



MINERAL INDUSTRY SURVEYS

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Douglas McKay, Secretary

Thos. H. Miller, Acting Director

Iron and Steel Scrap
Monthly Report No. 182

IRON AND STEEL SCRAP IN DECEMBER 1955

Consumption of ferrous materials, scrap and pig iron, increased 2 percent over November, and was only exceeded during October in the use of these materials, according to the Bureau of Mines, United States Department of the Interior. The daily consumption rate of ferrous materials in December (407,370 gross tons) was 2 percent lower than the previous month. Scrap consumed for all purposes increased 1 percent during December with pig iron consumption increasing 3 percent. The total melt consisted of 51 percent scrap and 49 percent pig iron, compared with 52 percent and 48 percent, respectively, during November.

Consumption, in gross tons:	December	November
Scrap	6,496,796	6,441,351
Pig iron	<u>6,131,680</u>	<u>5,973,223</u>
Total melt	12,628,476	12,414,574

Continued high steel production during December, 2 percent greater than November, reflected increased consumption of ferrous materials in steel-making furnaces. The use of scrap in these furnaces (open-hearth, Bessemer and electric) totaled 5,012,625 gross tons, 2 percent greater than during November; pig iron consumption totaled 5,417,923 tons, an increase of 3 percent. The total steel-furnace melt (10,430,548 gross tons) of scrap and pig iron increased 3 percent and consisted of 48 percent scrap and 52 percent pig iron. Electric furnaces used 830,404 tons of scrap during December, a slight decrease from November.

Table 1 - Summary of production, receipts, consumption and consumers' stocks of iron and steel scrap and pig iron, July 1955 to December 1955, in gross tons

Date	Scrap for Consumption			Consumption		Consumers' Stocks at end of month	
	Home Scrap Produced	Purchased Scrap Received (Net)	Total	Scrap	Pig iron	Scrap	Pig iron <u>1/</u>
July 1955----	3,086,718	2,313,211	5,399,929	5,447,130	5,430,550	6,367,841	2,082,385
Aug. 1955----	3,419,122	2,697,239	6,116,361	5,913,031	5,769,689	6,568,771	2,205,932
Sept. 1955----	3,501,052	2,558,199	6,059,251	6,060,491	5,903,190	6,566,601	2,217,334
Oct. 1955----	3,573,364	2,897,714	6,471,078	6,443,349	6,193,512	6,593,899	2,161,702
Nov. 1955----	3,543,690	2,896,539	6,440,229	6,441,351	5,973,223	6,593,987	2,108,060
Dec. 1955----	3,601,466	2,734,300 <u>1/</u>	6,335,766	6,496,796	6,131,680	6,437,794	2,043,929

1/ Suppliers' stocks included with consumers' stocks.

2/ Excludes 258,076 gross tons of scrap shipped, transferred or otherwise disposed of during month.

Prepared by James E. Larkin and James C.O. Harris, February 29, 1956, under the supervision of H. G. Iverson, Chief, Branch of Ferrous Metals and Ferroalloys, Division of Minerals.

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The use of scrap by gray iron foundries during December totaled 910,675 gross tons, compared with 952,906 tons during November. Pig iron consumed by this industry totaled 444,459 gross tons, compared with 469,485 tons used during the previous month.

Stocks of scrap and pig iron held by consumers at the end of December totaled 8,481,723 gross tons, a decrease of 3 percent from the previous month. Stocks of scrap at the end of December totaled 6,437,794 tons, a decrease of 2 percent from November. Pig iron stocks totaled 2,043,929 tons, a decrease of 3 percent from the previous month.

Total scrap for consumption (home scrap produced plus purchased scrap received) totaled 6,335,766 gross tons during December, compared with 6,440,229 tons in November; home scrap accounted for 3,601,466 tons and purchases 2,734,300 tons. Of the purchases, 83 percent was received from dealers and 17 percent from other sources. Receipts of purchased scrap is a net figure computed by deducting consumers scrap shipped, transferred or otherwise disposed of during the month from total scrap received from dealers and all others.

