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Stewart L. Udall, Secretary

Marling J. Ankeny, Director

Iron and Steel Scrap,
Monthly

IRON AND STEEL SCRAP IN OCTOBER 1963 (Final Data)

A rise of 11 percent in total domestic consumption of iron and steel scrap for October 1963 made this the second consecutive month showing a gain, according to data compiled by the Bureau of Mines, U.S. Department of the Interior. Consumption of pig iron during October was 7 percent above September. The total metallics charge (11,800 thousand short tons) was 9 percent above September and consisted of 52 percent iron and steel scrap.

A total of 4,528 thousand short tons of iron and steel scrap went into steel-making furnaces (open-hearth, electric, basic oxygen converter, and Bessemer) during October. This was a 10 percent increase over September. Iron and steel scrap constituted 47 percent of the total metallics charge of 9,574 thousand short tons used in steelmaking furnaces. Open hearth consumption of scrap was up another 1 percent to 42 percent. Electric furnaces consumed 1,119 thousand short tons, up 12 percent over September 1963.

Table 1 - Production, receipts, consumption, and consumers' stocks of iron and steel scrap and pig iron, May 1963 through October 1963, in 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/}
May 1963	4,465,462	3,072,887	7,538,349	7,583,146	7,584,463	7,738,452	2,633,688
June 1963	4,168,499	2,689,983	6,858,482	6,867,086	6,989,940	7,730,890	2,668,639
July 1963	3,731,562	2,226,542	5,958,104	5,681,168	5,909,026	8,011,055	2,781,851
Aug. 1963	3,404,164	2,106,721	5,510,885	5,424,861	5,270,301	8,096,917	2,803,604
Sept. 1963	3,363,384	2,130,682	5,494,066	5,572,716	5,224,259	8,012,650	2,811,216
Oct. 1963	3,670,250	^{2/} 2,516,120	6,186,370	6,196,853	5,603,144	8,001,876	2,812,965

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

^{2/} Excludes 278,502 short tons of scrap shipped, transferred, or otherwise disposed of during month.

Prepared April 6, 1964, by R. A. Whitman, Physical Scientist

There were 1,143,213 short tons of iron and steel scrap used in gray iron foundries during October, an increase over September of 15 percent. These foundries used 13 percent more pig iron during the same period.

U.S. consumers' stocks of iron and steel scrap totaled 8,001,876 short tons, down slightly from September. This was the equivalent of a 40-day supply at the average October consumption rate. Pig iron stocks increased for the third straight month, but less than 1 percent above September.

The 6,186,370 short tons of home scrap plus purchased scrap received was 13 percent greater than September. Of the total scrap purchased, 79 percent was from dealers with the balance from other sources. (Purchased scrap 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 iron and steel scrap by major consuming industries plants, May 1963 through October 1963, in short tons

Date	Home scrap produced			Purchased scrap received (net) ^{1/}		
	Mfgs. of steel ingots and castings	Mfgs. of steel castings	Iron foundries and miscellaneous users	Mfgs. of steel ingots and castings	Mfgs. of steel castings	Iron foundries and miscellaneous users
May-----	3,834,807	123,061	507,594	2,331,281	149,956	591,650
June-----	3,566,513	118,140	483,846	1,987,710	131,784	570,489
July-----	3,239,151	91,458	400,953	1,626,339	109,492	490,711
August-----	2,858,111	117,461	428,592	1,492,648	134,320	479,753
September-----	2,775,202	107,496	480,686	1,450,613	139,351	540,718
October-----	3,010,489	122,932	536,829	1,706,030	163,485	646,605
^{1/} Excludes scrap shipped, transferred or otherwise disposed of during the month.						

