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# Mineral Industry Surveys

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## CHROMIUM IN JANUARY 2019

Reported consumption of chromium, on a gross weight basis, in January 2019 decreased slightly compared with reported consumption of chromium in December 2018 and decreased by 6% compared with consumption in January 2018. High-carbon ferrochromium accounted for 87% of the chromium material consumed in January 2019 (tables 1, 2). Stainless steel was the leading end use, consuming 89% of chromium materials (tables 1, 2). Consumer stocks decreased by 8% compared with those of the previous month and increased slightly compared with those of January 2018.

Stainless steel production was 233,000 metric tons (t) in January 2019, an 18% increase compared with production in December 2018, and a decrease of 8% compared with production in January 2018. Government stockpile inventories for ferroalloys and chromium metal were unchanged compared with those of December 2018. Compared with those of January 2018, Government stockpile inventories for chromium metal were essentially unchanged and ferroalloys inventories decreased by 7% (table 3).

Imports of chromite ore, chromium ferroalloys, chromium metal, and stainless steel commonly fluctuate from month to month (table 1). Stainless steel imports in January 2019 increased by 17% compared with imports in December 2018 and decreased by 21% compared with imports in January 2018 (fig. 1, table 1).

Exports of chromite ore, chromium ferroalloys, chromium

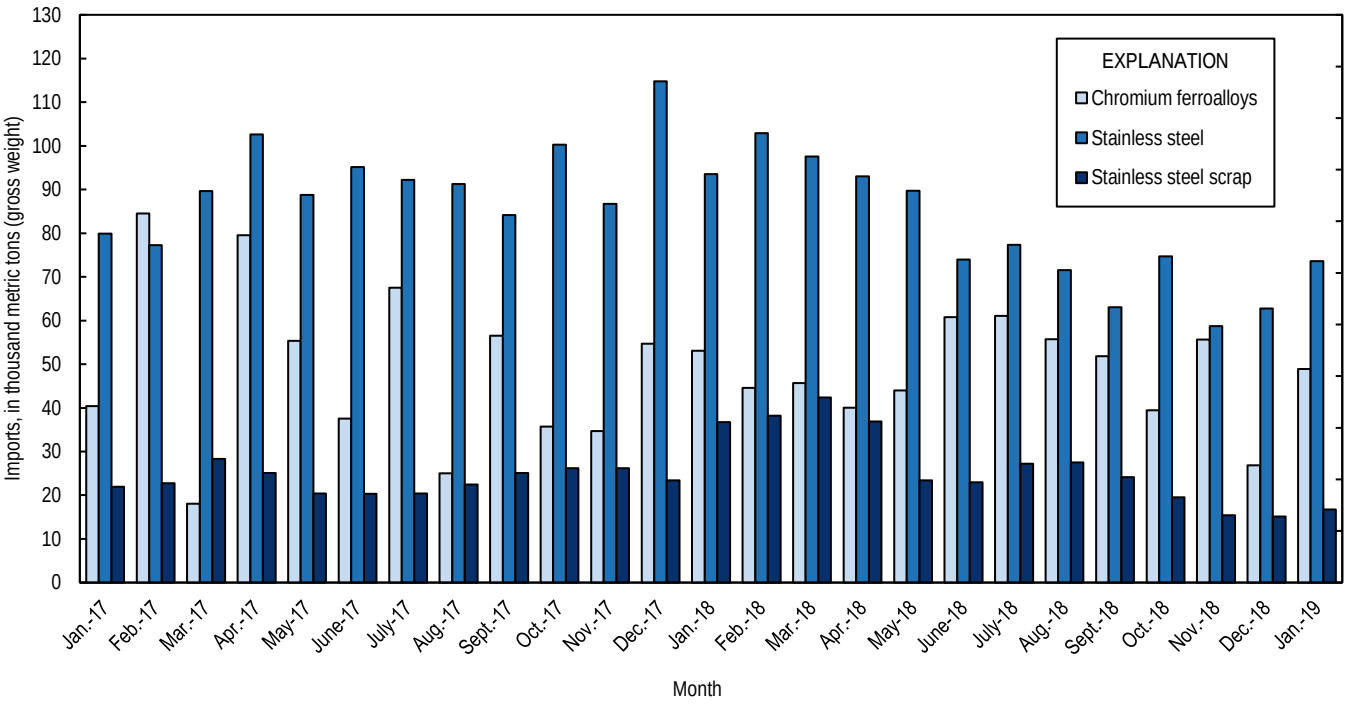


Figure 1. Chromium ferroalloys and stainless steel imports from January 2017 through January 2019. Source: U.S. Census Bureau.

metal, and stainless steel also frequently fluctuate from month to month (table 1, table 4). Stainless steel exports in January 2019 increased by 44% compared with exports in December 2018 (table 1) and decreased by 49% compared with those of January 2018.

