

# Mineral Industry Surveys

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## CHROMIUM IN JULY 2020

Reported consumption of chromium, on a gross weight basis, in July 2020 was essentially unchanged compared with reported consumption of chromium in June 2020, and decreased by 16% compared with reported consumption in July 2019. Consumer stocks were essentially unchanged compared with those of the previous month and decreased by 28% compared with those of July 2019 (tables 1, 2).

Stainless steel production decreased slightly in July 2020 compared with production in June 2020, and decreased by 35% compared with production in July 2019 (table 1). Government stockpile inventories for chromium metal have remained essentially unchanged since February 2017. Government stockpile inventories of ferroalloys decreased

slightly compared with those in June 2020 and decreased by 8% compared with those of July 2019 (table 3).

Imports of chromite ore, chromium ferroalloys, chromium metal, and stainless steel commonly fluctuate from month to month (table 1). In July 2020, imports of all grades of chromium ferroalloys decreased by 58% and 39% compared with imports of chromium ferroalloys in June 2020 and July 2019, respectively. Stainless steel imports in July 2020 increased by 86% compared with imports in June 2020 and increased by 32% compared with those in July 2019 (fig. 1, table 1).

Exports of chromite ore, chromium ferroalloys, chromium metal, and stainless steel also frequently fluctuate from month

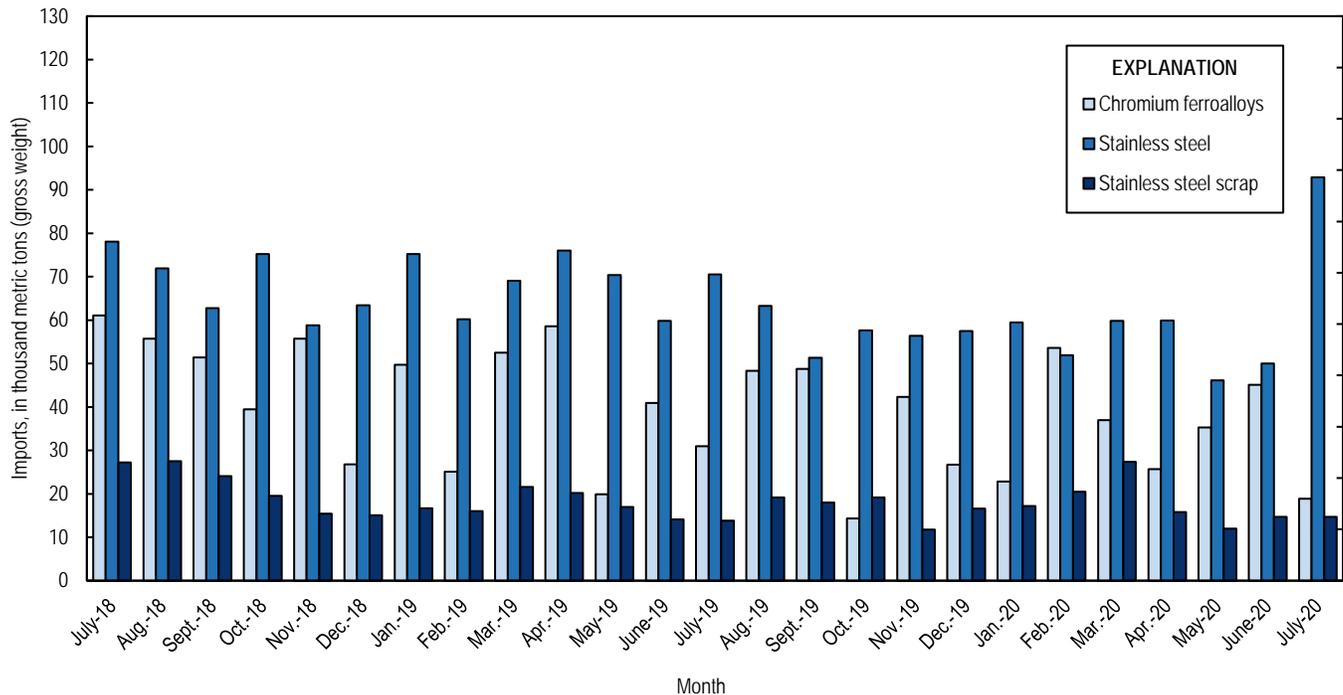


Figure 1. Chromium ferroalloys and stainless steel imports from July 2018 through July 2020. Source: U.S. Census Bureau.

