ANNUAL SURVEY ON CERTAIN STAINLESS STEEL AND ALLOY TOOL STEEL (COVERING ANNUAL 1986, AND QUARTERLY AND ANNUAL 1987)

Report to the President on Investigation No. 332-167 Under Section 332 of the Tariff Act of 1930

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NOTICE

The whole of the Commission's report to the President may not be made public since it contains certain information that has been classified by the United States Trade Representative or 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 (as indicated by asterisks).

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HIGHLIGHTS

- o U.S. PRODUCERS' CAPACITY increased by 5 percent from 1,779,685 tons in 1986 to 1,861,104 tons in 1987.
- o DOMESTIC PRODUCTION of the stainless steel and alloy tool steel products covered by the investigation increased by 24 percent from 1.1 million tons in 1986 to 1.3 million tons in 1987; increases occurred in all product categories.
- o U.S. PRODUCERS' SHIPMENTS rose by 24 percent from 1.1 million tons in 1986 to 1.3 million tons in 1987.
- o AVERAGE EMPLOYMENT of production and related workers increased by 4 percent from 12,196 workers in 1986 to 12,680 workers in 1987.
- o U.S. PRODUCERS' UNFILLED ORDERS more than doubled, rising from 200,656 tons on December 31, 1986 to 413,707 tons on December 31, 1987.
- o U.S. PRODUCERS' END-OF-PERIOD INVENTORIES increased by 10 percent from 265,653 tons on December 31, 1986 to 292,005 tons on December 31, 1987.
- o U.S. PRODUCERS' SALES increased by 17 percent from $3.24 billion during 1986 to $3.79 billion during 1987, while NET PROFIT BEFORE TAXES rose to $257.9 million during 1987 compared to $164.5 million during 1986.
- o U.S. CAPITAL EXPENDITURES were $105 million in 1986 and declined to $77 million in 1987. Similar projections of capital expenditures for 1987 made by respondents early in each year during the period 1984-87 show a distinct downward trend in projected spending.
- o U.S. EXPENDITURES ON RESEARCH AND DEVELOPMENT were $34.1 million in 1986 and decreased to $33.6 million in 1987. These expenditures are expected by producers to remain relatively stable in 1988-89.

U.S. Producers' Capacity

Data on producers' capacity indicate an increase in the total capacity for operations producing the stainless steel and alloy tool steel products subject to investigation between 1986 and 1987. The capacity increase was accounted for principally by increased capacity in the stainless steel flat-rolled products sector, which experienced strong demand in 1987.

U.S. Production and Producers' Shipments

U.S. production of the stainless steel and alloy tool steel products covered by the investigation increased overall from 1986 to 1987. There were production and shipment increases in all product categories, partly reflecting

increased domestic demand from automobile and appliance manufacturers. Growing demand for stainless steel flat-rolled products, in particular, has resulted from the increased use of stainless products in the maintenance and upgrading of chemical plants built during the 1960's, and the wider use of stainless equipment in the pulp and paper industry.

Employment and Hours Worked

The average number of all persons employed in producing the subject stainless steel and alloy tool steel products increased from 18,556 persons to 19,584 persons, or by 6 percent, from 1986 to 1987. Employment of production and related workers rose from 12,196 workers to 12,680 workers, or by 4 percent, over the same period. These increases in employment reflect the rise in production levels. The number of hours worked by production and related workers increased by 9 percent during the period.

U.S. Producers' Unfilled Orders and Inventories

Data on producers' unfilled orders indicate increases in such orders for all products between December 31, 1986 and December 31, 1987. The growth in unfilled orders follows the expansion in demand for these products. Data on inventories show increasing inventories for all product categories except stainless plate between December 31, 1986 and December 31, 1987. The changes in inventories generally paralleled those in shipments.

U.S. Producers' Sales and Net Profit Before Taxes

Reflecting the increase in quantity shipped in 1987 compared with 1986, sales value rose for each of the products during this period. The sales increase led to increased net profits before taxes on overall operations as well as on stainless plate, stainless sheet and strip, and alloy tool steel operations. Stainless bar and wire rod producers narrowed net losses on operations during 1986-87.

U.S. Capital Expenditures

Data on capital expenditures indicate that these expenditures declined between 1986 and 1987 principally because of decreased spending for machinery, equipment, and fixtures. Capital expenditures for the production of each of the product categories exhibited decreases in 1987. The bulk of spending was for additional finishing equipment, and improvements to melting equipment, rolling mills, and annealing, pickling, and coating facilities. Capital expenditures are principally designed to lower costs and increase productivity, according to questionnaire responses, in order to make specialty steel products more competitive both in domestic and foreign markets. Actual capital expenditures of $82.8 million in 1987 were about 10 percent less than the level of expenditures projected for 1987 by respondents to last year's

questionnaire. 1/ Postponement of project(s) due to insufficient time allocated in 1987 for completion, and a lack of funds due to lower than anticipated product prices and/or inadequate profits were the reasons most frequently given for the shortfall. Capital expenditures are projected to rise to $115 million in 1988 and decline to $90 million in 1989. Similar projections of capital expenditures for 1987 made by respondents early in each year during the period 1984-87 show a distinct downward trend in projected spending.

For 1987, capital expenditures ranged from 4 to 35 percent of cash flow in all product categories except stainless wire rod, for which cash flow was negative for the seventh consecutive year.

U.S. Research and Development Expenditures

U.S. expenditures on research and development for products subject to relief decreased between 1986 and 1987 as such spending for stainless plate, bar, and wire rod decreased, while spending for stainless sheets and strip and alloy tool steel increased in 1987. Actual research and development expenditures of $23.4 million were 34 percent below the $35.6 million projected for 1987. Such expenditures are projected to rise to about $34 million in each of 1988 and 1989. Most research and development expenditures have been made, and will be made, for the production of new and improved products, including stainless grades for automotive use, and for the development of improved production processes.

In 1987, research and development expenditures as a share of net sales decreased for each of the product categories from that reported in 1986.

Modifications in Specialty Steel Import Relief

Presidential Proclamation 5074 of July 19, 1983, provided for the temporary imposition of increased tariffs and quantitative restrictions on certain stainless and alloy tool steel imported into the United States. On September 18, 1984, the President established a national policy for the steel industry and directed the U.S. Trade Representative to coordinate and direct the implementation of that policy, including the negotiation of new arrangements and the reaffirmation of existing measures limiting steel exports to the United States, such as those applicable to specialty steel. Pursuant to this, the U.S. Trade Representative concluded voluntary restraint agreements (VRA's) with 19 countries and the EC, 2/ which, among other provisions, replace the increased tariffs on imports of stainless steel

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1/ The questionnaire was for inv. No. TA-203-16, Stainless and Alloy Tool Steel.

2/ The countries with which agreements have been reached are Australia, Austria, Brazil, Czechoslovakia, the German Democratic Republic, Finland, Hungary, Japan, Mexico, People's Republic of China, Poland, Portugal, the Republic of Korea, Romania, South Africa, Spain, Trinidad and Tobago, Venezuela, Yugoslavia, and the European Communities (Belgium, Denmark, France, Greece, Ireland, Italy, Luxembourg, the Netherlands, the United Kingdom, and West Germany).

sheets, strip, and plate with quotas. 1/ However, the additional tariffs remain in effect on imports of stainless sheets, strip, and plate from countries which have not participated in import restraint agreements. In addition, the EC countries were removed from the quantitative restrictions imposed on the non-flat-rolled specialty products (i.e., bar, wire rod, and alloy tool steel) and appropriate reductions in the quota quantities were made for the foregoing items.

On July 16, 1987, the President announced his decision to extend import relief as provided for under Proclamation 5074, and as subsequently modified. This followed an investigation under Section 203 of the Trade Act of 1974 in which the U.S. International Trade Commission majority advised the President that termination of the import relief program for stainless steel sheet and strip, and stainless steel plate would not have an adverse economic effect on the industries producing these products, assuming the continued administration of the VRA's at present levels. The Commission majority also advised that termination of the import relief program would have an adverse effect on the industries producing stainless steel bar, stainless steel wire rod, and alloy tool steel. The import relief was extended in the form previously in effect for a period from July 20, 1987 through September 30, 1989, "in order to provide time for the specialty steel industry to complete important investment projects, improve productivity, and regain profitability." The form of the extended relief is as follows: for the flat-rolled products (stainless steel sheets and strip and stainless steel plate), tariffs will be decreased from 3 percent ad valorem in the first year, to 2 percent ad valorem in the second year, and to 1 percent in the final period (July 20, 1989, to September 30, 1989). "In recognition of the weaker competitive position of the stainless steel bar, rod, and alloy tool steel sectors," the President proclaimed an extension of global quotas for these products. 2/ The extension of relief will not affect the limits on imports of specialty steel products under the VRA's.

