

# Mineral Industry Surveys

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#### **MANGANESE IN FEBRUARY 2017**

Preliminary data for February 2017 indicated that domestic consumption of manganese ore containing more than 20% manganese, exclusive of that consumed at iron and steel plants, was 26,400 metric tons (t) (gross weight). This was the same as the amount consumed in January 2017. Manganese ore consumption during the first 2 months of 2017 was 52,800 t, 20% less than the amount consumed during the same period of 2016 (66,400 t). (fig. 1). Industry stocks of ore at the end of February 2017 were 133,000 t, 10% less than that at the end of January 2017 (148,000 t).

On a gross-weight basis, U.S. imports of manganese ore in February 2017 were 1,670 t, 97% less than the amount imported in January 2017 (53,840 t) (fig. 1, table 5). Manganese ore imports were 95% less in February 2017 compared with the amount in February 2016 (31,800 t).

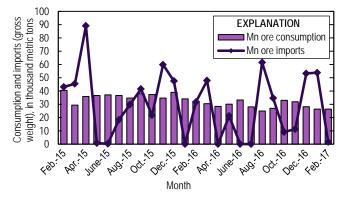


Figure 1. Monthly domestic consumption and imports of manganese (Mn) ore from February 2015 through February 2017. Sources: U.S. Census Bureau and U.S. Geological Survey.

In February 2017, CRU Ryan's Notes discontinued reporting average monthly spot-market prices for the 46%-grade of manganese ore deliveries to China. The average spot prices for the remaining two manganese ore grades were 4.59 dollars per metric ton unit, 36%–39% grade and 5.36 dollars per metric ton unit, 44% grade (fig. 2, table 1). These were less than those in January 2017—38% for the 36%–39% grade and 35% for the 44% grade. However, they were significantly higher than those in February 2016—126% for the 36%–39% grade and 184% for the 44% grade.

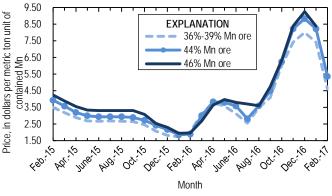


Figure 2. Average monthly spot prices for manganese (Mn) ore delivered to China from February 2015 through February 2017. Source: CRU Ryan's Notes.

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

		Low	Average	High
Manganese ferroalloys: <sup>1</sup>			-	-
High-carbon ferromanganese, 75% manganese	dollars per long ton of contained manganese	1,430.00	1,451.25	1,470.00
Medium-carbon ferromanganese, 85% manganese	cents per pound of contained manganese	108.00	110.00	112.00
Silicomanganese, 65% manganese	do.	69.00	70.75	72.00
Manganese metal, 99.9% manganese flake <sup>2</sup>	cents per pound	117.00	121.75	125.00
Manganese ore: <sup>3,4</sup>				
36%–39% manganese	dollars per metric ton unit contained manganese	2.95	4.59	6.10
44% manganese	do.	4.40	5.36	6.40
46% manganese <sup>5</sup>	do.	XX	XX	XX

do. Ditto. XX Not applicable.

<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 46 when the manganese content is 46%.

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

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

	Impo	Imports for consumption			Exports			
	Ore and	Ferroalloy		Ferroalloy				
	dioxide	and metal	Total	Ore	and metal	Total		
2016:								
January	252	53,700	53,900	29	1,970	2,000		
February	17,200	34,700	51,900	18	2,350	2,370		
January–February	17,400	88,400	106,000	47	4,320	4,370		
2017:								
January	27,700	33,200	60,900	9	901	910		
February	1,120	20,500	21,600	15	2,020	2,040		
January–February	28,800	53,700	82,500	24	2,920	2,950		

<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 FEBRUARY $2017^1$

#### (Metric tons)

				January–February <sup>2</sup>			
	Gross	Mn	Customs	Gross	Mn	Customs	
Source	weight	content	value <sup>3</sup>	weight	content	value <sup>3</sup>	
Australia				6,510	4,320	\$7,120,000	
France	2,300	1,390	\$3,680,000	2,300	1,390	3,680,000	
Georgia	9,460	6,140	8,170,000	10,200	6,700	8,750,000	
India	237	142	315,000	738	438	957,000	
Malaysia	216	141	270,000	216	141	270,000	
Mexico	1,900	1,240	1,850,000	6,550	4,270	6,750,000	
Norway	104	66	179,000	1,420	863	2,100,000	
Russia				4,970	3,360	6,340,000	
South Africa	5,250	3,410	5,770,000	15,600	10,200	13,600,000	
Total	19,500	12,500	20,200,000	48,600	31,700	49,500,000	

-- 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.

