

Mineral Industry Surveys

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IRON AND STEEL SCRAP IN SEPTEMBER 2023

In September 2023, purchased steel scrap receipts increased slightly, recirculating scrap production decreased by 5%, and iron and steel scrap consumption decreased slightly compared with those in August. Stocks of purchased and home scrap increased slightly from those at the end of August. In September 2023, pig iron production decreased by 16% and consumption decreased 14% from that in August. Direct-reduced iron receipts decreased slightly and consumption increased by 11% from that in August (table 1, fig. 1).

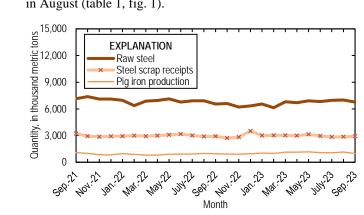


Figure 1. Monthly domestic production of raw steel, receipts of iron and steel scrap, and production of pig iron from September 2021 through September 2023. Sources: U.S. Geological Survey and American Iron and Steel Institute.

Exports of iron and steel scrap in September 2023 decreased by 19% from those in August (fig. 2, table 4). In September 2023, Turkey was the leading destination for exports, accounting for 19% of the total tonnage, followed by Bangladesh (14%) and India (14%) (table 4). Los Angeles, CA, and New York City, NY, were the leading U.S. Customs districts by tonnage of exports, accounting for 18% of the total, each, followed by San Francisco, CA, (12%) and Laredo, TX (7%) (table 5).

Imports of iron and steel scrap in September 2023 were essentially unchanged compared with those in August (fig. 2, table 7). Canada was the leading country of origin, accounting for 70% of the total tonnage of imports, followed by Mexico (21%) (table 7). Detroit, MI, was the leading U.S. Customs

district by tonnage of imports, accounting for 39% of the total, followed by Laredo, TX, and Seattle, WA, (16% each) (table 8).

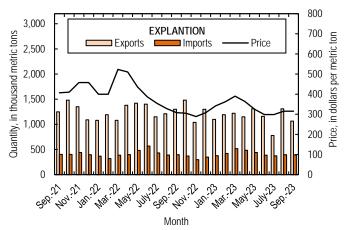


Figure 2. Monthly domestic imports and exports of iron and steel scrap and price for No. 1 heavy melting steel scrap from September 2021 through September 2023. Sources: U.S. Census Bureau and Fastmarkets AMM

The daily average domestic raw steel production for September, as calculated from the American Iron and Steel Institute's monthly production data, was 225,000 metric tons. unchanged from that in August and a 3% increase from September 2022. Raw steel production capability utilization was 76.4% in September 2023, down from 76.6% in August and the same as that in September 2022 (table 10).

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

	September	January–September ³
Scrap:		
Receipts:		
From outside sources	2,910	26,700
From other own company plants	214	1,680
Production:		
Recirculating scrap	378	3,040
Obsolete scrap	2	26
Consumption (by type of furnace):		
Blast furnace	108	1,140
Basic oxygen process	236	2,450
Electric furnace	3,080	27,200
Other	<u></u>	110
Total consumption	3,420	30,900
Shipments	20	209
Stocks, end of period	3,850	3,850
Pig iron (includes hot metal):		
Receipts	182	1,330
Production	969	9,740
Consumption	1,140	11,100
Stocks, end of period	538	538
Direct-reduced iron: ⁴		
Receipts	222	1,970
Consumption	233	1,910
Stocks, end of period	395	3,180

⁻⁻ 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.

³May include revisions to previously published data.

 $^{^4}$ Includes direct-reduced iron, hot-briquetted iron, and iron carbide. Domestic production data are included in "Receipts."

