

# Mineral Industry Surveys

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## MANGANESE IN AUGUST 2006

On a gross-weight basis, reported consumption of manganese ore containing 35% or more manganese, exclusive of that consumed at iron and steel plants, was 11,100 metric tons (t) in August 2006, which was a 71% decrease compared with that in July 2006, according to the U.S. Geological Survey. Corresponding industry stocks of ore at the end of the month were 232,000 t, which was an 18% increase from those at the end of July 2006. These data include estimates for annual respondents on the basis of 2005 data.

The following comparisons of trade data were made on the basis of manganese content (table 1). The data for July 2006 tabulated in this report indicate that the total exports of 11,300 t were 13 times greater than those of the prior month, owing primarily to increases in exports of ferromanganese. Manganese imports were 83,700 t, which was an increase of 5% compared with those of June 2006. This increase was primarily attributable to increases in manganese ore imports.

### Ferroalloy Prices, manganese content

	High-carbon ferromanganese <sup>1</sup> (dollars per gross ton)	Medium-carbon ferromanganese <sup>1</sup> (cents per pound)	Silicomanganese <sup>1</sup> (cents per pound)	Manganese metal <sup>2</sup> (cents per pound)
August 3	1,025.00-1,075.00	72.00-75.00	41.00-45.00	74.00-77.00
August 10	1,025.00-1,075.00	72.00-75.00	41.00-45.00	74.00-77.00
August 17	1,025.00-1,075.00	72.00-75.00	41.00-45.00	74.00-77.00
August 24	1,025.00-1,075.00	72.00-75.00	41.00-45.00	74.00-77.00
August 31	1,025.00-1,075.00	72.00-75.00	41.00-45.00	74.00-77.00

### Ore Prices, dollars per metric ton unit, manganese content<sup>3</sup>

	44% Manganese Ore <sup>2</sup>	48% Manganese Ore <sup>2</sup>
August 3	1.85-1.95	2.30-2.40
August 10	1.85-1.95	2.30-2.40
August 17	1.85-1.95	2.30-2.40
August 24	1.85-1.95	2.30-2.40
August 31	1.90-2.00	2.30-2.40

<sup>1</sup>Source: Platts Metals Week, dealer import price.

<sup>2</sup>Source: Ryan's Notes, North American transaction price.

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

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
2005:						
July	21,000	40,000	61,000	197	934	1,130
January-July	166,000	284,000	451,000	3,670	7,920	11,600
2006:						
January	20,300	25,600	45,900	46	1,710	1,760
February	27,500	52,800 <sup>r</sup>	80,200 <sup>r</sup>	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
Total	156,000	304,000	460,000	456	17,700	18,200

<sup>r</sup>Revised.

<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 2  
U.S. IMPORTS FOR CONSUMPTION OF SILICOMANGANESE IN JULY 2006<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	--	--	--	12,300	8,180	\$7,830,000
Austria	1,100	668	\$406,000	1,100	668	406,000
Canada	720	512	428,000	741	525	452,000
France	--	--	--	11	7	3,620
Georgia	5,000	3,900	3,300,000	21,900	15,700	14,700,000
Korea, Republic of	--	--	--	12,800	8,210	9,690,000
Mexico	1,500	983	1,040,000	9,730	6,370	6,740,000
Netherlands	21	12	24,100	42	25	48,100
Norway	15,700	10,100	12,700,000	52,500	32,600	44,600,000
Russia	769	500	565,000	3,960	2,030	2,920,000
Saudi Arabia	--	--	--	1,010	499	422,000
South Africa	5,800	3,830	3,780,000	90,500	59,200	58,300,000
Total	30,600	20,500	22,200,000	207,000	134,000	146,000,000

-- Zero.

