

Mineral Industry Surveys

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IRON ORE IN SEPTEMBER 2023

Data are reported as gross weight unless otherwise noted and do not include iron metalics such as direct-reduced iron, hot-briquetted iron, iron nuggets, or pig iron. Production, shipments, and trade were impacted from January through March owing to seasonal closures of the Soo Locks, the primary shipping route for iron ore in the Great Lakes region.

U.S. mine production and shipments of iron ore in September 2023 were estimated to be 3.65 million metric tons (Mt) and 4.44 Mt, respectively (fig. 1, table 1). Average daily production of iron ore was 118,000 metric tons (t), a 3% decrease from that in August and a 17% increase from that in September 2022. Average daily shipments of iron ore were 143,000 t, unchanged from those in August and a 13% increase from those in September 2022.

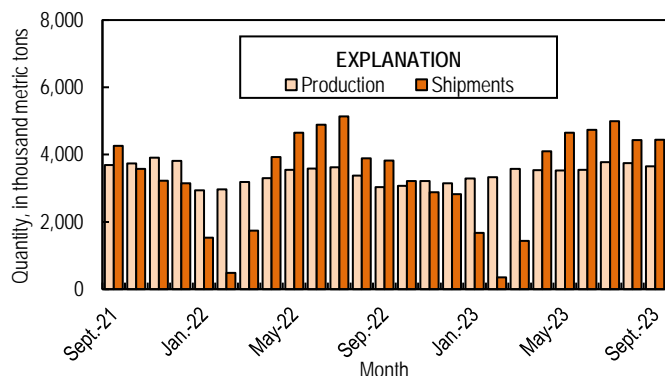


Figure 1. Monthly domestic production and of iron ore from September 2021 through September 2023.

Mine stocks were estimated to be 4.38 Mt at the end of September 2023, a 15% decrease from those held at the end of August, and a 64% increase from those held at the end of September 2022 (table 1).

U.S. exports of iron ore were 1.03 Mt in September 2023, a 5% decrease from those in August and a 25% decrease from those in September 2022 (fig. 2, tables 3, 6). U.S. imports of iron ore were 449,000 t in September 2023, a 36% increase from those in August and a 16% increase from those in September 2022 (fig. 2, tables 4, 6).

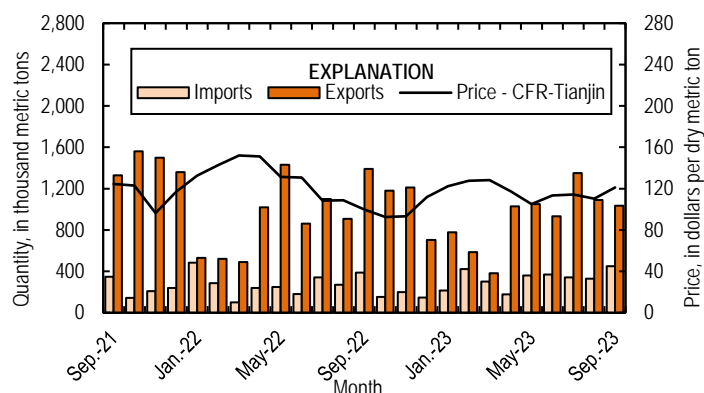


Figure 2. Monthly domestic imports and exports of iron ore and spot prices for imported iron ore fines, 62% iron content, cost and freight (CFR), at Tianjin Port, China, from September 2021 through September 2023. Source: U.S. Census Bureau and IndexMundi, undated.

The spot price for imported iron ore fines, 62% iron content, cost and freight, at Tianjin Port, China, was \$120.98 in September, a 10% increase from \$110.20 in August and a 21% increase from \$99.81 in September 2022.

Industry News

U.S. Steel Corp and , the U.S. Department of Energy's (DOE) National Energy Technology Laboratory (NETL), announced that the Edgar Thomson Plant in Braddock, PA, was chosen as the site for testing an advanced membrane technology intended to reduce carbon dioxide emissions through the NETL's Point Source Carbon Capture Program. The technology uses a process, which recently passed lab-scale tests at a DOE facility in Alabama, that allows for the selective separation of carbon dioxide from flue gases to potentially store in deep geologic formations or as a fuel-making feedstock. The device was scheduled to be installed in early 2025 for a 6-month test run (U.S. Steel Corp, 2023).

Reference Cited

U.S. Steel Corp., 2023, NETL collaborates with U. S. Steel to capture greenhouse gas at Edgar Thomson Plant: Pittsburgh, PA, U.S. Steel Corp. press release, September 20. (Accessed December 5, 2023, at <https://www.ussteel.com/newsroom/-/blogs/netl-collaborates-with-u-s-steel-to-capture-greenhouse-gas-at-edgar-thomson-plant>.)

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TABLE 1
U.S. PRODUCTION, SHIPMENTS, AND STOCKS OF IRON ORE^{1, 2}

(Thousand metric tons, usable ore)

Period	Production		Shipments ³		Stocks
	Monthly	Year to date	Monthly	Year to date	End of Month
2022:					
September	3,030	29,600	3,820	30,100	2,670
October	3,070	32,600	3,210	33,300	2,530
November	3,210	35,900	2,880	36,200	2,860
December	3,150	39,000	2,820	39,000	3,190
2023:					
January	3,290	3,290	1,670	1,670	4,810
February	3,330	6,620	350	2,020	7,790
March	3,580	10,200	1,440	3,460	9,930
April	3,540	13,700	4,100	7,560	9,370
May	3,530	17,300	4,650	12,200	8,250
June	3,550	20,800	4,740	17,000	7,060
July	3,780	24,600	4,990	21,900	5,850
August	3,750	28,400	4,430	26,400	5,170
September	3,650	32,000	4,440	30,800	4,380

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

²Data are estimated based on publicly reported data, employment hours, and historical ratios. Excludes byproduct ores and iron metallics.

