

# Mineral Industry Surveys

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## MANGANESE IN JANUARY 2011

Preliminary reported data (gross weight) for January 2011 indicate that consumption of manganese ore containing 35% or more manganese, exclusive of that consumed at iron and steel plants, was 39,300 metric tons (t), according to the U.S. Geological Survey. This was slightly more than the amount consumed in December 2010, and 8% more than that consumed in January 2010. Industry stocks of ore at the end of January 2011 were 207,000 t, which was a slight increase from those at the end of December 2010.

Data for U.S. manganese imports and exports for December 2010 are published in this issue. On a contained-weight basis, U.S. imports of manganese ore plus dioxide and manganese ferroalloys plus metal were 38% lower and 16% higher, respectively, than those in November 2010. U.S. imports of

manganese ore plus dioxide and manganese ferroalloys plus metal during 2010 were 63% higher and 116% higher, respectively, than those during 2009 (table 1).

On a contained-weight basis, U.S. manganese ore and manganese ferroalloys plus metal exports for December 2010 were 87% lower and 81% lower, respectively, than those in November 2010. U.S. exports of manganese ore and manganese ferroalloys plus metal during 2010 were 9% lower and 28% lower, respectively, than those during 2009 (table 1).

**Prices**

Prices for manganese materials in January 2011, manganese content, are listed below.

**Ferroalloys prices<sup>1</sup>**

	<u>Price Range</u>	<u>Average Price</u>
High-carbon ferromanganese <sup>2</sup>	1,285.00-1,350.00	1,321.88
Medium-carbon ferromanganese <sup>3</sup>	117.00-119.00	118.00
Silicomanganese <sup>3</sup>	57.00-62.00	59.88

**Manganese metal and ore prices<sup>4</sup>**

	<u>Price Range</u>	<u>Average Low, Mid, and High Prices</u>
Manganese metal <sup>3</sup>	177.00-180.00	177.00-178.50-180.00
36%-39% Manganese ore <sup>5</sup>	5.00-5.60	5.00-5.30-5.60
44% Manganese ore <sup>5</sup>	5.70-6.20	5.70-5.95-6.20
48% Manganese ore <sup>5</sup>	6.50-6.80	6.50-6.65-6.80

<sup>1</sup>Source: Platts Metals Week, dealer import price; average prices reported for all transactions during the month.

<sup>2</sup>Dollars per gross ton.

<sup>3</sup>Cents per pound.

<sup>4</sup>Source: Ryan's Notes, cost and freight, China; average prices reported for the price range.

<sup>5</sup>Dollars per metric ton unit, contained manganese. To determine dollars per metric ton of ore (gross weight), multiply the manganese content percentage by the price; that is, by 48 when the manganese content is 48%.

TABLE 1  
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
2009:						
December	1,730	37,500	39,300	129	1,990	2,120
January-December	165,000	227,000	391,000	7,640	34,600	42,300
2010:						
January	782	34,600	35,400	51	992	1,040
February	75,800	37,800	114,000	159	1,400	1,560
March	14,600	42,300	56,900	820	1,540	2,360
April	18,000	33,600	51,600	113	1,290	1,410
May	31,800	33,900	65,700	864	1,010	1,880
June	11,100	49,400	60,500	54	1,140	1,200
July	26,900	59,300	86,200	4,390	591	4,980
August	2,570	52,100	54,700	95	3,120	3,210
September	24,500	30,700	55,200	92	2,040	2,140
October	26,400	34,400	60,800	84	2,130	2,210
November	21,800	37,600	59,400	219	8,130	8,350
December	13,500	43,700	57,200	28	1,540	1,570
Total	268,000	489,000	757,000	6,970	24,900	31,900

<sup>1</sup>Data 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 2  
U.S. IMPORTS FOR CONSUMPTION OF SILICOMANGANESE IN DECEMBER 2010<sup>1</sup>

(Metric tons)

Source	Gross weight	Mn content	Customs value <sup>2</sup>	Year to date		
				Gross weight	Mn content	Customs value <sup>2</sup>
Australia	2,650	1,760	\$2,520,000	31,200	20,700	\$32,700,000
Bahrain	--	--	--	1,140	760	1,480,000
Canada	--	--	--	52	31	44,700
China	--	--	--	35	23	54,100
Georgia	11,900	7,740	14,700,000	79,200	54,300	98,100,000
India	78	43	124,000	884	491	1,510,000
Macedonia	--	--	--	986	657	1,310,000
Mexico	1,000	654	1,190,000	12,500	8,180	14,700,000
Norway	2,030	1,260	3,440,000	38,300	23,900	61,600,000
Russia	--	--	--	2,050	1,350	2,310,000
Saudi Arabia	--	--	--	2,540	1,670	2,990,000
South Africa	4,550	3,020	4,700,000	122,000	81,500	145,000,000
Spain	1,570	956	3,470,000	5,560	3,370	10,900,000
Vietnam	--	--	--	40	26	60,100
Total	23,800	15,400	30,200,000	297,000	197,000	373,000,000

-- Zero.

