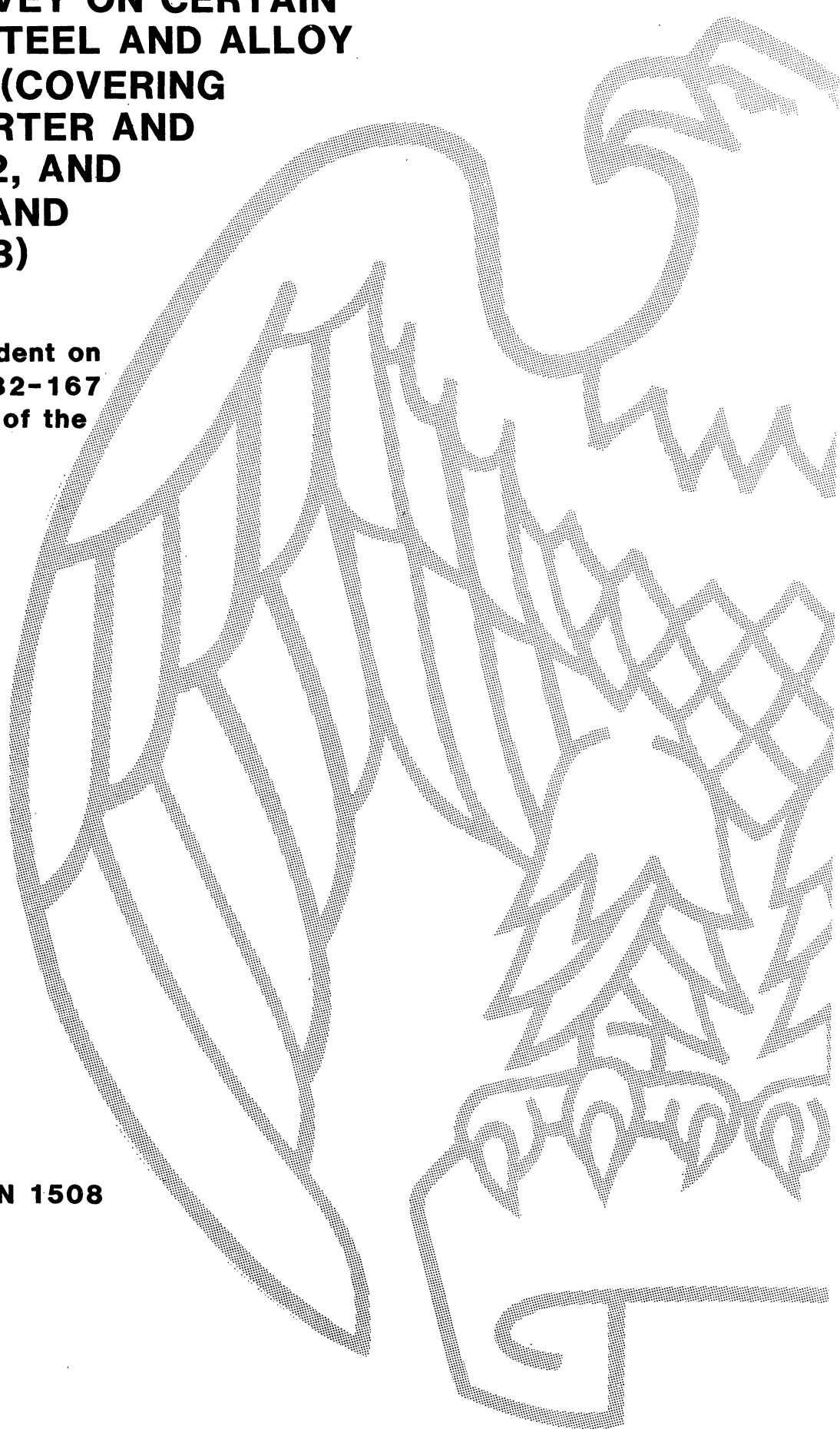


**ANNUAL SURVEY ON CERTAIN  
STAINLESS STEEL AND ALLOY  
TOOL STEEL (COVERING  
FOURTH QUARTER AND  
ANNUAL 1982, AND  
QUARTERLY AND  
ANNUAL 1983)**

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

**USITC PUBLICATION 1508**

**MARCH 1984**



**UNITED STATES INTERNATIONAL TRADE COMMISSION**

**COMMISSIONERS**

**Alfred E. Eckes, Chairman**

**Paula Stern**

**Veronica A. Haggart**

**Seeley G. Lodwick**

**David B. Rohr**

---

**Kenneth R. Mason, Secretary to the Commission**

---

This report was principally prepared by

Patrick J. Magrath

Vincent DeSapio

Metals Branch

Minerals and Metals Division

Office of Industries  
Norris A. Lynch, Director

**Address all communications to  
Office of the Secretary  
United States International Trade Commission  
Washington, D.C. 20436**