³Includes rail and vessel.

TABLE 2
U.S. PRODUCTION OF PIG IRON AND RAW STEEL¹

(Thousand metric tons)

Period	Pig iron production ²		Raw steel production	
	Monthly	Year to date	Monthly	Year to date
2022:				
September	1610	15100	6,550	61,400
October	1620	16700	6,610	68,000
November	1520	18200	6,200	74,200
December	1560	19800	6,330	80,500
2023:				
January	1,680	1,680	6,550	6,550
February	1,610	3,290	6,120	12,700
March ³	1,800	5,090	6,800	19,500
April	1,720	6,810	6,690	26,200
May	1,800	8,610	6,900	33,100
June	1,780	10,400	6,820	39,900
July	1,810	12,200	6,970	46,900
August	1,820	14,000	7,000	53,800
September	1,760	15,800	6,760	60,600

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

²Pig iron data are estimated based on historical ratios.

³Pig iron data production reported by the American Iron and Steel Institute for the reported month.

Source: American Iron and Steel Institute, U.S. Geological Survey estimates.

TABLE 3
U.S. EXPORTS OF IRON ORE, BY COUNTRY OR LOCALITY AND TYPE ^{1,2}

Country or locality and type of product	2022	2023				
	January-September	September		January-September		
	Quantity (thousand metric tons)	Quantity (thousand metric tons)	Value ³ (thousand dollars)	Quantity (thousand metric tons)	Value ³ (thousand dollars)	Value ³ (dollars per ton)
Canada	5,320 ^r	912	89,600	5,940	582,000	98.04
China	1,110	75	10,700	973	123,000	126.49
France	314 ^r	45	4,360	67	6,530	97.51
Other	1,580 ^r	(4)	319	1,250	109,000	87.32
Total	8,320 ^r	1,030	105,000	8,230	821,000	99.75
Concentrates	1,420	78	11,600	1,050	133,000	126.68
Fine ores	2	1	216	2	505	252.50
Pellets	6,760 ^r	955	93,000	6,980	680,000	97.40
Other	139	(4)	48	194	7,240	37.31
Total	8,320 ^r	1,030	105,000	8,230	821,000	99.75

^rRevised.

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

²All countries with quantities less than 5,000 metric tons for the month included in "Other."

³Free alongside ship (FAS) value.

⁴Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 4
U.S. IMPORTS FOR CONSUMPTION OF IRON ORE, BY COUNTRY OR LOCALITY AND TYPE^{1,2}

Country or locality of origin and type of product	2022	2023				
	January–September	September		January–September		
	Quantity (thousand metric tons)	Quantity (thousand metric tons)	Value ³ (thousand dollars)	Quantity (thousand metric tons)	Value ³ (thousand dollars)	Value ³ (dollars per ton)
Brazil	1,380	161	27,700	1,680	287,000	170.97
Canada	650 ^r	90	15,000	647	108,000	166.66
Chile	61	61	6,790	182	18,600	102.24
South Africa	1	11	1,050	11	1,080	97.73
Sweden	278	127	17,500	382	57,300	149.88
Other	169 ^r	(4)	18	68	2,720	39.96
Total	2,540	449	68,000	2,970	474,000	159.82
Concentrates	61	11	1,060	72	6,720	963.39
Fine Ores	131	42	4,860	228	20,200	88.67
Pellets	2,340	330	54,500	2,600	439,000	169.07
Other	6	66	7,650	66	7,660	116.03
Total	2,540	449	68,000	2,970	474,000	159.82

^rRevised.

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

²All countries with quantities less than 5,000 metric tons for the month included in "Other."

³Customs value. Excludes international freight and insurance charges.

⁴Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 5
U.S. IMPORTS FOR CONSUMPTION OF IRON ORE, BY CUSTOMS DISTRICT^{1, 2}

(Thousand metric tons)

Customs district (code no.)	Pellets			Total, all products		
	January–September		September	January–September		September
	2022	2023		2022	2023	
Baltimore, MD (13)	--	--	--	5	6	6
Charleston, SC (16)	--	--	--	12	7	6
Houston-Galveston, TX (53)	76	88	18	77	88	18
New Orleans, LA (20)	2,260	2,510	312	2,400	2,800	419
Other	-- ^r	(3)	--	44 ^r	69	(3)
Total	2,340	2,600	330	2,540	2,970	449

^rRevised. -- Zero.

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

²Customs Districts with less than 5,000 metric tons of imports per month included in "Other."

³Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 6
U.S. IRON ORE TRADE SUMMARY¹

(Thousand metric tons and thousand dollars)

Period	Exports		Imports	
	Quantity	Value ²	Quantity	Value ³
2022:				
January–September	8,320 ^r	834,000 ^r	2,540	521,000
September	1,390	141,000	387	84,500
October	1,180	115,000	154	34,300
November	1,210	122,000	199	31,900
December	704	72,200	145	25,400
January–December	11,400	1,140,000	3,040	613,000
2023:				
January	779	68,400	214	32,400
February	586	57,400	423	69,300
March	383	36,300	302	51,200
April	1,030	97,300	177	27,700
May	1,050	112,000	359	57,700
June	933	93,600	370	59,100
July	1,350	137,000	341	56,000
August	1,090	114,000	330	52,600
September	1,030	105,000	449	68,000
January–September	8,230	821,000	2,970	474,000

^rRevised.

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

²Free alongside ship (FAS) value.

³Customs value. Excludes international freight and insurance charges.

Source: U.S. Census Bureau.