 $TABLE\ 2$ RECEIPTS FROM OUTSIDE SOURCES, PRODUCTION, CONSUMPTION, AND STOCKS OF IRON AND STEEL SCRAP, BY GRADE, FOR STEEL PRODUCERS, IN SEPTEMBER 2023 1,2

		September				January–September ³	
	Receipts of scrap	Production of		Ending	Receipts of scrap	Production of	
Item	from outside sources	recirculating scrap	Consumption ⁴	stocks	from outside sources	recirculating scrap	Consumption ⁴
Carbon steel:			·				·
Low-phosphorus plate and punchings		W	16	W	124	W	14
Cut structural and plate	249	29	291	337	2,310	245	2,61
No. 1 heavy melting steel	276	53	339	177	2,630	444	2,98
No. 2 heavy melting steel	326	32	384	235	2,950	254	3,41
No. 1 and electric furnace bundles	103		110	115	1,010		1,03
No. 2 and all other bundles	58	W	56	32	567	W	594
Electric furnace 1 foot and under (not bundles)	W		W	W	W		V
Railroad rails		W	18	98	153	W	15
Turnings and borings	132	W	142	196	1,210	W	1,26
Slag scrap	27	22	48	51	248	225	49
Shredded and fragmentized	895	W	955	1,500	7,990	W	8,64
No. 1 busheling	352	24	366	344	3,210	207	3,44
Steel cans scrap (post consumer)	W	W	W	293	W	W	V
All other carbon steel scrap	156	124	276	221	1,500	975	2,57
Stainless steel scrap	42	19	75	45	376	170	57
Alloy steel scrap	23	8	31	49	211	74	28
Ingot mold and stool scrap	W	W	W	W	W	W	V
Machinery and cupola cast iron	3		W	W	W		V
Cast iron borings	11		12	W	103	W	10
Other iron scrap	56	10	62	42	556	99	60
Other mixed scrap	153	W	218	88	1,380	96	1,84
Total	2,910	378	3,420	3,850	26,700	3,040	30,90

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.

³May include revisions to previously published data.

⁴Includes recirculating scrap.

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

		September		Ja	nuary-September ³	
	Receipts of scrap	Production of		Receipts of scrap	Production of	
Region and State	from outside sources	recirculating scrap	Consumption ⁴	from outside sources	recirculating scrap	Consumption ⁴
Mid-Atlantic and New England:			•			<u> </u>
New Jersey, New York, Pennsylvania	186	38	274	1,690	343	2,330
North Central:						
Illinois and Indiana	344	78	456	3,100	692	4,040
Iowa, Nebraska, Wisconsin	200	W	213	2,020	W	1,960
Michigan	32	W	32	284	\mathbf{W}	286
Ohio	385	92	449	3,620	750	4,340
Total	961	173	1,150	9,020	1,500	10,600
South Atlantic:						
Georgia, North Carolina, South Carolina	272	W	267	2,440	W	2,570
Virginia, West Virginia	82	W	144	885	W	1,180
Total	355	W	411	3,320	W	3,750
South Central:						
Alabama, Kentucky, Mississippi, Tennessee	659	45	713	5,850	399	6,470
Arkansas and Texas	453	41	539	4,140	346	4,760
Total	1,110	87	1,250	9,990	746	11,200
Mountain and Pacific:						
California, Colorado, Oregon, Utah, Washington	295	W	334	2,660	W	2,980
Grand total	2,910	378	3,420	26,700	3,040	30,900

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.

³May include revisions to previously published data.

⁴Includes recirculating scrap.

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

(Thousand metric tons and thousand dollars)

	September		January-Sep	otember ³
Country or locality	Quantity	Value	Quantity	Value
Bangladesh	151	55,300	1,040	420,000
Belgium	1	390	11	10,800
Canada	39	13,700	389	145,000
China	1	3,010	14	30,500
Ecuador	(4)	100	100	41,400
Greece	(4)	36	93	34,200
India	144	83,600	976	598,000
Italy	36	16,300	211	86,700
Korea, Republic of	37	15,500	265	123,000
Malaysia	10	6,890	108	110,000
Mexico	135	51,200	1,640	512,000
Morocco	45	16,600	86	32,300
Netherlands	6	11,100	12	18,300
Pakistan	47	30,100	235	170,000
Peru	35	13,300	386	153,000
Taiwan	92	35,400	816	338,000
Thailand	16	15,700	220	136,000
Turkey	206	74,000	2,780	1,080,000
Vietnam	55	20,000	682	273,000
Other ⁵	6	6,710	211	86,500
Total	1,060	469,000	10,300	4,400,000

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.

