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Iron and Steel Scrap
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FERROUS SCRAP IN MAY 1960

The domestic use of ferrous scrap in May 1960 dropped 10 percent from the quantity used in April and was the lowest since December 1958, excluding months affected by the steel strike, according to data reported to the Bureau of Mines, U.S. Department of the Interior. The use of pig iron during May was 7 percent lower than during the preceding month and was also the lowest quantity used since December 1958. The total metallic charge (10,518,333 gross tons), excluding iron ore and agglomerates, consisted of 48 percent scrap and 52 percent pig iron, compared with 49 percent scrap and 51 percent pig iron in April.

Table 1 - Summary of production, receipts, consumption, and consumers' stocks of ferrous scrap and pig iron, December 1959 to May 1960, 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 ^{1/}
Dec. 1959	3,979,397	3,121,209	7,100,606	7,021,870	6,905,787	8,938,480	2,660,051
Jan. 1960	4,002,324	2,630,556	6,632,880	7,043,488	7,015,519	8,517,965	2,648,533
Feb. 1960	3,784,179	2,712,029	6,496,208	6,493,558	6,601,704	8,522,138	2,654,641
Mar. 1960	3,913,500	2,506,899	6,420,399	6,655,569	6,869,866	8,283,647	2,723,814
Apr. 1960	3,434,845	2,182,873	5,617,718	5,625,717	5,853,330	8,276,546	2,919,105
May 1960	3,158,934	2,074,810 ^{2/}	5,233,744	5,051,121	5,467,212	8,459,725	3,157,880

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

^{2/} Excludes 162,888 gross tons of scrap shipped, transferred, or otherwise disposed of during the month.

Prepared by James E. Larkin, James C.O. Harris, and Selma D. Harris, Aug. 4, 1960, under the supervision of F.J. Cservenyak, Chief, Branch of Ferrous Metals, Division of Minerals.

Domestic steel production during May dropped 10 percent from April and resulted in the lowest use of scrap in steelmaking furnaces (open-hearth, Bessemer, basic oxygen converter, and electric) since December 1958, excluding strike months. Consumption of pig iron in these furnaces was 7 percent less than during April and also the lowest quantity used since December 1958. The total steel-furnace melt (8,771,817 gross tons) consisted of 44 percent scrap and 56 percent pig iron, compared with 45 percent scrap and 55 percent pig iron during April.

The use of scrap by gray iron foundries during May totaled 771,800 gross tons, a drop of 2 percent from April. Pig iron used by this industry totaled 292,407 gross tons, an increase of 4 percent over the preceding month.

Ferrous scrap stocks held by consumers on May 31, totaled 8,459,725 gross tons, 2 percent higher than at the end of the preceding month and was equivalent to a 52-day supply at the May daily consumption rate. Pig iron stocks held by consumers and suppliers totaled 3,157,880 gross tons, a rise of 8 percent over the preceding month and the largest quantity on hand since March 31, 1959.

Home scrap produced plus purchased scrap received totaled 5,233,744 gross tons, a drop of 7 percent from the preceding month and a decrease for the fifth consecutive month. Net purchased scrap received by consumers totaled 2,074,810 gross tons, 5 percent less than during April and a drop for the third consecutive month. Of the purchases, 81 percent was received from dealers and 19 percent from other sources. Purchased scrap received is a net figure computed by deducting scrap shipped, transferred, or otherwise disposed of by consumers from total scrap received from dealers and all others during the month.

Table 2 - Production and receipts of ferrous scrap by major consuming industries plants, in gross tons

Date	Home scrap produced			Purchased scrap received (net) <u>1/</u>		
	Mfgrs. of steel ingots and castings	Mfgrs. of steel castings	Iron foundries and miscellaneous users	Mfgrs. of steel ingots and castings	Mfgrs. of steel castings	Iron foundries and miscellaneous users
Dec. 1959--	3,480,112	96,278	403,007	2,488,201	148,223	484,785
Jan. 1960--	3,500,704	93,118	408,502	2,063,499	116,774	450,283
Feb. 1960--	3,278,381	96,456	409,342	2,140,144	117,146	454,739
Mar. 1960--	3,381,327	110,225	421,948	1,891,566	126,014	489,319
Apr. 1960--	2,972,257	91,122	371,466	1,648,925	125,057	408,891
May 1960--	2,695,387	92,459	371,088	1,532,192	116,553	426,065

