

Mineral Industry Surveys

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MANGANESE IN DECEMBER 2006

On a gross-weight basis, consumption of manganese ore containing 35% or more manganese, exclusive of that consumed at iron and steel plants, was 7,950 metric tons (t) in December 2006, which was a 31% decrease from those in November 2006, according to the U.S. Geological Survey. Corresponding industry stocks of ore at the end of the month were 173,000 t, which was a 6% decrease from that at the end of November 2006. These data include estimates for annual respondents on the basis of 2005 data.

Domestic consumption of manganese ore during the fourth quarter of 2006 was 52,500 t, which was a 31% decrease from that during the third quarter of 2006, and a 57% decrease from

the fourth quarter of 2005. Domestic consumption during the 2006 was 312,000 t, which was 25% lower than the revised consumption in 2005 (418,000 t).

The following comparisons of trade data were made on the basis of manganese content (table 1). The data for November 2006 tabulated in this report indicate that the total exports of 739 t were 31% less than those of the prior month, owing primarily to decreases in exports of ferromanganese. Manganese imports were 82,800 t, which was a decrease of 27% compared with those of October 2006. This decrease was primarily attributable to a decline in manganese ore imports.

Ferroalloy Prices, manganese content

	High-carbon ferromanganese ¹ (dollars per gross ton)	Medium-carbon ferromanganese ¹ (cents per pound)	Silicomanganese ¹ (cents per pound)	Manganese metal ² (cents per pound)
December 7	780.00-800.00	68.00-71.00	38.00-39.00	86.00-88.00
December 14	770.00-800.00	66.00-70.00	39.00-41.00	86.00-88.00
December 21	800.00-840.00	66.00-70.00	38.00-40.00	92.00-95.00
December 28	820.00-850.00	66.00-70.00	38.00-40.00	92.00-95.00

Ore Prices, dollars per metric ton unit, manganese content³

	44% Manganese Ore ²	48% Manganese Ore ²
December 7	2.30-2.40	2.70-2.80
December 14	2.30-2.40	2.70-2.80
December 21	2.30-2.40	2.70-2.80
December 28	2.30-2.40	2.70-2.80

¹Source: Platts Metals Week, dealer import price.

²Source: Ryan's Notes, North American transaction price.

³To determine dollars per metric ton, multiply the manganese content percentage by the price.

TABLE 1
SELECTED U.S. FOREIGN TRADE IN MANGANESE¹

(Metric tons, manganese content)²

	Imports for consumption			Exports		
	Ore and dioxide	Ferroalloy and metal	Total	Ore	Ferroalloy and metal	Total
2005:						
November	40,400	33,600	74,000	101	1,620	1,720
January-November	313,000	415,000	729,000 [†]	5,050	13,100	18,200
2006:						
January	20,300	25,600	45,900	46	1,710	1,760
February	27,500	52,800	80,200	87	1,170	1,260
March	4,970	47,400	52,300	63	1,660	1,720
April	30,300	34,800	65,200	25	661	686
May	7,140	46,300	53,400	40	609	648
June	26,800	52,600	79,400	101	753	853
July	39,300	44,400	83,700	95	11,200	11,300
August	5,710	54,400	60,100	36	838	874
September	18,000	49,400	67,400	201	488	689
October	49,000	64,500	114,000	157	921	1,080
November	30,500	52,400	82,800	133	606	739
Total	259,000	524,000	784,000	983	20,600	21,600

[†]Revised.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²As 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 NOVEMBER 2006¹

(Metric tons)

