

Mineral Industry Surveys

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SILICON IN FEBRUARY 2007

Preliminary data for February 2007 indicate that domestic production of silicon ferroalloys, on a gross-weight basis, increased slightly while net shipments decreased by 5% compared with the revised amount in January 2007, according to the U.S. Geological Survey. Stocks decreased by 2% compared with the revised amount at the end of the prior month. Stocks included adjustments in inventory and in-plant consumption of ferrosilicon to produce magnesium ferrosilicon and other miscellaneous alloys. Production-related statistics for silicon metal were concealed to avoid disclosing company proprietary data.

Based on a gross-weight comparison of January 2007 export data (table 2) with those of December 2006, ferrosilicon exports

increased by 81%, owing to increases in both ferrosilicon trade categories. Silicon metal exports decreased by 12%, owing to decreases in the “more than 99.99% silicon” and “other” silicon metal trade categories.

Based on a gross-weight comparison of January 2007 import data (table 3) with those of the prior month, ferrosilicon imports decreased by 36%, owing primarily to a decrease in the “55%-80% silicon, other” ferrosilicon trade category. Silicon metal imports decreased by 17% during the same period, primarily because of a decrease in the “99.00% to 99.99% silicon” metal trade category.

Prices, cents per pound, silicon content

| | <u>50% Ferrosilicon¹</u> | <u>75% Ferrosilicon²</u> | <u>Silicon Metal²</u> |
|--------------------|-------------------------------------|-------------------------------------|----------------------------------|
| February 1 | 67.00-68.00 | 59.00-61.00 | 92.00-96.00 |
| February 8 | 67.00-68.00 | 59.00-61.00 | 92.00-96.00 |
| February 15 | 67.00-68.00 | 59.00-61.00 | 92.00-96.00 |
| February 22 | 67.00-68.00 | 60.00-61.00 | 92.00-96.00 |

¹Source: Ryan’s Notes, North American transaction price.

²Source: Platts Metals Week, dealer import price.

TABLE 1
U.S. PRODUCTION, SHIPMENTS, AND PRODUCER STOCKS OF SILICON ALLOYS AND METAL IN 2007^{1, 2, 3}

(Metric tons)

| Material | Gross production ⁴ | | Net shipments | | Stocks, |
|--|-------------------------------|--------------|---------------|--------------|-------------|
| | February | Year to date | February | Year to date | February 28 |
| Ferrosilicon, all grades ^{5, 6} | 21,000 | 41,700 | 17,600 | 36,100 | 24,600 |
| Silicon metal, excludes semiconductor grades | W | W | W | W | W |

W Withheld to avoid disclosing company proprietary data.

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

²Includes U.S. Geological Survey estimates.

³Data for silvery pig iron (less than 25% silicon) withheld to avoid disclosing company proprietary data.

⁴Includes in-plant consumption, as in production of magnesium ferrosilicon and other miscellaneous alloys.

⁵Ferrosilicon categories were aggregated to avoid disclosing company proprietary data.

⁶Includes miscellaneous silicon alloys.

TABLE 2
U.S. EXPORTS OF FERROSILICON AND SILICON METAL IN JANUARY 2007^{1, 2}

(Metric tons, unless otherwise specified)

| Country | Gross weight | Contained weight | Value | Year to date | | |
|-------------------------------|--------------|------------------|-----------|--------------|------------------|-----------|
| | | | | Gross weight | Contained weight | Value |
| Ferrosilicon: | | | | | | |
| More than 55% silicon: | | | | | | |
| Canada | 573 | 344 | \$581,000 | 573 | 344 | \$581,000 |
| Mexico | 116 | 69 | 156,000 | 116 | 69 | 156,000 |
| Spain | 16 | 10 | 20,300 | 16 | 10 | 20,300 |
| Thailand | 16 | 10 | 16,100 | 16 | 10 | 16,100 |
| Total | 721 | 433 | 773,000 | 721 | 433 | 773,000 |
| Other ferrosilicon: | | | | | | |
| Canada | 253 | 126 | 258,000 | 253 | 126 | 258,000 |
| Mexico | 56 | 28 | 69,600 | 56 | 28 | 69,600 |
| Spain | 16 | 8 | 23,800 | 16 | 8 | 23,800 |
| Total | 325 | 162 | 351,000 | 325 | 162 | 351,000 |
| Total ferrosilicon | 1,050 | 595 | 1,120,000 | 1,050 | 595 | 1,120,000 |

See footnotes at end of table.