Table 2 - Scrap produced and received during December, and stocks at consumers' plants December 31, 1955, in gross tons

	Home Scrap Produced	Scrap received		Scrap Stocks Dec. 31
		From Dealers	From Others	
No. 1 heavy melting steel-----	1,416,885	434,741	83,955	1,578,669
No. 2 heavy melting steel-----	193,496	349,251	31,790	931,987
Bundles-----	104,538	547,719	139,528	969,565
Low phosphorous scrap-----	139,775	269,415	31,378	463,916
Cast iron scrap, other than borings	594,141	329,326	61,438	862,603
Turnings and/or borings, alloy free	56,376	233,162	40,143	263,540
Rerolling rails-----	2,717	31,886	24,980	170,196
Scrap rails-----	5,678	35,564	3,598	78,659
High speed steel-----	2,425	782	2,440	5,355
Stainless steel-----	39,181	15,986	5,666	64,065
All other alloy iron and steel-----	157,229	28,861	10,515	180,842
All other prepared scrap-----	571,922	151,407	58,296	513,122
Unprepared scrap-----	317,103	62,810	7,739	355,275
Total scrap-----	3,601,466	2,490,910*	501,466*	6,437,794

* Includes 258,076 gross tons of scrap shipped, transferred or otherwise disposed of during month.

Stocks of iron and steel scrap at the end of December were equivalent to a 31-day supply at the December consumption rate.

Table 3 - Stocks of iron and steel scrap and pig iron on hand at major consuming industries plants, at end of month, in gross tons

Date	Scrap Stocks				Pig Iron Stocks			
	Mfgs. of Steel Ingots and Castings	Mfgs. of Steel Castings	Iron Foundries and Miscellaneous Users	Total	Mfgs. of Steel Ingots and Castings	Mfgs. of Steel Castings	Iron Foundries and Miscellaneous Users	Total
July 31, 1955	5,141,988	328,461	897,392	6,367,841	1,391,229	52,405	638,751	2,082,385
Aug. 31, 1955	5,334,960	341,008	892,803	6,568,771	1,512,441	54,559	638,932	2,205,932
Sept. 30, 1955	5,345,201	338,146	883,254	6,566,601	1,551,247	53,723	612,364	2,217,334
Oct. 31, 1955	5,371,835	345,850	876,214	6,593,899	1,479,431	53,731	628,540	2,161,702
Nov. 30, 1955	5,353,243	370,847	869,897	6,593,987	1,438,512	54,937	614,611	2,108,060
Dec. 31, 1955	5,192,241	372,233	873,320	6,437,794	1,395,462	57,432	591,035	2,043,929

Table 4 - Consumption of iron and steel scrap in the United States during November and December, by grades, in gross tons

	November	December	Year to date
No. 1 heavy melting steel	1,992,292	2,008,049	22,336,493
No. 2 heavy melting steel	586,489	586,173	6,619,816
Bundles	827,828	870,251	9,527,473
Low phosphorous scrap	387,776	399,174	4,358,518
Cast iron scrap other than borings	996,880	969,865	11,006,996
Turnings and/or borings, alloy free	286,469	288,729	3,400,940
Rerolling rails	60,530	57,069	647,364
Scrap rails	38,357	39,585	425,212
High speed steel	4,883	4,459	59,052
Stainless steel	59,304	60,221	651,005
All other alloy iron and steel	202,761	189,988	2,089,618
All other prepared scrap	775,341	791,977	8,912,366
Unprepared scrap	222,441	231,256	2,620,072
Total (all grades)	6,441,351	6,496,796	72,654,925

DEALERS AND BROKERS

Data on shipments and stocks of iron and steel scrap for December 1955 were submitted on a voluntary basis by 591 dealers which represented approximately 30 percent of those that reported during January 1953. Based on data reported by 582 identical dealers during these two periods, shipments and stocks of iron and steel scrap in December 1955, increased 10 percent and 80 percent, respectively, over those in January 1953.

Table 5 - Reported ^{1/} shipments and stocks of iron and steel scrap on hand at dealers¹ and automobile wreckers yards December 1955, in gross tons

	Shipments during December 1955	Stocks December 31, 1955
No. 1 heavy melting steel	108,448	69,542
No. 2 heavy melting steel	128,637	57,550
Bundles	149,719	50,348
Low phosphorous scrap	45,549	15,585
Cast iron scrap other than borings	84,546	48,753
Turnings and/or borings, alloy free	44,802	24,075
Rerolling rails	1,118	916
Scrap rails	7,664	12,655
High speed steel	72	158
Stainless steel	3,189	3,037
All other alloy iron and steel	3,831	1,484
All other prepared scrap	27,729	21,166
Unprepared scrap	47,043	477,411
Total (all grades)	652,347	782,680

^{1/} Reported by a combined total of 591 dealers and automobile wreckers.

CONSUMPTION OF SCRAP IRON AND STEEL AND PIG IRON

Consumption of scrap in December totaled 6,496,796 gross tons which was at an average daily rate of 209,574 tons or 40 percent greater than for the year 1954.

