

Mineral Industry Surveys

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CHROMIUM IN MAY 2021

Estimated consumption of chromium, on a gross weight basis, in May 2021 increased by 4% compared with estimated consumption of chromium in April 2021, and increased slightly compared with consumption in May 2020. Estimated consumer stocks increased by 4% compared with stocks in April 2021 and decreased by 89% compared with those of May 2020 (tables 1, 2).

Stainless steel production decreased slightly in May 2021 compared with production in April 2021, and increased by 39% compared with production in May 2020 (table 1). Year-to-date production through May 2021 increased by 12% compared with year-to-date production through May 2020. Government stockpile inventories for chromium metal were

unchanged compared with those in April 2021 and decreased by 4% compared with those in May 2020. Government stockpile inventories of ferroalloys were unchanged compared with those in April 2021 and decreased by 12% compared with those of May 2020 (table 3).

Imports of chromite ore, chromium ferroalloys, stainless steel, and stainless steel scrap commonly fluctuate from month to month (table 1). In May 2021, imports of all grades of chromium ferroalloys decreased by 17% compared with imports of chromium ferroalloys in April 2021 and decreased by 18% compared with those in May 2020. Stainless steel and stainless steel scrap imports in May 2021 decreased by 17% and 26%, respectively, compared with imports in April