to month (table 1, table 4). Exports of chromium ferroalloys more than doubled in July 2020 compared with exports in June 2020 and increased by 40% compared with exports in July 2019. Stainless steel exports in July 2020 increased by 15% compared with exports in June 2020 (table 1) and decreased by 41% compared with those of July 2019.

In July 2020, the leading import sources for ferrochromium (FeCr) into the United States were, in descending order of quantity by gross weight, Russia, Kazakhstan, and India (table 6), whereas the leading import sources for chromium metal were France, the United Kingdom, and Russia (table 7).

The U.S. chromium metal (99% Cr) average price was \$3.35 per pound in July 2020, unchanged from the average price in June 2020, and a 17% decrease compared with the average price in July 2019 (CRU Group, 2020). The U.S. high-carbon FeCr (62%–70% chromium) average price was 90.50 cents per pound of contained chromium in July 2020, essentially unchanged from the average price in June 2020, and a 6% decrease from the average price in July 2019 (fig. 2) (CRU Group, 2020).

### Industry News

United States Steel Corp. (Pittsburgh, PA) announced it would keep the No. 4 blast furnace at Gary Works in Indiana

and the BF-A furnace in Indiana idled for the rest of 2020, citing market demand for the decision (Forster, 2020). The idled furnaces had a combined annual capacity of 2.9 million metric tons per year.

### References Cited

- CRU Group, 2020, CRU prices\_chrome\_historical data\_31-july-2020-july-avg: CRU Group, July 31. (Accessed August 4, 2020, via <http://www.crugroup.com/>)
- Forster, Hector, 2020, US Steel expects to keep two US blast furnaces idled through 2020: New York, NY, S&P Global Inc., July 31. (Accessed August 3, 2020, via <https://www.spglobal.com/en/>)

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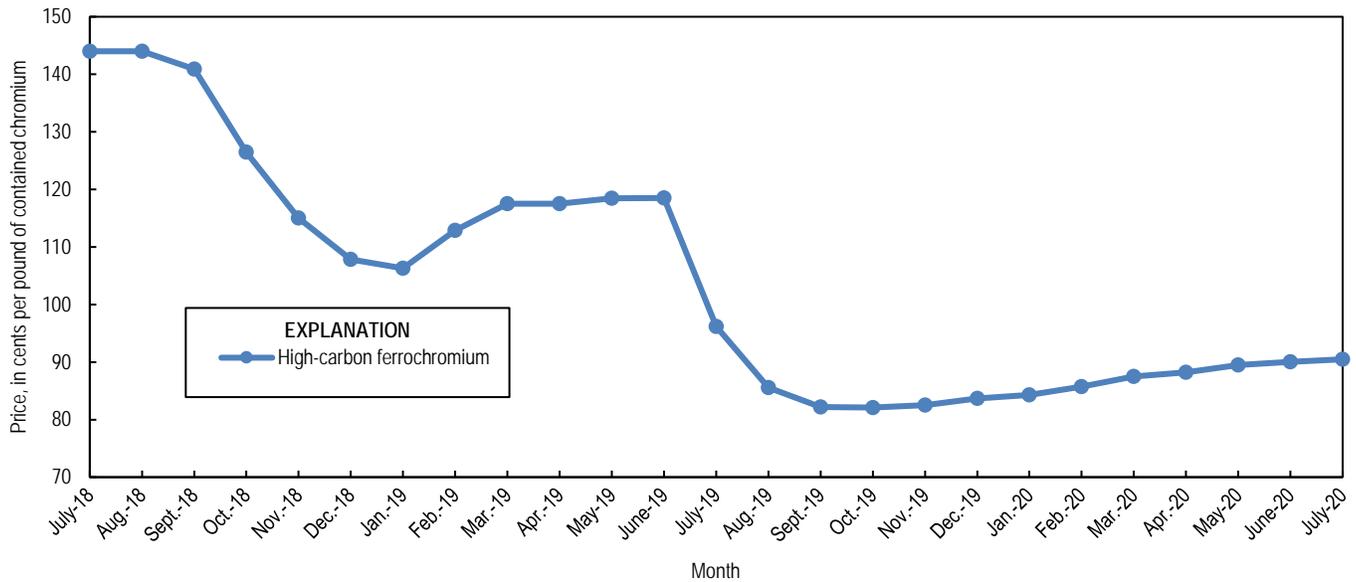