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

<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.

Source: U.S. Census Bureau.

TABLE 3  
U.S. IMPORTS FOR CONSUMPTION OF FERROMANGANESE IN DECEMBER 2010<sup>1</sup>

(Metric tons)

Source	Gross weight	Mn content	Customs value <sup>2</sup>	Year to date		
				Gross weight	Mn content	Customs value <sup>2</sup>
<b>Low carbon:</b>						
China	610	526	\$1,570,000	21,700	19,000	\$55,100,000
Korea, Republic of	--	--	--	3,000	2,420	6,760,000
Mexico	1,400	1,140	2,990,000	10,200	8,200	21,100,000
Netherlands	--	--	--	220	178	429,000
Norway	200	163	419,000	3,810	3,090	7,830,000
South Africa	--	--	--	23	21	69,800
Vietnam	--	--	--	578	541	1,550,000
Total	2,210	1,830	4,980,000	39,500	33,500	92,800,000
<b>Medium carbon, 1%-2% C:</b>						
China	40	32	98,700	11,100	8,890	20,300,000
India	--	--	--	1,110	875	2,340,000
Korea, Republic of	--	--	--	12,400	9,920	27,100,000
Mexico	158	122	393,000	11,300	8,970	22,900,000
Netherlands	--	--	--	48	39	118,000
Norway	--	--	--	18,500	14,900	34,600,000
Russia	--	--	--	18	14	46,300
South Africa	4,870	3,710	6,610,000	31,200	24,700	55,000,000
Spain	--	--	--	99	80	146,000
Total	5,070	3,870	7,100,000	85,900	68,400	163,000,000
<b>Medium carbon, 2%-4% C:</b>						
Brazil	--	--	--	1	1	2,780
China	--	--	--	60	32	114,000
South Africa	18	17	48,100	180	166	464,000
Switzerland	--	--	--	50	39	49,100
Total	18	17	48,100	291	238	629,000
<b>High carbon:</b>						
Australia	--	--	--	4,040	3,140	4,200,000
Bahrain	--	--	--	300	229	360,000
Brazil	--	--	--	1,100	829	1,340,000
France	5,000	3,440	6,180,000	15,700	11,200	19,000,000
India	--	--	--	198	147	233,000
Kazakhstan	--	--	--	1,450	1,100	1,620,000
Korea, Republic of	--	--	--	1,500	1,130	1,800,000
Mexico	--	--	--	8	6	14,600
Norway	3,500	2,740	3,900,000	12,700	9,980	14,200,000
Russia	--	--	--	649	473	659,000
South Africa	10,000	7,810	12,000,000	120,000	93,100	144,000,000
Ukraine	6,470	5,070	7,310,000	40,300	31,600	47,100,000
Venezuela	--	--	--	1,000	750	1,450,000
Zambia	--	--	--	1,490	1,050	1,600,000
Total	25,000	19,100	29,400,000	200,000	155,000	237,000,000
Grand total	32,300	24,800	41,500,000	326,000	257,000	493,000,000

-- Zero.

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

<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.

Source: U.S. Census Bureau.

TABLE 4  
U.S. IMPORTS FOR CONSUMPTION OF MANGANESE ORE (20% OR MORE Mn) IN DECEMBER 2010<sup>1,2</sup>

(Metric tons)