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

Table 3 - Scrap produced, received, and consumed during May, stocks at consumers' plants
May 31, 1960, and consumption year-to-date, by grades, in gross tons

Grades of scrap	Home scrap produced	Purchased scrap received		Total scrap consumed	Scrap stocks May 31	Consumption Year-to-date
		From dealers*	From others*			
No.1 heavy melting steel-----	1,313,589	309,236	62,628	1,656,871	2,475,735	10,426,328
No.2 heavy melting steel-----	137,208	169,179	35,300	350,908	823,744	2,182,836
No.1 and electric furnace bundles-----	82,730	271,181	81,489	407,096	816,814	2,567,769
No.2 and all other bundles-----	22,067	271,976	34,380	304,801	856,109	1,953,778
Low phosphorous scrap-----	83,379	165,567	28,331	265,078	572,326	1,624,771
Cast iron scrap other than borings-----	465,115	273,674	42,824	746,518	986,849	4,065,920
Turnings and/or borings, alloy free-----	47,230	129,220	45,875	201,899	223,884	1,355,649
Rerolling rails-----	-	15,776	12,517	24,589	129,908	150,004
Scrap rails-----	2,827	19,180	649	23,894	61,695	128,239
High speed steel-----	1,500	1,050	245	2,626	4,671	15,129
Stainless steel-----	29,500	10,139	2,277	34,192	130,042	270,298
All other alloy iron and steel-----	132,760	24,837	10,517	146,144	328,720	1,009,963
All other prepared scrap-----	495,454	124,646	44,431	686,194	650,728	4,089,160
Unprepared scrap-----	345,575	36,631	13,943	200,311	398,500	1,029,609
Total (all grades)-----	3,158,934	1,822,292	415,406	5,051,121	8,459,725	30,869,453

* Includes 162,888 gross tons of scrap shipped, transferred, or otherwise disposed of during the month.

Table 4 - Stocks of ferrous scrap and pig iron on hand at major consuming industries plants,
at end of month, in gross 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
Dec. 31, 1959--	7,589,572	434,091	914,817	8,938,480	2,035,549	40,176	584,326
Jan. 31, 1960--	7,245,085	424,749	848,131	8,517,965	2,039,360	44,827	564,346
Feb. 29, 1960--	7,257,785	410,937	853,466	8,522,188	2,109,790	42,790	502,105
Mar. 31, 1960--	7,020,810	396,458	866,379	8,283,647	2,226,794	42,131	454,889
Apr. 30, 1960--	7,024,793	395,516	856,237	8,276,546	2,449,743	42,919	426,443
May 31, 1960--	7,220,894	386,828	852,003	8,459,725	2,714,061	40,943	402,876
							2,660,051
							2,648,533
							2,654,641
							2,723,814
							2,919,105
							3,157,880

DEALERS, BROKERS, AND AUTOMOBILE WRECKERS FOR MAY 1960

The 857 identical companies reporting for April and May indicated that at the end of May, stocks of ferrous scrap in their yards had decreased slightly from the end of April. During May, receipts increased slightly over the preceding month, however, shipments decreased 2 percent from April. Receipts in May were 25 percent less than shipments. Of the scrap handled during May, six grades (No.1 and No.2 heavy melting steel, No.1 and electric furnace bundles, No.2 and all other bundles, low phosphorous and cast iron scrap other than borings) represented 70 percent of the total shipments and 44 percent of the stocks on hand May 31. Unprepared scrap stocks held in dealers and automobile wreckers yards at the end of May constituted 44 percent of the total.