Figure 2. Average monthly prices for U.S. high-carbon ferrochromium from July 2018 through July 2020. Source: CRU Group.

TABLE 1  
U.S. SALIENT CHROMIUM STATISTICS<sup>1</sup>

(Metric tons, gross weight)

	2019	2020			
	January– December <sup>p</sup>	May	June	July	January– July <sup>2</sup>
Production, stainless steel <sup>3</sup>	2,590,000	155,000	147,000	144,000	1,220,000
Components of U.S. supply:					
Stainless steel scrap receipts	810,000	56,800 <sup>r</sup>	58,000 <sup>e</sup>	58,000 <sup>e</sup>	430,000 <sup>e</sup>
Stainless steel scrap consumption	1,240,000	85,700 <sup>r</sup>	87,000 <sup>r, e</sup>	87,000 <sup>e</sup>	650,000 <sup>e</sup>
Imports for consumption:					
Chromite ore	152,000	36,300	3,320	5,440	57,600
Ferrochromium:					
More than 4% carbon	393,000	32,900	40,500	17,200	201,000
More than 3% but not more than 4% carbon	1,210	--	126	4	179
More than 0.5% but not more than 3% carbon	2,090	--	324	105	2,170
Not more than 0.5% carbon	44,300	2,410	1,150	1,280	23,800
Ferrochromium silicon	17,600	--	3,030	323	10,900
Total ferroalloy imports	458,000	35,300	45,100	18,900	238,000
Chromium metal <sup>4</sup>	14,400	1,820	994	690	9,650
Stainless steel	767,000	46,100	50,000	92,900	420,000
Stainless steel scrap	204,000	12,000	14,700	14,700	122,000
Distribution of U.S. supply:					
Consumption, industry, chromium ferroalloys and metal	389,000	26,900	26,900	26,900	207,000
Exports:					
Chromite ore	2,300	155	186	96	1,020
Chromium ferroalloys:					
High-carbon ferrochromium	1,300	40	33	51	295
Low-carbon ferrochromium	437	2	23	42	211
Ferrochromium silicon	22	42	--	41	123
Total ferroalloy exports	1,760	85	56	133	629
Chromium metal	431	35	33	46	241
Stainless steel	436,000	22,100	19,600	22,500	184,000
Stainless steel scrap	469,000	13,100	21,500	22,800	183,000
Stocks at end of period:					
Consumer, industry, chromium ferroalloys and metal	7,530	7,270	7,280	7,290	7,290
Government stockpile:					
Chromium ferroalloys	66,100	62,800	62,500	61,900	61,900
Chromium metal	3,850	3,850	3,840	3,840	3,840

<sup>e</sup>Estimated. <sup>p</sup>Preliminary. <sup>r</sup>Revised. -- Zero.

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

<sup>2</sup>May include revised data that are not broken out by specific month(s).

<sup>3</sup>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.

<sup>4</sup>Includes waste and scrap and other.

