

Mineral Industry Surveys

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SILICON IN APRIL 2014

On a gross-weight basis, data for April 2014 indicate that domestic production of total silicon materials (ferrosilicon plus silicon metal) was 12% lower than that in March 2014 and 4% lower than that in April 2013. Net shipments were 20% lower than those of March 2014 and 16% higher than those of April 2013. Total production and net shipments during the first 4 months of 2014 were 11% higher and 22% higher, respectively, than those during the same period in 2013 (table 1). Production-related statistics for the individual categories of ferrosilicon and silicon metal were concealed to avoid disclosing company proprietary data.

Ending stocks were slightly less than those in March 2014 and 23% less than those in April 2013 (table 1). Stocks included adjustments in inventory and in-plant consumption of ferrosilicon to produce magnesium ferrosilicon and other miscellaneous alloys.

Total U.S. exports of ferrosilicon by gross weight were 1,440 metric tons (t) in April 2014, 26% higher than those in March 2014 and 32% higher than those in April 2013. Total U.S. exports of silicon metal by gross weight were 2,840 t in April 2014, 16% lower than those in March 2014 and 73% higher than those in April 2013. Total U.S. exports of ferrosilicon and silicon metal during the first 4 months of 2014 were 14% lower and 50% higher, respectively, than those during the same period in 2013 (table 3).

Total U.S. imports of ferrosilicon by gross weight were 12,100 metric tons (t) in April 2014, 5% lower than those in March 2014 and 14% higher than those in April 2013. Total U.S. imports of silicon metal by gross weight were 10,800 t in April 2014, 13% lower than those in March 2014 and slightly

higher than those in April 2013. Total U.S. imports of ferrosilicon and silicon metal during the first 4 months of 2014 were slightly higher and slightly lower, respectively, than those during the same period in 2013 (table 4).

Included in this Mineral Industry Surveys are U.S. spot market prices and U.S. foreign trade data for selected silicon-containing materials in April 2014.

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Industry News

The European Commission extended antidumping duties this month on imports of ferrosilicon from China and Russia. The rates remained at 15.6% for Erdos Zjin Kuangye Co. Ltd, 29% for Lanzhou Good Land Ferroalloy Factory Co. Ltd., and 31.2% for all other companies in China. The rates for all companies in Russia remained at 22.7%, except for Bratsk Ferroalloy Plant, which was set at 17.8% (Blamey, 2014).

References Cited

Blamey, Andy, 2014, EC opts to maintain dumping duties on Chinese, Russian ferrosilicon: Platts McGraw Hill Financial [London], April 10. (Accessed July 9, 2014, at <http://www.platts.com/latest-news/metals/london/ec-opts-to-maintain-dumping-duties-on-chinese-26769143>.)

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–April ^f | 147,000 | 96,500 | 44,400 |
| April | 39,300 | 22,400 | 44,400 |
| 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 ^f | 42,600 | 32,000 | 31,400 |
| February ^f | 39,700 | 27,500 | 33,000 |
| March ^f | 42,700 | 32,200 | 34,400 |
| April | 37,600 | 25,900 | 34,000 |
| January–April | 163,000 | 118,000 | 34,000 |

^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 APRIL 2014

| | High | Low | Average | Average low, mid, and high |
|---------------------------------------|--------------------------------------|--------|---------|----------------------------|
| Ferrosilicon: | | | | |
| 50% ferrosilicon ¹ | cents per pound of contained silicon | 110.00 | 106.00 | XX |
| 75% ferrosilicon ² | do. | 99.00 | 96.00 | 97.70 |
| Silicon metal, 553 grade ³ | cents per pound | 139.00 | 135.00 | 137.40 |

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 APRIL 2014^{1,2}

(Metric tons, unless otherwise specified)

