Mineral Industry Surveys

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CHROMIUM IN AUGUST 2020

Estimated consumption of chromium, on a gross weight basis, in August 2020 was essentially unchanged compared with reported consumption of chromium in July 2020, and decreased by 15% compared with reported consumption in August 2019. Consumer stocks decreased slightly compared with those of the previous month and decreased by 32% compared with those of August 2019 (tables 1, 2).

Stainless steel production increased by 20% in August 2020 compared with production in July 2020, and decreased by 24% compared with production in August 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 July 2020 and decreased by 10% compared with those of August 2019 (table 3).

Imports of chromite ore, chromium ferroalloys, chromium metal, and stainless steel commonly fluctuate from month to month (table 1). In August 2020, imports of all grades of chromium ferroalloys decreased by 71% and 89% compared with imports of chromium ferroalloys in July 2020 and August 2019, respectively. Stainless steel imports in August 2020 decreased by 57% compared with imports in July 2020 and decreased by 38% compared with those in August 2019 (fig. 1, table 1).

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

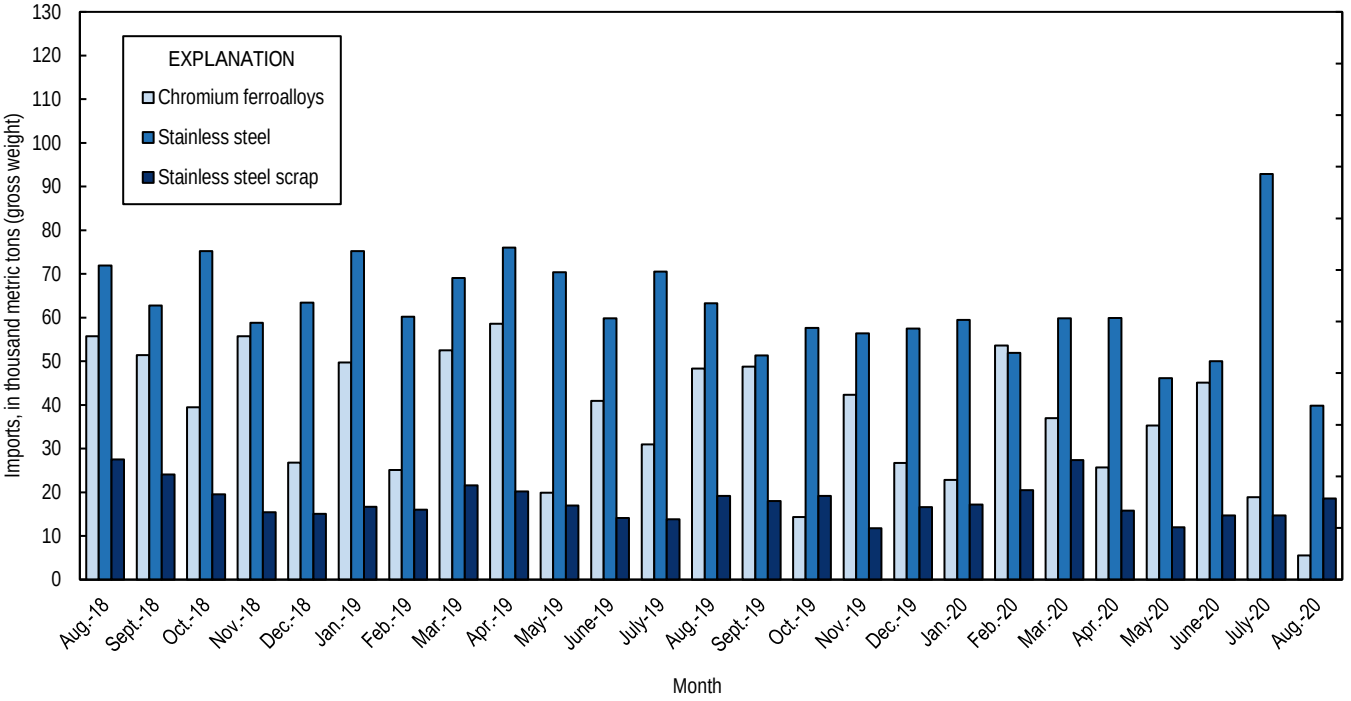

Figure 1. Chromium ferroalloys and stainless steel imports from August 2018 through August 2020. Source: U.S. Census Bureau.

to month (table 1, table 4). Exports of chromium ferroalloys increased by 12% in August 2020 compared with exports in July 2020 and almost quadrupled compared with exports in August 2019. Stainless steel exports in August 2020 increased by 4% compared with exports in July 2020 (table 1) and decreased by 32% compared with those of August 2019.

