



## MINERAL INDUSTRY SURVEYS

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BUREAU OF MINES

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Iron and Steel Scrap  
Monthly Report No. 193

### IRON AND STEEL SCRAP IN NOVEMBER 1956

Domestic consumption of ferrous material, scrap and pig iron, decreased 5 percent from October, however, the daily consumption rate was only 2 percent less than the previous month, according to the Bureau of Mines, United States Department of the Interior. The total charge of these materials consisted of 50 percent scrap and pig iron, respectively, compared with 51 percent scrap and 49 percent pig iron during October.

Total consumption, in gross tons:	November	October
Scrap	6,305,947	6,722,320
Pig iron	<u>6,237,538</u>	<u>6,450,404</u>
Total melt	12,543,485	13,172,724

Steel production and ferrous materials used in steel-making furnaces each decreased 4 percent. The use of scrap in these furnaces (open-hearth, Bessemer, and electric) totaled 4,939,749 gross tons, 6 percent less than during October; pig iron consumption totaled 5,566,208 tons, a decrease of 3 percent. The total steel furnace melt (10,505,957 gross tons) consisted of 47 percent scrap and 53 percent pig iron. Electric furnaces used 875,524 tons of scrap during November, a decrease of 6 percent from the previous month.

Table 1 - Summary of production, receipts, consumption and consumers' stocks of iron and steel scrap and pig iron, June 1956 to November 1956, 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 <sup>1/</sup>
June 1956--	3,282,993	2,605,309	5,888,302	5,994,989	5,642,004	6,191,341	2,066,708
July 1956--	882,703	1,174,551	2,057,254	1,986,613	963,749	6,261,368	2,159,930
Aug. 1956--	2,919,528	2,550,736	5,470,264	5,453,927	4,618,718	6,274,545	2,076,382
Sept. 1956--	3,352,689	2,658,911	6,011,600	6,231,017	6,053,147	6,059,165	2,139,236
Oct. 1956--	3,716,308	3,126,537	6,842,845	6,722,320	6,450,404	6,181,076	2,124,841
Nov. 1956--	3,518,533	2,827,563 <sup>2/</sup>	6,346,096	6,305,947	6,237,538	6,212,242	2,060,879

<sup>1/</sup> Suppliers' stocks included with consumers' stocks.

<sup>2/</sup> Excludes 208,523 gross tons of scrap shipped, transferred or otherwise disposed of during month.

Prepared by James E. Larkin and James C.O.Harris, February 8, 1957, under the supervision of H.G.Iverson, Chief, Branch of Ferrous Metals and Ferroalloys, Division of Minerals.

The use of scrap by gray iron foundries during November totaled 822,542 gross tons, a decrease of 8 percent from the 890,389 tons used during October. Pig iron consumed by this industry totaled 391,632 gross tons compared with 446,449 tons during the previous month.

Stocks of scrap and pig iron held by consumers at the end of November totaled 8,273,054 gross tons, a slight decrease from the previous month. Stocks of scrap at the end of November totaled 6,212,242 gross tons, a slight increase over October but 6 percent less than stocks held on November 30, 1955. Pig iron stocks held by consumers and suppliers were 3 percent less than at the end of October.

Total scrap for consumption (home scrap produced plus purchased scrap received) totaled 6,346,096 gross tons during November; home scrap accounted for 3,518,533 tons and purchases 2,827,563 tons. Of the purchases 87 percent was received from dealers and 13 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 November, and stocks at consumers' plants November 31, 1956, in gross tons

	Home scrap produced	Scrap received		Scrap stocks November 30
		From dealers	From others	
No. 1 heavy melting steel-----	1,453,568	473,420	67,937	1,562,197
No. 2 heavy melting steel-----	155,460	342,640	30,334	867,750
Bundles-----	108,187	656,488	86,724	1,053,746
Low phosphorous scrap-----	125,746	295,503	25,740	471,184
Cast iron scrap, other than borings	549,574	318,903	56,069	885,768
Turnings and/or borings, alloy free	48,868	211,800	33,929	176,889
Rerolling rails-----	1,022	36,661	21,991	120,559
Scrap rails-----	3,599	27,606	3,217	74,854
High speed steel-----	1,806	940	496	5,495
Stainless steel-----	44,530	20,016	5,354	66,906
All other alloy iron and steel-----	141,061	43,670	13,049	185,542
All other prepared scrap-----	581,480	139,435	47,093	469,288
Unprepared scrap-----	303,632	64,365	12,706	272,064
Total scrap-----	3,518,533	2,631,447*	404,639*	6,212,242

\* Includes 208,523 gross tons of scrap shipped, transferred or otherwise disposed of during month.