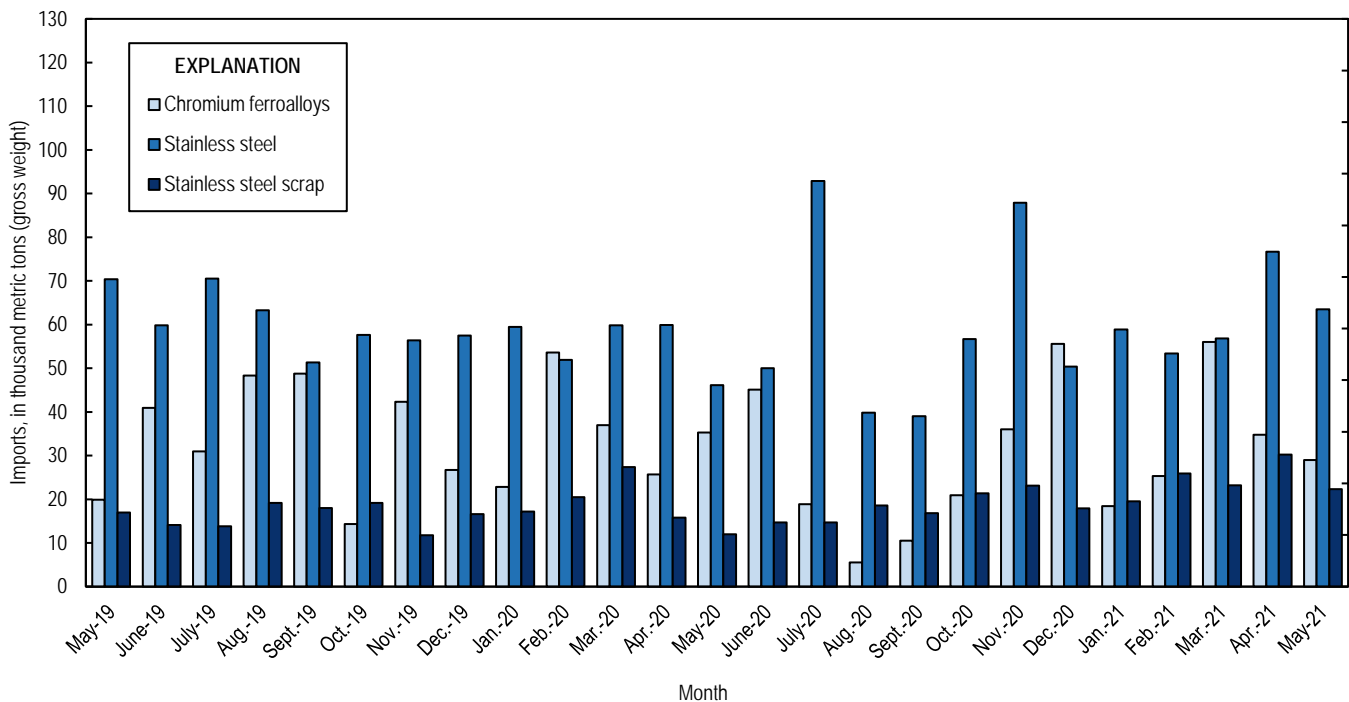


Figure 1. Chromium ferroalloys, stainless steel, and stainless steel scrap imports from May 2019 through May 2021. Source: U.S. Census Bureau.

2021 and increased by 38% and 85%, respectively, compared with those in May 2020 (fig. 1, table 1).

Exports of chromite ore, chromium ferroalloys, chromium metal, and stainless steel also frequently fluctuate from month to month (table 1, table 4). Exports of chromium ferroalloys more than tripled in May 2021 compared with exports in April 2021 and increased by 11% compared with exports in May 2020. Stainless steel exports in May 2021 increased by 4% compared with exports in April 2021 and increased by 46% compared with those of May 2020 (table 1).

In May 2021, the leading import sources for ferrochromium (FeCr) into the United States were, in descending order of quantity by gross weight, South Africa, Kazakhstan, and Finland (table 6), whereas the leading import sources for chromium metal were Russia, the United Kingdom, and France (table 7).

The U.S. chromium metal (99% Cr) average price was \$3.56 per pound in May 2021, a slight increase from the average price in April 2021, and a 6% increase compared with the average price in May 2020. The U.S. high-carbon FeCr (62%–70% chromium) average price was 133.38 cents per pound of contained chromium in May 2021, a slight increase from the average price in April 2021, and a 49% increase from the average price in May 2020 (fig. 2) (CRU Group, 2021).

Industry News

Afarak Group Plc (Finland) announced it approved the sale of its assets in the Stellite Mine in South Africa, owned by its subsidiary Ilitha Mining Pty Ltd. (South Africa), to WMA Chrome Mining Property Ltd. (South Africa) and WMA Minmet Processing (Pty) Ltd. (South Africa). The assets

included a plant and mining right at the Stellite Mine (Afarak Group Plc, 2021; Decena, 2021).

Stricter measures on electricity supply were imposed in Baotou City, China, after it failed to meet second quarter energy consumption targets under China’s 14th Five-Year Plan. Baotou City has been a key producer of high-carbon ferrochromium in Inner Mongolia, and high-carbon ferrochromium production would be affected by these restrictions (Tong, 2021).