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

The U.S. chromium metal (99% Cr) average price was $3.20 per pound in August 2020, a 4% decrease from the average price in July 2020, and a 16% decrease compared with the average price in August 2019 (CRU Group, 2020). The U.S. high-carbon FeCr (62%–70% chromium) average price was 90.63 cents per pound of contained chromium in August 2020, essentially unchanged from the average price in July 2020, and a 6% increase from the average price in August 2019 (fig. 2) (CRU Group, 2020).

Industry News

Jubilee Metals Group (United Kingdom) entered into a 3-year third-party chromite ore offtake agreement with an undisclosed company at its Windsor chromium beneficiation plant in South Africa. Under the agreement, the plant would produce 40,000 metric tons per month (t/mo) of chromium concentrate and included the rights to all tailings, including those containing platinum group metals. Jubilee Metals Group also entered a joint venture (JV) agreement with a private company in South Africa to increase chromium processing capability by an additional 35,000 t/mo at the Windsor 8 plant (Jubilee Metals Group, 2020).

ArcelorMittal USA initiated measures to restart the #4 blast furnace at the Indiana Harbor East Chicago steel mill following its closure after a decrease in steel demand (including stainless steel) related to the COVID-19 pandemic. The company also began repairing blast furnace D at its Burn Harbor, IN, mill, which was damaged in July after an explosion (Pete, 2020).

References Cited

CRU Group, 2020, CRU-prices_chrome_historical-data_01-sep-2020: CRU Group, September 1. (Accessed September 4, 2020, via http://www.crugroup.com/.)

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Pete, Joseph S, 2020, ArcelorMittal restarting blast furnace at Indiana Harbor, working on repairs after Burns Harbor explosion: Munster, IN, The Times of Northwest Indiana, August 3. (Accessed October 2, 2020, at https://www.nwitimes.com/business/local/arcelormittal-restarting-blast-furnace-at-indiana-harbor-working-on-repairs-after-burns-harbor-explosion/article_9e061478-46c5-5197-8579-68cd16c3e0ca.html.)

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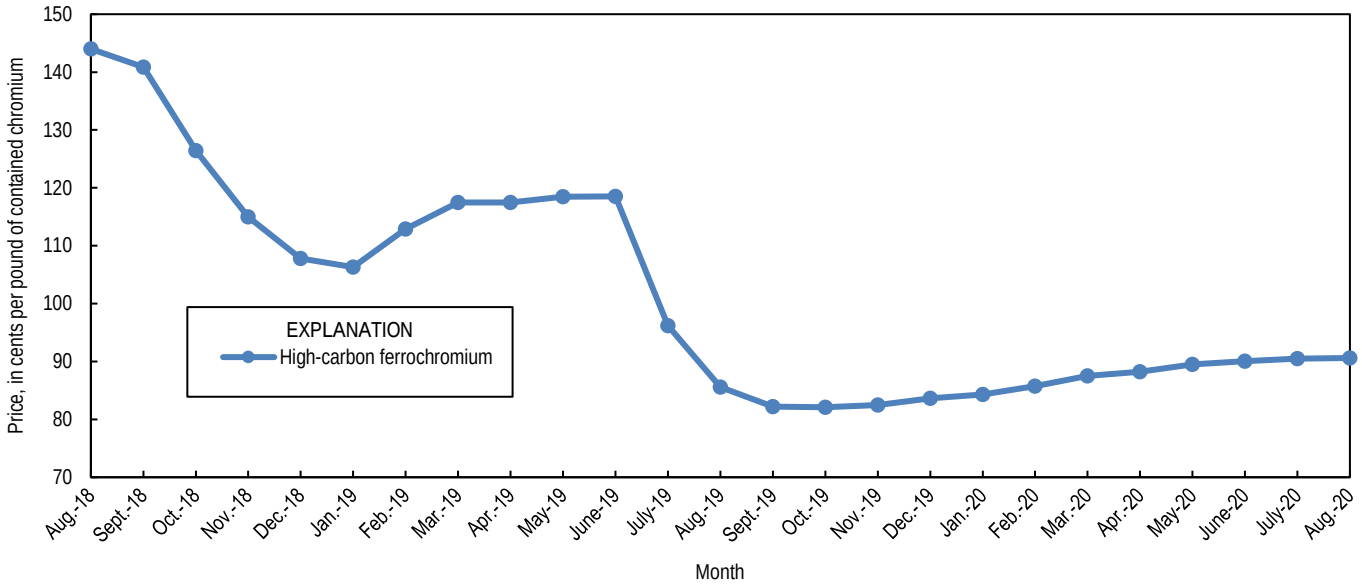

Figure 2. Average monthly prices for U.S. high-carbon ferrochromium from August 2018 through August 2020. Source: CRU Group.

