price. Of these, only in price was the imported product cited as clearly and consistently demonstrating an advantage over the domestic competition.

Throughout the early years covered by the Commission's questionnaires, price levels of imported stainless steel wire ranged from 15 percent to about 40 percent below the price levels of the corresponding U.S. product. The pattern of changes in prices of imports paralleled that of the prices of the domestic product with the exception that import prices showed much greater percentage increases through the years 1972 to 1974. It is highly probable that the devaluations of the U.S. dollar in 1971 and 1973 (especially the latter) caused some of this increase, but this could not be clearly demonstrated from the available data. Price controls on U.S. producers had the effect of making the domestic market less attractive to importers, since it placed upper limits on prices if the importers were to maintain their advantage in this category.

As shown in the preceding table, average importers' prices of the items covered in the Commission's questionnaire more than doubled from 1971 to the second quarter of 1975, then dropped to a level about 90 percent higher than 1971. This contrasts with a 60-percent climb in average domestic prices before they settled to a level 45 percent higher than in the base year, 1971. Import prices peaked approximately 6 months after the domestic prices; this corresponds closely with the time lag found in comparisons of unshipped orders. Although the percentage change in import prices was considerably greater than changes in domestic prices, the importers still maintained a price advantage through most of the relevant period in some product lines, particularly in the large-volume areas such as spring wire and wire intended for

further domestic processing (redraw wire). This advantage was very slim in other areas, and in several cases import prices exceeded domestic prices by more than 30 percent (tables 15-20).

Profit-and-loss experience of domestic producers

Questionnaires containing usable financial information covering the period 1971-75 were received from 12 domestic producers of stainless steel wire representing approximately 80 percent of the domestic open-market shipments of stainless steel wire in 1975. The operations of one additional producer will be used in this section's discussion on the total number of companies which made or lost money during the period; however, its operations cannot be used in the total industry figures in table 22 because its data cannot be provided in the proper detail. For the most part, the remaining 20 percent of the stainless steel wire producers for the open market, for which data were not obtained, simply could not respond owing to inadequate recordkeeping systems. A number of companies stated that their operations on stainless steel wire were so small in relation to their overall operations that to break out profit-and-loss data on wire with any degree of accuracy would be impossible.

Overall establishment operations.--Total overall establishment net sales increased steadily from $657 million in 1971 to $779 million in 1972, $1.1 billion in 1973, and $1.4 billion in 1974; they then declined to $1.1 billion in 1975, or by 21 percent (table 22).

Net operating profit followed a similar trend, increasing from $16 million in 1971 to $50 million in 1972, $83 million in 1973, and

a high of $146 million in 1974. Net operating profit decreased in 1975 to $89 million, or by 39 percent, almost twice the decline in sales in that year. The ratio of net operating profit to net sales for the period amounted to 2.4 percent in 1971, 6.4 percent in 1972, 7.9 percent in 1973, 10.7 percent in 1974, and 8.3 percent in 1975.

Operations on stainless steel wire.--Total open-market net sales of stainless steel wire increased without interruption from 1971 to 1974 and then dropped sharply in 1975. As shown in table 22, net sales increased from $77 million in 1971 to $88 million in 1972, $115 million in 1973, and $159 million in 1974; they then fell to $99 million in 1975.

Net operating profit on stainless steel wire followed a similar trend. Following a loss of $3.4 million in 1971, profit increased from $762,000 in 1972 to $6.6 million in 1973 and $19.2 million in 1974, but declined to $8.1 million in 1975. The ratio of net operating loss to net sales amounted to 4.5 percent in 1971; the ratio of net operating profit rose from 0.9 percent in 1972 to 12.0 percent in 1974 and then declined to 8.2 percent 1975. That the stainless steel wire industry was able to remain profitable during a period of increasing imports and sharply declining domestic shipments is somewhat misleading. A look at the number of companies which sustained losses and reported profits in 1975 shows that 4 of the 13 responding companies reported profits in excess of 20 percent, 1/ 8 companies sustained operating losses, and

1/ * * *.

1 company reported a profit of less than 10 percent. Hence the 8.2 return for 1975 actually represents the operations of a small number of firms which operated profitably enough to offset the losses of the remaining companies in the industry. The following table shows the distribution of stainless steel wire manufacturers by profit or loss ratio. Generally, this table shows that a majority of the producers were able to maintain profitable operations during 1971-74, whereas in 1975 a majority of the producers lost money.

Distribution of stainless steel wire manufacturers, by net operating profit or loss ratios, 1971-75

Ratio	1971	1972	1973	1974	1975
Loss to 0 percent	4	4	4	2	8
1 to 10 percent profit	6	7	5	5	1
11 to 20 percent profit	2	2	4	4	-
21 to 30 percent profit	1	-	-	2	4

Source: Compiled from data submitted to the U.S. International Trade Commission by domestic producers of stainless steel wire.

Looking at the individual operations of those eight companies which sustained losses in 1975, it would appear that the main reason for their poor showing was a substantial decline in sales in that year. Four of the establishments reported a decline in sales of more than 50 percent; the decline in sales of the remaining producers ranged from 26 to 44 percent. Another factor contributing to their losses was the general decline in selling prices which occurred in 1975.

Some of the five companies which maintained profitable operations in 1975 were able to do so because they produced low-volume items that were not particularly sensitive to import competition, e.g., fine wire, which has a higher rate of return on sales than the more competitive intermediate sizes. Similarly, other companies were able to avoid import competition by manufacturing a very specialized wire that is made to extremely close tolerances, such as that used in the nuclear power industry. Finally, one large producer established a marketing system that facilitates direct sales to the end user. This eliminates the middleman or wholesaler, thus enabling the manufacturer to sell his product at "retail" prices and realize a higher return per sales dollar.

A comparison of the data submitted by the domestic producers of stainless steel wire with the data collected during the Commission investigation on stainless steel and alloy tool steel (No. TA-201-5), which covered 90 percent of that industry, indicates a close correlation in trends during 1971-75. Both industries show a steady growth in sales, operating profits, and operating profit ratios through 1974, with sharp declines in 1975. However, the stainless steel wire manufacturers did not perform as well as the overall stainless steel industry during the period. The following table shows that the stainless steel wire industry maintained a profit level below that of the overall stainless steel industry except for 1975, when the wire industry fared much better. Stainless steel wire producers also operated at a profit level below that of all manufacturing corporations for the years 1971-73, recorded a 66.6 percent

Net operating profit or (loss) ratios for specified groups of manufacturers, 1971-75

(In percent)

Item	1971	1972	1973	1974	1975
Stainless steel manufacturers	1.0	4.0	9.6	13.4	1/ 1.7
Stainless steel wire manufacturers	(4.5)	.9	5.8	12.0	8.2
All manufacturers	6.9	7.7	8.7	7.2	8.0

1/ Compiled from data representing operations for 9 months only (January-September).

Source: Compiled from data submitted to the U.S. International Trade Commission by the domestic producers of stainless steel and stainless steel wire, and the quarterly financial report of the Federal Trade Commission.

Capital expenditures and research and development costs.--Capital expenditures showed an overall decline during 1971-75. The highest expenditures were reported in 1971 ($5.8 million), and the lowest were reported in 1972 ($2.5 million); expenditures averaged $4.5 million in 1973-75 (table 23). The bulk of funds invested in fixed assets went to new machinery and equipment, followed at a considerable distance by building and leasehold improvements. Research and development expenses held close to $1.4 million throughout 1971-75, except in 1974, when they totaled $1.8 million.

Other factors

Potential imports.--Because of a finding and recommendation to the President by the Commission in an investigation on stainless steel and alloy tool steel (January 16, 1976) that quotas be established on imports of stainless steel wire rod, one of the items covered by the finding, potential increased activity on the part of the exporters of stainless steel wire to the United States, is highly possible (fig. 5). Increased exports of stainless steel wire in lieu of wire rods would represent a normal marketing strategy for foreign producers.

The effect of imports of finished products in the channels of distribution.--One problem facing the stainless steel wire producers results from a surge of imported finished wire products such as wire rope and woven wire cloth. For example, from 1971 to 1974, imports of stainless-steel wire rope increased 765,000 pounds, or by 93 percent; wire cloth imports jumped 11.0 million square feet, or by 101 percent; fastener imports increased 2.0 million pounds, or by 43 percent (tables 24-26). These increased quantities of finished stainless steel wire products represented an estimated 5.0 million pounds of wire or 2.1 additional percentage points of open-market penetration by imports of stainless steel wire in 1974. In many instances, particularly during the recessionary period of 1975, domestic wire producers reported that stainless steel wire end users were purchasing imported finished wire products, such as wire cloth, for resale to their customers at prices

that were lower than the cost of the wire these producers bought to weave. Thus, the overall demand for wire, whether of domestic or foreign origin, may have been reduced to some extent by imports of finished wire products.

The Question of Imports as a Substantial Cause of Serious Injury

U.S. consumption

Apparent U.S. consumption of stainless steel wire during 1968-75 was characterized more by cyclical fluctuations than by any strong underlying trend (fig. 7). 1/ Consumption rose from 151 million pounds in 1968 to 173 million pounds in 1969, but then fell to the 1968 level in 1970 and continued to decline in 1971, amounting to 145 million pounds in that year. Consumption rose without interruption from 1971 to 1974, reaching a alltime high of 248 million pounds in the latter year, before dropping by almost half to 133 million pounds in 1975--the low point during the period (table 1).

The demand for stainless steel wire is derived from the demand for its end-product uses, such as wire strand and rope, woven and knitted wire products, fasteners, welding electrodes, springs, and a host of other durable goods. The Commission's report on stainless steel and alloy tool steel 2/ noted that--"the durability of many articles made from stainless steel is a factor that permits discretion in the timing of purchases of replacement articles; consequently, cyclical fluctuations in

1/ Because of these fluctuations, attempts to express consumption in terms of average annual rates of growth or decline are crucially dependent upon the period selected. For example, based on a trend line fitted by least-squares regression, consumption grew at an average annual rate of 2.7 percent during 1968-75, but the slope (trend) of this line was not statistically significant ("t" statistic=0.76) and thus little can confidently be said about the "trend" of consumption during this period. However, during 1968-74, consumption grew at an average annual rate of 7.8 percent, and this trend was statistically significant ("t" statistic=2.75). Thus it could be argued that the sharp drop in consumption in 1975 merely represented an abnormally large cyclical fluctuation downward from an "underlying" trend of moderate (7.8 percent) growth.

2/ Stainless Steel and Alloy Tool Steel: Report to the President on Investigation No. TA-201-5 . . . , USITC Publication 756, 1976, p. A-76.

the overall U.S. economy usually result in changes in demand for stainless-steel articles which are much wider than the changes that are applicable to nondurable goods and to most other types of durable goods. The decline in apparent U.S. consumption of stainless steel wire in 1970 and 1971 and 1975, as well as increases in 1973 and 1974, can be directly attributed to wide fluctuations in the pace of U.S. industrial activity in those years. The high degree of correlation between changes in consumption and changes in U.S. industrial production of durable manufactures is illustrated graphically in figure 7. 1/

The following table further highlights the two principal points just made--that consumption of stainless steel wire normally moves in the same direction as U.S. industrial production, but that fluctuations in the former are much wider than in the latter.