Stocks of iron and steel scrap at the end of November were equivalent to a 30-day supply at the November 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 Miscel- laneous Users	Total	Mfgs. of Steel Ingots and Castings	Mfgs. of Steel Castings	Iron Foundries and Miscel- laneous Users	Total
June 30, 1956-	5,004,910	330,431	856,000	6,191,341	1,196,343	84,294	786,071	2,066,708
July 31, 1956-	5,084,785	337,403	839,180	6,261,368	1,286,453	81,987	791,490	2,159,930
Aug. 31, 1956-	5,131,756	333,230	809,559	6,274,545	1,288,178	71,526	716,678	2,076,382
Sept. 30, 1956-	4,897,394	339,536	822,235	6,059,165	1,382,266	70,358	686,612	2,139,236
Oct. 31, 1956-	4,984,582	347,250	849,244	6,181,076	1,390,532	66,102	668,207	2,124,841
Nov. 30, 1956-	5,016,219	362,386	833,637	6,212,242	1,341,231	67,503	652,078	2,060,812

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

	October	November	Year to date
No. 1 heavy melting steel-----	2,186,728	2,017,091	19,901,379
No. 2 heavy melting steel-----	578,151	566,653	6,431,048
Bundles-----	855,163	830,074	8,374,722
Low phosphorous scrap-----	439,491	413,559	4,451,183
Cast iron scrap other than borings-----	943,261	887,367	9,637,694
Turnings and/or borings, alloy free-----	277,845	272,969	2,890,629
Re-rolling rails-----	60,806	48,717	559,838
Scrap rails-----	35,118	33,869	389,598
High speed steel-----	4,542	2,835	47,807
Stainless steel-----	68,759	65,051	622,650
All other alloy iron and steel-----	198,842	176,393	1,919,438
All other prepared scrap-----	854,763	794,794	8,027,351
Unprepared scrap-----	218,851	196,575	2,191,197
Total (all grades)-----	6,722,320	6,305,947	65,444,534

# DEALERS AND BROKERS

Data on shipments and stocks of iron and steel scrap for November 1956 were submitted on a voluntary basis by 664 dealers which represented approximately 33 percent of those that reported during January 1953. Based on data reported by 638 identical dealers during these two periods, shipments of iron and steel scrap in November, increased 27 percent with stocks increasing 38 percent, over those in January 1953.

Table 5 - Reported <sup>1/</sup> shipments and stocks of iron and steel scrap on hand at dealers' and automobile wreckers yards November 1956, in gross tons

	Shipments during November 1956	Stocks  November 30, 1956
No. 1 heavy melting steel-----	106,183	50,739
No. 2 heavy melting steel-----	114,646	48,186
Bundles-----	142,023	37,757
Low phosphorous scrap-----	35,767	8,017
Cast iron scrap other than borings-----	72,478	52,149
Turnings and/or borings, alloy free-----	30,963	20,287
Rerolling rails-----	1,550	1,170
Scrap rails-----	5,005	8,156
High speed steel-----	112	313
Stainless steel-----	2,023	2,124
All other alloy iron and steel-----	5,822	1,415
All other prepared scrap-----	25,651	15,726
Unprepared scrap-----	67,634	278,148
Total (all grades)-----	609,857	524,187

<sup>1/</sup> Reported by a combined total of 664 dealers and automobile wreckers.

# CONSUMPTION OF SCRAP IRON AND STEEL AND PIG IRON

Consumption of scrap in November totaled 6,305,947 gross tons which was at an average daily rate of 210,198 tons or 6 percent greater than for the year 1955.

In November, open-hearth furnaces used 64 percent of the total scrap, and 84 percent of the pig iron compared with 64 and 83 percent, respectively, in October; electric furnaces in November used 7 percent of the ferrous materials (scrap and pig iron) charged to all furnaces, with open-hearth using 74 percent. During 1955, these percentages were 6 and 73, respectively. Blast furnaces used 6 percent of the total scrap; the corresponding percentage for the year 1955 was 6.