For January 2019, the leading import sources for ferrochromium (FeCr) into the United States were, in descending order of quantity by gross weight, South Africa, Zimbabwe, and Kazakhstan (table 6), whereas the leading import sources for chromium metal were the Russia, China, and France (table 7).

According to CRU Group (2019), the U.S. high-carbon FeCr (60%–70% chromium) average price was 106.300 cents per pound of contained chromium in January 2019, a slight decrease from the average price in December 2018 and a 26% decrease from the average price in January 2018 (fig. 2). The high-carbon FeCr price began declining in September 2018 and continued to drop through January 2019. The U.S. charge-grade FeCr (47%–55% chromium) average price was 134.500 cents per pound of contained chromium in January 2019, unchanged since March 2017.

## Industry News

The Jindal Stainless Group (India) announced the commissioning of the first phase of its brownfield project for cold-rolled products at its plant in Jajpur, Odisha. The first unit was expected to go into production in January and would have a capacity of 100,000 metric tons per year (t/yr). A second 100,000-t/yr unit was planned to begin production later in 2019 (Jindal Stainless Group, 2019, p. 39).

## References Cited


CRU Group, 2019, CRU prices_chrome_historical data_01_feb_2019_jan_avg: CRU Group, February 1. (Accessed February 5, 2019, via http://www.crugroup.com/.)

Jindal Stainless Group, 2019, Jindal Stainless commits capacity for kitchenware grade stainless steel in eastern India: Kolkata, India, Jindal Stainless Group press release, January 1, 40 p. (Accessed April 1, 2019, at https://www.jindalstainless.com/pdfs/Activity-Report-Houseware-Event-Kolkata.pdf.)




