

Mineral Industry Surveys

For information, contact:

Cris Candice Tuck, Iron and Steel Scrap Commodity Specialist National Minerals Information Center

Telephone: (703) 648-4912 Email: ctuck@usgs.gov Tiffany J. Lin (Data)
Telephone: (703) 648-7963
Email: tjlin@usgs.gov

Internet: https://www.usgs.gov/centers/national-minerals-

information-center/mineral-industry-surveys

IRON AND STEEL SCRAP IN JANUARY 2023

In January 2023, purchased steel scrap receipts decreased by 16%, recirculating scrap production increased by 4%, and iron and steel scrap consumption decreased by 15% compared with those in December 2022. Stocks of purchased and home scrap were essentially unchanged from those at the end of December 2022. In January 2023, pig iron production increased by 8% and pig iron consumption increased by 7% from that in December 2022. Direct-reduced iron receipts decreased by 8% and consumption increased by 8% from those in December 2022 (table 1, fig. 1).

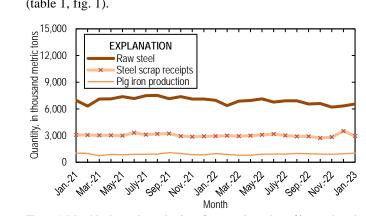


Figure 1. Monthly domestic production of raw steel, receipts of iron and steel scrap, and production of pig iron from January 2021 through January 2023. Sources: U.S. Geological Survey and American Iron and Steel Institute.

Exports of iron and steel scrap in January 2023 decreased by 16% from those in December 2022 (fig. 2, table 4). In January 2023, Mexico was the leading destination for exports, accounting for 24% of the total tonnage, followed by Turkey (23%) and India (12%) (table 4). New York City, NY, was the leading U.S. Customs district by tonnage of exports, accounting for 17% of the total, followed by Philadelphia, PA, (11%), and San Francisco, CA, (9%) (table 5).

Imports of iron and steel scrap in January 2023 increased by 8% compared with those in December 2022 (fig. 2, table 7). Canada was the leading country of origin, accounting for 80% of the total tonnage of imports, followed by Mexico (11%) and New Zealand (7%) (table 7).

Detroit, MI, was the leading U.S. Customs district by tonnage of imports, accounting for 50% of the total, followed by Seattle,

WA, (16%) and New Orleans, LA, and Laredo, TX, (8% each) (table 8)

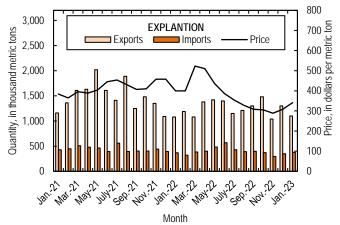


Figure 2. Monthly domestic imports and exports of iron and steel scrap and price for No. 1 heavy melting steel scrap from January 2021 through January 2023. Sources: U.S. Census Bureau and Fastmarkets AMM.

The daily average domestic raw steel production for January, as calculated from the American Iron and Steel Institute's monthly production data, was 211,000 metric tons, a 4% increase from than that in December 2022 and a 6% decrease from that in January 2022. Raw steel production capability utilization was 73.0% in January 2023, up from 70.6% in December 2022 and down from 79.8% in January 2022 (table 10).

Industry News

Boston Metal (Massachusetts) announced a \$120 million investment from steelmaker ArcelorMittal S.A. to expand production of a zero-emissions pilot plant based in Woburn, Massachusetts and launch a commercial production facility in Brazil. The company uses an electro-chemical process to remove oxygen from ferrous oxides to create a high purity liquid metal without generating carbon dioxide (Davey, 2023).

Reference Cited

Davey, Ed, 2023, US company gets \$120 million boot to make 'green steel': AP News [New York, NY], January 26. (Accessed May 17, 2023, at

https://apnews.com/article/production-facilities-climate-and-environment-business-d095684168e9f6a2634ee9316007f994.)