#### TABLE 4 U.S. IMPORTS FOR CONSUMPTION OF FERROMANGANESE IN FEBRUARY 2017<sup>1</sup>

#### (Metric tons)

					January–Februa	ry <sup>2</sup>
	Gross	Mn	Customs	Gross	Mn	Customs
Source	weight	content	value <sup>3</sup>	weight	content	value <sup>3</sup>
Low carbon:						
China	408	380	\$653,000	1,280	1,190	\$2,010,000
France	3,300	2,680	5,410,000	3,300	2,680	5,410,000
Germany	5	5	11,800	5	5	11,800
Japan				15	12	34,800
Mexico	220	176	276,000	220	176	276,000
Norway	944	767	1,570,000	4,210	3,420	6,930,000
Total	4,880	4,010	7,930,000	9,030	7,490	14,700,000
Medium carbon, 1%–2% C:						
China	6	4	11,000	6	4	11,000
France	400	324	625,000	400	324	625,000
Mexico	199	149	387,000	469	352	850,000
Norway				500	408	738,000
South Africa				2,540	2,060	3,330,000
Total	604	478	1,020,000	3,920	3,150	5,560,000
High carbon:						
Australia				9,840	4,290	8,820,000
Brazil	287	213	201,000	488	360	340,000
Canada	20	13	24,300	41	26	48,700
Georgia	104	81	150,000	104	81	150,000
Mexico	101	71	80,700	261	186	212,000
Norway	36	30	65,400	36	30	65,400
South Africa	1,270	965	1,560,000	3,230	2,460	3,750,000
Total	1,820	1,370	2,080,000	14,000	7,430	13,400,000
Grand total	7,300	5,860	11,000,000	26,900	18,100	33,600,000

-- 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.

#### TABLE 5

#### U.S. IMPORTS FOR CONSUMPTION OF MANGANESE ORE (20% OR MORE Mn) IN FEBRUARY 2017<sup>1</sup>

#### (Metric tons)

				January–February <sup>2</sup>		
	Gross	Mn	Customs	Gross	Mn	Customs
Source	weight	content	value <sup>3</sup>	weight	content	value <sup>3</sup>
More than 20%, but less than 47% manganese, South Africa	1,500	696	\$441,000	6,500	3,020	\$1,900,000
47% or more manganese:						
Brazil	153	104	75,500	201	128	95,700
Gabon				47,300	24,300	10,800,000
Korea, Republic of	20	14	12,800	20	14	12,800
Mexico				1,410	706	513,000
Morocco				39	22	50,900
South Africa				17	8	4,080
Total	173	118	88,300	49,000	25,200	11,400,000
Grand total	1,670	814	529,000	55,500	28,200	13,400,000

-- 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 FEBRUARY 2017 $^{\rm 1}$

#### (Metric tons, gross weight)

			January-	-February <sup>2</sup>
		Customs		Customs
Source	Quantity	value <sup>3</sup>	Quantity	value <sup>3</sup>
Canada			3	\$3,380
China			13	38,000
Germany			2	8,540
Japan	502	\$1,050,000	862	1,780,000
Singapore	11	19,100	22	38,200
Ukraine			6	10,800
Total	513	1,060,000	908	1,880,000
-				

-- 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.

#### TABLE 7

#### U.S. IMPORTS FOR CONSUMPTION OF MANGANESE METAL IN FEBRUARY 2017<sup>1</sup>

(Metric tons)

			January–February <sup>2</sup>	
	Gross	Customs	Gross	Customs
Source	weight	value <sup>3</sup>	weight	value <sup>3</sup>
Unwrought flake:				
China	122	\$223,000	122	\$223,000
Gabon	50	86,400	200	356,000
Japan	23	144,000	53	314,000
South Africa	918	2,270,000	1,640	3,920,000
Total	1,110	2,720,000	2,020	4,810,000
Unwrought powder:				
China	40	101,000	40	101,000
Mexico	2	6,900	27	89,800
South Africa	60	158,000	236	632,000
Total	102	266,000	303	823,000
Unwrought, other:				
Belgium			19	37,600
China	649	1,470,000	1,080	2,370,000
Germany	87	177,000	241	474,000
South Africa	81	157,000	163	323,000
Spain	23	45,300	23	45,300
Total	840	1,850,000	1,520	3,250,000
Other manganese, wrought:				
Germany			21	204,000
India			(4)	2,110
Japan	3	14,000	3	14,000
Mexico			6	23,600
Total	3	14,000	31	243,000
Metallic waste and scrap:				
Canada	71	21,500	141	43,300
Mexico	3	3,210	3	3,210
Total	74	24,700	144	46,500
Grand total	2,130	4,870,000	4,020	9,170,000

-- 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 <sup>1</sup>/<sub>2</sub> unit.