³May include revisions to previously published data.

⁴Less than ½ unit.

 $^{^{5}}$ Includes countries with quantities of less than 500 metric tons for the current year.

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

(Thousand metric tons and thousand dollars)

	Septem	ber	January-Sep	January–September ³		
Customs district	Quantity	Value	Quantity	Value		
Baltimore, MD	36	16,700	346	167,000		
Boston, MA	65	24,700	714	286,000		
Buffalo, NY	12	5,570	88	45,900		
Charleston, SC	5	4,550	44	36,400		
Columbia-Snake, OR	53	20,300	522	223,000		
Dallas-Forth Worth, TX			(4)	4		
Detroit, MI	10	4,490	134	56,900		
Duluth, MN	1	809	4	3,150		
El Paso, TX	(4)	145	86	1,510		
Honolulu, HI, and Anchorage, AK	2	1,040	89	34,900		
Houston-Galveston, TX	33	19,700	235	152,000		
Laredo, TX	73	28,800	826	247,000		
Los Angeles, CA	195	80,300	1,320	598,000		
Miami, FL	25	10,700	206	101,000		
Mobile, AL	(4)	345	6	6,220		
New Orleans, LA	4	825	24	7,270		
New York City, NY	194	85,600	1,720	800,000		
Norfolk, VA	37	33,500	315	213,000		
Ogdensburg, NY	2	572	13	3,780		
Pembina, ND	4	1,310	161	24,000		
Philadelphia, PA	33	11,500	568	216,000		
Portland, ME	3	608	72	26,400		
Providence, RI	16	4,970	363	138,000		
San Diego, CA	21	7,070	199	60,400		
San Francisco, CA	124	46,800	1,090	442,000		
San Juan, PR	11	4,310	180	60,800		
Savannah, GA	18	12,400	132	106,000		
Seattle, WA	63	26,200	425	191,000		
St. Albans, VT	3	695	18	4,220		
Tampa, FL	6	2,250	278	116,000		
U.S. Virgin Islands	(4)	14	6	2,350		
Other ⁵	13	12,100	82	26,800		
Total	1,060	469,000	10,300	4,400,000		

⁻⁻ Zero.

 $^{^{1}\}mathrm{Data}$ 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. Export valuation is on a free-alongside-ship basis.

³May include revisions to previously published data.

⁴Less than ½ unit.

⁵Includes countries with quantities of less than 500 metric tons for the current year.

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

(Thousand metric tons and thousand dollars)

	Septem	lber	January–September ³		
Item	Quantity	Value	Quantity	Value	
No. 1 heavy melting steel	414	171,000	4,280	1,720,000	
No. 2 heavy melting steel	53	30,900	514	250,000	
No. 1 bundles	9	3,280	126	25,800	
No. 2 bundles	5	672	9	1,290	
Shredded steel scrap	410	152,000	3,450	1,370,000	
Borings, shovelings, and turnings	3	1,080	34	10,000	
Cut plate and structural	38	14,500	481	201,000	
Tinned iron or steel	6	1,190	70	12,300	
Remelting scrap ingots	(4)	69	4	1,490	
Cast iron	22	13,600	344	127,000	
Other iron and steel	5	1,320	34	8,010	
Total carbon steel and cast iron	964	389,000	9,340	3,720,000	
Stainless steel	47	49,700	401	347,000	
Other alloy steel	52	29,700	526	325,000	
Total stainless and alloy steel	100	79,500	927	672,000	
Total carbon, stainless, alloy steel, and cast iron	1,060	469,000	10,300	4,400,000	
Ships, boats, and other vessels for					
breaking up (for scrapping)	(4)	3	3	428	
Used rails	(4)	488	2	4,880	
Used rails for rerolling and other uses			(4)	150	
Total scrap exports	1,060	469,000	10,300	4,400,000	
Exports of manufactured ferrous products,					
Pig iron < or = 0.5% phosphorus	5	2,650	18	12,300	
Pig iron > or = 0.5% phosphorus					
Alloy Pig Iron			(4)	125	
Total pig iron	5	2,650	18	12,500	
Direct-reduced iron (DRI)	79	12,300	84	12,400	
Granules for abrasive cleaning and other uses	3	3,940	18	27,900	
Powders of alloy steel	1	4,470	9	52,400	
Other ferrous powders	4	7,270	41	66,200	
Total DRI, granules, powders	87	27,900	153	159,000	
Grand total	1,160	500,000	10,400	4,570,000	
Zero	•	•	•		

⁻⁻ 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.
³May include revisions to previously published data.

