

# Mineral Industry Surveys

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## MANGANESE IN AUGUST 2017

Preliminary data for August 2017 indicated that domestic consumption of manganese ore containing more than 20% manganese, exclusive of that consumed at iron and steel plants, was 21,400 metric tons (t) (gross weight). This was 17% less than the amount consumed in July 2017 (25,700 t) (fig. 1). Manganese ore consumption during the first 8 months of 2017 was 258,000 t, which was 3% less the amount consumed during the same period in 2016. Industry stocks of ore at the end of August 2017 were 140,000 t, 6% less than the amount at the end of July 2017 (149,000 t).

On a gross-weight basis, U.S. imports of manganese ore in August 2017 were 33,500 t, down from 46,300 t in July 2017 (fig. 1, table 5).

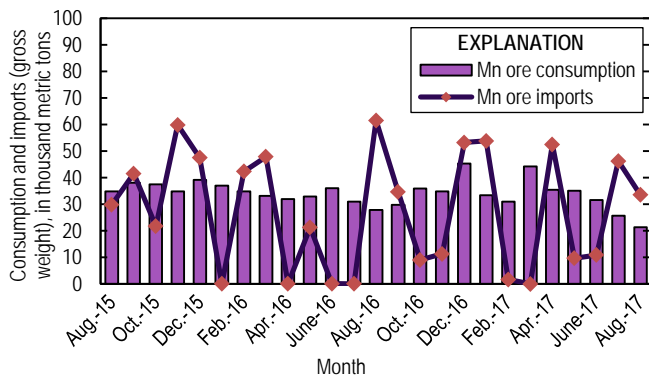


Figure 1. Monthly domestic consumption and imports of manganese (Mn) ore from August 2015 through August 2017. Sources: U.S. Census Bureau and U.S. Geological Survey.

In August 2017, the average monthly spot-market prices for manganese ore deliveries to China increased compared to those

in July 2017. The average spot prices were 4.95 dollars per metric ton unit, 36%–39% grade, and 6.13 dollars per metric ton unit, 44% grade (fig. 2, table 1). They were higher than those in August 2016—42% for the 36%–39% grade and 71% for the 44% grade—and about 86% to 109% more than those of August 2015, respectively. However, they were 38% and 31% less, respectively, than the 2-year-high prices of December 2016.

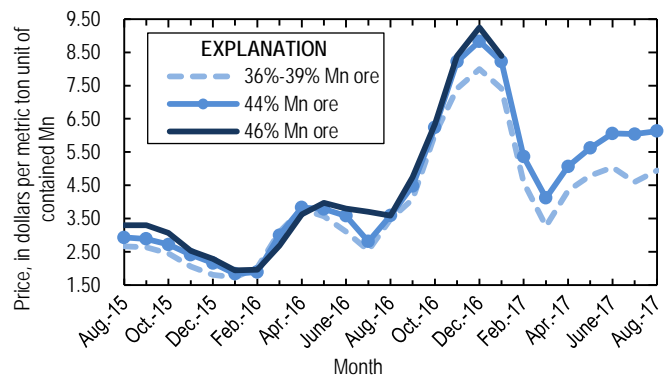


Figure 2. Average monthly spot prices for manganese (Mn) ore delivered to China from August 2015 through August 2017. Source: CRU Group.

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TABLE 1  
PRICES FOR MANGANESE FERROALLOYS, METAL, AND ORE IN AUGUST 2017

		Low	Average	High
Manganese ferroalloys: <sup>1</sup>				
High-carbon ferromanganese, 75% manganese	dollars per long ton of contained manganese	1,500.00	1,537.00	1,560.00
Medium-carbon ferromanganese, 85% manganese	cents per pound of contained manganese	110.00	112.50	115.00
Silicomanganese, 65% manganese	do.	61.00	63.80	65.00
Manganese metal, 99.9% manganese flake <sup>2</sup>	cents per pound	105.00	107.80	110.00
Manganese ore: <sup>3,4</sup>				
36%–39% manganese	dollars per metric ton unit contained manganese	4.80	4.95	5.15
44% manganese	do.	6.00	6.13	6.25

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 Ryan's Notes 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 Ryan's Notes, 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
2016:						
August	28,100	26,700	54,900	19	1,060	1,080
January–August	88,100	265,000 <sup>†</sup>	353,000 <sup>†</sup>	161	9,940	10,100
2017:						
January	27,700	33,200	60,900	9	901	910
February	1,120	20,500	21,600	15	2,020	2,040
March	477	21,600	22,100	28	2,160	2,180
April	42,300	59,500	102,000	10	1,990	2,000
May	5,030	53,300	58,400	43	1,240	1,280
June	10,300	44,800	55,100	139	905	1,040
July	27,800	57,300	85,100	120	411	531
August	18,100	46,900	65,000	145	1,430	1,580
January–August	133,000	337,000	470,000	510	11,100	11,600