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

(Metric tons, gross weight)

	2019	2020			
	January–December[p]	June	July	August	January–August[2]
Production, stainless steel[3]	2,590,000	147,000	144,000	172,000	1,390,000
Components of U.S. supply:					
Stainless steel scrap receipts	810,000	56,800 [r]	58,000 [e]	56,000 [e]	485,000 [e]
Stainless steel scrap consumption	1,240,000	85,700 [r]	87,000 [e]	86,000 [e]	735,000 [e]
Imports for consumption:					
Chromite ore	152,000	3,320	5,440	712	58,300
Ferrochromium:					
More than 4% carbon	393,000	40,500	17,200	4,250	206,000
More than 3% but not more than 4% carbon	1,210	126	4	34	212
More than 0.5% but not more than 3% carbon	2,090	324	105	--	2,170
Not more than 0.5% carbon	44,300	1,150	1,280	1,010	24,800
Ferrochromium silicon	17,600	3,030	323	243	11,200
Total ferroalloy imports	458,000	45,100	18,900	5,540	244,000
Chromium metal[4]	14,400	994	690	308	9,950
Stainless steel	767,000	50,000	92,900	39,800	460,000
Stainless steel scrap	204,000	14,700	14,700	18,600	141,000
Distribution of U.S. supply:					
Consumption, industry, chromium ferroalloys and metal	389,000	26,900	26,900	27,000 [e]	230,000 [e]
Exports:					
Chromite ore	2,300	186	96	305	1,320
Chromium ferroalloys:					
High-carbon ferrochromium	1,300	33	51	100	395
Low-carbon ferrochromium	437	23	42	49	260
Ferrochromium silicon	22	--	41	--	123
Total ferroalloy exports	1,760	56	133	149	778
Chromium metal	431	33	46	42	284
Stainless steel	436,000	19,600	22,500	23,400	207,000
Stainless steel scrap	469,000	21,500	22,800	30,000	213,000
Stocks at end of period:					
Consumer, industry, chromium ferroalloys and metal	7,530	7,280	7,290	7,100 [e]	7,100 [e]
Government stockpile:					
Chromium ferroalloys	66,100	62,500	61,900	60,700	60,700
Chromium metal	3,850	3,840	3,840	3,830	3,830

[e]Estimated. [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)

	2020		
	July	August	January–August[3]
Consumption by end use:			
Steel:			
Carbon steel	W	W	W
High-strength low-alloy steel	135	140 e	1,100 e
Stainless and heat-resisting steel	22,900	23,000 e	200,000 e
Unspecified steel[4]	3,360	3,400 e	27,000 e
Superalloys	204	200 e	1,600 e
Other alloys and uses[5]	W	W	W
Total	26,900	27,000 e	230,000 e
Total, chromium content	15,500	16,000 e	130,000 e
Consumption by material:			
Low-carbon ferrochromium	1,710	1,700 e	14,000 e
High-carbon ferrochromium	23,800	24,000 e	210,000 e
Ferrochromium silicon	W	W	W
Chromium metal	143	140 e	1,100 e
Chromite ore	132	130 e	1,000 e
Chromium-aluminum alloy	W	W	W
Other chromium materials	W	W	W
Total	26,900	27,000 e	230,000 e
Total, chromium content	15,500	16,000 e	130,000 e
Consumer stocks:			
Low-carbon ferrochromium	749	750 e	750 e
High-carbon ferrochromium	2,090	2,100 e	2,100 e
Ferrochromium silicon	W	W	W
Chromium metal	20	20 e	20 e
Chromium-aluminum alloy	W	W	W
Other chromium materials[6]	4,110	4,100 e	4,100 e
Total	7,290	7,100 e	7,100 e
Total, chromium content	3,720	3,700 e	3,700 e

eEstimated. 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.
[6]Includes chromite ore as foundry sand

