

Mineral Industry Surveys

For information, contact:

Christopher A. Tuck, Silicon Commodity Specialist
National Minerals Information Center
U.S. Geological Survey
989 National Center
Reston, VA 20192
Telephone: (703) 648-4912, Fax: (703) 648-7757
E-mail: ctuck@usgs.gov

Martha L. Jackson (Data)
Telephone: (703) 648-7944
Fax: (703) 648-7975
E-mail: mjackson@usgs.gov

Internet: <http://minerals.usgs.gov/minerals>

SILICON IN MAY 2014

Domestic production of total silicon materials (ferrosilicon plus silicon metal) was 39,400 metric tons (t) for May 2014, 5% more than that of April 2014 and 15% more than that of May 2013. Net shipments were 30,400 t, 17% more than those in April 2014 and 19% more than those in May 2013. Total production and net shipments during the first 5 months of 2014 were 12% and 21% more, respectively, than those during the same period in 2013 (table 1). Individual production-related statistics were concealed to avoid disclosing company proprietary data.

Ending stocks were 31,800 t in May 2014, 6% less than those in April 2014 and 26% less than those in May 2013 (table 1). Stocks included adjustments in inventory and in-plant consumption of ferrosilicon to produce magnesium ferrosilicon and other miscellaneous alloys.

Included in this Mineral Industry Surveys are U.S. spot market prices and U.S. foreign trade data for selected silicon-containing materials in May 2014. All comparative statistics were calculated based on gross-weight figures.

Industry News

An investigation is being conducted into imposing anti-dumping duties on U.S. ferrosilicon imports. The International Trade Administration issued a preliminary decision in March imposing no duties on Russia; the International Trade

Commission has scheduled a hearing in July as part of the final phase of the investigation (Fitzgerald, 2014).

Refulgent Alloys and Steel Ltd. received environmental clearance in May from the Union Ministry for Environment and Forests to begin construction on a ferroalloys plant in Srikakulam, India. The plant was expected to have 27,264 tons per year of ferrosilicon capacity, in addition to producing ferromanganese and silicomanganese. The company expected to begin construction on the facility and submerged electric arc furnace within the next 18 months (Manish, 2014).

List services and Web feed subscribers are the first to receive notification of USGS minerals information publications and data releases. For information on how to subscribe, go to <http://minerals.usgs.gov/minerals/>.

References Cited

- Fitzgerald, Daniel, 2014, Sen. urges actions in Russian ferrosilicon duty trade case: American Metal Market, v. 122, no. 22-1, May 26, p. 5.
Manish, 2014, Ferroalloy unit at Srikakulam gets green signal from MoEF: The Times of India, May 30. (Accessed July 31, 2014, at <http://timesofindia.indiatimes.com/city/visakhapatnam/Ferro-alloy-unit-at-Srikakulam-gets-green-signal-from-MoEF/articleshow/35790432.cms>.)

TABLE 1
 PRODUCTION, SHIPMENTS, AND STOCKS OF SILICON ALLOYS
 AND METAL IN THE UNITED STATES^{1,2}

(Metric tons, gross weight)

| | Gross production ³ | Net shipments | Producers' stocks, end of period |
|--------------------------|----------------------------------|------------------|--|
| 2013: | | | |
| January–December | 468,000 | 331,000 | 33,700 |
| January–May ^f | 181,000 | 122,000 | 43,300 |
| May | 34,300 | 25,500 | 43,300 |
| June | 42,100 | 34,600 | 42,200 |
| July | 34,100 | 25,500 | 40,000 |
| August | 42,100 | 30,200 | 40,500 |
| September | 39,700 | 30,000 | 35,500 |
| October | 45,200 | 30,800 | 34,800 |
| November | 44,300 | 27,800 | 37,100 |
| December | 40,000 | 29,700 | 33,700 |
| 2014: | | | |
| January | 42,600 | 32,000 | 31,400 |
| February | 39,700 | 27,500 | 33,000 |
| March | 42,700 | 32,200 | 34,400 |
| April | 37,600 | 25,900 | 34,000 |
| May | 39,400 | 30,400 | 31,800 |
| January–May | 202,000 | 148,000 | 31,800 |

^fRevised.

