



MINERAL INDUSTRY SURVEYS

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Iron and Steel Scrap
Monthly

IRON AND STEEL SCRAP IN OCTOBER 1967

The daily consumption rate of iron and steel scrap in October increased 3 percent from that in September but was 5 percent below that of October 1966, according to the Bureau of Mines, U.S. Department of the Interior.

The daily rate of both steel production and scrap consumption for steelmaking increased 4 percent in October. Scrap comprised 45 percent of the metallics used in steelmaking furnaces and 49 percent of the metallics used in ironmaking, steelmaking, and ferroalloy furnaces.

The monthend inventory decreased 2 percent from the previous month and equaled a 32-day supply at the daily consumption rate of 238,616 short tons.

Table 1.—Salient scrap and pig iron statistics, October 1967
(Short tons)

Grades of scrap	Stocks at beginning of month <u>r/</u> <u>1/</u>	Production	Receipts <u>2/</u>	Consumption	Shipments	Stocks at end of month
Steel scrap: <u>3/</u>						
Carbon-----	5,992,443	3,370,548	2,670,969	5,804,432	316,258	5,913,270
Alloy <u>4/</u> -----	322,171	209,854	41,388	252,017	13,076	308,320
Stainless-----	114,757	48,039	31,229	78,771	3,783	111,471
Cast iron <u>5/</u> ----	1,402,281	859,624	494,717	1,261,862	118,967	1,375,793
Total-----	7,831,652	4,488,065	3,238,303	7,397,082	452,084	7,708,854
Pig iron-----	3,073,675	7,524,971	588,787	7,630,830	596,161	2,960,442

r/ Revised.

1/ Pig iron stocks include both suppliers' and consumers' stocks.

2/ Receipts of scrap include purchased scrap received from dealers and all others.

3/ Excludes rerolling rails.

4/ Excludes stainless.

5/ Includes borings.

Table 2.—Production, receipts, consumption, and stocks of iron and steel scrap, and pig iron stocks, by type of manufacturer, October 1967

	Mfgs. of steel ingots and castings	Mfgs. of steel castings	Iron foundries and miscel- laneous users	Total	Total Year to date 1/
Production by source of scrap:					
Recirculating 2/-----	3,308,255	118,735	535,561	3,962,551	37,816,245
Obsolete 3/-----	296,835	665	11,021	308,521	2,508,974
Other, including slag-----	201,637	1,511	13,845	216,993	2,798,969
Total-----	3,806,727	120,911	560,427	4,488,065	43,124,188
Purchased scrap received (net) 4/-----	1,899,944	147,164	739,111	2,786,219	26,630,649
Consumption by grades, excludes rerolling rails:					
Carbon steel-----	5,100,657	232,795	470,980	5,804,432	54,659,690
Alloy steel, excludes stainless-----	226,207	11,909	13,901	252,017	2,466,213
Stainless steel-----	73,600	2,862	2,309	78,771	710,094
Cast iron, includes borings-----	435,166	27,383	799,313	1,261,862	12,351,991
Total-----	5,835,630	274,949	1,286,503	7,397,082	70,187,988
Stocks at end of month:					
Scrap-----	6,487,713	342,544	878,597	7,708,854	-----
Pig iron-----	2,534,096	25,945	400,401	2,960,442	-----

1/ Year-to-date total may not agree with a summation of prior monthly totals due to revisions received after publication of monthly data.

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

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

4/ Excludes 452,084 short tons of iron and steel scrap shipped, transferred, or otherwise disposed of during the month.