1/ The exception to this is Finland, whose VRA does not include stainless steel flat-rolled products.

2/ The extended import relief is provided for under Presidential Proclamation 5679.

Table 1.--Certain stainless steel and alloy tool steel: U.S. producers' capacity, by products, 1986-87

(In short tons)

Item	1986	1987
Raw steel capacity for all operations producing stainless steel and/or alloy tool steel products 1/	2,665,895	2,674,855
Certain stainless steel and alloy tool steel products 2/	1,779,685	1,861,104
Stainless steel plate 2/	190,400	213,900
Stainless steel sheets and strip 2/	1,094,100	1,159,222
Stainless steel bar 2/	240,176	222,076
Stainless steel wire rod 2/ 3/	59,400	75,320
Alloy tool steel, all forms 2/	195,609	190,586

1/ Melt capacity.
2/ Finishing capacity.
3/ The increase in stainless wire rod capacity in 1987 resulted from capacity expansion by existing producers as well as from the entry of a new rod producer in that year.

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

Table 2.--Certain stainless steel and alloy tool steel: U.S. production by products, 1986-87

(In short tons)

Item	1986	1987
Certain stainless steel and alloy tool steel products	1,062,875	1,321,385
Stainless steel plate	126,208	187,493
Stainless steel sheets and strip	700,585	845,586
Stainless steel bar	128,684	159,327
Stainless steel wire rod	38,841	48,849
Alloy tool steel, all forms	68,557	80,130

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

Table 3.--Certain stainless steel and alloy tool steel: U.S. producers' shipments, by products, 1986-87

(In short tons)

Item	1986	1987
Certain stainless steel and alloy tool steel products	1,060,337	1,308,995
Stainless steel plate	129,470	184,781
Stainless steel sheets and strip	698,579	862,279
Stainless steel bar	123,857	141,965
Stainless steel wire rod	37,663	46,702
Alloy tool steel, all forms	70,768	73,268

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

Table 4.--Certain stainless steel and alloy tool steel: Average number of all persons employed in U.S. establishments in which certain stainless steel and alloy tool steel products are produced, by products, 1986-87

Item	1986	1987
Certain stainless steel and alloy tool steel products	18,556	19,584
Stainless steel plate	1,659	1,825
Stainless steel sheets and strip	7,065	8,330
Stainless steel bar	5,079	4,759
Stainless steel wire rod	999	1,118
Alloy tool steel, all forms	3,754	3,552

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

Table 5.--Certain stainless steel and alloy tool steel: Average number of production and related workers employed in U.S. establishments in which certain stainless steel and alloy tool steel products are produced, by products, 1986-87

Item	1986	1987
Certain stainless steel and alloy tool steel products	12,196	12,680
Stainless steel plate	1,306	1,416
Stainless steel sheets and strip	3,901	4,726
Stainless steel bar	3,606	3,253
Stainless steel wire rod	658	733
Alloy tool steel, all forms	2,725	2,552

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

Table 6.--Certain stainless steel and alloy tool steel: Number of man-hours worked by production and related workers in U.S. establishments in which certain stainless steel and alloy tool steel products are produced, by products, 1986-87

Item	1986	1987
Certain stainless steel and alloy tool steel products	24,574,340	26,829,385
Stainless steel plate	2,503,397	3,144,899
Stainless steel sheets and strip	7,989,888	9,794,351
Stainless steel bar	7,408,052	7,079,595
Stainless steel wire rod	1,287,000	1,563,996
Alloy tool steel, all forms	5,386,003	5,246,544

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

Table 7.--Certain stainless steel and alloy tool steel: U.S. producers' unfilled orders, by products, by specified periods, 1986 and 1987

(In short tons)

Period	Stainless steel plate	Stainless steel sheets and strip	Stainless steel bar	Stainless steel wire rod	Alloy tool steel, all forms	All products subject to investigation
1986:						
Dec. 31	14,058	141,460	22,062	16,508	6,568	200,656
1987:						
March 31	19,534	198,964	21,822	17,830	7,680	265,830
June 30	20,983	237,575	24,648	17,848	7,913	308,967
Sept. 30	32,979	305,819	27,843	19,109	8,625	394,375
Dec. 31	38,087	310,022	32,511	24,276	8,811	413,707

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

Table 8.--Certain stainless steel and alloy tool steel: U.S. producers' end-of-period inventories, by products, by specified periods, 1986 and 1987

(In short tons)

Period	Stainless steel plate	Stainless steel sheets and strip	Stainless steel bar	Stainless steel wire rod	Alloy tool steel, all forms	All products subject to investigation
1986:						
Dec. 31	36,631	141,260	43,244	6,369	38,149	265,653
1987:						
March 31	33,688	144,423	43,386	6,988	41,202	269,687
June 30	34,712	147,434	45,349	5,374	39,730	272,599
Sept. 30	36,896	149,963	43,306	4,438	39,922	274,525
Dec. 31	33,253	160,080	48,493	8,256	41,923	292,005

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

Table 9.--Selected financial data of U.S. producers on their overall stainless steel and/or alloy tool steel operations, 1986-87, and by specified periods, 1987

(In thousands of dollars)

Line No.	Item	Year 1986	Jan-Mar. 1987	Apr-June 1987	July-Sept. 1987	Oct-Dec. 1987	Year 1987
	NET SALES:						
1	Excluding intracompany and intercompany transfers	3,147,031	855,019	898,217	894,631	985,864	3,633,731
2	Intracompany and intercompany transfers	91,389	29,052	40,104	39,224	45,922	154,302
3	Total net sales (lines 1 and 2)	3,238,420	884,071	938,321	933,855	1,031,786	3,788,033
4	COST OF GOODS SOLD (including intracompany and intercompany transfers)	2,713,252	723,885	773,790	773,867	881,590	3,153,132
5	GROSS PROFIT OR (LOSS) (line 3 less line 4)	525,168	160,186	164,531	159,988	150,196	634,901
6	GENERAL, SELLING, AND ADMINISTRATIVE EXPENSES	284,078	68,353	69,902	66,874	74,372	279,501
7	NET OPERATING PROFIT OR (LOSS) (line 5 less line 6)	241,090	91,833	94,630	93,114	75,824	355,400
	OTHER INCOME OR (EXPENSE):						
8	Net interest income or (expense)	(47,762)	(20,688)	(25,006)	(15,350)	(14,804)	(75,850)
9	All other income or (expense)	(28,828)	(14,344)	(2,904)	(2,902)	(1,520)	(21,670)
10	Total other income or (expense) (lines 8 and 9)	(76,597)	(35,032)	(27,910)	(18,252)	(16,324)	(97,520)
11	NET PROFIT OR (LOSS) BEFORE TAXES (line 7 plus line 10)	164,493	56,801	66,720	74,862	59,498	257,880
12	Depreciation and amortization	97,313	25,350	24,778	23,518	33,017	108,030

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

Table 10.--Selected financial data of U.S. producers on their stainless steel plate operations, 1986-87, and by specified periods, 1987

(In thousands of dollars)

Line No.	Item	Year 1986	Jan-Mar. 1987	Apr-June 1987	July-Sept. 1987	Oct-Dec. 1987	Year 1987
	NET SALES:						
1	Excluding intracompany and intercompany transfers	***	***	***	***	***	***
2	Intracompany and intercompany transfers	***	***	***	***	***	***
3	Total net sales (lines 1 and 2)	256,680	73,979	75,322	80,074	89,209	318,584
4	COST OF GOODS SOLD (including intracompany and intercompany transfers)	186,358	54,371	54,966	60,796	62,521	232,654
5	GROSS PROFIT OR (LOSS) (line 3 less line 4)	70,322	19,608	20,356	19,278	26,688	85,930
6	GENERAL, SELLING, AND ADMINISTRATIVE EXPENSES	56,649	11,964	12,703	11,467	17,542	53,676
7	NET OPERATING PROFIT OR (LOSS) (line 5 less line 6)	13,673	7,644	7,653	7,811	9,146	32,254
	OTHER INCOME OR (EXPENSE):						
8	Net interest income or (expense)	(4,199)	(1,410)	(1,244)	(1,230)	(1,107)	(4,991)
9	All other income or (expense)	(3,703)	(567)	(414)	(623)	1,328	(276)
10	Total other income or (expense) (lines 8 and 9)	(7,902)	(1,977)	(1,658)	(1,853)	221	(5,267)
11	NET PROFIT OR (LOSS) BEFORE TAXES (line 7 plus line 10)	5,771	5,667	5,995	5,958	9,367	26,987
12	Depreciation and amortization	5,547	1,493	1,427	1,440	1,967	6,327