1/ The coefficient of correlation, r, was 0.92.

Annual percentage changes in apparent U.S. consumption of stainless steel wire and in the index of U.S. industrial production of durable manufactures, 1968-75

Period	Change in--	
	Apparent U.S. consumption of stainless steel wire	Index of industrial production of durable manufactures
1968 to 1969	+14.2	+4.3
1969 to 1970	-12.3	-7.8
1970 to 1971	-4.0	-2.0
1971 to 1972	+14.6	+8.0
1972 to 1973	+34.6	+13.6
1973 to 1974	+10.8	-1.1
1974 to 1975	-46.6	-12.3

Source: Consumption compiled from table 1 of this report; index of industrial production of durable manufactures compiled from official statistics of the Federal Reserve Board.

The ratio of imports to total apparent U.S. consumption trended upward during the 1968-75 period--from 15.0 percent in 1968 to 27.8 percent in 1975--in a cyclical path, with peaks occurring during the years of economic recession, 1970, 1971, and 1975 (table 1). The trend in the ratio of imports to consumption in the open market, where imports compete most strongly with the domestic product, was similar; the ratio averaged 3 percentage points higher than the penetration of the total market until 1974, when the difference increased to roughly 4 percentage points.

Possible substantial causes of serious injury or the threat thereof

Among the possible substantial causes of any serious injury or threat thereof to the domestic producers of stainless steel wire that were mentioned most frequently during the course of this investigation are cyclical declines in U.S. economic conditions and increased imports. Thus, one of the key analytical issues involved in the investigation is the assessment of the relative importance of these two forces. The following discussion uses annual changes in U.S. consumption of stainless steel wire during 1968-75 and then looks at how, if at all, domestic shipments (plus captive production) and imports were affected differently within the context of changing aggregate demand.

The predominant cause of expansions or contractions in the aggregate level of U.S. demand for stainless steel wire has been shown to be corresponding fluctuations in the level of domestic industrial production. However, certain changes occurred during 1968-75 in the strength of imports vis-a-vis the domestic industry that would not have been entirely predictable from merely looking at the level of aggregate domestic consumption. The table on the following page shows annual changes occurring in U.S. consumption of stainless steel wire, and compares changes in imports with corresponding changes in U.S. producers' shipments (net of U.S. exports) plus production for internal consumption.

It is readily apparent from the table that importers and domestic producers shared unequally in fluctuations in apparent U.S. consumption during 1968-75. In fact, in three consecutive periods shown--1969 to 1970, 1970 to 1971, and 1971 to 1972--imports and domestic shipments plus

captive production moved in opposite directions. It should be noted, however, that in none of these three periods did the absolute change in imports approximate the magnitude of the absolute change in domestic shipments plus captive production. In only two periods--1968 to 1969 and 1972 to 1973--did imports and shipments plus captive production move in the same direction at rates within 15 percentage points of each other. In the remaining 2 periods--1973-74 and 1974-75--they moved in the same direction but at widely divergent rates.

Stainless steel wire: Annual changes in apparent U.S. consumption, imports, and U.S. producers' shipments plus captive production, 1968-75

Period	Change in--		
	Apparent U.S consumption	U.S. producers' shipments plus captive production	U.S. imports
	Absolute quantity (million pounds)		
1968 to 1969	+21.4	+16.2	+5.2
1969 to 1970	-21.3	-27.0	+5.7
1970 to 1971	-6.1	-6.2	+0.1
1971 to 1972	+21.2	+21.3	-0.1
1972 to 1973	+57.7	+49.7	+8.0
1973 to 1974	+24.2	+11.6	+12.6
1974 to 1975	-115.8	-98.4	-17.4
	Relative quantity (percent)		
1968 to 1969	+14.2	+12.6	+22.7
1969 to 1970	-12.3	-18.6	+20.3
1970 to 1971	-4.0	-5.3	+0.3
1971 to 1972	+14.6	+19.1	-0.4
1972 to 1973	+34.6	+37.4	+23.8
1973 to 1974	+10.8	+6.3	+30.4
1974 to 1975	-46.6	-50.7	-32.0

Source: Imports from official statistics of the U.S. Department of Commerce; other data compiled from responses to questionnaires of the U.S. International Trade Commission.

The preceeding table affords at least some evidence supporting one contention made by U.S. producers of stainless steel wire--that imports made their greatest inroads into the domestic market during periods of downturn in the domestic economy. During the recessionary years 1970 and 1971, imports increased while domestic shipments plus captive production fell; the reverse was true in 1972, a year of economic recovery and the first year under the second phase of the VRA. The other recessionary year covered above, 1975, showed sharp declines in both imports and shipments plus captive production, but imports fell by only about one-third while shipments dropped by over half. The possible explanation noted previously for the decline in productivity and the rapid increase in U.S. producers' prices in 1974--i.e., that many domestic producers were apparently operating at or near their capacity limitations--could also logically be extended to explain why, in both absolute and relative terms, imports increased more than domestic shipments plus captive production during this year of exceptionally strong domestic demand.

APPENDIX A

STATISTICAL TABLES

Table 1.--Stainless steel wire: U.S. production, producers' shipments, exports of domestic merchandise, imports for consumption, and apparent consumption, 1968-75

Year	U.S. production	U.S. producers' open-market shipments	Exports	Imports	Apparent consumption-- Total	Apparent consumption-- Open-market	Ratio of imports to-- Total consumption	Ratio of imports to-- Open-market consumption
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	Percent	Percent
1968	129,914	106,894	1,367	22,748	151,295	128,275	15.0	17.7
1969	146,728	120,829	1,921	27,911	172,718	146,819	16.2	19.0
1970	119,693	102,790	1,857	33,585	151,421	134,518	22.2	25.0
1971	113,574	99,639	1,923	33,696	145,347	131,412	23.2	25.6
1972	135,685	121,143	2,730	33,555	166,510	151,968	20.2	22.1
1973	186,024	155,074	3,361	41,548	224,211	193,261	18.5	21.5
1974	198,886	158,123	4,660	54,190	248,416	207,653	21.8	26.1
1975	99,630	80,643	3,828	36,831	132,633	113,646	27.8	32.4

Source: U.S. production derived from raw-material consumption; U.S. producers' shipments compiled from responses to questionnaires of the U.S. International Trade Commission; exports and imports compiled from official statistics of the U.S. Department of Commerce.

Table 2.--Stainless steel wire: U.S. production, total and for the open market, and imports for consumption, 1968-75

Year	U.S. production		Imports	Ratio of imports to--	
	Total	Open market 1/		Total production	Open-market production
	1,000 pounds	1,000 pounds	1,000 pounds	Percent	Percent
1968	129,914	118,708	22,748	17.5	19.2
1969	146,728	124,074	27,911	19.0	22.5
1970	119,693	106,164	33,585	28.1	31.6
1971	113,574	100,490	33,696	29.7	33.5
1972	135,685	129,451	33,555	24.7	25.9
1973	186,024	156,822	41,548	22.3	26.5
1974	198,886	166,055	54,190	27.2	32.6
1975	99,630	79,839	36,831	37.0	46.1

1/ Includes redraw production, producer-company exports, and effects of inventory changes.

Source: U.S. production derived from raw-material consumption; production for the open-market derived from responses to questionnaires of the U.S. International Trade Commission submitted by domestic wire producers; imports from official statistics of the U.S. Department of Commerce.

Table 3.--Stainless steel wire: U.S. imports for consumption, by TSUSA items, 1968-75

Year	Under 0.060 inch in diameter (item 609.4510)	0.060 inch or more in diameter (item 609.4540)	Total or Average
	Quantity (1,000 pounds)		
1968	7,165	15,583	22,748
1969	7,220	20,691	27,911
1970	8,201	25,384	33,585
1971	9,729	23,967	33,696
1972	9,024	24,531	33,555
1973	11,773	29,775	41,548
1974	14,938	39,251	54,190
1975	10,581	26,250	36,831
	Value (1,000 dollars)		
1968	4,766	5,991	10,757
1969	4,911	8,662	13,573
1970	6,490	11,226	17,716
1971	7,335	11,401	18,736
1972	7,637	12,253	19,890
1973	11,716	16,392	28,108
1974	18,223	28,286	46,509
1975	15,497	23,937	39,434
	Unit value (per pound)		
1968	$0.67	$0.38	$0.47
1969	.68	.42	.49
1970	.79	.44	.53
1971	.75	.48	.56
1972	.85	.50	.59
1973	1.00	.55	.68
1974	1.22	.72	.86
1975	1.46	.91	1.07

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

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

Table 4.--Stainless steel wire: U.S. imports for consumption, by TSUSA items and by months, 1975

Month	Under 0.060 inch in diameter (item 609.4510)		0.060 inch or more in diameter (item 609.4540)		Total	
	Quantity	Value	Quantity	Value	Quantity	Value
	1,000 pounds	1,000 dollars	1,000 pounds	1,000 dollars	1,000 pounds	1,000 dollars
January	1,451	2,090	5,068	4,432	6,519	6,522
February	982	1,439	2,756	2,386	3,738	3,825
March	1,086	1,696	3,654	3,290	4,740	4,986
April	866	1,358	3,181	2,920	4,047	4,278
May	1,499	1,768	1,871	1,912	3,370	3,680
June	410	736	1,661	1,590	2,071	2,326
July	843	1,284	1,426	1,428	2,269	2,712
August	621	927	1,399	1,343	2,020	2,270
September	663	914	1,232	1,131	1,895	2,045
October	737	1,150	1,093	1,030	1,830	2,180
November	732	1,016	1,086	1,045	1,818	2,061
December	740	1,117	1,823	1,434	2,563	2,551

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

Table 5.--Stainless steel wire: U.S. imports for consumption, by principal sources, 1968-75