Table 3.— Consumers' receipts and total consumption of iron and steel scrap,
by grades, during October 1967
(Short tons)

Grades of scrap (Excludes rerolling rails)	Receipts during month			Total consumption
	From dealers	From others	Total	
Carbon steel:				
Low phosphorus plate and punchings----	223,951	81,035	304,986	354,845
Cut structurals and plate-----	82,043	1,407	83,450	90,766
Steel car wheels-----	10,975	121	11,096	12,767
No. 1 heavy melting-----	427,592	181,587	609,179	2,502,465
No. 1 and electric furnace bundles----	395,905	135,995	531,900	624,121
No. 2 and all other bundles-----	337,703	44,841	382,544	468,678
Turnings and borings-----	187,222	13,532	200,754	246,725
Slag scrap (Fe content)-----	18,014	57,049	75,063	259,473
All other carbon steel scrap-----	363,533	108,464	471,997	1,244,592
Alloy steel excludes stainless-----	26,541	14,847	41,388	252,017
Stainless steel-----	26,841	4,388	31,229	78,771
Cast iron: Borings-----	50,926	28,673	79,599	122,645
All other cast iron scrap-----	332,160	82,958	415,118	1,139,217
Total-----	2,483,406	754,897	3,238,303	7,397,082

Table 4.— 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 1967 (Short tons)

District and State	Home scrap produced	Total purchased scrap received 1/	Consumption by grades					Scrap stock	Pig iron consumption
			Carbon steel (excludes re-rolling mills)	Alloy steel (includes stainless)	Stainless steel	Cast iron (includes borings)	Total scrap		
New England:									
Connecticut, Massachusetts, Rhode Island, Vermont, Maine, New Hampshire, New York	18,216	22,062	15,223	1,193	2,576	19,083	38,075	43,196	9,551
Total	1,000	2,188	766	-----	-----	1,866	2,632	3,157	662
Middle Atlantic:									
New Jersey, New York, Pennsylvania (East) 2/, Pennsylvania (West)	18,553	45,864	35,153	769	365	29,182	65,469	89,669	7,668
Total	250,272	158,741	310,338	8,205	6,169	75,880	400,532	437,981	533,388
South Atlantic:	291,294	185,889	393,011	48,846	2,785	60,037	504,679	764,484	508,432
Total	706,463	383,786	736,316	73,442	35,494	145,099	990,351	844,674	1,334,661
East North Central:									
Illinois, Indiana, Michigan, Ohio (East) 3/, Ohio (West), Wisconsin	1,266,582	774,220	1,474,818	131,262	44,813	310,136	1,961,031	2,133,808	2,381,149
Total	387,680	394,130	604,931	14,582	4,600	116,900	741,013	1,010,674	565,804
West North Central:									
Iowa, Kansas and Nebraska, Minnesota, Missouri	636,217	239,594	718,289	12,906	2,435	82,527	816,097	901,712	1,089,303
Total	331,011	295,847	373,904	2,927	9,486	216,815	603,132	420,040	519,779
South Atlantic:									
Delaware, Maryland, Virginia and West Virginia	519,423	445,273	763,835	58,399	7,750	80,310	910,294	632,666	1,012,163
Total	196,311	96,386	166,313	425	74	77,140	243,952	194,979	221,054
West South Central:									
Alabama, Arkansas, Louisiana, Mississippi, Texas	50,514	46,802	48,885	405	235	37,604	87,219	51,682	18,244
Total	2,121,156	1,518,032	2,676,097	89,644	24,580	611,386	3,401,707	3,211,753	3,427,747
South Atlantic:									
Delaware, Maryland, Virginia and West Virginia	19,999	43,695	34,083	-----	W	16,234	50,380	52,917	5,251
Total	4,487	7,815	9,292	-----	-----	4,051	13,343	6,939	591
East South Central:									
Alabama, Arkansas, Louisiana, Mississippi, Tennessee	17,373	15,890	22,354	801	W	11,531	34,038	74,099	39,201
Total	21,594	44,005	75,711	-----	-----	13,843	90,322	96,221	2,514
South Atlantic:									
Delaware, Maryland, Virginia and West Virginia	63,453	111,365	141,440	801	W	45,659	188,083	220,176	47,557
Total	249,906	46,206	285,246	1,470	W	19,187	311,399	272,517	551,360
East South Central:									
Alabama, Arkansas, Louisiana, Mississippi, Tennessee	42,626	42,626	50,793	-----	W	3,134	53,927	47,021	1,308
Total	5,061	16,238	10,962	684	W	12,862	24,041	14,503	4,423
West South Central:									
Arkansas, Louisiana, Mississippi, Texas	85,690	119,412	181,162	-----	W	21,797	203,426	206,632	197,077
Total	350,587	224,472	588,163	2,154	W	56,980	592,793	540,673	754,168
East South Central:									
Alabama, Arkansas, Louisiana, Mississippi, Tennessee	165,409	123,684	220,036	7,452	W	60,996	288,499	338,921	324,394
Total	97,380	95,237	151,385	8,190	W	39,411	199,011	155,171	164,558
West South Central:									
Arkansas, Louisiana, Mississippi, Texas	262,789	218,921	371,421	15,642	W	100,407	487,510	494,092	488,952
Total	6,202	21,869	21,042	4,365	W	3,462	24,522	34,343	1,467
Rocky Mountain:									
Arizona, Colorado, Idaho, Montana, Nevada, Utah	146,398	121,976	195,842	-----	W	53,911	254,278	244,980	73,131
Total	152,600	143,845	216,884	4,365	W	57,373	278,800	279,323	74,538
Pacific Coast:									
California and Hawaii, Oregon and Washington	103,841	31,823	107,398	4,468	-----	12,419	124,285	345,631	232,670
Total	132,780	146,850	214,903	814	178	38,502	254,397	295,543	213,587
U.S. total	15,061	44,525	57,319	1,674	727	8,049	67,769	141,502	309
Total	147,841	191,375	272,222	2,488	905	46,551	322,166	437,045	213,896
U.S. total	4,488,065	3,238,303	5,804,432	252,017	78,771	1,261,862	7,397,082	7,708,854	7,630,830