| Country | Gross weight | Contained weight | Value | January–April ³ | | |
|---------------------------|--------------|------------------|-------------|----------------------------|------------------|-------------|
| | | | | Gross weight | Contained weight | Value |
| Ferrosilicon: | | | | | | |
| More than 55% silicon: | | | | | | |
| Austria | -- | -- | -- | 4 | 3 | \$7,000 |
| Belgium | 20 | 15 | \$27,600 | 20 | 15 | 27,600 |
| Brazil | -- | -- | -- | 19 | 11 | 29,600 |
| Canada | 347 | 208 | 542,000 | 1,110 | 666 | 1,730,000 |
| Colombia | 14 | 10 | 36,000 | 33 | 24 | 86,400 |
| France | -- | -- | -- | 20 | 15 | 26,600 |
| Japan | 100 | 78 | 188,000 | 308 | 238 | 561,000 |
| Mexico | 223 | 138 | 526,000 | 835 | 521 | 2,020,000 |
| Turkey | -- | -- | -- | 5 | 4 | 11,700 |
| United Kingdom | -- | -- | -- | 55 | 33 | 85,800 |
| Total | 704 | 449 | 1,320,000 | 2,410 | 1,530 | 4,590,000 |
| Other ferrosilicon: | | | | | | |
| Belgium | 40 | 18 | 74,400 | 279 | 129 | 539,000 |
| Brazil | -- | -- | -- | 38 | 19 | 90,400 |
| Canada | 69 | 34 | 117,000 | 370 | 185 | 513,000 |
| Colombia | 5 | 3 | 9,840 | 24 | 11 | 59,900 |
| Korea, Republic of | 54 | 23 | 62,100 | 216 | 94 | 248,000 |
| Mexico | 76 | 38 | 210,000 | 321 | 158 | 830,000 |
| Netherlands | 60 | 26 | 28,200 | 160 | 69 | 75,200 |
| Poland | -- | -- | -- | 61 | 12 | 137,000 |
| Turkey | 320 | 147 | 632,000 | 874 | 398 | 1,730,000 |
| United Kingdom | 80 | 36 | 165,000 | 280 | 136 | 323,000 |
| Other (4 countries) | 29 | 14 | 65,200 | 69 | 32 | 148,000 |
| Total | 733 | 339 | 1,360,000 | 2,690 | 1,240 | 4,690,000 |
| Total ferrosilicon | 1,440 | 788 | 2,680,000 | 5,100 | 2,770 | 9,280,000 |
| Metal: | | | | | | |
| More than 99.99% silicon: | | | | | | |
| China | 461 | 461 | 17,400,000 | 3,930 | 3,930 | 109,000,000 |
| Germany | 397 | 397 | 13,800,000 | 2,430 | 2,430 | 84,700,000 |
| Hong Kong | 160 | 160 | 4,150,000 | 268 | 268 | 7,830,000 |
| Italy | 39 | 39 | 2,020,000 | 102 | 102 | 6,160,000 |
| Japan | 730 | 730 | 41,700,000 | 3,340 | 3,340 | 183,000,000 |
| Korea, Republic of | 234 | 234 | 12,800,000 | 1,150 | 1,150 | 51,900,000 |
| Malaysia | 21 | 21 | 3,610,000 | 112 | 112 | 15,700,000 |
| Norway | 47 | 47 | 2,220,000 | 140 | 140 | 7,000,000 |
| Singapore | 99 | 99 | 1,740,000 | 642 | 642 | 10,900,000 |
| Taiwan | 503 | 503 | 14,100,000 | 1,920 | 1,920 | 56,500,000 |
| Other (30 countries) | 34 | 34 | 2,440,000 | 237 | 237 | 12,000,000 |
| Total | 2,730 | 2,730 | 116,000,000 | 14,300 | 14,300 | 545,000,000 |
| 99.00%–99.99% silicon: | | | | | | |
| China | (3) | (3) | 3,110 | 14 | 14 | 44,100 |
| India | -- | -- | -- | 1 | 1 | 5,760 |
| Mexico | 2 | 2 | 7,260 | 7 | 7 | 16,300 |
| Taiwan | -- | -- | -- | 1 | 1 | 7,640 |
| Turkey | -- | -- | -- | 9 | 9 | 12,600 |
| Total | 3 | 3 | 10,400 | 32 | 31 | 86,400 |
| Other silicon: | | | | | | |
| Austria | -- | -- | -- | 21 | 21 | 28,200 |
| Belgium | -- | -- | -- | 52 | 51 | 57,900 |
| Canada | 58 | 56 | 157,000 | 675 | 656 | 1,860,000 |
| China | 30 | 29 | 39,000 | 30 | 29 | 39,000 |
| India | -- | -- | -- | 6 | 6 | 11,000 |
| Korea, Republic of | 1 | 1 | 7,140 | 85 | 82 | 143,000 |

See footnotes at end of table.