## ANNUAL REPORT ON CERTAIN STAINLESS STEEL AND ALLOY TOOL STEEL

Highlights

- o U.S. PRODUCERS' CAPACITY increased 6 percent from 1,556,050 tons in 1982 to 1,643,452 tons in 1983.
- o U.S. PRODUCERS' UNFILLED ORDERS increased 136 percent from 102,639 tons on December 31, 1982 to 242,076 tons on December 31, 1983.
- o U.S. PRODUCERS' END-OF-PERIOD INVENTORIES increased 12 percent from 218,546 tons on December 31, 1982 to 244,861 tons on December 31, 1983.
- o U.S. PRODUCERS' SALES increased 11 percent from \$2.7 billion during 1982 to \$3.0 billion during 1983, while NET PROFIT BEFORE TAXES rose to \$102.8 million during 1983 compared to a net loss of \$57.0 million during 1982.
- o U.S. CAPITAL EXPENDITURES equalled \$92 million in 1982 and rose to \$150 million\* in 1983. These expenditures are projected to decline to \$113 million in 1984 and to rise in successive years 1985-87 to \$137 million, \$153 million, and \$168 million, respectively.
- o U.S. EXPENDITURES ON RESEARCH AND DEVELOPMENT equalled \$26 million in 1982 and declined to \$23 million in 1983. These expenditures are projected to rise in successive years 1984-87 to \$25 million, \$27 million, \$28 million, and \$29 million, respectively.

\* Includes \* \* \* purchase by Jones & Laughlin of Crucible's Midland, PA plant.

U.S. producers' capacity

Data on producers' capacity indicates increases in capacity for the production of stainless flat rolled products between 1982 and 1983, with more modest increases in capacity for stainless bar and rod production. Capacity to produce alloy tool steel products declined between 1982 and 1983.

U.S. producers' unfilled orders and inventories

Data on producers' unfilled orders indicate increases in such orders for all products between December 31, 1982 and December 31, 1983, with the largest increase in orders for stainless steel sheet and strip which more than doubled during this period. Data on inventories showed increasing inventories for all

products between December 31, 1982 and December 31, 1983, except for alloy tool steel products.

#### U.S. producers' sales and net profit before taxes

Data on U.S. producers' sales indicate that the primary factor behind the sales increase for 1983 was an increase in sales of stainless steel sheet and strip, which accounted for almost 45 percent of total net sales. Sales of all products improved during this period. The net profit turnaround for producers was also primarily attributable to increased profits among stainless sheet and strip producers. Although four of five product groupings experienced some profit recovery in 1983, stainless plate, bar, and rod producers still sustained net losses. Net losses for wire rod producers widened in 1983.

#### U.S. capital expenditures

Data on capital expenditures indicate that these expenditures rose between 1982 and 1983 due to increased spending for machinery, equipment, and fixtures. The largest percentage of these expenditures consisted of improvements to bar-rolling, and annealing and pickling operations. Capital expenditures for the production of stainless sheet and strip, and plate also experienced increases in 1983, while spending for the production of alloy tool steel declined in 1983. Capital expenditures are projected to continue to rise between 1984 and 1987 with the largest expenditures to be centered on stainless bar-rolling operations, while spending for primary steelmaking operations is projected to decline from 1983 levels. 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.

For 1983, two of the 5 product areas covered in the survey realized positive capital expenditures/cash flow ratios; this, however, is an improvement over 1982, when 4 of 5 product categories showed negative ratios.

U.S. research and development expenditures

U.S. expenditures on research and development declined between 1982 and 1983 as such spending for stainless sheet and strip and for stainless bar declined, while spending for stainless plate, wire rod, and alloy tool steel increased in 1983. Research and development expenditures are projected to rise steadily between 1984 and 1987. Most R & D expenditures have been and will be made for the production of new and improved products.

In 1983, research and development expenditures as a share of net sales increased slightly for stainless steel plate and alloy tool steel from that reported in 1982, whereas this measure for stainless steel sheet and strip, bar, and wire rod fell from the 1982 level.

Table 1.—Stainless steel and alloy tool steel: U.S. producers' capacity,  
by products, 1982-83

(In short tons)

Item	1982	1983
Stainless steel and alloy tool steel products	1,556,050	1,643,452
Stainless steel plate	204,576	225,139
Stainless steel sheets and strip	912,900	974,700
Stainless steel bar	230,400	234,600
Stainless steel wire rod	44,900	46,600
Alloy tool steel, all forms	163,274	162,413

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

Table 2.—Stainless and alloy tool steel: U.S. producers' unfilled orders,  
by products, by specified periods, 1982 and 1983

(In short tons)

Period	Stainless steel plate	Stainless steel sheet and strip	Stainless steel bar	Stainless steel wire rod	Alloy tool steel, all forms
1982:					
Dec. 31	9,104	72,749	10,948	6,404	3,434
1983:					
March 31	10,011	135,375	12,825	7,189	4,130
June 30	8,477	159,053	13,900	10,663	4,461
Sept. 30	10,007	192,464	16,963	12,030	4,677
Dec. 31	10,008	189,249	20,730	16,262	5,827

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

Table 3.—Stainless and alloy tool steel: U.S. producers' end-of-period inventories, by products, by specified periods, 1982 and 1983

(In short tons)					
Period	Stainless steel plate	Stainless steel sheet and strip	Stainless steel bar	Stainless steel wire rod	Alloy tool steel, all forms
1982:					
Dec. 31	19,942	116,968	40,943	3,149	37,544
1983:					
March 31	19,798	126,250	38,241	3,069	35,267
June 30	18,837	124,989	37,200	2,979	35,260
Sept. 30	18,604	130,270	39,416	3,481	37,037
Dec. 31	20,118	139,813	42,931	4,892	37,107