#### TABLE 8 U.S. EXPORTS OF MANGANESE ORE (20% OR MORE Mn), FERROMANGANESE, SILICOMANGANESE, AND MANGANESE METAL BY COUNTRIES OF DESTINATION IN FEBRUARY 2017<sup>1,2</sup>

			January–Fe	ry–February <sup>3</sup>	
		F.a.s. <sup>4</sup>		F.a.s. <sup>4</sup>	
	Gross weight	value	Gross weight	value	
Source	(metric tons)	(thousands)	(metric tons)	(thousands)	
Ore and concentrates with 20% or more manganese:					
China			(5)	\$5	
Mexico			2	6	
Netherlands	31	\$131	47	198	
Total	31	131	49	209	
Ferromanganese:					
2% or less carbon:					
Canada	701	1,160	830	1,360	
Israel			5	9	
Total	701	1,160	834	1,370	
More than 2% carbon:		-			
Argentina	5	14	8	23	
Brazil			21	59	
Canada	40	40	110	120	
Germany	(5)	4	(5)	4	
Malaysia			1	4	
Mexico	101	119	115	166	
Singapore			4	12	
United Arab Emirates	3	9	3	9	
United Kingdom	(5)	4	3	13	
Total	150	189	268	409	
Silicomanganese:					
Canada	934	1,280	1,570	2,150	
Georgia	128	120	128	120	
Total	1,060	1,400	1,700	2,270	
Metal, including alloys and waste and scrap: <sup>6</sup>					
Argentina			1	9	
Belgium	12	229	16	303	
Canada	1	7	1	7	
China	19	66	64	237	
India	149	41	255	69	
Japan	23	87	23	87	
Malaysia	351	105	468	227	
Mexico	(5)	9	2	18	
South Africa	92	80	92	80	
United Kingdom			4	45	
Other (5 countries)			8	48	
Total	648	624	934	1,130	
Grand total	2,590	3,510	3,780	5,390	

-- Zero.

<sup>1</sup>Presentation of monthly data is based on the "January-February" 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 <sup>1</sup>/<sub>2</sub> unit.

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

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

Gross weight		Principal sources			Principal sources
STOBS Weight	Value <sup>3</sup>	and destinations: gross weight (metric tons);	Gross weight	Value <sup>3</sup>	and destinations: gross weight (metric tons)
(metric tons)	(thousands)	value <sup>3</sup> (thousands)	(metric tons)	(thousands)	value <sup>3</sup> (thousands)
1,260	\$987	South Africa 405; \$241	3,050	\$2,130	South Africa 1,550; \$752
			(4)	3	Canada (4); \$3
27	63	India 18; \$46	107	260	India 90; \$228
76	170	China 76; \$170	94	212	China 76; \$170
4,180	3,670	China 1,750; \$1,140	10,000	8,860	China 3,590; \$2,330
456	728	Canada 198; \$113	693	1,140	Canada 324; \$263
424	724	Poland 103; \$138	920	1,480	Canada 181; \$238
2	12	Canada 2; \$4	7	21	Canada 7; \$13
218	547	Belgium 127; \$305	357	1,000	Belgium 127; \$305
23	66	Belgium 19; \$40	45	124	Belgium 38; \$81
		-			
1,890	1,650	Canada 1,690; \$735	3,120	3,670	Canada 2,480; \$1,240
	(metric tons) 	(metric tons)         (thousands)           1,260         \$987           1,260         \$987           27         63           76         170           4,180         3,670           4,180         3,670           424         728           424         724           2         12           218         547           23         66	(metric tons)         (thousands)         value <sup>3</sup> (thousands)           1,260         \$987         South Africa 405; \$241                27         63         India 18; \$46           76         170         China 76; \$170           4,180         3,670         China 1,750; \$1,140            456         728         Canada 198; \$113           424         724         Poland 103; \$138           2         12         Canada 2; \$4           218         547         Belgium 127; \$305           23         66         Belgium 19; \$40	(metric tons)         (thousands)         value <sup>3</sup> (thousands)         (metric tons)           1,260         \$987         South Africa 405; \$241         3,050              (4)           27         63         India 18; \$46         107           76         170         China 76; \$170         94           4,180         3,670         China 1,750; \$1,140         10,000            456         728         Canada 198; \$113         693           424         724         Poland 103; \$138         920           2         12         Canada 2; \$4         7           218         547         Belgium 127; \$305         357           23         66         Belgium 19; \$40         45	(metric tons)         (thousands)         value <sup>3</sup> (thousands)         (metric tons)         (thousands)           1,260         \$987         South Africa 405; \$241         3,050         \$2,130              (4)         3           27         63         India 18; \$46         107         260           76         170         China 76; \$170         94         212           4,180         3,670         China 1,750; \$1,140         10,000         8,860            456         728         Canada 198; \$113         693         1,140           424         724         Poland 103; \$138         920         1,480           2         12         Canada 2; \$4         7         21           218         547         Belgium 127; \$305         357         1,000           23         66         Belgium 19; \$40         45         124

-- 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 <sup>1</sup>/<sub>2</sub> unit.