References Cited

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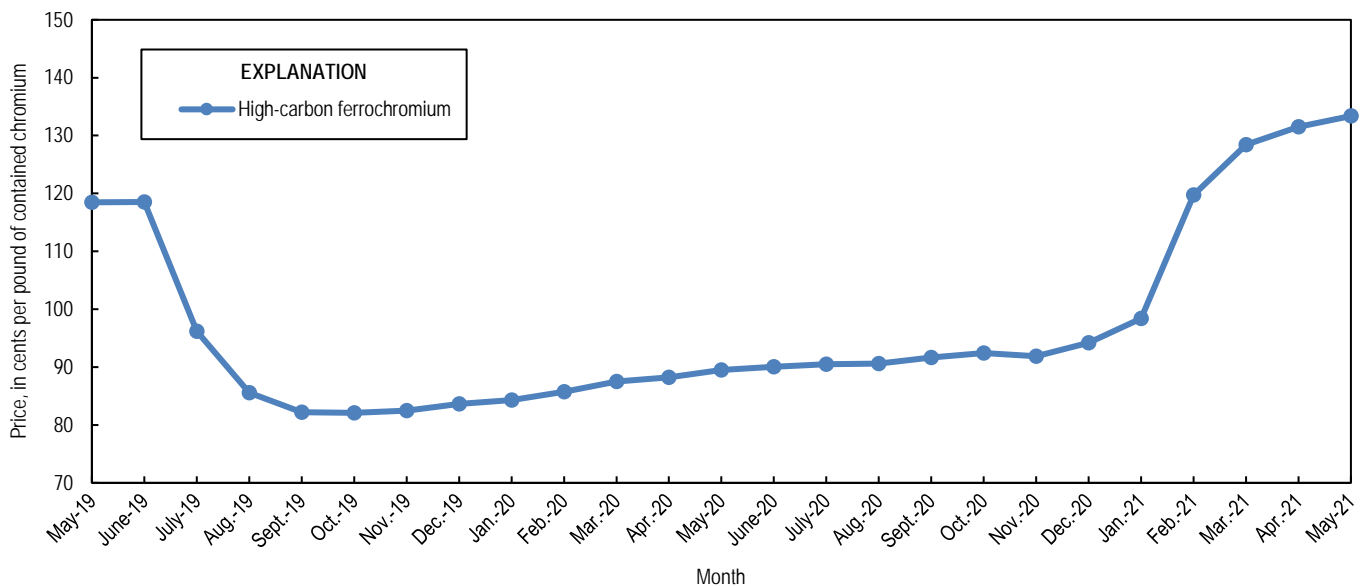


Figure 2. Average monthly prices for U.S. high-carbon ferrochromium from May 2019 through May 2021. Source: CRU Group.

TABLE 1
U.S. SALIENT CHROMIUM STATISTICS¹

(Metric tons, gross weight)

	2020	2021			
	January– December ^p	March	April	May	January– May ²
Production, stainless steel ³	2,140,000	215,000	221,000	215,000	1,060,000
Components of U.S. supply:					
Stainless steel scrap receipts	690,000	62,600 ^r	56,400 ^r	54,300	291,000
Stainless steel scrap consumption	1,040,000	101,000 ^r	84,000 ^r	82,300	449,000
Imports for consumption:					
Chromite ore	101,000	5,440	17,800	5,140	38,300
Ferrochromium:					
More than 4% carbon	310,000	47,500	32,600	24,600	130,000
More than 3% but not more than 4% carbon	212	55	27	--	6,580
More than 0.5% but not more than 3% carbon	3,360	488	--	325	1,460
Not more than 0.5% carbon	37,400	5,530	2,180	2,730	15,100
Ferrochromium silicon	15,800	2,400	--	1,350	9,930
Total ferroalloy imports	367,000	56,000	34,800	29,000	163,000
Chromium metal ⁴	11,600	1,130	1,450	1,100	4,770
Stainless steel	694,000	56,800	76,700	63,500	309,000
Stainless steel scrap	219,000	23,200	30,200	22,300	121,000
Distribution of U.S. supply:					
Consumption, industry, chromium ferroalloys and metal ^c	335,000	27,100	26,000	27,100	107,000
Exports:					
Chromite ore	1,780	208	157	115	970
Chromium ferroalloys:					
High-carbon ferrochromium	949	60	7	81	222
Low-carbon ferrochromium	393	78	21	11	132
Ferrochromium silicon	238	71	--	2	112
Total ferroalloy exports	1,580	209	28	94	466
Chromium metal	379	47	25	66	211
Stainless steel	325,000	34,600	30,900	32,300	158,000
Stainless steel scrap	314,000	19,500	17,700	21,500	92,800
Stocks at end of period:					
Consumer, industry, chromium ferroalloys and metal ^c	7,400	1,100	740	770	770
Government stockpile:					
Chromium ferroalloys	59,600	56,300	55,200	55,200	55,200
Chromium metal	3,750	3,690	3,690	3,690	3,690

^cEstimated. ^pPreliminary. ^rRevised. -- Zero.

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

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

³Data 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.

⁴Includes waste and scrap and other.