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

Table 4.—Selected financial data of 20 U.S. producers on their overall stainless steel and/or alloy tool steel operations, 1982-83, and by specified periods, 1982 and 1983

Line No.	Item	(In thousands of dollars)						
		Oct-Dec. 1982	Year 1982	Jan-Mar. 1983	Apr-June 1983	July-Sept. 1983	Oct-Dec. 1983	Year 1983
	NET SALES:							
1	Excluding intracompany and intercompany transfers	551,611	2,667,785	657,757	742,666	743,170	874,050	3,017,642
2	Intracompany and intercompany transfers	5,457	37,813	6,162	8,227	7,564	8,141	30,094
3	Total net sales (lines 1 and 2)	557,068	2,705,598	663,919	750,893	750,734	882,191	3,047,736
4	COST OF GOODS SOLD (including intracompany and intercompany transfers)	526,282	2,525,677	606,934	661,136	668,650	752,921	2,689,641
5	GROSS PROFIT OR (LOSS) (line 3 less line 4)	30,786	179,921	56,985	89,757	82,084	129,270	358,095
6	GENERAL, SELLING, AND ADMINISTRATIVE EXPENSES	54,797	211,555	52,913	56,831	55,060	60,430	225,235
7	NET OPERATING PROFIT OR (LOSS) (line 5 less line 6)	(24,011)	(31,634)	4,072	32,926	27,024	68,840	132,860
	OTHER INCOME OR (EXPENSE):							
8	Interest expense	(7,989)	(33,402)	(8,142)	(8,110)	(7,260)	(8,296)	(31,808)
9	All other income or (expense)	(648)	8,085	2,004	148	1,230	(1,606)	1,776
10	Total other income or (expense) (lines 8 and 9)	(8,637)	(25,317)	(6,138)	(7,962)	(6,030)	(9,902)	(30,032)
11	NET PROFIT OR (LOSS) BEFORE TAXES (line 7 less line 10)	(32,648)	(56,951)	(2,066)	24,964	20,994	58,938	102,828
12	Depreciation and amortization	16,598	64,771	18,928	19,453	19,501	20,544	78,425

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



Table 5.—Selected financial data of 8 U.S. producers on their stainless steel plate operations, 1982-83, and by specified periods, 1982 and 1983

Line No.	Item	(In thousands of dollars)							Year
		Oct-Dec. 1982	Year 1982	Jan-Mar. 1983	Apr-June 1983	July-Sept. 1983	Oct-Dec. 1983	Year 1983	
	NET SALES:								
1	Excluding intracompany and intercompany transfers	43,610	201,384	46,462	50,833	49,693	60,081	207,069	
2	Intracompany and intercompany transfers	—	406	—	—	—	—	—	
3	Total net sales (lines 1 and 2)	43,610	201,790	46,462	50,833	49,693	60,081	207,069	
4	COST OF GOODS SOLD (including intracompany and intercompany transfers)	43,157	201,763	46,878	48,115	49,077	54,981	199,051	
5	GROSS PROFIT OR (LOSS) (line 3 less line 4)	453	27	(416)	2,718	616	5,100	8,018	
6	GENERAL, SELLING, AND ADMINISTRATIVE EXPENSES	3,777	13,661	3,666	3,648	3,430	3,142	13,884	
7	NET OPERATING PROFIT OR (LOSS) (line 5 less line 6)	(3,324)	(13,634)	(4,082)	(930)	(2,814)	1,958	(5,866)	
8	OTHER INCOME OR (EXPENSE):	(522)	(4,583)	(1,316)	(1,162)	(838)	(986)	(4,301)	
9	Interest expense	(563)	(2,205)	(519)	(579)	(566)	(660)	(2,324)	
10	All other income or (expense)	(1,085)	(6,788)	(1,835)	(1,741)	(1,404)	(1,646)	(6,625)	
	Total other income or (expense) (lines 8 and 9)	(1,085)	(6,788)	(1,835)	(1,741)	(1,404)	(1,646)	(6,625)	
11	NET PROFIT OR (LOSS) BEFORE TAXES (line 7 less line 10)	(4,409)	(20,422)	(5,917)	(2,671)	(4,218)	312	(12,491)	
12	Depreciation and amortization	504	2,009	473	479	474	470	1,897	

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

Table 6.—Selected financial data of 9 U.S. producers on their stainless steel sheet and strip operations, 1982-83, and by specified periods, 1982 and 1983

Line No.	Item	(In thousands of dollars)						Year 1983
		Oct-Dec. 1982	Year 1982	Jan-Mar. 1983	Apr.-June 1983	July-Sept. 1983	Oct-Dec. 1983	
	NET SALES:							
1	Excluding intracompany and intercompany transfers	218,485	922,930	251,801	303,393	320,739	360,560	1,236,493
2	Intracompany and intercompany transfers	1,511	11,233	2,212	2,867	2,478	2,006	9,563
3	Total net sales (lines 1 and 2)	219,996	934,163	254,013	306,260	323,217	362,566	1,246,056
4	COST OF GOODS SOLD (including intracompany and intercompany transfers)	203,012	885,192	233,235	276,853	287,012	303,139	1,100,239
5	GROSS PROFIT OR (LOSS) (line 3 less line 4)	16,984	48,971	20,778	29,407	36,205	59,427	145,817
6	GENERAL, SELLING, AND ADMINISTRATIVE EXPENSES	10,557	43,388	10,128	10,027	10,383	11,174	41,711
7	NET OPERATING PROFIT OR (LOSS) (line 5 less line 6)	6,427	5,583	10,650	19,380	25,822	48,253	104,106
	OTHER INCOME OR (EXPENSE):							
8	Interest expense	(1,845)	(8,436)	(1,639)	(1,540)	(1,550)	(1,450)	(6,178)
9	All other income or (expense)	(648)	5,104	2,361	948	1,304	(1,085)	3,528
10	Total other income or (expense) (lines 8 and 9)	(2,493)	(3,332)	722	(592)	(246)	(2,535)	(2,650)
11	NET PROFIT OR (LOSS) BEFORE TAXES (line 7 less line 10)	3,934	2,251	11,372	18,788	25,576	45,718	101,456
12	Depreciation and amortization	3,368	13,562	3,727	3,921	4,101	4,258	16,006