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TABLE 1 IRON AND STEEL SCRAP, PIG IRON, AND DIRECT-REDUCED IRON STATISTICS FOR STEEL PRODUCERS, IN JANUARY 2023 $^{\rm 1,2}$

	January
Scrap:	
Receipts:	
From outside sources	2,950
From other own company plants	166
Production:	
Recirculating scrap	349
Obsolete scrap	10
Consumption (by type of furnace):	· · · · · · · · · · · · · · · · · · ·
Blast furnace	118
Basic oxygen process	292
Electric furnace	3,030
Other	
Total consumption	3,440
Shipments	43
Stocks, end of period	3,820
Pig iron (includes hot metal):	
Receipts	119
Production	1,030
Consumption	1,170
Stocks, end of period	679
Direct-reduced iron: ³	
Receipts	201
Consumption	219
Stocks, end of period	320

⁻⁻ Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes manufacturers of raw steel that also produce steel castings.

 $^{^3}$ Includes direct-reduced iron, hot-briquetted iron, and iron carbide. Domestic production data are included in "Receipts."

 ${\bf TABLE~2}$ RECEIPTS FROM OUTSIDE SOURCES, PRODUCTION, CONSUMPTION, AND STOCKS OF IRON AND STEEL SCRAP, BY GRADE, FOR STEEL PRODUCERS, IN JANUARY 2023 $^{1.2}$

		January		
	Receipts of scrap	Production of		Ending
Item	from outside sources	recirculating scrap	Consumption ³	stocks
Carbon steel:			•	
Low-phosphorus plate and				
punchings	14	W	16	W
Cut structural and plate	256	30	291	326
No. 1 heavy melting steel	269	58	329	181
No. 2 heavy melting steel	332	26	366	238
No. 1 and electric furnace bundles	109		108	110
No. 2 and all other bundles	70	W	70	41
Electric furnace 1 foot and	•			
under (not bundles)	W		W	W
Railroad rails	18	7	19	97
Turnings and borings	134	W	138	204
Slag scrap	27	29	62	40
Shredded and fragmentized	879	W	966	1,500
No. 1 busheling	366	26	396	346
Steel cans (post consumer)	W	W	10	293
All other carbon steel scrap	180	120	311	226
Stainless steel scrap	42	19	62	32
Alloy steel scrap	23	8	31	50
Ingot mold and stool scrap	W	W	6	5
Machinery and cupola cast iron	4		W	W
Cast iron borings	12		12	W
Other iron scrap	54	8	50	61
Other mixed scrap	146	12	191	46
Total	2,950	349	3,440	3,820

W Withheld to avoid disclosing company proprietary data; included in "Total." -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes manufacturers of raw steel that also produce steel castings.

³Includes recirculating scrap.

TABLE 3 RECEIPTS FROM OUTSIDE SOURCES, PRODUCTION, AND CONSUMPTION OF IRON AND STEEL SCRAP, BY REGION AND STATE, FOR STEEL PRODUCERS, IN JANUARY 2023 $^{\!1,2}$

	January				
	Receipts of scrap from brokers, dealers, and other	Production of home scrap (recirculating scrap resulting from	Consumption of purchased and home scrap ³		
Region and State	outside sources	current operations)			
Mid-Atlantic and New England:		•			
New Jersey, New York, Pennsylvania	177	38	248		
North Central:	- '				
Illinois and Indiana	356	76	460		
Iowa, Nebraska, Wisconsin	219	W	238		
Michigan	38	W	43		
Ohio	401	100	482		
Total	1,010	187	1,220		
South Atlantic:					
Georgia, North Carolina, South Carolina	270	W	288		
Virginia and West Virginia	87	W	112		
Total	359	W	400		
South Central:					
Alabama, Kentucky, Tennessee	665	49	710		
Arkansas and Texas	445	38	540		
Total	1,110	87	1,250		
Mountain and Pacific:			_		
California, Colorado, Oregon, Utah, Washington	292	18	322		
Grand total	2,950	349	3,440		

W Withheld to avoid disclosing company proprietary data; included in "Total."

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes manufacturers of raw steel that also produce steel castings.

³Includes recirculating scrap.