TABLE 2--Continued
 U.S. EXPORTS OF FERROSILICON AND SILICON METAL IN JANUARY 2007^{1,2}

(Metric tons, unless otherwise specified)

| Country | Gross weight | Contained weight | Value | Year to date | | |
|----------------------------------|--------------|--------------------------|--------------------|--------------|--------------------------|--------------------|
| | | | | Gross weight | Contained weight | Value |
| Metal: | | | | | | |
| More than 99.99% silicon: | | | | | | |
| China | 191 | XX | \$30,200,000 | 191 | XX | \$30,200,000 |
| Germany | 209 | XX | 15,300,000 | 209 | XX | 15,300,000 |
| Italy | 9 | XX | 938,000 | 9 | XX | 938,000 |
| Japan | 529 | XX | 54,600,000 | 529 | XX | 54,600,000 |
| Korea, Republic of | 122 | XX | 10,100,000 | 122 | XX | 10,100,000 |
| Malaysia | 11 | XX | 1,590,000 | 11 | XX | 1,590,000 |
| Norway | 277 | XX | 11,300,000 | 277 | XX | 11,300,000 |
| Taiwan | 23 | XX | 2,740,000 | 23 | XX | 2,740,000 |
| Ukraine | 11 | XX | 739,000 | 11 | XX | 739,000 |
| United Kingdom | 12 | XX | 1,610,000 | 12 | XX | 1,610,000 |
| Other (15 countries) | 12 | XX | 1,090,000 | 12 | XX | 1,090,000 |
| Total | 1,410 | 1,410^e | 130,000,000 | 1,410 | 1,410^e | 130,000,000 |
| 99.00% - 99.99% silicon: | | | | | | |
| Brazil | 66 | 65 | 171,000 | 66 | 65 | 171,000 |
| China | 12 | 12 | 36,000 | 12 | 12 | 36,000 |
| Costa Rica | 1 | 1 | 3,840 | 1 | 1 | 3,840 |
| Peru | 3 | 3 | 4,500 | 3 | 3 | 4,500 |
| Singapore | 3 | 3 | 3,920 | 3 | 3 | 3,920 |
| Total | 85 | 84 | 219,000 | 85 | 84 | 219,000 |
| Other silicon: | | | | | | |
| Belgium | 2 | 2 | 11,800 | 2 | 2 | 11,800 |
| Canada | 4 | 4 | 6,030 | 4 | 4 | 6,030 |
| China | 63 | 61 | 81,200 | 63 | 61 | 81,200 |
| Germany | 6 | 6 | 8,090 | 6 | 6 | 8,090 |
| Japan | 148 | 144 | 196,000 | 148 | 144 | 196,000 |
| Mexico | 7 | 6 | 21,900 | 7 | 6 | 21,900 |
| Netherlands | 38 | 37 | 192,000 | 38 | 37 | 192,000 |
| Philippines | 6 | 6 | 7,780 | 6 | 6 | 7,780 |
| United Kingdom | 10 | 10 | 21,200 | 10 | 10 | 21,200 |
| Total | 284 | 276 | 546,000 | 284 | 276 | 546,000 |
| Total silicon metal | 1,770 | 1,760 | 131,000,000 | 1,770 | 1,760 | 131,000,000 |

^eEstimated. XX Not applicable.

¹Presentation of monthly data is based on the year-to-date quantities (gross weight) of the top 10 countries.

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

Source: U.S. Census Bureau.

TABLE 3
U.S. IMPORTS FOR CONSUMPTION OF FERROSILICON AND SILICON METAL IN JANUARY 2007^{1,2}

(Metric tons, unless otherwise specified)

| Country | Gross weight | Contained weight | Value | Year to date | | |
|--------------------------------|---------------|--------------------|-------------------|---------------|------------------|-------------------|
| | | | | Gross weight | Contained weight | Value |
| Ferrosilicon: | | | | | | |
| 55% - 80% silicon, over 3% Ca: | | | | | | |
| Brazil | 95 | 58 | \$124,000 | 95 | 58 | \$124,000 |
| China | 97 | 55 | 132,000 | 97 | 55 | 132,000 |
| France | 19 | 7 ³ | 32,000 | 19 | 7 | 32,000 |
| Total | 211 | 120 | 288,000 | 211 | 120 | 288,000 |
| 55% - 80% silicon, Other: | | | | | | |
| Brazil | 20 | 15 | 18,900 | 20 | 15 | 18,900 |
| Canada | 1,230 | 930 | 1,430,000 | 1,230 | 930 | 1,430,000 |
| China | 4,870 | 3,710 | 4,660,000 | 4,870 | 3,710 | 4,660,000 |
| France | 139 | 100 | 219,000 | 139 | 100 | 219,000 |
| Germany | 34 | 26 ³ | 167,000 | 34 | 26 | 167,000 |
| Iceland | 205 | 151 | 199,000 | 205 | 151 | 199,000 |
| Norway | 218 | 160 | 341,000 | 218 | 160 | 341,000 |
| Russia | 4,750 | 3,560 ³ | 3,760,000 | 4,750 | 3,560 | 3,760,000 |
| Sri Lanka | 19 | 14 | 34,400 | 19 | 14 | 34,400 |
| Venezuela | 4,880 | 3,660 | 3,800,000 | 4,880 | 3,660 | 3,800,000 |
| Total | 16,400 | 12,300 | 14,600,000 | 16,400 | 12,300 | 14,600,000 |
| Magnesium ferrosilicon: | | | | | | |
| Argentina | 79 | 46 | 107,000 | 79 | 46 | 107,000 |
| Brazil | 716 | 335 | 626,000 | 716 | 335 | 626,000 |
| Canada | 799 | 371 | 827,000 | 799 | 371 | 827,000 |
| China | 19 | 14 ³ | 18,500 | 19 | 14 | 18,500 |
| Japan | 15 | 6 ³ | 36,200 | 15 | 6 | 36,200 |
| Netherlands | 54 | 25 | 52,700 | 54 | 25 | 52,700 |
| Norway | 78 | 35 | 75,100 | 78 | 35 | 75,100 |
| Russia | 1,400 | 630 | 672,000 | 1,400 | 630 | 672,000 |
| Total | 3,160 | 1,460 | 2,410,000 | 3,160 | 1,460 | 2,410,000 |
| Other ferrosilicon: | | | | | | |
| Canada | 706 | 175 | 661,000 | 706 | 175 | 661,000 |
| China | 1 | (4) | 2,350 | 1 | (4) | 2,350 |
| Russia | 47 | 24 | 36,100 | 47 | 24 | 36,100 |
| Total | 754 | 199 | 699,000 | 754 | 199 | 699,000 |
| Total ferrosilicon | 20,500 | 14,100 | 18,000,000 | 20,500 | 14,100 | 18,000,000 |