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

Table 7.—Selected financial data of 8 U.S. producers on their stainless steel bar operations, 1982-83, and by specified periods, 1982 and 1983

Line No.	Item	(In thousands of dollars)						Year
		Oct-Dec. 1982	Jan-Mar. 1983	Apr-June 1983	July-Sept. 1983	Oct-Dec. 1983	1983	
	NET SALES:							
1	Excluding intracompany and intercompany transfers	74,953	351,684	90,553	94,810	90,252	110,198	385,814
2	Intracompany and intercompany transfers	169	1,827	136	219	180	389	924
3	Total net sales (lines 1 and 2)	75,122	353,511	90,689	95,029	90,432	110,587	386,738
4	COST OF GOODS SOLD (including intracompany and intercompany transfers)	68,745	326,730	82,747	84,237	79,272	96,207	342,462
5	GROSS PROFIT OR (LOSS) (line 3 less line 4)	6,377	26,781	7,942	10,792	11,160	14,380	44,276
6	GENERAL, SELLING, AND ADMINISTRATIVE EXPENSES	13,660	46,413	13,172	14,309	13,638	15,816	56,935
7	NET OPERATING PROFIT OR (LOSS) (line 5 less line 6)	(7,283)	(19,632)	(5,230)	(3,517)	(2,478)	(1,436)	(12,659)
	OTHER INCOME OR (EXPENSE):							
8	Interest expense	(1,778)	(4,425)	(1,490)	(1,523)	(1,368)	(1,847)	(6,229)
9	All other income or (expense)	133	1,162	664	98	239	54	1,055
10	Total other income or (expense) (lines 8 and 9)	(1,645)	(3,263)	(826)	(1,425)	(1,129)	(1,793)	(5,174)
11	NET PROFIT OR (LOSS) BEFORE TAXES (line 7 less line 10)	(8,928)	(22,895)	(6,056)	(4,942)	(3,607)	(3,229)	(17,833)
12	Depreciation and amortization	3,294	11,879	3,765	3,693	3,615	3,941	15,014

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

Table 8.—Selected financial data of 4 U.S. producers on their stainless steel wire rod operations, 1982-83, and by specified periods, 1982 and 1983

Line No.	Item	(In thousands of dollars)														
		Oct-Dec. 1982	Year 1982	Jan-Mar. 1983	Apr-June 1983	July-Sept. 1983	Oct-Dec. 1983	Year 1983								
	NET SALES:															
1	Excluding intracompany and intercompany transfers	10,352	43,444	11,940	15,702	15,149	18,663									61,454
2	Intracompany and intercompany transfers	—	—	—	—	—	—									—
3	Total net sales (lines 1 and 2)	10,352	43,444	11,940	15,702	15,149	18,663									61,454
4	COST OF GOODS SOLD (including intracompany and intercompany transfers)	10,632	46,324	12,659	16,401	15,949	19,959									64,968
5	GROSS PROFIT OR (LOSS) (line 3 less line 4)	(280)	(2,880)	(719)	(699)	(800)	(1,296)									(3,514)
6	GENERAL, SELLING, AND ADMINISTRATIVE EXPENSES	1,328	5,532	1,568	1,974	1,921	2,131									7,594
7	NET OPERATING PROFIT OR (LOSS) (line 5 less line 6)	(1,608)	(8,412)	(2,287)	(2,673)	(2,721)	(3,427)									(11,108)
	OTHER INCOME OR (EXPENSE):															
8	Interest expense	(423)	(1,767)	(377)	(506)	(453)	(631)									(1,967)
9	All other income or (expense)	(4)	301	(49)	(21)	62	57									49
10	Total other income or (expense) (lines 8 and 9)	(427)	(1,466)	(426)	(527)	(391)	(574)									(1,918)
11	NET PROFIT OR (LOSS) BEFORE TAXES (line 7 less line 10)	(2,035)	(9,878)	(2,713)	(3,200)	(3,112)	(4,001)									(13,026)
12	Depreciation and amortization	399	1,610	560	625	648	675									2,509

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

Table 9.—Selected financial data of 13 U.S. producers on their alloy tool steel products operations, 1982-83, and by specified periods, 1982 and 1983