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

(Metric tons, unless otherwise specified)

| Country | Gross weight | Contained weight | Value | January–April ³ | | |
|----------------------|--------------|------------------|-------------|----------------------------|------------------|-------------|
| | | | | Gross weight | Contained weight | Value |
| Metal—Continued: | | | | | | |
| Other silicon: | | | | | | |
| Kuwait | -- | -- | -- | 11 | 11 | \$14,700 |
| Mexico | 21 | 20 | \$65,400 | 51 | 50 | 150,000 |
| South Africa | -- | -- | -- | 8 | 7 | 27,900 |
| Taiwan | -- | -- | -- | 26 | 25 | 250,000 |
| Others (9 countries) | 2 | 2 | 17,300 | 20 | 19 | 111,000 |
| Total | 111 | 107 | 286,000 | 985 | 957 | 2,690,000 |
| Total silicon metal | 2,840 | 2,840 | 116,000,000 | 15,300 | 15,300 | 548,000,000 |

-- Zero.

¹Presentation of monthly data is based on the "January–April" 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 APRIL 2014^{1,2}

(Metric tons, unless otherwise specified)

| Country | Gross weight | Contained weight | Value | January–April ³ | | |
|-----------------------------------|---------------|------------------|-------------------|----------------------------|------------------|--------------------|
| | | | | Gross weight | Contained weight | Value |
| Ferrosilicon: | | | | | | |
| 55%–80% silicon, more than 3% Ca: | | | | | | |
| Brazil | 26 | 21 | \$58,500 | 292 | 221 | \$445,000 |
| Canada | -- | -- | -- | 20 | 11 | 11,700 |
| China | 743 | 551 | 1,010,000 | 1,680 | 1,250 | 2,220,000 |
| France | 18 | 11 | 39,800 | 61 | 39 | 165,000 |
| Germany | -- | -- | -- | 5 | 3 | 8,200 |
| South Africa | 54 | 37 | 115,000 | 162 | 110 | 340,000 |
| Total | 842 | 620 | 1,220,000 | 2,220 | 1,630 | 3,190,000 |
| 55%–80% silicon, other: | | | | | | |
| Brazil | 57 | 43 | 89,400 | 1,700 | 1,270 | 2,380,000 |
| Canada | 875 | 639 | 2,180,000 | 3,640 | 2,660 | 9,030,000 |
| China | 3,700 | 2,790 | 4,810,000 | 15,800 | 11,900 | 21,800,000 |
| France | 198 | 133 | 581,000 | 760 | 512 | 2,230,000 |
| Iceland | 525 | 407 | 789,000 | 4,230 | 3,210 | 6,270,000 |
| India | 61 | 48 | 133,000 | 322 | 253 | 687,000 |
| Russia | 168 | 127 | 205,000 | 22,600 | 17,300 | 33,100,000 |
| South Africa | 240 | 178 | 456,000 | 1,160 | 865 | 1,970,000 |
| Spain | 1,740 | 1,310 | 2,700,000 | 1,740 | 1,310 | 2,700,000 |
| Venezuela | -- | -- | -- | 10,400 | 7,800 | 14,700,000 |
| Other (4 countries) | 92 | 65 | 589,000 | 459 | 326 | 1,880,000 |
| Total | 7,660 | 5,740 | 12,500,000 | 62,800 | 47,400 | 96,700,000 |
| 80%–90% ferrosilicon, Germany | 1 | 1 | 2,650 | 1 | 1 | 2,650 |
| Magnesium ferrosilicon: | | | | | | |
| Argentina | 105 | 50 | 123,000 | 238 | 112 | 269,000 |
| Brazil | 205 | 90 | 338,000 | 585 | 262 | 980,000 |
| Canada | 1,370 | 632 | 2,500,000 | 4,730 | 2,160 | 8,320,000 |
| China | 114 | 51 | 220,000 | 293 | 131 | 554,000 |
| Germany | -- | -- | -- | 5 | 2 | 8,200 |
| India | 245 | 118 | 445,000 | 1,210 | 581 | 2,060,000 |
| Norway | 354 | 170 | 711,000 | 746 | 359 | 1,570,000 |
| Total | 2,390 | 1,110 | 4,340,000 | 7,800 | 3,600 | 13,800,000 |
| Other ferrosilicon: | | | | | | |
| Canada | 1,120 | 426 | 1,380,000 | 4,270 | 1,510 | 5,000,000 |
| China | 30 | 18 | 69,700 | 170 | 95 | 313,000 |
| Germany | 6 | 2 | 28,500 | 8 | 3 | 35,500 |
| Poland | 19 | 9 | 30,900 | 38 | 17 | 60,700 |
| Russia | 8 | 4 | 13,200 | 11 | 5 | 17,900 |
| Vietnam | -- | -- | -- | 150 | 113 | 209,000 |
| Total | 1,190 | 459 | 1,520,000 | 4,650 | 1,750 | 5,630,000 |
| Total ferrosilicon | 12,100 | 7,930 | 19,600,000 | 77,500 | 54,400 | 119,000,000 |
| Metal: | | | | | | |
| More than 99.99% silicon: | | | | | | |
| Brazil | -- | -- | -- | 77 | 77 | 233,000 |
| China | (3) | (3) | 51,700 | 28 | 28 | 399,000 |
| Denmark | (3) | (3) | 32,100 | 1 | 1 | 241,000 |
| Germany | 39 | 39 | 3,530,000 | 264 | 264 | 18,500,000 |
| Japan | 15 | 15 | 1,560,000 | 48 | 48 | 4,070,000 |
| Korea, Republic of | 4 | 4 | 462,000 | 6 | 6 | 525,000 |
| Malaysia | (3) | (3) | 19,400 | 1 | 1 | 51,200 |
| Norway | (3) | (3) | 26,600 | 3 | 3 | 178,000 |
| Spain | (3) | (3) | 4,190 | 2 | 2 | 16,700 |
| Taiwan | 8 | 8 | 290,000 | 33 | 33 | 906,000 |
| Other (7 countries) | 1 | 1 | 57,200 | 2 | 2 | 260,000 |
| Total | 68 | 68 | 6,030,000 | 463 | 463 | 25,400,000 |