Source	Gross weight	Mn content	Customs value <sup>3</sup>	Year to date		
				Gross weight	Mn content	Customs value <sup>3</sup>
<b>More than 20%, but less than 47% manganese:</b>						
Gabon	--	--	--	16,800	7,480	\$2,320,000
Ghana	--	--	--	36,600	10,300	5,080,000
Mexico	--	--	--	2,920	1,050	687,000
South Africa	103	38	\$37,100	77,400	30,300	9,490,000
Total	103	38	37,100	134,000	49,100	17,600,000
<b>47% or more manganese:</b>						
Australia	--	--	--	86,400	65,200	24,900,000
Brazil	--	--	--	6,780	3,440	2,520,000
China	--	--	--	707	481	637,000
Gabon	24,800	12,200	7,710,000	229,000	117,000	68,300,000
Georgia	--	--	--	12,400	8,610	13,000,000
Morocco	38	19	30,700	1,540	791	217,000
South Africa	--	--	--	18,000	9,850	6,010,000
Total	24,900	12,300	7,740,000	355,000	206,000	116,000,000
Grand total	25,000	12,300	7,780,000	489,000	255,000	133,000,000

-- Zero.

<sup>1</sup>Quantities for general imports and imports for consumption are identical.

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

<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 DIOXIDE IN DECEMBER 2010<sup>1</sup>

(Metric tons, gross weight)

Source	Quantity	Customs value <sup>2</sup>	Year to date	
			Quantity	Customs value <sup>2</sup>
Belgium	103	\$61,400	197	\$435,000
Brazil	--	--	1	2,240
China	--	--	41	20,200
Colombia	--	--	680	1,310,000
Germany	--	--	49	93,800
India	--	--	(3)	3,970
Japan	1,010	2,330,000	7,220	16,000,000
Korea, Republic of	--	--	(3)	4,260
Mexico	--	--	8	13,800
Morocco	--	--	45	28,800
Netherlands	--	--	246	145,000
Portugal	9	15,500	9	15,500
Singapore	--	--	133	226,000
South Africa	953	2,860,000	13,100	36,400,000
Spain	--	--	214	424,000
Total	2,070	5,270,000	21,900	55,100,000

-- Zero.

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

<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>3</sup>Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 6  
U.S. IMPORTS FOR CONSUMPTION OF MANGANESE METAL IN DECEMBER 2010<sup>1</sup>

(Metric tons)

Source	Gross weight	Customs value <sup>2</sup>	Year to date	
			Gross weight	Customs value <sup>2</sup>
<b>Unwrought flake:</b>				
China	662	\$1,820,000	13,400	\$33,300,000
Hong Kong	60	184,000	784	2,170,000
Japan	--	--	30	38,700
Mexico	2	7,120	7	28,500
South Africa	--	--	1,330	4,210,000
Vietnam	20	67,700	1,230	3,010,000
Total	744	2,070,000	16,800	42,700,000
<b>Unwrought powder:</b>				
China	--	--	260	783,000
Mexico	--	--	39	206,000
South Africa	318	1,110,000	3,240	11,200,000
Total	318	1,110,000	3,540	12,200,000
<b>Unwrought, other:</b>				
China	2,120	6,000,000	12,200	30,300,000
Germany	64	240,000	852	2,650,000
Hong Kong	--	--	132	339,000
Poland	--	--	(3)	6,990
South Africa	76	259,000	876	2,930,000
Spain	--	--	43	90,200
Ukraine	--	--	19	23,800
United Kingdom	--	--	167	582,000
Total	2,260	6,500,000	14,300	36,900,000
<b>Other manganese, wrought:</b>				
Canada	--	--	(3)	7,110
China	--	--	56	169,000
France	--	--	35	140,000
Mexico	82	442,000	477	2,620,000
Poland	(3)	3,980	(3)	8,880
South Africa	--	--	40	124,000
Switzerland	--	--	(3)	2,650
United Kingdom	--	--	8	30,700
Total	82	446,000	616	3,110,000
Grand total	3,400	10,100,000	35,300	94,900,000

-- Zero.

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

<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>3</sup>Less than ½ unit.

Note: Imports for consumption of metallic waste and scrap totaled 143 metric tons (t), all of which was from Canada, to give a year-to-date total of 786 t.

Source: U.S. Census Bureau.