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

Table 11.--Selected financial data of U.S. producers on their stainless steel sheet and strip operations, 1986-87, and by specified periods, 1987

(In thousands of dollars)

Line No.	Item	Year 1986	Jan-Mar. 1987	Apr-June 1987	July-Sept. 1987	Oct-Dec. 1987	Year 1987
	NET SALES:						
1	Excluding intracompany and intercompany transfers	1,197,891	337,269	373,668	377,206	430,939	1,519,082
2	Intracompany and intercompany transfers	12,967	11,107	24,447	18,789	25,881	80,224
3	Total net sales (lines 1 and 2)	1,210,858	348,376	398,115	395,995	456,820	1,599,306
4	COST OF GOODS SOLD (including intracompany and intercompany transfers)	1,009,593	284,319	317,115	318,843	383,686	1,303,963
5	GROSS PROFIT OR (LOSS) (line 3 less line 4)	201,265	64,057	81,000	77,152	73,134	295,343
6	GENERAL, SELLING, AND ADMINISTRATIVE EXPENSES	44,879	12,517	14,311	13,714	13,366	53,908
7	NET OPERATING PROFIT OR (LOSS) (line 5 less line 6)	156,386	51,540	66,689	63,438	59,768	241,435
	OTHER INCOME OR (EXPENSE):						
8	Net interest income or (expense)	(15,629)	(7,907)	(7,141)	(5,998)	(5,704)	(26,750)
9	All other income or (expense)	(9,209)	(1,671)	97	(807)	(2,003)	(4,384)
10	Total other income or (expense) (lines 8 and 9)	(24,838)	(9,578)	(7,044)	(6,805)	(7,707)	31,134
11	NET PROFIT OR (LOSS) BEFORE TAXES (line 7 plus line 10)	131,548	41,962	59,645	56,633	52,061	210,301
12	Depreciation and amortization	22,357	5,612	5,345	5,110	12,502	28,569

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

Table 12.--Selected financial data of U.S. producers on their stainless steel bar operations, 1986-87, and by specified periods, 1987

(In thousands of dollars)

Line No.	Item	Year 1986	Jan-Mar. 1987	Apr-June 1987	July-Sept. 1987	Oct-Dec. 1987	Year 1987
	NET SALES:						
1	Excluding intracompany and intercompany transfers	***	***	***	***	***	***
2	Intracompany and intercompany transfers	***	***	***	***	***	***
3	Total net sales (lines 1 and 2)	420,720	108,576	109,439	109,572	113,422	441,009
4	COST OF GOODS SOLD (including intracompany and intercompany transfers)	373,047	93,409	96,438	97,107	104,005	390,959
5	GROSS PROFIT OR (LOSS) (line 3 less line 4)	47,673	15,167	13,001	12,465	9,417	50,050
6	GENERAL, SELLING, AND ADMINISTRATIVE EXPENSES	45,421	11,653	11,007	10,777	11,571	45,009
7	NET OPERATING PROFIT OR (LOSS) (line 5 less line 6)	2,252	3,514	1,994	1,688	(2,154)	5,041
	OTHER INCOME OR (EXPENSE):						
8	Net interest income or (expense)	(11,274)	(2,963)	(2,905)	(2,881)	(2,798)	(11,547)
9	All other income or (expense)	(1,776)	(3,293)	(174)	(59)	776	(2,750)
10	Total other income or (expense) (lines 8 and 9)	(13,050)	(6,256)	(3,079)	(2,940)	(2,022)	(14,297)
11	NET PROFIT OR (LOSS) BEFORE TAXES (line 7 plus line 10)	(10,798)	(2,742)	(1,085)	(1,252)	(4,176)	(9,256)
12	Depreciation and amortization	15,103	3,933	3,944	4,105	3,531	16,880

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

Table 13.--Selected financial data of U.S. producers on their stainless steel wire rod operations, 1986-87, and by specified periods, 1987

(In thousands of dollars)

Line No.	Item	Year 1986	Jan-Mar. 1987	Apr-June 1987	July-Sept. 1987	Oct-Dec. 1987	Year 1987
	NET SALES:						
1	Excluding intracompany and intercompany transfers	78,654	20,892	22,715	23,150	26,678	93,435
2	Intracompany and intercompany transfers	0	0	0	0	0	0
3	Total net sales (lines 1 and 2)	78,654	20,892	22,715	23,150	26,678	93,435
4	COST OF GOODS SOLD (including intracompany and intercompany transfers)	73,632	18,746	20,549	21,913	24,416	85,624
5	GROSS PROFIT OR (LOSS) (line 3 less line 4)	5,022	2,146	2,166	1,237	2,262	7,811
6	GENERAL, SELLING, AND ADMINISTRATIVE EXPENSES	7,667	2,142	2,323	2,239	2,455	9,159
7	NET OPERATING PROFIT OR (LOSS) (line 5 less line 6)	(2,645)	4	(157)	(1,002)	(193)	(1,348)
	OTHER INCOME OR (EXPENSE):						
8	Net interest income or (expense)	(1,865)	(606)	(647)	(652)	(650)	(2,555)
9	All other income or (expense)	(146)	(764)	(9)	42	41	(690)
10	Total other income or (expense) (lines 8 and 9)	(2,011)	(1,370)	(656)	(610)	(609)	(3,245)
11	NET PROFIT OR (LOSS) BEFORE TAXES (line 7 plus line 10)	(4,656)	(1,366)	(813)	(1,612)	(802)	(4,593)
12	Depreciation and amortization	3,552	1,009	1,173	1,229	885	4,296

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

Table 14.--Selected financial data of U.S. producers on their alloy tool steel products operations, 1986-87, and by specified periods, 1987

(In thousands of dollars)

Line No.	Item	Year 1986	Jan-Mar. 1987	Apr-June 1987	July-Sept. 1987	Oct-Dec. 1987	Year 1987
	NET SALES:						
1	Excluding intracompany and intercompany transfers	327,627	89,686	86,569	82,888	100,130	359,273
2	Intracompany and intercompany transfers	2,454	933	821	1,011	851	3,616
3	Total net sales (lines 1 and 2)	331,222	90,619	87,390	83,899	100,981	362,889
4	COST OF GOODS SOLD (including intracompany and intercompany transfers)	272,804	73,575	68,969	64,416	79,709	286,669
5	GROSS PROFIT OR (LOSS) (line 3 less line 4)	58,418	17,044	18,421	19,483	21,272	76,220
6	GENERAL, SELLING, AND ADMINISTRATIVE EXPENSES	49,459	13,249	13,166	12,603	14,939	53,957
7	NET OPERATING PROFIT OR (LOSS) (line 5 less line 6)	8,959	3,795	5,255	6,880	6,333	22,263
	OTHER INCOME OR (EXPENSE):						
8	Net interest income or (expense)	(2,898)	(902)	(9,068)	(902)	(1,020)	(11,894)
9	All other income or (expense)	(4,916)	(1,421)	(497)	(13)	(30)	(1,961)
10	Total other income or (expense) (lines 8 and 9)	(7,821)	(2,323)	(9,565)	(915)	(1,050)	(13,855)
11	NET PROFIT OR (LOSS) BEFORE TAXES (line 7 plus line 10)	1,138	1,472	(4,310)	5,965	5,281	8,408
12	Depreciation and amortization	13,519	3,604	3,582	3,219	3,969	14,377

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

Table 15.--Capital expenditures by U.S. producers for their operations producing stainless steel and alloy tool steel, by products, 1986-87

(In thousands of dollars)