TABLE 2  
U.S. REPORTED CONSUMPTION AND STOCKS OF CHROMIUM PRODUCTS<sup>1,2</sup>

(Metric tons, gross weight unless otherwise noted)

	2020		
	June	July	January– July <sup>3</sup>
<b>Consumption by end use:</b>			
<b>Steel:</b>			
Carbon steel	78	W	W
High-strength low-alloy steel	135	135	941
Stainless and heat-resisting steel	22,900	22,900	179,000
Unspecified steel <sup>4</sup>	3,360	3,360	23,500
Superalloys	204	204	1,450
Other alloys and uses <sup>5</sup>	204	W	W
<b>Total</b>	<b>26,900</b>	<b>26,900</b>	<b>207,000</b>
<b>Total, chromium content</b>	<b>15,500</b>	<b>15,500</b>	<b>119,000</b>
<b>Consumption by material:</b>			
Low-carbon ferrochromium	1,670	1,710	12,200
High-carbon ferrochromium	23,800	23,800	184,000
Ferrochromium silicon	W	W	W
Chromium metal	143	143	999
Chromite ore	124	132	881
Chromium-aluminum alloy	W	W	W
Other chromium materials	W	W	W
<b>Total</b>	<b>26,900</b>	<b>26,900</b>	<b>207,000</b>
<b>Total, chromium content</b>	<b>15,500</b>	<b>15,500</b>	<b>119,000</b>
<b>Consumer stocks:</b>			
Low-carbon ferrochromium	753	749	749
High-carbon ferrochromium	2,090	2,090	2,090
Ferrochromium silicon	W	W	W
Chromium metal	20	20	20
Chromium-aluminum alloy	W	W	W
Other chromium materials <sup>6</sup>	4,110	4,110	4,110
<b>Total</b>	<b>7,280</b>	<b>7,290</b>	<b>7,290</b>
<b>Total, chromium content</b>	<b>3,740</b>	<b>3,720</b>	<b>3,720</b>

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

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

<sup>2</sup>Includes estimates.

<sup>3</sup>May include revised data that are not broken out by specific month(s).

<sup>4</sup>Includes electrical, full alloy, tool, and unspecified steel end uses.

<sup>5</sup>Includes cast irons, welding and alloy hard-facing rods and materials, wear- and corrosion-resistant alloys, and aluminum, copper, magnetic, nickel, and other alloys.

<sup>6</sup>Includes chromite ore as foundry sand

TABLE 3  
U.S. GOVERNMENT STOCKPILE INVENTORY OF  
CHROMIUM MATERIALS<sup>1</sup>

(metric tons)

	Chromium ferroalloys		Chromium metal
	High-carbon ferro- chromium	Low-carbon ferro- chromium	
2019:			
July	39,900	27,400	3,850
August	39,900	27,400	3,850
September	39,600	27,400	3,850
October	39,600	27,400	3,850
November	38,700	27,400	3,850
December	38,700	27,400	3,850
2020:			
January	37,800	27,400	3,850
February	37,100	27,400	3,850
March	36,700	27,100	3,850
April	36,700	27,100	3,850
May	36,000	26,800	3,850
June	35,700	26,800	3,840
July	35,100	26,800	3,840

<sup>1</sup>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<sup>1</sup>

	Chromite ore		Chromium ferroalloys <sup>2</sup>			Chromium metal <sup>3</sup>	
	Gross weight (metric tons)	Value (thousands)	Gross weight (metric tons)	Chromium content (metric tons)	Value (thousands)	Gross weight (metric tons)	Value (thousands)
2019:							
July	269	\$217	95	53	\$160	42	\$971
August	382	356	38	23	78	44	1,370
September	218	152	30	18	40	25	649
October	61	56	328	184	525	39	1,340
November	141	110	179	107	319	23	889
December	120	86	83	50	107	31	718
January–December <sup>4</sup>	2,300	1,940	1,760	942	2,810	431	13,100
2020:							
January	147	82	66	36	91	37	733
February	176	104	66	40	118	24	658
March	140	79	106	63	207	35	972
April	115	83	118	61	182	31	550
May	155	90	85	41	106	35	1,050
June	186	133	56	34	72	33	529
July	96	68	133	71	180	46	1,770
January–July <sup>4</sup>	1,020	640	629	347	956	241	6,260

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

<sup>2</sup>Includes low- and high-carbon ferrochromium and ferrochromium silicon.

