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FRED A. SEATON, Secretary

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Iron and Steel Scrap
Monthly Report No. 206

IRON AND STEEL SCRAP IN DECEMBER AND PRELIMINARY 1957

Domestic consumption of ferrous materials, scrap and pig iron, decreased 11 percent from November and was the lowest quantity of these materials consumed in any month, exclusive of strike months, since September 1954, according to the Bureau of Mines, United States Department of the Interior. Iron and steel scrap and pig iron consumed during December decreased 12 percent and 10 percent, respectively, from the previous month. The total charge of these materials consisted of 48 percent scrap and 52 percent pig iron, compared with 49 percent scrap and 51 percent pig iron during November.

Preliminary data for 1957 show that there was a decrease of 3 percent in the consumption of ferrous materials, scrap and pig iron, from 1956. Scrap consumption totaled 65,668,000 gross tons, 8 percent less than 1956, and comprised 49 percent of the total charge compared with 52 percent in the previous year. Pig iron consumption, 2 percent greater than in 1956, totaled 68,173,000 gross tons, comprising 51 percent of the total charge compared with 48 percent in 1956.

Table 1 - Summary of production, receipts, consumption, and consumers' stocks of iron and steel scrap and pig iron, August 1957 to December 1957, and Preliminary 1957, 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>
Aug. 1957-	3,341,628	2,428,579	5,770,207	5,299,543	5,769,995	7,493,892	3,086,853
Sept. 1957-	3,192,926	2,288,864	5,481,790	5,033,998	5,645,036	7,941,835	3,242,471
Oct. 1957-	3,385,672	2,141,461	5,527,133	5,333,767	5,669,624	8,135,372	3,309,569
Nov. 1957-	2,990,946	1,733,128	4,724,074	4,858,489	5,073,898	8,007,423	3,298,738
Dec. 1957-	2,686,210	1,580,375 ^{2/}	4,266,585	4,281,414	4,565,635	7,990,523	3,407,767
Total 1957*	39,261,000	27,755,000 ^{3/}	67,016,000	65,668,000	68,173,000	-	-

* Preliminary.

1/ Suppliers' stocks included with consumers' stocks.

2/ Excludes 144,888 gross tons of scrap shipped, transferred or otherwise disposed of during the month.

3/ Excludes 2,478,000 gross tons of scrap shipped, transferred or otherwise disposed of during the year 1957.

Prepared by James E. Larkin and James C.O. Harris, March 7, 1958, under the supervision of H. G. Iverson, Chief, Branch of Ferrous Metals and Ferroalloys, Division of Minerals.

During December, steel production decreased 12 percent from November, and reflected an 11 percent decrease in the use of ferrous materials, scrap and pig iron, in steelmaking furnaces. The use of scrap and pig iron in these furnaces (open-hearth, Bessemer, and electric) totaled 3,240,974 gross tons and 4,120,985 tons, with scrap the lowest quantity used since September 1954 and pig iron the lowest since October 1954, exclusive of strike months. The total steel furnace melt (7,361,959 tons) consisted of 44 percent scrap and 56 percent pig iron, compared with 45 percent and 55 percent, respectively, during November. Preliminary data for steel production and ferrous materials used in steelmaking furnaces during 1957, indicates a decrease of 2 percent from 1956 for each of these commodities. The use of scrap in these furnaces totaled 50,683,000 gross tons, a decrease of 9 percent from 1956; pig iron consumption totaled 61,399,000 tons, an increase of 4 percent over the previous year.

The use of scrap by gray iron foundries during December totaled 661,918 gross tons, a decrease of 8 percent from the 716,095 tons used during November. Pig iron consumed by this industry totaled 288,219 tons, a decrease of 7 percent from the previous month. According to preliminary data, the use of scrap and pig iron by gray iron foundries decreased 7 percent and 13 percent, respectively, from 1956.

Stocks of scrap and pig iron held by consumers at the end of December totaled 11,398,290 gross tons, a slight decrease from the end of the previous month. Stocks of iron and steel scrap were equivalent to a 58-day supply at the December consumption rate and totaled 7,990,523 tons, slightly less than at the end of November but 21 percent greater than stocks held on December 31, 1956. Pig iron stocks held by consumers and suppliers were at a record high, totaling 3,407,767 tons, an increase of 3 percent over November, and 62 percent greater than at the end of December 1956.