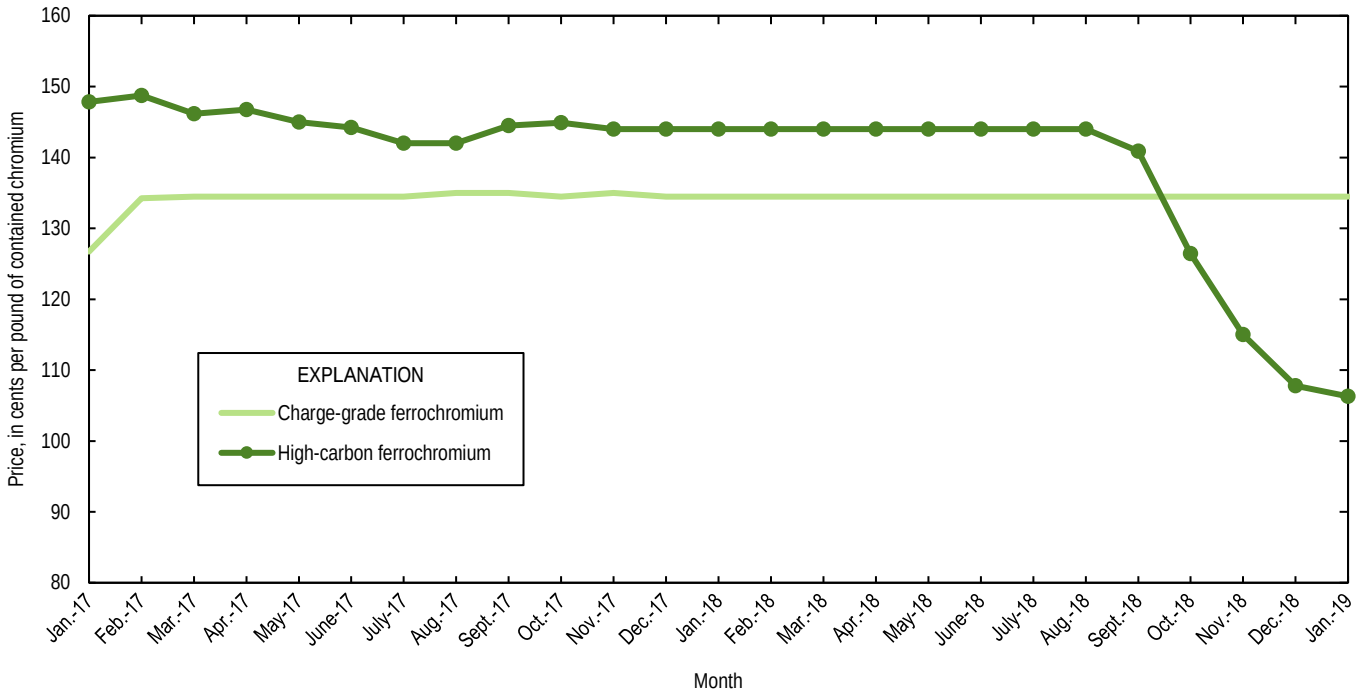


Figure 2. Average monthly prices for U.S. charge-grade and high-carbon ferrochromium from January 2016 through January 2019. Source: CRU Group.

TABLE 1
U.S. SALIENT CHROMIUM STATISTICS[1]

(Metric tons, gross weight)

| | 2018 | | | 2019 |
|---|---|---|---|---|
| | November | December | January–December[p, 2] | January |
| Production, stainless steel[3] | 193,000 | 198,000 | 2,810,000 | 233,000 |
| Components of U.S. supply: | | | | |
| Stainless steel scrap receipts | 75,000 [r] | 74,700 [r] | 889,000 [r] | 74,100 |
| Stainless steel scrap consumption | 109,000 [r] | 110,000 | 1,320,000 | 112,000 |
| Imports for consumption: | | | | |
| Chromite ore | 361 | 39,200 | 197,000 | 9,090 |
| Ferrochromium: | | | | |
| More than 4% carbon | 51,500 | 14,300 | 492,000 | 42,200 |
| More than 3% but not more than 4% carbon | -- | 7,450 | 8,610 | 54 |
| More than 0.5% but not more than 3% carbon | 267 | 463 | 4,130 | 108 |
| Not more than 0.5% carbon | 3,350 | 2,340 | 56,000 | 4,940 |
| Ferrochromium silicon | 508 | 2,250 | 18,000 | 1,550 |
| Total ferroalloy imports | 55,700 | 26,800 | 579,000 | 48,900 |
| Chromium metal[4] | 1,100 | 1,100 | 18,000 | 1,400 |
| Stainless steel | 58,700 | 62,700 | 959,000 | 73,600 |
| Stainless steel scrap | 15,400 | 15,100 | 329,000 | 16,700 |
| Distribution of U.S. supply: | | | | |
| Consumption, industry, chromium ferroalloys and metal | 32,400 | 32,900 | 391,000 | 32,200 |
| Exports: | | | | |
| Chromite ore | 843 | 741 | 6,280 | 169 |
| Chromium ferroalloys: | | | | |
| High-carbon ferrochromium | 34 | 61 | 731 | 191 |
| Low-carbon ferrochromium | 65 | 27 | 1,740 | 13 |
| Ferrochromium silicon | 24 | 3 | 60 | -- |
| Total ferroalloy exports | 123 | 90 | 2,530 | 204 |
| Chromium metal | 43 | 29 | 514 | 25 |
| Stainless steel | 36,000 | 30,100 | 650,000 | 43,200 |
| Stainless steel scrap | 48,200 | 43,100 | 778,000 | 46,500 |
| Stocks at end of period: | | | | |
| Consumer, industry, chromium ferroalloys and metal | 10,600 | 11,300 | 11,300 | 10,400 |
| Government stockpile: | | | | |
| Chromium ferroalloys | 71,700 | 71,200 | 71,200 | 71,200 |
| Chromium metal | 3,850 | 3,850 | 3,850 | 3,850 |