See footnotes at end of table.

TABLE 3--Continued
 U.S. IMPORTS FOR CONSUMPTION OF FERROSILICON AND SILICON METAL IN JANUARY 2007^{1,2}

(Metric tons, unless otherwise specified)

| Country | Gross weight | Contained weight | Value | Year to date | | |
|---------------------------|--------------|------------------|------------|--------------|------------------|------------|
| | | | | Gross weight | Contained weight | Value |
| Metal: | | | | | | |
| More than 99.99% silicon: | | | | | | |
| British Virgin Island | 1 | XX | \$10,000 | 1 | XX | \$10,000 |
| China | 1 | XX | 395,000 | 1 | XX | 395,000 |
| Germany | 83 | XX | 9,190,000 | 83 | XX | 9,190,000 |
| Italy | 29 | XX | 2,280,000 | 29 | XX | 2,280,000 |
| Japan | 30 | XX | 3,470,000 | 30 | XX | 3,470,000 |
| Korea, Republic of | 6 | XX | 1,570,000 | 6 | XX | 1,570,000 |
| Spain | 1 | XX | 6,330 | 1 | XX | 6,330 |
| Switzerland | 2 | XX | 254,000 | 2 | XX | 254,000 |
| Taiwan | 6 | XX | 332,000 | 6 | XX | 332,000 |
| Turkey | 13 | XX | 28,900 | 13 | XX | 28,900 |
| Other (4 countries) | (4) | XX | 43,400 | (4) | XX | 43,400 |
| Total | 172 | 172 ^e | 17,600,000 | 172 | 172 ^e | 17,600,000 |
| 99.00% - 99.99% silicon: | | | | | | |
| Australia | 1,180 | 1,170 | 2,010,000 | 1,180 | 1,170 | 2,010,000 |
| Brazil | 4,440 | 4,410 | 7,060,000 | 4,440 | 4,410 | 7,060,000 |
| Canada | 2,040 | 2,030 | 3,520,000 | 2,040 | 2,030 | 3,520,000 |
| Norway | 314 | 312 | 573,000 | 314 | 312 | 573,000 |
| Philippines | 223 | 188 ³ | 342,000 | 223 | 188 | 342,000 |
| South Africa | 1,740 | 1,690 | 2,540,000 | 1,740 | 1,690 | 2,540,000 |
| Total | 9,940 | 9,810 | 16,000,000 | 9,940 | 9,810 | 16,000,000 |
| Other silicon: | | | | | | |
| Brazil | 360 | 355 | 543,000 | 360 | 355 | 543,000 |
| Canada | 751 | 736 | 1,180,000 | 751 | 736 | 1,180,000 |
| China | 5 | 5 | 17,600 | 5 | 5 | 17,600 |
| Japan | 11 | 1 | 12,200 | 11 | 1 | 12,200 |
| Norway | 18 | 18 | 57,100 | 18 | 18 | 57,100 |
| Philippines | 27 | 24 | 38,400 | 27 | 24 | 38,400 |
| Sweden | 61 | 10 | 66,600 | 61 | 10 | 66,600 |
| Total | 1,230 | 1,150 | 1,910,000 | 1,230 | 1,150 | 1,910,000 |
| Total silicon metal | 11,300 | 11,100 | 35,500,000 | 11,300 | 11,100 | 35,500,000 |

^eEstimated. XX Not applicable.

¹Presentation of monthly data is based on the year-to-date quantities (gross weight) of the top 10 countries.

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

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

⁴Less than ½ unit.

Source: U.S. Census Bureau.