

Mineral Industry Surveys

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IRON ORE IN JULY 2016

U.S. mine production and shipments of iron ore in July 2016 were 3.72 million metric tons (Mt) and 4.43 Mt, respectively (fig. 1, table 1). Average daily production of iron ore was 120,000 metric tons (t), 4% less than that of June, and 15% greater than that of July 2015. Average daily shipments of iron ore were 143,000 t, 5% less than those in June, and 12% less than in July 2015. Mine stocks at the end of July 2016 were 8% less than those held at the end of June and 10% less than those held at the end of July 2015.

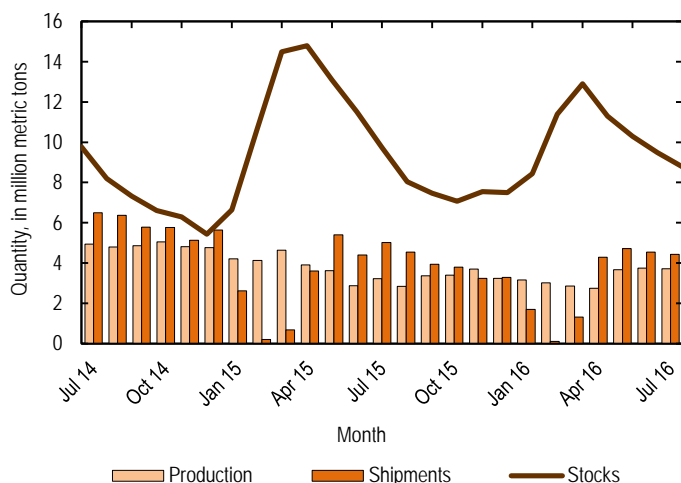


Figure 1. Monthly domestic production, shipments, and stocks of iron ore from July 2014 through July 2016.

As of July 2016, six open-pit mines and collocated pellet plants, one tailings reclamation operation, and two iron metalics facilities were operating. One iron ore mine was expected to reopen in August 2016. Three facilities were idled indefinitely.

Monthly iron ore data are reported as gross weight unless otherwise noted and do not include iron metalics such as pig iron, direct-reduced iron, hot-briquetted iron, or iron nuggets. Data for iron metalics can be found in the Iron Ore chapter in

the U.S. Geological Survey Minerals Yearbook, volume I, Metals and minerals.

U.S. exports of iron ore totaled 524,000 t in July 2016, 31% less than those in June and less than one-half those in July 2015. U.S. imports of iron ore totaled 287,000 t in July 2016, slightly less than those in June and 28% less than those in July 2015 (fig. 2).

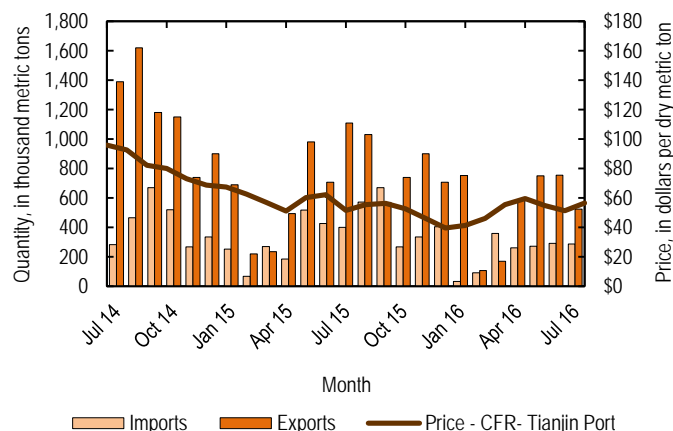


Figure 2. Monthly domestic imports and exports of iron ore and spot prices for iron ore import fines, 62% iron content CFR, at Tianjin Port, from July 2014 through July 2016. Source: U.S. Census Bureau and Index Mundi, undated.

Industry News

Essar Steel Minnesota LLC and its parent company, ESML Holdings, Inc. filed for Chapter 11 bankruptcy protection on July 8. The company, which had been constructing a 7-million-metric-ton-per-year iron ore pellet plant and mine, had been required by the State of Minnesota to develop a financing plan by July 1, 2016, that would have paid an estimated \$1 billion owed to creditors and contractors. Essar requested an extension, but the Minnesota Department of Natural Resources was instructed to cancel the company's lease agreements with the State on July 7. Approximately 50% of the site's leases were owned by the State with the remaining 50% owned by private trusts; however, it is not certain whether the company could operate the site using only the remaining leases. The Governor

of Minnesota announced support for Cliffs Natural Resources Inc.'s public statements of interest in acquiring the site and finalizing construction. Cliffs also announced that there was interest in their company constructing a direct-reduced iron plant at the site (Myers, 2016). Essar Steel planned to coordinate a reorganization strategy that would complete the facilities and begin operations (Essar Steel Minnesota LLC, 2016).

The Governor of Michigan sent a letter to the State's congressional representatives requesting Federal funding to upgrade the Soo Locks, a channel used to transport iron ore freighters in and out of the Great Lakes. Citing the U.S. Department of Homeland Security 2015 analysis, the letter predicted 'significant economic consequences' should the Poe Lock fail—the specific lock used for iron ore cargos, as it could potentially create raw material shortfalls in the steel industry that would carry over to the automotive and manufacturing sectors. The Army Corps of Engineers was conducting a cost-benefit analysis of the project that was expected to be completed by yearend 2018 (Pluta, 2016).