Country	1968	1969	1970	1971	1972	1973	1974	1975
	Quantity (1,000 pounds)							
Japan	11,411	17,387	23,782	24,393	20,792	22,302	29,547	20,774
Sweden	3,805	5,277	5,216	4,611	6,599	8,819	9,824	7,919
France	2,832	2,574	2,460	2,841	3,976	5,974	6,760	2,901
Belgium	2,678	1,182	861	1,119	1,008	1,786	1,491	619
Canada	360	215	188	125	169	428	890	300
West Germany	583	245	320	98	201	389	1,764	1,832
Other	1,079	1,031	758	509	810	1,850	3,914	2,486
Total	22,748	27,911	33,585	33,696	33,555	41,548	54,190	36,831
	Value (1,000 dollars)							
Japan	5,477	7,093	10,521	12,250	11,018	13,100	23,584	20,090
Sweden	2,696	3,848	4,541	3,664	5,578	8,458	11,442	11,866
France	959	1,019	1,128	1,280	1,436	2,778	3,994	2,467
Belgium	697	800	795	870	965	1,783	2,125	940
Canada	272	196	209	238	201	514	1,389	621
West Germany	257	252	204	120	254	322	1,200	1,501
Other	399	366	318	314	437	1,154	2,776	1,949
Total	10,757	13,574	17,716	18,736	19,889	28,109	46,510	39,434
	Unit value (per pound)							
Japan	$0.48	$0.41	$0.44	$0.50	$0.53	$0.59	$0.80	$0.97
Sweden	.71	.73	.87	.80	.85	.96	1.16	1.50
France	.34	.40	.46	.45	.36	.47	.59	.85
Belgium	.26	.68	.92	.78	.96	1.00	1.43	1.52
Canada	.76	.91	1.11	1.90	1.19	1.20	1.56	2.07
West Germany	.44	1.03	.64	1.22	1.26	.83	.68	.82
Other	.37	.36	.42	.62	.54	.62	.71	.78
Average	.47	.49	.53	.56	.59	.68	.86	1.07

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

Table 6.--Stainless steel wire: U.S. producers' shipments, by sizes, 1968-75

(In thousands of pounds)

Year	Size of wire			Total
	0.060 inch or more in diameter	0.019-0.595 inch in diameter	Under 0.019 inch in diameter	
1968	92,666	10,104	4,124	106,894
1969	106,148	10,286	4,395	120,829
1970	89,723	9,154	3,913	102,790
1971	87,225	8,650	3,764	99,639
1972	108,078	9,000	4,065	121,143
1973	139,395	10,567	5,112	155,074
1974	141,705	10,372	6,046	158,123
1975	71,179	6,076	3,388	80,643

Source: Compiled from responses to questionnaires of the U.S. International Trade Commission.

Table 7.--Stainless steel wire under 0.060 inch in diameter: U.S. producers' open-market shipments, exports of domestic merchandise, imports for consumption, and apparent open-market consumption, 1968-75

Year	U.S. producers' open-market shipments	Exports	Imports	Apparent open-market consumption	Ratio of imports to open-market consumption
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	Percent
1968----	14,228	369	7,165	21,024	34.1
1969----	14,681	519	7,220	21,382	33.8
1970----	13,067	501	8,201	20,767	39.5
1971----	12,414	519	9,729	21,624	45.0
1972----	13,065	738	9,024	21,351	42.3
1973----	15,679	907	11,773	26,545	44.4
1974----	16,418	1,258	14,938	30,098	49.6
1975----	9,464	426	10,581	19,619	53.9

Source: U.S. producers' shipments compiled from responses to questionnaires of the U.S. International Trade Commission; exports of wire under 0.060 inch in diameter were based on the ratio of domestic open-market shipments of such wire to total open-market shipments; imports compiled from official statistics of the U.S. Department of Commerce.

Table 8.--Stainless steel wire 0.060 inch or more in diameter: U.S. producers' open-market shipments, exports of domestic merchandise, imports for consumption, and apparent open-market consumption, 1968-75

Year	U.S. producers' open-market shipments	Exports	Imports	Apparent open-market consumption	Ratio of imports to open-market consumption
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	Percent
1968----	92,666	998	15,583	107,251	14.5
1969----	106,148	1,402	20,691	125,437	16.5
1970----	89,723	1,356	25,384	113,751	22.3
1971----	87,225	1,404	23,967	109,788	21.8
1972----	108,078	1,992	24,531	130,617	18.8
1973----	139,395	2,454	29,775	166,716	17.9
1974----	141,705	3,402	39,251	177,554	22.1
1975----	71,179	2,794	26,259	94,635	27.7

Source: U.S. producers' shipments compiled from responses to questionnaires of the U.S. International Trade Commission; exports of wire 0.060 inch or more in diameter were based on the ratio of domestic open-market shipments of such wire to total open-market shipments; and imports compiled from official statistics of the U.S. Department of Commerce.

Table 9.--Stainless steel wire: 1/ U.S. exports of domestic merchandise, by principal markets, 1968-75

Country	1968	1969	1970	1971	1972	1973	1974	1975
	Quantity (1,000 pounds)							
Canada	484	555	367	451	842	1,169	1,651	1,008
West Germany	75	168	64	132	177	290	417	200
Mexico	119	158	180	253	55	237	500	111
France	-	28	31	53	126	182	165	140
United Kingdom	20	28	65	74	434	592	208	316
Ireland	125	250	-	66	140	97	285	291
Italy	11	27	51	39	42	71	96	326
Other	533	707	1,099	855	914	723	1,338	1,436
Total	1,367	1,921	1,857	1,923	2,730	3,361	4,660	3,828
	Value (1,000 dollars)							
Canada	548	493	441	437	724	990	1,794	1,347
West Germany	83	129	88	169	272	518	726	379
Mexico	137	178	211	305	71	295	609	176
France	-	25	50	84	288	339	367	380
United Kingdom	29	41	106	69	298	430	298	470
Ireland	60	189	-	55	142	117	227	358
Italy	22	32	87	79	106	180	199	268
Other	521	674	1,091	1,081	1,008	1,023	1,752	1,888
Total	1,400	1,761	2,074	2,279	2,909	3,892	5,972	5,266
	Unit value (per pound)							
Canada	$1.13	$0.89	$1.20	$0.97	$0.86	$0.85	$1.09	$1.34
West Germany	1.11	.77	1.38	1.28	1.54	1.79	1.74	1.90
Mexico	1.15	1.13	1.17	1.21	1.29	1.24	1.22	1.59
France	-	.89	1.61	1.58	2.29	1.86	2.22	2.71
United Kingdom	1.45	1.46	1.63	.93	.69	.73	1.43	1.49
Ireland	.48	.76	-	.83	1.01	1.21	.80	1.23
Italy	2.00	1.19	1.71	2.03	2.52	2.54	2.07	.82
Other	.98	.95	.99	1.26	1.10	1.41	1.31	1.31
Total	1.02	.92	1.12	1.19	1.07	1.16	1.28	1.38

1/ Includes both round and flat stainless steel wire.

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

Table 10.--Stainless steel wire: International trade, by specified countries, 1974

(In metric tons)

Exporting country	Importing country							Total imports
	Japan	Sweden	France 1/	United States	Belgium	West Germany	United Kingdom	
Japan	–	184	17	2/	1	1	36	239
Sweden	32	–	624	2/	16	54	58	784
France	2/	1,068	–	75	1,017	832	327	3,319
United States	10,791	5,172	8,189	–	672	239	867	25,930
Belgium	2	221	3,027	2/	–	254	20	3,524
West Germany	140	1,507	6,019	190	701	–	43	8,600
United Kingdom	18	1,225	617	95	10	130	–	2,095
Total exports to 7 countries listed	10,983	9,377	18,493	360	2,417	1,510	1,351	44,491
U.S. imports as a percent of total exports	98.3	55.2	44.3	–	27.8	15.8	64.2	58.3
Total exports to all countries	20,315	19,087	25,872	2,118	4,135	7,052	6,277	84,856
U.S. imports as a percent of total exports	53.1	27.1	31.7	17.0	16.3	3.4	13.8	30.6

1/ Figures include wire rod exports.
2/ None shown.

Source: International Nickel Limited, World Stainless Steel Statistics.

Table 11.--Unshipped orders of U.S.-made and foreign-made stainless steel wire, on Jan. 1 of 1971-74, and, at beginning of quarters, Apr. 1, 1974-Jan. 1, 1976

(In thousands of pounds)

Date	Unshipped orders of--	
	U.S.-made wire	Foreign-made wire
Jan. 1, 1971	6,532	5,658
Jan. 1, 1972	7,687	5,914
Jan. 1, 1973	14,290	7,863
Jan. 1, 1974	43,337	9,714
Apr. 1, 1974	43,428	9,917
July 1, 1974	39,487	11,423
Oct. 1, 1974	39,492	11,799
Jan. 1, 1975	22,142	9,141
Apr. 1, 1975	11,136	6,974
July 1, 1975	9,516	6,854
Oct. 1, 1975	7,834	5,054
Jan. 1, 1976	6,267	7,570

Source: Compiled from responses to questionnaires of the U.S. International Trade Commission.

Note: Data on unshipped orders of foreign-made stainless steel wire were based on responses to U.S. International Trade Commission questionnaires from importers that accounted for approximately 57 percent, by quantity, of aggregate U.S. imports in 1971-75.

Table 12.--Lead times, average, and range for delivery of U.S.-made and imported stainless steel wire, at beginning of quarters, Jan. 1, 1974-Jan. 1, 1976

(In weeks)

Date	Lead time for--			
	U.S.-made wire		Imported wire	
	Range	Average	Range	Average
Jan. 1, 1974	3-34	11	10-39	22
Apr. 1, 1974	3-39	13	10-39	21
July 1, 1974	3-33	13	10-44	23
Oct. 1, 1974	3-36	13	10-40	22
Jan. 1, 1975	3-17	8	7-34	18
Apr. 1, 1975	2-14	6	7-30	18
July 1, 1975	2-14	6	7-27	16
Oct. 1, 1975	1-11	5	7-28	15
Jan. 1, 1976	2-11	5	5-28	15

Source: Compiled from responses to questionnaires of the U.S. International Trade Commission.

Table 13.--Inventories of stainless steel wire held by U.S. producers and importers, on Jan. 1 of 1969-76

(In thousands of pounds)

Date	U.S. producers' inventory	Importers' inventory
Jan. 1, 1969	24,807	1/
Jan. 1, 1970	24,811	1/
Jan. 1, 1971	24,584	1,643
Jan. 1, 1972	21,886	3,146
Jan. 1, 1973	26,205	3,194
Jan. 1, 1974	23,482	3,389
Jan. 1, 1975	24,884	9,476
Jan. 1, 1976	20,210	5,933

1/ Not available.

Source: Compiled from responses to questionnaires of the U.S. International Trade Commission.

Note.--Data on importers' inventories were based on responses to U.S. International Trade Commission questionnaires from importers that accounted for approximately 57 percent, by quantity, of aggregate U.S. imports of stainless steel wire in 1971-75.

Table 14.--Average number of employees in U.S. establishments producing stainless steel wire, total and production and related workers, and man-hours worked by, and wages paid to, the latter, 1971-75

Item	1971	1972	1973	1974	1975
Average number of persons employed in establishments producing stainless steel wire:					
All persons	27,857	27,925	29,702	30,918	26,082
Production and related workers engaged in the production of--					
All products	20,834	21,157	22,955	24,045	19,499
Stainless steel wire	2,212	2,297	2,563	2,819	1,619
Man-hours worked by production and related workers producing--					
All products--1,000 man-hours	40,449	45,055	48,857	51,900	37,853
Stainless steel wire--do	4,412	4,777	5,480	6,026	3,144
Production and related workers producing stainless steel wire:					
Average hourly wage rate	$4.55	$4.96	$5.43	$6.12	$6.07
Total wages paid 1/ 1,000 dollars	20,092	23,696	29,751	36,887	19,100
Other compensation 1/ 2/ 1,000 dollars	4,583	5,026	6,597	9,598	4,047

1/ Estimated.

