



MINERAL INDUSTRY SURVEYS

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON, D.C. 20241



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Iron and Steel Scrap, Monthly

IRON AND STEEL SCRAP IN DECEMBER 1977

Returns from 74% of reporting consumers representing 92% of total scrap consumption, indicated that consumption of iron and steel scrap in December on a daily average basis was 4% below that in November, according to the Bureau of Mines, U.S. Department of the Interior. Compared with November data, daily average production and net receipts were down 3% and 4%, respectively, and stocks at the end of the month were down 2%.

Exports of ferrous scrap during the month were 2% above those for November 1977 and 29% below those for December 1976. Japan was the largest importer of U.S. scrap in December 1977, taking 31% of the total exported. The next largest importers were Republic of Korea and Spain, which received 18% and 10%, respectively.

The Iron Age composite price for No. 1 heavy melting steel scrap (Chicago, Pittsburgh, and Philadelphia) at the end of December was \$66.17 per long ton, down 6% from the price of \$70.50 at the end of December 1976.

Pig iron production and consumption on a daily average basis for the month were unchanged and up 1%, respectively, from those of the previous month. Monthend stocks of pig iron decreased 3% compared with those at the end of November.

TABLE 1. - U.S. RECEIPTS, PRODUCTION, CONSUMPTION, SHIPMENTS, AND STOCKS OF IRON AND STEEL SCRAP AND PIG IRON, BY TYPE OF MANUFACTURER (SHORT TONS)

DECEMBER 1977 (PRELIMINARY) 1/						
	MFRS. OF PIG IRON AND STEEL INGOTS & CASTINGS 2/	MFRS. OF STEEL CASTINGS 3/	IRON FOUNDRIES AND MISCEL- LANEOUS USERS	TOTAL FOR MONTH OF DEC 1977	FINAL TOTAL FOR MONTH OF NOV 1977 4/	TOTAL YEAR THROUGH DEC 1977 5/
SCRAP:						
RECEIPTS FROM DEALERS AND OTHER SOURCES	1,998,123	162,880	768,234	2,929,237	2,858,120	37,899,662
RECEIPTS FROM OTHER OWN COMPANY PLANTS--	481,550	8,163	273,241	762,954	850,819	9,973,332
PRODUCTION RECIRCULATING SCRAP-----	3,246,746	80,265	442,768	3,769,779	3,754,592	46,957,801
PRODUCTION OBSOLETE SCRAP-----	206,812	3,128	7,981	217,921	207,426	2,564,994
CONSUMPTION-----	5,626,634	245,487	1,483,874	7,355,995	7,430,429	92,089,890
SHIPMENTS-----	524,685	1,214	19,440	545,339	530,999	5,774,981
STOCKS END OF MONTH-----	7,870,607	258,855	1,112,984	9,242,446	9,411,819	--
PIG IRON:						
RECEIPTS-----	535,625	4,018	159,103	698,746	619,108	8,666,712
PRODUCTION-----	6,312,656	--	--	6,312,656	6,103,660	80,990,835
CONSUMPTION-----	6,335,979	3,497	158,044	6,497,520	6,211,029	82,009,303
SHIPMENTS-----	596,791	48	3,186	600,025	614,830	7,011,567
STOCKS END OF MONTH-----	1,179,811	6,422	122,683	1,308,916	1,352,724	--
DIRECT-REDUCED OR PREREDUCED IRON:						
RECEIPTS-----	--	--	--	17,801	21,904	426,305
PRODUCTION-----	--	--	--	--	--	--
CONSUMPTION-----	--	--	--	18,510	21,997	425,296
SHIPMENTS-----	--	--	--	--	--	--
STOCKS END OF MONTH-----	--	--	--	2,556	3,589	--

1/ BASED ON RETURNS FROM 74% OF REPORTING CONSUMERS, REPRESENTING 92% OF SCRAP CONSUMPTION.

2/ INCLUDES ONLY THOSE MANUFACTURERS OF STEEL CASTINGS THAT ALSO PRODUCE INGOTS.

3/ EXCLUDES COMPANIES THAT PRODUCE BOTH STEEL INGOTS AND CASTINGS.

4/ BASED ON RETURNS FROM 93% OF REPORTING CONSUMERS, REPRESENTING 97% OF SCRAP CONSUMPTION.

5/ CUMULATIVE TOTALS MAY NOT AGREE WITH SUM OF MONTHLY REPORTS BECAUSE OF ADDITION OF REPORTS FROM LATE RESPONDENTS.