W Withheld to avoid disclosing individual company confidential data; included in U.S. total.
1/ Includes 452,084 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.

CONSUMPTION OF IRON AND STEEL SCRAP AND PIG IRON

Consumption of scrap in October totaled 7,397,082 short tons which was at an average daily rate of 238,616 tons or 5 percent less than for the year 1966.

In October, open-hearth furnaces used 40 percent of the total scrap, and 54 percent of the pig iron compared with 39 and 54 percent, respectively, in September; electric furnaces in October used 11 percent of the combined total of iron and steel scrap and pig iron charged to all furnaces, with open-hearth using 47 percent. During 1966, these percentages were 10 and 52 percent, respectively. Blast furnaces used 4 percent of the total scrap; the corresponding percentage for the year 1966 was 6.

During October, steelmaking furnaces (open-hearth, Bessemer, basic oxygen converter, and electric) accounted for 77 percent of the total scrap, and 92 percent of the pig iron consumed, the same as September. In 1966, 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 5.--Consumption of iron and steel scrap, and pig iron, by type of manufacturers and furnaces during October 1967
(Short tons)

Type of furnace or equipment	Steel 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/}	1,187,091	2,852,039	-----	-----	-----	-----	1,187,091	2,852,039
Bessemer converters	-----	6,064	389	-----	5,176	982	5,565	6,046
Open-hearth furnaces	2,896,162	4,138,731	45,665	6,364	-----	-----	2,941,827	4,145,095
Electric furnaces ^{4/}	1,332,709	17,902	189,532	3,137	57,277	4,635	1,579,518	25,674
Total steelmaking furnaces	5,415,962	7,013,736	235,586	9,501	62,453	5,617	5,714,001	7,028,854
Blast furnaces ^{5/}	408,114	-----	-----	-----	-----	-----	408,114	-----
Cupola furnaces	6,709	13,763	33,300	1,179	1,094,910	238,106	1,134,919	253,048
Air furnaces	3,734	1,245	6,063	2,500	82,688	8,616	92,485	12,361
Direct castings	-----	272,035	-----	-----	-----	64,532	-----	336,567
Ferroalloy	-----	-----	-----	-----	40,915	-----	40,915	-----
Miscellaneous	1,111	-----	-----	-----	5,537	-----	6,648	-----
Total October 1967	5,835,630	7,300,779	274,949	13,180	1,286,503	316,871	7,397,082	7,630,830
Total year to date ^{6/}	54,940,131	68,138,766	2,973,598	140,275	12,274,259	3,103,250	70,187,988	71,382,291

^{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 converters.

