

# Mineral Industry Surveys

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## **MANGANESE IN AUGUST 2014**

Preliminary data for August 2014 indicated that domestic consumption of manganese ore containing more than 20% manganese, exclusive of that consumed at iron and steel plants, was 44,200 metric tons (t) (gross weight). This was a 7% increase compared with the revised amount consumed in July 2014 (41,100 t). Manganese ore consumption during the first 8 months of 2014 was 306,000 t, or 17% less than that consumed during the same period of 2013. This decrease in manganese ore consumption was primarily the result of limited production at Felman Production, LLC's silicomanganese production facility in Letart, WV. Industry stocks of ore at the end of August 2014

were estimated to be 198,000 t, which was a 4% decrease from the revised amount at the end of July 2014 (207,000 t).

Included in this Mineral Industry Surveys are U.S. spot market prices and U.S. foreign trade data for selected manganese-containing materials in August 2014.

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TABLE 1
PRICES FOR MANGANESE FERROALLOYS, METAL, AND ORE IN AUGUST 2014

					Average low,
		High	Low	Average	mid, and high
Manganese ferroalloys: <sup>1</sup>					_
High-carbon ferromanganese, 75% manganese	dollars per long ton of contained manganese	1,060.00	1,040.00	1,050.00	XX
Medium-carbon ferromanganese, 85% manganese	cents per pound of contained manganese	97.50	95.50	96.56	XX
Silicomanganese, 65% manganese	do.	60.00	57.00	57.88	XX
Manganese metal, 99.9% manganese flake <sup>2</sup>	cents per pound	130.00	120.00	XX	120.22-122.89-125.56
Manganese ore: <sup>3, 4</sup>					
36%–39% manganese	dollars per metric ton unit contained manganese	3.90	3.80	XX	3.80-3.85-3.90
44% manganese	do.	4.40	4.30	XX	4.30-4.35-4.40
46% manganese	do.	4.80	4.55	XX	4.55-4.68-4.80

do. Ditto. XX Not applicable.

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

<sup>&</sup>lt;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>&</sup>lt;sup>3</sup>CRU Ryan's Notes, cost and freight, China; average prices reported for the price range.

<sup>&</sup>lt;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%.

 $\label{eq:table 2} \textbf{TABLE 2}$  SELECTED U.S. FOREIGN TRADE IN MANGANESE  $^1$ 

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

	Impo	rts for consump	tion		Exports	
	Ore and	and Ferroalloy				
	dioxide	and metal	Total	Ore	and metal	Total
2013:						
August	36,600	36,600	73,200	84	368	452
January-August	171,000	362,000	533,000	217	6,110	6,330
2014:						
January	6,510	32,200	38,700	21	1,130	1,150
February	28,000	61,500	89,500	202	1,100	1,310
March	1,910	46,400	48,300	1	1,010	1,020
April	19,100	52,100	71,100	23	464	487
May	27,500	74,700	102,000	31	749	780
June	6,740	48,400	55,200	19	346	366
July	37,100	37,900	75,000	9	965	974
August	19,500	75,800	95,300	54	887	940
January-August	146,000	429,000	575,000	359	6,660	7,020

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

Source: U.S. Census Bureau.

 ${\it TABLE~3} \\ {\it U.S.~IMPORTS~FOR~CONSUMPTION~OF~SILICOMANGANESE~IN~AUGUST~2014}^1$ 

(Metric tons)

				January–August		
	Gross	Mn	Customs	Gross	Mn	Customs
Source	weight	content	value <sup>2</sup>	weight	content	value <sup>2</sup>
Australia	7,810	5,180	\$8,960,000	56,500	37,600	\$60,900,000
Bahrain	999	649	1,150,000	4,000	2,600	4,540,000
Brazil				7,550	4,980	7,760,000
China				400	302	564,000
Georgia	8,220	5,920	9,390,000	95,500	66,400	100,000,000
Hong Kong				1	1	3,700
India	297	187	482,000	2,600	1,640	3,920,000
Indonesia				1,790	1,180	1,830,000
Korea, Republic of				20	13	20,500
Mexico	6,360	4,150	6,540,000	24,900	16,200	25,600,000
Norway	5,940	3,640	9,320,000	29,300	18,800	38,000,000
Russia	10	5	13,300	548	381	646,000
Saudi Arabia				6,030	3,920	6,170,000
South Africa	24,100	15,700	26,700,000	90,500	59,400	95,300,000
Spain				1,720	1,120	2,060,000
Total	53,800	35,400	62,500,000	321,000	214,000	348,000,000

<sup>--</sup> Zero.