[p]Preliminary. [r]Revised. -- Zero.

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

[2]May include revised data that are not broken out by specific month(s).

[3]Data on stainless steel production reported by American Iron and Steel Institute; monthly, quarterly, and year–to–date production of stainless and heat-resisting raw steel.

[4]Includes waste and scrap and other.

TABLE 2
U.S. REPORTED CONSUMPTION AND STOCKS OF CHROMIUM PRODUCTS[1, 2]

(Metric tons, gross weight unless otherwise noted)

| | 2018 | | 2019 |
|---|---|---|---|
| | December | January–December[3] | January |
| Consumption by end use: | | | |
| Steel: | | | |
| Carbon steel | 220 | 2,190 | 151 |
| High-strength low-alloy steel | 146 | 1,750 | 146 |
| Stainless and heat-resisting steel | 29,300 | 348,000 | 28,600 |
| Unspecified steel[4] | 2,720 | 32,600 | 2,720 |
| Superalloys | 438 | 5,250 | 439 |
| Other alloys and uses[5] | 102 | 1,150 | 112 |
| Total | 32,900 | 391,000 | 32,200 |
| Total, chromium content | 19,300 | 233,000 | 18,900 |
| Consumption by material: | | | |
| Low-carbon ferrochromium | 1,890 | 21,900 | 1,820 |
| High-carbon ferrochromium | 28,400 | 337,000 | 27,800 |
| Ferrochromium silicon | W | W | W |
| Chromium metal | 160 | 2,430 | 161 |
| Chromite ore | 16 | 124 | 30 |
| Chromium-aluminum alloy | W | W | W |
| Other chromium materials | W | W | W |
| Total | 32,900 | 391,000 | 32,200 |
| Total, chromium content | 19,300 | 233,000 | 18,900 |
| Consumer stocks: | | | |
| Low-carbon ferrochromium | 1,570 | 1,570 | 1,620 |
| High-carbon ferrochromium | 8,760 | 8,760 | 7,770 |
| Ferrochromium silicon | 836 | 836 | 852 |
| Chromium metal | 55 | 55 | 53 |
| Chromium-aluminum alloy | W | W | W |
| Other chromium materials | W | W | W |
| Total | 11,300 | 11,300 | 10,400 |
| Total, chromium content | 6,700 | 6,700 | 6,160 |

W Withheld to avoid disclosing company proprietary data; included in "Total."

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

[2]Includes estimates.

[3]May include revised data that are not broken out by specific month(s).

[4]Includes electrical, full alloy, tool, and unspecified steel end uses.

[5]Includes cast irons, welding and alloy hard-facing rods and materials, wear- and corrosion-resistant alloys, and aluminum, copper, magnetic, nickel, and other alloys.

