

# Mineral Industry Surveys

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# **MANGANESE IN SEPTEMBER 2014**

Preliminary data for September 2014 indicated that domestic consumption of manganese ore containing more than 20% manganese, exclusive of that consumed at iron and steel plants, was 58,900 metric tons (t) (gross weight). This was a 33% increase compared with the amount consumed in August 2014. Manganese ore consumption during the first 9 months of 2014 was 365,000 t, or 10% less than the revised amount consumed during the same period of 2013 (405,000 t). This increase in manganese ore consumption was primarily the result of resumed production at Felman Production, LLC's silicomanganese production facility in Letart, WV. Industry stocks of ore at the

end of September 2014 were estimated to be 168,000 t, which was a 15% decrease from those at the end of August 2014.

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

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

		High	Low	Average	Average low, 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	96.50	97.00	XX
Silicomanganese, 65% manganese	do.	58.00	57.00	57.50	XX
Manganese metal, 99.9% manganese flake <sup>2</sup>	cents per pound	131.00	122.00	XX	123.56-127.00-130.44
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	orts for consump	tion		Exports		
	Ore and	Ferroalloy			Ferroalloy		
	dioxide	and metal	Total	Ore	and metal	Total	
2013:							
September	50,000	39,200	89,200	12	204	216	
January-September	221,000	401,000	622,000	229	6,310	6,540	
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	
September	17,100	34,900	52,000		858	858	
January-September	163,000	464,000	627,000	359	7,510	7,870	

<sup>--</sup> Zero.

Source: U.S. Census Bureau.

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

## (Metric tons)

				January–September			
	Gross	Mn	Customs	Gross	Mn	Customs	
Source	weight	content	value <sup>2</sup>	weight	content	value <sup>2</sup>	
Australia				56,500	37,600	\$60,900,000	
Bahrain				4,000	2,600	4,540,000	
Brazil	75	50	\$72,200	7,620	5,030	7,830,000	
China				400	302	564,000	
Georgia	9,300	6,480	9,930,000	105,000	72,900	110,000,000	
Hong Kong				1	1	3,700	
India				2,600	1,640	3,920,000	
Indonesia	46	30	48,800	1,840	1,210	1,880,000	
Korea, Republic of				20	13	20,500	
Mexico	3,000	1,960	3,080,000	27,900	18,200	28,600,000	
Norway	3,840	2,310	6,070,000	33,200	21,100	44,100,000	
Russia				548	381	646,000	
Saudi Arabia				6,030	3,920	6,170,000	
South Africa	1,600	1,040	1,680,000	92,100	60,400	97,000,000	
Spain				1,720	1,120	2,060,000	
Zambia	100	66	113,000	100	66	113,000	
Total	18,000	11,900	21,000,000	339,000	226,000	368,000,000	

<sup>--</sup> Zero.

<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>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.