TABLE 2. - MANUFACTURERS OF PIG IRON AND STEEL INGOTS AND CASTINGS 1/ - RECEIPTS, PRODUCTION, CONSUMPTION, SHIPMENTS AND STOCKS OF PIG IRON AND IRON AND STEEL SCRAP, BY GRADE, DECEMBER 1977 (PRELIMINARY) 2/ (SHORT TONS)

ITEM	RECEIPTS OF SCRAP			PRODUCTION OF HOME SCRAP			CONSUMPTION			ENDING STOCKS
	FROM BROKERS, DEALERS AND OTHER OUTSIDE SOURCES	FROM OTHER OWN COMPANY PLANTS	FROM SCRAP	RECYCLING	RESULTING FROM CURRENT OPERATIONS	OLD EQUIPMENT, BUILDINGS, ETC.)	AND SCRAP FROM (INCLUDES RE- CIRCULATING OF SCRAP)	CHASED AND HOME SCRAP		
SCRAP:										
CARBON STEEL-										
LOW-PHOSPHORUS PLATE AND PUNCHINGS----	34,911	692		2,266		803		38,133		108,352
CUT STRUCTURAL AND PLATE-----	24,822	--		21,971		--		50,218		59,828
NO.1 HEAVY MELTING STEEL-----	421,635	260,009		1,472,822		10,356		2,009,723		2,410,148
NO.2 HEAVY MELTING STEEL-----	142,903	4,104		75,694		148		243,999		426,944
NO.1 AND ELECTRIC FURNACE BUNDLES---	472,550	66,079		238,361		142		770,231		1,632,235
NO.2 AND ALL OTHER BUNDLES-----	122,818	10,449		28,457		--		144,386		281,529
ELECTRIC FURNACE 1 FOOT AND UNDER (NOT BUNDLES)-----	1,458	--		--		--		2,729		3,511
RAILROAD RAILS-----	8,600	--		1		--		8,125		3,510
TURNTINGS AND BORINGS-----	113,667	7,023		29,960		137		132,627		108,517
SLAB SCRAP (FE CONTENT 70 PERCENT)---	106,838	797		183,814		800		316,005		171,391
SHREDDED OR FRAGMENTIZED-----	94,586	23,991		79		--		138,656		195,152
NO. 1 BUSHING-----	131,062	3,503		454		--		137,108		171,646
ALL OTHER CARBON STEEL SCRAP-----	147,475	11,179		853,214		34,092		968,427		949,623
STAINLESS STEEL SCRAP-----										
ALLOY STEEL (EXCEPT STAINLESS)---	32,073	3,217		53,053		4		84,260		4,180
INGOT MOLD AND STUOL SCRAP-----	17,265	19,651		131,506		285		137,517		15,000
MACHINERY AND CUPOLA CAST IRON---	69,986	47,843		79,892		150,836		306,442		72,425
CAST IRON BORINGS-----	543	--		--		--		506		4,253
MOTOR BLOCKS-----	12,236	3,860		17,143		6,066		37,400		77,822
OTHER IRON SCRAP-----	2	--		18		--		27		1,569
OTHER MIXED SCRAP-----	17,751	16,060		36,738		3,139		46,396		129,438
	25,742	2,693		21,303		4		43,718		61,213
TOTAL SCRAP-----	1,998,123	481,550		3,246,746		206,812		5,626,634		7,870,607
TOTAL SCRAP THROUGH DECEMBER 1977----	25,626,765	5,980,099		39,926,281		2,442,385		69,197,032		7,870,607
RECEIPTS										
PRODUCTION										
CONSUMPTION										
SHIPMENTS										
STOCKS										
PIG IRON-----	535,625			6,312,656				6,335,979		1,179,911
PIG IRON THROUGH DECEMBER 1977-----	6,039,179			80,990,835				79,391,189		1,179,911
1/ INCLUDES ONLY THOSE MANUFACTURERS OF STEEL CASTINGS THAT ALSO PRODUCE INGOTS.										
2/ BASED ON RETURNS FROM 89% OF REPORTING CONSUMERS, REPRESENTING 95% OF SCRAP CONSUMPTION.										

TABLE 3. - MANUFACTURERS OF STEEL CASTINGS 1/ - RECEIPTS, PRODUCTION, CONSUMPTION, SHIPMENTS AND STOCKS OF PIG IRON AND IRON AND STEEL SCRAP, BY GRADE, DECEMBER 1977 (PRELIMINARY) 2/ (SHORT TONS)

