

# Mineral Industry Surveys

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## MANGANESE IN AUGUST 2018

Preliminary data for August 2018 indicated that domestic consumption of manganese ore containing more than 20% manganese, exclusive of that consumed at iron and steel plants, was 34,300 metric tons (t) (gross weight). This was 14% more than the amount consumed in July 2018 (30,000 t) (fig. 1). Manganese ore consumption in the first 8 months of 2018 was 261,000 t; this was slightly more than that during the same period in 2017 (258,000 t) (fig. 1). Industry stocks of ore at the end of August 2018 were estimated to be 192,000 t, 29% more than the amount at the end of July 2018 (149,000 t).

On a gross-weight basis, U.S. imports of manganese ore in August 2018 were 9,410 t, 86% less than 68,300 t imported in July 2018 (fig. 1, table 5).

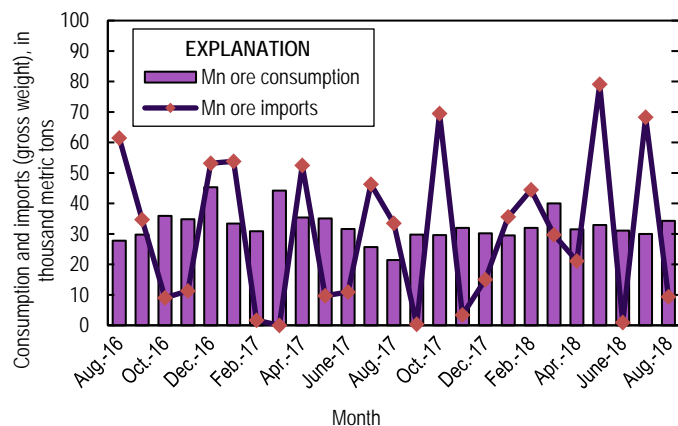


Figure 1. Monthly domestic consumption and imports of manganese (Mn) ore from August 2016 through August 2018. Sources: U.S. Census Bureau and U.S. Geological Survey.

In August 2018, the average spot prices for manganese ore deliveries to China were \$6.36 per metric ton unit, 36%–39% grade, and \$6.73 per metric ton unit, 44% grade (fig. 2, table 1). Compared with July 2018 prices, they were slightly less for both grades. Compared with the 2-year price highs of December 2016, they were 21% lower for the 36%–39% grade and 24% lower for the 44% grade. However, they were both more than 83% higher than those of August 2016.

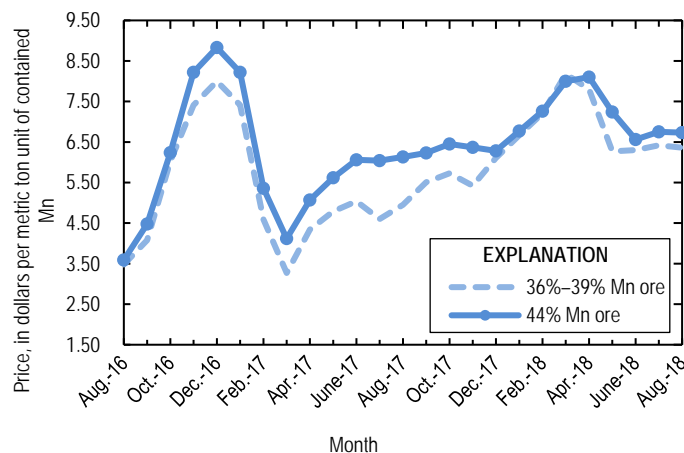


Figure 2. Average monthly spot prices for manganese (Mn) ore delivered to China from August 2016 through August 2018. Source: CRU Group.

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TABLE 1  
PRICES FOR MANGANESE FERROALLOYS, METAL, AND ORE IN AUGUST 2018

		Low	Average	High
<u>Manganese ferroalloys:<sup>1</sup></u>				
High-carbon ferromanganese, 75% manganese	dollars per long ton of contained manganese	1,400.00	1,425.00	1,450.00
Medium-carbon ferromanganese, 85% manganese	cents per pound of contained manganese	112.00	113.50	115.00
Silicomanganese, 65% manganese	do.	63.00	64.00	65.00
Manganese metal, 99.9% manganese flake <sup>2</sup>	cents per pound	155.00	157.50	160.00
<u>Manganese ore:<sup>3, 4</sup></u>				
36%–39% manganese	dollars per metric ton unit contained manganese	6.10	6.36	6.50
44% manganese	do.	6.50	6.73	6.95

do. Ditto.

