



MINERAL INDUSTRY SURVEYS

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Stewart L. Udall, Secretary

Frank C. Memmott, Acting Director

Iron and Steel Scrap
Monthly

IRON AND STEEL SCRAP IN JULY 1965

The usual summer decline affected the total consumption of iron and steel scrap in July 1965, according to the Bureau of Mines, U.S. Department of the Interior. Although scrap consumption in July was 5 percent less than for June, it was 17 percent above July 1964. Consumption of pig iron decreased less than one-half percent from June 1965 and was 11 percent better than July 1964. The total consumption of ferrous scrap and pig iron (49 percent scrap) was 14 percent better than in July 1964.

Steel ingot production remained about the same as in June, but scrap consumption in steelmaking furnaces (open-hearth, basic oxygen, electric, and Bessemer) decreased 3 percent and was 45 percent of the metallics charged in steelmaking furnaces. Scrap comprised 41 percent of the open-hearth charge and 30 and 98 percent of the basic oxygen and electric furnace charge, respectively. The use of scrap in the basic oxygen furnaces increased 9 percent over June 1965 and 57 percent over July 1964.

TABLE 1.--Production, receipts, consumption, and consumers' stocks of ferrous scrap and pig iron, February 1965 through July 1965
(Short 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 ^{1/}
Feb. 1965-	4,463,245	2,820,522	7,283,767	7,417,041	7,362,153	7,001,912	2,457,884
Mar. 1965-	5,173,798	3,272,072	8,445,870	8,528,707	8,309,333	6,914,912	2,373,898
Apr. 1965-	5,001,640	3,297,921	8,299,561	8,247,887	8,029,854	6,959,832	2,300,114
May 1965-	4,889,746	3,220,766	8,110,512	8,042,939	8,164,746	7,026,551	2,401,557
June 1965-	4,862,961	3,219,968	8,082,929	8,021,171	7,863,605	7,065,508	2,507,799
July 1965-	4,728,153	2,840,395	7,568,548	7,581,764	7,835,710	7,051,424	2,505,200

^{1/} Suppliers' stocks included with consumers' stocks.

^{2/} Excludes 488,556 short tons of scrap shipped, transferred, or otherwise disposed of during month.

Prepared November 2, 1965, by Robert A. Whitman, Physical Scientist.

Consumption of scrap and pig iron in cupola furnaces dropped 16 and 19 percent, respectively, in July as compared with June 1965. Use of scrap in cupola furnaces was up 11 percent above July 1964 with no change in amount of pig iron used.

Daily consumption of scrap dropped 9 percent while stocks remained about even, so there was an estimated 29-day supply of scrap in consumers' stocks.

There was a decrease of 7 percent in home scrap produced plus purchased scrap received. Dealers furnished 76 percent of all scrap purchased in July. (Purchased scrap is a net figure computed by deducting scrap shipped, transferred, or otherwise disposed of by consumers, from total received from dealers and all others.)

TABLE 2.--Production and receipts of ferrous scrap by major consuming industries' plants, February 1965 through July 1965 (Short tons)

Date	Home scrap produced				Purchased scrap received (net) 1/			
	Mfgs. of steel ingots and castings	Mfgs. of steel castings	Iron foundries and miscel-laneous users	Mfgs. of steel ingots and castings	Mfgts. of steel castings	Iron foundries and miscel-laneous users		
Feb.-----	3,818,740	127,717	516,788	1,990,939	177,414	652,169		
Mar.-----	4,430,927	147,469	595,402	2,283,581	199,221	789,270		
Apr.-----	4,275,865	142,341	583,434	2,305,143	199,447	793,331		
May -----	4,202,004	135,184	552,558	2,270,934	190,485	759,347		
June-----	4,122,494	142,440	598,027	2,259,056	207,952	752,960		
July-----	4,120,953	108,149	499,051	2,065,441	153,320	621,634		

1/ Excludes scrap shipped, transferred or otherwise disposed of during the month.

TABLE 3.--Consumers' stocks, production, receipts, consumption and shipments of iron and steel scrap, by grades, July 1965 (Short tons)

Grades of scrap	Stocks at beginning of month 1/		Home scrap produced	Purchased scrap received 1/	Consump-tion	Ship-ments	Stocks at end of month
	r/	r/					
Steel scrap, excludes rerolling rails:							
Carbon-----	5,043,400		3,579,074	2,726,526	5,925,222	347,538	5,076,240
Alloy, excludes stainless-----	343,508		232,640	48,427	270,040	12,524	342,011
Stainless-----	113,405		42,249	31,382	59,622	2,697	124,717
Cast iron, includes borings-----	1,564,327		874,190	522,616	1,326,880	125,797	1,508,456
Total-----	7,064,640		4,728,153	3,328,951	7,581,764	488,556	7,051,424

r/ Revised. 1/ Purchased scrap received from dealers and all others.