Source	Gross weight	Mn content	Customs value ²	Year to date		
				Gross weight	Mn content	Customs value ²
Australia	7,010	4,680	\$4,560,000	29,000	19,400	\$19,400,000
Austria	--	--	--	1,100	668	406,000
Canada	--	--	--	741	525	452,000
France	--	--	--	11	7	3,620
Georgia	11,000	8,070 ³	7,380,000	49,400	36,000	32,600,000
Korea, Republic of	--	--	--	13,000	8,330	9,920,000
Mexico	1,250	815	868,000	16,300	10,700	11,300,000
Netherlands	--	--	--	42	25	48,100
Norway	641	378	566,000	67,900	42,300	59,000,000
Romania	6,030	4,270	3,940,000	12,100	8,220	8,140,000
Russia	--	--	--	3,960	2,030	2,920,000
Saudi Arabia	--	--	--	7,510	4,820	4,370,000
South Africa	15,400	10,300	10,900,000	160,000	105,000	108,000,000
Total	41,300	28,500	28,300,000	361,000	238,000	257,000,000

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Customs 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.

³All or part of these data have been referred to the U.S. Census Bureau for verification.

Source: U.S. Census Bureau.

TABLE 3
U.S. IMPORTS FOR CONSUMPTION OF FERROMANGANESE IN NOVEMBER 2006¹

(Metric tons)

Source	Gross weight	Mn content	Customs value ²	Year to date		
				Gross weight	Mn content	Customs value ²
Low carbon:						
Canada	--	--	--	42	37	\$57,700
China	2,190	1,890	\$2,770,000	16,500	14,100	19,900,000
Japan	--	--	--	3,500	2,810	3,690,000
Korea, Republic of	--	--	--	9,310	7,670	9,420,000
Mexico	500	405	522,000	6,380	5,140	6,630,000
Norway	--	--	--	1,080	869	1,350,000
South Africa	134	124	205,000	2,750	2,520	4,040,000
Total, low carbon	2,820	2,420	3,500,000	39,600	33,100	45,100,000
Medium carbon, (m.c.) 1%-2% C:						
Brazil	--	--	--	1,540	1,230	1,480,000
Canada	--	--	--	143	114	163,000
China	1,300	1,040	1,410,000	9,620	7,770	9,440,000
Korea, Republic of	--	--	--	15,700	12,700	14,000,000
Mexico	907	727	647,000	12,100	9,700	8,920,000
Nauru	--	--	--	56	46	68,500
Norway	27	22	31,900	3,270	2,690	3,830,000
South Africa	2,000	1,630	2,170,000	28,400	23,100	24,000,000
Spain	--	--	--	36	29	37,100
Total, m.c., 1%-2% C	4,230	3,420	4,250,000	70,800	57,300	61,900,000
Medium carbon, 2%-4% C:						
Brazil	--	--	--	19	14	19,300
Georgia	--	--	--	1,470	1,160	637,000
Total, m.c., 2%-4% C	--	--	--	1,490	1,170	657,000
High carbon:						
Australia	--	--	--	4,000	3,090	2,240,000
Brazil	--	--	--	9,200	7,220	5,590,000
Canada	--	--	--	97	58	61,200
China	9,950	7,610	7,000,000	28,000	21,300	19,400,000
France	--	--	--	1,500	1,170	764,000
Hong Kong	--	--	--	500	375	327,000
India	3,000	2,280	2,170,000	3,000	2,280	2,170,000
Korea, Republic of	--	--	--	13,200	10,000	9,190,000
Mexico	18	14	23,600	44	35	52,800
Norway	--	--	--	21	18	25,400
Poland	--	--	--	592	465	567,000
South Africa	3,620	2,830	2,550,000	142,000	110,000	88,900,000
Spain	20	15	27,000	40	31	44,000
Ukraine	4,690	3,620	3,260,000	10,800	8,300	7,500,000
Total, high carbon	21,300	16,400	15,000,000	214,000	164,000	137,000,000
Grand total	28,400	22,200	22,800,000	325,000	256,000	244,000,000

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Customs 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 NOVEMBER 2006^{1,2}

(Metric tons)