During November, steel-making furnaces (open-hearth, Bessemer, and electric) accounted for 78 percent of the total scrap, and 89 percent of the pig iron consumed, the same as during October. In 1955, steel-making furnaces used 76 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 November 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 November 1956, 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-----	3,966,596	5,205,768	66,035	12,907	-	-	4,032,631	5,218,675
Bessemer*-----	30,059	330,048	798	66	737	258	31,594	330,372
Electric-----	713,911	12,055	148,801	2,737	12,812	2,369	875,524	17,161
Total steel-making furnaces-----	4,710,566	5,547,871	215,634	15,710	13,549	2,627	4,939,749	5,566,208
Cupola-----	64,166	49,145	41,417	2,458	716,959	340,029	822,542	391,632
Air-----	2,886	1,152	22,997	4,600	70,007	15,805	95,890	21,557
Blast 3/-----	352,638	-	-	-	-	-	352,638	-
Direct casting-----	-	145,566	-	-	-	112,575	-	258,141
Ferro-alloy-----	-	-	-	-	24,999	-	24,999	-
Miscellaneous-----	24,388	-	-	-	45,741	-	70,129	-
Total November 1956-----	5,154,644	5,743,734	280,048	22,768	871,255	471,036	6,305,947	6,237,538
Total October 1956-----	5,472,122	5,905,861	302,159	24,932	948,039	519,611	6,722,320	6,450,404
Total September 1956-----	5,181,408	5,585,385	259,265	20,875	790,344	446,887	6,231,017	6,053,147
Total August 1956-----	4,309,470	4,158,897	289,274	23,042	855,183	436,779	5,453,927	4,618,718
Total July 1956-----	1,105,811	659,508	206,949	16,537	673,853	287,704	1,986,613	963,749
Total June 1956-----	4,873,209	5,161,326	283,420	23,319	838,360	457,359	5,994,989	5,642,004

\* 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 Nov. 30, 1956	Pig Iron Consumed
	Home Scrap Produced	Purchased Scrap Received	Consumed		
United States, total-----	3,518,533	3,036,086 <sup>1</sup>	6,305,947	6,212,242	6,237,538
New England, total-----	32,217	43,963	74,314	85,895	22,512
Connecticut-----	10,505	15,543	25,411	16,946	4,663
Maine-----	412	647	577	1,144	258
Massachusetts-----	16,702	21,488	38,009	52,174	13,036
New Hampshire-----	595	1,230	1,575	2,705	285
Rhode Island-----	3,009	3,860	6,601	10,677	3,362
Vermont-----	994	1,195	2,141	2,249	908
Middle Atlantic, total-----	1,107,012	825,784	1,887,020	1,782,977	2,020,983
New Jersey-----	15,737	39,072	53,886	64,297	17,949
New York-----	164,311	169,729	340,378	474,896	322,371
Pennsylvania (East)-----	277,184	279,360	578,919	438,276	441,675
Pennsylvania (West)-----	649,780	337,623	913,837	805,508	1,238,988
East North Central, total-----	1,676,828	1,413,577	2,930,002	2,575,252	2,888,293
Illinois-----	306,862	326,695	588,860	711,081	489,069
Indiana-----	410,095	283,666	663,276	650,707	752,312
Michigan-----	262,515	234,479	505,343	321,634	369,318
Ohio (East)-----	555,754	416,457	890,856	596,929	1,095,120
Ohio (West)-----	104,133	114,703	213,613	233,341	164,177
Wisconsin-----	37,469	37,577	68,054	61,560	18,297
West North Central, total-----	51,504	118,276	178,237	355,850	54,204
Iowa-----	13,445	19,846	33,460	29,023	6,883
Kansas and Nebraska-----	2,395	5,247	8,752	9,877	448
Minnesota-----	20,251	24,469	51,268	127,926	43,618
Missouri-----	15,413	68,714	84,757	189,024	3,255
South Atlantic, total-----	234,821	138,320	379,110	305,153	506,285
Delaware, District of Columbia, and Maryland-----	163,403	48,675	229,125	148,263	342,789
Florida and Georgia-----	6,104	14,864	26,694	3,692	1,493
North Carolina-----	2,080	2,813	4,334	6,152	1,656
South Carolina-----	722	791	2,056	2,005	900
Virginia and West Virginia-----	62,512	71,177	116,901	145,041	159,447
East South Central, total-----	177,368	157,339	315,277	233,392	415,380
Alabama-----	127,048	91,931	197,680	113,476	331,386
Kentucky, Mississippi, and Tennessee-----	50,320	65,408	117,597	119,916	83,994
West South Central, total-----	57,975	98,173	149,549	285,924	44,408
Arkansas, Louisiana, and Oklahoma-----	3,964	13,318	15,819	28,093	769
Texas-----	54,011	84,855	133,730	257,831	43,639
Rocky Mountain, total-----	90,163	51,710	145,318	167,764	180,913
Arizona and Nevada-----	986	3,733	5,147	11,689	23
Colorado and Utah-----	88,804	46,850	138,450	150,813	180,875
Idaho-----	53	351	468	1,533	3
Montana-----	320	776	1,253	3,729	12
Pacific Coast, total-----	90,645	188,944	247,120	420,035	104,560
California-----	80,371	151,366	201,616	341,301	102,120
Oregon-----	3,231	14,333	13,727	27,013	115
Washington-----	7,043	23,245	31,777	51,721	2,325

<sup>1/</sup> Includes 208,523 gross tons that was shipped, transferred or otherwise disposed of during November.