Total scrap for consumption (home scrap produced plus purchased scrap received) totaled 4,266,585 gross tons during December; home scrap accounted for 2,686,210 tons and purchases 1,580,375 tons. Of the purchases 84 percent was received from dealers and 16 percent from other sources. During 1957, scrap for consumption totaled 67,016,000 gross tons, and comprised 39,261,000 tons of home scrap and 27,755,000 tons of purchased scrap. 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, received, and consumed during December, stocks at consumers' plants December 31, 1957, and consumption year-to-date, by grades, in gross tons

Grade of scrap	Home scrap produced	Purchased scrap received		Total scrap consumed	Scrap stocks Dec. 31	Consumption Year-to-date
		From dealers*	From others*			
No. 1 heavy melting steel-----	1,123,103	254,243	35,514	1,396,904	2,599,718	20,897,000
No. 2 heavy melting steel-----	133,538	164,526	20,913	348,283	812,623	5,789,000
Bundles-----	80,345	323,303	61,466	505,140	1,284,637	8,501,000
Low phosphorous scrap-----	78,461	160,876	21,046	273,851	476,809	4,077,000
Cast iron scrap other than borings-----	411,666	207,418	42,917	621,122	995,289	9,430,000
Turnings and/or borings, alloy free-----	36,255	124,285	27,560	155,726	230,366	2,506,000
Rerolling rails-----	674	16,513	18,957	30,392	131,479	476,000
Scrap rails-----	2,359	20,185	2,285	23,944	65,437	361,000
High speed steel-----	1,105	581	152	1,614	5,853	31,000
Stainless steel-----	24,312	8,492	3,252	33,005	92,743	585,000
All other alloy iron and steel-----	94,335	25,280	11,154	119,167	216,383	1,893,000
All other prepared scrap-----	415,853	113,293	23,543	603,235	767,053	8,814,000
Unprepared scrap-----	284,204	25,609	11,900	169,031	312,133	2,308,000
Total (all grades)-----	2,686,210	1,444,604	280,659	4,281,414	7,990,523	65,668,000

* Includes 144,888 gross tons of scrap shipped, transferred, or otherwise disposed of during the month.

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	Total	Mfgs. of steel ingots and castings	Mfgs. of steel castings	Total
July 31, 1957----	5,859,391	363,554	7,023,107	2,214,452	75,612	2,878,719
Aug. 31, 1957----	6,307,244	376,401	7,493,892	2,464,215	68,787	3,086,853
Sept. 30, 1957----	6,730,362	379,564	7,941,835	2,652,820	62,879	3,242,471
Oct. 31, 1957----	6,918,377	376,799	8,135,372	2,736,071	59,258	3,309,569
Nov. 30, 1957----	6,829,407	371,480	8,007,423	2,737,912	52,876	3,298,738
Dec. 31, 1957----	6,803,410	369,764	7,990,523	2,843,866	50,516	3,407,767

DEALERS, BROKERS, AND AUTOMOBILE WRECKERS

The 1,011 identical companies reporting for November and December indicated that at the end of December, stocks of iron and steel scrap in their yards had increased 12 percent over November 30th; however, receipts, and shipments decreased 6 percent and 19 percent, respectively. Receipts in December, however, were 6 percent greater than shipments. Of the scrap handled during December, five grades (No. 1 and No. 2 heavy melting steel, bundles, low phosphorous, and cast iron scrap other than borings), represented 79 percent of the shipments and 42 percent of the stocks at the end of the month. Unprepared scrap stocks held in dealers and automobile wreckers yards at the end of December constituted 45 percent of the total stocks.