TABLE 2
U.S. CONSUMPTION AND STOCKS OF CHROMIUM PRODUCTS¹

(Metric tons, gross weight unless otherwise noted)

	2021		
	April	May	January– May ²
Consumption by end use:			
Steel:			
Carbon steel	W	W	W
High-strength low-alloy steel ^e	140	150	740
Stainless and heat-resisting steel ^e	22,000	23,000	114,000
Unspecified steel ^{e, 3}	3,400	3,400	17,000
Superalloys ^e	200	250	1,200
Other alloys and uses ⁴	W	W	W
Total^e	26,000	27,100	135,000
Total, chromium content^e	15,400	16,100	79,800
Consumption by material:			
Low-carbon ferrochromium ^e	1,700	1,800	8,900
High-carbon ferrochromium ^e	23,000	23,500	117,000
Ferrochromium silicon	W	W	W
Chromium metal ^e	140	140	730
Chromite ore ^e	120	130	640
Chromium-aluminum alloy	W	W	W
Other chromium materials	W	W	W
Total^e	26,000	27,100	135,000
Total, chromium content^e	15,400	16,100	79,800
Consumer stocks:			
Low-carbon ferrochromium ^e	300	300	300
High-carbon ferrochromium ^e	350	400	400
Ferrochromium silicon	W	W	W
Chromium metal ^e	20	20	20
Chromium-aluminum alloy	W	W	W
Other chromium materials	W	W	W
Total^e	740	770	770
Total, chromium content^e	440^r	450	450

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

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

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

³Includes electrical, full alloy, tool, and unspecified steel end uses.

⁴Includes 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 MATERIALS¹

(metric tons)

	Chromium ferroalloys		Chromium metal
	High-carbon ferro- chromium	Low-carbon ferro- chromium	
2020:			
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
September	33,900	26,800	3,830
October	33,900	26,800	3,830
November	33,900	26,800	3,790
December	33,000	26,600	3,750
2021:			
January	33,000	26,600	3,750
February	32,400	26,500	3,690
March	28,800	27,500	3,690
April	27,700	27,500	3,690
May	27,700	27,500	3,690

¹Data 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 METAL¹

	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)
2020:							
May	155	\$90	85	41	\$106	35	\$1,050
June	210	131	56	34	72	33	529
July	96	68	133	71	180	47	1,780
August	305	97	149	90	233	42	927
September	19	8	208	115	324	33	727
October	139	120	260	157	316	23	942
November	59	45	83	51	141	22	580
December	222	136	252	133	306	16	531
January–December ⁴	1,780	1,040	1,580	893	2,280	379	9,970
2021:							
January	70	55	24	15	43	44	1,050
February	420	264	111	58	169	30	650
March	208	147	209	100	401	47	783
April	157	128	28	17	54	25	659
May	115	106	94	59	155	66	1,200
January–May ⁴	970	700	466	249	822	211	4,350

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

²Includes low- and high-carbon ferrochromium and ferrochromium silicon.

³Includes chromium metal, waste and scrap, and unwrought powders.

⁴May 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 METAL¹

(Metric tons)

