

Mineral Industry Surveys

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MANGANESE IN JANUARY 2012

On a contained-weight basis, U.S. manganese ore plus dioxide and manganese ferroalloys plus metal imports for December 2011 were slightly higher and 7% lower, respectively, than those in November 2011. U.S. imports of manganese ore plus dioxide and manganese ferroalloys plus metal during 2011 were 6% and 10% higher, respectively, than those during 2010 (table 1).

On a contained-weight basis, U.S. manganese ore and manganese ferroalloys plus metal exports for December 2011 were 75% lower than, and more than double, respectively, those

in November 2011. U.S. exports of manganese ore and manganese ferroalloys plus metal during 2011 were 90% lower and 50% lower, respectively, than those during 2010 (table 1).

Preliminary manganese ore consumption and ending stocks data for January 2012 will be published in a future issue of this report.

Prices

Prices for manganese materials in January 2012, manganese content, are listed below.

Ferroalloys prices¹

| | <u>Price Range</u> | <u>Average Price</u> |
|---|--------------------|----------------------|
| High-carbon ferromanganese ² | 1,100.00–1,175.00 | 1,131.25 |
| Medium-carbon ferromanganese ³ | 89.00–91.00 | 91.88 |
| Silicomanganese ³ | 54.00–56.00 | 55.13 |

Manganese metal and ore prices⁴

| | <u>Price Range</u> | <u>Average Low, Mid, and High Prices</u> |
|------------------------------------|--------------------|--|
| Manganese metal ³ | 152.00–165.00 | 177.00–178.50–180.00 |
| 36%-39% Manganese ore ⁵ | 3.70–3.90 | 3.76–3.84–3.92 |
| 44% Manganese ore ⁵ | 4.10–4.30 | 4.17–4.24–4.32 |
| 46% Manganese ore ⁵ | 4.60–4.75 | 4.63–4.69–4.75 |

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

²Dollars per gross ton.

³Cents per pound.

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

⁵Dollars 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 46 when the manganese content is 46%.

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 |
| 2010: | | | | | | |
| December | 13,500 | 43,700 | 57,200 | 28 | 1,540 | 1,570 |
| January–December | 268,000 | 489,000 | 757,000 | 6,970 | 24,900 | 31,900 |
| 2011: | | | | | | |
| January | 28,900 | 44,500 | 73,400 | 36 | 1,080 | 1,120 |
| February | 9,160 | 30,400 | 39,600 | 46 | 1,240 | 1,290 |
| March | 50,900 | 68,900 | 120,000 | 73 | 1,740 | 1,810 |
| April | 1,720 | 27,800 | 29,500 | 61 | 1,150 | 1,210 |
| May | 21,100 | 51,000 | 72,100 | 33 | 1,800 | 1,830 |
| June | 26,800 | 68,700 | 95,500 | 59 | 519 | 578 |
| July | 11,500 | 57,400 | 69,000 | 82 | 669 | 750 |
| August | 25,500 | 50,600 | 76,100 | 65 | 902 | 967 |
| September | 38,800 | 55,800 | 94,600 | -- | 611 | 611 |
| October | 16,900 | 22,300 | 39,200 | 84 | 708 | 792 |
| November | 25,800 | 32,700 | 58,600 | 113 | 642 | 755 |
| December | 26,300 | 30,600 | 56,900 | 28 | 1,470 | 1,500 |
| Total | 283,000 | 541,000 | 824,000 | 681 | 12,500 | 13,200 |

-- Zero.

¹Data 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 DECEMBER 2011¹

(Metric tons)

| Source | Gross weight | Mn content | Customs value ² | January–December | | |
|--------------------|--------------|------------|----------------------------|------------------|------------|----------------------------|
| | | | | Gross weight | Mn content | Customs value ² |
| Australia | 1,900 | 1,260 | \$1,910,000 | 44,800 | 29,800 | \$45,500,000 |
| Canada | 33 | 22 | 28,700 | 160 | 89 | 114,000 |
| China | -- | -- | -- | 1 | 1 | 2,500 |
| Georgia | -- | -- | -- | 100,000 | 69,500 | 120,000,000 |
| Greece | -- | -- | -- | 20 | 15 | 45,100 |
| India | -- | -- | -- | 962 | 535 | 1,550,000 |
| Korea, Republic of | -- | -- | -- | 300 | 174 | 600,000 |
| Mexico | 1,000 | 652 | 1,060,000 | 12,700 | 8,290 | 13,900,000 |
| Norway | 9 | 6 | 22,700 | 33,500 | 21,000 | 55,300,000 |
| Romania | -- | -- | -- | 7,490 | 4,620 | 7,490,000 |
| South Africa | 13,600 | 8,950 | 14,800,000 | 143,000 | 94,900 | 163,000,000 |
| Spain | -- | -- | -- | 4,880 | 2,950 | 9,800,000 |
| Total | 16,500 | 10,900 | 17,800,000 | 348,000 | 232,000 | 417,000,000 |