TABLE 4 ${\hbox{U.S. EXPORTS OF IRON AND STEEL SCRAP} } \\ {\hbox{BY SELECTED COUNTRY OR LOCALITY, IN JANUARY 2023}^{1,2} \\ {\hbox{}} \\ {\hbox{AND STEEL SCRAP}} \\ {\hbox{AND STEEL$

(Thousand metric tons and thousand dollars)

	Janu	ary
Country or locality	Quantity	Value
Bangladesh	30	10,900
Belgium	2	2,940
Canada	42	15,800
China	2	3,280
Greece	29	11,600
India	132	67,500
Korea, Republic of	33	13,700
Malaysia	10	11,300
Mexico	260	59,500
Morocco	17	6,170
Netherlands	2	3,980
Pakistan	23	16,600
Peru	62	24,000
Taiwan	87	36,500
Thailand	16	14,800
Turkey	247	84,300
Vietnam	76	28,300
Other ³	25	8,180
Total	1,100	419,000

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes tinplate and terneplate; excludes used rails for rerolling and other uses and ships, boats, and other vessels for scrapping. Export valuation is on a free-alongside-ship basis.

³Includes countries with quantities of less than 500 metric tons.

${\it TABLE 5} \\ {\it U.S. EXPORTS OF IRON AND STEEL SCRAP BY REGION AND SELECTED CUSTOMS DISTRICT, IN JANUARY 2023^{1,2}}$

(Thousand metric tons and thousand dollars)

		January		
Customs district	Quantity	Value		
Baltimore, MD	10	6,710		
Boston, MA	69	26,300		
Buffalo, NY	5	4,120		
Charleston, SC	4	3,260		
Columbia–Snake, OR	48	18,500		
Detroit, MI	19	8,230		
El Paso, TX	83	54		
Honolulu, HI, and Anchorage, AK	3	1,130		
Houston-Galveston, TX	15	12,700		
Laredo, TX	80	23,400		
Los Angeles, CA	78	36,000		
Miami, FL	21	9,330		
Mobile, AL	2	2,100		
New Orleans, LA	1	1,290		
New York City, NY	189	78,800		
Norfolk, VA	31	21,600		
Ogdensburg, NY	1	188		
Pembina, ND	8	2,960		
Philadelphia, PA	118	41,400		
Portland, ME	31	11,900		
Providence, RI	53	18,200		
San Diego, CA	17	5,650		
San Francisco, CA	97	36,300		
San Juan, PR	6	2,070		
Savannah, GA	14	11,500		
Seattle, WA	31	13,800		
St. Albans, VT	1	224		
Tampa, FL	52	19,600		
Other ³	7	2,040		
Total	1,090	419,000		

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes tinplate and terneplate; excludes used rails for rerolling and other uses and ships, boats, and other vessels for scrapping. Export valuation is on a free-alongside-ship basis.

³Includes countries with quantities of less than 500 metric tons.

TABLE 6 U.S. EXPORTS OF IRON AND STEEL SCRAP AND OTHER FERROUS PRODUCTS BY GRADE, IN JANUARY $2023^{1,2}$

(Thousand metric tons and thousand dollars)

	Janu	ary
Item	Quantity	Value
No. 1 heavy melting steel	463	180,000
No. 2 heavy melting steel	50	20,800
No. 1 bundles	4	1,610
No. 2 bundles		
Shredded steel scrap	290	107,000
Borings, shovelings, and turnings	4	1,060
Cut plate and structural	53	20,100
Tinned iron or steel	7	972
Remelting scrap ingots	(3)	121
Cast iron	122	13,700
Other iron and steel	3	735
Total carbon steel and cast iron	996	346,000
Stainless steel	48	40,000
Other alloy steel	51	33,600
Total stainless and alloy steel	99	73,600
Total carbon, stainless, alloy steel, and cast iron	1,100	419,000
Ships, boats, and other vessels for		
breaking up (for scrapping)	(3)	24
Used rails	(3)	452
Used rails for rerolling and other uses	1	1,470
Total scrap exports	1,100	421,000
Exports of manufactured ferrous products:	<u> </u>	
Pig iron < or = 0.5% phosphorus		1,420
Pig iron > or = 0.5% phosphorus		
Pig iron alloy		
Total pig iron	2	1,420
Direct-reduced iron (DRI)	(3)	13
Granules for abrasive cleaning and other uses		2,760
Powders of alloy steel	1	5,710
Other ferrous powders		5,710
Total DRI, granules, powders	8	14,200
Grand total	1,110	437,000

⁻⁻ Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown. ²Export valuation is on a free-alongside-ship basis.