2/ Includes retirement, health benefits, vacation and holiday pay, savings and thrift plans, and supplementary unemployment benefits.

Source: Average number of persons employed and man-hours worked compiled from responses to questonnaires of the U.S. International Trade Commission; wage rates compiled from information obtained from J. K. Lasser & Co. and used by the Commission to estimate total wages and other compensation.

Table 15.--Ranges, arithmetic averages, and weighted averages of lowest net selling prices received by U.S. producers and importers from sales of stainless steel wire, type 305, 0.128-0.141-inch diameter, cold-heading quality, to distributors or end users, 1971-73 and, by quarters, 1974 and 1975

Period	Domestic price			Import price 1/	Ratio (percent) of average import price to average domestic price
	Range	Arithmetic average	Weighted average		
1971	$0.95-$1.00	$0.98	$0.99	$0.71	73
1972	.95- 1.07	1.02	.98	.71	70
1973	1.00- 1.17	1.07	1.02	-	-
1974:					
Jan.-Mar.	1.00- 1.35	1.19	1.03	-	-
Apr.-June	1.09- 1.44	1.22	1.13	-	-
July-Sept	1.28- 1.50	1.42	1.33	-	-
Oct.-Dec.	1.32- 1.85	1.49	1.41	-	-
1975:					
Jan.-Mar.	1.28- 1.51	1.35	1.28	-	-
Apr.-June	1.32- 1.51	1.36	1.33	-	-
July-Sept	1.32- 1.51	1.36	1.33	-	-
Oct.-Dec.	1.32- 1.51	1.37	1.33	.85	62

1/ Based on data submitted by a single firm.

Source: Compiled from data submitted by 9 domestic producers and 2 importers in response to questionnaires of the U.S. International Trade Commission.

Table 16.--Ranges, arithmetic averages, and weighted averages of lowest net selling prices received by U.S. producers and importers from sales of stainless steel wire, type 308, 0.093-0.098-inch diameter, to distributors or end users, 1971-73 and, by quarters, 1974 and 1975

Period	Domestic price			Import price			Ratio (percent) of import price to domestic price using--	
	Range	Arithmetic average	Weighted average	Range	Arithmetic average	Weighted average	Arithmetic average	Weighted average
1971	$1.12-$1.26	$1.19	$1.25	$0.71-$1.42	$1.06	$0.81	90	65
1972	1.16- 1.36	1.26	1.35	.78- 1.56	1.29	.85	102	63
1973	1.00- 1.65	1.39	1.42	.82- 1.81	1.39	.87	100	61
1974:								
Jan.-Mar.	1.00- 1.66	1.38	1.61	1.00- 2.17	1.58	1.15	114	71
Apr.-June	1.36- 1.75	1.53	1/ 1.48	1.00- 2.17	1.71	1.07	112	72
July-Sept	1.48- 1.64	1.54	1/ 1.48	1.17- 1.92	1.79	1.30	116	88
Oct.-Dec.	1.48- 1.83	1.66	1.80	1.17- 2.60	1.98	1.47	119	82
1975:								
Jan.-Mar.	1.48- 1.96	1.70	1.75	1.28- 2.60	2.09	1.38	123	79
Apr.-June	1.48- 1.83	1.68	1/ 1.48	1.92- 2.82	2.34	1.95	139	132
July-Sept	1.48- 1.87	1.73	1.78	1.29- 2.82	2.07	1.47	120	83
Oct.-Dec.	1.48- 2.28	1.83	1/ 1.48	1.92- 2.82	2.35	1.98	129	133

1/ Based on data submitted by a single firm.

Source: Compiled from data submitted by 5 domestic producers and 6 importers in response to questionnaires of the U.S. International Trade Commission.

Table 17.--Ranges, arithmetic averages, and weighted averages of lowest net selling prices received by U.S. producers and importers from sales of stainless steel wire, type 302, 0.051-0.057-inch diameter, full-hard, nonmetallic coating, to distributors or end users, 1971-73 and, by quarters, 1974 and 1975

Period	Domestic price			Import price			Ratio (percent) of import price to domestic price using--	
	Range	Arithmetic average	Weighted average	Range	Arithmetic average	Weighted average	Arithmetic average	Weighted average
1971	$0.93-$1.02	$0.94	$0.93	$0.66-$0.96	$0.78	$0.80	83	86
1972	1.04- 1.25	1.12	1.14	.76- .97	.85	.87	76	76
1973	.98- 1.48	1.21	1.39	.80- 1.06	.95	.93	79	67
1974:								
Jan.-Mar.	1.08- 1.50	1.28	1.43	.99- 1.27	1.13	1.01	88	71
Apr.-June	1.23- 1.50	1.34	1.43	1.09- 1.45	1.27	1.09	95	77
July-Sept	1.23- 1.50	1.38	1.48	1.09- 1.49	1.29	1.17	94	79
Oct.-Dec.	1.43- 1.67	1.53	1.49	1.41- 1.57	1.45	1.40	95	94
1975:								
Jan.-Mar.	1.08- 1.58	1.39	1.42	1.37- 1.45	1.41	1.39	101	98
Apr.-June	1.42- 1.58	1.49	1.49	1.44- 1.45	1.45	1.44	97	97
July-Sept	1.28- 1.73	1.50	1.42	1.15- 1.53	1.25	1.20	88	85
Oct.-Dec.	1.28- 1.66	1.46	1.37	1.15- 1.58	1.37	1.42	94	104

Source: Compiled from data submitted by 7 domestic producers and 6 importers in response to questionnaires of the U.S. International Trade Commission.

Table 18.--Ranges, arithmetic averages, and weighted averages of lowest net selling prices received by U.S. producers and importers from sales of stainless steel wire, type 304, 0.030-0.032-inch diameter, full-anneal, nonmetallic coating, to distributors or end users, 1971-73 and, by quarters, 1974 and 1975

Period	Domestic price			Import price			Ratio (percent) of import price to domestic price using--	
	Range	Arithmetic average	Weighted average	Range	Arithmetic average	Weighted average	Arithmetic average	Weighted average
1971	$1.18-$1.47	$1.35	$1.19	$0.77	$0.77	$0.77	57	65
1972	.93- 1.41	1.14	1/ .93	$0.75- .94	.86	.93	75	100
1973	.93- 1.75	1.40	.96	.84- 1.04	.95	.98	68	102
1974:								
Jan.-Mar.	1.60- 1.94	1.80	1.85	1.08- 1.30	1.20	1.29	66	70
Apr.-June	1.54- 2.23	1.81	1.90	1.05- 1.48	1.30	1.29	71	68
July-Sept	1.79- 2.89	2.08	1.85	1.24- 1.68	1.36	1.35	65	73
Oct.-Dec.	1.97- 3.83	2.35	2.04	1.20- 1.68	1.53	1.60	65	78
1975:								
Jan.-Mar.	1.75- 2.33	1.96	1.90	1.20- 1.40	1.29	1.20	66	63
Apr.-June	1.45- 2.33	1.87	1.60	1.18- 1.26	1.22	1.18	65	74
July-Sept	1.62- 2.24	1.90	1.81	1.26- 1.60	1.48	1/ 1.26	78	70
Oct.-Dec.	1.62- 2.24	1.98	1.83	1.09- 1.60	1.35	1/ 1.10	68	60

1/ Based on data submitted by a single firm.

Source: Compiled from data submitted by 6 domestic producers and 8 importers in response to questionnaires of the U.S. International Trade Commission.

Table 19.--Ranges, arithmetic averages, and weighted averages of lowest net selling prices received by U.S. producers and importers from sales of stainless steel wire, type 316, 0.016-inch diameter to distributors or end users, 1971-73 and, by quarters, 1974 and 1975

Period	Domestic price			Imported price 1/	Ratio (percent) of import price to domestic price using--	
	Range	Arithmetic average	Weighted average		Arithmetic average	Weighted average
1971	$1.65-$2.60	$2.05	$2.00	-	-	-
1972	1.55- 2.14	1.77	1.95	-	-	-
1973	1.57- 2.14	1.77	1/ 2.14	154	87	72
1974:						
Jan.-Mar.	1.61- 2.54	1.98	2.54	-	-	-
Apr.-June	2.35- 2.95	2.44	2.51	-	-	-
July-Sept	2.63- 3.04	2.88	2.99	242	84	81
Oct.-Dec.	2.95- 3.14	3.02	3.09	-	-	-
1975:						
Jan.-Mar.	2.44- 2.95	2.65	1/ 2.95	-	-	-
Apr.-June	2.30- 2.95	2.56	1/ 2.95	-	-	-
July-Sept	2.30- 2.95	2.56	1/ 2.95	-	-	-
Oct.-Dec.	2.30- 2.95	2.56	1/ 2.95	-	-	-

1/ Based on data submitted by a single firm.

Source: Compiled from data submitted by domestic producers and 1 importer in response to questionnaires of the U.S. International Trade Commission.

Table 20.--Ranges, arithmetic averages, and weighted averages of lowest net selling prices received by U.S. producers and importers from sales of stainless steel wire, type 302, 0.010 inch-diameter, to distributors or end users, 1971-73 and, by quarters, 1974 and 1975

Period	Domestic price			Import price			Ratio (percent) of import price to domestic price using--	
	Range	Arithmetic average	Weighted average	Range	Arithmetic average	Weighted average	Arithmetic average	Weighted average
1971	$1.57-$2.33	$1.82	$1.67	$1.35-$1.58	$1.47	$1.57	81	94
1972	1.47- 2.33	1.74	1.56	1.30- 1.58	1.44	1.58	83	101
1973	1.50- 2.33	1.83	1.66	1.32- 1.82	1.57	1.82	86	110
1974:								
Jan.-Mar.	1.96- 2.60	2.26	2.14	1.47- 2.80	2.14	2.80	95	131
Apr.-June	2.00- 2.60	2.37	2.28	1.47- 2.83	2.15	2.82	91	124
July-Sept	2.07- 2.93	2.63	2.64	2.47- 3.12	2.30	3.02	88	114
Oct.-Dec.	2.47- 3.06	2.81	2.84	2.38- 3.48	2.93	3.45	104	121
1975:								
Jan.-Mar.	2.70- 3.46	2.93	2.83	2.14- 3.60	2.87	3.59	98	127
Apr.-June	2.35- 3.46	2.81	2.76	1/ 3.60	3.60	3.60	128	130
July-Sept	2.62- 3.06	2.86	2.83	1/ 3.53	3.53	3.53	123	125
Oct.-Dec.	2.36- 3.06	2.73	2.78	2.31- 3.61	2.96	3.56	108	128

1/ Based on data submitted by a single firm.