Line No.	Item	(In thousands of dollars)											
		Oct-Dec. 1982	Year 1982	Jan-Mar. 1983	Apr-June 1983	July-Sept. 1983	Oct-Dec. 1983	Year 1983					
	NET SALES:												
1	Excluding intracompany and intercompany transfers	44,485	237,341	54,409	59,338	59,315	74,377	247,639					
2	Intracompany and intercompany transfers—	402	3,150	368	717	584	803	2,272					
3	Total net sales (lines 1 and 2)	44,877	240,491	54,777	60,055	59,899	75,180	249,911					
4	COST OF GOODS SOLD (including intra-company and intercompany transfers)	41,651	209,779	47,697	50,218	48,835	56,513	203,263					
5	GROSS PROFIT OR (LOSS) (line 3 less line 4)	3,236	30,712	7,080	9,837	11,064	18,667	46,648					
6	GENERAL, SELLING, AND ADMINISTRATIVE EXPENSES	9,386	41,803	8,979	9,720	9,408	10,605	38,712					
7	NET OPERATING PROFIT OR (LOSS) (line 5 less line 6)	(6,150)	(11,091)	(1,899)	117	1,656	8,062	7,936					
	OTHER INCOME OR (EXPENSE):												
8	Interest expense	(339)	(1,483)	(430)	(452)	(350)	(495)	(1,727)					
9	All other income or (expense)	81	318	(231)	(232)	(182)	(221)	(866)					
10	Total other income or (expense) (lines 8 and 9)	(258)	(1,165)	(661)	(684)	(532)	(716)	(2,593)					
11	NET PROFIT OR (LOSS) BEFORE TAXES (line 7 less line 10)	(6,408)	(12,256)	(2,560)	(567)	1,124	7,346	5,343					
12	Depreciation and amortization	1,710	6,510	2,036	2,024	1,998	2,114	8,172					

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

Table 10.—Capital expenditures by U.S. producers for their operations producing stainless steel and alloy tool steel, by products, 1982-83

(In thousands of dollars)

Item	1982	1983
All operations producing stainless steel and alloy tool steel products:		
Land and land improvement	3,752	1,892
Building or leasehold improvements	14,045	19,549
Machinery, equipment, and fixtures	74,572	128,772
Total	92,369	150,213
Stainless steel plate:		
Land and land improvement	17	0
Building or leasehold improvements	451	1,070
Machinery, equipment, and fixtures	4,088	3,917
Total	4,556	4,987
Stainless steel sheets and strip:		
Land and land improvement	121	1,075
Building or leasehold improvements	5,377	9,732
Machinery, equipment, and fixtures	11,614	58,900
Total	17,112	69,707
Stainless steel bar:		
Land and land improvement	2,049	404
Building or leasehold improvements	2,587	4,491
Machinery, equipment, and fixtures	26,050	36,951
Total	30,686	41,846
Stainless steel wire rod:		
Land and land improvement	613	186
Building or leasehold improvements	770	1,463
Machinery, equipment, and fixtures	6,908	8,145
Total	8,291	9,794
Alloy tool steel, all forms:		
Land and land improvement	386	129
Building or leasehold improvements	1,254	720
Machinery, equipment, and fixtures	9,138	7,517
Total	10,778	8,366

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

Table 11.—Research and development expenses by U.S. producers for their operations producing stainless steel and alloy tool steel, by products, 1982-83

(In thousands of dollars)

Item	1982	1983
All operations producing stainless steel and alloy tool steel products	45,477	43,184
Stainless steel plate	530	776
Stainless steel sheets and strip	13,368	9,260
Stainless steel bar	7,412	7,016
Stainless steel wire rod	2,016	2,531
Alloy tool steel, all forms	2,683	3,010

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

Table 12.—Projected capital expenditures and expenditures on research and development by U.S. producers for their operations producing stainless steel and alloy tool steel, 1984-87

(thousands of dollars)

Item	1984	1985	1986	1987
	<u>Projected</u>			
Capital expenditures	112,570	137,028	152,655	168,385
Research and development expenditures <sup>1/</sup>	25,207	26,958	27,613	28,939

<sup>1/</sup> 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 13.—Capital expenditures as a share of cash flow, and research and development expenditures as a share of total net sales, by product, 1978–83

(In percent)

Item/year	Stainless steel				Alloy tool steel, all forms
	Plate	Sheet and strip	Bar	Wire rod	
Capital expenditures as a share of cash flow: <u>1/</u>					
1978	15.3	15.4	24.3	289.9	15.1
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	<u>2/</u> (791.5)	38.1
1982	<u>2/</u> (24.7)	108.2	<u>2/</u> (278.6)	<u>2/</u> (100.4)	<u>2/</u> (187.6)
1983	<u>2/</u> (47.1)	59.3	<u>2/</u> (1,484.4)	<u>2/</u> (93.1)	61.9
Research and development expenditures as a share of total net sales:					
1978	0.09	0.35	1.43	1.59	0.66
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	0.37	0.75	1.82	4.12	1.22

1/ Stainless steel plate, sheet and strip, and alloy tool steel data may be somewhat overstated due to failure of some companies to provide depreciation expenses for 1978–81.

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

Source: For 1978–81, 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 and 1983, compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.