	2020	2021		
	January– December	April	May	January– May ²
Chromite ore:				
Not more than 40% chromic oxide:				
Gross weight	3,600	1,810	762	6,140
Chromic oxide content	909	372	186	1,310
More than 40% but less than 46% chromic oxide:				
Gross weight	11,000	583	1,770	7,420
Chromic oxide content	4,780	254	789	3,240
46% or more chromic oxide:				
Gross weight	86,300	15,400	2,600	24,800
Chromic oxide content	77,500	12,400	1,220	17,600
Total, all grades:				
Gross weight	101,000	17,800	5,140	38,300
Chromic oxide content	83,200	13,000	2,200	22,200
Ferrochromium:				
Low-carbon: ³				
Not more than 0.5% carbon:				
Gross weight	37,400	2,180	2,730	15,100
Chromium content	25,200	1,610	1,980	10,800
More than 0.5% but not more than 3% carbon:				
Gross weight	3,360	--	325	1,460
Chromium content	2,260	--	230	1,000
Total, low-carbon:				
Gross weight	40,800	2,180	3,060	16,500
Chromium content	27,400	1,610	2,210	11,800
Medium-carbon: ⁴				
Gross weight	212	27	--	6,580
Chromium content	116	14	--	3,360
High-carbon: ⁵				
Gross weight	310,000	32,600	24,600	130,000
Chromium content	169,000	16,400	13,400	72,300
Total, all grades:				
Gross weight	351,000	34,800	27,700	154,000
Chromium content	196,000	18,000	15,600	87,400
Chromium metal:				
Unwrought powders	9,730	1,210	785	3,900
Waste and scrap	168	34	1	45
Other than waste and scrap and unwrought powders	1,740	213	313	832
Total, all grades	11,600	1,450	1,100	4,770

-- Zero.

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

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

³Ferrochromium containing not more than 3% carbon.

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

⁵Ferrochromium containing more than 4% carbon.

Source: U.S. Census Bureau.

TABLE 6
U.S. IMPORTS FOR CONSUMPTION OF FERROCHROMIUM IN 2021, BY GRADE AND COUNTRY OR LOCALITY¹

Grade and country or locality	May			January–May 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	360	265	\$481	2,660	1,870	\$3,370
Finland	5,000	2,650	5,570	14,500	7,680	13,500
India	144	87	142	1,190	733	1,040
Kazakhstan	4,310	2,980	7,870	24,100	16,700	35,900
Russia	--	--	--	781	533	931
South Africa	13,700	6,700	15,000	70,900	34,500	63,900
Sweden	1,080	706	1,390	10,700	7,080	15,500
Turkey	--	--	--	200	124	229
Zimbabwe	--	--	--	5,450	3,010	3,760
Total	24,600	13,400	30,500	130,000	72,300	138,000
Medium-carbon ferrochromium:⁵						
China	--	--	--	5	3	2
Russia	--	--	--	77	41	63
South Africa	--	--	--	6,500	3,310	5,340
Total	--	--	--	6,580	3,360	5,410
Low-carbon ferrochromium:⁶						
More than 0.5% but not more than 3% carbon						
Brazil	--	--	--	318	197	436
Kazakhstan	325	230	1,070	1,140	807	3,360
Total	325	230	1,070	1,460	1,000	3,790
Not more than 0.5% carbon:						
Belgium	--	--	--	368	287	1,160
Brazil	--	--	--	842	528	1,240
Germany	705	540	2,300	3,560	2,750	11,500
Japan	160	111	539	558	394	2,000
Kazakhstan	1,280	918	3,980	4,280	3,080	12,100
Russia	590	408	1,600	4,480	3,070	11,900
Turkey	--	--	--	966	666	2,040
Total	2,730	1,980	8,420	15,100	10,800	42,000
All grades:						
Albania	360	265	481	2,660	1,870	3,370
Belgium	--	--	--	368	287	1,160
Brazil	--	--	--	1,160	725	1,680
China	--	--	--	5	3	2
Finland	5,000	2,650	5,570	14,500	7,680	13,500
Germany	705	540	2,300	3,560	2,750	11,500
India	144	87	142	1,190	733	1,040
Japan	160	111	539	558	394	2,000
Kazakhstan	5,910	4,130	12,900	29,500	20,600	51,400
Russia	590	408	1,600	5,340	3,640	12,900
South Africa	13,700	6,700	15,000	77,400	37,900	69,300
Sweden	1,080	706	1,390	10,700	7,080	15,500
Turkey	--	--	--	1,170	790	2,270
Zimbabwe	--	--	--	5,450	3,010	3,760
Total	27,700	15,600	40,000	154,000	87,400	189,000

-- Zero.

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

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

³Customs 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.

⁴Ferrochromium containing more than 4% carbon.