Source: Compiled from data submitted by 8 domestic producers and 2 importers in response to questionnaires of the U.S. International Trade Commission.

Table 21.--Wholesale price index for stainless steel wire, type 302, 0.125-inch diameter in coils, base quantity, mill to user, f.o.b. mill, annual average 1959-75 and, by months, 1959-75

(1967=100)

Year	Annual average	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1959	96.6	96.2	96.6	96.6	96.6	96.6	96.6	96.6	96.6	96.6	96.6	96.6	96.6
1960	96.6	96.6	96.6	96.6	96.6	96.6	96.6	96.6	96.6	96.6	96.6	96.6	96.6
1961	96.6	96.6	96.6	96.6	96.6	96.6	96.6	96.6	96.6	96.6	96.6	96.6	96.6
1962	96.7	96.7	96.7	96.7	96.7	96.7	96.7	96.7	96.7	96.7	96.7	96.7	96.7
1963	96.7	96.7	96.7	96.7	96.7	96.7	96.7	96.7	96.7	96.7	96.7	96.7	96.7
1964	96.7	96.7	96.7	96.7	96.7	96.7	96.7	96.7	96.7	96.7	96.7	96.7	96.7
1965	98.8	96.7	96.7	96.7	96.7	99.3	99.9	99.9	99.9	99.9	99.9	99.9	99.9
1966	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9
1967	100.0	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	100.1	100.6	100.6
1968	101.4	100.6	100.6	100.6	100.6	100.6	100.6	100.6	101.0	103.0	103.0	103.0	103.0
1969	109.5	103.8	105.3	105.2	105.1	105.1	107.8	107.8	108.1	109.5	118.8	118.8	118.8
1970	122.0	122.0	122.0	122.0	122.0	122.0	122.0	122.0	122.0	122.0	122.0	122.0	122.0
1971	125.2	122.0	122.0	122.0	122.0	122.0	127.4	127.4	127.4	127.4	127.4	127.4	127.4
1972	130.0	127.4	127.4	127.4	128.0	130.6	131.3	131.3	131.3	131.3	131.3	131.3	131.3
1973	137.6	131.3	131.3	131.3	137.1	138.6	140.1	140.1	140.2	140.7	140.2	140.2	140.2
1974	155.2	141.5	143.4	149.0	149.0	151.6	154.1	154.6	163.5	163.5	163.5	163.5	164.7
1975	168.4	167.1	167.5	167.1	167.5	166.3	166.3	166.3	166.3	166.3	173.5	173.5	173.5

Source: Official statistics of the U.S. Bureau of Labor Statistics.

Table 22.--Profit-and-loss experience of 12 U.S. producers of stainless steel wire on their overall establishment operations and their operations on stainless steel wire, 1971-75

Year	Net sales	Cost of goods sold	Gross profit	General, selling, and administrative expense	Net operating profit or (loss)	Ratio of net operating profit or (loss) to net sales
	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	Percent
Overall establishment operation:						
1971	657,203	564,291	92,912	76,901	16,011	2.4
1972	778,513	650,776	127,737	78,000	49,737	6.4
1973	1,057,090	880,854	176,236	93,161	83,075	7.9
1974	1,362,373	1,110,652	251,721	105,958	145,763	10.7
1975	1,068,744	880,945	187,799	99,258	88,541	8.3
Operations on stainless steel wire						
1971	76,859	67,600	9,259	12,686	(3,427)	(4.5)
1972	88,332	74,485	13,847	13,085	762	.9
1973	114,710	91,643	23,067	16,434	6,633	5.8
1974	159,453	121,679	37,774	18,579	19,195	12.0
1975	98,549	75,681	22,868	14,787	8,081	8.2

Source: Compiled from data submitted to the U.S. International Trade Commission by domestic producers.

Table 23.--Capital expenditures and research and development expenses incurred in connection with the operations on stainless steel wire, 1971-75

(In thousands of dollars)

Year	Capital expenditures						Research and development expenses
	Total	Land and land improvements	Building and leasehold improvements	Machinery and equipment		Other	
				New	Used		
1971	5,757	126	722	4,764	108	37	1,408
1972	2,456	34	430	1,596	47	349	1,350
1973	4,149	58	362	2,958	99	672	1,476
1974	4,911	24	663	3,570	131	523	1,845
1975	4,512	116	658	3,369	260	109	1,480

Source: Compiled from data submitted to the U.S. International Trade Commission by domestic producers.

Table 24.--Stainless steel wire rope: U.S. imports for consumption, by principal sources, 1968-75

Country	1968	1969	1970	1971	1972	1973	1974	1975
	Quantity (pounds)							
Japan	360,300	334,537	667,930	644,735	1,255,546	848,852	1,087,178	538,804
France	31,439	20,364	339	-	5,752	44,120	195,083	146,251
Canada	2,241	31,301	1,236	282	2,193	11,466	140,138	475
West Germany	69,509	186,280	63,832	79,589	114,741	78,793	92,948	3,999
Other	105,995	42,372	93,817	98,836	98,373	202,456	73,486	101,163
Total	569,484	614,854	827,154	823,442	1,476,605	1,185,687	1,588,833	790,692
	Value							
Japan	$492,808	$336,954	$680,564	$782,939	$1,177,253	$1,141,069	$2,075,232	$983,636
France	37,031	22,504	1,505	-	6,087	95,780	316,151	241,654
Canada	1,170	5,646	2,390	556	4,629	18,386	48,607	822
West Germany	75,843	129,810	78,981	84,553	123,998	124,938	156,030	12,681
Other	122,668	43,222	64,815	53,845	88,595	186,939	155,365	153,063
Total	729,520	538,136	828,255	921,893	1,400,562	1,567,112	2,751,385	1,391,856
	Average unit value (per pound)							
Japan	$1.37	$1.01	$1.02	$1.21	$0.94	$1.34	$1.91	$1.83
France	1.18	1.11	4.44	-	1.06	2.17	1.62	1.65
Canada	.52	.18	1.93	1.97	2.11	1.60	.35	1.73
West Germany	1.09	.70	1.24	1.06	1.08	1.59	1.68	3.17
Other	1.16	1.02	.69	.54	.90	.92	2.11	1.51
Average	1.28	.88	1.00	1.12	.95	1.32	1.73	1.76

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

Table 25.--Stainless steel wire cloth: U.S. imports for consumption, by principal sources, 1968-75

Country	1968	1969	1970	1971	1972	1973	1974	1975
	Quantity (1,000 square feet)							
Japan	4,488	5,920	6,768	7,518	9,410	12,217	15,061	10,005
Belgium	-	5	152	1	-	80	27	-
West Germany	1,976	1,954	2,255	2,272	2,866	4,086	3,885	2,535
Netherlands	198	151	77	299	260	277	363	127
Canada	13	1	30	5	29	173	104	19
Switzerland	551	413	516	519	537	818	992	357
France	24	14	16	10	2	75	196	48
Other	130	190	231	240	315	1,414	1,189	966
Total	7,380	8,648	10,045	10,864	13,419	19,140	21,817	14,057
	Value (1,000 dollars)							
Japan	1,636	2,070	2,684	3,157	3,550	5,947	10,357	7,773
Belgium	-	4	13	1	-	17	10	-
West Germany	1,456	1,558	1,836	1,648	2,595	4,088	4,899	3,673
Netherlands	123	103	71	191	211	235	386	188
Canada	16	1	28	7	16	52	167	42
Switzerland	478	409	509	444	518	794	1,259	371
France	27	9	14	7	12	99	149	68
Other	129	230	274	241	322	1,031	1,060	1,398
Total	3,865	4,384	5,429	5,696	7,224	12,263	18,287	13,513
	Average unit value (per square foot)							
Japan	$0.36	$0.35	$0.40	$0.42	$0.38	$0.49	$0.69	$0.78
Belgium	-	.80	.09	1.00	-	.21	.37	-
West Germany	.74	.80	.81	.73	.91	1.00	1.26	1.45
Netherlands	.62	.68	.92	.64	.81	.85	1.06	1.48
Canada	1.23	1.00	.93	1.40	.90	.30	1.61	2.21
Switzerland	.87	.99	.99	.86	.55	.97	1.27	1.04
France	1.13	.64	.88	.70	6.00	1.32	.76	1.42
Other	.99	1.21	1.19	1.00	1.02	.73	.89	1.45
Average	.52	.51	.54	.52	.54	.64	.84	.96

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

Table 26.--Bolts, nuts, and screws of stainless steel: U.S. shipments of imported fasteners, by types of steel, 1969-74, January-June 1974, and January-June 1975

Period	U.S. shipments
	Quantity (1,000 pounds)
1969	5,650
1970	6,400
1971	4,634
1972	3,970
1973	5,870
1974	6,606
January-June	
1974	2,740
1975	2,787
	Value (1,000 dollars)
1969	5,469
1970	8,864
1971	6,467
1972	7,567
1973	12,950
1974	20,735
January-June	
1974	7,979
1975	10,122