TABLE 4.--Home scrap produced by source, by type of manufacturers, during July 1965
(Short tons)

	Source of scrap			Total
	Recirculating 1/	Obsolete 2/	Other including slag	
Manufacturers of steel ingots and castings----	3,588,181	323,939	208,833	4,120,953
Manufacturers of steel castings-----	107,768	280	101	108,149
Iron foundries and miscellaneous users-----	492,455	5,930	666	499,051
Total-----	4,188,404	330,149	209,600	4,728,153

1/ Includes home, plant, or recycled iron and steel scrap.

2/ Includes molds, stools, machinery, and buildings; excludes rerolling rails.

TABLE 5.--Consumption of iron and steel scrap at major consuming industries' plants,
during July 1965, and consumption year to date, by grades
(Short tons)

Grades of scrap	Mfgrs. of steel ingots and castings	Mfgrs. of steel castings	Iron foundries and miscel- laneous users	Total consump- tion	Total consumption year to date
Steel scrap, excludes rerolling rails:					
Carbon-----	5,344,669	218,999	361,554	5,925,222	43,295,397
Alloy, excludes stainless-----	245,800	11,420	12,820	270,040	2,006,970
Stainless-----	54,953	2,035	2,634	59,622	536,174
Cast iron, includes borings-----	576,193	20,066	730,621	1,326,880	9,756,672
Total-----	6,221,615	252,520	1,107,629	7,581,764	55,595,213

TABLE 6.--Stocks of iron and steel scrap and pig iron on hand at major consuming industries' plants,
at end of month
(Short tons)

Date	Scrap stocks				Pig iron stocks			
	Mfgrs. of steel ingots and castings	Mfgrs. of steel castings	Iron foundries and miscel- laneous users	Total	Mfgrs. of steel ingots and castings	Mfgrs. of steel castings	Iron foundries and miscel- laneous users	Total
Feb. 28, 1965--	5,835,622	348,663	817,627	7,001,912	2,047,997	27,280	382,607	2,457,884
Mar. 31, 1965--	5,742,923	338,537	833,452	6,914,912	1,964,334	29,892	379,672	2,373,898
Apr. 30, 1965--	5,733,083	343,791	882,958	6,959,832	1,850,601	33,190	416,323	2,300,114
May 31, 1965--	5,742,799	346,907	936,845	7,026,551	1,937,107	29,650	434,800	2,401,557
June 30, 1965--	5,739,122	359,330	967,056	7,065,508	2,010,415	27,520	469,864	2,507,799
July 31, 1965--	5,711,137	367,175	973,112	7,051,424	2,008,952	27,167	469,081	2,505,200

TABLE 7.--Pig iron stocks, production, receipts, consumption and shipments
(Short tons)

	Stocks at beginning of month r/	Produced during the month	Received during the month	Consumed during the month	Shipped to others during the month	Stocks at end of month
June 1965-----	2,403,721	7,868,831	770,325	7,863,605	671,473	2,507,799
July 1965-----	2,457,520	7,806,438	687,309	7,835,710	610,357	2,505,200

r/ Revised.

TABLE 8.--Consumers' receipts and total consumption of iron and steel scrap, by grades, during July 1965
(Short tons)

Grades of scrap (Excludes rerolling rails)	Receipts during the month			Total consumption
	From dealers	From others	Total	
Carbon steel:				
Low phosphorus plate and punchings--	208,792	56,534	265,326	326,628
Cut structurals and plate-----	75,162	2,104	77,266	79,572
Steel car wheels-----	12,372	220	12,592	11,293
No. 1 heavy melting-----	387,279	195,634	582,913	2,564,448
No. 1 and electric furnace bundles--	390,549	170,775	561,324	599,723
No. 2 and all other bundles-----	464,608	64,440	529,048	629,074
Turnings and borings-----	206,753	16,557	223,310	250,469
Slag scrap (Fe content)-----	43,901	51,379	95,280	292,039
All other carbon steel scrap-----	293,150	86,317	379,467	1,171,976
Alloy steel, excludes stainless-----	29,896	18,531	48,427	270,040
Stainless steel-----	27,462	3,920	31,382	59,622
Cast iron: Borings-----	67,120	28,105	95,225	93,160
All other cast iron scrap-----	317,393	109,998	427,391	1,233,720
Total-----	2,524,437	804,514	3,328,951	7,581,764

