



MINERAL INDUSTRY SURVEYS

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
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Iron and Steel Scrap, Monthly

IRON AND STEEL SCRAP IN DECEMBER 1973

Returns from 92 percent of reporting consumers indicated that consumption of iron and steel scrap in December was 6.4 percent above that in November according to the Bureau of Mines, U.S. Department of the Interior. Compared with November data, production was up 0.6 percent, net receipts were up 6.4 percent, and stocks were down 3.9 percent.

Exports of ferrous scrap during the month were 18.9 percent above those for November and 23.7 percent below those for December 1972. Total exports for the year through December were 52.0 percent above 1972 exports for the comparable period. Japan was the largest importer of U.S. scrap, taking 20.9 percent of the total exported in December 1973. Next largest exports were to Spain and Korea, which received 20.5 percent and 14.9 percent, respectively, of the total in December 1973.

The Iron Age composite price for No. 1 heavy melting steel scrap (Chicago, Pittsburgh, and Philadelphia) at the end of December was \$75.17 per gross ton, up 62.8 percent from the December 1972 price of \$46.17. The price of No. 2 bundles at the end of December was \$46.83, up 41.2 percent from the December 1972 price of \$33.17.

Pig iron production and consumption during the month were up 4.9 percent and 4.1 percent, respectively, from those of the previous month, according to the same reports from consumers. Stocks declined about 0.6 percent during December compared with those of November 1973.

The following import data were not available in time for inclusion in the November 1973, Iron and Steel Scrap Mineral Industry Surveys: Imports of scrap in November 1973 totaled 19,932 short tons compared with 31,922 in October. Of the scrap imported in November, 19,498 short tons came from Canada and 434 tons from other sources. Imports of pig iron totaled 54,962 short tons in November and 23,763 tons in October. In addition to the foregoing imports of pig iron during November, there were 208 tons of sponge iron valued at \$44,387 imported of which 12 tons came from Canada, 196 tons from other countries.

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 1973 1/				Total for month of November 1973 4/	Total year through December 1973 5/
	Mfgs. of steel ingots and castings 2/	Mfgs. of steel castings 3/	Iron foundries and miscellaneous users	Total for month of December 1973		
SCRAP:						
Receipts-----	3,527,589	166,842	881,663	4,576,094	4,300,651	49,919,700
Production-----	4,287,218	71,884	399,986	4,759,088	4,731,653	57,586,311
Consumption by grades:						
Carbon steel-						
Low phosphorous plate and punchings-----	59,033	63,179	76,313	198,525	213,359	2,481,844
Cut structural and plate-----	51,454	16,593	81,898	149,945	156,222	1,952,387
No. 1 heavy melting steel-----	3,032,236	21,524	35,225	3,088,985	2,574,371	31,312,488
No. 2 heavy melting steel-----	345,050	734	9,247	355,031	359,283	4,173,120
No. 1 and electric furnace bundles-----	614,982	5,219	26,044	646,245	625,936	7,961,874
No. 2 and all other bundles-----	309,876	1,814	43,279	354,969	375,623	4,069,381
Furnings and borings-----	201,230	7,061	51,070	259,361	216,635	2,803,739
Slag scrap (Fe content)-----	321,503	555	93	322,151	338,132	3,644,643
Shredded or fragmented-----	130,144	5,639	42,067	177,850	172,328	2,054,097
All other carbon steel scrap-----	1,496,746	74,509	135,866	1,707,121	1,683,641	20,246,657
Stainless steel-----	168,517	1,957	1,602	172,076	94,129	1,153,691
Alloy steel (except stainless)-----	184,828	11,026	9,704	205,558	203,563	2,544,817
Cast iron (includes borings)-----	646,289	23,071	642,770	1,312,130	1,382,916	16,245,901
Other grades of scrap-----	76,972	7,199	53,380	137,551	146,262	1,686,790
Consumption total-----	7,638,860	240,080	1,208,558	9,087,498	8,542,400	102,331,429
Shipments-----	487,825	3,754	20,579	512,158	517,618	6,249,297
Stocks end of month-----	5,891,168	205,596	886,492	6,983,256	7,266,048	--
PIG IRON:						
Receipts-----	508,671	5,785	207,113	721,569	691,232	7,777,967
Production-----	8,267,201	--	--	8,267,201	7,882,809	99,523,416
Consumption-----	8,219,803	5,560	218,801	8,444,164	8,113,993	100,560,950
Shipments-----	536,250	93	907	537,250	487,791	7,181,860
Stocks end of month-----	954,195	7,603	238,047	1,199,845	1,206,658	--

1/ Based on 92 percent return of reporting consumers.