<sup>3</sup>Includes chromium metal, waste and scrap, and unwrought powders.

<sup>4</sup>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<sup>1</sup>

(Metric tons)

	2019	2020		
	January– December	June	July	January– July <sup>2</sup>
<b>Chromite ore:</b>				
Not more than 40% chromic oxide:				
Gross weight	973	52	--	1,030
Chromic oxide content	360	20	--	264
More than 40% but less than 46% chromic oxide:				
Gross weight	4,170	1,760	396	5,990
Chromic oxide content	1,810	773	171	2,600
46% or more chromic oxide:				
Gross weight	147,000	1,510	5,040	50,600
Chromic oxide content	90,400	695	2,350	43,200
<b>Total, all grades:</b>				
Gross weight	152,000	3,320	5,440	57,600
Chromic oxide content	92,500	1,490	2,520	46,100
<b>Ferrochromium:</b>				
Low-carbon: <sup>3</sup>				
Not more than 0.5% carbon:				
Gross weight	44,300	1,150	1,280	23,800
Chromium content	30,900	818	832	16,100
More than 0.5% but not more than 3% carbon:				
Gross weight	2,090	324	105	2,170
Chromium content	1,330	233	64	1,430
<b>Total, low-carbon:</b>				
Gross weight	46,400	1,480	1,390	26,000
Chromium content	32,200	1,050	896	17,600
Medium-carbon: <sup>4</sup>				
Gross weight	1,210	126	4	179
Chromium content	802	68	3	99
High-carbon: <sup>5</sup>				
Gross weight	393,000	40,500	17,200	201,000
Chromium content	215,000	20,900	10,600	112,000
<b>Total, all grades:</b>				
Gross weight	440,000	42,100	18,500	227,000
Chromium content	248,000	22,000	11,500	130,000
<b>Chromium metal:</b>				
Unwrought powders	11,500	923	528	8,200
Waste and scrap	221	3	8	112
Other than waste and scrap and unwrought powders	2,680	67	155	1,330
<b>Total, all grades</b>	<b>14,400</b>	<b>994</b>	<b>690</b>	<b>9,650</b>

-- Zero.

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

<sup>2</sup>May include revised data that are not broken out by specific month(s).

<sup>3</sup>Ferrochromium containing not more than 3% carbon.

<sup>4</sup>Ferrochromium containing more than 3% carbon but not more than 4% carbon.

<sup>5</sup>Ferrochromium containing more than 4% carbon.

Source: U.S. Census Bureau.