ITEM	RECEIPTS OF SCRAP			PRODUCTION OF HOME SCRAP			CONSUMPTION			ENDING STOCKS
	FROM BROKERS, DEALERS AND OTHER OUTSIDE SOURCES	FROM OTHER OWN COMPANY PLANTS		RECYCLING SCRAP RESULTING FROM CURRENT OPERATIONS	OBsolete SCRAP (INCLUDES INGOT AND SCRAP FROM OLD EQUIPMENT, BUILDINGS, ETC.)	CHASED AND HOME SCRAP (INCLUDES RE-SHIPMENTS OF SCRAP)				
SCRAP:										
CARBON STEEL--										
LOW-PHOSPHORUS PLATE AND PUNCHINGS----	46,616	274		16,137	1,010	67,820	--		62,447	
CUT STRUCTURAL AND PLATE-----	16,141	2,482		2,220	--	18,583	25		23,366	
NO.1 HEAVY MELTING STEEL-----	10,778	122		5,880	257	19,521	--		30,837	
NO.2 HEAVY MELTING STEEL-----	2,852	--		1,489	--	5,244	--		1,388	
NO.1 AND ELECTRIC FURNACE BUNDLES----	5,515	--		249	--	5,103	--		4,078	
NO.2 AND ALL OTHER BUNDLES-----	1,185	--		--	--	172	--		2,183	
ELECTRIC FURNACE 1 FOOT AND UNDER (NOT BUNDLES)-----	5,346	--		1,875	--	6,948	96		5,432	
RAILROAD RAILS-----	--	--		--	--	10	--		214	
TURNINGS AND BORINGS-----	3,426	299		2,247	--	5,462	596		5,721	
SLAG SCRAP (FE CONTENT 70 PERCENT)----	--	--		306	--	303	10		58	
SHREDDER OR FRAGMENTIZED-----	7,375	1,151		--	--	7,273	--		5,555	
NO. 1 BUSHELING-----	4,000	680		813	--	3,788	--		9,270	
ALL OTHER CARBON STEEL SCRAP-----	45,029	2,354		26,487	1,861	71,740	--		51,896	
STAINLESS STEEL SCRAP-----										
ALLOY STEEL (EXCEPT STAINLESS)-----	2,505	337		2,242	--	4,346	274		4,732	
INGOT MOLD AND STUOL SCRAP-----	3,929	484		10,579	--	12,001	--		22,630	
MACHINERY AND CUPOLA CAST IRON-----	493	--		32	--	485	28		749	
CAST IRON BORINGS-----	527	--		698	--	1,293	--		2,101	
MOTOR BLOCKS-----	3,143	--		2,517	--	5,721	50		4,580	
OTHER IRON SCRAP-----	55	--		--	--	75	91		91	
OTHER MIXED SCRAP-----	3,853	--		6,155	--	9,261	135		21,408	
	112	--		339	--	338	--		119	
TOTAL SCRAP-----										
	162,880	8,163		80,265	3,128	245,487	1,214		258,855	
TOTAL SCRAP THROUGH DECEMBER 1977----										
	1,877,587	116,204		989,261	16,948	2,939,438	18,810		258,855	
RECEIPTS			PRODUCTION			CONSUMPTION			STOCKS	

4,018			--			3,497			48	

45,043			--			44,083			95	

PIG IRON-----										

PIG IRON THROUGH DECEMBER 1977-----										

45,043			--			44,083			95	

PIG IRON THROUGH DECEMBER 1977-----										

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PIG IRON THROUGH DECEMBER 1977-----										

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PIG IRON THROUGH DECEMBER 1977-----										

45,043			--			44,083			95	

PIG IRON THROUGH DECEMBER 1977-----										

45,043			--			44,083			95	

PIG IRON THROUGH DE										

1/ EXCLUDES COMPANIES THAT PRODUCE BOTH STEEL INGOTS AND CASTINGS.
2/ BASED ON RETURNS FROM 78% OF REPORTING CONSUMERS, REPRESENTING 88% OF SCRAP CONSUMPTION.

TABLE 4. - IRON FOUNDRIES AND MISCELLANEOUS USERS - RECEIPTS, PRODUCTION, CONSUMPTION, SHIPMENTS, AND STOCKS OF PIG IRON AND IRON AND STEEL SCRAP, BY GRADE, DECEMBER 1977 (PRELIMINARY) 1/ (SHORT TONS)