Table 5 - Dealers, brokers, and automobile wreckers, receipts, shipments, and stocks of ferrous scrap, for May 1960, in gross tons

Grades of scrap	Receipts during month		Shipments ^{1/} during month		Stocks	
	May 1960	Change from previous month (percent)	To domestic consumers	For export	May 31 1960	Change from end of previous month (percent)
No. 1 heavy melting steel-----	51,961	+16	79,802	51,711	125,374	+ 5
No. 2 heavy melting steel-----	59,354	+ 2	68,497	40,190	127,228	- 5
No. 1 and electric furnace bundles-----	10,764	- 3	26,134	6,561	19,423	+27
No. 2 and all other bundles-----	40,296	- 1	55,245	21,833	139,657	- 2
Low phosphorous scrap-----	10,362	-13	33,458	677	25,744	+ 5
Cast iron scrap other than borings-----	41,095	+ 3	62,949	7,391	68,528	+ 6
Turnings and/or borings, alloy free-----	17,556	-11	27,148	226	62,028	+ 4
Rerolling rails-----	2,526	+62	11,404	-	7,335	-51
Scrap rails-----	1,954	-28	1,565	-	16,301	+ 3
Highspeed steel-----	62	+182	127	-	113	+14
Stainless steel-----	1,794	-43	1,705	25	4,887	-18
All other alloy iron and steel-----	881	+54	11,010	47	3,668	+47
All other prepared scrap-----	13,217	-15	22,969	27,051	46,490	- 2
Unprepared scrap-----	235,300	<u>2/</u>	79,533	11,318	505,495	- 1
Total (all grades)-----	487,122	<u>3/</u>	481,546	167,030	1,152,271	<u>2/</u>

^{1/} Includes shipments from yards and direct shipments by dealers and brokers from other than yard operations.

^{2/} Less than 1 percent decrease.

^{3/} Less than 1 percent increase.

CONSUMPTION OF FERROUS SCRAP AND PIG IRON

Consumption of scrap in May totaled 5,051,121 gross tons which was at an average daily rate of 162,999 gross tons or 1 percent greater than for the year 1959.

In May, open-hearth furnaces used 61 percent of the total scrap and 84 percent of the pig iron compared with 62 and 84 percent, respectively, in April; electric furnaces in May used 6 percent of the combined total of ferrous scrap and pig iron charged to all furnaces, with open-hearth using 73 percent. During 1959, these percentages were 8 and 70 percent, respectively. Blast furnaces used 6 percent of the total scrap; the corresponding percentage for the year 1959 was 5.

During May, steelmaking furnaces (open-hearth, Bessemer, basic oxygen converter, and electric) accounted for 76 percent of the total scrap and 90 percent of the pig iron consumed, compared with 77 and 91 percent, respectively, during April. In 1959, steelmaking furnaces used 75 percent of the total scrap and 80 percent of the pig iron. The remainder was used in iron-making furnaces, principally the cupola. Consumption by type of furnace during May is shown in the following table:

Table 6 - Consumption of ferrous scrap and pig iron by manufacturers of ingots, steel castings and iron foundries during May 1960, 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-----	3,019,860	4,599,419	48,492	9,632	-	-	3,068,352	4,609,051
Basic oxygen converter-----	99,837	241,518	-	-	-	-	99,837	241,518
Bessemer converter-----	7,659	71,875	803	52	174	42	8,636	71,969
Electric 3/-----	527,176	15,961	113,362	2,277	12,047	1,631	652,585	19,869
Total steelmaking furnaces-----	3,654,532	4,928,773	162,657	11,961	12,221	1,673	3,829,410	4,942,407
Cupola-----	51,492	26,491	39,844	1,614	680,464	264,302	771,800	292,407
Air-----	2,990	1,110	16,265	3,523	59,915	11,097	79,170	15,730
Blast 4/-----	310,397	-	-	-	-	-	310,397	-
Direct casting-----	-	129,562	-	-	-	87,106	-	216,668
Ferro-alloy-----	-	-	-	-	-	-	-	-
Miscellaneous-----	11,841	-	-	-	18,907	-	18,907	-
Total May 1960-----	4,031,252	5,085,936	218,766	17,098	29,596	-	41,437	-
Total April 1960-----	4,615,497	5,467,429	218,663	18,354	801,103	364,178	5,051,121	5,467,212
Total March 1960-----	5,503,158	6,417,669	251,925	22,023	791,557	367,547	5,625,717	5,853,330
Total February 1960-----	5,403,834	6,151,389	228,161	19,128	900,486	430,174	6,655,569	6,869,866
Total January 1960-----	5,954,032	6,557,710	221,006	20,532	861,563	431,187	6,493,558	6,601,704
Total December 1959-----	5,919,081	6,457,864	237,493	21,790	868,450	437,277	7,043,488	7,015,519
					865,296	426,133	7,021,870	6,905,787

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

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

3/ Includes crucible furnaces.