TABLE 3
U.S. GOVERNMENT STOCKPILE INVENTORY OF
CHROMIUM MATERIALS[1]

(Metric tons)

| | Chromium ferroalloys | | |
|---|---|---|---|
| | High-carbon ferro-chromium | Low-carbon ferro-chromium | Chromium metal |
| 2018: | | | |
| January | 47,900 | 28,500 | 3,860 |
| February | 47,000 | 28,300 | 3,850 |
| March | 47,000 | 28,200 | 3,850 |
| April | 46,300 | 28,200 | 3,850 |
| May | 45,600 | 27,900 | 3,850 |
| June | 45,400 | 27,600 | 3,850 |
| July | 44,500 | 27,600 | 3,850 |
| August | 44,500 | 27,600 | 3,850 |
| September | 44,500 | 27,600 | 3,850 |
| October | 44,500 | 27,600 | 3,850 |
| November | 44,000 | 27,600 | 3,850 |
| December | 43,800 | 27,400 | 3,850 |
| 2019, January | 43,800 | 27,400 | 3,850 |

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

Source: Defense Logistics Agency, DLA Strategic Materials.

TABLE 4
U.S. EXPORTS OF CHROMITE ORE, CHROMIUM FERROALLOYS, AND METAL[1]

| | Chromite ore | | Chromium ferroalloys[2] | | | Chromium metal[3] | |
|---|---|---|---|---|---|---|---|
| | Gross weight (metric tons) | Value (thousands) | Gross weight (metric tons) | Chromium content (metric tons) | Value (thousands) | Gross weight (metric tons) | Value (thousands) |
| 2018: | | | | | | | |
| January | 192 | $142 | 61 | 27 | $88 | 38 | $875 |
| February | 418 | 274 | 123 | 65 | 144 | 64 | 909 |
| March | 575 | 416 | 41 | 22 | 50 | 21 | 604 |
| April | 375 | 238 | 258 | 118 | 247 | 51 | 1,120 |
| May | 983 | 398 | 204 | 90 | 365 | 55 | 1,300 |
| June | 225 | 177 | 680 | 408 | 855 | 45 | 1,310 |
| July | 811 | 456 | 255 | 153 | 420 | 41 | 1,090 |
| August | 181 | 138 | 123 | 81 | 291 | 33 | 990 |
| September | 294 | 395 | 165 | 99 | 222 | 53 | 1,280 |
| October | 637 | 408 | 406 | 224 | 565 | 43 | 1,160 |
| November | 843 | 398 | 123 | 68 | 231 | 43 | 982 |
| December | 741 | 368 | 90 | 42 | 111 | 29 | 674 |
| January–December[4] | 6,280 | 3,810 | 2,530 | 1,400 | 3,590 | 514 | 12,300 |
| 2019, January | 169 | 124 | 204 | 64 | 188 | 25 | 644 |

[1]Data are rounded to no more than three significant digits; may not add to totals shown.
[2]Includes low- and high-carbon ferrochromium and ferrochromium silicon.
[3]Includes chromium metal, waste and scrap, and unwrought powders.
[4]May include revised data that are not broken out by specific month(s).

Source: U.S. Census Bureau.

TABLE 5
U.S. IMPORTS FOR CONSUMPTION OF CHROMITE ORE, FERROCHROMIUM, AND CHROMIUM METAL[1]

(Metric tons)