Table 4 - Dealers, brokers and automobile wreckers 1/, receipts, shipments, and stocks of iron and steel scrap, for December, as percent of change from November 1957, in gross tons

Grades of scrap	Receipts during month		Shipments during month		Stocks	
	December 1957	Change from previous month (percent)	December 1957	Change from previous month (percent)	December 31, 1957	Change from end of previous month (percent)
No. 1 heavy melting steel-----	33,458	-10	70,896	+12	89,538	+ 2
No. 2 heavy melting steel-----	48,414	+ 1	48,992	-17	84,867	+26
Bundles-----	46,999	- 8	56,877	-34	113,745	+26
Low phosphorous scrap-----	13,250	- 5	25,374	-11	21,431	+13
Cast iron scrap other than borings-----	34,393	- 4	47,959	-15	63,372	+ 5
Turnings and/or borings, alloy free-----	21,303	-17	19,627	-23	58,053	+16
Rerolling rails-----	627	-64	2,009	-11	1,076	-32
Scrap rails-----	2,874	-17	2,693	-28	10,601	+ 6
Highspeed steel-----	28	+40	10	-86	127	+15
Stainless steel-----	1,331	-11	1,202	-36	2,943	+10
All other alloy iron and steel-----	2,229	-18	2,597	-46	4,414	+23
All other prepared scrap-----	9,458	-22	15,333	+ 2	40,460	+22
Unprepared scrap-----	200,943	- 3	23,533	-45	394,777	+ 9
Total (all grades)-----	415,307	- 6	317,102	-19	885,404	+12

1/ As reported by 1,011 identical dealers and automobile wreckers for November and December 1957.

CONSUMPTION OF SCRAP IRON AND STEEL AND PIG IRON

Consumption of scrap in December totaled 4,281,414 gross tons which was at an average daily rate of 138,110 tons or 30 percent less than for the year 1956.

In December, open-hearth furnaces used 63 percent of the total scrap, and 87 percent of the pig iron compared with 64 and 86 percent, respectively, in November; electric furnaces in December used 6 percent of the ferrous materials (scrap and pig iron) charged to all furnaces, with open-hearth using 75 percent. During 1956, these percentages were 7 and 73, respectively. Blast furnaces used 6 percent of the total scrap; the corresponding percentage for the year 1956 was 5.

During December, steel-making furnaces (open-hearth, Bessemer, and electric) accounted for 76 percent of the total scrap, and 90 percent of the pig iron consumed, compared with 77 and 90, respectively, during November. In 1956, steel-making furnaces used 78 percent of the total scrap, and 89 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 5- Consumption of iron and steel scrap and pig iron by manufacturers of ingots, steel castings and iron foundries during December 1957, 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	2,630,245	3,951,384	47,312	9,183	-	-	2,677,557	3,960,567
Bessemer*	20,499	146,451	784	53	126	33	21,409	146,537
Electric	429,483	10,792	100,075	2,083	12,450	1,006	542,008	13,881
Total steel-making furnaces	3,080,227	4,108,627	148,171	11,319	12,576	1,039	3,240,974	4,120,985
Cupola	47,839	35,949	32,899	1,603	581,180	250,667	661,918	288,219
Air	2,059	879	14,804	2,848	53,228	11,027	70,091	14,754
Blast 3/	238,807	-	-	-	-	-	238,807	-
Direct casting	-	94,717	-	-	-	46,960	-	141,677
Ferro-alloy	-	-	-	-	22,909	-	22,909	-
Miscellaneous	9,859	-	-	-	36,856	-	46,715	-
Total December 1957	3,378,791	4,240,172	195,874	15,770	706,749	309,693	4,281,414	4,565,635
Total November 1957	3,883,668	4,717,274	211,145	17,179	763,676	339,445	4,858,489	5,073,898
Total October 1957	4,205,169	5,249,454	252,824	20,992	875,774	399,178	5,333,767	5,669,624
Total September 1957	4,026,411	5,253,883	242,794	20,206	764,793	370,947	5,033,998	5,645,036
Total August 1957	4,248,327	5,349,468	254,459	21,271	796,757	399,256	5,299,543	5,769,995
Total July 1957	4,014,044	5,201,777	196,928	16,952	686,780	339,973	4,897,752	5,558,702