-- Zero.

¹Data 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 3
U.S. IMPORTS FOR CONSUMPTION OF FERROMANGANESE IN DECEMBER 2011¹

(Metric tons)

| Source | Gross weight | Mn content | Customs value ² | January–December | | |
|--------------------------------|---------------|---------------|----------------------------|------------------|----------------|----------------------------|
| | | | | Gross weight | Mn content | Customs value ² |
| Low carbon: | | | | | | |
| China | 977 | 918 | \$2,840,000 | 17,200 | 15,200 | \$46,900,000 |
| India | 150 | 120 | 244,000 | 350 | 275 | 621,000 |
| Korea, Republic of | -- | -- | -- | 222 | 200 | 727,000 |
| Mexico | 500 | 406 | 890,000 | 8,960 | 7,260 | 17,000,000 |
| Norway | 1,000 | 809 | 1,660,000 | 6,480 | 5,220 | 11,900,000 |
| South Africa | -- | -- | -- | 20 | 16 | 45,500 |
| Vietnam | -- | -- | -- | 1,250 | 1,180 | 3,860,000 |
| Total | 2,630 | 2,250 | 5,630,000 | 34,500 | 29,300 | 81,000,000 |
| Medium carbon, 1%–2% C: | | | | | | |
| China | -- | -- | -- | 262 | 221 | 583,000 |
| Korea, Republic of | -- | -- | -- | 31,500 | 25,400 | 56,200,000 |
| Mexico | 900 | 724 | 1,600,000 | 10,600 | 8,500 | 19,500,000 |
| Norway | -- | -- | -- | 7,920 | 6,410 | 13,900,000 |
| South Africa | 2,290 | 1,870 | 4,040,000 | 24,200 | 19,500 | 41,400,000 |
| Spain | -- | -- | -- | 40 | 32 | 122,000 |
| Ukraine | -- | -- | -- | 392 | 342 | 783,000 |
| Total | 3,190 | 2,590 | 5,630,000 | 74,900 | 60,300 | 133,000,000 |
| Medium carbon, 2%–4% C: | | | | | | |
| South Africa | 36 | 28 | 79,600 | 378 | 329 | 922,000 |
| Sweden | -- | -- | -- | 3 | 2 | 6,180 |
| Total | 36 | 28 | 79,600 | 380 | 331 | 928,000 |
| High carbon: | | | | | | |
| Australia | -- | -- | -- | 9,030 | 6,990 | 8,950,000 |
| Bahrain | -- | -- | -- | 180 | 142 | 205,000 |
| Brazil | -- | -- | -- | 199 | 147 | 234,000 |
| France | -- | -- | -- | 2,600 | 1,770 | 3,110,000 |
| Germany | -- | -- | -- | 19 | 6 | 16,400 |
| India | -- | -- | -- | 429 | 332 | 523,000 |
| Korea, Republic of | -- | -- | -- | 1,830 | 1,380 | 2,080,000 |
| Norway | -- | -- | -- | 9,820 | 7,680 | 10,600,000 |
| South Africa | 10,800 | 8,290 | 12,500,000 | 183,000 | 141,000 | 208,000,000 |
| Spain | -- | -- | -- | 598 | 441 | 703,000 |
| Sweden | -- | -- | -- | 100 | 67 | 176,000 |
| Ukraine | 4,630 | 3,580 | 4,700,000 | 30,700 | 23,900 | 33,600,000 |
| Total | 15,400 | 11,900 | 17,200,000 | 239,000 | 184,000 | 268,000,000 |
| Grand total | 21,300 | 16,700 | 28,600,000 | 349,000 | 274,000 | 483,000,000 |

-- Zero.