<sup>1</sup>Data are 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 JULY 2006<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>						
Canada	--	--	--	20	16	\$23,500
China	1,730	1,420	\$1,830,000	10,100	8,520	12,200,000
Japan	--	--	--	1,500	1,210	1,510,000
Korea, Republic of	--	--	--	6,310	5,150	6,090,000
Mexico	17	14	34,000	5,120	4,130	5,260,000
Norway	311	246	395,000	1,020	824	1,270,000
South Africa	84	77	118,000	2,160	1,980	3,140,000
Total, low carbon	2,140	1,760	2,370,000	26,200	21,800	29,500,000
<b>Medium carbon, (m.c.) 1%-2% C:</b>						
Brazil	--	--	--	1,540	1,230	1,480,000
Canada	--	--	--	77	61	86,800
China	2,580	2,050	2,330,000	4,370	3,550	3,990,000
Korea, Republic of	--	--	--	8,600	6,910	7,010,000
Mexico	462	370	221,000	9,730	7,790	7,250,000
Nauru	36	30	43,900	36	30	43,900
Norway	688	563	823,000	1,690	1,380	1,990,000
South Africa	654	524	660,000	21,000	17,100	16,500,000
Total, m.c., 1%-2% C	4,420	3,530	4,080,000	47,100	38,000	38,300,000
<b>Medium carbon, 2%-4% C:</b>						
Brazil	--	--	--	19	14	19,300
Georgia	--	--	--	1,470	1,160	637,000
Total, m.c., 2%-4% C	--	--	--	1,490	1,170	657,000
<b>High carbon:</b>						
Australia	--	--	--	4,000	3,090 <sup>r</sup>	2,240,000
Brazil	3,010	2,340	2,120,000	7,520	5,900	4,340,000
Canada	--	--	--	97	58	61,200
China	2,190	1,670	1,460,000	4,590	3,500	2,990,000
France	--	--	--	1,500	1,170	764,000
Korea, Republic of	6,500	4,940	4,220,000	6,500	4,940	4,220,000
Mexico	--	--	--	26	20	29,300
Norway	--	--	--	21	18	25,400
Poland	284	221	272,000	284	221	272,000
South Africa	7,130	5,440	4,630,000	91,300	70,600	50,600,000
Ukraine	997	778	607,000	1,120	873	678,000
Total, high carbon	20,100	15,400	13,300,000	117,000	90,400	66,200,000
Grand total	26,700	20,700	19,800,000	192,000	151,000	135,000,000

<sup>r</sup>Revised. -- Zero.

<sup>1</sup>Data are 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 JULY 2006<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>
More than 20%, but less than 47% manganese:						
Brazil	--	--	--	1,730	784	\$227,000
Canada	6,510	1,850	\$309,000	6,510	1,850	309,000
China	163	75	11,200	1,380	435	74,000
Mexico	--	--	--	2,950	1,030	353,000
South Africa	34,100	13,000	2,540,000	34,100	13,000	2,540,000
Total	40,800	14,900	2,860,000	46,700	17,100	3,500,000
47% or more manganese:						
Australia	--	--	--	25,000	12,800	3,900,000
Belgium	--	--	--	213	153	179,000
Brazil	--	--	--	6,840	4,580	1,100,000
China	--	--	--	2,910	1,550	410,000
Gabon	41,100	21,600	4,970,000	176,000	90,200	18,300,000
Morocco	--	--	--	20	17	6,000
South Africa	--	--	--	35,700	17,300	3,360,000
Total	41,100	21,600	4,970,000	246,000	127,000	27,300,000
Grand total	81,900	36,400	7,830,000	293,000	144,000	30,800,000

-- Zero.

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

<sup>2</sup>Data are 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 JULY 2006<sup>1</sup>

(Metric tons, gross weight)

Source	Quantity	Customs value <sup>2</sup>	Year to date	
			Quantity	Customs value <sup>2</sup>
Australia	2,010	\$2,840,000	5,720	\$8,030,000
Belgium	137	294,000	502	1,160,000
Brazil	23	39,500	187	150,000
China	1,900	2,000,000	10,300	10,900,000
Colombia	--	--	8	14,400
France	--	--	3	29,400
Germany	--	--	23	122,000
Indonesia	40	74,500	40	74,500
Japan	604	815,000	4,060	5,620,000
Mexico	--	--	150	183,000
Netherlands	--	--	1	4,290
United Kingdom	--	--	(3)	11,300
Total	4,710	6,060,000	21,000	26,300,000

-- Zero.

