

Mineral Industry Surveys

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COPPER IN JULY 2017

In July 2017, domestic mine production of recoverable copper was 112,000 metric tons (t). The average daily mine production was 3,610 t, slightly less than that in June and a decrease of 3% compared with that in July 2016. Year-to-date recoverable mine production through July 2017 was 761,000 t, a decline of 9% relative to the same period in 2016 (fig. 1; table 2).

Total U.S. refinery production in July 2017 was 81,200 t; electrolytic and electrowon production data are in table 4. Average daily total refinery production was 2,620 t, a decrease of 5% compared with that in June and 19% less than that in July 2016. Output from one domestic refinery fell significantly in July, likely owing to maintenance of the source smelter. Year-to-date refinery production through July 2017 was 640,000 t, a decline of 11% relative to the same period in 2016 (fig. 1; tables 2, 4).

Smelter production in July 2017 was 45,800 t. The average daily smelter production was 1,480 t, 20% greater than that in June and an increase of 38% from the daily average in July 2016. Year-to-date smelter production through July 2017 was 293,000 t, a decrease of 6% compared with the same period in the prior year (table 3).

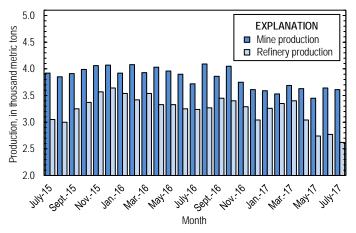


Figure 1. Average daily U.S. copper mine (recoverable) and refinery production from July 2015 through July 2017. Source: U.S. Geological Survey.

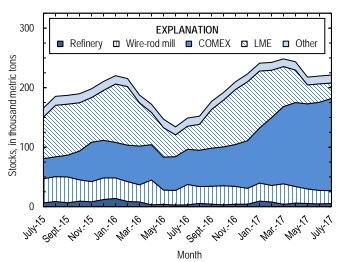


Figure 2. Monthly domestic refined copper stocks, by type, from July 2015 through July 2017. Sources: American Metal Market, London Metal Exchange Ltd., and U.S. Geological Survey.

Stocks

Refined copper stocks in the United States totaled 222,000 t at the end of July 2017, a slight increase from those in June and 49% more than those in July 2016. COMEX stocks rose by 5%, stocks at wire-rod mills fell by 5%, and London Metal Exchange Ltd. stocks in U.S. warehouses decreased by 17% compared with those at the end of June (fig. 2, table 10).

Prices

The average July 2017 COMEX spot copper price was \$2.73 per pound, an increase of 5% from \$2.60 per pound in June and 24% greater than \$2.21 per pound in July 2016 (fig. 3, table 11). A weakening U.S. dollar, stronger-than-expected industrial production and gross domestic product data for China, supply disruptions at multiple worldwide copper mines, and expectations that China will ban the importation of certain types of copper scrap within the next few years contributed to the price increase (Barker, 2017; CRU International Ltd., 2017,

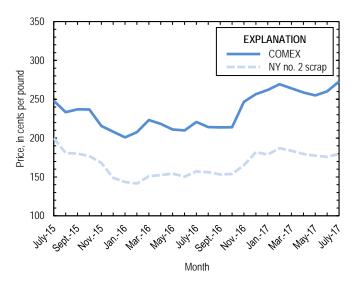


Figure 3. Monthly average COMEX copper price and New York no. 2 copper scrap price from July 2015 through July 2017. Sources: American Metal Market, Platts Metals Week.

p. 4; Zuberi, 2017). The average price of New York dealers' number 2 scrap in July 2017 was \$1.80 per pound, up slightly from \$1.76 in June and 14% higher than the average price in July 2016 (table 12).

Industry News

Approximately 5,000 workers at Freeport-McMoRan Inc.'s (Phoenix, AZ) Grasberg Mine in Indonesia continued to strike in protest of layoffs earlier in the year. Freeport projected that the disruption, which began on May 1, would result in roughly 70,000 t of lost refined copper output in 2017 (Jennemann,

2017). Unionized miners in Peru staged a brief nationwide strike from July 19 through July 23 in response to proposed labor reforms that would allow mining companies to more easily fire personnel and provide fewer benefits to new hires (Valdez, 2017). The employees agreed to return to work after Peruvian Government officials promised to review their demands (Emery, 2017). Wildfires in British Columbia, Canada, also temporarily halted operations at Imperial Metals Corp.'s Mount Polley Mine and Taseko Mines Ltd.'s Gibraltar Mine (CRU International Ltd., 2017, p. 12).