Item	1986	1987
All operations producing stainless steel and alloy tool steel products:		
Land and land improvement	1,338	1,990
Building or leasehold improvements	8,969	8,904
Machinery, equipment, and fixtures	118,582	89,485
Total	128,889	100,079
All operations producing stainless steel and alloy tool steel products subject to relief:		
Land and land improvement	1,123	1,325
Building or leasehold improvements	6,618	6,068
Machinery, equipment, and fixtures	97,522	69,271
Total	105,263	76,664
Stainless steel plate:		
Land and land improvement	5	0
Building or leasehold improvements	44	158
Machinery, equipment, and fixtures	2,596	2,380
Total	2,645	2,538
Stainless steel sheets and strip:		
Land and land improvement	843	60
Building or leasehold improvements	4,427	3,275
Machinery, equipment, and fixtures	37,860	29,451
Total	43,130	32,786
Stainless steel bar:		
Land and land improvement	179	785
Building or leasehold improvements	1,268	1,659
Machinery, equipment, and fixtures	27,056	25,655
Total	28,503	28,099
Stainless steel wire rod:		
Land and land improvement	***	***
Building or leasehold improvements	***	***
Machinery, equipment, and fixtures	6,871	4,514
Total	7,315	5,194
Alloy tool steel, all forms:		
Land and land improvement	***	***
Building or leasehold improvements	***	***
Machinery, equipment, and fixtures	23,139	7,271
Total	23,670	8,047

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

Table 16.--Research and development expenses by U.S. producers for their operations producing stainless steel and alloy tool steel, by products, 1986-87

(In thousands of dollars)

Item	1986	1987
All operations producing stainless steel and alloy tool steel products	43,604	42,467
All operations producing stainless steel and alloy tool steel products subject to relief	34,086	33,603
Stainless steel plate	***	***
Stainless steel sheets and strip	***	***
Stainless steel bar	7,162	5,766
Stainless steel wire rod	***	***
Alloy tool steel, all forms	4,041	4,063

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

Table 17.--Projected capital expenditures and expenditures on research and development by U.S. producers for their operations producing stainless steel and alloy tool steel products subject to relief, 1987-89

(In thousands of dollars)

Item	1987	1988	1989
Capital expenditures:			
Projections made in February 1984	168,385	1/	1/
Projections made in February 1985	160,062	1/	1/
Projections made in February 1986	104,945	1/	1/
Projections made in March 1987	92,319	1/	1/
Projections made in March 1988	2/	114,956	90,251
Research and development expenditures: 3/			
Projections made in February 1984	28,939	1/	1/
Projections made in February 1985	25,491	1/	1/
Projections made in February 1986	23,553	1/	1/
Projections made in March 1987	35,579	1/	1/
Projections made in March 1988	2/	33,953	34,123

1/ Data not requested.

2/ Not applicable.

3/ Research and development includes the further development of present products, development of new or improved products, manufacturing methods, testing of new materials, and pure research.

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

Table 18.--Capital expenditures as a share of cash flow, and research and development expenditures as a share of total net sales, by product, 1979-87

(In percent)

Item/year	Stainless steel				Alloy tool steel, all forms
	Plate	Sheets and Strip	Bar	Wire rod	
Capital expenditures as a share of cash flow: 1/					
1979	12.6	9.3	30.3	61.3	17.5
1980	20.4	36.4	27.4	419.6	24.0
1981	47.8	180.3	51.0	2/ (791.5)	38.1
1982	2/ (24.7)	108.2	2/ (278.6)	2/ (100.4)	2/ (187.6)
1983	2/ (47.1)	60.5	2/ (1,594.5)	2/ (93.1)	65.0
1984	58.0	23.2	73.8	2/ (174.2)	17.4
1985	39.5	34.6	357.6	2/ (317.0)	62.5
1986	22.6	23.2	109.5	2/ (1015.6)	101.8
1987	7.6	13.7	3.7	2/ (17.5)	35.3
Research and development expenditures as a share of total net sales:					
1979	0.09	0.30	1.42	1.75	0.58
1980	0.15	0.43	1.38	2.21	0.72
1981	0.20	0.43	1.48	2.50	0.87
1982	0.26	1.45	2.11	4.64	1.15
1983	0.17	0.30	3.36	4.12	1.20
1984	0.05	0.78	1.43	3.41	0.93
1985	0.05	0.82	1.59	2.60	1.33
1986	3/ 1.70	3/ 2.16	1.94	2.86	1.57
1987	0.54	1.25	1.31	2.14	1.12

1/ Stainless steel plate, sheet and strip, and alloy tool steel data may be somewhat overstated for 1979-81, and stainless wire rod and alloy tool steel data may be somewhat overstated for 1985, due to failure of some companies to provide depreciation expenses.

2/ Parentheses signify that companies reported negative cash flow for the period indicated.

3/ One firm revised its method of reporting research and development expenditures in 1986 to reflect broader coverage of expenditures. The firm did not revise its expenditures for prior years.

Source: For 1979-81, Stainless Steel and Alloy Tool Steel: Determinations of the Commission in Investigations No. TA-201-48 under Section 201 of The Trade Act of 1974, Together with the Information Obtained in the Investigation, USITC Publication 1377, May 1983. For 1982-87 compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Efforts of U.S. Stainless and Alloy Tool Steel Producers to Adjust to Import Competition

Note.--This section consists of data which would disclose confidential operations of individual concerns, and therefore may not be published.

MAJOR FOREIGN SUPPLIERS OF STAINLESS AND ALLOY TOOL STEEL TO THE UNITED STATES

Stainless steel and alloy tool steel are produced in at least 20 countries (although not all of the countries produce both kinds of steel). The following table presents production (on a raw steel basis) and capacity data on the major foreign suppliers of such specialty steel to the United States. The industries in these countries are discussed in the remainder of this section.

Table 19
Stainless and alloy tool steel production, capacity, and capacity utilization for certain foreign producing countries, 1986-87

Country	Production		Capacity		Capacity utilization	
	1986	1987	1986	1987	1986	1987
	Thousand short tons				Percent	
Austria	1/ 182	2/	1/ 195	1/ 195	1/ 93.8	2/
Belgium	127	2/	154	2/	82.5	2/
Brazil	3/ 1,360	3/ 1,226	4/ 1,490	4/ 1,490	91.3	82.3
Finland	190	208	4/ 220	4/ 220	86.4	94.5
France	674	2/	2/	2/	2/	2/
Italy	595	2/	2/	2/	2/	2/
Japan	2,482	2,781	2/	2/	2/	2/
Republic of Korea	228	267	312	348	73.1	76.7
Spain	3/ 5/ 1,843	3/ 5/ 1,769	2/	2/	2/	2/
Sweden	2/	2/	2/	2/	2/	2/
United Kingdom	239	4/ 250	2/	2/	2/	2/
West Germany	1,499	4/ 1,471	2/	2/	2/	2/

1/ The Austrian industry's definition of specialty steel is believed to include a greater range of products than stainless and alloy tool steel.
2/ Not available.
3/ Production data encompass a larger variety of products than those under investigation.
4/ Estimated by the staff of the U.S. International Trade Commission.
5/ Data are for January-October.

Source: Data compiled from World Stainless Steel Statistics and from U.S. Department of State telegrams.

Austria

Austria's only producers of specialty steel in 1987 were Voest-Alpine (VA), a nationalized company that produces and consumes small quantities of stainless products; and its subsidiary, Vereinigte Edelstahlwerke (VEW), a producer of various specialty steel products, including stainless bar and rod.