TABLE 6  
U.S. IMPORTS FOR CONSUMPTION OF FERROCHROMIUM IN 2020, BY GRADE AND COUNTRY OR LOCALITY<sup>1</sup>

Grade and country or locality	July			January–July <sup>2</sup>		
	Gross weight (metric tons)	Chromium content (metric tons)	Value <sup>3</sup> (thousands)	Gross weight (metric tons)	Chromium content (metric tons)	Value <sup>3</sup> (thousands)
<b>High-carbon ferrochromium:<sup>4</sup></b>						
Albania	171	114	\$190	2,350	1,560	\$2,750
Brazil	--	--	--	2,170	1,180	1,560
Canada	6	3	9	6	3	9
India	410	243	295	5,600	3,370	4,550
Kazakhstan	7,970	5,570	8,270	40,400	28,100	44,500
Oman	--	--	--	968	499	630
Russia	8,400	4,510	6,660	21,900	13,200	20,700
South Africa	--	--	--	111,000	54,300	91,700
Sweden	196	133	245	406	275	520
Turkey	--	--	--	1,130	730	1,250
Zimbabwe	--	--	--	15,400	8,790	9,740
<b>Total</b>	<b>17,200</b>	<b>10,600</b>	<b>15,700</b>	<b>201,000</b>	<b>112,000</b>	<b>178,000</b>
<b>Medium-carbon ferrochromium:<sup>5</sup></b>						
Russia	4	3	9	42	23	69
Turkey	--	--	--	126	68	68
United Kingdom	--	--	--	10	8	23
<b>Total</b>	<b>4</b>	<b>3</b>	<b>9</b>	<b>179</b>	<b>99</b>	<b>159</b>
<b>Low-carbon ferrochromium:<sup>6</sup></b>						
<b>More than 0.5% but not more than 3% carbon</b>						
Brazil	--	--	--	1,020	631	1,700
India	105	64	194	200	123	372
Kazakhstan	--	--	--	830	591	2,130
Russia	--	--	--	120	85	284
<b>Total</b>	<b>105</b>	<b>64</b>	<b>194</b>	<b>2,170</b>	<b>1,430</b>	<b>4,490</b>
<b>Not more than 0.5% carbon:</b>						
Belgium	100	69	320	1,220	735	3,610
Brazil	128	80	190	649	404	1,010
China	--	--	--	9	6	29
Germany	308	204	981	2,070	1,420	6,660
India	--	--	--	396	251	774
Japan	--	--	--	579	415	2,280
Kazakhstan	--	--	--	6,230	4,470	15,600
Russia	648	416	1,220	12,100	8,040	25,000
Turkey	98	64	223	553	386	1,470
<b>Total</b>	<b>1,280</b>	<b>832</b>	<b>2,940</b>	<b>23,800</b>	<b>16,100</b>	<b>56,500</b>
<b>All grades:</b>						
Albania	171	114	190	2,350	1,560	2,750
Belgium	100	69	320	1,220	735	3,610
Brazil	128	80	190	3,840	2,220	4,280
Canada	6	3	9	6	3	9
China	--	--	--	9	6	29
Germany	308	204	981	2,070	1,420	6,660
India	515	307	489	6,200	3,740	5,700
Japan	--	--	--	579	415	2,280
Kazakhstan	7,970	5,570	8,270	47,400	33,100	62,200
Oman	--	--	--	968	499	630
Russia	9,050	4,930	7,900	34,200	21,400	46,100
South Africa	--	--	--	111,000	54,300	91,700
Sweden	196	133	245	406	275	520
Turkey	98	64	223	1,810	1,180	2,790
United Kingdom	--	--	--	10	8	23

(See footnotes at end of table.)

TABLE 6—Continued  
 U.S. IMPORTS FOR CONSUMPTION OF FERROCHROMIUM IN 2020, BY GRADE AND COUNTRY OR LOCALITY<sup>1</sup>

Grade and country or locality	July			January–July <sup>2</sup>		
	Gross weight (metric tons)	Chromium content (metric tons)	Value <sup>3</sup> (thousands)	Gross weight (metric tons)	Chromium content (metric tons)	Value <sup>3</sup> (thousands)
Zimbabwe	--	--	--	15,400	8,790	9,740
Total	18,500	11,500	18,800	227,000	130,000	239,000

-- Zero.

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

<sup>2</sup>May include revised data that are not broken out by specific month(s).

<sup>3</sup>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.

<sup>4</sup>Ferrochromium containing more than 4% carbon.

<sup>5</sup>Ferrochromium containing more than 3% carbon but not more than 4% carbon.

<sup>6</sup>Ferrochromium containing not more than 3% carbon.

Source: U.S. Census Bureau.