References Cited

Barker, Dalton, 2017, Copper upside seen limited in August: American Metal Market, July 31. (Accessed July 31, 2017, via http://www.amm.com/.)
CRU International Ltd., 2017, CRU copper monitor: London, United Kingdom, CRU International Ltd., July 27, 21 p. (Accessed July 31, 2017, via http://www.crugroup.com/.)

Emery, Alex, 2017, Peru miners end national strike following labor ministry accord: BNamericas [Santiago, Chile], July 24. (Accessed October 2, 2017, at https://www.bnamericas.com/en/news/mining/peru-miners-end-national-strike-following-labor-ministry-accord/.)

Jennemann, Tom, 2017, Grasberg unrest dents Freeport copper sales: American Metal Market, July 25. (Accessed July 28, 2017, via http://www.amm.com/.)
 Valdez, Adrienne, 2017, Unionized Peruvian miners start nationwide strike:
 S&P Global Market Intelligence, July 19. (Accessed July 21, 2017, via

http://www.snl.com/.)
Zuberi, Suhaib, 2017, Copper rises as China considers scrap import ban by 2018-end: S&P Global Market Intelligence, July 26. (Accessed July 28, 2017,

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http://minerals.usgs.gov/minerals/.

$\label{table 1} \textbf{TABLE 1}$ SALIENT STATISTICS OF THE COPPER INDUSTRY IN THE UNITED STATES 1

(Metric tons, unless otherwise specified)

				2	017	
	Source					January-
	table ²	2016 ^p	May	June	July	July
Production:						
Primary:						
Mine, recoverable	(2)	1,430,000	107,000	109,000	112,000	761,000
Smelter, total	(3)	563,000	20,100	37,100	45,800	293,000
Refinery:						
Electrolytic, domestic and foreign	(4)	561,000	32,800	33,100	33,000	294,000
Electrowon	(4)	615,000	48,600	46,600	44,900	323,000
Total	(4)	1,180,000	81,400	79,800	78,000	617,000
Secondary recoverable copper: ³						
Refineries	(5)	46,300	3,380	3,280	3,220	23,700
Ingot makers ⁴	(5)	73,100	6,090	6,090	6,090	42,600
Brass and wire-rod mills	(5)	621,000	55,200	54,400	53,700	379,000
Foundries, etc. ⁴	(5)	47,200	3,940	3,940	3,940	27,600
Consumption:						
Apparent	(8)	1,890,000	174,000	165,000	173,000	1,130,000
Refined (reported)	(7)	1,810,000	154,000	155,000	137,000	1,060,000
Purchased copper-base scrap	(9)	917,000	82,800	82,000	81,200	572,000
Stocks at end of period:						
Total refined	(10)	223,000	218,000	219,000	222,000	222,000
Blister, etc.	(10)	14,400	11,000	11,000	11,900	11,900
Prices, U.S. producers cathode (cents per pound) ⁵	(11)	224.873	259.902	265.143	277.821	268.004
Imports: ⁶						
Ore and concentrate ⁷	(13)	67	2	3		10,700
Refined	(13)	708,000	63,500	66,100	72,500	471,000
Exports: ⁶	=					
Ore and concentrate ⁷	(14)	331,000	23,400	21,100	25,100	136,000
Refined	(14)	134,000	9,230	6,140	7,140	65,900

^pPreliminary. -- Zero.

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

²Numbers in parentheses refer to the tables where these data are located.

³Copper recovered from copper-base scrap only.

⁴Estimated based on the monthly average of 2015 annual data.

⁵Source: Platts Metals Week.

⁶Source: U.S. Census Bureau.

⁷Copper content.