TABLE 7  
U.S. EXPORTS OF MANGANESE ORE (20% OR MORE Mn), FERROMANGANESE, SILICOMANGANESE,  
AND MANGANESE METAL BY COUNTRIES OF DESTINATION IN DECEMBER 2010<sup>1</sup>

(Metric tons, gross weight)

Country	Manganese ore		Ferromanganese,				Silicomanganese		Manganese metal <sup>2</sup>	
	December	Year to date	2% or less C		More than 2% C		December	Year to date	December	Year to date
			December	Year to date	December	Year to date				
Australia	--	2	--	--	7	7	--	1	--	22
Belgium	20	427	--	--	--	--	--	240	--	192
Brazil	--	--	--	1,620	--	551	--	4	--	139
Canada	3	3,160	4	331	184	5,220	799	3,300	54	233
Chile	--	--	--	1,390	--	184	--	--	--	28
China	--	8,790	--	--	--	--	--	--	58	690
Colombia	--	1	--	21	--	--	--	--	--	--
Denmark	--	--	--	--	--	2	--	--	--	--
El Salvador	--	--	--	--	--	--	--	--	--	1
France	--	--	--	--	--	--	--	--	--	(3)
Germany	(3)	75	2	2	--	--	--	--	--	82
Guyana	--	--	--	--	--	--	--	--	--	2
Hong Kong	--	--	--	--	--	--	--	--	--	849
India	--	--	--	--	--	--	--	--	91	626
Indonesia	--	--	--	--	--	1	--	--	--	38
Ireland	--	--	--	--	1	20	--	--	--	--
Japan	--	--	--	--	--	--	--	--	57	311
Korea, Republic of	34	306	--	--	100	100	--	--	--	2
Luxembourg	--	--	--	--	--	--	--	--	--	3
Malaysia	--	102	--	--	4	8	--	--	--	5
Mexico	--	40	498	9,030	59	573	52	5,030	12	130
Norway	--	--	--	--	--	3	--	19	--	--
Pakistan	--	419	--	--	--	--	--	--	--	--
Romania	--	--	--	--	12	16	--	--	--	--
Russia	--	14	--	--	--	--	--	--	--	--
Singapore	--	--	--	--	--	37	--	--	--	--
Spain	--	8	--	--	--	--	--	60	--	--
Suriname	--	--	--	--	--	--	--	--	--	1
Taiwan	--	560	--	--	--	--	--	--	23	89
Trinidad and Tobago	--	7	--	--	--	--	--	279	--	--
Turkey	--	1	--	--	--	--	--	420	--	--
United Kingdom	--	40	--	--	--	--	--	--	--	1
Venezuela	--	--	--	--	--	1	--	--	--	--
Vietnam	--	--	--	--	--	--	--	--	--	217
Total	57	14,000	504	12,400	367	6,720	851	9,350	294	3,660

-- Zero.

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

<sup>2</sup>Includes manganese-aluminum, other alloys, and waste and scrap.

<sup>3</sup>Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 8  
U.S. FOREIGN TRADE IN SELECTED MANGANESE CHEMICALS IN DECEMBER 2010, BY CLASS<sup>1</sup>

Class	Gross weight (metric tons)	Value <sup>2</sup> (thousands)	Principal sources and destinations: gross weight (metric tons); value <sup>2</sup> (thousands)	Year to date		
				Gross weight (metric tons)	Value <sup>2</sup> (thousands)	Principal sources and destinations: gross weight (metric tons); value <sup>2</sup> (thousands)
<b>Imports for consumption:</b>						
Manganese oxides other than dioxide	671	\$658	Mexico 200; \$195	8,500	\$7,450	South Africa 3,240; \$2,300
Manganites, manganates, and other permanganates	--	--	--	18	101	Germany 17; \$62
Potassium permanganate	69	221	India 54; \$171	1,090	3,330	India 690; \$2,140
Sodium permanganate	20	47	China 20; \$47	550	1,260	China 548; \$1,250
Sulfates, basket category, including manganese sulfate	3,900	3,200	Mexico 1,740; \$1,260	41,400	40,400	Mexico 19,800; \$16,500
<b>Exports:</b>						
Manganese dioxide	435	508	Canada 311; \$323	8,990	14,700	Canada 4,090; \$4,220
Manganese oxides other than dioxide	531	1,020	Canada 150; \$95	7,650	12,900	Canada 2,530; \$2,090
Manganites, manganates, and other permanganates	15	39	Canada 15; \$39	104	454	Canada 101; \$257
Potassium permanganate	423	1,200	Belgium 285; \$802	3,260	9,370	Belgium 1,930; \$5,070
Sodium permanganate	103	235	Belgium 54; \$111	1,230	3,020	Singapore 421; \$1,140
Sulfates, basket category, including manganese sulfate	1,430	4,430	Canada 680; \$431	16,700	17,300	Canada 12,200; \$7,330

-- Zero.

<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.

Source: U.S. Census Bureau.