¹Data 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 DECEMBER 2011^{1,2}

(Metric tons)

| Source | Gross weight | Mn content | Customs value ³ | January–December | | |
|--|--------------|------------|----------------------------|------------------|------------|----------------------------|
| | | | | Gross weight | Mn content | Customs value ³ |
| More than 20%, but less than 47% manganese: | | | | | | |
| Australia | -- | -- | -- | 82,200 | 32,300 | \$15,700,000 |
| Brazil | -- | -- | -- | 3,220 | 1,480 | 1,150,000 |
| Gabon | -- | -- | -- | 17,900 | 7,950 | 3,070,000 |
| Mexico | -- | -- | -- | 4,540 | 1,640 | 1,060,000 |
| Netherlands | -- | -- | -- | 86 | 18 | 17,200 |
| South Africa | -- | -- | -- | 13,000 | 5,520 | 6,680,000 |
| Turkey | -- | -- | -- | 566 | 199 | 190,000 |
| Total | -- | -- | -- | 122,000 | 49,100 | 27,900,000 |
| 47% or more manganese: | | | | | | |
| Australia | -- | -- | -- | 78,600 | 38,300 | 18,800,000 |
| Belgium | 96 | 48 | \$82,700 | 298 | 149 | 94,700 |
| Brazil | 3,020 | 1,600 | 1,270,000 | 6,280 | 3,260 | 2,380,000 |
| Gabon | 46,200 | 23,100 | 11,700,000 | 344,000 | 175,000 | 95,400,000 |
| Morocco | -- | -- | -- | 902 | 454 | 317,000 |
| Netherlands | -- | -- | -- | 446 | 223 | 26,700 |
| South Africa | -- | -- | -- | 20 | 10 | 12,800 |
| Total | 49,300 | 24,700 | 13,000,000 | 430,000 | 217,000 | 117,000,000 |
| Grand total | 49,300 | 24,700 | 13,000,000 | 552,000 | 266,000 | 145,000,000 |

-- Zero.

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

²Data 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.

Source: U.S. Census Bureau.

TABLE 5
U.S. IMPORTS FOR CONSUMPTION OF MANGANESE DIOXIDE IN DECEMBER 2011¹

(Metric tons, gross weight)

| Source | Quantity | Customs value ² | January–December | |
|----------------|----------|----------------------------|------------------|----------------------------|
| | | | Quantity | Customs value ² |
| Belgium | 6 | \$27,100 | 484 | \$582,000 |
| Brazil | -- | -- | 73 | 82,400 |
| China | 1 | 2,500 | 2 | 5,000 |
| Colombia | -- | -- | 600 | 1,150,000 |
| Germany | 10 | 16,800 | 115 | 196,000 |
| India | -- | -- | 20 | 25,000 |
| Japan | 924 | 1,370,000 | 9,000 | 20,100,000 |
| Mexico | -- | -- | 1,010 | 941,000 |
| Netherlands | -- | -- | 101 | 61,500 |
| Singapore | 34 | 58,100 | 205 | 310,000 |
| South Africa | 1,610 | 4,010,000 | 16,600 | 44,600,000 |
| Turkey | -- | -- | 176 | 89,000 |
| United Kingdom | -- | -- | -- | -- |
| Vietnam | -- | -- | -- | -- |
| Total | 2,590 | 5,490,000 | 28,400 | 68,200,000 |

-- Zero.

¹Data 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 bring the material into the United States.

Source: U.S. Census Bureau.

TABLE 6
U.S. IMPORTS FOR CONSUMPTION OF MANGANESE METAL IN DECEMBER 2011¹

(Metric tons)