| | 2018 | | 2019 |
|---|---|---|---|
| | December | January–December[2] | January |
| Chromite ore: | | | |
| Not more than 40% chromic oxide: | | | |
| Quantity | 205 | 462 | 46 |
| Chromic oxide content | 79 | 173 | 18 |
| More than 40% but less than 46% chromic oxide: | | | |
| Quantity | 1,180 | 14,600 | 152 |
| Chromic oxide content | 541 | 6,590 | 68 |
| 46% or more chromic oxide: | | | |
| Quantity | 37,800 | 182,000 | 8,890 |
| Chromic oxide content | 18,000 | 85,400 | 4,180 |
| Total, all grades: | | | |
| Quantity | 39,200 | 197,000 | 9,090 |
| Chromic oxide content | 18,600 | 92,100 | 4,260 |
| Ferrochromium: | | | |
| Low-carbon:[3] | | | |
| Not more than 0.5% carbon: | | | |
| Quantity | 2,340 | 56,000 | 4,940 |
| Chromium content | 1,620 | 38,800 | 3,360 |
| More than 0.5% but not more than 3% carbon: | | | |
| Quantity | 463 | 4,130 | 108 |
| Chromium content | 291 | 2,570 | 65 |
| Total, low-carbon: | | | |
| Quantity | 2,800 | 60,100 | 5,050 |
| Chromium content | 1,910 | 41,400 | 3,430 |
| Medium-carbon:[4] | | | |
| Quantity | 7,450 | 8,610 | 54 |
| Chromium content | 3,830 | 4,560 | 24 |
| High-carbon:[5] | | | |
| Quantity | 14,300 | 492,000 | 42,200 |
| Chromium content | 7,980 | 268,000 | 22,900 |
| Total, all grades: | | | |
| Quantity | 24,600 | 561,000 | 47,300 |
| Chromium content | 13,700 | 314,000 | 26,400 |
| Chromium metal: | | | |
| Unwrought powders | 764 | 7,920 | 969 |
| Waste and scrap | 22 | 177 | 30 |
| Other than waste and scrap and unwrought powders | 315 | 9,940 | 402 |
| Total, all grades | 1,100 | 18,000 | 1,400 |

-- Zero.

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

[2]May include revised data that are not broken out by specific month(s).

[3]Ferrochromium containing not more than 3% carbon.

[4]Ferrochromium containing more than 3% carbon but not more than 4% carbon.

[5]Ferrochromium containing more than 4% carbon.

Source: U.S. Census Bureau.

TABLE 6
U.S. IMPORTS FOR CONSUMPTION OF FERROCHROMIUM IN 2019, BY GRADE AND COUNTRY OR LOCALITY[1]

| Grade and country or locality | January | | |
|---|---|---|---|
| | Quantity (metric tons) | Chromium content (metric tons) | Value[2] (thousands) |
| High-carbon ferrochromium:[3] | | | |
| Albania | 1,680 | 1,110 | $2,360 |
| Germany | 3 | 2 | 11 |
| India | 3,090 | 1,890 | 3,410 |
| Kazakhstan | 5,120 | 3,570 | 8,380 |
| Oman | 288 | 177 | 385 |
| South Africa | 24,400 | 12,000 | 23,800 |
| Sweden | 337 | 225 | 470 |
| Turkey | 293 | 185 | 463 |
| Zimbabwe | 7,010 | 3,800 | 6,670 |
| Total | 42,200 | 22,900 | 45,900 |
| Medium-carbon ferrochromium:[4], South Africa | 54 | 24 | 20 |
| Low-carbon ferrochromium:[5] | | | |
| More than 0.5% but not more than 3% carbon, Brazil | 108 | 65 | 228 |
| Not more than 0.5% carbon: | | | |
| China | 5 | 3 | 16 |
| Germany | 695 | 483 | 2,240 |
| India | 9 | 6 | 53 |
| Japan | 279 | 198 | 1,180 |
| Kazakhstan | 1,030 | 739 | 2,990 |
| Russia | 2,750 | 1,820 | 6,720 |
| Turkey | 173 | 120 | 518 |
| Total | 4,940 | 3,360 | 13,700 |
| All grades: | | | |
| Albania | 1,680 | 1,110 | 2,360 |
| Brazil | 108 | 65 | 228 |
| China | 5 | 3 | 16 |
| Germany | 698 | 485 | 2,250 |
| India | 3,100 | 1,900 | 3,460 |
| Japan | 279 | 198 | 1,180 |
| Kazakhstan | 6,140 | 4,310 | 11,400 |
| Oman | 288 | 177 | 385 |
| Russia | 2,750 | 1,820 | 6,720 |
| South Africa | 24,500 | 12,000 | 23,800 |
| Sweden | 337 | 225 | 470 |
| Turkey | 466 | 305 | 981 |
| Zimbabwe | 7,010 | 3,800 | 6,670 |
| Total | 47,300 | 26,400 | 59,900 |

[1]Data are rounded to no more than three significant digits; may not add to totals shown.
[2]Customs import 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 merchandise into the United States.
[3]Ferrochromium containing more than 4% carbon.
[4]Ferrochromium containing more than 3% carbon but not more than 4% carbon.
[5]Ferrochromium containing not more than 3% carbon.