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

²Includes ferrosilicon, miscellaneous silicon alloys, and silicon metal, excluding semiconductor and solar grades, except where noted.

³Ferrosilicon production includes material consumed in the production of miscellaneous silicon alloys.

TABLE 2
 PRICES FOR FERROSILICON AND SILICON METAL IN MAY 2014

| | High | Low | Average | Average low, mid, and high |
|---------------------------------------|--------|--------|---------|----------------------------|
| Ferrosilicon: | | | | |
| 50% ferrosilicon ¹ | 110.00 | 106.00 | XX | 106.00–108.00–110.00 |
| 75% ferrosilicon ² | 100.00 | 97.00 | 98.56 | XX |
| Silicon metal, 553 grade ³ | 141.00 | 137.00 | 139.13 | XX |

do. Ditto. XX Not applicable.

¹CRU Ryan's Notes, North American transaction price, duty paid, f.o.b. Pittsburgh, producing plant or Chicago/Pittsburgh warehouse. Average price reported for price range.

²Platts Metals Week, in U.S. warehouse, U.S. origin and imported material. Average prices reported for all transactions during the month.

³Platts Metals Week, duty paid, delivered Midwest, U.S. spot and imported 553 grade silicon metal (minimum 98.50% silicon). Average price reported for all transactions during the month.

TABLE 3
U.S. EXPORTS OF FERROSILICON AND SILICON METAL IN MAY 2014^{1,2}

(Metric tons, unless otherwise specified)

| Country | Gross weight | Contained weight | Value | January–May ³ | | |
|----------------------------------|--------------|------------------|--------------------|--------------------------|------------------|--------------------|
| | | | | Gross weight | Contained weight | Value |
| Ferrosilicon: | | | | | | |
| More than 55% silicon: | | | | | | |
| Austria | -- | -- | -- | 4 | 3 | \$7,000 |
| Belgium | -- | -- | -- | 20 | 15 | 27,600 |
| Brazil | -- | -- | -- | 19 | 11 | 29,600 |
| Canada | 511 | 306 | \$797,000 | 1,620 | 972 | 2,530,000 |
| Colombia | -- | -- | -- | 33 | 24 | 86,400 |
| France | -- | -- | -- | 20 | 15 | 26,600 |
| Japan | 102 | 85 | 109,000 | 410 | 323 | 670,000 |
| Mexico | 186 | 118 | 466,000 | 1,020 | 638 | 2,490,000 |
| Turkey | -- | -- | -- | 5 | 4 | 11,700 |
| United Kingdom | -- | -- | -- | 55 | 33 | 85,800 |
| Other (2 countries) | 6 | 3 | 13,200 | 6 | 3 | 13,200 |
| Total | 804 | 512 | 1,390,000 | 3,210 | 2,040 | 5,980,000 |
| Other ferrosilicon: | | | | | | |
| Belgium | 20 | 10 | 38,200 | 299 | 139 | 577,000 |
| Brazil | 76 | 38 | 174,000 | 114 | 57 | 264,000 |
| Canada | 67 | 33 | 93,600 | 437 | 219 | 606,000 |
| Colombia | -- | -- | -- | 24 | 11 | 59,900 |
| Korea, Republic of | 60 | 27 | 70,200 | 276 | 121 | 319,000 |
| Mexico | 72 | 36 | 170,000 | 393 | 194 | 1,000,000 |
| Netherlands | 60 | 27 | 57,800 | 220 | 96 | 133,000 |
| Poland | 21 | 10 | 41,000 | 81 | 22 | 178,000 |
| Turkey | 240 | 109 | 480,000 | 1,110 | 506 | 2,210,000 |
| United Kingdom | 60 | 28 | 120,000 | 340 | 165 | 443,000 |
| Other (5 countries) | 20 | 9 | 43,400 | 89 | 41 | 191,000 |
| Total | 695 | 328 | 1,290,000 | 3,390 | 1,570 | 5,980,000 |
| Total ferrosilicon | 1,500 | 840 | 2,670,000 | 6,600 | 3,610 | 12,000,000 |
| Metal: | | | | | | |
| More than 99.99% silicon: | | | | | | |
| China | 905 | 905 | 22,300,000 | 4,830 | 4,830 | 131,000,000 |
| Germany | 279 | 279 | 9,560,000 | 2,710 | 2,710 | 94,300,000 |
| Hong Kong | 100 | 100 | 2,500,000 | 368 | 368 | 10,300,000 |
| Italy | 22 | 22 | 1,260,000 | 124 | 124 | 7,420,000 |
| Japan | 567 | 567 | 29,400,000 | 3,910 | 3,910 | 212,000,000 |
| Korea, Republic of | 373 | 373 | 13,700,000 | 1,530 | 1,530 | 65,600,000 |
| Malaysia | 33 | 33 | 4,570,000 | 145 | 145 | 20,300,000 |
| Norway | 92 | 92 | 4,300,000 | 232 | 232 | 11,300,000 |
| Singapore | 98 | 98 | 1,740,000 | 740 | 740 | 12,600,000 |
| Taiwan | 648 | 648 | 19,900,000 | 2,570 | 2,570 | 76,400,000 |
| Other (31 countries) | 24 | 24 | 2,750,000 | 261 | 261 | 14,800,000 |
| Total | 3,140 | 3,140 | 112,000,000 | 17,400 | 17,400 | 656,000,000 |
| 99.00%–99.99% silicon: | | | | | | |
| China | 9 | 9 | 12,700 | 23 | 23 | 56,800 |
| India | -- | -- | -- | 1 | 1 | 5,760 |
| Japan | 2 | 2 | 3,150 | 2 | 2 | 3,150 |
| Mexico | 20 | 20 | 57,800 | 27 | 26 | 74,100 |
| Saudi Arabia | 6 | 6 | 9,120 | 6 | 6 | 9,120 |
| Taiwan | -- | -- | -- | 1 | 1 | 7,640 |
| Turkey | -- | -- | -- | 9 | 9 | 12,600 |
| Total | 38 | 37 | 82,800 | 69 | 69 | 169,000 |
| Other silicon: | | | | | | |
| Austria | -- | -- | -- | 21 | 21 | 28,200 |
| Belgium | -- | -- | -- | 52 | 51 | 57,900 |
| Canada | 50 | 49 | 147,000 | 725 | 704 | 2,000,000 |