<sup>1</sup>Platts Metals Week; in U.S. warehouse; average prices reported for all transactions during the month.

<sup>2</sup>CRU Group North American transaction prices, electrolytic manganese metal flake, 99.99% manganese, free-on-board producing point or Chicago/Pittsburgh warehouse; Average prices reported for the price range.

<sup>3</sup>CRU Group, cost and freight, China; average prices reported for the price range.

<sup>4</sup>To determine dollars per metric ton of ore (gross weight), multiply the manganese content percentage by the price; that is, by 44 when the manganese content is 44%.

TABLE 2  
SELECTED U.S. FOREIGN TRADE IN MANGANESE<sup>1</sup>

(Metric tons, manganese content)<sup>2</sup>

	Imports for consumption			Exports		
	Ore and dioxide	Ferroalloy and metal	Total	Ore	Ferroalloy and metal	Total
2017:						
August	18,100	47,000 <sup>r</sup>	65,100 <sup>r</sup>	145	1,430	1,580
January–August	133,000	337,000	470,000	510	10,900 <sup>r</sup>	11,400 <sup>r</sup>
2018:						
January	17,300	66,800	84,100 <sup>r</sup>	18	221	239
February	23,200	34,700	57,900	47 <sup>r</sup>	805 <sup>r</sup>	852 <sup>r</sup>
March	10,600	59,300	69,900	25 <sup>r</sup>	993	1,020
April	10,500	41,700	52,200	16	1,250	1,270 <sup>r</sup>
May	36,500	67,700	104,000	30	1,240	1,270
June	753 <sup>r</sup>	56,800	57,500	30	1,800	1,830
July	32,900	35,900	68,800	1,180	1,740	2,910
August	5,240	84,100	89,300	37	1,350	1,380
January–August	137,000	447,000	584,000	1,380	9,390	10,800

<sup>r</sup>Revised.

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

<sup>2</sup>As reported except as estimated for imports of manganese dioxide and manganese waste and scrap and for exports from gross weights.

Source: U.S. Census Bureau.

TABLE 3  
U.S. IMPORTS FOR CONSUMPTION OF SILICOMANGANESE IN AUGUST 2018<sup>1</sup>

(Metric tons)

Source	Gross weight	Mn content	Customs value <sup>3</sup>	January–August <sup>2</sup>		
				Gross weight	Mn content	Customs value <sup>3</sup>
Australia	9,210	6,120	\$11,400,000	63,500	40,800	\$79,400,000
Belgium	--	--	--	1,890	1,240	2,300,000
Brazil	297	194	342,000	3,270	2,170	3,440,000
Georgia	18,000	13,400	24,200,000	83,500	60,800	101,000,000
India	--	--	--	1,820	1,070	2,640,000
Malaysia	6,600	4,290	7,420,000	22,500	14,600	26,700,000
Mexico	60	37	144,000	16,200	10,800	18,300,000
Norway	1,070	645	1,610,000	14,300	9,400	20,200,000
Russia	--	--	--	8,960	5,990	11,300,000
Saudi Arabia	--	--	--	5,010	3,310	4,810,000
South Africa	11,700	7,610	12,900,000	42,700	27,800	47,100,000
Spain	5,350	3,460	7,080,000	18,100	11,900	23,000,000
Taiwan	--	--	--	200	132	237,000
Zambia	999	650	1,230,000	999	650	1,230,000
Total	53,300	36,400	66,400,000	283,000	191,000	342,000,000

-- Zero.

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

<sup>2</sup>May include revised data that are not broken out by specific month(s).

<sup>3</sup>Customs value generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance, and other charges incurred in bringing the material into the United States.