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 94 percent return from reporting consumers.

5/ Cumulative totals may not agree with sum of monthly reports because of addition of reports from late respondents.

Table 2. - Manufacturers of steel ingots and castings 1/ - receipts, production, consumption, and shipments of iron and steel scrap, by grades, December 1973 2/ (Short tons)

Item	Receipts	Production	Consumption	Shipments	Ending stocks
SCRAP:					
Carbon steel-					
Low phosphorous plate and punchings-----	62,744	1,294	59,033	225	56,105
Cut structural and plate-----	50,229	130	51,454	72	38,523
No. 1 heavy melting steel-----	1,171,475	1,851,964	3,032,236	186,747	1,870,653
No. 2 heavy melting steel-----	268,964	100,253	345,050	7,536	322,716
No. 1 and electric furnace bundles-----	526,376	57,837	614,982	3,588	548,600
No. 2 and all other bundles-----	264,378	35,636	309,876	9,800	285,791
Turnings and borings-----	198,906	17,139	201,230	17,792	152,628
Slag scrap (Fe content)-----	133,237	206,415	321,503	6,229	239,971
Shredded or fragmented-----	121,024	--	130,144	105	52,668
All other carbon steel scrap-----	298,644	1,316,549	1,496,746	111,653	852,418
Stainless steel-----	76,005	101,674	168,517	4,664	119,002
Alloy steel (except stainless)-----	37,760	158,330	184,828	9,169	188,011
Cast iron (includes borings)-----	258,384	419,340	646,289	126,707	1,120,031
Other grades of scrap-----	59,463	20,657	76,972	3,538	44,051
Total scrap-----	3,527,589	4,287,218	7,638,860	487,825	5,891,168
PIG IRON-----	508,671	8,267,201	8,219,803	536,250	954,195

1/ Includes only those manufacturers of steel castings that also produce ingots.

2/ Based on 100 percent return from reporting consumers.

Table 3. - Manufacturers of steel castings 1/ - receipts, production, consumption,
and shipments of iron and steel scrap,
by grades, December 1973 2/
(Short tons)

Item	Receipts	Production	Consumption	Shipments	Ending stocks
SCRAP:					
Carbon steel-					
Low phosphorous plate and punchings-----	47,078	15,722	63,179	454	44,070
Cut structural and plate-----	15,837	1,619	16,593	944	11,609
No. 1 heavy melting steel-----	10,471	6,980	21,524	41	18,199
No. 2 heavy melting steel-----	719	--	734	--	22
No. 1 and electric furnace bundles-----	4,937	--	5,219	--	3,018
No. 2 and all other bundles-----	1,155	--	1,814	--	1,131
Turnings and borings-----	5,214	1,133	7,061	782	4,986
Slag scrap (Fe content)-----	--	538	555	--	25
Shredded or fragmentized-----	5,660	--	5,639	--	1,651
All other carbon steel scrap-----	50,598	24,824	74,509	185	70,179
Stainless steel-----	747	1,522	1,957	180	2,201
Alloy steel (except stainless)-----	6,504	6,043	11,026	1,025	15,354
Cast iron (includes borings)-----	13,628	9,877	23,071	112	29,962
Other grades of scrap-----	4,294	3,626	7,199	31	3,189
Total scrap-----	166,842	71,884	240,080	3,754	205,596
PIG IRON-----	5,785	--	5,560	93	7,603

1/ Excludes companies that produce both steel ingots and castings.