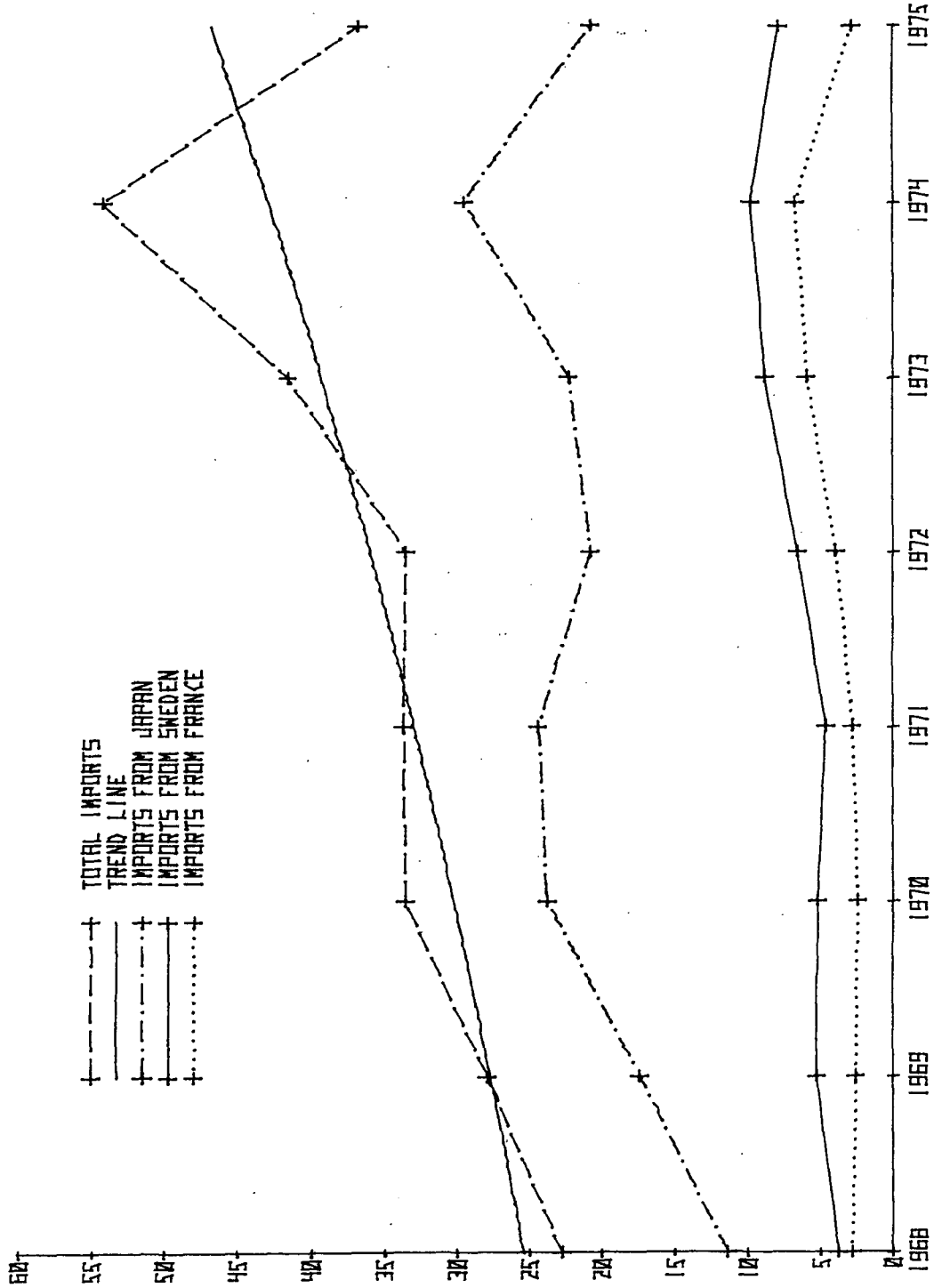
Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Note.--Data was estimated by the staff of the U.S. International Trade Commission from responses to Commission questionnaires from U.S. importers which accounted for approximately 75 percent of all imported fasteners in terms of quantity and 60 percent in terms of value.

APPENDIX B

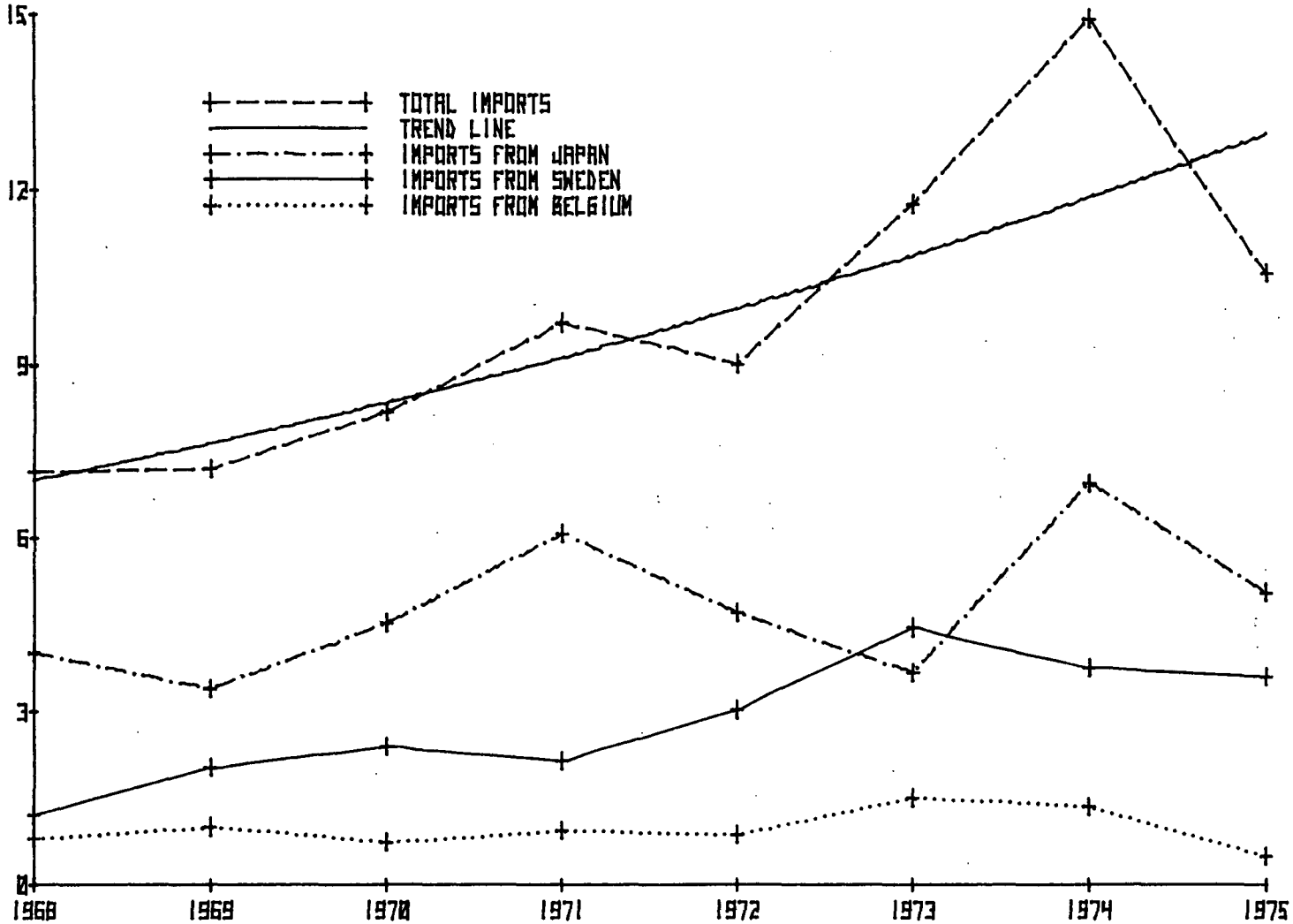
FIGURES

FIGURE 1.--U.S. IMPORTS OF STAINLESS STEEL WIRE, 1968-75.



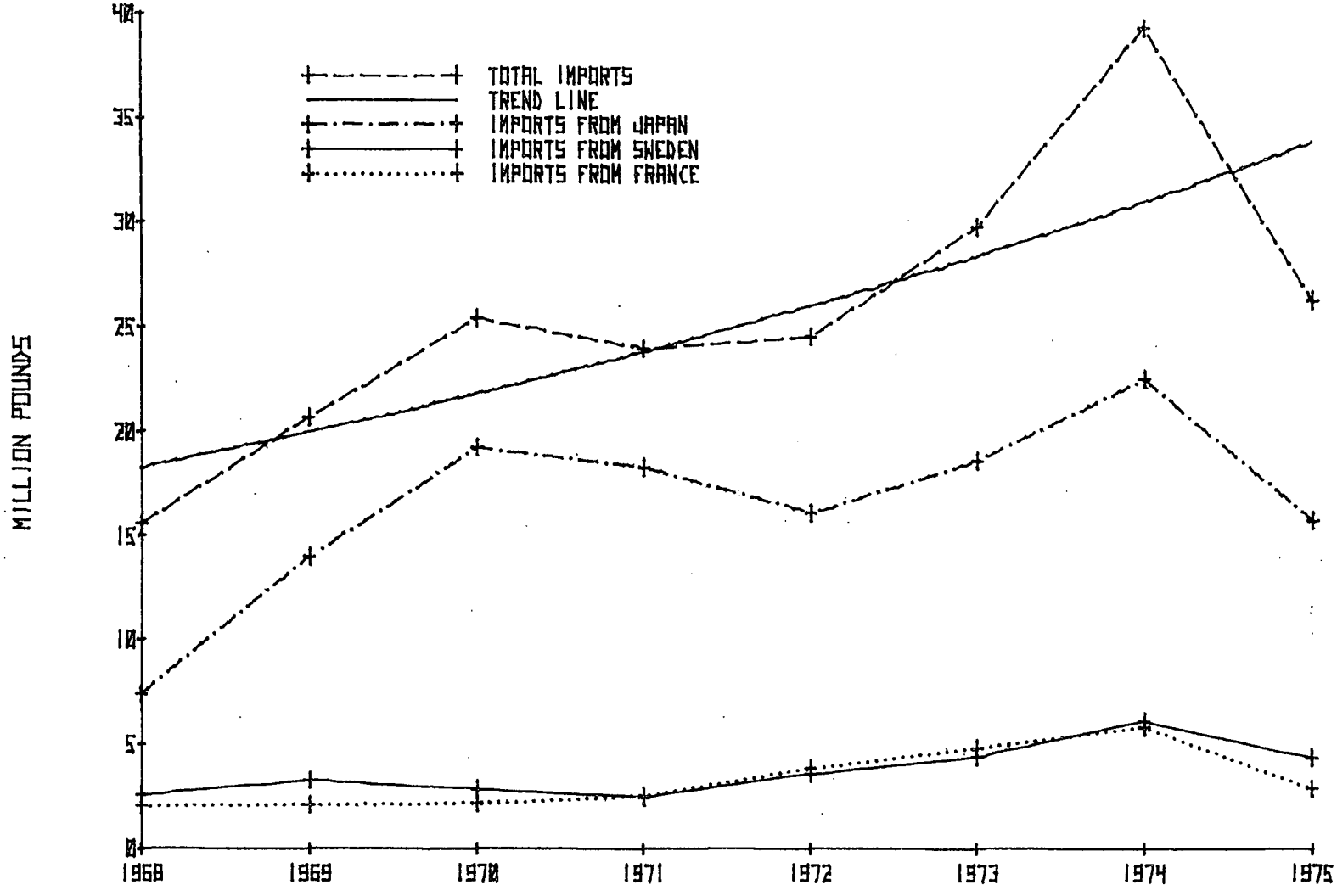
SOURCE: COMPILED FROM OFFICIAL STATISTICS OF THE U.S. DEPARTMENT OF COMMERCE.

FIGURE 2.--U.S. IMPORTS OF STAINLESS STEEL WIRE LESS THAN 0.060 INCH IN DIAMETER (TSUSA NO. 609.4510), 1968-75.