In December, open-hearth furnaces used 64 percent of the total scrap, and 83 percent of the pig iron compared with 63 and 82 percent, respectively, in November; electric furnaces in December used 7 percent of the ferrous materials (scrap and pig iron) charged to all furnaces, with open-hearth using 73 percent. During 1954, these percentages were 6 and 73, respectively. Blast furnaces used 5 percent of the total scrap; the corresponding percentage for the year 1954 was 6.

During December, steel-making furnaces (open-hearth, Bessemer and electric) accounted for 77 percent of the total scrap, and 88 percent of the pig iron consumed, compared with 76 and 88, respectively, during November. In 1954, steel-making furnaces used 75 percent of the total scrap, and 88 percent of the pig iron. The remainder was used in iron-making furnaces, principally the cupola. Consumption by type of furnace during December is shown in the following table:

Table 6 - Consumption of iron and steel scrap and pig iron by manufacturers of ingots, steel castings and iron foundries during December 1955, by type of furnace, in gross tons

Type of furnace or equipment	Steel Ingots and Castings 1/		Steel Castings 2/		Iron Foundries and Miscellaneous Users		Total	
	Scrap	Pig iron	Scrap	Pig iron	Scrap	Pig iron	Scrap	Pig iron
Open-hearth-----	4,074,950	5,062,741	68,278	12,444	-	-	4,143,228	5,075,185
Bessemer*-----	36,878	320,682	1,494	75	621	50	38,993	320,807
Electric-----	677,514	17,511	140,829	3,103	12,061	1,317	830,404	21,931
Total steel-making furnaces-----	4,789,342	5,400,934	210,601	15,622	12,682	1,367	5,012,625	5,417,923
Cupola-----	70,795	61,252	40,084	2,301	799,796	380,906	910,675	444,459
Air-----	2,738	1,058	30,869	4,631	81,829	17,831	115,436	23,520
Blast 3/-----	346,176	-	-	-	-	-	346,176	-
Direct casting-----	-	138,371	-	-	-	107,407	-	245,778
Ferro-alloy-----	-	-	-	-	31,741	-	31,741	-
Miscellaneous-----	28,002	-	-	-	52,141	-	80,143	-
Total December 1955-----	5,237,053	5,601,615	281,554	22,554	978,189	507,511	6,496,796	6,131,680
Total November 1955-----	5,157,777	5,426,290	270,920	21,413	1,012,654	525,520	6,441,351	5,973,223
Total October 1955-----	5,174,792	5,647,784	271,805	20,204	996,752	525,524	6,443,349	6,193,512
Total September 1955-----	4,844,798	5,383,336	278,368	20,461	937,325	499,393	6,060,491	5,903,190
Total August 1955-----	4,731,485	5,250,610	256,222	19,064	925,324	500,015	5,913,031	5,769,689
Total July 1955-----	4,489,784	5,003,293	182,850	13,483	774,496	413,774	5,447,130	5,430,550

* Includes scrap and pig iron used in Oxygen Steel Process.

1/ Includes only those castings made by companies producing steel ingots.

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

3/ Includes consumption in blast furnaces by both integrated and non-integrated mills.

Table 7 - Consumers' production, receipts, consumption and stocks of ferrous scrap, and consumption of pig iron in the United States, by State and Region, in gross tons