See footnotes at end of table.

TABLE 3—Continued
 U.S. EXPORTS OF FERROSILICON AND SILICON METAL IN MAY 2014^{1,2}

(Metric tons, unless otherwise specified)

| Country | Gross weight | Contained weight | Value | January–May ³ | | |
|-----------------------|--------------|------------------|-------------|--------------------------|------------------|-------------|
| | | | | Gross weight | Contained weight | Value |
| Metal—Continued: | | | | | | |
| Other silicon: | | | | | | |
| China | -- | -- | -- | 30 | 29 | \$39,000 |
| Korea, Republic of | -- | -- | -- | 85 | 82 | 143,000 |
| Kuwait | -- | -- | -- | 11 | 11 | 14,700 |
| Mexico | 84 | 82 | \$255,000 | 135 | 132 | 405,000 |
| South Africa | 1 | 1 | 11,700 | 8 | 8 | 39,600 |
| Taiwan | -- | -- | -- | 26 | 25 | 250,000 |
| United Kingdom | 23 | 23 | 30,600 | 25 | 25 | 57,000 |
| Others (10 countries) | (3) | (3) | 6,390 | 24 | 23 | 102,000 |
| Total | 158 | 154 | 450,000 | 1,140 | 1,110 | 3,140,000 |
| Total silicon metal | 3,340 | 3,330 | 113,000,000 | 18,600 | 18,600 | 659,000,000 |

-- Zero.

¹Presentation of monthly data is based on the "January–May" quantities (gross weight) of the leading countries.