Source	Gross weight	Mn content	Customs value ³	Year to date		
				Gross weight	Mn content	Customs value ³
More than 20%, but less than 47% manganese:						
Brazil	60	28	\$52,800	1,790	812	\$280,000
Canada	--	--	--	6,510	1,850	309,000
China	195	40	\$5,930	2,410	858	115,000
Colombia	--	--	--	34,200	15,800	354,000
Mexico	--	--	--	2,950	1,030	353,000
South Africa	--	--	--	68,600	25,900	4,920,000
Total	255	68	58,700	116,000	46,200	6,330,000
47% or more manganese:						
Australia	--	--	--	25,000	12,800	3,900,000
Belgium	1,860	929	112,000	2,090	1,100	305,000
Brazil	683	341	41,000	7,590	4,970	1,200,000
China	--	--	--	4,300	2,260	502,000
Gabon	10,700	6,950	1,610,000	230,000	120,000	26,600,000
Mexico ⁴	--	--	--	2,950	287	354,000
Morocco	--	--	--	38	29	15,000
South Africa	42,800	20,500	2,460,000	98,300	50,700	9,140,000
Total	56,000	28,700	4,220,000	371,000	192,000	42,000,000
Grand total	56,200	28,800	4,280,000	487,000	238,000	48,400,000

-- Zero.

¹Quantities for general imports and imports for consumption are identical.

²Data are rounded to no more than three significant digits; may not add to totals shown.

³Customs 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.

⁴All or part of these data have been referred to the U.S. Census Bureau for verification.

Source: U.S. Census Bureau.

TABLE 5
U.S. IMPORTS FOR CONSUMPTION OF MANGANESE DIOXIDE IN NOVEMBER 2006¹

(Metric tons, gross weight)

Source	Quantity	Customs value ²	Year to date	
			Quantity	Customs value ²
Australia	1,790	\$2,430,000	13,300	\$18,600,000
Belgium	77	178,000	618	1,490,000
Brazil	12	19,800	338	312,000
China	671	700,000	14,800	15,700,000
Colombia	--	--	8	14,400
France	--	--	3	29,400
Germany	--	--	46	254,000
Indonesia	--	--	40	74,500
Japan	210	264,000	6,320	8,740,000
Mexico	--	--	150	183,000
Netherlands	--	--	1	4,290
South Africa	--	--	2	3,960
United Kingdom	--	--	(3)	13,400
Total	2,760	3,590,000	35,600	45,400,000

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Customs 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.

³Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 6
U.S. IMPORTS FOR CONSUMPTION OF MANGANESE METAL IN NOVEMBER 2006¹

(Metric tons)

Source	Gross weight	Customs value ²	Year to date	
			Gross weight	Customs value ²
Unwrought flake:				
China	841	\$1,160,000	17,200	\$22,200,000
Hong Kong	--	--	18	23,800
South Africa	171	281,000	3,130	5,100,000
Total	1,010	1,440,000	20,400	27,300,000
Unwrought powder:				
China	--	--	1,290	1,620,000
South Africa	354	631,000	3,410	6,130,000
Total	354	631,000	4,700	7,760,000
Unwrought, other:				
Brazil	--	--	36	153,000
China	156	247,000	1,400	2,340,000
Germany	63	117,000	721	1,320,000
Russia	--	--	21	76,100
South Africa	--	--	700	1,200,000
Spain	--	--	476	793,000
Total	219	364,000	3,360	5,890,000
Other manganese, wrought:				
Brazil	--	--	463	601,000
China	--	--	710	883,000
France	7	89,500	20	224,000
Jamaica	--	--	(³)	3,000
Mexico	20	35,700	182	305,000
Netherlands	--	--	15	30,800
United Kingdom	--	--	19	48,800
Total	28	125,000	1,410	2,100,000
Grand total	1,610	2,560,000	29,800	43,000,000

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Customs 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.

³Less than ½ unit.

Note: Imports for consumption of metallic manganese waste and scrap totaled 39 tons, all of which was from Canada, to give a year-to-date total of 983 tons.