In 1987, the holding company for state industries, OIAG, decided to streamline and completely reorganize VEW and implement new restructuring measures. Previous restructuring had focused on reductions in production capacity; the new restructuring will concentrate on improving efficiencies and reducing costs, which will be accomplished through personnel cutbacks and the division of the VEW companies into independent units. Thus, the merger of independent companies in 1975 which led to the creation of VEW is now being reversed. 1/

Effective January 1, 1988 (legally retroactive to January 1, 1987), VEW has been functioning as a holding company called VEW-AG. VEW-AG holds 100 percent of the shares in the newly created Boehlor Edelstahl Ges.mbH, which concentrates on the metallurgical works, with plants in Kapfenberg and Muerzzuschlag; and in the newly created Schaeller Final Ges.mbH, which is responsible for finished products in the Ternitz plant. 2/

Employment reductions to reduce costs are continuing at VEW. The former VEW employed about 9,700 employees at the end of 1986, which declined to 9,000 employees during 1987. Another reduction of 3,000 employees is expected in 1988. This decrease will primarily affect the metallurgical plant in Kapfenberg, which has thus far been relatively unaffected by the restructuring. Current plans are expected to result in the Kapfenberg plant operating without losses. 3/

In May 1987, the government of Austria approved legislation for a financial rescue package for Austria's state-owned industries. The Federal subsidies to the iron and steel sector were $2.7 billion: $1.0 billion to cover old debts; $1.6 billion in new subsidies; and $47 million for other compensation. 4/ The $1.0 billion to cover old debts was granted retroactively to cover emergency loans raised by the state holding company OIAG in 1985-86, which were subsequently converted into equity. Of the total, $102 million went to VEW. The $1.6 billion in subsidies was to be used to cover expected operating losses and to provide additional equity capital from 1987 to 1990; of this amount, $451 million was earmarked for VEW. The granting of these funds was expedited so that by spring 1988, $1.0 billion will have been obligated, of which $364 million will go to VEW. 5/

Operating losses for VEW are estimated at $111 million for 1987; however the total 1987 loss, including that of subsidiary companies, is expected to be approximately $253 million. This loss is higher than expected, partly because

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1/ U.S. Department of State telegram, February 1988.
2/ Ibid.
3/ Ibid.
4/ The exchange rate used to convert Austrian schillings to U.S. dollars was the 1987 average of 12.64 Austrian schillings to one U.S. dollar.
5/ U.S. Department of State telegram, February 1988.

of the retroactive reorganization of VEW. For 1988, a loss of $58 million is projected. It is believed that the VEW group as a whole will break even by 1990. 1/

Production of specialty steel in Austria declined from 209,000 short tons in 1985 to 182,000 short tons in 1986, a decrease of 13 percent. Although data are not available for 1987, industry sources indicate that production declined further. 2/ Between 1985 and 1986, capacity utilization rates appeared to increase, as shown in the following tabulation:

Specialty steel 1/	1985	1986	1987
Production 2/.....1,000 short tons....	3/ 209	4/ 182	5/
Capacity.....do....	250	195	195
Capacity utilization.....percent....	83.6	93.8	5/

1/ The Austrian industry's definition of specialty steel is believed to include a greater range of products than stainless and alloy tool steel. Data represent crude steel output and capacity from VEW companies.
2/ Production data compiled from U.S. Department of State telegram and World Stainless Steel Statistics.
3/ Of this amount, approximately 76,390 short tons were stainless steel.
4/ Of this amount, approximately 54,233 short tons were stainless steel.
5/ Not available.

Belgium

There were two producers of stainless steel products in Belgium in 1986; ALZ/NV and S.A. Fabrique de Fer de Charleroi. Both made stainless steel sheet, strip, and plate. The sole producer of stainless bar and wire rod, Henricot, ceased production at the end of 1984. There were no producers of alloy tool steel.

ALZ/NV is currently involved in an investment project to replace existing melting, steelmaking, and cold-rolling equipment. The investment, of which a new reversing cold mill represents the largest part, will raise steelmaking capacity to 397,000 short tons per year. This expansion will allow ALZ/NV to expand its market to include stainless strip over 2 meters in width. The investment is being undertaken because the existing mill is more than 20 years old, and the new mill will improve quality 3/ as well as expand product lines. The melt shop investment includes the following: a 900-metric ton electric furnace with bottom tapping and 96 MVA transformer capacity; a 100-metric ton MRP converter with oxygen-inert gas vessel bottom tuyeres and top blowing oxygen lance to permit metal refining by the Demag process; and a vacuum oxygen degassing (VOD) unit. This installation will increase ALZ's production of continuously cast slab. 4/

1/ Ibid.
2/ Ibid.
3/ "ALZ," Steel Times, June 1987.
4/ "New Meltshop for ALZ," Metal Bulletin, March 20, 1987.

Production of stainless steel in Belgium grew by 5 percent from 121,000 short tons in 1985 to 127,000 short tons in 1986. No new capacity was added, so capacity utilization increased from 78.6 percent to 82.5 percent, as shown in the following tabulation: 1/

Stainless steel 1/	1985	1986	1987
Production.....1,000 short tons..	121	127	2/
Capacity.....do....	154	154	2/
Capacity utilization.....percent..	78.6	82.5	2/
Exports to the U.S.....1,000 short tons..	15	11	2/

1/ Production, capacity, and export data are from World Stainless Steel Statistics, published by Inco Europe Limited and World Bureau of Metal Statistics, 1987 edition.
2/ Not available.

Brazil

There were six Brazilian producers of stainless and alloy tool steel products in 1987. Acos Anhanguera S.A. (Acoansa) produced stainless wire rod; Acos Villares S.A. produced stainless wire rod, bars and tool steel; Companhia Acos Especiales Itabira (Acesita), the largest producer, produced stainless bar, sheet and strip, and tool steel; Acos Finos Piratini S.A. (Piratini) produced stainless bar, rod, and tool steel; Siderurgica Nossa Senhora da Aparecida S.A. (Aparecida) produced stainless bar, rod and tool steel; and Electrometal Acos Finos S.A. produced stainless bar and rod.

On June 17, 1987, the U.S. Government concluded an agreement that incorporates Brazil's specialty steel exports to the United States into the Brazilian VRA. The VRA was expanded to include three product categories: stainless steel bar, stainless steel wire rod, and alloy tool steel. 2/

No new capacity is expected in 1988 in the stainless or alloy tool steel areas, 3/ although Acesita has indicated that it would like to double capacity by 1991. In late January 1988, Acesita held a meeting with the national economic and development bank, BNDES, to discuss financing for the expansion project. If the project is financed, it would increase capacity from 140,000 metric tons to 220,000 metric tons per year, with the addition of a new stainless melting shop. 4/

A new stainless steel processing facility is being constructed as a joint venture between Acesita and Amorim e Feital. The facility, Plaminox, is located in Tinoteo, Minas Gerais and will process stainless steel plate and sheet and strip. The original start up date of December, 1987 has been rescheduled for March or April, 1988. 5/

1/ 1987 production figures for Belgian stainless steel are not yet available.
2/ U.S. Department of State telegram, June 1987.
3/ U.S. Department of State telegram, February 1988.
4/ "Acesita Seeks Financing for Growth," Metal Bulletin, February 1, 1988.
5/ Information provided by industry sources.

Brazilian production of special steels totaled approximately 1.2 million short tons in 1987, a decline of 9.9 percent from the 1986 level of 1.4 million short tons, as shown in the following tabulation:

Special steel 1/ 2/	1986	1987
Production---------1,000 short tons--	1,360	1,226
Capacity 3/----------do----	1,490	1,490
Capacity utilization---------percent--	91.3	82.3

1/ The term "special" includes all non-carbon steels such as stainless, ferrosilicon, alloy tool, low-alloy, high-alloy, and high carbon. As a result, these production figures encompass a larger variety of products than those under investigation.
2/ Production information was obtained from Consider-Statistical Yearbook, 1987, published by the Brazilian Metallurgical Industry, and data gathered by the Brazilian Steel Institute. Capacity information was estimated from data supplied in Iron and Steel Works of the World, 8th edition, published by Metal Bulletin.
3/ Estimated by staff of the U.S. International Trade Commission

Finland

Outokumpu Oy, a state-controlled, multimetal company, was the sole producer of stainless sheets, plates and strip in Finland in 1987. Ovako Steel Oy AB, which merged with Swedish SKF Steel AB in 1986, is Finland's sole producer of alloy tool steel, although it does not produce the type of alloy tool steel which is subject to investigation. The company had produced very small quantities of stainless steel bars, but production was terminated in 1985 because of low profitability. 1/

Industry sources indicate that Outokumpu is not planning any significant changes in production, capacity, shipments, or exports to the U.S. or any other country in 1988 or 1989. If there is an increase in production it is expected to be approximately 1-2 percent, which is the estimated growth in domestic demand. 2/

Outokumpu Oy completed a new hot-rolling mill at its Tornio works in the fall of 1987 at a cost of about $159 million. After trial runs, the mill started operations in early 1988 and is expected to be running fully by the second half of 1988. The new hot-rolling mill replaces the past arrangement for hot band production, under which slabs from the Tornio continuous caster were sent 140 miles for rolling at the Raahe works of Finland's state-owned integrated steelmaker, Rautaruukki and returned to Tornio for cold rolling. The company believes that the new hot-rolling mill will enhance the whole works' profitability. It also will reportedly increase the works' operational flexibility and offers opportunities to develop new stainless steel qualities and expand product range. 3/

1/ U.S. Department of State telegram, February 1988.
2/ Ibid.
3/ Ibid.