ITEM	RECEIPTS OF SCRAP			PRODUCTION OF HOME SCRAP			CONSUMPTION			ENDING STOCKS
	FROM BROKERS, DEALERS AND OTHER OUTSIDE SOURCES	FROM OTHER OWN COMPANY PLANTS	FROM OTHER RESULTING FROM CURRENT OPERATIONS BUILDINGS, ETC.)	RECYCLING OBSOLETE SCRAP (INCLUDES INGOT MOLD, STUOL, HOME SCRAP AND SCRAP FROM (INCLUDES RE-OLD EQUIPMENT, CIRCULATING OF SCRAP)	FROM	OTHER	SHIPMENTS	CONSUMPTION		
SCRAP:										
CARBON STEEL-										
LOW-PHOSPHORUS PLATE AND PUNCHINGS---	52,492	7,130	5,226	34	61,146	158				66,295
CUT STRUCTURAL AND PLATE---	104,297	12,278	11,376	147	140,724	194				90,338
NO.1 HEAVY MELTING STEEL---	17,576	10,818	6,016	--	31,802	3,510				53,851
NO.2 HEAVY MELTING STEEL---	646	502	654	38	4,018	160				7,050
NO.1 AND ELECTRIC FURNACE BUNDLES---	11,475	11,248	5,796	34	31,721	--				10,231
NO.2 AND ALL OTHER BUNDLES---	49,854	11,397	--	--	56,393	--				56,934
ELECTRIC FURNACE 1 FOOT AND UNDER (NOT BUNDLES)---	4,091	--	2,193	--	6,356	--				6,283
RAILROAD RAILS---	9,827	--	24	--	9,527	173				13,061
TURNINGS AND BORINGS---	43,584	8,909	1,333	54	53,108	2,000				80,803
SLAG SCRAP (FE CONTENT 70 PERCENT)---	4,780	--	54	--	5,656	54				31,659
SHREDDER OR FRAGMENTIZED---	66,303	9,246	--	--	74,187	296				52,703
NO. 1 BUSHING---	28,783	11,108	982	--	38,005	--				14,830
ALL OTHER CARBON STEEL SCRAP---	79,141	52,540	13,450	7	151,037	607				126,677
STAINLESS STEEL SCRAP---										
ALLOY STEEL (EXCEPT STAINLESS)---	1,261	--	572	1	1,599	66				9,178
INGOT MOLD AND STUOL SCRAP---	8,927	709	297	73	8,601	124				10,744
MACHINERY AND CUPOLA CAST IRON---	19,309	--	8,150	369	19,412	338				33,260
CAST IRON BORINGS---	66,736	11,989	70,253	370	147,836	1,295				88,048
MOTOR BLOCKS---	34,399	46,841	29,604	374	111,362	3,770				91,906
OTHER IRON SCRAP---	52,713	4,960	34,385	--	89,724	--				54,144
OTHER MIXED SCRAP---	80,817	8,757	226,425	6,281	319,867	6,510				175,888
	31,183	64,809	25,978	199	121,793	185				39,097
TOTAL SCRAP---										
	768,234	273,241	442,768	7,981	1,483,874	19,440				1,112,984
TOTAL SCRAP THROUGH DECEMBER 1977---										
	10,395,310	3,877,029	6,042,259	105,661	20,003,420	302,509				1,112,984
PIG IRON										
	159,103	--	--	--	158,044	3,186				122,683
PIG IRON THROUGH DECEMBER 1977---										
	2,582,490	--	--	--	2,574,031	8,291				122,683
1/ BASED ON RETURNS FROM 69% OF REPORTING CONSUMERS, REPRESENTING 83% OF SCRAP CONSUMPTION.										

TABLE 5. - CONSUMPTION OF IRON AND STEEL SCRAP AND PIG IRON IN THE UNITED STATES
IN DECEMBER 1977 (PRELIMINARY), BY TYPE OF CONSUMER AND TYPE OF FURNACE OR OTHER USE
(SHORT TONS)

TYPE OF FURNACE OR OTHER USE	MANUFACTURERS OF PIG IRON AND STEEL INGOTS AND CASTINGS 1/				MANUFACTURERS OF STEEL CASTINGS 2/				IRON FOUNDRIES AND MISCELLANEOUS USERS				TOTAL ALL TYPES	
	SCRAP		PIG IRON		SCRAP		PIG IRON		SCRAP		PIG IRON		SCRAP	PIG IRON
BLAST FURNACE 3/	295,038	--	--	--	--	--	--	--	--	--	--	295,038	--	--
BASIC OXYGEN PROCESS 4/	1,988,595	5,144,206	--	--	--	--	--	--	--	--	--	1,988,595	5,144,206	--
OPEN-HEARTH FURNACE	943,797	967,080	--	--	5,863	454	--	--	--	--	--	949,680	967,534	--
ELECTRIC FURNACE	2,304,514	46,230	--	--	224,845	2,500	--	--	427,958	25,954	--	2,957,317	74,684	--
CUPOLA FURNACE	34,511	14,218	--	--	11,757	59	--	--	1,017,841	70,839	--	1,064,109	85,116	--
OTHER (INCLUDING AIR FURNACE) 5/	60,179	20,207	--	--	3,002	484	--	--	38,075	3,616	--	101,256	24,307	--
DIRECT CASTINGS 6/	--	144,038	--	--	--	--	--	--	--	57,635	--	--	201,673	--
TOTAL	5,626,634	6,335,979	245,487	3,497	1,483,874	158,044	7,355,995	6,497,520						

1/ INCLUDES ONLY THOSE CASTINGS MADE BY COMPANIES PRODUCING STEEL INGOTS.
2/ EXCLUDES COMPANIES THAT PRODUCE BOTH STEEL INGOTS AND STEEL CASTINGS.
3/ INCLUDES CONSUMPTION IN ALL BLAST FURNACES PRODUCING PIG IRON.
4/ INCLUDES SCRAP AND PIG IRON PROCESSED IN METALLURGICAL BLAST CUPOLAS AND USED IN OXYGEN CONVERTERS.
5/ INCLUDES VACUUM MELTING FURNACES AND MISCELLANEOUS USES.
6/ INCLUDES INGOT MOLDS AND STOODLS.