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

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

<sup>&</sup>lt;sup>2</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.

 ${\bf TABLE~4} \\ {\bf U.S.~IMPORTS~FOR~CONSUMPTION~OF~FERROMANGANESE~IN~AUGUST~2014}^1$ 

## (Metric tons)

				January-August		
	Gross	Mn	Customs	Gross	Mn	Customs
Source	weight	content	value <sup>2</sup>	weight	content	value <sup>2</sup>
Low carbon:						
Canada	<del></del>			36	8	\$22,800
China	1,220	1,140	\$2,700,000	6,700	6,220	15,200,000
France				19	15	48,300
Korea, Republic of				4,010	3,610	8,430,000
Norway	1,900	1,540	2,930,000	12,400	10,000	18,800,000
South Africa	76	72	197,000	1,770	1,680	4,210,000
Total	3,200	2,750	5,820,000	24,900	21,500	46,600,000
Medium carbon, 1%–2% C:						
China				100	76	244,000
India				1	1	3,250
Korea, Republic of				11,000	8,880	15,200,000
Mexico	473	359	922,000	1,340	1,020	2,720,000
Norway	800	650	1,090,000	9,080	7,380	11,700,000
South Africa				12,100	9,760	17,300,000
Total	1,270	1,010	2,020,000	33,600	27,100	47,200,000
Medium carbon, 2%–4% C:						
Brazil				135	100	123,000
China				1	(3)	3,300
Total				136	100	126,000
High carbon:	= -					
Australia	9,110	6,830	8,420,000	41,700	31,500	34,500,000
Brazil	108	74	70,000	1,380	993	1,150,000
Canada	19	12	29,000	145	93	209,000
France	<del></del>			662	503	609,000
Korea, Republic of	<del></del>			519	395	548,000
Macedonia	<del></del>			152	114	141,000
Saudi Arabia				503	377	483,000
South Africa	36,000	27,200	34,500,000	136,000	104,000	126,000,000
Spain	<del></del>			96	73	99,200
Ukraine		12	25,000	3,160	2,440	3,060,000
Total	45,200	34,100	43,100,000	185,000	140,000	167,000,000
Grand total	49,700	37,900	50,900,000	243,000	189,000	261,000,000

<sup>--</sup> Zero.

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

<sup>&</sup>lt;sup>2</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>&</sup>lt;sup>3</sup>Less than ½ unit.

 ${\rm TABLE~5}$  U.S. IMPORTS FOR CONSUMPTION OF MANGANESE ORE (20% OR MORE Mn) IN AUGUST 2014  $^1$ 

#### (Metric tons)

				January–August		
	Gross	Mn	Customs	Gross	Mn	Customs
Source	weight	content	value <sup>2</sup>	weight	content	value <sup>2</sup>
More than 20%, but less than 47% manganese:						
China				11	5	\$6,120
Gabon				40,600	16,500	6,690,000
Mexico	3,020	1,090	\$600,000	6,380	2,340	1,370,000
Morocco				115	44	54,900
South Africa				40,000	16,100	5,650,000
Total	3,020	1,090	600,000	87,100	35,000	13,800,000
47% or more manganese:						
Australia				17,600	8,670	5,920,000
Belgium				2,890	1,440	173,000
Brazil	52	26	22,500	3,060	1,630	1,340,000
Gabon	32,800	17,300	8,150,000	179,000	91,300	41,900,000
Morocco				1,620	808	97,000
Netherlands				5	4	5,760
South Africa	60	29	30,600	1,460	1,110	1,350,000
Total	32,900	17,300	8,200,000	205,000	105,000	50,800,000
Grand total	35,900	18,400	8,800,000	293,000	140,000	64,600,000

<sup>--</sup> Zero.