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
2019:			
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
August	33,900	26,800	3,830

[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)
2019:							
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[4]	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
August	305	97	149	90	233	42	927
January–August[4]	1,320	737	778	437	1,190	284	7,180

[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)

	2019	2020		
	January–December	July	August	January–August[2]
Chromite ore:				
Not more than 40% chromic oxide:				
Gross weight	973	--	156	1,190
Chromic oxide content	360	--	60	324
More than 40% but less than 46% chromic oxide:				
Gross weight	4,170	396	540	6,530
Chromic oxide content	1,810	171	234	2,830
46% or more chromic oxide:				
Gross weight	147,000	5,040	16	50,600
Chromic oxide content	90,400	2,350	8	43,200
Total, all grades:				
Gross weight	152,000	5,440	712	58,300
Chromic oxide content	92,500	2,520	302	46,400
Ferrochromium:				
Low-carbon:[3]				
Not more than 0.5% carbon:				
Gross weight	44,300	1,280	1,010	24,800
Chromium content	30,900	832	686	16,800
More than 0.5% but not more than 3% carbon:				
Gross weight	2,090	105	--	2,170
Chromium content	1,330	64	--	1,430
Total, low-carbon:				
Gross weight	46,400	1,390	1,010	27,000
Chromium content	32,200	896	686	18,200
Medium-carbon:[4]				
Gross weight	1,210	4	34	212
Chromium content	802	3	17	116
High-carbon:[5]				
Gross weight	393,000	17,200	4,250	206,000
Chromium content	215,000	10,600	2,610	115,000
Total, all grades:				
Gross weight	440,000	18,500	5,290	233,000
Chromium content	248,000	11,500	3,320	133,000
Chromium metal:				
Unwrought powders	11,500	528	308	8,510
Waste and scrap	221	8	(6)	112
Other than waste and scrap and unwrought powders	2,680	155	(6)	1,330
Total, all grades	14,400	690	308	9,950

-- 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.

[6]Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 6

U.S. IMPORTS FOR CONSUMPTION OF FERROCHROMIUM IN 2020, BY GRADE AND COUNTRY OR LOCALITY[1]

Grade and country or locality	August			January–August[2]		
	Gross weight (metric tons)	Chromium content (metric tons)	Value[3] (thousands)	Gross weight (metric tons)	Chromium content (metric tons)	Value[3] (thousands)
High-carbon ferrochromium:[4]						
Albania	251	169	$288	2,600	1,730	$3,040
Brazil	--	--	--	2,170	1,180	1,560
Canada	--	--	--	6	3	9
India	105	64	71	5,710	3,430	4,620
Kazakhstan	1,950	1,350	2,500	42,300	29,400	47,000
Oman	--	--	--	968	499	630
Russia	--	--	--	21,900	13,200	20,700
South Africa	1,460	717	748	112,000	55,000	92,400
Sweden	--	--	--	406	275	520
Turkey	476	310	536	1,610	1,040	1,790
Zimbabwe	--	--	--	15,400	8,790	9,740
Total	4,250	2,610	4,150	206,000	115,000	182,000
Medium-carbon ferrochromium:[5]						
Russia	34	17	51	76	41	119
Turkey	--	--	--	126	68	68
United Kingdom	--	--	--	10	8	23
Total	34	17	51	212	116	210
Low-carbon ferrochromium:[6]						
More than 0.5% but not more than 3% carbon						
Brazil	--	--	--	1,020	631	1,700
India	--	--	--	200	123	372
Kazakhstan	--	--	--	830	591	2,130
Russia	--	--	--	120	85	284
Total	--	--	--	2,170	1,430	4,490
Not more than 0.5% carbon:						
Belgium	--	--	--	1,220	735	3,610
Brazil	--	--	--	649	404	1,010
China	--	--	--	9	6	29
Germany	425	289	1,330	2,500	1,710	7,990
India	200	124	370	596	375	1,140
Japan	--	--	--	579	415	2,280
Kazakhstan	235	170	629	6,460	4,640	16,200
Russia	25	16	70	12,100	8,060	25,100
Turkey	125	87	267	679	473	1,740
Total	1,010	686	2,670	24,800	16,800	59,100
All grades:						
Albania	251	169	288	2,600	1,730	3,040
Belgium	--	--	--	1,220	735	3,610
Brazil	--	--	--	3,840	2,220	4,280
Canada	--	--	--	6	3	9
China	--	--	--	9	6	29
Germany	425	289	1,330	2,500	1,710	7,990
India	305	188	440	6,500	3,930	6,140
Japan	--	--	--	579	415	2,280
Kazakhstan	2,190	1,520	3,130	49,600	34,600	65,400
Oman	--	--	--	968	499	630
Russia	59	34	121	34,300	21,400	46,300
South Africa	1,460	717	748	112,000	55,000	92,400
Sweden	--	--	--	406	275	520
Turkey	601	397	803	2,410	1,580	3,590
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[1]