Table 3 - Consumer stocks, production, receipts, consumption and shipments of iron and steel scrap, by grades, October 1963, in short tons

Grades of scrap	Stocks at beginning of month ^{1/}	Home scrap produced	Purchased scrap received ^{2/}	Consumption	Shipments	Stocks at end of month
Steel scrap, excludes rerolling rails:						
Carbon-----	6,177,524	2,674,434	2,195,650	4,729,115	201,460	6,117,033
Alloy, excludes stainless-----	379,901	184,294	47,313	224,984	6,161	380,363
Stainless-----	128,916	41,354	23,302	63,174	2,076	128,322
Cast iron, includes borings-----	1,326,018	770,168	528,357	1,179,580	68,805	1,376,158
Total-----	8,012,359	3,670,250	2,794,622	6,196,853	278,502	8,001,876

^{1/} Revised.

^{2/} Purchased scrap received from dealers and all others.

Table 4 - Home scrap produced by source, by type of manufacturers, during October 1963, in short tons

	Source of scrap			Total
	Recirculating 1/	Obsolete 2/	Other, including slag	
Manufacturers of steel ingots and castings-----	2,696,860	208,572	105,057	3,010,489
Manufacturers of steel castings-----	122,626	275	31	122,932
Iron foundries and miscellaneous users-----	534,572	2,070	187	536,829
Total-----	3,354,058	210,917	105,275	3,670,250

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 October 1963, and consumption year to date, by grades, in short tons

Grades of scrap	Mfgs. of steel ingots and castings	Mfgs. of steel castings	Iron foundries and miscel- laneous users	Total consumption	Total consumption year to date
Steel scrap, excludes rerolling rails:					
Carbon-----	4,114,548	234,353	380,214	4,729,115	48,436,782
Alloy, excludes stainless-----	201,694	11,115	12,175	224,984	2,254,391
Stainless-----	57,530	2,393	3,251	63,174	602,174
Cast iron, includes borings-----	373,279	30,179	776,122	1,179,580	11,412,735
Total-----	4,747,051	278,040	1,171,762	6,196,853	62,706,082

Table 6 - Stocks of iron and steel scrap and pig iron on hand at major consuming industries' plants, at end of month, in short tons

Date	Scrap stocks			Pig iron stocks		
	Mfgs. of steel ingots and castings	Mfgs. of steel castings	Iron foundries and miscellaneous users	Mfgs. of steel ingots and castings	Iron foundries and miscellaneous users	Total
May 31, 1963	6,544,864	367,474	826,114	2,220,409	28,360	2,633,688
June 30, 1963	6,531,778	354,327	844,785	2,245,252	27,409	2,668,639
July 31, 1963	6,793,061	350,321	867,673	2,348,188	28,772	2,781,851
Aug. 31, 1963	6,917,675	341,414	837,828	2,390,642	27,893	2,803,604
Sept. 30, 1963	6,834,025	335,072	843,553	2,385,316	27,444	2,811,216
Oct. 31, 1963	6,801,303	344,427	856,146	2,380,230	26,135	2,812,965

Table 7 - Consumers receipts and total consumption of iron and steel scrap, by grades, during October 1963, in short tons

Grades of scrap (excludes reolling rails)	Receipts during the month			Total consumption
	From dealers	From others	Total	
Carbon steel:				
Low phosphorus plate and punchings-----	184,827	59,764	244,591	325,567
Cut structurals and plate-----	57,432	9,360	66,792	78,884
Steel car wheels-----	8,262	6,072	14,334	9,212
No. 1 heavy melting-----	352,824	113,130	465,954	2,064,619
No. 1 and electric furnace bundles-----	351,467	120,388	471,855	463,857
No. 2 and all other bundles-----	335,447	25,925	361,372	479,192
Turnings and borings-----	160,949	15,200	176,149	181,549
Slag scrap (Fe content)-----	11,783	24,119	35,902	154,360
All other carbon steel scrap-----	266,199	91,539	357,738	965,728
Alloy steel, excludes stainless-----	31,543	15,399	46,942	224,220
Stainless steel-----	20,796	2,506	23,302	63,173
Cast iron: Borings-----	64,736	36,964	101,700	109,456
All other cast iron scrap-----	371,699	56,292	427,991	1,077,036
Total-----	2,217,964	576,658	2,794,622	6,196,853

Table 8 - Consumers' production, receipts, consumption and stocks of iron and steel scrap, and consumption of pig iron in the United States, by districts and States, October 1953, in short tons.