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

³Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 4
U.S. IMPORTS OF FERROSILICON AND SILICON METAL IN MAY 2014^{1,2}

(Metric tons, unless otherwise specified)

| Country | Gross weight | Contained weight | Value | January–May ³ | | |
|-----------------------------------|---------------|------------------|-------------------|--------------------------|------------------|--------------------|
| | | | | Gross weight | Contained weight | Value |
| Ferrosilicon: | | | | | | |
| 55%–80% silicon, more than 3% Ca: | | | | | | |
| Brazil | 1 | 1 | \$2,400 | 293 | 222 | \$447,000 |
| Canada | -- | -- | -- | 20 | 11 | 11,700 |
| China | 807 | 607 | 1,010,000 | 2,480 | 1,850 | 3,230,000 |
| France | -- | -- | -- | 61 | 39 | 165,000 |
| Germany | -- | -- | -- | 5 | 3 | 8,200 |
| South Africa | 54 | 37 | 114,000 | 216 | 147 | 454,000 |
| Total | 862 | 644 | 1,130,000 | 3,080 | 2,280 | 4,320,000 |
| 55%–80% silicon, other: | | | | | | |
| Brazil | -- | -- | -- | 1,700 | 1,270 | 2,380,000 |
| Canada | 984 | 720 | 2,510,000 | 4,620 | 3,380 | 11,500,000 |
| China | 11,400 | 8,550 | 15,500,000 | 27,200 | 20,500 | 37,300,000 |
| France | 144 | 93 | 420,000 | 904 | 605 | 2,650,000 |
| Iceland | 1,580 | 1,190 | 2,230,000 | 5,810 | 4,400 | 8,500,000 |
| India | 41 | 32 | 79,100 | 363 | 285 | 766,000 |
| Russia | 20,300 | 15,600 | 29,400,000 | 42,900 | 32,900 | 62,500,000 |
| South Africa | 63 | 46 | 120,000 | 1,220 | 911 | 2,090,000 |
| Spain | -- | -- | -- | 1,740 | 1,310 | 2,700,000 |
| Venezuela | -- | -- | -- | 10,400 | 7,800 | 14,700,000 |
| Other (5 countries) | 415 | 310 | 927,000 | 874 | 636 | 2,810,000 |
| Total | 34,900 | 26,500 | 51,200,000 | 97,700 | 73,900 | 148,000,000 |
| 80%–90% ferrosilicon, Germany | -- | -- | -- | 1 | 1 | 2,650 |
| Magnesium ferrosilicon: | | | | | | |
| Argentina | 90 | 41 | 121,000 | 328 | 153 | 390,000 |
| Brazil | 81 | 36 | 141,000 | 666 | 298 | 1,120,000 |
| Canada | 982 | 449 | 1,940,000 | 5,710 | 2,600 | 10,300,000 |
| China | -- | -- | -- | 293 | 131 | 554,000 |
| Germany | 10 | 5 | 6,000 | 15 | 7 | 14,200 |
| India | 82 | 39 | 151,000 | 1,290 | 620 | 2,220,000 |
| Norway | 319 | 153 | 651,000 | 1,070 | 512 | 2,220,000 |
| Total | 1,560 | 724 | 3,010,000 | 9,370 | 4,330 | 16,800,000 |
| Other ferrosilicon: | | | | | | |
| Canada | 1,140 | 420 | 1,320,000 | 5,410 | 1,940 | 6,310,000 |
| China | 60 | 31 | 91,900 | 230 | 126 | 405,000 |
| Germany | 6 | 2 | 23,200 | 13 | 5 | 58,700 |
| Poland | -- | -- | -- | 38 | 17 | 60,700 |
| Russia | 3 | 1 | 4,080 | 14 | 7 | 22,000 |
| Vietnam | -- | -- | -- | 150 | 113 | 209,000 |
| Total | 1,210 | 454 | 1,440,000 | 5,860 | 2,200 | 7,070,000 |
| Total ferrosilicon | 38,600 | 28,300 | 56,800,000 | 116,000 | 82,800 | 176,000,000 |
| Metal: | | | | | | |
| More than 99.99% silicon: | | | | | | |
| Brazil | -- | -- | -- | 77 | 77 | 233,000 |
| China | 10 | 10 | 171,000 | 38 | 38 | 570,000 |
| Denmark | (3) | (3) | 94,200 | 1 | 1 | 335,000 |
| Germany | 111 | 111 | 5,720,000 | 375 | 375 | 24,200,000 |
| Japan | 16 | 16 | 1,540,000 | 64 | 64 | 5,610,000 |
| Korea, Republic of | 2 | 2 | 159,000 | 7 | 7 | 684,000 |
| Norway | 1 | 1 | 41,000 | 4 | 4 | 219,000 |
| Spain | (3) | (3) | 4,200 | 2 | 2 | 20,900 |
| Taiwan | 5 | 5 | 120,000 | 37 | 37 | 1,030,000 |
| Ukraine | 1 | 1 | 41,600 | 1 | 1 | 59,900 |
| Other (8 countries) | 1 | 1 | 34,500 | 3 | 3 | 327,000 |
| Total | 147 | 147 | 7,930,000 | 610 | 610 | 33,300,000 |