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 NOVEMBER 2006¹

(Metric tons, gross weight)

	Manganese ore		Ferromanganese, 2% or less C		Silicomanganese		Manganese metal ²	
	November	Year to date	November	Year to date	November	Year to date	November	Year to date
Argentina	--	--	--	--	--	--	3	7
Australia	--	--	--	--	--	15	--	8
Belgium	--	--	--	--	--	--	97	1,230
Brazil	--	--	--	--	42	123	--	24
Canada	248	1,430	54	4,560	210	583	22	514
Chile	--	--	--	1	--	--	--	14
China	--	35	--	--	--	--	37	148
Colombia	--	--	--	--	--	--	--	7
Dominican Republic	--	9	--	--	--	--	--	--
France	--	--	--	--	--	--	--	342
Germany	19	144	--	--	--	--	--	154
Hong Kong	--	--	--	--	--	--	3	74
India	--	--	--	--	--	--	1	74
Indonesia	--	23	--	--	--	72	9	16
Japan	--	103	--	--	--	--	81	799
Korea, Republic of	--	--	--	--	--	--	--	41
Malaysia	--	--	--	--	--	--	--	8
Mexico	--	--	--	25	--	129	1	21
Netherlands	--	--	--	100	--	13	--	--
Poland	--	21	--	--	--	--	--	--
Portugal	--	--	--	--	--	--	--	3
South Africa	--	--	--	--	--	--	--	2
Sweden	--	19	--	--	--	--	--	37
Switzerland	--	--	--	--	--	--	--	35
Trinidad and Tobago	--	--	--	--	--	--	2	3
United Kingdom	--	7	5	5	--	--	--	15
Venezuela	--	--	--	--	--	--	--	--
Total	267	1,970	58	4,690	252	934	256	3,580

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes manganese-aluminum, some other alloys, and waste and scrap.

Note: Exports of ferromanganese with more than 2% carbon totaled 174 tons, of which 97 tons went to Canada and 77 tons went to Mexico, to give a year-to-date total of 16,100 tons.

Source: U.S. Census Bureau.

TABLE 8
U.S. FOREIGN TRADE IN SELECTED MANGANESE CHEMICALS IN NOVEMBER 2006, BY CLASS¹

Class	Gross weight (metric tons)	Value ² (thousands)	Principal sources and destinations: gross weight (metric tons); value ² (thousands)	Year to date		
				Gross weight (metric tons)	Value ² (thousands)	Principal sources and destinations: gross weight (metric tons); value ² (thousands)
Imports for consumption:						
Manganese oxides other than dioxide	985	\$516	South Africa 532; \$172	7,350	\$6,430	China 3,179; \$4,180
Manganites, manganates, and other permanganates	--	--	--	16	34	Japan 16; \$34
Potassium permanganate	94	223	India 52; \$127	1,120	2,540	Czech Republic 525; \$1,150
Sodium permanganate	20	36	China 20; \$36	47	63	China 47; \$63
Sulfates, basket category, including manganese sulfate	4,070	1,950	Chile 1,674; \$423	42,300	24,200	China 19,800; \$9,080
Exports:						
Manganese dioxide	571	486	Canada 383; \$220	5,410	5,100	Canada 3,100; \$1,810
Manganese oxides other than dioxide	1,160	763	Canada 621; \$251	20,900	11,300	Canada 16,800; \$6,170
Manganites, manganates, and other permanganates	--	--	--	42	98	Canada 42; \$98
Potassium permanganate	183	348	Belgium 117; \$191	2,200	5,370	Spain 695; \$1,510
Sodium permanganate	90	502	Belgium 38; \$88	1,320	4,000	Spain 505; \$1,910
Sulfates, basket category, including manganese sulfate	1,580	1,350	Canada 1,120; \$789	21,400	16,900	Canada 16,10; \$8,570

-- Zero.

¹Data are rounded to no more than three significant digits.

²For imports, Customs value; for exports, free alongside ship value.

Source: U.S. Census Bureau.