**Efforts of Domestic 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

Japan

There are approximately 20 producers of stainless and alloy tool steel in Japan. The three largest producers are Nippon Steel Corp., the largest steel producer in the world and the only stainless and alloy tool steel producer in Japan producing both flat and round products; Nisshin Steel Co., the largest specialty flat-rolled products producer in Japan; and Daido Steel Co., the largest round products producer in Japan. NKK, the third largest integrated steel producer in Japan and a producer of stainless steel ingots, billets, and pipes and tubes, began production of stainless steel clad plates in October 1983. 1/

Nippon Steel, which produced nearly 23 percent of all Japanese stainless steel products in 1982, announced in January 1984 a major reorganization of its operations, involving capacity reductions. Its Muroran and Hikari steelworks would henceforth concentrate in the production of specialty steel products, and two other facilities would close. 2/

Nisshin, announced an upgrading of its stainless steel plate facilities to include plates up to 100mm thick. Nisshin also announced plans to increase its percentage of continuously cast steel to 85 percent. 3/

Japanese production of stainless and alloy tool steel products increased from 2,055,000 short tons in 1982 to 2,161,000 short tons in 1983.

---

1/ Metal Bulletin, November 8, 1983, p. 29.

2/ Ibid., January 27, 1984, p. 23.

3/ Ibid., July 29, 1983, p. 23.

Stainless and alloy tool steel

	<u>1982</u>	<u>1983</u>
Production-----1,000 short tons-----	2,055	2,161
Capacity-----do-----	<u>1/</u>	<u>1/</u>
Capacity utilization-----percent-----	<u>1/</u>	<u>1/</u>

1/ Not available.

Source: Production information is from U.S. Department of State cable.

West Germany

The four major producers of stainless and alloy tool steel in West Germany are ARBED Saarstahl GmbH; Edelstahlwerke Buderus AG; Krupp Stahl, AG; and Thyssen Edelstahlwerke AG. All of these firms except Buderus are affiliated with major European carbon steel producers. Thyssen and Krupp are by far the largest stainless and alloy tool steel producers in W. Germany.

In January 1983, Krupp and Thyssen began talks on the establishment of a joint company for their carbon and specialty steel operations, but merger talks between the two collapsed in November 1983. Failure of the merger ended the larger government-backed reorganization plan for the steel industry (including specialty steel) advanced earlier in the year. This plan called for the combination of the nation's five largest steelmakers into two groups, one of which would have included Thyssen and Krupp. 1/ In the wake of the failed merger attempt, Krupp and Thyssen announced cuts in total steelmaking capacity and production. However, a spokesman for Thyssen announced that the cutbacks would not affect the quantity of steel exported to the United States. 2/

---

1/ American Metal Market, November 6, 1983, p. 1.

2/ Ibid., November 8, 1983, p. 10.

West German production of stainless steel products reached 750,000 short tons in 1982 while capacity equalled an estimated 1,200,000 short tons. Capacity utilization equalled 62.5 percent in 1982.

Stainless steel

	<u>1982</u>	<u>1983</u>
Production-----1,000 short tons--	750	<u>1/</u>
Capacity-----do-----	1,200	1,200
Capacity utilization-----percent--	62.5	<u>1/</u>

1/ Not available.

Source: Production information is from Annual Stainless Steel Statistics, 1983, published by Inco-Europe, Ltd. Capacity information is estimated from data supplied in Metal Bulletin Stainless Survey 1982, published by Metal Bulletin, Ltd.

France

In 1983, there were about 10 producers of stainless and alloy tool steel products in France. The five largest producers of stainless and alloy tool steel products include Ugine Aciers, a producer of slabs and bars; Forge de Guegnon, a producer of stainless steel sheet and strip; 1/ Peugeot-Loire, a producer of cold-rolled sheet and strip; the Chatillon Division of Usinor, a producer of hot- and cold-rolled sheets and plates; and Creusot-Loire, a producer of ingots, bars, rods, and plates. Stainless steel sheet and strip is the largest type of steel produced, accounting for almost 70 percent of French stainless and alloy tool steel production in 1983.

In July 1983, Usinor acquired 100 percent of Peugeot-Loire, which produced nearly 70,000 short tons of stainless steel sheet and strip in 1982 and exported some 60 percent of its production. 2/ The move reportedly increased Usinor's already strong presence in stainless sheet.

---

1/ Ugine Aciers and Forges de Guegnon sell their products under a joint sales company known as Ugine-Guegnon.

2/ Metal Bulletin, July 5, 1983, p. 25.

In the fall of 1982 Sacilor, which along with Usinor is a state-owned company, extended its activities into the specialty steel sector by acquiring Ugine Aciers from its parent company, Pechiney Ugine Kuhlman. Ugine Aciers continued to modernize its operations by installing an argon-oxygen decarburization (AOD) converter at its Ardoise plant in December 1982 and adding continuous casting there in 1983. 1/ In November 1983, Sacilor acquired the Imphy bar- and rod-making division from Creusot-Loire while Usinor continued to strengthen its position in specialty steel by taking over Creusot-Loire's ingot-making operation. Creusot-Loire still retains its stainless steel plate-making operation. 2/

France's production of stainless and alloy tool steel products reached 444,000 short tons in 1982 and 461,000 short tons in 1983. Production capacity for stainless steel products is expected to remain at approximately 554,000 short tons in 1983.

Stainless and alloy tool steel

	<u>1982</u>	<u>1983</u>
Production-----1,000 short tons--	<u>1/444</u>	461
Capacity-----do-----	<u>2/554</u>	<u>2/554</u>
Capacity utilization-----percent--	80.1	83.2

1/ Not including cold-rolled bars.