³Less than ½ unit.

TABLE 7 U.S. IMPORTS FOR CONSUMPTION OF IRON AND STEEL SCRAP BY SELECTED COUNTRY OR LOCALITY, IN JANUARY $2023^{1,2}$

(Thousand metric tons and thousand dollars)

	Janu	ary
Country or locality	Quantity	Value
Canada	300	118,000
Cayman Islands	1	92
China	(3)	140
Colombia	(3)	120
Germany	1	107
Japan	3	62
Mexico	43	19,600
New Zealand	27	12,100
Other ⁴	1	706
Total	377	151,000

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes tinplate and terneplate; excludes used rails for rerolling and other uses and ships, boats, and other vessels for scrapping. Import valuation is on a Customs basis.

³Less than ½ unit.

⁴Includes countries with quantities of less than 500 metric tons.

TABLE 8 $\label{table 8}$ U.S. IMPORTS FOR CONSUMPTION OF IRON AND STEEL SCRAP BY SELECTED CUSTOMS DISTRICT, IN JANUARY $2023^{1.2}$

(Thousand metric tons and thousand dollars)

	January	
Customs district	Quantity	Value
Baltimore, MD	(3)	50
Buffalo, NY	21	11,200
Charleston, SC	1	93
Chicago, IL	(3)	213
Cleveland, OH	(3)	10
Detroit, MI	188	77,500
Duluth, MN	6	1,910
El Paso, TX	5	2,170
Great Falls, MT		588
Houston-Galveston, TX	(3)	132
Laredo, TX	28	14,000
Miami, FL	2	376
Mobile, AL	2	1,130
New Orleans, LA	30	12,100
New York City, NY	(3)	31
Nogales, AZ	3	1,040
Ogdensburg, NY	1	460
Pembina, ND	23	8,510
San Diego, CA		1,380
Seattle, WA	60	17,600
St. Albans, VT	(3)	24
Other	(3)	104
Total	377	151,000

 $[\]overline{\ }$ Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes tinplate and terneplate; excludes used rails for rerolling and other uses and ships, boats and other vessels for scrapping. Import valuation is on a Customs basis.

³Less than ½ unit.

${\it TABLE~9}$ U.S. IMPORTS OF IRON AND STEEL SCRAP AND OTHER FERROUS PRODUCTS BY GRADE, IN JANUARY $2023^{1,2}$

(Thousand metric tons and thousand dollars)

	Januar	ry	
Item	Quantity	Value	
No. 1 heavy melting steel	18	5,780	
No. 2 heavy melting steel	10	2,790	
No. 1 bundles	- 76	31,000	
No. 2 bundles	7	2,750	
Shredded steel scrap	61	24,600	
Borings, shovelings, and turnings	4	847	
Cut plate and structural	15	4,930	
Tinned iron or steel	21	7,890	
Remelting scrap ingots	(3)	189	
Cast iron	36	15,200	
Other iron and steel	70	23,200	
Total carbon steel and cast iron	319	119,000	
Stainless steel	16	17,600	
Other alloy steel	41	14,000	
Total stainless and alloy steel	57	31,600	
Total carbon, stainless, alloy steel, and cast iron	377	151,000	
Ships, boats, and other vessels for			
breaking up (for scrapping)			
Used rails	(3)	34	
Used rails, nonalloyed			
Used rails other	(3)	175	
Total scrap imports	377	151,000	
Imports of manufactured ferrous products:			
Pig iron > or = 0.5% phosphorus	297	183,000	
Pig Iron < or =0.5% phosphorus			
Alloy pig iron	(3)	23	
Total pig iron	297	183,000	
Direct-reduced iron (DRI)	219	79,800	
Spongy iron products, not DRI	(3)	235	
Granules for abrasive cleaning and other uses		2,910	
Powders of alloy steel		10,400	
Other ferrous powders	4	8,520	
Total DRI, granules, powders	229	102,000	
Grand total	904	436,000	
Zero.			