See footnotes at end of table.

TABLE 4—Continued
U.S. IMPORTS OF FERROSILICON AND SILICON METAL IN MAY 2014^{1,2}

(Metric tons, unless otherwise specified)

| Country | Gross weight | Contained weight | Value | January–May ³ | | |
|------------------------|--------------|------------------|-------------|--------------------------|------------------|--------------|
| | | | | Gross weight | Contained weight | Value |
| Metal—Continued: | | | | | | |
| 99.00%–99.99% silicon: | | | | | | |
| Australia | 1,520 | 1,510 | \$4,210,000 | 7,250 | 7,200 | \$19,500,000 |
| Brazil | 1,820 | 1,800 | 4,710,000 | 16,700 | 16,500 | 44,300,000 |
| Canada | 68 | 68 | 141,000 | 1,080 | 1,080 | 2,900,000 |
| France | 521 | 519 | 1,500,000 | 2,140 | 2,130 | 5,850,000 |
| Japan | 10 | 10 ⁴ | 12,800 | 26 | 26 ⁴ | 34,100 |
| Malaysia | 19 | 19 | 43,200 | 91 | 90 | 205,000 |
| Norway | 816 | 811 | 2,720,000 | 2,780 | 2,740 | 9,410,000 |
| South Africa | 4,430 | 4,400 | 11,200,000 | 16,800 | 16,600 | 44,400,000 |
| Spain | 60 | 60 | 162,000 | 1,220 | 1,210 | 3,250,000 |
| Thailand | 947 | 941 | 2,340,000 | 2,920 | 2,900 | 7,010,000 |
| Other (3 countries) | 20 | 20 | 59,800 | 40 | 39 | 107,000 |
| Total | 10,200 | 10,200 | 27,100,000 | 51,000 | 50,500 | 137,000,000 |
| Other silicon: | | | | | | |
| Australia | -- | -- | -- | 288 | 284 | 799,000 |
| Belgium | -- | -- | -- | 21 | 21 | 47,100 |
| Brazil | 338 | 333 | 894,000 | 2,930 | 2,880 | 7,460,000 |
| Canada | 1,450 | 1,430 | 3,750,000 | 2,320 | 2,290 | 6,010,000 |
| China | 40 | 40 | 95,000 | 106 | 40 | 111,000 |
| France | -- | -- | -- | 494 | 488 | 1,310,000 |
| Japan | (3) | (3) | 4,540 | 7 | (3) | 14,200 |
| Norway | 61 | 59 | 124,000 | 385 | 374 | 853,000 |
| South Africa | 20 | 20 | 50,600 | 40 | 40 | 96,600 |
| United Kingdom | -- | -- | -- | 36 | 34 | 79,000 |
| Other (1 country) | (3) | (3) | 10,500 | (3) | (3) | 10,500 |
| Total | 1,910 | 1,880 | 4,930,000 | 6,620 | 6,450 | 16,800,000 |
| Total silicon metal | 12,300 | 12,200 | 40,000,000 | 58,200 | 57,600 | 187,000,000 |

-- Zero.

¹Presentation of monthly data is based on the "January–May" quantities (gross weight) of the leading countries.

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

³Less than ½ unit.

⁴Adjusted by the U. S. Geological Survey.

Source: U.S. Census Bureau.