TABLE 4 U.S. IMPORTS FOR CONSUMPTION OF FERROMANGANESE IN SEPTEMBER  $2014^{\rm l}$ 

### (Metric tons)

				Ja	nuary–Septer	nber
	Gross	Mn	Customs	Gross	Mn	Customs
Source	weight	content	value <sup>2</sup>	weight	content	value <sup>2</sup>
Low carbon:						
Canada	29	4	\$12,000	65	12	\$34,800
China	109	103	225,000	6,810	6,320	15,400,000
France				19	15	48,300
Korea, Republic of				4,010	3,610	8,430,000
Norway	3,150	2,550	4,890,000	15,500	12,600	23,600,000
South Africa	346	328	779,000	2,120	2,000	4,990,000
Total	3,630	2,990	5,910,000	28,500	24,500	52,500,000
Medium carbon, 1%–2% C:						
China	80	61	195,000	180	137	440,000
India	<del></del>			1	1	3,250
Korea, Republic of	<del></del>			11,000	8,880	15,200,000
Mexico	92	73	227,000	1,430	1,090	2,950,000
Norway	1,000	819	1,380,000	10,100	8,200	13,100,000
South Africa	4,110	3,250	5,420,000	16,200	13,000	22,800,000
Total	5,280	4,200	7,220,000	38,900	31,300	54,400,000
Medium carbon, 2%–4% C:						
Brazil	<del></del>			135	100	123,000
China	<del></del>			1	-3	3,300
Total				136	100	126,000
High carbon:						
Australia				41,700	31,500	34,500,000
Brazil				1,380	993	1,150,000
Canada				145	93	209,000
France				662	503	609,000
Korea, Republic of				519	395	548,000
Macedonia				152	114	141,000
Saudi Arabia				503	377	483,000
South Africa	16,700	12,900	15,800,000	153,000	117,000	142,000,000
Spain	120	91	121,000	216	164	220,000
Ukraine	57	36	79,800	3,210	2,480	3,140,000
Total	16,900	13,000	16,000,000	201,000	153,000	183,000,000
Grand total	25,800	20,200	29,100,000	269,000	209,000	290,000,000

<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.

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

## (Metric tons)

				January–September		
	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				6,380	2,340	1,370,000
Morocco				115	44	54,900
South Africa				40,000	16,100	5,650,000
Total				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				3,060	1,630	1,340,000
Gabon	33,000	16,500	\$7,060,000	212,000	108,000	49,000,000
Ivory Coast	18	16	19,400	18	16	19,400
Morocco	39	34	51,100	1,660	842	148,000
Netherlands	2	2	9,740	7	5	15,500
South Africa				1,460	1,110	1,350,000
Total	33,100	16,600	7,140,000	239,000	122,000	57,900,000
Grand total	33,100	16,600	7,140,000	326,000	157,000	71,700,000

<sup>--</sup> Zero.

Source: U.S. Census Bureau.

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

(Metric tons, gross weight)

			January–S	eptember	
		Customs		Customs	
Source	Quantity	value <sup>2</sup>	Quantity	value <sup>2</sup>	
Belgium	10	\$40,100	233	\$163,000	
Bolivia			9	14,500	
Brazil			18	20,300	
China			181	152,000	
Colombia	4	8,530	4	8,530	
Germany			15	33,300	
India	(2)	2,890	(2)	2,890	
Japan	300	679,000	4,490	10,400,000	
Netherlands			80	34,000	
Singapore	12	20,200	119	202,000	
South Africa	570	1,340,000	5,360	11,700,000	
Spain		37,900	176	101,000	
Turkey			866	423,000	
Total	918	2,130,000	11,600	23,300,000	

<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>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, U.S. import duties, freight, insurance, and other charges incurred in bringing the material into the United States.

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

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

## (Metric tons)

			January-	September
	Gross	Customs	Gross	Customs
Source	weight	value <sup>2</sup>	weight	value <sup>2</sup>
Unwrought flake:				
China	990	\$2,020,000	6,870	\$13,800,000
Hong Kong			60	130,000
Japan	15	52,700	322	1,100,000
Mexico	20	60,600	213	704,000
South Africa	811	2,000,000	7,130	18,600,000
Total	1,840	4,130,000	14,600	34,300,000
Unwrought powder:				
China	50	98,600	188	365,000
Mexico			3	16,300
South Africa	179	580,000	1,830	6,290,000
Total	229	679,000	2,020	6,670,000
Unwrought, other:				
Belgium			3	7,520
China	637	1,540,000	9,500	21,900,000
Germany	10	22,600	94	181,000
Mexico			16	53,900
Netherlands	19	45,000	57	137,000
Poland			(3)	4,320
South Africa	19	50,400	346	983,000
Spain	9	19,200	10	21,600
Total	694	1,680,000	10,000	23,300,000
Other manganese, wrought:				
China			(3)	2,370
Germany	(3)	11,100	62	842,000
India			7	22,700
Japan	(3)	4,110	(3)	15,200
Korea, Republic of			1,010	2,700,000
Malaysia			(3)	2,400
Mexico	9	30,800	38	145,000
Netherlands			(3)	2,000
Poland			(3)	2,080
Total	9	46,000	1,120	3,740,000
Metallic waste and scrap, Canada	60	25,900	1,120	685,000
Grand total	2,830	6,560,000	28,900	68,800,000