Because the Tornio stainless steel plant of Outokumpu Oy is located in Finland's northern developing area, certain benefits are available to it under regional policy legislation. Special laws provide for the partial payment of interest by the Government on company borrowing. Under this legislation $0.89 million is designated in Finland's 1988 national budget, a decline from the 1987 level of $1.62 million, for the payment of "interest support" on the loans taken for building the Tornio stainless works. Furthermore, since the Tornio stainless steel works is located in Finland's underdeveloped area, it is entitled to certain tax relief when establishing a new production plant or expanding an existing one. The completion of the hot-rolling mill entitles the company, over the next ten years, to special depreciation allowances, additional investment deductions in state taxation, and exemptions from property and stamp taxes. 1/

Finland's production of stainless steel rose by 9.5 percent from 190,000 short tons in 1986 to 208,000 short tons in 1987. As shown in the following tabulation, there was a corresponding increase in capacity utilization from 86.4 percent to 94.5 percent.

Stainless steel 1/	1986	1987
Production.....1,000 short tons..	190	208
Capacity 2/.....do....	220	220
Capacity utilization.....percent..	86.4	94.5

1/ U.S. Department of State telegram, February, 1988.
2/ Estimated by staff of the U.S. International Trade Commission.

France

In 1986, there were at least five producers of stainless and alloy tool steel products in France. Almost 70 percent of French production of these steel products was accounted for by production of stainless sheet and strip. The largest producers of stainless and alloy tool steel products in 1986 included Sacilor, a state-owned producer of flat-rolled products and bars; Ugine-Gueugnon and Ugine-Savoie, companies that are majority-owned by Sacilor and are each the second largest producer worldwide of their particular products, stainless sheet and strip and stainless bar and rod, respectively; Usinor, a state-owned producer of sheet, plate, and bar; and Ascometal, a company that was established in 1983 to merge the unprofitable operations of Sacilor and Usinor and that produces specialty steel bars and rods. In September 1986 the French Government announced that a single chairman would head both Sacilor and Usinor.

On January 1, 1987, Ascometal merged its three stainless and specialty metal operations, Cie Francaise des Aciers Speciaux (Asfor), Ste des Aciers Fin de l'Est (Safe) and Ugifos together. 2/ On July 1, 1987, France's stainless steel sector underwent further reorganization when Ugine-Gueugnon and Usinor Chatillon were merged to form Ugine-Aciers de Chatillon et Gueugnon

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1/ Ibid.
2/ "France Sees New Scope for Restructuring," Metal Bulletin, February 3, 1987, p. 25.

(Ugine). Although the merger took effect July 1, 1987, it was dated retroactively to January 1, 1987. This merger makes Ugine the world's largest producer of stainless and special steel flat products. The merger was, according to Francis Mer, chairman of Usinor-Sacilor, necessary to eliminate unnecessary competition and duplication of investments in the state-owned stainless flat product sector. 1/

In September 1987, Francis Mer announced a regrouping of special steel production, bringing together the stainless flat product business and the works making stainless and alloy steel bar, rod, strip, and wire. The new grouping is called Aciers Inoxydables and Produits Plats Speciaux, and it merges Ugine Chatillon-Gueugnon with Ugine-Savoie and Imphy. Ugine-Savoie makes stainless bar and rod. Imphy and its subsidiary, Sprint Metal, make alloy steel and superalloys in the form of strip, bar, wire, powder, and forgings. 2/

In 1987, the French stainless and special flat products sector showed a profit of $79,900 (Fr 480,000). This follows losses in 1986 of $23,800 (Fr 165,000). French executives indicate that profits will continue to grow in 1988. 3/

The following tabulation shows that in 1986 French production of stainless steel ingots, slabs, blooms, and billets was 674,000 short tons, up from 617,000 short tons in 1985 (an increase of 9 percent). Exports to the United States and all other countries fell slightly in 1986 from 1985 (down 4.5 percent).

Stainless steel 1/	1985	1986	1987
Production.....1,000 short tons..	617	674	2/
Capacity.....do....	2/	2/	2/
Capacity utilization.....percent..	2/	2/	2/
Exports:			
To the United States..1,000 short tons..	41	34	2/
To all other countries.....do....	632	609	2/
Total.....do....	673	643	2/

1/ Production and export data compiled from World Stainless Steel Statistics, published by International Nickel Inc., 1987 edition.
2/ Not available.

Italy

There are believed to be approximately 20 producers of specialty steel products in Italy. 4/ In early 1986, Italy's third largest stainless steel producer, Ilssa-Viola decided to close down its works. The closure was blamed

1/ "The New Ugine: Rationalizing French Stainless," Metal Bulletin Monthly, August, 1987.
2/ "Mer Forms New Special Steel Group," Metal Bulletin, Sept. 14, 1987, p. 23.
3/ "Mer Confirms Usinor-Sacilor's Improved," Metal Bulletin, Feb. 25, 1988, p. 25.
4/ Iron and Steel Works of the World, Metal Bulletin Books, 8th edition, 1983.

on the high level of import penetration on the Italian market and a general excess of production capacity of the stainless sector in Europe. This move left Terni (a subsidiary of the state owned Finsider steel group) as Italy's sole producer of stainless sheets, through its subsidiaries IAI and Terninoss (which Terni owns jointly with U.S. Steel Corp.) 1/

In 1986, investments in Terni resulted in an increase in electric steelmaking capacity of more than 200,000 metric tons per year. Most of this capacity will replace stainless steel melting operations of a subsidiary, IAI, which will shut down operations in 1987. Some capacity will also go toward electrical steel production. In 1986, stainless production at Terni was 200,000 metric tons per year; this will most probably rise to 380,000 metric tons per year in 1989. The investments included a 140-metric ton AOD converter, a new continuous caster (for stainless slab production), a ladle furnace, and modifications on the hot-rolling mill to increase coil width. 2/

USX Corp. began to negotiate the sale of its 50-percent stake in Terninoss in April, 1987. USX indicated that this is part of the company's general restructuring program as well as the reorganization within the Terni group. After the sale Terninoss would become a 100-percent-owned subsidiary of Terni. 3/

In 1986, Terni had losses of 2.5 million lire ($1,700), compared to 19.5 million lire ($10,200) in 1985. The trend toward recovery did not continue in 1987 as Terni lost nearly 40 million lire ($33,000) in that year. 4/ 5/

Stainless steel production increased from 561,000 short tons in 1985 to 595,000 short tons in 1986 (up by 6 percent). During this same time period, Italy's exports to the United States fell from 28,000 short tons to 14,000 short tons (down by 50 percent), as shown in the following tabulation:

Stainless steel 1/	1985	1986	1987
Production 2/.....1,000 short tons..	561	595	3/
Capacity.....do....	3/	3/	3/
Capacity utilization.....percent..	3/	3/	3/
Exports to the United States 1,000 short tons..	28	14	3/

1/ Production and export data compiled from World Stainless Steel Statistics, published by International Nickel Inc., 1987 edition.
2/ Ingots, slabs, blooms, and billets.
3/ Not available.

1/ "Ilssa-Viola to Close Down in March," Metal Bulletin, Feb. 14, 1986.
2/ "Stainless Output to Rise at Terni," Metal Bulletin, Oct. 7, 1986.
3/ "USX to sell out of Italian Stainless," Metal Bulletin, April 28, 1987.
4/ "IRI to Approve Finsider Restructuring," Metal Bulletin, Feb. 15, 1988.
5/ Thirty percent of Terni's production is in products that are not included in this investigation.

Japan

There were approximately 25 producers of stainless and alloy tool steel products in Japan in 1987, many of which produce a variety of the specialty steel products subject to investigation, as follows: stainless plate, 9 companies; stainless sheet and strip, 14 companies; stainless bar, 12 companies; stainless wire rod, 12 companies; alloy tool steel and high-speed steel products, 13 companies. 1/ The largest producers include Nippon Metal Industry Co., Nippon Yakin Kogyo Co., and Nippon Stainless Co.