TABLE 7  
U.S. IMPORTS FOR CONSUMPTION OF CHROMIUM METAL IN 2020,  
BY GRADE AND BY COUNTRY OR LOCALITY<sup>1</sup>

Grade and country or locality	July		January–July <sup>2</sup>	
	Gross weight (metric tons)	Value <sup>3</sup> (thousands)	Gross weight (metric tons)	Value <sup>3</sup> (thousands)
<b>Unwrought powders:</b>				
Belgium	--	--	24	\$140
China	114	\$939	921	8,660
Estonia	--	--	10	75
France	210	1,640	1,790	15,300
Germany	3	14	256	2,090
India	20	172	76	687
Japan	--	--	(4)	21
Russia	1	11	3,120	20,300
Spain	23	119	94	482
Switzerland	--	--	20	149
United Kingdom	157	1,630	1,890	18,900
Total	528	4,530	8,200	66,800
<b>Waste and scrap:</b>				
Canada	--	--	15	43
Japan	3	15	12	82
United Kingdom	4	79	84	509
Total	8	94	112	634
<b>Other than waste and scrap and unwrought powders:</b>				
China	(4)	8	21	263
France	(4)	3	(4)	8
Germany	9	90	44	382
Japan	--	--	4	197
Malaysia	--	--	(4)	32
Russia	115	649	1,060	5,960
Spain	19	97	38	194
United Kingdom	12	132	161	1,600
Total	155	979	1,330	8,630
<b>All grades:</b>				
Belgium	--	--	24	139
Canada	--	--	15	43
China	114	947	943	8,920
Estonia	--	--	10	75
France	210	1,650	1,790	15,300
Germany	11	105	300	2,480
India	20	172	76	687
Japan	3	15	17	299
Malaysia	--	--	(4)	32
Russia	116	660	4,180	26,300
Spain	42	216	132	676
Switzerland	--	--	20	149
United Kingdom	173	1,850	2,130	21,000
Total	690	5,610	9,650	76,100

-- Zero.

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

<sup>2</sup>May include revised data that are not broken out by specific month(s).

<sup>3</sup>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.

<sup>4</sup>Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 8  
U.S. STAINLESS STEEL TRADE, BY PRODUCT, IN 2020<sup>1</sup>

Stainless steel product	July		January–July <sup>2</sup>	
	Gross weight (metric tons)	Value <sup>3</sup> (thousands)	Gross weight (metric tons)	Value <sup>3</sup> (thousands)
<b>Exports:</b>				
Ingot	673	\$4,270	7,610	\$45,900
Flat-rolled (width > 600 mm)	12,100	32,800	109,000	299,000
Flat-rolled (width < 600 mm)	4,840	24,000	30,900	171,000
Bars and rods in irregular coils	195	1,400	1,450	8,060
Other bars and rods	1,650	18,200	15,400	165,000
Wire	480	8,420	4,270	65,300
Tubes, pipes, hollow profiles	2,590	25,100	15,500	183,000
Total	22,500	114,000	184,000	938,000
Stainless steel scrap	22,800	23,800	183,000	138,000
<b>Grand total</b>	<b>45,300</b>	<b>138,000</b>	<b>367,000</b>	<b>1,080,000</b>
<b>Imports:</b>				
Ingot	48,900	53,600	105,000	268,000
Flat-rolled (width > 600 mm)	15,000	37,700	128,000	306,000
Flat-rolled (width < 600 mm)	4,540	13,400	25,500	94,600
Bars and rods in irregular coils	2,630	7,920	20,200	65,000
Other bars and rods	8,950	32,900	59,500	231,000
Wire	3,300	12,300	19,600	88,600
Tubes, pipes, hollow profiles	9,550	62,100	62,300	436,000
Total	92,900	220,000	420,000	1,490,000
Stainless steel scrap	14,700	12,500	122,000	106,000
<b>Grand total</b>	<b>108,000</b>	<b>232,000</b>	<b>542,000</b>	<b>1,600,000</b>

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

<sup>2</sup>May include revised data that are not broken out by specific month(s).

<sup>3</sup>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 incurred in bringing the merchandise into the United States.

Source: U.S. Census Bureau.