2/ Based on 90 percent return from reporting consumers.

Table 4. - Iron foundries and miscellaneous users - receipts, production, consumption, and shipments of iron and steel scrap, by grades, December 1973 1/
(Short tons)

Item	Receipts	Production	Consumption	Shipments	Ending stocks
SCRAP:					
Carbon steel-					
Low phosphorous plate and punchings-----	77,894	3,780	76,313	574	69,386
Cut structural and plate-----	78,312	9,453	81,898	538	74,638
No. 1 heavy melting steel-----	44,953	6,177	35,225	1,821	32,709
No. 2 heavy melting steel-----	9,607	200	9,247	109	17,222
No. 1 and electric furnace bundles-----	25,595	21	26,044	--	28,291
No. 2 and all other bundles-----	54,374	898	43,279	--	58,090
Turnings and borings-----	47,732	5,827	51,070	4,753	57,265
Slag scrap (Fe content)-----	93	50	93	50	--
Shredded or fragmented-----	43,538	--	42,067	--	24,534
All other carbon steel scrap-----	131,655	10,534	135,866	1,901	129,412
Stainless steel-----	2,491	21	1,602	23	2,771
Alloy steel (except stainless)-----	8,670	251	9,704	62	19,509
Cast iron (includes borings)-----	317,509	346,152	642,770	10,336	342,593
Other grades of scrap-----	39,240	16,622	53,380	412	30,072
Total scrap-----	881,663	399,986	1,208,558	20,579	886,492
PIG IRON-----	207,113	--	218,801	907	238,047

1/ Based on 90 percent return from reporting consumers.

FOREIGN TRADE

Exports of iron and steel scrap totaled 660,449 short tons in December compared with 555,490 tons in November. Exports of pig iron during December totaled 1,886 tons and 1,364 tons in November. Imports of scrap totaled 18,426 short tons in December compared with 19,932 tons in November. Of the scrap imported during December, 18,069 short tons came from Canada and 357 tons from other sources. Imports of pig iron totaled 30,539 short tons in December and 54,962 tons in November. In addition to the foregoing imports of pig iron during December there were 48 tons of sponge iron, valued at \$19,979 imported, of which 8 tons came from Canada, 40 tons from other countries.

Table 5. - U.S. exports of iron and steel scrap 1/, by countries

Country	December 1973		Year to date	
	Short tons	Value	Short tons	Value
Argentina-----	17,756	\$984,769	260,762	\$13,841,145
Canada-----	56,994	2,098,397	845,805	28,160,008
China, People's Rep. of-----	33,425	2,233,322	426,976	23,728,735
Greece-----	--	--	186,261	9,429,224
Italy-----	403	22,475	352,088	23,965,334
Japan-----	137,924	10,566,977	4,666,261	234,333,548
Korea-----	98,333	5,637,226	739,079	42,429,445
Mexico-----	81,990	5,279,608	1,008,852	56,063,231
Spain-----	135,360	8,174,499	1,128,346	58,197,086
Taiwan-----	86,655	5,196,423	672,598	39,519,788
Venezuela-----	50	6,320	76,503	3,802,637
Other Countries-----	11,559	1,245,244	545,019	37,565,726
Total-----	660,449	41,445,260	10,908,550	571,035,907

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

Table 6. - U.S. exports of iron and steel scrap, by grades

Grades of scrap	December 1973		Year to date	
	Short tons	Value	Short tons	Value
No. 1 heavy melting steel scrap-----	239,857	\$16,347,956	3,779,836	\$207,734,017
No. 2 heavy melting steel scrap-----	66,622	3,393,611	1,106,632	52,817,098
No. 1 bundles-----	14,841	830,330	390,643	21,564,709
No. 2 bundles-----	83,131	4,280,719	1,221,218	49,420,926
Borings, shovelings and turnings-----	23,428	936,015	521,394	16,351,776
Stainless steel-----	3,640	1,151,661	49,080	16,731,485
Shredded steel scrap-----	140,696	9,550,986	2,098,306	118,132,553
Iron scrap (excluding borings and shovelings)-----	53,435	2,835,655	639,449	30,785,204
All other steel scrap <u>1/</u> -----	34,799	2,118,327	1,101,992	57,498,139
Total-----	660,449	41,445,260	10,908,550	571,035,907
Ships, boats, and other vessels for breaking up (for scrapping)-----	13,055	1,830,300	155,863	8,056,157
Total-----	673,504	43,275,560	11,064,413	579,092,064

1/ Includes tinplate and terneplate.