2/ Stainless steel only.

Source: Production information is from U.S. Department of State cable. Capacity information is estimated from data found in Metal Bulletin Stainless Survey 1982 published by Metal Bulletin, Ltd.

---

1/ American Metal Market, Stainless Steel Supplement, February 14, 1983, p. 7A.

2/ Metal Bulletin, December 6, 1983, p. 35.

Spain

There are six Spanish producers of stainless and alloy tool steel products presently exporting to the United States. Producers include Acerinox SA, a producer of a wide variety of finished steel products, including sheet and strip; SA Echevarria, a producer of bar and rod; Aceros Inoxidables Roldan SA, a producer of bar and rod; Forjas Alavesas SA; a producer of bar and rod; Olarra SA, a producer of bar and sheet; and La Calibradora Mecanica SA, a producer of bar.

The trade press reports that Acerinox plans to install a hot strip mill at its Algeciras works. 1/ Acerinox presently rolls its continuously cast slabs into finished products at various European mills. Industry sources estimate that Acerinox produces 130,000 tons of slab per year, more than enough to justify the installation of its own mill. 2/ Acerinox has also recently added a new Sendzimir rolling mill with capacity to roll 100,000 tons per year and has modernized two annealing and pickling lines to raise total cold-rolled sheet finishing capacity to 200,000 tons per year. The company plans to maintain its current level of exports to the United States into 1984 despite the increase in U.S. tariff levels. 3/

Olarra is in the midst of a three-stage restructuring program. The first stage saw the closing of Olarra's Erandio works and the dropping of certain product lines. The second stage (July-October 1984) involves automating and improving the tolerances of the rolling mills to increase productivity while the third stage (after October 1984) calls for the installation of a continuous caster and a reduction in the number of rolling mills from seven to

---

1/ Metal Bulletin, November 18, 1983, p. 25.

2/ Ibid.

3/ Ibid., August 2, 1983, p. 21.

three. 1/ By 1986, Olarra's finishing capacity should decline by nearly 20 percent from current levels.

Much of the shipments of Spanish stainless and alloy tool steel products to the United States originate from members of Aceriales, a consortium formed by the Spanish government in 1980 to restructure the specialty steel industry in the Basque region. The Aceriales group includes Olarra and Echevarria among those firms exporting to the United States. In September 1983 Aceriales approved a restructuring plan for the period from 1983 to 1986, calling for major investments in improving rolling, melting, and continuous casting capability and for the integration of specialty steel producers into two groups; Aceguisa and Acenor. The plan also calls for work force reductions, elimination of inefficient capacity, product quality improvement, and expansion of exports. 2/

Spain's production of stainless steel products reached 212,000 short tons in 1982, while production capacity for all specialty steel products amounted to 455,000 short tons in 1982. Capacity utilization amounted to 46.6 percent in 1982.

Stainless and alloy tool steel

	<u>1982</u>	<u>1983</u>
Production-----1,000 short tons—	<u>1/212</u>	<u>2/</u>
Capacity-----do-----	455	455
Capacity utilization-----percent—	46.6	<u>2/</u>

1/ Stainless steel production only.

2/ Not available.

Source: Production information is from Annual Stainless Steel Statistics, 1983, published by Inco-Europe, Ltd.

---

1/ Ibid., December 9, 1983, p. 25.

2/ Metal Bulletin, September 13, 1983, p. 29.

Spanish production of stainless sheet and strip \* \* \* from \* \* \* in 1982 to \* \* \* in 1983. Production \* \* \* 1984 and \* \* \* 1985. Capacity \* \* \* from \* \* \* 1982 \* \* \* 1983 and \* \* \* 1984 \* \* \*, while capacity utilization \* \* \* 1982, \* \* \* 1983 and \* \* \* and \* \* \* in 1984 and 1985.

Stainless steel sheet and strip

	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>
Production——1,000 short tons——	***	***	***	***
Capacity——do——	***	***	***	***
Capacity utilization——percent——	***	***	***	***

Republic of Korea

Sammi Corp., a manufacturer of bars, wire rods, and sheets, is the only manufacturer and exporter of the products subject to the stainless and alloy tool steel trade actions in the Republic of Korea. \* \* \*.

Korean production of stainless steel products \* \* \* 1982. Capacity \* \* \* 1982 to \* \* \* 1983, while capacity utilization \* \* \*.

Stainless steel

	<u>1982</u>	<u>1983</u>
Production——short tons——	***	***
Capacity——do——	***	***
Capacity utilization——percent——	***	***

Sweden

There are approximately 10 Swedish producers of stainless and alloy tool steel products. Major producers include Avesta AB, a producer of a full range of stainless steel products; Fagersta AB, a producer of hot- and cold-rolled stainless steel strip and wire rod; Sandvik AB, a producer of hot-rolled and forged bar and wire rod; and Uddeholm AB, a producer of a full range of stainless steel products and Europe's largest producer of hot-rolled stainless steel plate.



In January 1984, these four producers announced that certain of their stainless steel operations would be combined. Avesta will be the dominant partner in the restructuring. Raw stainless steel production will be concentrated in Avesta and Sandvik's operations while the melt shops at the other two companies will be closed. Under the arrangement, two new joint companies will be set up. One, owned 50 percent each by Avesta and Sandvik, will take over Fagersta's raw steelmaking, hot-rolling, and cold-rolled strip operations, while the other company, owned 75 percent by Avesta and 25 percent by Sandvik, will produce stainless welded tubes. 1/ Discussions have also been held for further restructuring of stainless steel operations through the closing of two cold-rolling mills and the consolidation of all sheet and strip operations. 2/ The objective of the restructuring is to make the Swedish steel industry more competitive through the elimination of duplicative and inefficient capacity.