State and Region	Scrap			Scrap Stocks Dec. 31 1955	Pig Iron Consumed
	Home Scrap Produced	Purchased Scrap Received	Consumed		
United States, total-----	3,601,466	2,992,376 ^{1/}	6,496,796	6,437,794	6,131,680
New England, total-----	35,128	52,104	77,644	104,028	23,694
Connecticut-----	9,719	19,478	26,149	18,971	3,845
Maine-----	283	627	559	931	282
Massachusetts-----	18,080	24,431	37,672	72,110	13,257
New Hampshire-----	824	711	1,567	1,754	313
Rhode Island-----	4,807	5,344	9,166	7,951	5,014
Vermont-----	1,415	1,513	2,531	2,311	983
Middle Atlantic, total-----	1,105,972	755,090	1,872,686	1,805,884	2,008,459
New Jersey-----	18,439	38,149	57,690	71,087	19,796
New York-----	159,325	154,780	315,169	383,466	307,668
Pennsylvania (East)-----	267,407	236,433	553,136	483,236	444,019
Pennsylvania (West)-----	660,801	325,728	946,691	868,095	1,236,976
East North Central, total-----	1,744,041	1,398,892	3,070,799	2,723,957	2,768,659
Illinois-----	314,175	363,023	621,228	737,974	473,949
Indiana-----	432,857	249,870	720,847	671,032	720,871
Michigan-----	288,662	257,970	544,929	346,384	358,740
Ohio (East)-----	564,210	365,917	911,966	633,924	1,045,474
Ohio (West)-----	98,417	122,107	195,138	270,101	147,552
Wisconsin-----	45,720	40,005	76,691	64,542	22,073
West North Central, total-----	56,013	122,784	176,959	340,793	61,947
Iowa-----	14,156	24,325	37,641	30,090	6,524
Kansas and Nebraska-----	1,925	4,625	6,343	11,431	529
Minnesota-----	24,393	25,381	51,802	137,668	49,810
Missouri-----	15,539	68,453	81,173	161,604	5,084
South Atlantic, total-----	237,229	174,103	421,491	341,583	493,980
Delaware, District of Columbia and Maryland-----	162,477	69,022	245,357	130,304	332,886
Florida and Georgia-----	6,753	21,392	29,098	10,563	3,389
North Carolina-----	2,145	2,022	4,132	4,757	1,649
South Carolina-----	848	989	2,199	1,588	1,094
Virginia and West Virginia-----	65,006	80,678	140,705	194,371	154,962
East South Central, total-----	179,432	186,804	343,340	270,592	432,140
Alabama-----	128,940	98,250	219,608	169,677	339,560
Kentucky, Mississippi and Tennessee-----	50,492	88,554	123,732	100,915	92,580
West South Central, total-----	56,094	81,792	146,272	297,099	62,120
Arkansas, Louisiana and Oklahoma-----	4,141	11,168	14,607	24,107	820
Texas-----	51,953	70,624	131,665	272,992	61,300
Rocky Mountain, total-----	90,060	40,268	135,106	136,180	176,032
Arizona and Nevada-----	1,011	3,852	5,059	12,477	6
Colorado and Utah-----	88,615	35,490	128,118	117,521	176,012
Idaho-----	51	273	542	1,868	3
Montana-----	383	653	1,387	4,314	11
Pacific Coast, total-----	97,497	180,539	252,499	417,678	104,649
California-----	86,209	147,320	209,701	315,942	102,561
Oregon-----	2,909	10,439	14,735	33,687	129
Washington-----	8,379	22,780	28,063	68,049	1,959

^{1/} Includes 258,076 gross tons that was shipped, transferred or otherwise disposed of during December.

Table 8 - Consumption of ferrous scrap and pig iron in open-hearth furnaces in the United States, by State and Region, in gross tons

State and Region	Consumption during December 1955		
	Total scrap	Pig iron	Total charge
United States, total-----	4,143,228	5,075,185	9,218,413
New England, total-----	30,144	8,070	38,214
Connecticut, Massachusetts, and Rhode Island-----	30,144	8,070	38,214
Middle Atlantic, total-----	1,391,098	1,773,151	3,164,249
New Jersey and New York-----	250,309	294,874	545,183
Pennsylvania (East)-----	435,246	394,826	830,072
Pennsylvania (West)-----	705,543	1,083,451	1,788,994
East North Central, total-----	1,817,726	2,184,827	4,002,553
Illinois-----	333,490	365,473	698,963
Indiana-----	635,660	691,667	1,327,327
Michigan and Wisconsin-----	170,589	237,649	408,238
Ohio (East)-----	589,510	764,449	1,353,959
Ohio (West)-----	88,477	125,589	214,066
West North Central, total-----	75,358	46,850	122,208
Minnesota and Missouri-----	75,358	46,850	122,208
South Atlantic, total-----	321,074	443,532	764,606
Delaware and Maryland-----	214,028	296,496	510,524
Georgia and West Virginia-----	107,046	147,036	254,082
East South Central, total-----	172,547	321,877	494,424
Alabama, Kentucky and Tennessee-----	172,547	321,877	494,424
West South Central, total-----	88,358	47,512	135,870
Oklahoma and Texas-----	88,358	47,512	135,870
Rocky Mountain, total-----	109,759	160,783	270,542
Colorado and Utah-----	109,759	160,783	270,542
Pacific Coast, total-----	137,164	88,583	225,747
California and Washington-----	137,164	88,583	225,747

FOREIGN TRADE 1/

According to the Bureau of the Census, exports of iron and steel scrap totaled 390,876 gross tons in December and 375,845 tons in November; exports of pig iron during December totaled 22,159 tons and 407 tons in November. Imports of scrap totaled 15,696 gross tons in November compared with 17,667 tons in October. Imports of pig iron totaled 17,269 gross tons in November and 40,574 tons in October. In addition to the above imports of pig iron during November there was 1,208 tons of sponge iron, valued at \$138,027, imported, of which 52 tons came from Canada and 1,156 tons from Sweden. Scrap and pig iron import data in December were not available for this release; these data will appear in the January release.