TABLE 6. - MANUFACTURERS OF PIG IRON AND STEEL INGOTS AND CASTINGS 1/ - RECEIPTS, PRODUCTION, CONSUMPTION, SHIPMENTS AND STOCKS OF PIG IRON AND IRON AND STEEL SCRAP, BY GRADE, NOVEMBER 1977 (FINAL) 2/ (SHORT TONS)

ITEM	RECEIPTS OF SCRAP			PRODUCTION OF HOME SCRAP			CONSUMPTION			ENDING STOCKS
	FROM BROKERS, DEALERS AND OTHER OUTSIDE SOURCES	FROM OTHER OWN COMPANY PLANTS	FROM SCRAP RESULTING FROM CURRENT OPERATIONS	RE-CIRCULATING OBSOLETE SCRAP (INCLUDES INGOT MOLDS, STTOOLS, HOME SCRAP AND SCRAP FROM OLD EQUIPMENT, BUILDINGS, ETC.)	SCRAP FROM (INCLUDES RE- SHIPMENTS OF SCRAP)	CONSUMPTION	SHIPMENTS	STOCKS		
SCRAP:										
CARBON STEEL-										
LOW-PHOSPHORUS PLATE AND PUNCHINGS----	42,933	1,242	2,449	1,031	41,012	3,147	110,965			
CUT STRUCTURAL AND PLATE-----	15,287	9	27,976	--	50,734	--	57,080			
NO.1 HEAVY MELTING STEEL-----	387,302	271,321	1,406,498	5,962	1,921,918	226,236	2,489,574			
NO.2 HEAVY MELTING STEEL-----	132,884	15,085	79,223	121	255,149	2,428	443,083			
NO.1 AND ELECTRIC FURNACE BUNDLES---	457,196	67,443	209,180	39	733,840	28,565	1,596,040			
NO.2 AND ALL OTHER BUNDLES-----	87,940	6,989	25,436	--	138,657	11,564	281,669			
ELECTRIC FURNACE 1 FOOT AND UNDER (NOT BUNDLES)-----	2,648	--	1	--	2,855	--	4,731			
RAILROAD RAILS-----	6,825	254	--	--	5,069	66	3,445			
TURNINGS AND BORINGS-----	104,893	6,978	28,440	135	134,936	10,039	98,787			
SLAG SCRAP (FE CONTENT 70 PERCENT)---	115,821	448	205,961	801	325,860	8,891	196,105			
SHREDDED OR FRAGMENTIZED-----	187,309	29,564	--	--	150,684	--	211,779			
NO. 1 BUSHING-----	121,198	4,013	2,675	--	124,776	1,740	173,077			
ALL OTHER CARBON STEEL SCRAP-----	160,935	15,738	832,412	37,773	983,286	48,822	1,000,341			
STAINLESS STEEL SCRAP-----	27,546	3,376	51,503	35	81,808	4,169	94,786			
ALLOY STEEL (EXCEPT STAINLESS)---	15,877	21,132	123,778	253	145,479	31,169	291,054			
INGOT MOLD AND STUOL SCRAP-----	23,231	60,930	91,608	139,506	281,880	85,363	712,267			
MACHINERY AND CUPOLA CAST IRON-----	1,230	--	--	--	922	--	4,216			
CAST IRON BORINGS-----	18,179	5,617	22,263	9,549	40,807	8,497	74,673			
MOTOR BLOCKS-----	--	--	26	--	20	--	1,563			
OTHER IRON SCRAP-----	20,399	11,468	42,386	4,768	55,533	36,589	123,695			
OTHER MIXED SCRAP-----	29,808	43	13,863	11	45,148	1,576	57,585			
TOTAL SCRAP-----	1,871,441	521,650	3,165,678	199,984	5,520,413	508,861	8,026,515			
TOTAL SCRAP THROUGH NOVEMBER 1977---	23,628,642	5,498,449	36,679,535	2,235,573	63,520,398	4,928,977	8,026,515			
PIG IRON										
	426,153		6,183,660		6,025,157	613,684	1,223,500			
PIG IRON THROUGH NOVEMBER 1977-----	5,503,554		74,678,179		73,055,210	7,306,390	1,223,500			
1/ INCLUDES ONLY THOSE MANUFACTURERS OF STEEL CASTINGS THAT ALSO PRODUCE INGOTS. 99% OF REPORTING CONSUMERS, REPRESENTING 99% OF SCRAP CONSUMPTION.										

1/ INCLUDES ONLY THOSE MANUFACTURERS OF STEEL CASTINGS THAT ALSO PRODUCE INGOTS.

2/ BASED ON RETURNS FROM 95% OF REPORTING CONSUMERS, REPRESENTING 99% OF SCRAP CONSUMPTION.