^{4/} Includes crucible furnaces.

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

^{6/} Year-to-date total may not agree with a summation of prior monthly totals due to revisions received after publication of monthly data.

Table 6.—Consumption of iron and steel scrap and pig iron in open-hearth furnaces in the United States, by districts and States, during October 1967
(Short tons)

District and State	Scrap	Pig iron	Total charge
New England and Middle Atlantic:			
New York and Rhode Island-----	167,304	178,941	346,245
Pennsylvania (East)-----	290,045	436,599	726,644
Pennsylvania (West)-----	465,837	829,885	1,295,722
Total-----	923,186	1,445,425	2,368,611
East North Central:			
Illinois-----	228,391	283,111	511,502
Indiana-----	503,446	566,724	1,070,170
Michigan and Wisconsin-----	94,492	93,458	187,950
Ohio (East)-----	315,263	428,496	743,759
Ohio (West)-----	106,339	210,209	316,548
Total-----	1,247,931	1,581,998	2,829,929
West North Central:			
Minnesota and Missouri-----	19,594	35,695	55,289
South Atlantic:			
Delaware, Maryland, West Virginia-----	344,224	556,569	900,793
East and West South Central:			
Alabama, Kentucky, Texas-----	230,922	279,331	510,253
Rocky Mountain and Pacific Coast:			
California, Colorado, Utah-----	175,970	246,077	422,047
U.S. total-----	2,941,827	4,145,095	7,086,922

FOREIGN TRADE

Exports of iron and steel scrap totaled 605,933 short tons in October compared with 744,344 tons in September. Exports of pig iron during October totaled 11 tons and 148 tons in September. Imports of scrap totaled 19,256 short tons in October compared with 19,809 tons in September. Of the scrap imported during October, 18,915 short tons came from Canada and 341 tons from other sources. Imports of pig iron totaled 54,086 short tons in October and 19,728 tons in September. In addition to the foregoing imports of pig iron during October, there were 610 tons of sponge iron, valued at \$70,626, imported, all from Canada.

Table 7.—U.S. exports of iron and steel scrap, by countries

Country	October 1967		Jan. through Oct. 1967	
	Short tons	Value	Short tons	Value
Belgium and Luxembourg-----	162	\$15,644	1,795	\$139,813
Canada-----	51,740	1,258,505	439,523	12,150,330
Hong Kong-----	4	2,375	309	158,979
Italy-----	22,528	342,771	156,079	3,670,429
Japan-----	446,560	15,569,767	4,887,266	158,160,514
Korea-----	14,034	450,429	291,737	10,211,492
Mexico-----	50,589	1,847,073	648,569	22,296,581
Sweden-----	1,552	268,706	18,122	2,822,777
Taiwan-----	10,096	250,290	57,564	2,235,358
Turkey-----	-----	-----	20,713	537,749
United Kingdom-----	892	20,272	1,054	57,624
All others-----	7,776	298,545	178,985	5,181,924
Total-----	605,933	20,324,377	6,701,716	217,623,570

Table 8.—U.S. exports of iron and steel scrap, by grades

Grades of scrap	October 1967		Jan. through Oct. 1967	
	Short tons	Value	Short tons	Value
No. 1 heavy melting steel scrap----	176,449	\$6,009,539	2,525,626	\$81,706,705
No. 2 heavy melting steel scrap----	66,825	2,019,355	1,044,380	30,052,687
No. 1 bundles-----	32,789	1,031,748	324,298	10,035,280
No. 2 bundles-----	111,130	2,403,326	1,362,299	30,347,394
Borings, shovelings, and turnings--	51,977	1,137,369	405,298	8,017,121
Iron scrap-----	61,641	1,709,752	407,803	11,641,960
Stainless steel scrap-----	8,789	2,990,466	100,880	27,772,545
All other steel scrap <u>1</u> /-----	96,333	3,022,822	531,132	18,049,878
Total-----	605,933	20,324,377	6,701,716	217,623,570

1/ Includes tin plate and terne plate.