4/ Includes consumption in all blast furnaces producing pig iron.

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 May 31, 1960	Pig iron consumed
	Home scrap produced	Purchased scrap received	Consumed		
United States, total-----	3,158,934	2,237,698 ^{1/}	5,051,121	8,459,725	5,467,212
New England, total-----	19,926	20,000	39,293	49,425	12,666
Connecticut-----	5,277	3,358	9,656	10,849	2,394
Maine and New Hampshire-----	679	904	1,623	1,055	367
Massachusetts-----	9,565	10,853	18,543	27,314	5,828
Rhode Island-----	3,754	4,439	8,027	8,546	3,586
Vermont-----	651	446	1,444	1,661	491
Middle Atlantic, total-----	904,583	468,710	1,340,539	2,398,807	1,655,242
New Jersey-----	12,682	33,344	44,505	70,145	9,316
New York-----	144,629	102,311	260,278	537,730	273,303
Pennsylvania (East) ^{2/} -----	181,553	113,519	329,221	689,930	342,210
Pennsylvania (West)-----	565,719	219,536	706,535	1,101,002	1,030,413
East North Central, total-----	1,530,450	1,111,326	2,331,048	3,489,377	2,530,380
Illinois-----	270,769	266,789	443,753	997,762	405,214
Indiana-----	414,045	220,650	600,156	842,159	790,168
Michigan-----	248,511	203,771	431,499	387,434	431,261
Ohio (East) ^{3/} -----	463,765	308,214	653,326	861,269	737,572
Ohio (West)-----	95,522	82,073	146,902	344,188	150,166
Wisconsin-----	37,838	29,829	55,412	56,565	15,999
West North Central, total-----	44,025	81,240	131,685	372,696	37,945
Iowa-----	8,653	12,376	22,197	32,077	4,394
Kansas and Nebraska-----	3,738	8,216	11,571	15,531	401
Minnesota-----	18,027	11,098	36,198	94,558	30,060
Missouri-----	13,607	49,550	61,719	230,530	3,090
South Atlantic, total-----	286,735	179,599	443,698	464,281	553,650
Delaware and Maryland-----	219,926	84,717	305,619	216,037	364,768
Florida and Georgia-----	5,322	12,045	15,429	25,281	959
North Carolina-----	2,123	4,441	4,947	5,506	2,091
South Carolina-----	1,303	507	2,397	2,131	1,296
Virginia and West Virginia-----	58,061	77,889	115,306	215,326	184,536
East South Central, total-----	139,014	169,658	295,344	489,968	307,722
Alabama-----	99,670	99,238	177,912	276,629	241,430
Kentucky, Mississippi, and Tennessee-----	39,344	70,420	117,432	213,339	66,292
West South Central, total-----	58,086	80,051	129,838	331,023	74,324
Arkansas, Louisiana, and Oklahoma-----	2,855	10,097	12,712	34,873	617
Texas-----	55,231	69,954	117,126	296,150	73,707
Rocky Mountain, total-----	82,512	37,264	148,383	255,576	164,937
Arizona and Nevada-----	1,095	4,824	7,205	12,476	4
Colorado and Utah-----	81,162	31,083	139,827	237,800	164,907
Idaho and Montana-----	255	1,357	1,351	5,300	26
Pacific Coast, total-----	93,603	89,850	191,293	608,572	130,346
California-----	84,691	64,202	152,032	477,361	129,723
Oregon-----	2,798	7,818	11,864	41,687	359
Washington-----	6,114	17,830	27,397	89,524	264

^{1/} Includes 162,888 gross 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.