⁴Less than ½ unit.

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

(Thousand metric tons and thousand dollars)

	Septem	ber	January–Sep	otember ³
Country or locality	Quantity	Value	Quantity	Value
Canada	274	111,000	2,680	1,160,000
Cayman Islands	1	100	5	894
Colombia	(4)	249	1	709
Germany	3	164	106	43,700
Japan	2	61	15	487
Mexico	80	34,400	527	260,000
Netherlands	(4)	2	101	44,700
New Zealand			27	12,100
Portugal			14	5,610
Spain			12	4,990
Sweden	(4)	1,220	180	81,200
United Kingdom			69	33,900
Other ⁵	32	14,600	53	27,100
Total	392	161,000	3,790	1,670,000

⁻⁻ Zero.

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.

³May include revisions to previously published data.

⁴Less than ½ unit.

 $^{^{5}}$ Includes countries with quantities of less than 500 metric tons for the current year.

TABLE 8 U.S. IMPORTS FOR CONSUMPTION OF IRON AND STEEL SCRAP BY SELECTED CUSTOMS DISTRICT, IN SEPTEMBER $2023^{1,2}$

(Thousand metric tons and thousand dollars)

-	Septem	ber	January-Sep	January–September ³		
Customs district	ict Quantity Value		Quantity	Value		
Baltimore, MD	(4)	184	1	912		
Buffalo, NY	15	8,900	164	92,800		
Charleston, SC	1	76	314	134,000		
Chicago, IL	5	1,390	21	5,430		
Cleveland, OH	(4)	162	1	960		
Detroit, MI	154	66,800	1,660	771,000		
Duluth, MN	15	5,550	94	35,700		
El Paso, TX	7	1,620	46	18,700		
Great Falls, MT	(4)	98	21	7,610		
Houston-Galveston, TX	(4)	309	1	1,910		
Laredo, TX	63	29,100	361	188,000		
Miami, FL	1	205	13	3,090		
Mobile, AL	32	14,800	81	48,700		
New Orleans, LA	4	116	183	76,200		
New York City, NY	(4)	14	8	2,290		
Nogales, AZ	3	1,200	38	15,900		
Ogdensburg, NY	1	1,430	14	15,200		
Pembina, ND	21	7,760	156	61,800		
San Diego, CA	7	2,150	61	19,200		
Seattle, WA	62	18,600	538	166,000		
St. Albans, VT	1	367	9	2,730		
Other ⁵	(4)	500	10	6,000		
Total	392	161,000	3,790	1,670,000		

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.

³May include revisions to previously published data.

⁴Less than ½ unit.

⁵Includes countries with quantities of less than 500 metric tons for the current year.

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

(Thousand metric tons and thousand dollars)