| Source | Gross weight | Customs value ² | January–December | |
|----------------------------------|--------------|----------------------------|------------------|----------------------------|
| | | | Gross weight | Customs value ² |
| Unwrought flake: | | | | |
| China | 1,230 | \$3,600,000 | 12,600 | \$37,000,000 |
| Hong Kong | 40 | 127,000 | 100 | 319,000 |
| Japan | -- | -- | 20 | 33,000 |
| Mexico | 5 | 26,100 | 96 | 421,000 |
| South Africa | 250 | 1,020,000 | 1,970 | 7,960,000 |
| Vietnam | 252 | 580,000 | 680 | 2,010,000 |
| Total | 1,770 | 5,360,000 | 15,500 | 47,800,000 |
| Unwrought powder: | | | | |
| China | 20 | 71,000 | 303 | 974,000 |
| Mexico | 17 | 77,300 | 108 | 494,000 |
| South Africa | 19 | 72,100 | 2,730 | 10,600,000 |
| United Kingdom | -- | -- | 1 | 2,210 |
| Total | 56 | 220,000 | 3,140 | 12,100,000 |
| Unwrought, other: | | | | |
| China | 923 | 2,400,000 | 14,000 | 44,100,000 |
| Germany | -- | -- | 233 | 867,000 |
| Korea, Republic of | -- | -- | 1 | 8,220 |
| Netherlands | -- | -- | 10 | 71,200 |
| Poland | -- | -- | (3) | 13,100 |
| South Africa | 117 | 444,000 | 1,240 | 4,620,000 |
| Spain | -- | -- | 150 | 582,000 |
| Total | 1,040 | 2,840,000 | 15,600 | 50,300,000 |
| Other manganese, wrought: | | | | |
| China | 8 | 21,500 | 171 | 569,000 |
| Germany | -- | -- | 4 | 68,900 |
| Japan | -- | -- | (3) | 17,200 |
| Mexico | -- | -- | 26 | 109,000 |
| United Kingdom | -- | -- | (3) | 5,860 |
| Vietnam | -- | -- | 168 | 548,000 |
| Total | 8 | 21,500 | 369 | 1,320,000 |
| Grand total | 2,880 | 8,440,000 | 34,600 | 111,000,000 |

-- Zero.

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

²Customs value generally represent 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 waste and scrap totaled 200 metric tons (t), of which 200 t was from Canada, and less than ½ t from the United Kingdom, to give a year-to-date total of 705 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 2011¹

(Metric tons, gross weight)

| Country | Manganese ore | | Ferromanganese, | | | | Silicomanganese | | Manganese metal ² | |
|----------------------|---------------|----------------------|-----------------|----------------------|----------------|----------------------|-----------------|----------------------|------------------------------|----------------------|
| | December | January– December | 2% or less C | | More than 2% C | | December | January– December | December | January– December |
| | | | December | January– December | December | January– December | | | | |
| Aruba | -- | 121 | -- | -- | -- | -- | -- | -- | -- | -- |
| Australia | -- | -- | -- | -- | -- | 53 | -- | -- | 6 | 9 |
| Bahamas, The | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1 |
| Bahrain | -- | 66 | -- | -- | -- | -- | -- | -- | -- | -- |
| Belgium | -- | 18 | -- | 357 | -- | -- | -- | -- | -- | -- |
| Brazil | -- | -- | -- | -- | 1 | 139 | -- | -- | -- | -- |
| Canada | 4 | 372 | 9 | 444 | 157 | 1,510 | 1,400 | 7,450 | 11 | 573 |
| Chile | -- | -- | -- | -- | -- | 26 | -- | -- | -- | -- |
| China | -- | 91 | -- | -- | -- | -- | -- | -- | 71 | 1,360 |
| Colombia | -- | -- | -- | -- | -- | -- | -- | 352 | -- | 1 |
| Costa Rica | -- | -- | -- | -- | -- | -- | -- | -- | 8 | 26 |
| Dominican Republic | -- | -- | -- | -- | -- | (3) | -- | -- | -- | 142 |
| Egypt | -- | -- | -- | 8 | -- | -- | -- | -- | -- | -- |
| France | -- | -- | -- | -- | -- | 27 | -- | -- | -- | 1 |
| Germany | -- | 10 | -- | -- | -- | 34 | -- | -- | 3 | 27 |
| Guatemala | -- | -- | 4 | 16 | -- | -- | -- | -- | -- | -- |
| Guyana | -- | -- | -- | -- | -- | -- | -- | -- | -- | 3 |
| Hong Kong | -- | 181 | -- | -- | -- | -- | -- | -- | -- | 11 |
| India | -- | (3) | -- | -- | -- | -- | -- | -- | 26 | 267 |
| Ireland | -- | -- | -- | -- | -- | 4 | -- | -- | -- | -- |
| Italy | -- | -- | -- | -- | -- | -- | -- | -- | -- | 7 |
| Japan | -- | -- | 20 | 120 | -- | -- | -- | -- | 75 | 505 |
| Korea, Republic of | 34 | 408 | -- | -- | -- | -- | -- | -- | -- | 4 |
| Malaysia | -- | -- | -- | -- | 2 | 8 | -- | -- | -- | -- |
| Mexico | -- | 44 | 45 | 1,360 | -- | -- | 132 | 659 | 65 | 129 |
| Netherlands | 18 | 50 | -- | -- | -- | -- | -- | -- | -- | -- |
| Norway | -- | -- | -- | -- | -- | 17 | -- | -- | -- | -- |
| Peru | -- | -- | -- | -- | -- | 100 | -- | -- | -- | -- |
| Philippines | -- | -- | -- | -- | -- | -- | -- | 7 | -- | -- |
| Portugal | -- | -- | -- | 20 | -- | -- | -- | -- | -- | -- |
| Romania | -- | -- | -- | -- | -- | 41 | -- | -- | -- | -- |
| Saint Lucia | -- | -- | -- | -- | -- | -- | -- | -- | -- | 15 |
| Singapore | -- | -- | -- | -- | -- | 42 | -- | -- | -- | -- |
| Spain | -- | -- | -- | -- | -- | -- | -- | -- | -- | 10 |
| Taiwan | -- | -- | -- | -- | -- | -- | -- | -- | -- | 250 |
| Trinidad and Tobago | -- | -- | -- | -- | -- | -- | -- | -- | 5 | 5 |
| Turkey | -- | -- | -- | 120 | -- | -- | -- | -- | -- | -- |
| United Arab Emirates | -- | -- | -- | -- | -- | 4 | -- | -- | 2 | 2 |
| United Kingdom | -- | -- | -- | 57 | -- | -- | -- | -- | -- | 10 |
| Venezuela | -- | -- | -- | -- | 2 | 6 | -- | -- | -- | -- |
| Vietnam | -- | -- | -- | -- | -- | -- | -- | -- | -- | 19 |
| Total | 56 | 1,360 | 78 | 2,500 | 162 | 2,010 | 1,530 | 8,470 | 272 | 3,370 |