Swedish production of stainless steel increased from 363,000 short tons in 1982 to 384,000 short tons in 1983. Swedish capacity to produce stainless and alloy tool steel \* \* \* 1983 from \* \* \* 1982, while capacity utilization \* \* \* 1982 \* \* \* 1983.

---

1/ Metal Bulletin, January 13, 1984, p. 32.

2/ American Metal Market, August 3, 1983, p. 11.

Stainless and alloy tool steel

	<u>1982</u>	<u>1983</u>
Production-----1,000 short tons--	<u>1/363</u>	<u>1/2/ 384</u>
Capacity-----do-----	***	***
Capacity utilization-----percent--	***	***

1/ Stainless steel only.

2/ Annualized from 9 month data.

Source: Production information for 1982 is from Annual Stainless Steel Statistics, 1983, published by Inco-Europe, Ltd. Data for 1983 were provided by Metal Bulletin. Capacity information was provided by counsel for Swedish Ironmaster Association during Investigation No. TA-201-48.

United Kingdom

The British stainless and alloy tool steel industry consists of British Stainless Corporation, a division of state owned British Steel Corporation (BSC), and approximately six private sector firms, which are members of the British Independent Steel Producers' Association (BISPA). BSC produces virtually no tool steel or stainless bar. The private sector producers are concentrated in tool steel and special alloy and special shape stainless steel products.

During 1982 and 1983 a number of BISPA member firms stopped producing stainless and alloy tool steel products. In 1982, Neepsend abandoned its specialty steel melting and rolling operations, while Aurora Holdings Ltd., closed its main steel plant in Sheffield in 1982 1/ and its tool steel plant in Manchester in 1983. 2/ Private sector companies expect further rationalizations, which may remove close to 40 percent of the specialty steel production capacity which existed in 1981. 3/

---

1/ Metal Bulletin Monthly, February, 1982, p. 35.

2/ American Metal Market, March 2, 1983, p. 3.

3/ Metal Bulletin Monthly, February 1982, p. 35.

UK production of stainless steel reached 241,000 short tons in 1982, while capacity to produce stainless steel equalled 450,000 short tons in 1982 and about 440,000 short tons in 1983. Capacity utilization was 53.6 percent in 1982.

Stainless steel

	<u>1982</u>	<u>1983</u>
Production-----1,000 short tons---	241	<u>1/</u>
Capacity-----do-----	450	440
Capacity utilization-----percent---	53.6	<u>1/</u>

1/ Not available.

Source: Production information is from Annual Stainless Steel Statistics, 1983, published by Inco-Europe, Ltd; capacity data is estimated from material supplied by attorneys in Investigation No. 701-TA-196 (Final), Stainless Steel Sheet and Strip and Plate from the United Kingdom and from data found in Metal Bulletin Stainless Survey, 1982, published by Metal Bulletin, Ltd.

Brazil

There are approximately five Brazilian producers of stainless and alloy tool steel products. Acos Anhanguera S.A. produces stainless wire rod; Acos Villares S.A. produces stainless wire rods, bars, and tool steel. Comphania Acos Especiais Itabira (Acesita) produces stainless bars, sheet and strip, and tool steel; Acos Finos Piratini S.A. (Piratini) produces stainless bars, wire rods, and tool steel; and Siderurgica Nossa Senhora da Aparecida S.A. (Aparecida) produces stainless bars, wire rods, and tool steel.

Brazil's two leading producers of stainless and alloy tool steels, Acesita and Acos Villares, last increased their steelmaking capacities in 1981 when both firms completed major plant expansions. 1/ In 1982, Acesita purchased a cold rolling mill which enabled it to double its production of cold-rolled stainless products. 2/ Given these relatively recent additions to

---

1/ American Metal Market, August 10, 1981, p. 10A.

2/ Ibid., April 12, 1982, p. 9A.

specialty steelmaking capacity and anticipated moderate growth in domestic specialty steel consumption, the Brazilian government has planned to increase its total steel exports by over 50 percent in 1984 over 1983 levels. However, Brazil has anticipated a loss in exports to the United States market in 1984; it hopes to offset this loss by increasing exports to other markets. 1/

Brazilian production of stainless and alloy tool steel increased from 90,000 short tons in 1982 to 95,000 short tons in 1983. Capacity was an estimated 180,000 short tons in 1982 and 1983, while capacity utilization was 50 percent in 1982.

Stainless and alloy tool steel

	<u>1982</u>	<u>1983</u>
Production.....1,000 short tons—	90	<u>1/</u> 95
Capacity.....do——	180	180
Capacity utilization.....percent—	50.0	<u>2/</u>

1/ Annualized from 11 month data.

2/ Not available.

Source: Production information obtained from the U.S. Department of State through the Brazilian Iron and Steel Institute. Capacity information is estimated from data found in Metal Bulletin Stainless Survey 1982, published by Metal Bulletin, Ltd.

---

1/ Department of State telegram, February 1984, p. 1.