	Septem	ber	January–September ³	
Item	Quantity	Value	Quantity	Value
No. 1 heavy melting steel	11	3,280	110	36,000
No. 2 heavy melting steel	7	2,570	94	33,800
No. 1 bundles	62	26,700	999	468,000
No. 2 bundles	6	1,960	66	24,700
Shredded steel scrap	60	24,500	706	308,000
Borings, shovelings, and turnings	6	1,220	42	11,000
Cut plate and structural	17	4,620	163	50,400
Tinned iron or steel	24	9,070	201	80,500
Remelting scrap ingots	1	1,470	2	2,560
Cast iron	12	3,470	133	45,600
Other iron and steel	86	31,700	595	221,000
Total carbon steel and cast iron	291	111,000	3,110	1,280,000
Stainless steel	16	18,000	156	181,000
Other alloy steel	86	32,800	524	211,000
Total stainless and alloy steel	102	50,800	680	393,000
Total carbon, stainless, alloy steel, and cast iron	392	161,000	3,790	1,670,000
Ships, boats, and other vessels for				
breaking up (for scrapping)			(4)	11
Used rails			3	773
Used rails, nonalloyed	(4)	17	(4)	17
Used rails other			(4)	747
Total scrap imports	392	161,000	3,790	1,680,000
Imports of manufactured ferrous products:				
Pig iron < or = 0.5% phosphorus			(4)	8
Pig iron > or = 0.5% phosphorus	251	111,000	3,220	1,660,000
Alloy pig iron			(4)	23
Total pig iron	251	111,000	3,220	1,660,000
Direct-reduced iron (DRI)	187	59,600	2,560	822,000
Spongy iron products, not DRI	(4)	259	1	3,060
Granules for abrasive cleaning and other uses	1	2,470	13	25,000
Powders of alloy steel	4	10,800	42	104,000
Other ferrous powders	3	5,420	30	69,100
Total DRI, granules, powders	195	78,500	2,650	1,020,000
Grand total	839	351,000	9,670	4,360,000

⁻⁻ Zero.

 $^{^{1}\}mathrm{Data}$ are rounded to no more than three significant digits; may not add to totals shown.

²Import valuation is on a Customs basis.

³May include revisions to previously published data.

⁴Less than ½ unit.

 ${\it TABLE~10}\\ {\it U.S.~RAW~STEEL~PRODUCTION,~RAW~STEEL~CAPABILITY~UTILIZATION,}\\ {\it AND~CONTINUOUS~CAST~STEEL~PRODUCTION}^1$

	Raw steel pr	oduction,	Raw steel c	apability	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:	-		-			
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
February	6,120	12,700	75.5	74.2	99.7	99.7
March	6,800	19,500	75.7	74.7	99.7	99.7
April	6,690	26,200	76.5	75.1	99.7	99.7
May	6,900	33,100	76.3	75.4	99.7	99.7
June	6,820	39,900	77.9	75.8	99.7	99.7
July	6,970	46,900	76.2	75.9	99.7	99.7
August	7,000	53,800	76.6	76.0	99.7	99.7
September	6,760	60,600	76.4	76.0	99.7	99.7

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

Source: American Iron and Steel Institute.

²May include revisions to previously published data.

TABLE 11 COMPOSITE PRICES FOR STEEL SCRAP AND PIG IRON

	Steel Scr	ap¹	Pig Iro	n^2
Period	\$/lt	\$/t	\$/1t	\$/t
2022:				
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	385.28	379.19	665.66	655.15
2023:				
January	346.67	341.20	560.18	551.33
February	368.33	362.51	439.42	432.48
March	396.67	390.41	600.00	590.53
April	370.00	364.16	492.25	484.48
May	330.00	324.79	510.73	502.67
June	303.33	298.54	518.60	510.41
July	303.33	298.54	509.23	501.19
August	320.00	314.95	438.33	431.41
September	320.00	314.95	423.42	430.21

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 o	of scrap				
	from outside	e sources	Pig iron pro	duction	DRI consu	mption
		Year		Year		Year
Period ²	Monthly	to date	Monthly	to date	Monthly	to date
2022:						
September	2,310	26,000	950	8,260	180	2,160
October	2,120	28,100	918	9,180	107	2,270
November	2,220	30,400	898	10,100	176	2,450
December	2,340	32,700	1,030	11,100	187	2,630
2023:						
January	2,960	2,960	1,030	1,030	211	211
February	3,020	5,980	986	2,020	205	416
March	3,020	9,000	1,140	3,160	206	622
April	2,990	12,000	1,140	4,290	198	821
May	3,130	15,100	1,170	5,460	202	1,020
June	2,950	18,100	1,090	6,550	248	1,270
July	2,840	20,900	1,070	7,620	198	1,470
August	2,860	23,800	1,160	8,770	209	1,680
September	2,910	26,700	969	9,740	233	1,910

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

²May include revisions to previously published data.