<sup>†</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 2017<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	--	--	--	41,500	27,500	\$55,300,000
Brazil	54	35	\$56,400	1,620	1,060	1,690,000
Canada	--	--	--	76	36	48,600
France	--	--	--	2,300	1,390	3,680,000
Georgia	12,700	9,550	13,700,000	66,100	48,700	63,100,000
India	--	--	--	3,140	1,870	4,300,000
Italy	--	--	--	189	112	257,000
Malaysia	1,400	915	1,560,000	7,100	4,700	8,410,000
Mexico	--	--	--	20,800	13,000	20,700,000
Norway	4,190	2,540	6,500,000	12,900	7,780	19,500,000
Russia	--	--	--	13,300	8,940	16,900,000
Saudi Arabia	8,020	5,210	9,000,000	9,230	5,770	10,300,000
South Africa	--	--	--	54,700	35,500	55,900,000
Spain	--	--	--	11,700	7,630	13,900,000
Total	26,300	18,200	30,800,000	245,000	164,000	274,000,000

-- 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 2017<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>
<b>Low carbon:</b>						
Belgium	--	--	--	24	23	\$56,900
China	1,190	1,110	\$2,470,000	7,400	6,890	14,500,000
France	--	--	--	3,300	2,680	5,410,000
Germany	26	21	62,800	231	216	575,000
Japan	--	--	--	15	12	34,800
Korea, Republic of	342	315	681,000	6,250	5,550	12,400,000
Mexico	--	--	--	1,160	936	1,460,000
Norway	6,430	5,230	11,000,000	22,100	17,900	37,700,000
Russia	24	23	56,900	24	23	56,900
Saudi Arabia	--	--	--	5	4	8,590
South Africa	--	--	--	162	151	304,000
Total	8,010	6,690	14,200,000	40,600	34,400	72,600,000
<b>Medium carbon, 1%–2% C:</b>						
China	--	--	--	45	34	115,000
France	--	--	--	400	324	625,000
Germany	--	--	--	1	1	2,180
Korea, Republic of	494	395	751,000	12,400	9,900	18,700,000
Mexico	84	64	199,000	1,460	1,110	2,830,000
Norway	3,550	2,890	5,570,000	13,700	11,100	21,500,000
South Africa	4,450	3,590	8,520,000	14,600	11,700	25,000,000
Total	8,570	6,940	15,000,000	42,500	34,200	68,800,000
<b>High carbon:</b>						
Australia	--	--	--	38,500	26,200	43,700,000
Brazil	1,010	770	1,180,000	2,080	1,580	2,210,000
Canada	--	--	--	145	96	220,000
Georgia	--	--	--	2,400	1,860	2,230,000
Germany	--	--	--	3	2	3,710
Malaysia	--	--	--	6,080	4,560	8,170,000
Mexico	1	1	2,180	264	188	217,000
Netherlands	--	--	--	344	265	373,000
Norway	156	122	189,000	721	563	709,000
Russia	55	42	52,800	5,650	4,320	5,430,000
Saudi Arabia	51	40	82,100	139	107	215,000
South Africa	11,400	8,730	16,200,000	47,100	35,900	61,300,000
Spain	463	349	697,000	7,320	5,540	8,170,000
Ukraine	1,640	1,260	1,580,000	6,090	4,670	5,690,000
Total	14,700	11,300	20,000,000	117,000	85,800	139,000,000
Grand total	31,300	24,900	49,200,000	200,000	154,000	280,000,000

-- 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 2017<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	--	--	--	332	133	\$19,800
Mexico	--	--	--	13,200	5,100	2,480,000
South Africa	--	--	--	11,000	5,100	2,220,000
Total	--	--	--	24,500	10,300	4,720,000
47% or more manganese:						
Australia	--	--	--	17,400	8,340	4,950,000
Brazil	--	--	--	519	288	338,000
Gabon	33,000	17,400	\$7,770,000	163,000	109,000	38,500,000
Georgia	--	--	--	122	88	138,000
Korea, Republic of	--	--	--	20	14	12,800
Mexico	--	--	--	1,410	706	513,000
Morocco	--	--	--	110	66	153,000
South Africa	517	251	217,000	1,830	898	554,000
Total	33,500	17,600	7,990,000	184,000	119,000	45,200,000
Grand total	33,500	17,600	7,990,000	208,000	130,000	49,900,000

-- 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 2017<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	--	--	42	\$133,000
Brazil	--	--	30	41,400
Canada	--	--	3	3,380
China	--	--	61	95,100
Germany	18	\$30,100	39	89,300
India	--	--	35	64,600
Japan	740	1,580,000	4,650	9,760,000
Morocco	--	--	19	86,600
Netherlands	--	--	22	38,100
Singapore	--	--	79	107,000
Ukraine	6	10,800	32	54,900
Total	764	1,620,000	5,010	10,500,000