TABLE 7. - MANUFACTURERS OF STEEL CASTINGS 1/ - RECEIPTS, PRODUCTION, CONSUMPTION, SHIPMENTS AND STOCKS OF PIG IRON AND IRON AND STEEL SCRAP, BY GRADE, NOVEMBER 1977 (FINAL) 2/ (SHORT TONS)

ITEM	RECEIPTS OF SCRAP			PRODUCTION OF HOME SCRAP			CONSUMPTION			ENDING STOCKS
	FROM BROKERS, DEALERS AND OTHER OUTSIDE SOURCES	FROM OTHER OWN COMPANY PLANTS	FROM RECIRCULATING SCRAP (INCLUDES INGOT CHASED AND MOLD, STTOOLS, HOME SCRAP FROM AND SCRAP FROM (INCLUDES RE-OLD EQUIPMENT, CIRCULATING OF SCRAP OPERATIONS BUILDINGS, ETC.) SCRAP)	FROM BROKERS, DEALERS AND OTHER OUTSIDE SOURCES	FROM OTHER OWN COMPANY PLANTS	FROM RECIRCULATING SCRAP (INCLUDES INGOT CHASED AND MOLD, STTOOLS, HOME SCRAP FROM AND SCRAP FROM (INCLUDES RE-OLD EQUIPMENT, CIRCULATING OF SCRAP OPERATIONS BUILDINGS, ETC.) SCRAP)	FROM BROKERS, DEALERS AND OTHER OUTSIDE SOURCES	FROM OTHER OWN COMPANY PLANTS	FROM RECIRCULATING SCRAP (INCLUDES INGOT CHASED AND MOLD, STTOOLS, HOME SCRAP FROM AND SCRAP FROM (INCLUDES RE-OLD EQUIPMENT, CIRCULATING OF SCRAP OPERATIONS BUILDINGS, ETC.) SCRAP)	
SCRAP:										
CARBON STEEL-										
LOW-PHOSPHORUS PLATE AND PUNCHINGS----	48,211	357	--	16,636	--	--	67,271	--	--	65,597
CUT STRUCTURAL AND PLATE-----	19,734	1,454	--	2,512	--	--	18,647	--	38	21,012
NO.1 HEAVY MELTING STEEL-----	13,093	5	12	5,536	--	--	14,009	--	78	33,233
NO.2 HEAVY MELTING STEEL-----	5,428	--	--	1,524	--	--	7,118	--	--	3,474
NO.1 AND ELECTRIC FURNACE BUNDLES----	5,275	--	--	249	--	--	5,388	--	--	3,428
NO.2 AND ALL OTHER BUNDLES-----	337	--	--	--	--	--	152	--	--	1,184
ELECTRIC FURNACE 1 FOOT AND UNDER (NOT BUNDLES)-----	4,830	--	--	1,807	--	--	7,149	--	90	5,033
RAILROAD RAILS-----	--	--	--	--	--	--	7	--	--	224
TURNINGS AND BORINGS-----	4,841	430	--	2,044	--	--	6,089	--	391	6,204
SLAG SCRAP (FE CONTENT 70 PERCENT)----	--	--	--	314	--	--	324	--	22	65
SHREDDED OR FRAGMENTIZED-----	6,686	1,099	--	--	--	--	6,860	--	--	3,841
NO. 1 BUSHING-----	4,351	532	--	672	--	--	4,314	--	--	7,565
ALL OTHER CARBON STEEL SCRAP-----	47,555	2,498	1,715	25,590	--	--	71,910	--	125	47,146
STAINLESS STEEL SCRAP-----										
ALLOY STEEL (EXCEPT STAINLESS)-----	2,013	376	--	2,153	--	--	4,602	--	308	4,416
INGOT MOLD AND STUOL SCRAP-----	3,760	967	--	9,747	--	--	11,072	--	--	22,301
MACHINERY AND CUPOLA CAST IRON-----	558	--	--	6	--	--	452	--	8	688
CAST IRON BORINGS-----	596	--	--	594	--	--	1,175	--	--	2,169
MOTOR BLOCKS-----	3,530	468	--	4,468	--	--	8,536	--	33	4,736
OTHER IRON SCRAP-----	32	--	--	--	--	--	107	--	--	111
OTHER MIXED SCRAP-----	3,594	19	32	6,463	--	--	9,699	--	117	20,846
	--	--	--	364	--	--	364	--	--	6
TOTAL SCRAP-----	174,424	8,209	1,759	80,679	--	--	245,245	--	1,210	253,279
TOTAL SCRAP THROUGH NOVEMBER 1977----	1,714,787	188,041	13,820	908,996	--	--	2,693,951	--	17,596	253,279
PIG IRON-----										
	3,823	--	--	--	--	--	3,875	--	--	5,992
PIG IRON THROUGH NOVEMBER 1977-----	41,025	--	--	--	--	--	40,586	--	47	5,992

1/ EXCLUDES COMPANIES THAT PRODUCE BOTH STEEL INGOTS AND CASTINGS.