Source: U.S. Census Bureau.

TABLE 7
U.S. IMPORTS FOR CONSUMPTION OF CHROMIUM METAL IN 2019,
BY GRADE AND BY COUNTRY OR LOCALITY[1]

| Grade and country or locality | January | |
|---|---|---|
| | Quantity (metric tons) | Value[2] (thousands) |
| Unwrought powders: | | |
| China | 313 | $3,560 |
| France | 19 | 374 |
| Germany | 48 | 502 |
| Japan | (3) | 23 |
| Russia | 381 | 4,070 |
| United Kingdom | 207 | 3,230 |
| Total | 969 | 11,800 |
| Waste and scrap: | | |
| Canada | 3 | 16 |
| United Kingdom | 27 | 250 |
| Total | 30 | 266 |
| Other than waste and scrap and unwrought powders: | | |
| China | (3) | 11 |
| France | 284 | 3,670 |
| Germany | 3 | 84 |
| Ireland | (3) | 3 |
| Japan | 1 | 9 |
| Lithuania | (3) | 3 |
| New Zealand | (3) | 11 |
| Russia | 111 | 1,260 |
| United Kingdom | 3 | 50 |
| Total | 402 | 5,100 |
| All grades: | | |
| Canada | 3 | 16 |
| China | 313 | 3,570 |
| France | 303 | 4,050 |
| Germany | 51 | 586 |
| Ireland | (3) | 3 |
| Japan | 1 | 32 |
| Lithuania | (3) | 3 |
| New Zealand | (3) | 11 |
| Russia | 493 | 5,340 |
| United Kingdom | 237 | 3,530 |
| Total | 1,400 | 17,100 |

[1]Data are rounded to no more than three significant digits; may not add to totals shown.
[2]Customs import 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 merchandise into the United States.
[3]Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 8
U.S. STAINLESS STEEL TRADE, BY PRODUCT, IN 2019[1]

| Stainless steel product | January Gross weight (metric tons) | January Value[2] (thousands) |
|---|---|---|
| Exports: | | |
| Ingot | 1,880 | $8,610 |
| Flat-rolled (width > 600 mm) | 28,800 | 67,300 |
| Flat-rolled (width < 600 mm) | 6,220 | 28,300 |
| Bars and rods in irregular coils | 350 | 1,200 |
| Other bars and rods | 2,670 | 25,700 |
| Wire | 744 | 10,200 |
| Tubes, pipes, hollow profiles | 2,580 | 27,700 |
| Total | 43,200 | 169,000 |
| Stainless steel scrap | 46,500 | 25,600 |
| Grand total | 89,700 | 195,000 |
| Imports: | | |
| Ingot | 8,490 | 20,100 |
| Flat-rolled (width > 600 mm) | 27,000 | 64,700 |
| Flat-rolled (width < 600 mm) | 3,350 | 14,100 |
| Bars and rods in irregular coils | 2,780 | 12,500 |
| Other bars and rods | 12,900 | 47,800 |
| Wire | 4,820 | 22,400 |
| Tubes, pipes, hollow profiles | 14,200 | 73,500 |
| Total | 73,600 | 255,000 |
| Stainless steel scrap | 16,700 | 12,600 |
| Grand total | 90,300 | 268,000 |

[1]Data are rounded to no more than three significant digits; may not add to totals shown.
[2]Export value is free alongside ship. Import value is Customs import value,which generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance, and other charges incurred in bringing the merchandise into the United States.

Source: U.S. Census Bureau.