In 1987, the three major stainless steel producers undertook rationalization efforts designed primarily to reduce employment levels. 2/ A number of other changes occurred in the industry in 1987 including the following: one company resumed production of stainless plate; one began production of stainless steel sheets; two began production of stainless steel bar; one opened production of stainless steel wire rod; and one ceased production of alloy tool steel products. 3/

Among the Japanese stainless steel producers, Nippon Yakin has its own nickel refinery, while Nippon Metal and Nippon Stainless import ferro-nickel and ferro-chrome. Although imported raw materials are priced in U.S. dollars, the producers were not adversely affected by the sharp increase in 1987 in the U.S. dollar price of nickel, an important raw material, because the rapid appreciation of the yen during the year kept the nickel price below 1985 prices in terms of local currency. 4/

According to the Ministry of International Trade and Industry (MITI) in Japan, there were no Government assistance programs designed for the specialty steel industry in 1987. Japanese producers of specialty steel products with 300 or fewer regular employees or with paid-in capital of 100 million yen or less are eligible for Japanese Government assistance programs for small business in general. MITI also stated that there are no nontariff barriers to imports of specialty steel products in Japan. 5/

The following tabulation shows that Japan's production of stainless and alloy tool steel products rose by 12 percent from 2.5 million short tons in 1986 to 2.8 million short tons in 1987, reflecting the increased pace of activity in principal domestic markets (automotive, housing, and construction). 6/ Japan's exports rose from 777,000 short tons in 1986 to 853,000 short tons in 1987, an increase of almost 10 percent. Southeast Asia is Japan's largest stainless export market. 7/

1/ U.S. Department of State telegram, February 1988.
2/ Metal Bulletin, May 29, 1987.
3/ U.S. Department of State telegram, February 1988.
4/ Metal Bulletin, May 29, 1987.
5/ U.S. Department of State telegram, February 1988.
6/ Metal Bulletin, May 29, 1987.
7/ Metal Bulletin, Aug. 8, 1986.

Certain stainless and alloy tool steel 1/		1986	1987
Production	1,000 short tons	2,482	2,781
Capacity	do	2/	2/
Capacity utilization	percent	2/	2/
Exports:			
To the U.S.	1,000 short tons	72	73
To all other countries	do	705	780
Total	do	777	853

1/ Data compiled from U.S. Department of State telegrams, March 1987 and February 1988.
2/ Not available.

Republic of Korea (Korea)

There were six producers of stainless and/or alloy tool steel products in Korea in 1987. They included Sammi Steel Co., a producer of stainless steel sheet, strip, bar, rod, and alloy tool steel products and Korea's largest producer of specialty steel items, accounting for about 80-percent of total production in 1987; Samyang Metal Co., Tong Yang Mulsan, Daiyang Metal Co., and Poongsan Specialty Steel Co., all producers of stainless steel sheet and strip; and Korea Heavy Machinery, a maker of alloy steel and tool steel products. 1/

On March 28, 1987, construction began on the Pohang works' new 250,000 ton per year stainless steelworks, scheduled to begin operation in June 1989. 2/ Korea currently imports all of the stainless hot-rolled band needed for domestic production of cold-rolled coil; Japan supplies about 80 percent of Korea's requirements for hot-rolled band at the present time. 3/

In late 1987, Sammi Steel awarded a contract to supply a 330,000 metric ton-per-year bar and wire rod mill for the production of stainless, tool, and high-speed steels to a consortium led by SMS Schloemann-Siemag AG of West Germany. The mill is scheduled to begin operations in mid-1989. According to press reports, the mill will produce rounds ranging from 5.5 to 80 mm in diameter, and is intended to supply primarily the Korean market. 4/

Tariffs on Korean imports of specialty steel products range from 10 percent to 20 percent. There is a system of nontariff restrictions on certain of Korea's imports. Under the plan, the import of restricted items may be approved if recommended by a particular ministry or trade association. During 1987, the Korean government eliminated the requirement of recommendation by the concerned association for the import of stainless steel sheets, plates, bars, and rods. Four items are still under this plan; however, effective April 1, 1988, the government plans to eliminate all such import restrictions

1/ U.S. Department of State telegram, March 1988.
2/ Pohang is Korea's only integrated steel producer.
3/ Metal Bulletin, April 3, 1987.
4/ 33 Metal Producing, October 1987, and Metal Bulletin, October 1, 1987.

for various specialty steel products including heat-resisting steel and stainless steel hoop and strips. 1/

Korea's production of stainless steel sheet, strip, bar, and rod increased by 17 percent from 228,000 short tons in 1986 to 267,000 short tons in 1987, largely reflecting an increase in sheet and strip production. Almost 85 percent of production in 1987 was accounted for by sheet and strip production. Korea's capacity to produce stainless sheet, strip, bar, and rod rose in 1987, but the increased level of production resulted in an increase in capacity utilization, from 73.1 percent in 1986 to 76.7 percent in 1987. Korea's exports to the United States rose from 11,000 short tons in 1986 to 13,000 short tons in 1987, an increase of 18 percent, as shown in the following tabulation:

Stainless sheet, strip, bar and rod	1986	1987
Production 1/.....1,000 short tons..	228	267
Capacity 1/.....do....	2/ 312	348
Capacity utilization.....percent..	73.1	76.7
Exports:		
To the U.S. 1/.....1,000 short tons..	2/ 11	13
To all other countries 1/.....do....	2/ 36	45
Total.....do....	2/ 47	58

1/ Data compiled from U.S. Department of State telegrams.
2/ Revised.

Spain

There were at least six Spanish producers of stainless and alloy tool steel products in 1987. Major producers included Acerinox SA, a producer of a wide variety of finished stainless steel products and Spain's only producer of stainless flat-rolled products; SA Echevarria, a producer of bar and rod; Olarra SA, a producer of stainless ingots, billets, and bar; and Roldan SA, a producer of stainless billets, bar, rod, and wire.

In June 1984, the Aceriales group, which included Olarra and Echevarria, announced that Echevarria and two other specialty steel producers would combine to form Aceros Especiales del Norte SA (Acenor). During 1985, Acenor acquired additional specialty steel producers, including Olarra (October 1985). In February 1988 the group, which consisted of five companies and accounted for about 70 percent of Spain's specialty steel production, was legally constituted into one corporation. 2/ Acenor's goal is the rationalization and modernization of Spain's specialty steels sector through work force reductions, elimination of inefficient capacity, and plant modernization. The restructuring program is designed to enable Spain's

1/ U.S. Department of State telegram, March 1988.
2/ U.S. Department of State telegram, March 1988.

specialty steelmakers to become internationally competitive, and is expected to be completed by 1989. 1/

Acenor, which is Spain's largest tool steel producer, has entered into a joint venture with Swedish tool steel producer, Uddeholm, to set up a new company in Spain. The new Uddenor Co., based in Bilbao, will apply Uddeholm's technical know-how in the Acenor works, and it will also act as a channel for both partners' steel products on the Spanish market. The two companies will each hold 50 percent of the new firm. Reportedly, Acenor's goal in joining with Uddeholm is to broaden the range of products it handles. 2/

Industry sources indicate that there are no quotas or other requirements which constitute nontariff barriers to specialty steel imports. 3/ All subsidies to the Spanish steel industry are regulated by the EC. In 1987, the EC approved $1.8 billion in aid for the Spanish steel industry, of which $250 million was destined for the stainless steel sector (specifically for Acenor). Acenor received this infusion of cash in exchange for shares of stock which gave the Government of Spain, through the Bank of Industrial Credit, effective control over Acenor. The funds were used to pay off outstanding debts and to subsidize the layoff of excess employees. 4/

According to a U.S. Department of State telegram, Spain, which entered the EC in 1986, is subject to the common EC policy on allocation of steel production. Under the terms of the agreement that admitted Spain to the EC, Spanish steel production and capacity are to be reduced. The effect of EC membership on Spain's specialty steel industry is not yet known.

Spain's production of specialty steel remained relatively steady at about 1.8 million short tons in the first 10 months of 1986 and 1987, as shown in the following tabulation. Although no capacity data are available, industry sources estimate that stainless steel producers in Spain are operating at less than 60 percent of capacity. 5/ Strong domestic markets for Spanish specialty steel include the food processing, chemicals, and paper industries in which the use of stainless steel is replacing that of other materials.

1/ Metal Bulletin, Oct. 18, 1985 and Aug. 13, 1985, and Metal Bulletin Monthly, February 1988.
2/ Metal Bulletin, May 8, 1987.
3/ U.S. Department of State telegram, March 1988.
4/ Ibid.
5/ U.S. Department of State telegram, March 1988.