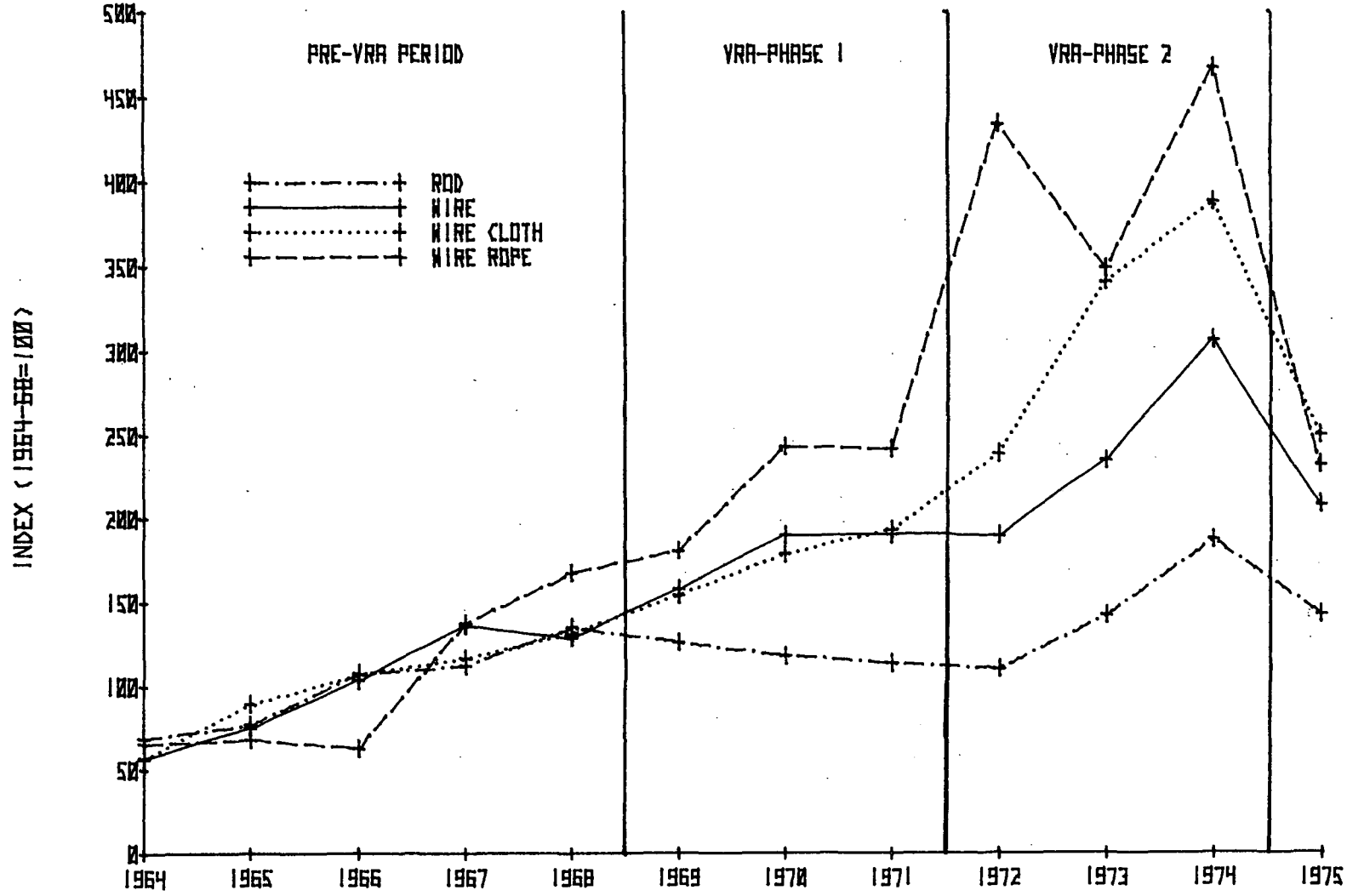
SOURCE: COMPILED FROM OFFICIAL STATISTICS OF THE U.S. DEPARTMENT OF COMMERCE.

FIGURE 3.--U.S. IMPORTS OF STAINLESS STEEL WIRE 0.060 INCH OR GREATER IN DIAMETER (TSUSA NO. 609.4540), 1968-75.



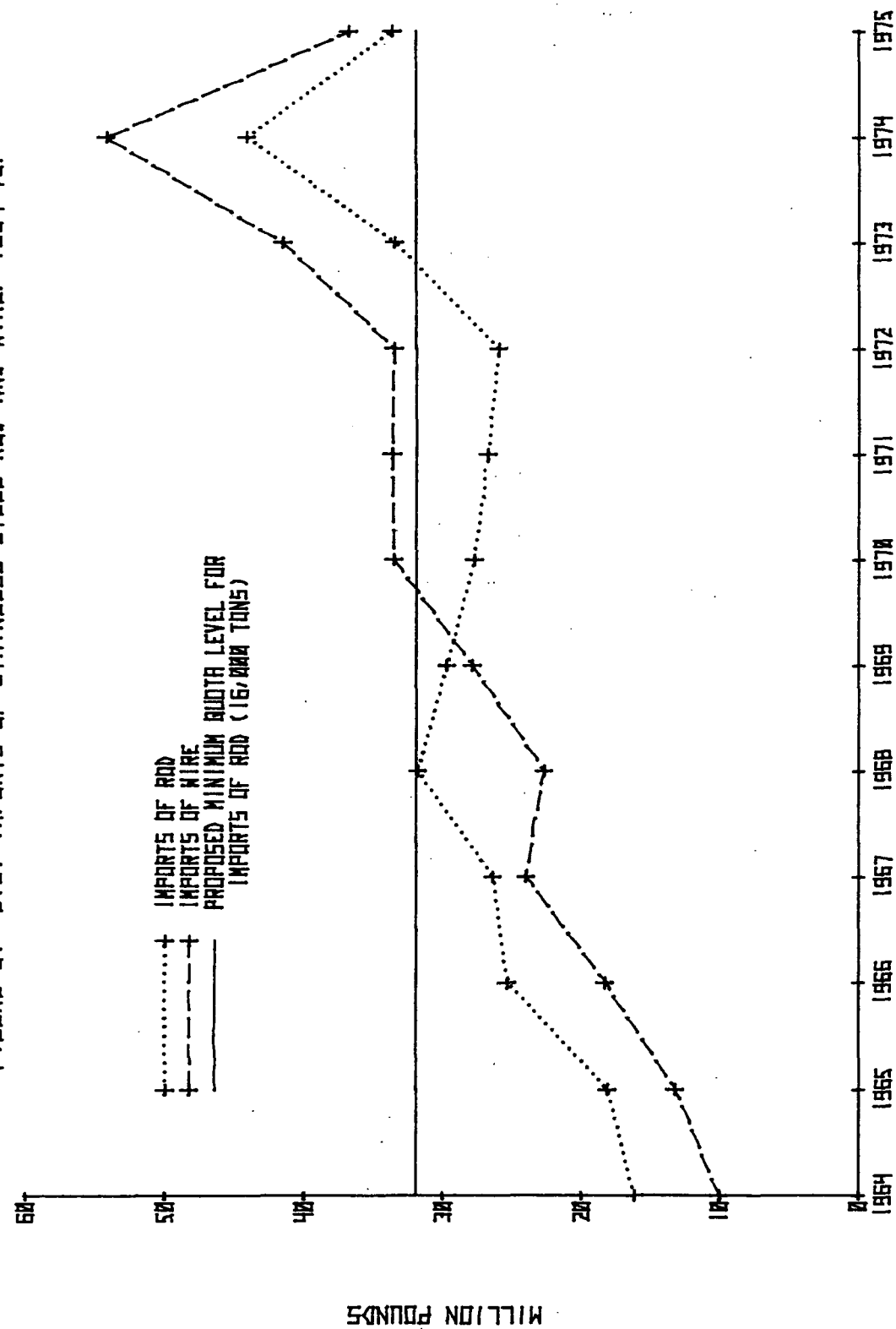
SOURCE: COMPILED FROM OFFICIAL STATISTICS OF THE U.S. DEPARTMENT OF COMMERCE.

FIGURE 4.--INDEXES OF U.S. IMPORTS OF STAINLESS STEEL ROD, WIRE, WIRE CLOTH, AND WIRE ROPE, 1964-75.



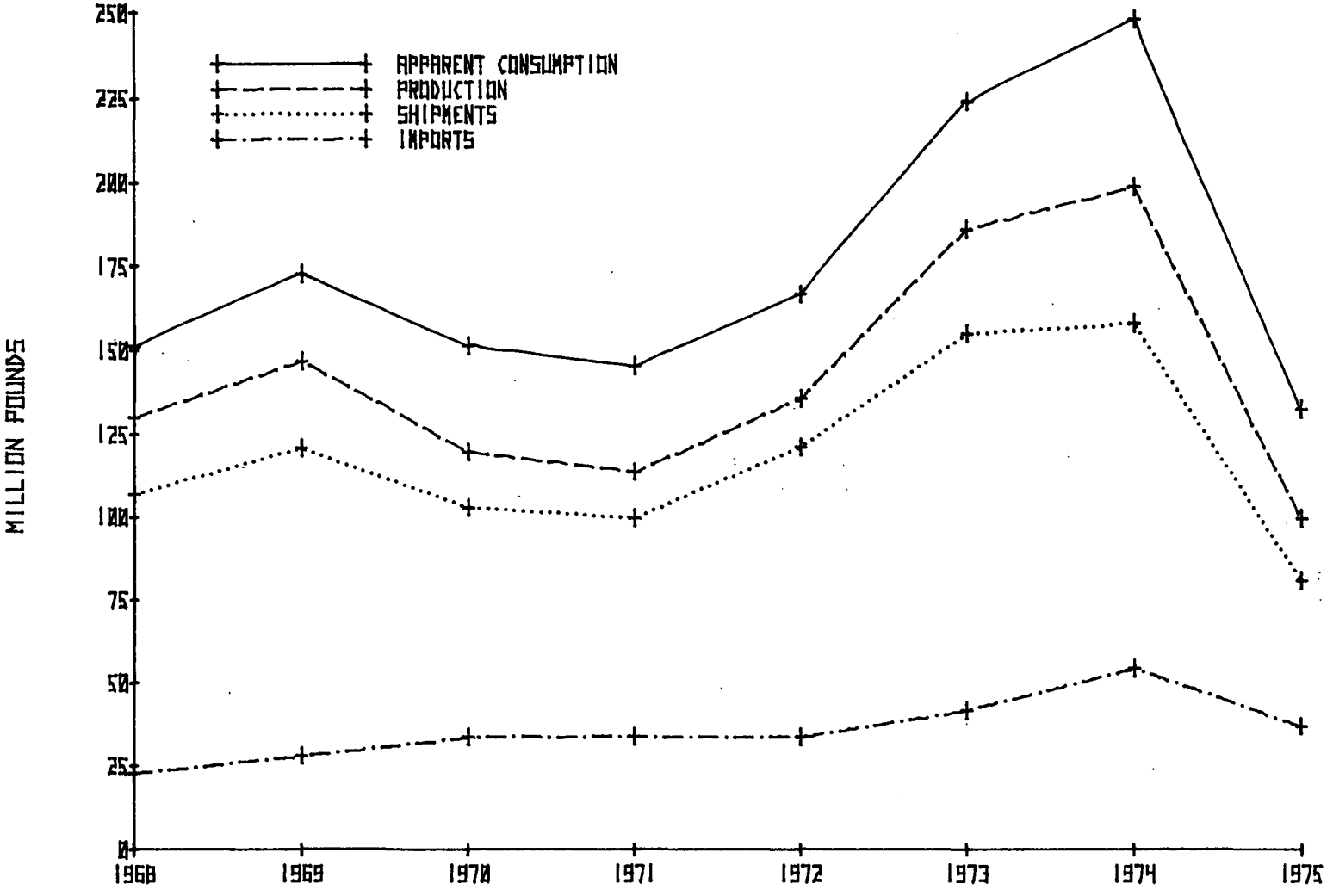
SOURCE: COMPILED FROM OFFICIAL STATISTICS OF THE U.S. DEPARTMENT OF COMMERCE.