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

⁶Ferrochromium containing not more than 3% carbon.

Source: U.S. Census Bureau.

TABLE 7
U.S. IMPORTS FOR CONSUMPTION OF CHROMIUM METAL IN 2021,
BY GRADE AND BY COUNTRY OR LOCALITY¹

Grade and country or locality	May		January–May ²	
	Gross weight (metric tons)	Value ³ (thousands)	Gross weight (metric tons)	Value ³ (thousands)
Unwrought powders:				
Belgium	--	--	3	\$88
China	22	\$133	379	3,220
France	172	1,360	857	5,720
Germany	112	704	340	1,880
India	20	172	59	502
Japan	1	21	1	21
Russia	292	1,840	1,500	9,020
Spain	--	--	46	223
United Kingdom	167	1,650	711	6,440
Total	785	5,880	3,900	27,100
Waste and scrap:				
Canada	--	--	18	67
Germany	--	--	1	10
Japan	1	3	5	35
Liechtenstein	--	--	1	6
Taiwan	--	--	1	15
United Kingdom	--	--	18	104
Total	1	3	45	237
Other than waste and scrap and unwrought powders:				
Canada	--	--	(4)	7
China	(4)	59	12	311
Germany	(4)	34	9	292
Japan	--	--	3	145
Liechtenstein	--	--	(4)	18
Malaysia	(4)	7	(4)	12
Netherlands	--	--	(4)	7
Russia	232	1,440	690	4,300
South Africa	4	30	4	30
Spain	69	334	93	446
Taiwan	--	--	(4)	9
United Kingdom	7	106	22	275
Total	313	2,010	832	5,860
All grades:				
Belgium	--	--	3	88
Canada	--	--	18	74
China	23	192	391	3,530
France	172	1,360	857	5,720
Germany	112	738	349	2,180
India	20	172	59	502
Japan	1	24	9	202
Liechtenstein	--	--	2	25
Malaysia	(4)	7	(4)	12
Netherlands	--	--	(4)	7
Russia	524	3,280	2,190	13,300
South Africa	4	30	4	30
Spain	69	334	139	668
Taiwan	--	--	1	24
United Kingdom	174	1,750	751	6,820
Total	1,100	7,890	4,770	33,200

-- Zero.

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

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

³Customs 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.

⁴Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 8
U.S. STAINLESS STEEL TRADE, BY PRODUCT, IN 2021¹

Stainless steel product	May		January–May ²	
	Gross weight (metric tons)	Value ³ (thousands)	Gross weight (metric tons)	Value ³ (thousands)
Exports:				
Ingot	5,650	\$21,200	8,680	\$42,900
Flat-rolled (width > 600 mm)	15,500	50,900	93,300	284,000
Flat-rolled (width < 600 mm)	4,700	27,200	25,100	145,000
Bars and rods in irregular coils	84	649	932	5,140
Other bars and rods	2,200	25,100	10,800	110,000
Wire	670	10,200	3,760	47,500
Tubes, pipes, hollow profiles	3,450	33,500	15,300	145,000
Total	32,300	169,000	158,000	779,000
Stainless steel scrap	21,500	25,800	92,800	108,000
Grand total	53,800	195,000	251,000	887,000
Imports:				
Ingot	6,880	34,200	71,100	247,000
Flat-rolled (width > 600 mm)	26,300	70,000	103,000	261,000
Flat-rolled (width < 600 mm)	4,780	15,100	22,100	72,500
Bars and rods in irregular coils	2,770	10,800	11,800	42,400
Other bars and rods	9,980	40,500	45,900	181,000
Wire	3,540	14,500	15,800	64,400
Tubes, pipes, hollow profiles	9,230	48,600	39,600	225,000
Total	63,500	234,000	309,000	1,090,000
Stainless steel scrap	22,300	31,300	121,000	154,000
Grand total	85,800	265,000	430,000	1,250,000

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

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

³Export 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.