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 May 1960		
	Total scrap	Pig iron	Total charge
United States, total-----	3,068,352	4,609,051	7,677,403
New England and Middle Atlantic, total-----	944,893	1,445,718	2,390,611
New Jersey and Rhode Island-----	15,906	4,109	20,015
New York-----	192,096	260,297	452,393
Pennsylvania (East)-----	225,188	312,419	537,607
Pennsylvania (West)-----	511,703	868,893	1,380,596
East North Central, total-----	1,374,959	2,108,115	3,483,074
Illinois-----	229,070	298,288	527,358
Indiana-----	532,638	769,346	1,301,984
Michigan and Wisconsin-----	178,134	277,738	455,872
Ohio (East)-----	352,389	626,512	978,901
Ohio (West)-----	82,728	136,231	218,959
West North Central, total-----	38,408	27,098	65,506
Minnesota and Missouri-----	38,408	27,098	65,506
South Atlantic, total-----	352,510	536,025	888,535
Delaware, Maryland, and West Virginia-----	352,510	536,025	888,535
East and West South Central, total-----	164,891	281,491	446,382
Alabama, Kentucky, Tennessee, and Texas-----	164,891	281,491	446,382
Rocky Mountain and Pacific Coast, total-----	192,691	210,604	403,295
California, Colorado, and Utah-----	192,691	210,604	403,295

FOREIGN TRADE 1/

According to the Bureau of the Census, exports of ferrous scrap totaled 591,312 gross tons in May compared with 459,134 tons in April. Imports of scrap totaled 12,609 gross tons in May compared with 16,989 tons in April. Imports of pig iron totaled 15,102 gross tons in May and 21,591 tons in April. In addition to the foregoing imports of pig iron during May, there were 595 tons of sponge iron, valued at \$80,267, imported, of which 152 tons came from Canada and 443 tons from Sweden.

Table 9 - Imports 2/ of ferrous scrap into the United States
by countries
(U. S. Department of Commerce)

Country	May 1960		Jan. through May 1960	
	Gross tons	Value	Gross tons	Value
Canada-----	12,005	\$491,276	56,748	\$2,331,624
Cuba-----	394	4,735	1,308	16,489
United Kingdom-----	-	-	167	134,919
West Germany-----	-	-	108	9,477
All others-----	210	8,344	9,406	486,167
Total-----	12,609	\$504,355	67,737	\$2,978,676

Table 10 - Exports 2/ of ferrous scrap from the United States, by countries
(U. S. Department of Commerce)

Country	May 1960		Jan. through May 1960	
	Gross tons	Value	Gross tons	Value
Canada-----	30,042	\$1,013,834	211,108	\$8,198,951
Italy-----	59,285	1,201,923	393,479	13,575,499
Japan-----	248,553	9,088,685	1,076,691	43,329,885
Mexico-----	48,491	1,837,519	158,471	6,146,422
Taiwan-----	-	-	33,227	1,452,656
West Germany-----	56,090	2,232,852	158,226	5,972,907
All others-----	148,851	3,216,782	238,645	7,161,121
Total-----	591,312	\$18,591,595	2,269,847	\$85,837,441

Table 11 - Exports 2/ of ferrous scrap from the United States, by grades
(U. S. Department of Commerce)

Grades of scrap	May 1960		Jan. through May 1960	
	Gross tons	Value	Gross tons	Value
No. 1 heavy melting steel scrap-	183,748	\$7,297,988	811,269	\$34,458,898
No. 2 heavy melting steel scrap-	114,614	4,113,095	492,860	19,077,720
No. 1 baled sheet melting scrap-	26,333	1,143,836	100,086	4,201,744
No. 2 baled sheet melting scrap-	75,771	2,069,367	383,838	11,569,333
Borings, shoveling, and turnings	9,290	228,536	41,872	1,098,226
Iron scrap-----	40,477	1,483,257	197,635	8,027,010
Rerolling material-----	7,062	480,128	27,982	1,833,283
All other scrap <u>3/</u> -----	134,017	1,775,388	209,305	5,571,227
Total-----	591,312	\$18,591,595	2,269,847	\$85,837,441

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

2/ Preliminary data subject to revision. Value may differ widely because of variations in quality, classes, and grade combinations.

3/ Includes tin plate and terne plate scrap.