District and State	Base scrap produced	Total purchased scrap received ^{1/}	Consumption by grades					Total scrap	Scrap stocks October 31	Pig iron consumption
			Carbon steel (excludes re-rolling mills)	Alloy steel (excludes stainless)	Stainless steel	Cast iron (includes borings)				
New England:										
Connecticut, Massachusetts, Rhode Island-----	18,056	26,302	14,979	1,111	2,310	22,447	40,847	42,850	10,718	
Maine, New Hampshire, Vermont-----	1,058	2,246	595	-	2,230	2,799	2,799	2,230	635	
Total-----	19,114	28,548	15,574	1,111	2,310	24,651	43,646	45,080	11,353	
Middle Atlantic:										
New Jersey-----	18,044	53,349	32,130	850	429	36,285	69,694	67,069	11,176	
New York-----	156,912	92,116	204,650	6,688	4,995	53,965	270,298	541,468	280,392	
Pennsylvania (East) ^{2/} -----	236,876	149,465	286,106	41,368	2,221	43,006	372,661	699,556	399,000	
Pennsylvania (West)-----	527,914	235,232	549,476	62,545	24,589	93,344	729,954	1,372,619	907,615	
Total-----	939,748	530,162	1,072,362	111,411	32,234	226,600	1,442,607	2,590,712	1,598,183	
East North Central:										
Illinois-----	337,797	366,292	531,837	13,727	2,501	134,002	682,067	853,168	372,947	
Indiana-----	441,075	300,584	640,197	6,282	1,639	59,730	708,448	790,149	770,156	
Michigan-----	345,227	328,188	405,323	3,983	10,115	218,704	637,704	421,237	547,077	
Ohio (East) ^{3/} -----	501,374	328,141	656,747	66,421	7,303	103,146	833,617	766,099	729,190	
Ohio (West)-----	181,768	90,123	117,477	1,544	74	61,665	180,760	251,358	175,137	
Wisconsin-----	52,664	40,307	42,590	404	310	41,258	84,562	52,782	16,389	
Total-----	1,859,905	1,454,035	2,394,771	92,361	21,942	618,084	3,127,158	3,134,793	2,610,836	
West North Central:										
Iowa-----	20,778	32,618	29,425	-	-	19,781	49,206	40,014	6,975	
Kansas and Nebraska-----	4,352	9,205	8,231	-	-	3,480	11,711	13,448	1,469	
Minnesota-----	19,591	32,637	25,535	833	81	12,451	38,266	74,583	37,306	
Missouri-----	22,463	59,990	72,394	-	-	13,037	86,045	185,359	3,812	
Total-----	67,184	134,450	135,585	833	81	48,749	185,248	313,404	48,562	
South Atlantic:										
Delaware-----	209,718	38,253	229,297	2,890	4/	27,144	263,882	332,587	406,598	
Florida and Georgia-----	6,257	33,879	46,959	-	-	3,212	50,171	49,686	1,231	
North Carolina and South Carolina-----	3,408	6,201	636	879	4/	9,314	11,100	7,259	4,285	
Virginia and West Virginia-----	76,402	91,993	147,244	-	4/	22,095	169,442	115,596	163,997	
Total-----	295,785	170,326	424,136	3,769	4/	61,765	494,595	505,068	576,111	
East South Central:										
Alabama-----	115,797	122,915	151,166	361	4/	61,054	212,592	319,876	260,788	
Kentucky, Mississippi, Tennessee-----	63,275	86,104	87,513	5,908	4/	37,955	132,469	225,393	74,150	
Total-----	179,072	209,019	238,679	6,269	4/	99,009	345,061	545,269	334,938	
West South Central:										
Arkansas, Louisiana, Oklahoma-----	5,261	12,256	13,209	7	-	3,497	16,713	31,688	663	
Texas-----	63,356	70,431	108,503	3,129	4/	36,704	148,345	183,774	85,440	
Total-----	68,617	82,687	121,712	3,136	4/	40,201	165,058	215,462	86,103	
Rocky Mountain:										
Arizona, Colorado, Idaho, Montana, Nevada, Utah-----	103,187	54,124	118,263	3,485	-	20,235	141,983	193,889	180,340	
Total-----	103,187	54,124	118,263	3,485	4/	20,235	141,983	193,889	180,340	
Pacific Coast:										
California and Hawaii-----	126,199	90,889	159,583	1,511	194	36,191	197,479	349,422	155,908	
Oregon and Washington-----	11,439	40,382	48,490	375	375	4,095	54,018	108,777	810	
Total-----	137,638	131,271	208,073	2,609	569	40,286	251,497	458,199	156,718	
U.S. Total-----	3,670,290	2,794,622	4,729,115	224,984	63,174	1,179,580	6,196,853	8,001,876	5,603,144	