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References Cited

- Essar Steel Minnesota LLC, 2016, Essar Steel Minnesota LLC names Matthew Stock new CEO as next step in reorganization strategy: Essar Steel Minnesota LLC press release, July 14, 1 p. (Accessed September 20, 2016, at <http://essarsteelmn.com/wp-content/uploads/2016/07/Press-release-2016-7-14.pdf>.)
- Myers, John, 2016, Essar Steel Minnesota files for bankruptcy as Dayton pulls mineral leases; Duluth [MN] News Tribune, July 8. (Accessed September 20, 2016 at <http://www.duluthnewstribune.com/business/mining/4070252-essar-steel-minnesota-files-bankruptcy-dayton-pulls-mineral-leases>.)
- Pluta, Rick, 2016, Governor asks Michigan delegation to start work on funding Soo Locks upgrade: Michigan Radio, July 7. (Accessed September 20, 2016, at <http://michiganradio.org/post/governor-asks-michigan-delegation-start-work-funding-soo-locks-upgrade>.)

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
2015:					
July	3,220	26,600	5,020	21,900	9,740
August	2,840	29,400	4,540	26,400	8,040
September	3,360	32,800	3,940	30,400	7,460
October	3,400	36,200	3,790	34,200	7,070
November	3,700	39,900	3,230	37,400	7,550
December	3,230	43,100	3,290	40,700	7,490
2016:					
January	3,150	3,150	1,700	1,700	8,440
February	3,020	6,160	106	1,810	11,400
March	2,850	9,010	1,310	3,120	12,900
April	2,740	11,800	4,290	7,410	11,300
May	3,660	15,400	4,710	12,100	10,300
June	3,740 ^r	19,200	4,540	16,700	9,490 ^r
July	3,720	22,900	4,430	21,100	8,770

^rRevised.

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

²Excludes byproduct ores and iron metallics.

³Includes rail and vessel.

TABLE 2
U.S. PRODUCTION OF PIG IRON AND RAW STEEL, BY TYPE OF FURNACE¹

(Thousand metric tons)

Period	Pig iron production,		Raw steel production			
	Basic oxygen furnace		Blast furnace		Electric furnace	
	Monthly	Year to date	Monthly	Year to date	Monthly	Year to date
2015:						
July	2,830	17,800	2,460	15,300	4,200	29,200
August	2,690	20,500	2,330	17,600	4,240	33,400
September	2,390	22,900	2,090	19,700	4,170	37,600
October	2,270	25,200	1,990	21,700	4,270	41,900
November	2,120	27,300	1,780	23,500	3,710	45,600
December	2,110	29,400	1,930	25,400	3,860	49,400
2016:						
January	2,200	2,200	1,910	1,910	4,250	4,250
February	2,260	4,460	2,010	3,920	4,170	8,420
March	2,380	6,840	2,040	5,960	4,390	12,800
April	2,150	8,980	1,860	7,820	4,460	17,300
May	1,910	10,900	2,210	10,000	4,770	22,000
June	2,280	13,200	1,950	12,000	4,550	26,600
July	2,220	15,400	1,890	13,900	4,480	31,100

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

Source: American Iron and Steel Institute.

TABLE 3
U.S. EXPORTS OF IRON ORE, BY COUNTRY AND TYPE ^{1,2}
(Exclusive of ore containing 20% or more manganese)

Country and type of product	2015	2016		2016		
	January–July	July		January–July		
	Thousand metric tons	Thousand metric tons	Value ³ (thousand dollars)	Thousand metric tons	Value ³ (thousand dollars)	Value ³ (dollars per ton)
Canada	3,930	505	\$33,600	3,580	\$253,000	\$70.64
Mexico	828	19	2,350	53	4,120	77.74
Other	81	(4)	15	8	977	122.13
Total	4,840	524	36,000	3,640	258,000	70.83
Concentrates	215	6	747	19	2,520	131.12
Fine ores	16	(4)	5	(4)	85	271.34
Pellets	3,960	519	35,200	3,590	254,000	70.69
Other	647	(4)	28	34	1,750	51.35
Total	4,840	524	36,000	3,640	258,000	70.83

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

²All countries with less than 5,000 metric tons of exports per 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 AND TYPE ^{1,2}
(Exclusive of ore containing 20% or more manganese)

Country of origin and type of product	2015	2016		2016		
	January–July	July		January–July		
	Thousand metric tons	Thousand metric tons	Value ³ (thousand dollars)	Thousand metric tons	Value ³ (thousand dollars)	Value ³ (dollars per ton)
Argentina	30	37	\$4,480	37	\$4,480	\$121.14
Brazil	945	132	7,860	863	64,100	74.25
Canada	1,000	86	6,820	351	22,500	64.18
Sweden	42	32	2,790	241	18,900	78.33
Other	102	1	20	98	16,400	167.13
Total	2,120	287	22,000	1,590	126,000	79.46
Concentrates	303	55	2,040	283	11,900	41.98
Fine Ores	120	47	5,230	116	19,800	170.44
Pellets	1,660	162	12,600	1,170	92,600	79.22
Other	41	22	2,070	22	2,080	94.55
Total	2,120	287	22,000	1,590	126,000	79.46

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

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

³Customs value. Excludes international freight and insurance charges.

Source: U.S. Census Bureau.

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

(Exclusive of ore containing 20% or more manganese)

Customs district (code no.)	(Thousand metric tons)					
	Pellets			Total, all products		
	January–July		July	January–July		July
	2015	2016	2016	2015	2016	2016
Chicago, IL (39)	--	5	5	300	258	60
Columbia–Snake (29)	--	--	--	--	37	37
New Orleans, LA (20)	882	1,160	157	1,020	1,250	167
Tampa, FL (18)	--	--	--	11	23	23
Other	774	10	--	786	22	1
Total	1,660	1,170	162	2,120	1,590	287

-- 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."

Source: U.S. Census Bureau.