⁻⁻ Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

 $^{^2 \}mbox{Import valuation}$ is on a Customs basis.

³Less than ½ unit.

TABLE 10 U.S. RAW STEEL PRODUCTION, RAW STEEL CAPABILITY UTILIZATION, AND CONTINUOUS CAST STEEL PRODUCTION1

	Raw steel p	roduction,	Raw steel o	capability	Continuous	cast steel
	thousand m	etric tons	utilization, percent		production, percent	
		Year		Year		Year
Period	Monthly	to date ²	Monthly	to date ²	Monthly	to date ²
2022:						
January	6,970	6,970	79.8	79.8	99.8	99.8
February	6,370	13,300	80.8	80.3	99.7	99.8
March	6,870	20,200	78.7	79.7	99.6	99.7
April	6,950	27,200	81.9	80.3	99.7	99.7
May	7,120	34,300	81.1	80.5	99.7	99.7
June	6,760	41,000	79.6	80.3	99.7	99.7
July	6,910	48,000	78.1	80.0	99.7	99.7
August	6,910	54,900	78.0	79.7	99.7	99.7
September	6,550	61,400	76.4	79.4	99.7	99.7
October	6,610	68,000	73.7	78.8	99.7	99.7
November	6,200	74,200	71.5	78.1	99.6	99.7
December	6,330	80,500	70.6	77.5	99.7	99.7
2023, January	6,550	6,550	73.0	73.0	99.6	99.6

¹Data are rounded to no more than three significant digits.
²May include revisions to previously published data.

Source: American Iron and Steel Institute.

TABLE 11 COMPOSITE PRICES FOR STEEL SCRAP AND PIG IRON

	Steel Sc	rap ¹	Pig Iro	on ²
Period	\$/lt	\$/t	\$/lt	\$/t
2022:				
January	406.67	400.25	517.30	509.13
February	406.67	400.25	517.30	509.13
March	531.67	523.27	513.66	505.55
April	518.33	510.14	649.12	638.87
May	443.33	436.33	566.12	557.18
June	393.33	387.12	753.47	741.57
July	360.00	354.31	742.36	730.64
August	333.33	328.07	974.43	959.04
September	313.33	308.38	618.84	609.07
October	310.00	305.11	924.99	910.38
November	293.33	288.70	511.23	503.16
December	313.33	308.38	662.89	652.42
Average, January–December	313.33	308.38	665.66	655.15
2023, January	346.67	341.20	560.18	551.33

Note: Long tons = lt; metric tons = t.

¹Prices are for No. 1 heavy melting steel scrap. Source: Fastmarkets-AMM.
²Prices are Brazilian basic pig iron, free on board, New Orleans, LA. Source: U.S. Census Bureau.

 ${\it TABLE~12} \\ {\it U.S.~IRON~AND~STEEL~SCRAP~RECEIPTS~FROM~OUTSIDE~SOURCES,~PRODUCTION~OF~PIG~IRON,~} \\ {\it AND~DIRECT-REDUCED~IRON~(DRI)~CONSUMPTION}^1$

	Receipts	of scrap				
	from outside sources		Pig iron production		DRI cons	umption
		Year		Year		Year
Period	Monthly	to date	Monthly	to date	Monthly	to date
2022: ²						
January	2,940	2,940	970	970	223	223
February	2,980	5,920	877	1,850	248	471
March	2,930	8,850	802	2,650	264	735
April	2,980	11,800	802	3,450	265	1,000
May	3,080	14,900	903	4,350	291	1,290
June	3,170	18,100	920	5,270	309	1,600
July	2,990	21,100	922	6,200	262	1,860
August	2,900	24,000	988	7,180	264	2,130
September	2,910	26,900	950	8,130	187	2,310
October	2,720	29,600	918	9,050	190	2,500
November	2,830	32,400	898	9,950	184	2,690
December	3,510	35,900	956	10,900	202	2,890
2023, January	2,950	2,950	1,030	1,030	219	219

¹Data are rounded to no more than three significant digits.

²May include revisions to previously published data.