<sup>1</sup>Data are 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 JULY 2006<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	2,380	\$2,800,000	8,780	\$11,000,000
Hong Kong	18	23,800	18	23,800
South Africa	342	514,000	2,710	4,390,000
Total	2,740	3,340,000	11,500	15,500,000
<b>Unwrought powder:</b>				
China	--	--	1,180	1,480,000
South Africa	234	411,000	2,190	3,960,000
Total	234	411,000	3,370	5,440,000
<b>Unwrought, other:</b>				
China	120	231,000	817	1,370,000
Germany	23	41,400	375	696,000
South Africa	--	--	700	1,200,000
Spain	31	37,100	439	733,000
Total	174	310,000	2,330	4,010,000
<b>Other manganese, wrought:</b>				
Brazil	73	169,000	463	601,000
China	60	66,900	426	541,000
France	--	--	11	109,000
Jamaica	--	--	( <sup>3</sup> )	3,000
Mexico	--	--	39	57,600
Netherlands	--	--	15	30,800
United Kingdom	--	--	2	5,250
Total	133	236,000	955	1,350,000
Grand total	3,280	4,300,000	18,200	26,300,000

-- Zero.

<sup>1</sup>Data are 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 manganese waste and scrap totaled 42 tons, all of which was from Canada, to give a year-to-date total of 566 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 JULY 2006<sup>1</sup>

(Metric tons, gross weight)

	Manganese ore		Ferromanganese, 2% or less C		Silicomanganese		Manganese metal <sup>2</sup>	
	July	Year to date	July	Year to date	July	Year to date	July	Year to date
Argentina	--	--	--	--	--	--	--	3
Australia	--	--	--	--	3	10	--	3
Belgium	--	--	--	--	--	--	68	843
Brazil	--	--	--	--	--	--	20	24
Canada	172	700	53	4,030	25	44	51	290
Chile	--	--	--	--	--	--	--	14
China	--	35	--	--	--	--	--	--
Colombia	--	--	--	--	--	--	--	7
Dominican Republic	--	9	--	--	--	--	--	--
France	--	--	--	--	--	--	52	147
Germany	17	55	--	--	--	--	32	130
Hong Kong	--	--	--	--	--	--	42	50
India	--	--	--	--	--	--	21	21
Indonesia	--	23	--	--	--	33	--	--
Japan	--	51	--	--	--	--	23	606
Korea, Republic of	--	--	--	--	--	--	2	2
Malaysia	--	--	--	--	--	--	5	8
Mexico	--	--	--	25	3	109	--	13
Netherlands	--	--	--	100	--	13	--	--
Poland	--	21	--	--	--	--	--	--
Portugal	--	--	--	--	--	--	--	2
Sweden	--	19	--	--	--	--	--	26
Trinidad and Tobago	--	--	--	--	--	--	--	1
United Kingdom	--	--	--	--	--	--	15	15
Total	189	912	53	4,160	31	209	333	2,210

-- Zero.

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

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

Note: Exports of ferromanganese with more than 2% carbon totaled 13,700 tons, of which 52 tons went to Canada and 13,600 tons went to the Netherlands, to give a year-to-date total of 15,300 tons.

Source: U.S. Census Bureau.

TABLE 8  
U.S. FOREIGN TRADE IN SELECTED MANGANESE CHEMICALS IN JULY 2006, 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	738	\$707	China 406; \$524	4,610	\$4,400	China 2,320; \$3,060
Manganites, manganates, and other permanganates	--	--	--	16	34	Japan 16; \$34
Potassium permanganate	111	260	Czech Republic 49; \$105	668	1,490	Czech Republic 303; \$653
Sodium permanganate	--	--	--	27	27	China 27; \$27
Sulfates, basket category, including manganese sulfate	3,300	1,730	Mexico 2,070; \$1,060	27,100	15,300	China 13,500; \$6,140
<b>Exports:</b>						
Manganese dioxide	452	445	Canada 215; \$130	3,050	2,970	Canada 1,610; \$985
Manganese oxides other than dioxide	1,700	936	Canada 1,390; \$489	14,900	7,260	Canada 12,700; \$4,620
Manganites, manganates, and other permanganates	11	26	Canada 11; \$26	36	83	Canada 36; \$83
Potassium permanganate	242	542	Belgium 137; \$250	1,490	3,680	Spain 695; \$1,510
Sodium permanganate	267	524	Spain 95; \$186	932	2,800	Spain 399; \$1,490
Sulfates, basket category, including manganese sulfate	1,990	1,720	Canada 1,700; \$1,110	13,700	9,820	Canada 10,300; \$5,330

-- 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.