 $\label{eq:table 2} \textbf{MINE PRODUCTION OF RECOVERABLE COPPER IN THE UNITED STATES}^1$

(Metric tons)

	Recoverable copper			Contained copper			
Period	Arizona	Others ²	Total	Electrowon	Concentrates ³	Total	
2016: ^p							
January-June	490,000	232,000	722,000	306,000	433,000	740,000	
July	80,200	35,100	115,000	54,000	63,700	118,000	
August	86,400	40,300	127,000	52,700	76,900	130,000	
September	79,400	36,400	116,000	51,400	67,000	118,000	
October	81,800	43,700	125,000	53,300	74,900	128,000	
November	74,200	38,200	112,000	48,700	66,100	115,000	
December	76,600	35,300	112,000	47,900	66,600	115,000	
January-December	969,000	461,000	1,430,000	615,000	848,000	1,460,000	
2017:							
January	71,000	40,200	111,000	46,800	66,900	114,000	
February	64,200	34,500	98,700	41,600	59,400	101,000	
March	77,500	36,800	114,000	49,000	67,900	117,000	
April	72,500	36,500	109,000	45,600	66,000	112,000	
May	75,100	31,900	107,000	48,600	60,900	109,000	
June	71,900	37,100 ^r	109,000	46,600	64,700 ^r	111,000 ^r	
July	74,200	37,700	112,000	44,900	68,700	114,000	
January–July	507,000	255,000	761,000	323,000	455,000	778,000	

^pPreliminary. ^rRevised.

 $\label{eq:table 3} \text{COPPER PRODUCED AT SMELTERS IN}$ THE UNITED STATES $^{1,\,2}$

(Metric tons, copper content)

	Anode
Period	production
2016: ^p	
January-June	278,000
July	33,100
August	47,700
September	54,000
October	51,900
November	43,300
December	55,000
January-December	563,000
2017:	
January	48,900
February	47,800
March	52,200
April	40,700
May	20,100
June	37,100
July	45,800
January–July	293,000

^pPreliminary.

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

²Includes production from Michigan, Missouri, Montana, Nevada, New Mexico, and Utah.

³Includes copper content of precipitates and other metal concentrates.

¹Includes blister and copper anode from primary or secondary sources.

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

 $\label{table 4} {\it PRODUCTION~OF~REFINED~COPPER,~BY~SOURCE~AND~METHOD~OF~RECOVERY}^1$

(Metric tons)

	Prin	mary materials			
	Electrolytically				Total
Period	refined ²	Electrowon	Total	Scrap	refined
2016: ^p					
January-June	287,000	306,000	593,000	26,000	619,000
July	43,200	54,000	97,200	3,280	100,000
August	45,200	52,700	97,900	3,300	101,000
September	48,200	51,400	99,500	3,810	103,000
October	48,800	53,300	102,000	3,410	106,000
November	46,600	48,700	95,300	3,220	98,600
December	42,900	47,900	90,800	3,330	94,100
January-December	561,000	615,000	1,180,000	46,300	1,220,000
2017:					
January	51,100	46,800	97,900	3,240	101,000
February	48,200	41,600	89,800	4,090	93,900
March	53,200	49,000	102,000	3,240	105,000
April	42,300	45,600	87,800	3,230	91,000
May	32,800	48,600	81,400	3,380	84,800
June	33,100	46,600	79,800	3,280	83,000
July	33,000	44,900	78,000	3,220	81,200
January–July	294,000	323,000	617,000	23,700	640,000

^pPreliminary.

 ${\it TABLE~5}$ COPPER RECOVERABLE IN UNALLOYED AND ALLOYED FORM FROM PURCHASED COPPER-BASE SCRAP 1

(Metric tons, copper content)