-- 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 7  
U.S. IMPORTS FOR CONSUMPTION OF MANGANESE METAL IN AUGUST 2017<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>
<b>Unwrought flake:</b>				
China	669	\$1,050,000	3,880	\$7,080,000
Gabon	--	--	200	356,000
Hong Kong	--	--	50	96,300
Japan	46	235,000	283	1,550,000
Mexico	7	26,900	30	97,300
South Africa	349	830,000	4,460	10,600,000
Total	1,070	2,140,000	8,900	19,800,000
<b>Unwrought powder:</b>				
China	59	106,000	139	289,000
Mexico	5	19,600	175	590,000
South Africa	201	559,000	1,200	3,280,000
Total	266	685,000	1,510	4,160,000
<b>Unwrought, other:</b>				
Belgium	--	--	38	78,900
China	1,840	3,030,000	6,140	11,700,000
Germany	375	757,000	1,040	2,130,000
Japan	--	--	(4)	2,210
Portugal	--	--	(4)	5,100
Russia	25	50,100	24	50,100
South Africa	20	47,700	473	1,000,000
Spain	--	--	46	90,500
Total	2,260	3,880,000	7,760	15,100,000
<b>Other manganese, wrought:</b>				
Germany	1	16,400	132	1,390,000
India	--	--	(4)	2,110
Japan	--	--	4	30,400
Malaysia	--	--	(4)	3,650
Mexico	18	46,800	81	220,000
South Africa	--	--	10	19,400
Total	19	63,200	227	1,670,000
<b>Metallic waste and scrap:</b>				
Canada	190	53,200	500	127,000
China	36	60,100	36	60,100
Mexico	--	--	3	3,210
United Kingdom	--	--	2	5,530
Total	226	113,000	540	196,000
Grand total	3,840	6,880,000	18,900	40,900,000

-- 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 LOCALITY OF DESTINATION IN AUGUST 2017<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)
<b>Ore and concentrates with 20% or more manganese:</b>				
Belgium	226	\$233	431	\$371
Canada	--	--	20	19
China	--	--	48	61
Germany	--	--	205	168
Mexico	5	7	30	36
Netherlands	59	178	210	813
Poland	--	--	18	22
United Kingdom	--	--	59	43
Total	290	419	1,020	1,530
<b>Ferromanganese:</b>				
<b>2% or less carbon:</b>				
Canada	1,100	1,580	3,290	5,320
Chile	--	--	35	66
China	--	--	12	18
Other (6 countries)	--	--	34	74
Total	1,100	1,580	3,370	5,480
<b>More than 2% carbon:</b>				
Brazil	--	--	21	59
Canada	91	176	2,150	3,290
Mexico	92	83	217	263
Singapore	--	--	10	28
United Kingdom	--	--	14	42
Other (7 countries)	-5	4	22	67
Total	183	263	2,430	3,740
<b>Silicomanganese:</b>				
Canada	420	595	5,350	7,560
Georgia	--	--	128	120
United Kingdom	--	--	4	6
Total	420	595	5,480	7,690
<b>Metal, including alloys and waste and scrap:<sup>6</sup></b>				
Belgium	--	--	16	303
Canada	9	37	23	90
China	--	--	90	658
Costa Rica	--	--	6	116
India	--	--	729	552
Japan	--	--	86	294
Malaysia	125	73	1,520	707
Mexico	6	85	174	659
Pakistan	--	--	93	72
Other (14 countries)	1	16	119	273
Total	141	212	2,860	3,730
Grand total	2,140	3,070	15,200	22,200

-- Zero.

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

<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>Less than ½ unit.

<sup>6</sup>Includes manganese-aluminum, other alloys, and waste and scrap.

Source: U.S. Census Bureau.

TABLE 9  
U.S. FOREIGN TRADE IN SELECTED MANGANESE CHEMICALS  
IN AUGUST 2017, BY CLASS<sup>1</sup>

Class	Gross weight (metric tons)	Value <sup>3</sup> (thousands)	Principal sources and destinations: gross weight (metric tons); value <sup>3</sup> (thousands)	January–August <sup>2</sup>		
				Gross weight (metric tons)	Value <sup>3</sup> (thousands)	Principal sources and destinations: gross weight (metric tons); value <sup>3</sup> (thousands)
<b>Imports for consumption:</b>						
Manganese oxides other than dioxide	1,110	\$944	Korea, Republic of 540; \$552	16,000	\$11,400	South Africa 8,810; \$4,520
Manganites, manganates, and other permanganates	--	--	--	(4)	12	Canada (4); \$12
Potassium permanganate	72	193	India 71; \$186	468	1,180	India 450; \$1,140
Sodium permanganate	192	470	China 177; \$434	853	1,970	China 714; \$1,640
Sulfates, basket category, including manganese sulfate	3,910	2,740	Mexico 2,420; \$1,400	40,900	32,800	China 15,900; \$12,000
<b>Exports:</b>						
Manganese dioxide	378	734	Canada 198; \$183	3,600	5,750	Canada 1,730; \$1,530
Manganese oxides other than dioxide	641	1,080	Canada 365; \$513	4,690	8,400	Canada 898; \$1,290
Manganites, manganates, and other permanganates	(4)	16	Peru (4); \$16	59	310	Canada 56; \$112
Potassium permanganate	278	768	Belgium 183; \$440	2,120	5,760	Belgium 1,120; \$2,690
Sodium permanganate	99	300	Mexico 39; \$153	425	1,340	Belgium 240; \$513
Sulfates, basket category, including manganese sulfate	2,160	2,470	Canada 988; \$555	13,900	16,600	Canada 9,420; \$5,010

-- 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.