Source: U.S. Census Bureau.

TABLE 4  
U.S. IMPORTS FOR CONSUMPTION OF FERROMANGANESE IN AUGUST 2018<sup>1</sup>

(Metric tons)

Source	Gross weight	Mn content	Customs value <sup>3</sup>	January–August <sup>2</sup>		
				Gross weight	Mn content	Customs value <sup>3</sup>
Low carbon:						
China	17	14	\$40,700	2,830	2,650	\$6,020,000
France	--	--	--	19	15	58,900
Germany	--	--	--	264	233	657,000
Japan	--	--	--	100	80	165,000
Korea, Republic of	738	679	1,730,000	7,160	6,590	15,300,000
Mexico	218	178	337,000	1,720	1,400	2,580,000
Norway	4,570	3,720	7,650,000	32,800	26,500	55,100,000
South Africa	--	--	--	82	71	138,000
Vietnam	--	--	--	240	216	529,000
Total	5,540	4,590	9,760,000	45,200	37,800	80,500,000
Medium carbon, 1%–2% C:						
China	--	--	--	145	119	319,000
France	--	--	--	2,900	2,360	4,600,000
Korea, Republic of	--	--	--	22,500	18,000	35,700,000
Mexico	139	110	297,000	4,230	3,350	6,810,000
Norway	2,650	2,160	4,070,000	14,000	11,400	21,600,000
South Africa	7,610	6,150	13,100,000	26,000	20,900	44,300,000
Total	10,400	8,420	17,400,000	69,800	56,100	113,000,000
High carbon:						
Australia	14,900	11,300	18,500,000	48,700	37,100	63,200,000
Brazil	--	--	--	3,030	1,850	3,490,000
France	2,200	1,680	2,460,000	2,200	1,680	2,470,000
Georgia	--	--	--	3,100	2,410	3,930,000
India	--	--	--	3,690	1,470	4,340,000
Korea, Republic of	--	--	--	2,340	1,780	4,390,000
Malaysia	6,370	4,830	8,020,000	41,000	31,100	52,200,000
Mexico	6	4	9,630	115	92	169,000
Norway	--	--	--	3,090	2,390	3,870,000
Russia	7,040	5,380	6,590,000	20,900	16,000	20,700,000
Saudi Arabia	19	12	32,600	296	189	463,000
South Africa	11,500	8,710	15,100,000	37,400	28,400	49,400,000
Spain	20	15	39,600	18,700	14,200	22,800,000
Ukraine	204	155	189,000	6,240	4,770	6,230,000
Total	42,200	32,100	50,900,000	191,000	143,000	238,000,000
Grand total	58,100	45,100	78,100,000	306,000	237,000	432,000,000

-- Zero.

<sup>1</sup>Data rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>May include revised data that are not broken out by specific month(s).

<sup>3</sup>Customs value generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance and other charges incurred in bringing the material into the United States.

Source: U.S. Census Bureau.

TABLE 5  
U.S. IMPORTS FOR CONSUMPTION OF MANGANESE ORE (20% OR MORE Mn)  
IN AUGUST 2018<sup>1</sup>

(Metric tons)

Source	Gross weight	Mn content	Customs value <sup>3</sup>	January–August <sup>2</sup>		
				Gross weight	Mn content	Customs value <sup>3</sup>
More than 20%, but less than 47% manganese:						
Cote d'Ivoire	--	--	--	27	12	\$11,000
Gabon	--	--	--	9,610	4,130	1,910,000
Mexico	--	--	--	15,500	5,450	3,560,000
South Africa	--	--	--	59,400	21,100	12,400,000
Total	--	--	--	84,600	30,700	17,900,000
47% or more manganese:						
Australia	--	--	--	13,500	6,430	5,220,000
Brazil	103	60	\$57,100	803	491	424,000
China	--	--	--	2	2	4,400
Gabon	8,800	4,530	3,380,000	185,000	94,500	54,500,000
Mexico	--	--	--	2,050	1,090	1,100,000
Morocco	--	--	--	77	44	102,000
South Africa	217	105	91,900	2,320	1,130	979,000
Turkey	285	204	138,000	361	263	175,000
Total	9,410	4,900	3,660,000	204,000	104,000	62,500,000
Grand total	9,410	4,900	3,660,000	289,000	135,000	80,300,000

-- Zero.