TABLE 9.--Consumers' production, receipts, consumption and stocks of iron and steel scrap, and consumption of pig iron in the United States, by districts and States, July 1965 (Short tons)

District and State	Home scrap produced	Total purchased scrap received 1/	Consumption by grades					Scrap stocks	Pig iron consumption
			Carbon steel (excludes re-rolling rails)	Alloy steel (stainless)	Stainless steel	Cast iron (includes borings)	Total scrap		
New England:									
Connecticut	13,733	16,940	11,980	681	2,471	15,436	30,568	42,603	8,133
Maine	1,020	1,498	487	-----	-----	1,594	2,381	2,507	703
Total	14,753	18,438	12,467	681	2,471	17,330	32,949	45,110	8,836
Middle Atlantic:									
New Jersey	17,054	43,179	31,043	1,043	170	22,787	55,043	80,508	5,272
New York	246,998	120,244	298,902	8,142	7,079	80,424	394,347	565,332	487,754
Pennsylvania (East) 2/	301,350	259,159	405,828	56,342	1,720	67,673	531,563	538,925	507,955
Pennsylvania (West)	775,770	349,041	750,064	74,768	29,956	157,225	1,052,313	836,882	1,432,135
Total	1,341,172	771,623	1,525,837	140,295	38,925	328,209	2,033,266	2,021,647	2,433,116
East North Central:									
Illinois	411,029	392,190	558,267	15,369	3,564	136,642	713,842	766,289	591,565
Indiana	603,100	285,588	729,226	6,449	1,411	89,056	826,142	678,340	944,087
Michigan	384,259	363,473	478,002	2,848	3,860	251,624	736,334	465,025	677,982
Ohio (East) 3/	654,033	444,290	853,835	76,252	4,198	104,234	1,038,519	675,610	1,161,445
Ohio (West)	219,133	94,371	142,909	1,015	32	89,424	233,380	148,057	207,396
Wisconsin	43,103	38,872	37,400	242	256	33,073	70,971	54,642	13,276
Total	2,314,657	1,618,784	2,799,639	102,175	13,321	704,053	3,619,188	2,787,963	3,595,751
West North Central:									
Iowa	17,632	34,434	32,710	-----	-----	11,820	44,553	52,673	4,038
Kansas and Nebraska	2,391	6,374	4,430	-----	-----	3,322	7,753	9,255	367
Minnesota	21,447	21,815	29,759	944	140	9,491	39,630	63,108	57,413
Missouri	18,606	64,561	75,132	-----	-----	11,870	87,652	131,302	2,592
Total	60,076	127,184	142,001	944	140	36,503	179,588	256,338	64,410
South Atlantic:									
Delaware and Maryland	264,884	60,698	282,994	1,447	-----	22,839	310,821	242,133	498,819
Florida and Georgia	10,750	32,456	41,476	-----	-----	2,381	43,857	69,867	863
North Carolina and South Carolina	4,449	14,862	7,064	-----	-----	12,059	20,256	15,122	4,687
Virginia and West Virginia	72,769	90,737	145,956	1,899	-----	14,480	161,202	192,466	199,263
Total	352,892	198,753	477,490	3,346	4/	51,759	536,136	519,588	703,632
East South Central:									
Alabama	166,410	141,017	226,015	6,328	4/	49,217	281,585	280,500	308,765
Kentucky	85,197	98,463	139,408	7,443	4/	28,809	176,141	219,911	171,412
Total	251,607	239,480	365,423	13,771	4/	78,026	457,726	500,411	480,177
West South Central:									
Arkansas, Louisiana, Oklahoma	5,919	17,159	21,642	-----	-----	2,712	24,372	33,425	988
Texas	107,551	95,865	155,226	2,480	4/	38,205	196,017	158,546	127,603
Total	113,470	113,024	176,868	2,480	4/	40,917	220,389	191,971	128,591
Rocky Mountain:									
Arizona, Colorado, Idaho, Montana, Nevada, Utah	129,168	65,277	157,719	2,776	-----	23,217	183,712	278,488	233,081
Total	129,168	65,277	157,719	2,776	-----	23,217	183,712	278,488	233,081
Pacific Coast:									
California and Hawaii	134,973	124,924	206,767	1,938	140	44,015	292,860	325,946	180,749
Oregon and Washington	15,425	51,464	61,011	1,634	454	2,851	65,950	123,962	7,367
Total	150,398	176,388	267,778	3,572	594	46,866	318,810	449,908	188,116
U.S. total	4,728,153	3,328,951	5,925,222	270,040	59,622	1,326,880	7,581,764	7,051,424	7,835,710