Source: U.S. Census Bureau.

TABLE 6 U.S. IMPORTS FOR CONSUMPTION OF MANGANESE DIOXIDE IN AUGUST  $2014^1$ 

(Metric tons, gross weight)

			January-	-August	
		Customs		Customs	
Source	Quantity	value <sup>2</sup>	Quantity	value <sup>2</sup>	
Belgium			223	\$123,000	
Bolivia			9	14,500	
Brazil			18	20,300	
China	120	\$95,000	181	152,000	
Germany			15	33,300	
Japan	469	1,110,000	4,190	9,730,000	
Netherlands	<del></del>		80	34,000	
Singapore	12	20,200	107	182,000	
South Africa	1,090	2,500,000	4,790	10,400,000	
Spain	84	35,300	153	63,000	
Turkey			866	423,000	
Total	1,770	3,770,000	10,600	21,100,000	

<sup>--</sup> Zero.

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

<sup>&</sup>lt;sup>2</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.

 $<sup>^{1}\</sup>mbox{Data}$  rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>2</sup>Customs value generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, U.S. import duties, freight, insurance, and other charges incurred in bringing the material into the United States.

 ${\it TABLE~7} \\ {\it U.S.~IMPORTS~FOR~CONSUMPTION~OF~MANGANESE~METAL~IN~AUGUST~2014}^1$ 

## (Metric tons)

			January	–August
	Gross	Customs	Gross	Customs
Source	weight	value <sup>2</sup>	weight	value <sup>2</sup>
Unwrought flake:				
China	826	\$1,640,000	5,880	\$11,800,000
Hong Kong			60	130,000
Japan	34	117,000	306	1,040,000
Mexico	9	29,900	193	643,000
South Africa	730	1,910,000	6,320	16,600,000
Total	1,600	3,700,000	12,800	30,200,000
Unwrought powder:				
China	79	134,000	139	267,000
Mexico	2	8,170	3	16,300
South Africa	238	821,000	1,650	5,710,000
Total	318	963,000	1,790	5,990,000
Unwrought, other:				
Belgium	<del></del>		3	7,520
China	441	1,110,000	8,860	20,400,000
Germany	7	19,100	85	158,000
Mexico			16	53,900
Netherlands	<del></del>		38	91,700
Poland	<del></del>		(3)	4,320
South Africa	58	142,000	327	932,000
Spain	<del></del>		1	2,400
Total	506	1,280,000	9,330	21,700,000
Other manganese, wrought:	<u> </u>			
China			(3)	2,370
Germany	14	183,000	62	831,000
India	<del></del>		7	22,700
Japan			(3)	11,100
Korea, Republic of			1,010	2,700,000
Malaysia			(3)	2,400
Mexico	4	13,100	29	114,000
Netherlands	(3)	2,000	(3)	2,000
Poland			(3)	2,080
Total	19	198,000	1,110	3,690,000
Metallic waste and scrap, Canada	104	57,000	1,060	659,000
Grand total	2,550	6,200,000	26,000	62,200,000

<sup>--</sup> Zero.

 $<sup>^{1}\</sup>mathrm{Data}$  rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>2</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>&</sup>lt;sup>3</sup>Less than ½ unit.

# TABLE~8 U.S. EXPORTS OF MANGANESE ORE (20% OR MORE Mn), FERROMANGANESE, SILICOMANGANESE, AND MANGANESE METAL BY COUNTRIES OF DESTINATION IN AUGUST 2014 $^{1,\,2}$