-- Zero.

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

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

³Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 8
U.S. FOREIGN TRADE IN SELECTED MANGANESE CHEMICALS IN DECEMBER 2011, BY CLASS¹

| Class | Gross weight (metric tons) | Value ² (thousands) | Principal sources and destinations: gross weight (metric tons); value ² (thousands) | January–December | | |
|---|-------------------------------|-----------------------------------|---|-------------------------------|-----------------------------------|---|
| | | | | 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 | 77 | \$111 | China 20; \$18 | 2,630 | \$2,850 | South Africa 710; \$820 |
| Manganites, manganates, and other permanganates | -- | -- | XX | 17 | 65 | Germany 17; \$65 |
| Potassium permanganate | 140 | 452 | India 125; \$398 | 1,700 | 5,200 | India 1,570; \$4,780 |
| Sodium permanganate | 34 | 85 | China 34; \$85 | 525 | 1,320 | China 519; \$1,280 |
| Sulfates, basket category, including manganese sulfate | 4,540 | 3,660 | Mexico 1,740; \$1,440 | 46,400 | 43,200 | Mexico 19,000; \$16,000 |
| Exports: | | | | | | |
| Manganese dioxide | 588 | 850 | Canada 424; \$412 | 10,900 | 18,400 | Canada 5,180; \$4,800 |
| Manganese oxides other than dioxide | 717 | 978 | Canada 164; \$173 | 7,730 | 15,600 | Canada 1,800; \$2,200 |
| Manganites, manganates, and other permanganates | 5 | 19 | Canada 5; \$15 | 139 | 542 | Canada 108; \$290 |
| Potassium permanganate | 410 | 1,120 | Belgium 274; \$701 | 3,280 | 9,380 | Belgium 2,270; \$5,800 |
| Sodium permanganate | 50 | 124 | Belgium 19; \$43 | 960 | 2,280 | Belgium 338; \$586 |
| Sulfates, basket category, including manganese sulfate | 1,140 | 1,040 | Canada 850; \$512 | 15,900 | 14,300 | Canada 11,600; \$6,530 |

XX Not applicable. -- 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.