* 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 5A - Preliminary data for consumption of iron and steel scrap and pig iron by manufacturers of ingots, steel castings and iron foundries during 1957, 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	40,736,000	57,882,000	727,000	152,000	-	-	41,463,000	58,034,000
Bessemer*	330,000	3,117,000	10,000	1,000	6,000	2,000	346,000	3,120,000
Electric	7,171,000	199,000	1,541,000	28,000	162,000	18,000	8,874,000	245,000
Total steel-making furnaces	48,237,000	61,198,000	2,278,000	181,000	168,000	20,000	50,683,000	61,399,000
Cupola	718,000	517,000	472,000	22,000	8,029,000	3,622,000	9,219,000	4,161,000
Air	29,000	13,000	234,000	48,000	765,000	158,000	1,028,000	219,000
Blast 3/	3,720,000	-	-	-	-	-	3,720,000	-
Direct casting	-	1,495,000	-	-	-	899,000	-	2,394,000
Ferro-alloy	-	-	-	-	301,000	-	301,000	-
Miscellaneous	199,000	-	-	-	518,000	-	717,000	-
Total 1957	52,903,000	63,223,000	2,984,000	251,000	9,781,000	4,699,000	65,668,000	68,173,000

* 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 6 - 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, 1957	Pig iron consumed
	Home scrap produced	Purchased scrap received	Consumed		
United States, total-----	2,686,210	1,725,263 ^{1/}	4,281,414	7,990,523	4,565,635
New England, total-----	19,437	24,089	40,910	65,478	14,608
Connecticut-----	4,338	3,538	7,188	14,826	2,338
Maine-----	313	609	594	775	302
Massachusetts-----	11,343	15,167	25,862	38,167	8,191
New Hampshire-----	435	181	811	1,189	222
Rhode Island-----	2,637	3,744	5,632	7,465	3,231
Vermont-----	371	850	823	3,056	324
Middle Atlantic, total-----	799,283	439,953	1,075,660	2,374,344	1,429,971
New Jersey-----	10,789	35,567	37,066	72,164	8,808
New York-----	123,763	134,975	160,048	604,590	272,752
Pennsylvania (East) ^{2/} -----	183,940	118,129	300,298	550,477	348,962
Pennsylvania (West)-----	480,791	151,282	578,248	1,147,113	799,449
East North Central, total-----	1,228,191	830,731	2,122,579	3,388,021	1,951,596
Illinois-----	219,970	158,289	397,135	928,892	327,119
Indiana-----	350,811	227,007	595,793	901,668	631,409
Michigan-----	204,051	176,718	392,426	379,297	271,332
Ohio (East) ^{3/} -----	341,704	176,867	566,942	873,861	580,554
Ohio (West)-----	81,207	61,936	120,112	244,294	125,239
Wisconsin-----	30,448	29,914	50,171	60,009	15,943
West North Central, total-----	35,742	59,900	109,470	321,967	36,143
Iowa-----	7,394	12,383	23,026	28,248	4,593
Kansas and Nebraska-----	1,774	5,598	6,487	12,518	206
Minnesota-----	15,173	9,074	31,488	114,040	28,466
Missouri-----	11,401	32,845	48,469	167,161	2,878
South Atlantic, total-----	220,372	42,354	244,444	499,763	458,847
Delaware, District of Columbia, and Maryland-----	167,907	11,509	154,746	312,995	329,864
Florida and Georgia-----	3,773	5,192	8,279	11,674	1,017
North Carolina-----	1,736	1,265	3,345	5,708	1,814
South Carolina-----	761	604	1,935	1,810	969
Virginia and West Virginia-----	46,195	23,784	76,139	167,576	125,183
East South Central, total-----	161,435	108,009	252,316	392,081	338,492
Alabama-----	123,590	68,342	178,642	245,580	261,683
Kentucky, Mississippi, and Tennessee-----	37,845	39,667	73,674	146,501	76,809
West South Central, total-----	55,982	86,910	139,336	308,050	72,124
Arkansas, Louisiana, and Oklahoma-----	2,753	15,550	15,674	15,707	533
Texas-----	53,229	71,360	123,662	292,343	71,591
Rocky Mountain, total-----	84,871	18,379	116,547	188,095	166,521
Arizona and Nevada-----	1,006	4,595	4,731	12,196	14
Colorado and Utah-----	83,426	12,998	110,133	168,888	166,374
Idaho-----	169	141	513	2,272	126
Montana-----	270	645	1,170	4,739	7
Pacific Coast, total-----	80,897	114,938	180,152	452,724	97,333
California-----	72,304	84,319	140,312	330,135	96,343
Oregon-----	2,928	11,448	15,951	40,254	76
Washington-----	5,665	19,171	23,889	82,335	914