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 November 1956		
	Total scrap	Pig iron	Total charge
United States, total-----	4,032,631	5,218,675	9,251,306
New England, total-----	23,061	9,118	32,179
Connecticut, Massachusetts, and Rhode Island-----	23,061	9,118	32,179
Middle Atlantic, total-----	1,397,825	1,772,285	3,170,110
New Jersey and New York-----	264,455	305,473	569,928
Pennsylvania (East)-----	457,474	392,946	850,420
Pennsylvania (West)-----	675,896	1,073,866	1,749,762
East North Central, total-----	1,745,156	2,330,663	4,075,819
Illinois-----	313,398	396,472	709,870
Indiana-----	580,447	728,434	1,308,881
Michigan and Wisconsin-----	165,168	252,540	417,708
Ohio (East)-----	575,991	810,060	1,386,051
Ohio (West)-----	110,152	143,157	253,309
West North Central, total-----	81,663	41,754	123,417
Minnesota and Missouri-----	81,663	41,754	123,417
South Atlantic, total-----	282,405	457,960	740,365
Delaware and Maryland-----	200,229	307,758	507,987
Georgia and West Virginia-----	82,176	150,202	232,378
East South Central, total-----	156,417	320,205	476,622
Alabama, Kentucky, and Tennessee---	156,417	320,205	476,622
West South Central, total-----	81,048	30,796	111,844
Oklahoma and Texas-----	81,048	30,796	111,844
Rocky Mountain, total-----	118,515	166,095	284,610
Colorado and Utah-----	118,515	166,095	284,610
Pacific Coast, total-----	146,541	89,799	236,340
California and Washington-----	146,541	89,799	236,340

## FOREIGN TRADE 1/

According to the Bureau of the Census, exports of iron and steel scrap totaled 418,640 gross tons in November and 583,846 tons in October. The quantity of scrap licensed for export during December totaled 909,418 gross tons, excluding Canada, to which shipments do not require an export license, according to the Office of Export Supply, United States Department of Commerce. Exports of pig iron during November totaled 42,121 tons and 55,519 tons in October. Imports of scrap totaled 25,449 gross tons in November compared with 24,364 tons in October. Imports of pig iron totaled 53,016 gross tons in November and 21,807 tons in October. In addition to the above imports of pig iron during November there was 927 tons of sponge iron, valued at \$98,732, imported, of which 89 tons came from Canada and 838 tons from Sweden.

Table 9 - Imports of iron and steel scrap into the United States  
in November 1956 and year 1956 by countries  
(U. S. Department of Commerce)

Country	November 1956		January to November 1956	
	Gross tons	Value	Gross tons	Value
Canada and Newfoundland-----	22,512	\$1,129,849	188,567	\$8,975,914
Cuba-----	2,684	96,924	11,522	376,153
Guatemala-----	-	-	300	6,079
Japan-----	19	14,015	475	224,459
Union of South Africa-----	-	-	128	3,583
All others-----	234	50,911	3,636	559,310
Total-----	25,449	\$1,291,699	204,628	\$10,145,498

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

Country	November 1956		January to November 1956	
	Gross tons	Value	Gross tons	Value
Argentina-----	-	-	12,623	\$782,337
Austria-----	-	-	17,633	840,430
Belgium and Luxembourg-----	8,547	\$489,114	209,173	10,625,693
Canada-----	81,902	5,034,056	558,973	30,445,146
France-----	5,330	282,570	293,482	14,976,143
Italy-----	66,056	3,695,615	998,378	51,363,114
Japan-----	186,088	10,687,204	1,649,573	84,724,703
Mexico-----	24,934	1,318,095	294,830	14,409,471
Netherlands-----	7,328	443,716	31,637	1,664,873
Norway-----	-	-	6,000	274,848
United Kingdom-----	22,776	1,240,979	483,344	22,856,441
West Germany-----	58	20,840	185,753	9,436,258
Yugoslavia-----	-	-	22	1,225
All others-----	15,621	895,367	88,918	5,194,510
Total-----	418,640	\$24,107,556	4,830,339	\$247,595,192

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

	November 1956		January to November 1956	
	Gross tons	Value	Gross tons	Value
No. 1 and No. 2 heavy melting steel scrap-----	225,629	\$12,710,526	2,738,881	\$140,166,598
Baled sheet melting scrap-----	87,335	4,617,593	1,224,563	60,101,429
Borings, shoveling and turnings-----	4,777	204,032	63,083	2,229,269
Iron scrap-----	89,660	5,631,159	644,461	33,706,187
Rerolling material-----	6,381	539,735	85,845	6,100,832
All other scrap 2/-----	4,858	404,511	73,506	5,290,877
Total-----	418,640	\$24,107,556	4,830,339	\$247,595,192

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

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