^{1/} Includes 278,502 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 October totaled 6,196,853 short tons which was at an average daily rate of 199,898 tons or 10 percent greater than for the year 1962.

In October, open-hearth furnaces used 51 percent of the total scrap, and 77 percent of the pig iron, the same as in September; electric furnaces in October used 10 percent of the combined total of iron and steel scrap and pig iron charged to all furnaces, with open-hearth using 63 percent. During 1962, these percentages were 8 and 69 percent, respectively. Blast furnaces used 6 percent of the total scrap; the corresponding percentage for the year 1962 was 6.

During October, steelmaking furnaces (open-hearth, Bessemer, basic oxygen converter, and electric) accounted for 73 percent of the total scrap, and 90 percent of the pig iron consumed, compared with 74 and 91 percent, respectively, during September. In 1962, steelmaking furnaces used 75 percent of the total scrap, and 91 percent of the pig iron. The remainder was used in ironmaking furnaces, principally the cupola. Consumption by type of furnace during October is shown in the following table:

Table 9 - Consumption of iron and steel scrap and pig iron by type of manufacturers and furnaces during October 1963, in 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/--	254,817	629,326	-	-	-	-	254,817	629,326
Bessemer converters-----	10,073	73,306	1,171	-	150	20	11,394	73,326
Open-hearth furnaces-----	3,085,826	4,315,285	56,572	6,824	-	-	3,142,398	4,322,109
Electric furnaces 4/-----	937,519	15,408	166,186	3,036	15,536	2,796	1,119,241	21,240
Total steelmaking furnaces	4,288,235	5,033,325	223,929	9,860	15,686	2,816	4,527,850	5,046,001
Blast furnaces 5/-----	341,557	-	-	-	-	-	341,557	-
Cupola furnaces-----	103,482	28,222	28,151	983	1,011,580	311,234	1,143,213	340,439
Alf furnaces-----	3,526	1,049	25,960	3,396	96,093	10,820	125,579	15,265
Direct castings-----	-	173,755	-	-	-	27,684	-	201,439
Ferroalloys-----	-	-	-	-	36,121	-	36,121	-
Miscellaneous-----	10,251	-	-	-	12,282	-	22,533	-
Total Oct. 1963-----	4,747,051	5,236,351	278,040	14,239	1,171,762	352,554	6,196,853	5,603,144
Total Sept. 1963-----	4,307,535	4,893,974	247,117	13,802	1,018,064	316,483	5,572,716	5,224,259
Total Aug. 1963-----	4,224,262	4,944,146	261,726	14,667	938,873	311,488	5,424,861	5,270,301
Total July 1963-----	4,604,903	5,601,664	206,253	12,547	870,012	294,815	5,681,168	5,909,026
Total June 1963-----	5,566,896	6,631,354	264,246	15,025	1,035,944	343,561	6,867,086	6,989,940
Total May 1963-----	6,182,166	7,205,601	282,915	15,955	1,118,065	362,907	7,583,146	7,584,463

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 cupola and used in oxygen converter.

4/ Includes crucible furnaces.