<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 SEPTEMBER 2014  $^{1,2}$ 

			January–September		
		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:					
Argentina			3	\$13	
Canada			398	841	
China			19	17	
Dominican Republic			9	21	
Hungary			16	13	
Malaysia			6	8	
Mexico			10	26	
Netherlands			202	821	
Poland			35	42	
United Kingdom			20	17	
Total			719	1,820	
Ferromanganese:					
2% or less carbon:					
Canada	280	\$427	3,920	5,770	
Finland			20	36	
Japan			119	211	
Mexico	19	52	73	157	
Qatar			6	11	
Spain			80	158	
Turkey			40	84	
Other (5 countries)			46	92	
Total	299	479	4,300	6,520	
More than 2% carbon:					
Austria			7	20	
Brazil			10	27	
Canada	61	88	352	480	
Chile			48	134	
Equatorial Guinea			37	101	
Ghana	1	6	9	31	
Singapore	14	38	35	98	
Other (9 countries)	10	28	77	161	
Total	87	160	575	1,050	
Silicomanganese:					
Canada	55	70	700	878	
France			391	555	
India	160	127	160	127	
Mexico	<del></del> _		67	141	
Total	214	197	1,320	1,700	
Metal, including alloys and waste and scrap: <sup>4</sup>					
Canada			47	132	
China	8	121	76	1,060	
Germany			76	315	
India			25	80	
Japan	<del></del>		48	165	
Malaysia	262	113	2,040	1,100	
Mexico	123	386	242	843	
Philippines			36	19	
Vietnam			102	36	
Other (9 countries)		836	104	2,060	
Total	411	1,460	2,790	5,810	
Grand total Zero.	1,010	2,290	9,710	16,900	

<sup>--</sup> Zero

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

 $<sup>^2\</sup>mbox{Data}$  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 SEPTEMBER 2014, BY CLASS<sup>1</sup>

					January-	-September
			Principal sources			Principal sources
			and destinations:			and destinations:
	Gross weight	Value <sup>2</sup>	gross weight (metric tons);	Gross weight	Value <sup>2</sup>	gross weight (metric tons);
Class	(metric tons)	(thousands)	value <sup>2</sup> (thousands)	(metric tons)	(thousands)	value <sup>2</sup> (thousands)
Imports for consumption:						
Manganese oxides other than dioxide	1,340	\$1,070	Korea, Republic of 1,170; \$849	5,990	\$5,040	Korea, Republic of 4,130; \$2,82
Manganites, manganates, and						
other permanganates				14	32	Korea, Republic of 14; \$27
Potassium permanganate	126	350	India 126; \$350	1,250	3,550	India 1,240; \$3,540
Sodium permanganate	97	227	China 97; \$227	1,650	3,850	China 1,600; \$3,710
Sulfates, basket category,						
including manganese sulfate	4,090	3,140	China 1,480; \$1,230	40,500	32,300	Mexico 13,300; \$11,600
Exports:						
Manganese dioxide	238	461	Canada 117; \$127	2,990	6,080	Canada 1,340; \$1,270
Manganese oxides other than dioxide	651	1,160	Norway 190; \$226	8,470	13,000	Netherlands 1,570; \$1,360
Manganites, manganates, and						
other permanganates	6	30	Canada 5; \$11	122	384	Canada 79; \$191
Potassium permanganate	401	1,020	Belgium 176; \$424	3,140	8,450	Belgium 1,790; \$4,480
Sodium permanganate	19	46	Mexico 19; \$46	778	2,250	Belgium 394; \$910
Sulfates, basket category,						
including manganese sulfate	1,370	1,160	Canada 1,220; \$659	13,600	14,700	Canada 10,100; \$5,930

<sup>--</sup> Zero.

<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.