		T 3	Januar	y–August
		F.a.s. <sup>3</sup>		F.a.s. <sup>3</sup>
_	Gross weight	value	Gross weight	value
Source	(metric tons)	(thousands)	(metric tons)	(thousands)
Ore and concentrates with 20% or more manganese:			2	<b>#12</b>
Argentina			3	\$13
Canada			398	841
China	<del></del>		19	17
Dominican Republic	9	\$21	9	21
Hungary	16	13	16	13
Malaysia			6	8
Mexico	3	3	10	26
Netherlands	61	234	202	821
Poland	18	20	35	42
United Kingdom			20	17
Total	107	291	719	1,820
Ferromanganese:				
2% or less carbon:				
Canada	389	584	3,640	5,340
Finland			20	36
Japan	<del></del>		119	211
Mexico	54	104	54	104
Qatar	3	5	6	11
Spain	40	77	80	158
Turkey			40	84
Other (5 countries)	<del></del>		46	92
Total	486	770	4,000	6,040
More than 2% carbon:			, , , , , , , , , , , , , , , , , , , ,	
Angola	<del></del>		7	18
Brazil		13	10	27
Canada		34	291	393
Chile			48	134
Equatorial Guinea			37	101
Ghana	3	11	8	26
Singapore	15	43	21	60
Other (8 countries)	4	12	67	135
Total	49	112	488	894
Silicomanganese:		112	400	074
Canada	38	46	645	808
France		40	391	555
Mexico			67	
				141
Total 4	38	46	1,100	1,500
Metal, including alloys and waste and scrap: <sup>4</sup>		40	47	122
Canada		48	47	132
China	4	43	69	939
Germany	<del></del>		76	315
India	5	66	25	80
Japan	4	14	48	165
Malaysia	356	156	1,770	984
Mexico	42	136	118	457
Philippines			36	19
United Kingdom			20	73
Vietnam	<u></u>		102	36
Other (8 countries)	12	46	65	1,160
Total	439	510	2,380	4,360
Grand total	1,120	1,730	8,690	14,600

<sup>--</sup> Zero.

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

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

<sup>&</sup>lt;sup>3</sup>Free alongside ship.

<sup>&</sup>lt;sup>4</sup>Includes manganese-aluminum, other alloys, and waste and scrap.

TABLE 9 U.S. FOREIGN TRADE IN SELECTED MANGANESE CHEMICALS IN AUGUST 2014, BY  ${\rm CLASS}^1$ 

					Janua	ry–August
	Gross weight	Value <sup>2</sup>	Principal sources and destinations: gross weight (metric tons);	Gross weight	Value <sup>2</sup>	Principal sources and destinations: gross weight (metric tons);
Class	(metric tons)	(thousands)	value <sup>2</sup> (thousands)	(metric tons)	(thousands)	value <sup>2</sup> (thousands)
Imports for consumption:	(metric tons)	(thousands)	varue (mousunus)	(metric tons)	(inousunus)	varue (mousanus)
Manganese oxides other than dioxide	512	\$406	Korea, Republic of 323; \$228	4,660	\$3,970	Korea, Republic of 2,970; \$1,97
Manganites, manganates, and			•			*
other permanganates				14	32	Korea, Republic of 14; \$27
Potassium permanganate	136	394	India 136; \$394	1,120	3,200	India 1,120; \$3,190
Sodium permanganate	171	381	China 171; \$381	1,560	3,620	China 1,510; \$3,480
Sulfates, basket category,						
including manganese sulfate	3,520	2,890	Mexico 1,470; \$1,190	36,400	29,200	Mexico 12,100; \$10,600
Exports:						
Manganese dioxide	476	675	Netherlands 168; \$201	2,750	5,620	Canada 1,230; \$1,140
Manganese oxides other than dioxide	1,120	2,080	Malaysia 259; \$333	7,820	11,800	Netherlands 1,550; \$1,320
Manganites, manganates, and						
other permanganates	8	34	Canada 6; \$14	116	353	Canada 75; \$180
Potassium permanganate	419	1,170	Belgium 245; \$598	2,740	7,430	Belgium 1,610; \$4,050
Sodium permanganate	76	170	Belgium 74; \$157	759	2,200	Belgium 394; \$910
Sulfates, basket category,						
including manganese sulfate	2,010	2,100	Canada 1,150; \$678	12,300	13,600	Canada 8,890; \$5,270

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits.
<sup>2</sup>For imports, customs value; for exports, free alongside ship value.