Table 9 - Imports of iron and steel scrap into the United States
in November 1955 and year 1955 by countries
(U. S. Department of Commerce)

Country	November 1955		January to November 1955	
	Gross tons	Value	Gross tons	Value
Canada and Newfoundland-----	13,621	\$596,591	170,712	\$5,967,524
Japan-----	140	53,683	513	153,217
Peru-----	-	-	9,423	125,000
Union of South Africa-----	90	2,497	641	18,196
All others-----	1,845	79,181	7,186	184,934
Total-----	15,696	\$731,952	188,475	\$6,448,871

Table 10 - Exports of iron and steel scrap from the United States
by countries
(U. S. Department of Commerce)

Country	December 1955		January to December 1955	
	Gross tons	Value	Gross tons	Value
Argentina-----	-	-	92,796	\$4,621,509
Austria-----	8,715	\$332,637	71,007	2,636,177
Belgium and Luxembourg-----	33,144	1,294,026	166,182	6,511,335
Canada-----	27,022	1,230,084	383,400	14,270,625
Finland-----	-	-	11,764	382,248
France-----	9,644	400,770	229,135	8,327,299
Italy-----	139,030	5,985,677	1,029,243	39,713,184
Japan-----	53,589	2,773,753	672,948	29,469,118
Mexico-----	24,510	988,687	247,283	9,090,446
Netherlands-----	45	3,850	37,937	1,326,724
Spain-----	-	-	22,846	837,763
Sweden-----	108	7,446	22,649	866,119
United Kingdom-----	74,003	3,131,759	917,580	32,993,608
West Germany-----	12,918	560,112	599,523	22,313,972
Yugoslavia-----	-	-	15,322	653,812
All others-----	8,148	591,152	17,757	1,263,298
Total-----	390,876	\$17,299,953	4,537,372	\$175,277,237

Table 11 - Exports of iron and steel scrap from the United States
by grades
(U. S. Department of Commerce)

	December 1955		January to December 1955	
	Gross tons	Value	Gross tons	Value
No. 1 and No. 2 heavy melting steel scrap-----	238,759	\$10,695,967	2,751,839	\$107,731,902
Baled sheet melting scrap-----	96,394	3,980,262	1,196,027	43,425,243
Borings, shoveling and turnings-----	11,651	506,172	88,893	3,271,561
Iron scrap-----	36,290	1,618,501	390,073	14,671,766
Rerolling material-----	3,402	220,495	35,152	1,787,972
All other scrap 2/-----	4,380	278,556	75,388	4,388,793
Total-----	390,876	\$17,299,953	4,537,372	\$175,277,237

1/ To conform with other data in this report foreign trade data include tin plate scrap.

2/ Includesterne plate, tin plate, circles, cobbles, strip and scroll shear butts.

Exports of iron and steel scrap from the United States by grades,
revised for October 1955
(U. S. Department of Commerce)

	October 1955	
	Gross tons	Value
No. 1 and No. 2 heavy melting steel scrap-----	*250,990	*\$11,160,295
Baled sheet melting scrap-----	*102,521	*4,192,253
Borings, shovelings and turnings-----	2,223	61,088
Iron scrap-----	41,703	1,565,990
Rerolling material-----	3,360	165,635
All other scrap <u>1/</u> -----	5,073	326,123
Total-----	*405,870	*\$17,471,384

* Revised

1/ Includes terne plate, tin plate, circles, cobbles, strip and scroll shear butts.

Exports of iron and steel scrap from the United States, by countries,
revised for October 1955
(U. S. Department of Commerce)

	October 1955	
	Gross tons	Value
Argentina-----	15,017	\$927,798
Austria-----	22	5,758
Belgium and Luxembourg-----	24,921	1,063,300
Canada-----	41,426	1,588,104
Finland-----	-	-
France-----	*9,464	*410,072
Italy-----	103,496	4,495,568
Japan-----	*69,160	*3,252,286
Mexico-----	27,578	1,062,729
Netherlands-----	48	4,008
Spain-----	-	-
Sweden-----	-	-
United Kingdom-----	85,613	3,331,434
West Germany-----	28,135	1,243,230
Yugoslavia-----	-	-
All others-----	990	87,097
Total-----	*405,870	*17,471,384

* Revised.