<sup>1</sup>Data rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>May include revised data that are not broken out by specific month(s).

<sup>3</sup>Customs value generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance, and other charges incurred in bringing the material into the United States.

Source: U.S. Census Bureau.

TABLE 6  
U.S. IMPORTS FOR CONSUMPTION OF MANGANESE DIOXIDE  
IN AUGUST 2018<sup>1</sup>

(Metric tons, gross weight)

Source	Quantity	Customs value <sup>3</sup>	January–August <sup>2</sup>	
			Quantity	Customs value <sup>3</sup>
Belgium	19	\$86,600	59	\$158,000
Brazil	--	--	21	36,100
China	3	6,470	46	112,000
France	--	--	14	23,800
Germany	--	--	25	42,200
India	(4)	5,040	5	13,500
Japan	534	1,280,000	3,550	7,970,000
Mexico	--	--	(4)	2,210
Morocco	--	--	19	86,600
Spain	--	--	60	102,000
Ukraine	--	--	23	38,700
Total	556	1,380,000	3,820	8,580,000

-- Zero.

<sup>1</sup>Data rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>May include revised data that are not broken out by specific month(s).

<sup>3</sup>Customs value generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance, and other charges incurred in bringing the material into the United States.

<sup>4</sup>Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 7  
U.S. IMPORTS FOR CONSUMPTION OF MANGANESE METAL  
IN AUGUST 2018<sup>1</sup>

(Metric tons)

Source	Gross weight	Customs value <sup>3</sup>	January–August <sup>2</sup>	
			Gross weight	Customs value <sup>3</sup>
Unwrought flake:				
China	212	\$452,000	3,380	\$5,720,000
Hong Kong	--	--	42	90,700
Japan	(4)	272,000	153	1,750,000
Netherlands	1	2,900	1	2,900
South Africa	462	1,200,000	2,880	6,630,000
Vietnam	--	--	100	221,000
Total	675	1,930,000	6,560	14,400,000
Unwrought powder:				
China	17	39,800	97	216,000
Mexico	--	--	138	467,000
South Africa	61	164,000	863	2,340,000
Total	78	203,000	1,100	3,020,000
Unwrought, other:				
China	1,530	3,220,000	9,330	17,800,000
Germany	122	295,000	897	1,890,000
New Zealand	(4)	2,040	(4)	2,040
Poland	--	--	(4)	6,310
South Africa	125	296,000	554	1,270,000
Spain	--	--	3	4,280
Total	1,770	3,820,000	10,800	21,000,000
Other manganese, wrought:				
China	--	--	18	49,900
France	--	--	(4)	2,150
Germany	43	473,000	226	2,590,000
India	--	--	(4)	5,640
Japan	--	--	(4)	142,000
Malaysia	--	--	(4)	3,040
Mexico	--	--	74	203,000
Poland	--	--	(4)	9,250
Sweden	--	--	9	85,600
Total	43	473,000	327	3,090,000
Metallic waste and scrap, Canada	39	16,100	285	94,500
Grand total	2,610	6,440,000	19,000	41,600,000

-- Zero.

<sup>1</sup>Data rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>May include revised data that are not broken out by specific month(s).

<sup>3</sup>Customs value generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance, and other charges incurred in bringing the material into the United States.

<sup>4</sup>Less than ½ unit.

Source: U.S. Census Bureau.