1/ Includes 488,556 short tons that was shipped, transferred or otherwise disposed of during the month.
2/ Pennsylvania is divided into East and West by the eastern boundary of the following counties: McKean, Cameron, Clearfield, Cambria, and Somerset.
3/ Ohio is divided into East and West by the eastern boundary of the following counties: Ottawa, Sandusky, Seneca, Crawford, Morrow, Delaware, Franklin, Pickaway, Ross, Pike, and Scioto.
4/ Figures withheld to avoid disclosing individual company confidential data; included in U.S. total.

CONSUMPTION OF IRON AND STEEL SCRAP AND PIG IRON

Consumption of scrap in July totaled 7,581,764 short tons which was at an average daily rate of 244,573 tons or 5 percent greater than for the year 1964.

In July, open-hearth furnaces used 51 percent of the total scrap, and 70 percent of the pig iron compared with 49 and 71 percent, respectively, in June; electric furnaces in July used 9 percent of the combined total of iron and steel scrap and pig iron charged to all furnaces, with open-hearth using 61 percent. During 1964, these percentages were 9 and 64 percent, respectively. Blast furnaces used 6 percent of the total scrap; the corresponding percentage for the year 1964 was 6.

During July, steelmaking furnaces (open-hearth, Bessemer, basic oxygen converter, and electric) accounted for 78 percent of the total scrap, and 92 percent of the pig iron consumed, compared with 76 and 91 percent, respectively, during June. In 1964, steelmaking furnaces used 72 percent of the total scrap, and 91 percent of the pig iron. The remainder was used in iron-making furnaces, principally the cupola. Consumption by type of furnace during July is shown in the following table:

TABLE 10.--Consumption of iron and steel scrap, and pig iron, by type of manufacturers and furnaces during July 1965 (Short 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
Basic oxygen converters ^{3/}	692,997	1,620,029	-----	-----	-----	-----	692,997	1,620,029
Bessemer converters	1,679	42,725	424	-----	99	2	2,202	42,727
Open-hearth furnaces	3,809,899	5,484,853	49,847	5,536	-----	-----	3,859,746	5,490,389
Electric furnaces ^{4/}	1,144,317	25,703	168,537	2,458	20,367	2,964	1,333,221	31,125
Total steelmaking furnaces	5,648,892	7,173,310	218,808	7,994	20,466	2,966	5,888,166	7,184,270
Blast furnaces ^{5/}	449,424	-----	-----	-----	-----	-----	449,424	-----
Cupola furnaces	113,422	23,808	18,282	987	952,178	248,220	1,083,882	273,015
Air furnaces	3,985	1,470	15,430	2,929	78,633	7,350	98,048	11,749
Direct castings	-----	282,906	-----	-----	-----	83,770	-----	366,676
Ferroalloy	-----	-----	-----	-----	45,890	-----	45,890	-----
Miscellaneous	5,892	-----	-----	-----	10,462	-----	16,354	-----
Total July 1965	6,221,615	7,481,494	252,520	11,910	1,107,629	342,306	7,581,764	7,835,710
Total June 1965	6,351,782	7,442,367	338,984	15,985	1,330,405	405,253	8,021,171	7,863,605
Total May 1965	6,469,763	7,758,212	315,092	16,181	1,258,084	390,353	8,042,939	8,164,746
Total Apr. 1965	6,583,247	7,617,237	339,898	18,269	1,324,742	394,348	8,247,887	8,029,854
Total Mar. 1965	6,802,205	7,859,109	357,448	18,884	1,369,054	431,340	8,528,707	8,309,333
Total Feb. 1965	5,894,895	6,987,047	312,353	15,686	1,209,793	359,420	7,417,041	7,362,153

^{1/} Includes only those castings made by companies producing steel ingots. ^{2/} Excludes companies that produce both steel castings and steel ingots. ^{3/} Includes scrap and pig iron processed in metallurgical blast cupolas and used in oxygen converters. ^{4/} Includes crucible furnaces. ^{5/} Includes consumption in all blast furnaces producing pig iron.