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

Table 10 - Consumption of iron and steel scrap and pig iron in open-hearth furnaces in the United States, by districts and States, during October 1963, in short tons

District and State	Scrap	Pig iron	Total charge
New England and Middle Atlantic:			
New Jersey and Rhode Island-----	23,443	4,140	27,583
New York-----	177,142	252,413	429,555
Pennsylvania (East)-----	231,488	350,311	581,799
Pennsylvania (West)-----	427,638	705,974	1,133,612
Total-----	859,711	1,312,838	2,172,549
East North Central:			
Illinois-----	331,909	305,465	637,374
Indiana-----	620,138	734,358	1,354,496
Michigan and Wisconsin-----	144,767	201,016	345,783
Ohio (East)-----	420,514	573,743	994,257
Ohio (West)-----	88,436	158,491	246,927
Total-----	1,605,764	1,973,073	3,578,837
West North Central:			
Minnesota and Missouri-----	23,937	33,786	57,723
Total-----	23,937	33,786	57,723
South Atlantic:			
Delaware, Maryland, West Virginia-----	338,562	557,208	895,770
Total-----	338,562	557,208	895,770
East and West South Central:			
Alabama, Kentucky, Texas-----	166,578	280,375	446,953
Total-----	166,578	280,375	446,953
Rocky Mountain and Pacific Coast:			
California, Colorado, Utah-----	147,846	164,829	312,675
Total-----	147,846	164,829	312,675
United States, total-----	3,142,398	4,322,109	7,464,507

FOREIGN TRADE 1/

According to the Bureau of the Census, exports of iron and steel scrap totaled 551,643 short tons in October compared with 639,772 tons in September. During November 1963, the Office of Export Supply, U.S. Department of Commerce, issued scrap export licenses for 854,988 short tons. Exports of pig iron during October totaled 7,888 tons and 620 tons in September. Imports of scrap totaled 14,369 short tons in October compared with 12,968 tons in September. Of the scrap imported during October, 14,213 short tons came from Canada and 156 tons from other sources. Imports of pig iron totaled 109,374 short tons in October and 88,366 tons in September. In addition to the foregoing imports of pig iron during October, there were 1,031 tons of sponge iron, valued at \$142,167, imported, of which 454 tons came from Canada and 577 tons from Sweden.

Table 11 - Exports 2/ of iron and steel scrap from the United States, by countries
(U.S. Department of Commerce)

Country	October 1963		Jan. through October 1963	
	Short tons	Value	Short tons	Value
Argentina-----	-	-	10,180	\$311,878
Canada-----	64,384	\$1,730,355	452,233	12,253,386
France-----	25	875	6,475	184,303
Hong Kong-----	45	1,424	20,024	971,830
Italy-----	56,105	1,448,198	913,354	19,717,875
Japan-----	356,237	8,755,928	3,318,878	91,569,188
Korea-----	-	-	43,335	1,736,626
Mexico-----	60,354	1,795,396	373,441	10,430,583
Nicaragua-----	2,224	73,624	13,404	438,857
Spain-----	7,759	184,741	16,283	343,918
Taiwan-----	-	-	123,276	3,987,324
All others-----	4,510	171,932	85,669	2,270,511
Total-----	551,643	\$14,162,473	5,376,552	\$144,216,279

Table 12 - Exports 2/ of iron and steel scrap from the United States, by grades
(U.S. Department of Commerce)

Grades of scrap	October 1963		Jan. through October 1963	
	Short tons	Value	Short tons	Value
No. 1 heavy melting steel scrap-	203,903	\$4,871,388	2,076,096	\$60,177,256
No. 2 heavy melting steel scrap-	82,678	2,104,862	957,956	23,998,322
No. 1 baled sheet melting scrap-	40,417	1,068,100	340,833	9,072,644
No. 2 baled sheet melting scrap-	110,285	2,635,489	1,050,043	22,213,451
Borings, shovelings, & turnings-	20,746	389,546	177,607	3,790,661
Iron scrap-----	45,705	1,424,543	296,982	7,841,722
Rerolling material-----	4,164	194,690	134,094	6,293,488
All other scrap <u>3/</u> -----	43,745	1,473,855	342,941	10,828,735
Total-----	551,643	\$14,162,473	5,376,552	\$144,216,279

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.