TABLE 8  
U.S. EXPORTS OF MANGANESE ORE (20% OR MORE Mn), FERROMANGANESE,  
SILICOMANGANESE, AND MANGANESE METAL BY COUNTRIES OR LOCALITIES OF DESTINATION  
IN AUGUST 2018<sup>1,2</sup>

Source	Gross weight (metric tons)	F.a.s. <sup>4</sup> value (thousands)	January–August <sup>3</sup>	
			Gross weight (metric tons)	F.a.s. <sup>4</sup> value (thousands)
Ore and concentrates with 20% or more manganese:				
Belgium	19	\$77	38	\$152
Canada	32	33	241	231
Mexico	8	9	2,330	1,930
Netherlands	16	79	150	694
Total	75	197	2,760	3,010
Ferromanganese:				
2% or less carbon:				
Canada	--	--	700	1,210
Honduras	--	--	2	11
Mexico	3	6	41	110
Morocco	--	--	4	8
Taiwan	--	--	10	18
Total	3	6	756	1,350
More than 2% carbon:				
Canada	1,080	1,340	5,350	7,510
Costa Rica	--	--	4	18
Netherlands	--	--	1	4
United Kingdom	--	--	10	28
Other [4 countries and (or) localities]	1	4	110	116
Total	1,080	1,340	5,480	7,670
Silicomanganese:				
Canada	302	429	2,600	3,710
Mexico	--	--	2	3
Total	302	429	2,600	3,710
Metal, including alloys and waste and scrap: <sup>5</sup>				
Canada	--	--	12	47
China	1	22	5	75
France	--	--	9	36
India	--	--	218	241
Japan	25	107	83	303
Korea, Republic of	--	--	(6)	4
Malaysia	245	197	2,040	1,140
Mexico	6	182	151	1,160
Norway	10	472	10	472
South Africa	--	--	216	184
Venezuela	--	--	7	6
Other [7 countries and (or) localities]	(6)	10	5	82
Total	288	992	2,750	3,750
Grand total	2,830	4,300	14,300	19,500

-- Zero.

<sup>1</sup> Presentation of monthly data is based on the "January–August" quantities of the leading countries and (or) localities.

<sup>2</sup> Data rounded to no more than three significant digits; may not add to totals shown.

<sup>3</sup> May include revised data that are not broken out by specific month(s).

<sup>4</sup> Free alongside ship.

<sup>5</sup> Includes manganese-aluminum, other alloys, and waste and scrap.

<sup>6</sup> Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 9  
U.S. FOREIGN TRADE IN SELECTED MANGANESE CHEMICALS  
IN AUGUST 2018, BY CLASS<sup>1</sup>

Class	Gross weight (metric tons)	Value <sup>3</sup> (thousands)	Principal source and destination: gross weight (metric tons); value <sup>3</sup> (thousands)	January–August <sup>2</sup>		
				Gross weight (metric tons)	Value <sup>3</sup> (thousands)	Principal source and destination: gross weight (metric tons); value <sup>3</sup> (thousands)
Imports for consumption:						
Manganese oxides other than dioxide	1,010	\$895	Brazil 375; \$273	23,400	\$19,100	South Africa 10,940; \$6,540
Manganites, manganates, and other permanganates	--	--	--	20	48	Hong Kong 20; \$42
Potassium permanganate	163	429	India 163; \$429	1,000	2,640	India 983; \$2,567
Sodium permanganate	279	623	China 279; \$623	1,060	2,380	China 1,045; \$2,337
Sulfates, basket category, including manganese sulfate	4,310	3,420	Mexico 1,553; \$1,280	41,800	35,400	China 15,448; \$12,755
Exports:						
Manganese dioxide	785	1,060	Canada 422; \$359	5,040	7,490	Canada 3,185; \$2,818
Manganese oxides other than dioxide	489	967	Mexico 198; \$415	4,220	7,720	Poland 753; \$984
Manganites, manganates, and other permanganates	19	50	Mexico 17; \$47	166	602	Mexico 134; \$532
Potassium permanganate	235	789	Canada 72; \$283	2,160	6,270	Belgium 948; \$2,310
Sodium permanganate	74	201	Japan 30; \$75	572	2,000	Belgium 171; \$343
Sulfates, basket category, including manganese sulfate	1,620	3,540	Canada 1,194; \$1,455	13,700	21,500	Canada 9,740; \$7,684

-- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits.

<sup>2</sup>May include revised data that are not broken out by specific month(s).

<sup>3</sup>For imports, customs value; for exports, free alongside ship value.

<sup>4</sup>Less than ½ unit.

Source: U.S. Census Bureau.