TABLE 11.--Consumption of iron and steel scrap and pig iron in open-hearth furnaces in the United States, by districts and States, during July 1965
(Short tons)

District and State	Scrap	Pig iron	Total charge
New England and Middle Atlantic:			
New Jersey, New York, Rhode Island-----	202,704	256,015	458,719
Pennsylvania (East)-----	394,349	445,715	840,064
Pennsylvania (West)-----	632,337	972,627	1,604,964
Total-----	1,229,390	1,674,357	2,903,747
East North Central:			
Illinois-----	320,438	424,785	745,223
Indiana-----	743,148	909,165	1,652,313
Michigan and Wisconsin-----	117,113	104,557	221,670
Ohio (East)-----	447,944	821,125	1,269,069
Ohio (West)-----	120,097	197,964	318,061
Total-----	1,748,740	2,457,596	4,206,336
West North Central:			
Minnesota and Missouri-----	29,970	49,929	79,899
Total-----	29,970	49,929	79,899
South Atlantic:			
Delaware, Maryland, West Virginia-----	378,733	686,792	1,065,525
Total-----	378,733	686,792	1,065,525
East and West South Central:			
Alabama, Kentucky, Texas-----	254,999	407,328	662,327
Total-----	254,999	407,328	662,327
Rocky Mountain and Pacific Coast:			
California, Colorado, Utah-----	217,914	214,387	432,301
Total-----	217,914	214,387	432,301
U.S. total-----	3,859,746	5,490,389	9,350,135

FOREIGN TRADE

According to the Bureau of the Census, exports of iron and steel scrap totaled 710,642 short tons in July compared with 473,064 tons in June. Exports of pig iron during July totaled 1,299 tons and 1,180 tons in June. Imports of scrap totaled 16,557 short tons in July compared with 26,798 tons in June. Of the scrap imported during July, 16,552 short tons came from Canada and 5 tons from other sources. Imports of pig iron totaled 65,412 short tons in July and 78,652 tons in June. In addition to the foregoing imports of pig iron during July, there was 1,205 tons of sponge iron, valued at \$108,367, imported, of which 752 tons came from Canada and 453 tons from Sweden. To conform with other data in this report, foreign trade data include tin plate scrap.

TABLE 12.--U.S. exports of iron and steel scrap, by countries

Country	July 1965		Jan. through July 1965	
	Short tons	Value	Short tons	Value
Argentina-----	10,738	\$359,758	98,434	\$3,265,546
Canada-----	97,724	3,136,819	610,119	21,407,146
France-----	340	6,795	461	11,426
Germany, West-----	10,729	320,816	26,948	725,832
Italy-----	84,764	2,260,578	468,714	12,573,412
Japan-----	317,443	10,263,401	1,426,606	46,901,945
Korea-----	15,792	752,030	47,424	2,018,649
Mexico-----	90,142	2,986,049	512,226	17,842,262
Spain-----	8,404	200,883	52,613	1,355,707
Sweden-----	31	4,920	24,616	856,908
Taiwan-----	30,255	1,188,526	270,080	10,298,457
All others-----	44,280	1,297,225	262,821	8,798,619
Total-----	710,642	22,777,800	3,801,062	126,055,909

Source: Bureau of the Census.

TABLE 13.--U.S. exports of iron and steel scrap, by grades

Grades of scrap	July 1965		Jan. through July 1965	
	Short tons	Value	Short tons	Value
No. 1 heavy melting steel scrap---	269,104	\$9,375,591	1,350,415	\$47,788,696
No. 2 heavy melting steel scrap---	105,544	3,258,614	595,949	18,912,890
No. 1 bundles-----	35,588	1,173,282	185,531	6,297,182
No. 2 bundles-----	172,923	4,402,885	829,540	20,528,135
Borings, shovelings, and turnings-	33,845	804,567	123,094	3,007,877
Iron scrap-----	30,432	934,957	286,360	9,171,993
Stainless steel scrap-----	1,336	388,754	11,782	3,365,467
All other scrap <u>1</u> /-----	61,870	2,439,150	418,391	16,983,669
Total-----	710,642	22,777,800	3,801,062	126,055,909

1/ Includes tin plate andterne plate.

Source: Bureau of the Census.