See footnotes at end of table.

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

(Metric tons, unless otherwise specified)

| Country | Gross weight | Contained weight | Value | January–April ³ | | |
|------------------------|--------------|------------------|-------------|----------------------------|------------------|--------------|
| | | | | Gross weight | Contained weight | Value |
| Metal—Continued: | | | | | | |
| 99.00%–99.99% silicon: | | | | | | |
| Australia | 1,840 | 1,830 | \$5,130,000 | 5,720 | 5,690 | \$15,200,000 |
| Brazil | 3,190 | 3,100 | 8,860,000 | 14,900 | 14,700 | 39,600,000 |
| Canada | 299 | 297 | 774,000 | 1,020 | 1,010 | 2,760,000 |
| France | 504 | 499 | 1,400,000 | 1,620 | 1,610 | 4,350,000 |
| Malaysia | 72 | 71 | 162,000 | 72 | 71 | 162,000 |
| Norway | 477 | 473 | 1,620,000 | 1,960 | 1,930 | 6,690,000 |
| South Africa | 1,950 | 1,930 | 5,240,000 | 12,300 | 12,200 | 33,200,000 |
| Spain | 260 | 258 | 690,000 | 1,160 | 1,150 | 3,090,000 |
| Thailand | 629 | 624 | 1,500,000 | 1,980 | 1,960 | 4,670,000 |
| United Kingdom | -- | -- | -- | 19 | 19 | 45,100 |
| Other (2 countries) | -- | -- | -- | 17 | 1 | 23,600 |
| Total | 9,220 | 9,080 | 25,400,000 | 40,800 | 40,300 | 110,000,000 |
| Other silicon: | | | | | | |
| Australia | -- | -- | -- | 288 | 284 | 799,000 |
| Belgium | 20 | 20 | 44,500 | 21 | 21 | 47,100 |
| Brazil | 338 | 333 | 861,000 | 2,590 | 2,550 | 6,570,000 |
| Canada | 666 | 657 | 1,720,000 | 867 | 856 | 2,260,000 |
| China | -- | -- | -- | 65 | (3) | 16,200 |
| France | 280 | 276 | 742,000 | 494 | 488 | 1,310,000 |
| Japan | -- | -- | -- | 7 | (3) | 9,670 |
| Norway | 192 | 188 | 529,000 | 324 | 315 | 728,000 |
| South Africa | -- | -- | -- | 20 | 20 | 46,000 |
| United Kingdom | -- | -- | -- | 36 | 34 | 79,000 |
| Total | 1,500 | 1,480 | 3,900,000 | 4,710 | 4,570 | 11,900,000 |
| Total silicon metal | 10,800 | 10,600 | 35,300,000 | 45,900 | 45,400 | 147,000,000 |

-- Zero.

¹Presentation of monthly data is based on the "January–April" 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.