FIGURE 5.--U.S. IMPORTS OF STAINLESS STEEL ROD AND WIRE, 1964-75.



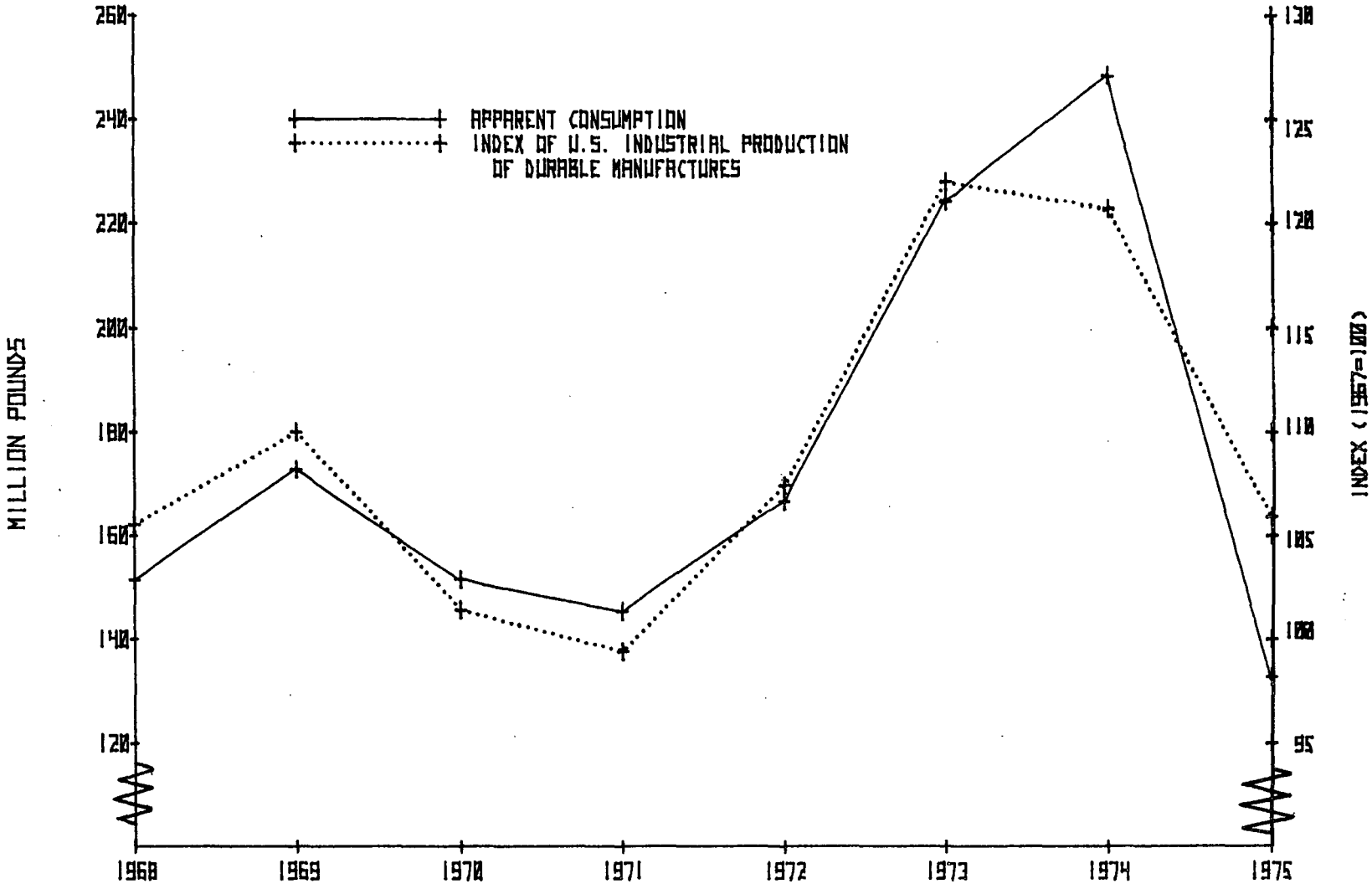
SOURCE: COMPILED FROM OFFICIAL STATISTICS OF THE U.S. DEPARTMENT OF COMMERCE.

FIGURE 6.--STAINLESS STEEL WIRE: U.S. PRODUCTION, SHIPMENTS, IMPORTS, AND APPARENT CONSUMPTION, 1968-75.



SOURCE: IMPORTS FROM OFFICIAL STATISTICS OF THE U.S. DEPARTMENT OF COMMERCE; PRODUCTION DERIVED FROM RAW MATERIAL CONSUMPTION; OTHER DATA FROM RESPONSES TO QUESTIONNAIRES OF THE U.S. INTERNATIONAL TRADE COMMISSION.

FIGURE 7.--APPARENT U.S. CONSUMPTION OF STAINLESS STEEL WIRE AND INDEX OF U.S. INDUSTRIAL PRODUCTION OF DURABLE MANUFACTURES, 1968-75.



SOURCE: CONSUMPTION FROM TABLE 1 OF THIS REPORT; INDUSTRIAL PRODUCTION INDEX FROM OFFICIAL STATISTICS OF THE FEDERAL RESERVE BOARD.

APPENDIX C

REGRESSION ANALYSIS

In order to empirically assess the relative importance of the various factors mentioned previously (p. A-19) as contributing to increased U.S. imports of stainless steel wire, a multiple regression analysis was performed using quarterly time series data for the 1968-75 period. The basic equation used in this analysis is one frequently employed in estimating disaggregated import demand functions. Its use in the logarithmic form is the most convenient method of estimating elasticities, as the resulting coefficients (b_1, b_2, and so forth) are the elasticity estimates. The equation is specified as--

$$\log Q_m = b_o + b_1 \log P_m + b_2 \log P_d + b_3 \log A$$

where Q is the quantity of imports, P_m is the import price, P_d is the domestic price, and A is an "activity" variable. 1/ In this analysis, A was the index of U.S. industrial production of durable manufactures; P_d, the BLS wholesale price index for stainless steel wire; and P_m, an index of the average unit value of U.S. imports of stainless steel wire. Q_m, U.S. imports of stainless steel wire, was lagged one quarter in order to allow a reasonable average lead time for delivery to the United States.

The results of the regression were generally satisfactory from a statistical point of view. The estimated elasticity coefficients

---

1/ This equation, unlike the perhaps more commonly used alternative that uses relative prices (P_m/P_d) as a single explanatory variable, has the advantage of permitting direct estimation of the separate effects on import demand of domestic and import prices. Both specifications were, in fact, run experimentally, but the results using relative prices were less satisfactory statistically, and are not shown here.

obtained and their corresponding "t" values (in parentheses) were--

$$\log Q_m = -9.123 - 1.346 \log P_m + 2.977 \log P_d + 1.978 \log A$$
$$(-4.033) \quad (-4.488) \quad (5.750) \quad (4.404)$$

All of the elasticity coefficients had the anticipated signs, and all were statistically highly significant. The value obtained for R^2 was 0.734, indicating that some 73 percent of the variation in quarterly imports during 1968-75 was accounted for by the explanatory variables; the Durbin-Watson statistic was 1.38, indecisive in testing for auto-correlation in the residuals.

Variants of the above equation using dummy variables for the dock strikes and the VRA added little to the overall explanatory power of the basic specification. Although the dummy variables had the anticipated signs, they were not statistically significant (at the 95-percent-confidence level) and were not included in obtaining the above results. Thus, while the dock strikes apparently acted as a deterrent and the VRA as a stimulus, little can be confidently said about the degree to which U.S. imports of stainless steel wire responded to these influences.

The table on the following page shows imports of stainless steel wire and indexes, by the variables used in the analysis, for 1968-75.

Stainless steel wire: U.S. imports (Qm), index of the average unit value of imports (Pm), wholesale price index (Pd), and index of U.S. production of durable manufactures(s) by quarters, 1968-75

Period	Qm	Indexes (1967=100)		
		P_m	P_d	A
	1,000 pounds			
1968:				
January-March	6,885	90.3	100.6	102.9
April-June	5,055	113.4	100.6	105.2
July-September	5,763	98.3	101.5	100.8
October-December	5,045	125.2	103.0	105.9
1969:				
January-March	3,877	117.0	104.8	110.3
April-June	8,015	112.3	106.0	111.9
July-September	7,209	100.8	108.5	108.0
October-December	8,810	105.4	118.8	109.8
1970:				
January-March	9,556	113.0	122.0	104.7
April-June	8,525	116.3	122.0	105.4
July-September	7,157	123.9	122.0	99.6
October-December	8,347	117.7	122.0	96.0
1971:				
January-March	8,042	125.9	122.0	99.5
April-June	7,711	132.1	123.8	102.1
July-September	9,486	119.7	127.4	96.3
October-December	8,457	118.3	127.4	99.8
1972:				
January-March	9,614	137.2	127.4	102.8
April-June	6,873	138.3	130.0	108.2
July-September	7,945	124.3	131.3	105.7
October-December	9,123	127.7	131.3	114.3
1973:				
January-March	10,106	134.8	131.3	119.5
April-June	10,578	148.1	138.6	123.8
July-September	10,752	149.2	140.2	121.0
October-December	10,112	167.5	140.2	123.8
1974:				
January-March	10,936	170.6	144.6	120.8
April-June	12,658	177.3	151.6	124.2
July-September	13,269	193.7	160.5	120.4
October-December	17,326	211.5	163.9	117.2
1975:				
January-March	14,997	227.3	167.1	106.0
April-June	9,439	242.4	166.7	105.3
July-September	6,184	252.7	166.3	104.0
October-December	6,212	243.1	173.5	108.5

Source: Qm and Pm compiled from official statistics of the U.S. Department of Commerce; Pd compiled from official statistics of the U.S. Bureau of Labor Statistics; A compiled from official statistics of the Federal Reserve Board.

Library Cataloging Data

U.S. International Trade Commission.
Round stainless steel wire. Report to the President on investigation no. TA-201-13 under section 201 of the Trade act of 1974. Washington, 1976.

22, A1-93 p. 27 cm. (USITC Pub. 779)

1. Wire--U.S. 2. Wire--Tariff--U.S.
I. Title.

UNITED STATES
INTERNATIONAL TRADE COMMISSION
WASHINGTON, D.C. 20436

OFFICIAL BUSINESS

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