Table 7. - U.S. consumption of pig iron by type of furnace and for all other uses 1935-1972 1/
(Thousand short tons)

Year	Open hearth	Basic oxygen	Electric	Cupola	Air	Bessemer	Direct casting	All other 2/	Total
1935	16,324	--	37	2,997	330	3,261	129	17	23,095
1936	24,596	--	26	4,070	456	4,072	457	33	33,710
1937	28,132	--	50	4,699	498	4,131	598	35	38,143
1938	15,377	--	18	2,693	208	2,180	243	6	20,725
1939	26,826	--	31	3,349	329	3,603	1,066	29	35,233
1940	36,297	--	47	4,106	374	3,829	1,504	29	46,186
1941	42,481	--	73	5,389	605	5,993	1,590	54	56,185
1942	45,539	None reported	93	4,491	555	6,131	2,184	50	59,043
1943	47,108	prior	394	3,603	538	6,258	2,376	38	60,315
1944	48,281	to	240	3,941	499	5,583	2,377	31	60,952
1945	41,683	1954	163	4,084	434	4,751	2,049	23	53,187
1946	34,608	--	113	4,613	356	3,723	1,642	17	45,072
1947	45,338	--	127	5,439	414	4,712	2,242	9	58,281
1948	47,267	--	132	5,281	368	4,778	2,184	16	60,026
1949	41,783	--	108	4,764	274	4,612	1,902	4	53,447
1950	50,946	--	154	6,059	335	5,170	2,275	4	64,943
1951	56,055	--	144	6,560	400	5,551	2,704	--	71,414
1952	49,374	--	119	5,438	317	3,999	2,303	--	61,551
1953	61,307	--	181	5,550	313	4,351	3,006	--	74,708
1954	48,632	1954-1958	178	4,897	232	2,849	1,874	--	58,662
1955	63,750	included	274	5,962	295	3,933	3,002	--	77,216
1956	62,166	under	233	5,349	293	4,039	2,916	--	74,995
1957	64,998	all other	275	4,660	245	3,495	2,681	--	76,353
1958	48,408	--	256	3,709	190	2,636	2,064	--	57,262
1959	51,250	1,574	391	4,412	251	1,483	2,411	--	61,773
1960	55,270	2,937	372	3,822	210	1,303	2,712	--	66,626
1961	54,611	3,552	279	3,439	178	976	2,763	--	65,797
1962	54,509	5,020	240	3,402	186	792	2,446	--	66,595
1963	57,291	7,082	212	3,597	178	1,603	2,726	--	72,689
1964	65,206	12,446	325	3,704	170	949	3,582	--	86,382
1965	61,483	18,519	387	3,757	173	652	3,975	--	88,945
1966	55,508	27,821	286	3,667	167	332	3,989	--	91,770
1967	46,386	33,553	378	3,162	147	87	3,658	--	87,371
1968	40,145	39,284	519	2,909	(3/)	(3/)	(3/)	7,096	89,953
1969	37,447	46,408	332	2,911	92	(3/)	(3/)	7,445	94,635
1970	31,529	49,136	453	2,076	94	(3/)	(3/)	6,838	90,126
1971	23,573	52,023	825	1,865	60	(3/)	(3/)	2,869	81,215
1972	r/22,375	r/60,232	961	r/2,264	139	(3/)	(3/)	r/3,169	r/89,140

r/ Revised.

1/ Source: Minerals Yearbooks.

2/ Includes pig iron consumed in crucible, puddling, induction, and vacuum melting furnaces, and after 1967 molten pig iron used for ingot molds and stools and for other uses.

3/ Included under all other.