2/ BASED ON RETURNS FROM 85% OF REPORTING CONSUMERS, REPRESENTING 94% OF SCRAP CONSUMPTION.

TABLE 8. - IRON FOUNDRIES AND MISCELLANEOUS USERS - RECEIPTS, PRODUCTION, CONSUMPTION, SHIPMENTS, AND STOCKS OF PIG IRON AND IRON AND STEEL SCRAP, BY GRADE, NOVEMBER 1977 (FINAL) 1/ (SHORT TONS)

ITEM	RECEIPTS OF SCRAP		PRODUCTION OF HOME SCRAP		CONSUMPTION		ENDING STOCKS
	FROM BROKERS, DEALERS AND OTHER OUTSIDE SOURCES	FROM OTHER OWN COMPANY PLANTS	RECYCLATING OBSOLETE SCRAP		OF BOTH PURCHASED AND HOME SCRAP		
			FROM SCRAP (INCLUDES INGOT CHASED AND MOLD, STOODS, HOME SCRAP AND SCRAP FROM (INCLUDES RE-OLD EQUIPMENT, CIRCULATING OF SCRAP)	RESULTING FROM CURRENT OPERATIONS BUILDINGS, ETC.)	CONSUMPTION	SHIPMENTS	
SCRAP:							
CARBON STEEL-							
LOW-PHOSPHORUS PLATE AND PUNCHINGS----	57,619	10,830	6,281	26	74,294	100	62,177
CUT STRUCTURAL AND PLATE-----	112,114	11,970	12,373	68	140,394	562	102,863
NO.1 HEAVY MELTING STEEL-----	15,432	13,535	6,089	--	33,995	4,464	54,501
NO.2 HEAVY MELTING STEEL-----	619	374	552	84	4,734	68	9,354
NO.1 AND ELECTRIC FURNACE BUNDLES----	13,472	13,082	5,617	27	33,767	--	13,843
NO.2 AND ALL OTHER BUNDLES-----	52,365	16,270	--	--	68,108	--	52,080
ELECTRIC FURNACE 1 FOOT AND UNDER (NOT BUNDLES)-----	5,125	--	1,727	--	6,975	--	6,061
RAILROAD RAILS-----	9,925	--	24	--	9,272	173	13,266
TURNINGS AND BORINGS-----	48,725	10,763	1,398	52	57,207	2,510	91,589
SLAG SCRAP (FE CONTENT 70 PERCENT)---	5,556	--	40	--	4,470	40	32,230
SHREDDER OR FRAGMENTIZED-----	59,835	4,785	--	--	82,907	48	51,463
NO. 1 BUSHING-----	34,595	11,248	982	--	50,862	--	11,954
ALL OTHER CARBON STEEL SCRAP-----	77,236	69,754	12,733	141	168,676	400	130,494
STAINLESS STEEL SCRAP-----							
ALLOY STEEL (EXCEPT STAINLESS)-----	533	--	716	3	1,282	47	8,992
INGOT MOLD AND STOOD SCRAP-----	9,665	703	386	41	6,337	20	9,830
MACHINERY AND CUPOLA CAST IRON -----	12,222	--	10,498	315	21,822	341	23,341
CAST IRON BORINGS-----	71,892	12,117	74,881	588	159,712	425	89,235
MOTOR BLOCKS-----	43,415	56,579	30,262	21	128,733	4,433	96,051
OTHER IRON SCRAP-----	60,263	4,068	37,004	--	103,060	--	56,400
OTHER MIXED SCRAP-----	86,447	9,171	279,375	3,810	368,269	6,786	176,656
	35,200	75,735	27,297	507	139,895	511	39,645
TOTAL SCRAP-----	812,255	320,964	508,235	5,683	1,664,771	20,928	1,132,025
TOTAL SCRAP THROUGH NOVEMBER 1977----	9,627,076	3,603,788	5,599,491	97,680	18,519,546	283,069	1,132,025
PIG IRON-----							
	189,132	--	--	--	181,997	746	123,232
PIG IRON THROUGH NOVEMBER 1977-----	2,423,387	--	--	--	2,415,987	5,105	123,232
1/ BASED ON RETURNS FROM 80% OF REPORTING CONSUMERS, REPRESENTING 93% OF SCRAP CONSUMPTION.							