- ^{1/} Includes 144,888 gross tons that was shipped, transferred or otherwise disposed of during December.
- ^{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 7 - 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 1957		
	Total scrap	Pig iron	Total charge
United States, total-----	2,677,557	3,960,567	6,638,124
New England, total-----	11,637	5,300	16,937
Massachusetts and Rhode Island-----	11,637	5,300	16,937
Middle Atlantic, total-----	780,521	1,311,446	2,091,967
New Jersey and New York-----	106,181	261,589	367,770
Pennsylvania (East)-----	214,308	318,493	532,801
Pennsylvania (West)-----	460,032	731,364	1,191,396
East North Central, total-----	1,303,542	1,619,936	2,923,478
Illinois-----	229,213	269,521	498,734
Indiana-----	529,812	612,247	1,142,059
Michigan and Wisconsin-----	126,128	176,552	302,680
Ohio (East)-----	363,294	451,409	814,703
Ohio (West)-----	55,095	110,207	165,302
West North Central, total-----	34,709	25,883	60,592
Minnesota and Missouri-----	34,709	25,883	60,592
South Atlantic, total-----	175,733	429,422	605,155
Delaware and Maryland-----	130,735	310,507	441,242
Georgia and West Virginia-----	44,998	118,915	163,913
East South Central, total-----	114,179	261,017	375,196
Alabama, Kentucky, and Tennessee-----	114,179	261,017	375,196
West South Central, total-----	63,245	65,123	128,368
Oklahoma and Texas-----	63,245	65,123	128,368
Rocky Mountain, total-----	94,168	154,252	248,420
Colorado and Utah-----	94,168	154,252	248,420
Pacific Coast, total-----	99,823	88,188	188,011
California and Washington-----	99,823	88,188	188,011

FOREIGN TRADE 1/

According to the Bureau of the Census, exports of iron and steel scrap totaled 289,318 gross tons in December and 431,032 tons in November. The quantity of scrap licensed for export during January 1958 totaled 345,244 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 December totaled 32,043 tons and 62,502 tons in November. Scrap and pig iron import data during December were not available for this release; these data will appear in the January release.

Table 8 - Exports of iron and steel scrap from the United States
by countries
(U. S. Department of Commerce)

Country	December 1957		January to December 1957	
	Gross tons	Value	Gross tons	Value
Argentina-----	37	\$4,139	39,316	\$2,684,339
Austria-----	1,469	79,222	51,235	2,198,014
Belgium and Luxembourg-----	-	-	227,472	12,344,667
Brazil-----	134	15,622	9,764	461,677
Canada-----	17,643	590,932	426,255	20,568,915
France-----	9,159	442,479	221,810	12,075,715
Italy-----	61,676	2,101,526	1,419,062	72,301,366
Japan-----	113,601	4,775,446	2,125,370	127,476,067
Mexico-----	18,466	876,616	293,324	15,799,161
Netherlands-----	34	4,755	22,256	1,357,483
Spain-----	32,803	1,443,133	93,332	4,552,253
Taiwan-----	-	-	43,520	2,871,142
United Kingdom-----	8,940	353,317	330,120	17,356,297
West Germany-----	24,205	907,916	573,901	28,492,124
Yugoslavia-----	-	-	27,389	1,751,339
All others-----	1,151	85,617	17,023	1,791,350
Total-----	289,318	\$11,680,720	5,921,149	\$324,081,909

Table 9 - Exports of iron and steel scrap from the United States
by grades
(U. S. Department of Commerce)

	December 1957		July to December 1957	
	Gross tons	Value	Gross tons	Value
No. 1 heavy melting steel scrap-	111,579	\$5,224,355	866,604	\$47,409,827
No. 2 heavy melting steel scrap-	73,848	2,742,762	678,192	34,220,249
No. 1 baled sheet melting scrap-	10,544	442,990	81,884	4,177,162
No. 2 baled sheet melting scrap-	70,123	2,289,662	569,119	25,823,614
Borings, shovelings and turnings	3,312	92,798	44,044	1,682,358
Iron scrap-----	15,759	562,470	297,003	14,353,288
Rerolling material-----	2,001	133,499	21,800	1,728,624
All other scrap 2/-----	2,152	192,184	37,899	2,964,803
Total-----	289,318	\$11,680,720	2,596,545	\$132,359,925

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.