Grade and country or locality	August			January–August[2]		
	Gross weight (metric tons)	Chromium content (metric tons)	Value[3] (thousands)	Gross weight (metric tons)	Chromium content (metric tons)	Value[3] (thousands)
Zimbabwe	--	--	--	15,400	8,790	9,740
Total	5,290	3,320	6,870	233,000	133,000	246,000

-- 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]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.

[4]Ferrochromium containing more than 4% carbon.

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

[6]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[1]

Grade and country or locality	August		January–August[2]	
	Gross weight (metric tons)	Value[3] (thousands)	Gross weight (metric tons)	Value[3] (thousands)
Unwrought powders:				
Belgium	--	--	24	$139
China	88	$808	1,010	9,460
Estonia	--	--	10	75
France	133	1,060	1,930	16,400
Germany	7	42	263	2,140
India	--	--	76	687
Japan	--	--	(4)	21
Russia	20	122	3,140	20,400
Spain	--	--	94	482
Switzerland	--	--	20	149
United Kingdom	60	856	1,950	19,700
Total	308	2,890	8,510	69,700
Waste and scrap:				
Canada	--	--	15	43
Japan	(4)	4	13	86
United Kingdom	--	--	84	509
Total	(4)	4	112	638
Other than waste and scrap and unwrought powders:				
Canada	(4)	5	(4)	5
China	(4)	3	21	266
France	--	--	(4)	8
Germany	(4)	12	44	393
Japan	--	--	4	197
Malaysia	--	--	(4)	32
Russia	--	--	1,060	5,960
Spain	--	--	38	194
United Kingdom	--	--	161	1,600
Total	(4)	19	1,330	8,650
All grades:				
Belgium	--	--	24	139
Canada	(4)	5	15	48
China	88	811	1,030	9,730
Estonia	--	--	10	75
France	133	1,060	1,930	16,400
Germany	7	54	307	2,530
India	--	--	76	687
Japan	(4)	4	17	303
Malaysia	--	--	(4)	32
Russia	20	122	4,200	26,400
Spain	--	--	132	676
Switzerland	--	--	20	149
United Kingdom	60	856	2,190	21,800
Total	308	2,910	9,950	79,000

-- 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]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.

[4]Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 8
U.S. STAINLESS STEEL TRADE, BY PRODUCT, IN 2020[1]

Stainless steel product	August		January–August[2]	
	Gross weight (metric tons)	Value[3] (thousands)	Gross weight (metric tons)	Value[3] (thousands)
Exports:				
Ingot	632	$3,890	8,240	$49,800
Flat-rolled (width > 600 mm)	13,600	39,700	122,000	339,000
Flat-rolled (width < 600 mm)	4,640	22,600	35,500	194,000
Bars and rods in irregular coils	75	861	1,520	8,920
Other bars and rods	1,810	17,400	17,200	183,000
Wire	410	6,460	4,680	71,800
Tubes, pipes, hollow profiles	2,320	23,600	17,800	207,000
Total	23,400	114,000	207,000	1,050,000
Stainless steel scrap	30,000	32,600	213,000	171,000
Grand total	53,400	147,000	420,000	1,220,000
Imports:				
Ingot	3,530	19,300	108,000	287,000
Flat-rolled (width > 600 mm)	14,200	32,800	142,000	339,000
Flat-rolled (width < 600 mm)	3,270	10,400	28,800	105,000
Bars and rods in irregular coils	1,630	5,760	21,800	70,800
Other bars and rods	7,660	28,200	67,200	259,000
Wire	2,470	9,330	22,100	97,900
Tubes, pipes, hollow profiles	7,060	42,700	69,300	479,000
Total	39,800	149,000	460,000	1,640,000
Stainless steel scrap	18,600	16,300	141,000	122,000
Grand total	58,400	165,000	601,000	1,760,000

[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]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.