TABLE 9. - CONSUMPTION OF IRON AND STEEL SCRAP AND PIG IRON IN THE UNITED STATES
IN NOVEMBER 1977 (FINAL), BY TYPE OF CONSUMER AND TYPE OF FURNACE OR OTHER USE
(SHORT TONS)

TYPE OF FURNACE OR OTHER USE	MANUFACTURERS OF PIG IRON AND STEEL INGOTS AND CASTINGS 1/				MANUFACTURERS OF STEEL CASTINGS 2/				IRON FOUNDRIES AND MISCELLANEOUS USERS				TOTAL ALL TYPES	
	SCRAP		PIG IRON		SCRAP		PIG IRON		SCRAP		PIG IRON		SCRAP	PIG IRON
BLAST FURNACE 3/	279,413												279,413	
BASIC OXYGEN PROCESS 4/	1,930,003	4,925,957											1,930,003	4,925,957
OPEN-HEARTH FURNACE	856,455	875,065			4,821	381							861,276	875,446
ELECTRIC FURNACE	2,330,120	53,139			221,224	2,980			26,034				3,028,970	82,153
CUPOLA FURNACE	25,661	9,082			15,986	56			1,139,022				1,180,669	89,089
OTHER (INCLUDING AIR FURNACE) 5/	98,761	24,359			3,214	458			48,123				150,098	27,849
DIRECT CASTINGS 6/		137,555												210,535
TOTAL	5,520,413	6,025,157			245,245	3,875			1,664,771				7,430,429	6,211,029

1/ INCLUDES ONLY THOSE CASTINGS MADE BY COMPANIES PRODUCING STEEL INGOTS.
2/ EXCLUDES COMPANIES THAT PRODUCE BOTH STEEL INGOTS AND STEEL CASTINGS.
3/ INCLUDES CONSUMPTION IN ALL BLAST FURNACES PRODUCING PIG IRON.
4/ INCLUDES SCRAP AND PIG IRON PROCESSED IN METALLURGICAL BLAST CUPOLAS AND USED IN OXYGEN CONVERTERS.
5/ INCLUDES VACUUM MELTING FURNACES AND MISCELLANEOUS USES.
6/ INCLUDES INGOT MOLDS AND STOOLES.

FOREIGN TRADE

Exports of iron and steel scrap totaled 448,145 short tons in December compared with 440,495 tons in November. Exports of pig iron during December totaled 698 tons and 1,536 tons in November. Imports of scrap totaled 49,598 short tons in December compared with 38,726 tons in November. Of the scrap imported during December, 48,388 short tons came from Canada and 1,210 tons from other sources. Imports of pig iron totaled 53,164 short tons in December and 48,297 tons in November. No sponge iron was imported during December.

Table 10. - U.S. exports of iron and steel scrap, 1/ by country

Country	December 1977		Year to date	
	Short tons	Value	Short tons	Value
Argentina-----	16,096	\$852,700	126,976	\$7,422,078
Canada-----	22,917	1,024,377	521,806	23,847,495
China, People's Rep. of----	102	101,955	102	101,955
Greece-----	31,803	1,209,185	299,500	17,191,702
Italy-----	101	66,665	208,307	18,440,586
Japan-----	137,700	6,907,025	1,036,004	61,927,065
Korea, Republic of-----	80,433	4,564,490	1,440,551	88,668,287
Mexico-----	21,358	1,273,092	321,571	22,554,846
Pakistan-----	--	--	54,245	3,415,493
Spain-----	44,419	1,725,412	784,466	46,908,736
Sweden-----	40	54,857	1,791	1,453,994
Taiwan-----	40,553	3,953,794	434,848	35,646,647
Turkey-----	16,534	768,854	310,283	20,044,063
United Kingdom-----	35	29,368	50,653	5,976,014
Other countries-----	36,054	3,841,244	262,878	27,431,842
Total-----	448,145	26,373,018	5,853,981	381,030,803

1/ Excludes ships, boats, and other vessels for breaking up (for scrapping) which was included in 1965-1970 figures.

Table 11. - U.S. exports of iron and steel scrap, by grade

Grade of scrap	December 1977		Year to date	
	Short tons	Value	Short tons	Value
No. 1 heavy melting steel scrap-----	100,531	\$5,366,980	1,750,003	\$107,089,053
No. 2 heavy melting steel scrap-----	46,451	2,375,960	593,953	33,869,533
No. 1 bundles-----	911	23,325	102,901	2,442,401
No. 2 bundles-----	18,565	609,789	335,615	14,428,773
Borings, shovelings and turnings-----	51,254	1,408,733	476,143	17,915,709
Stainless steel-----	5,049	2,489,893	74,662	37,154,342
Shredded steel scrap-----	165,368	8,795,449	1,606,084	97,601,928
Iron scrap (excluding borings and shovelings)---	10,452	569,884	313,789	20,578,732
All other steel scrap <u>1/</u> ----	49,564	4,733,005	600,831	49,950,332
Total-----	448,145	26,373,018	5,853,981	381,030,803
Ships, boats, and other vessels for breaking up (for scrapping)-----	--	--	34,540	2,612,680
Total-----	448,145	26,373,018	5,888,521	383,643,483

1/ Includes tinplate and terneplate.