Specialty steel 1/		January-October 1986	1987
Production	1,000 short tons	1,843	1,769
Capacity	do	2/	2/
Capacity utilization	percent	2/	2/
Exports:			
To the U.S	1,000 short tons	3/ 20	13
To all other countries	do	3/ 194	141
Total	do	3/ 214	154

1/ Production and export data compiled from U.S. Department of State telegram. Production data include a larger variety of products than those under investigation.
2/ Not available.
3/ Data include exports of stainless steel plate, sheet and strip, and bar for full year 1986.

Sweden

In 1987, Sweden's stainless steel industry consisted of two major groups: Avesta AB, a producer of stainless flat-rolled products; and Sandvik AB, a producer of specialty tubes, strip, and wire. The leading alloy tool steel producer was Uddeholm AB.

In January 1984, the Swedish specialty steel industry announced a reorganization leaving Avesta and Sandvik as the leading stainless producers. Under terms of the reorganization, Sandvik agreed to concentrate on specialty steel tubes, strip, and wire; Avesta agreed to concentrate on flat-rolled products; and Uddeholm, once a producer of a full range of stainless steel products, agreed to concentrate on alloy tool steel products and to sell its other operations to Avesta. Fagersta AB, once a leading producer of hot- and cold-rolled stainless steel strip and wire rod, began to diversify out of steel in 1984, and most of its stainless operations were absorbed by Avesta. The industry intended to combine these operations to eliminate duplication and inefficiency. 1/

Other restructuring efforts have been undertaken by Sweden's steel industry since 1984. In mid-1985 the steel melting plant within Fagersta Stainless (a joint subsidiary of Sandvik and Avesta) was closed, and production transferred to the two controlling companies. 2/ In addition, new companies producing stainless steel bars and seamless tubes were established, taking over the production of existing works. Avesta was to acquire a controlling share in a new company that will take stainless billets and heavy round bars from Avesta's Degerfors works and have them rolled and finished at the Hagfors works of Uddeholm. Sandvik and Avesta are equal partners (50 percent each) in a new seamless tube company called Ansab, which is operating the Storfors works to produce cold-finished stainless tubes from seamless hollow bars and tube hollows. 3/

1/ Metal Bulletin, Jan. 13, 1984, p. 32.
2/ American Metal Market, Oct. 30, 1985.
3/ Metal Bulletin, Sept. 27, 1985.

In October 1986, the Swedish Government approved a merger between Finland's Ovako Oy AB and Sweden's SKF Steel, Scandinavia's two largest specialty steel producers. 1/ The new company, Ovako Steel AB, had its first full operating year in 1987. The merger between Ovako and SKF Steel was to allow the two companies to undertake large new investment projects aimed at improving product quality, developing new products required by the market, and improving customer service. 2/

Developments in the Swedish specialty steel industry during 1987 include Sandvik's acquisition of the United Kingdom's TI Stainless Tubes. According to a Sandvik spokesman, the acquisition was necessary to keep pace with major Japanese producers. 3/ Fagersta Stainless AB, which produces stainless wire rod, drawn stainless wire, and stainless strip is investing in a new wire rod mill to strengthen its market position. The mill is expected to be fully operational by spring 1991. 4/

Two of Sweden's specialty steel producers entered into business agreements with U.S. firms during 1985. Avesta was granted exclusive rights by Armco's specialty steel division to produce certain grades of cold-finished stainless steel bars. Armco continues to serve some customers directly from its mills; however, Avesta became Armco's exclusive mill depot for smooth-turned cold-finished round bar products of certain stainless grades. Avesta Stainless is based in New Jersey and serves over 400 steel service center depots in the United States. 5/

No data are available on production, capacity, or capacity utilization in Sweden's stainless steel industry.

United Kingdom

The British stainless and alloy tool steel industry consists of British Stainless Corporation, a division of state-owned British Steel Corporation, and approximately six private-sector firms, which are members of the British Independent Steel Producers Association (BISPA). British Stainless is by far the largest producer of stainless steel in the United Kingdom, whereas alloy tool steel is produced in smaller quantities by a limited number of firms. Many stainless and alloy tool steel producers discontinued operations in the early 1980's citing the pressures of foreign competition. 6/ In 1985, after several years of negotiations between British Steel Corp. and engineering group Guest, Keen, and Nettlefold (GKN), an agreement was reached to merge their respective specialty-steelmaking activities into a new jointly owned company called United Engineering Steels Ltd. (UES), which began operations in April 1986. UES is an independent private sector company that has been formed into four independent "self standing" operations - Rotherham Engineering

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1/ These companies produce low-alloy specialty steel, much of which, such as bearing steel, is not subject to this investigation.
2/ Metal Bulletin, February 17, 1987.
3/ Metal Bulletin, December 7, 1987.
4/ Wire Industry, November 1987.
5/ Metal Bulletin, Dec. 17, 1985.
6/ Financial Times, Mar. 26, 1984, p. 26.

Steels, Stocksbridge Engineering Steels, Brymbo Engineering Steels, and United Engineering and Forging - each of which is responsible for its own profitability and customer relations and developing new market opportunities in home and export markets. 1/ During the course of the merger negotiations, much excess production capacity was eliminated, with further rationalization of operations targeted. 2/ The plan for the new venture, drawn up under the code name "Project Phoenix," was the biggest initiative taken in the United Kingdom's steel industry since 1980. 3/

A number of British steel producers have announced plans to move into stainless bar production in an effort to regain a bigger share of the British stainless bar market, which has experienced significant import penetration despite improved demand in 1987. The improvements resulted from higher activity levels in the general engineering sector and a less depressed petro-chemical sector. 4/ Companies which have announced plans to move into stainless bar production include Glynwed International's Steel Division, which is preparing to begin stainless steel bar production at a number of its plants, and British Steel Corp., which announced plans to install a new horizontal billet caster with an annual capacity of 25,000 tons at one of its facilities in an effort to establish itself as a competitive producer of stainless bar and rod. 5/

The U.K. tool steel industry has experienced both increased import penetration (in its domestic markets) and declining domestic demand over the past several years. Import competition varies depending on the grade of tool steel, but it is most prevalent in the six or seven principal grades. 6/

U.K. production of the specialty steel products subject to investigation increased an estimated 5 percent from 239,000 short tons in 1986 to an estimated 250,000 short tons in 1987, as shown in the following tabulation. The data reflect a continuation of the positive trend in demand for flat products which resulted from growth in demand for consumer goods and an improvement in capital investment in the nuclear industry and the petro-chemicals industry. 7/

1/ Metal Bulletin, Apr. 29, 1986.
2/ Metal Bulletin, Jan. 17, 1986, p. 19.
3/ U.S. Department of State telegram, Feb. 1986.
4/ Metal Bulletin, October 15, 1987.
5/ Metal Bulletin, Dec. 23, 1986 and Jan. 16, 1987.
6/ Metal Bulletin Monthly, February 1988.
7/ Metal Bulletin, June 16, 1987 and July 6, 1987.

Specialty steel		1986	1987
Production 1/	1,000 short tons	239	2/ 250
Capacity	do	3/	3/
Capacity utilization	percent	3/	3/
Exports:			
To the U.S.	1,000 short tons	12	3/
To all other countries	do	33	3/
Total	do	45	3/

1/ Data cover stainless steel plate, sheet and strip, bar, wire rod and alloy tool steel and are compiled from U.S. Department of State telegram, March 1987.
2/ Estimated by staff of the U.S. International Trade Commission.
3/ Not available.

West Germany

There were two major producers of stainless and alloy tool steel in West Germany in 1987; Krupp Stahl AG, a producer of a full range of specialty steel products and Thyssen Edelstahlwerke AG, a subsidiary of Thyssen AG and a producer of a wide range of specialty steel products. Thyssen and Krupp are among the world's largest stainless and alloy tool steel producers. In recent years, Thyssen Edelstahlwerke has increased its alloy tool steel production to nearly 50 percent of total company production from only 27 percent of production in 1977. Thyssen Edelstahlwerke is now one of the largest producers of alloy tool steel products in the Western world. 1/

West Germany's production of stainless and alloy tool steel products remained relatively stable at about 1.5 million short tons during 1986-87, as shown in the following tabulation:

Specialty steel		1986	1987
Production 1/	1,000 short tons	1,499	2/ 1,471
Capacity	do	3/	3/
Capacity utilization	percent	3/	3/

1/ Data compiled from U.S. Department of State telegram.
2/ Estimated by staff of the U.S. International Trade Commission on the basis of data compiled from U.S. Department of State telegram.
3/ Not available.

1/ American Metal Market, Feb. 2, 1987.

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