	Refin	eries ²	Ingot n	nakers ³	Brass and w	ire-rod mills	Foundri	es, etc. ³	
Period	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	Total ⁴
2016: ^p									
January-June	9,850	16,100	7,720	28,800	288,000	18,200	18,200	5,390	393,000
July	1,680	1,600	1,290	4,800	48,200	2,600	3,040	898	64,100
August	1,680	1,620	1,290	4,800	48,900	2,790	3,040	898	65,000
September	1,680	2,130	1,290	4,800	49,700	2,730	3,040	898	66,300
October	1,680	1,740	1,290	4,800	51,800	3,020	3,040	898	68,300
November	1,680	1,540	1,290	4,800	49,900	3,060	3,040	898	66,200
December	1,680	1,650	1,290	4,800	49,100	2,860	3,040	898	65,300
January-December	19,900	26,400	15,400	57,600	586,000	35,200	36,500	10,800	788,000
2017:									
January	1,680	1,560	1,290	4,800	49,500	3,360	3,040	898	66,100
February	1,680	2,420	1,290	4,800	50,100	2,940	3,040	898	67,100
March	1,680	1,560	1,290	4,800	52,000	3,110	3,040	898	68,400
April	1,680	1,550	1,290	4,800	51,300	3,110	3,040	898	67,600
May	1,680	1,710	1,290	4,800	52,000	3,140	3,040	898	68,600
June	1,680	1,600	1,290	4,800	51,300	3,070	3,040	898	67,700
July	1,680	1,540	1,290	4,800	50,700	3,010	3,040	898	67,000
January–July	11,700	11,900	9,010	33,600	357,000	21,700	21,300	6,290	472,000

^pPreliminary.

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

²From domestic and foreign source materials.

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

²Electrolytically refined and fire refined from scrap based on source of material at smelter or refinery level.

³Monthly data estimated based on the monthly average of the 2015 annual data.

⁴Does not include an estimate, based on reported 2015 annual data, of 3,050 tons per month from new scrap and 2,510 tons per month from old scrap of copper recovered from scrap other than copper-base.

 ${\it TABLE~6}$ PRODUCTION, SHIPMENTS, AND STOCKS OF BRASS AND WIRE-ROD SEMIFABRICATES 1

(Metric tons, gross weight)

	Pro	duction	Shi	pments	Stocks, end of period		
Period	Brass mills	Wire-rod mills	Brass mills	Wire-rod mills	Brass mills	Wire-rod mills	
2016: ^p							
January-June	440,000	679,000	440,000	668,000	28,900	29,900	
July	72,800	98,500	72,700	99,900	29,100	28,500	
August	74,400	118,000	73,800	121,000	29,600	25,800	
September	72,500	107,000	73,500	112,000	28,700	21,000	
October	74,800	115,000	75,100	111,000	28,500	24,900	
November	72,700	112,000	72,800	109,000	28,300	28,200	
December	72,300	94,300	72,100	97,700	28,500	24,800	
January-December	880,000	1,320,000	880,000	1,320,000	28,500	24,800	
2017:							
January	73,500	114,000	72,900	117,000	29,100	22,200	
February	72,800	105,000	73,100	98,000	28,900	29,000	
March	74,200	117,000	74,400	120,000	28,600	25,300	
April	72,200	112,000	72,800	104,000	28,000	33,000	
May	74,700	112,000	74,500	117,000	28,300	28,500	
June	73,300	115,000	73,000 ^r	117,000	28,600 r	26,400	
July	73,000	97,200	73,200	97,400	28,400	26,700	
January–July	514,000	772,000	514,000	771,000	28,400	26,700	

^pPreliminary. ^rRevised.

 $\label{eq:table 7} \text{CONSUMPTION OF REFINED COPPER}^1$

(Metric tons)

	Brass	Wire-rod	Other	
Period	mills	mills	plants ²	Total
2016: ^p				<u>.</u>
January-June	210,000	672,000	34,900	917,000
July	35,500	98,300	5,820	140,000
August	35,600	119,000	5,820	160,000
September	35,400	107,000	5,820	148,000
October	35,400	116,000	5,820	157,000
November	34,400	116,000	5,820	156,000
December	33,800	93,200	5,820	133,000
January-December	421,000	1,320,000	69,800	1,810,000
2017:				
January	34,600	113,000	5,820	154,000
February	34,800	114,000	5,820	154,000
March	35,300	116,000	5,820	157,000
April	34,200	112,000	5,820	152,000
May	35,300	113,000	5,820	154,000
June	34,700	114,000	5,820	155,000
July	35,000	96,300	5,820	137,000
January–July	244,000	779,000	40,700	1,060,000

 $^{^{}p}$ Preliminary.

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

 $^{^{1}\}mathrm{Data}$ are rounded to no more than three significant digits; may not add to totals shown.

²Monthly consumption data by ingot makers, chemical plants, foundries, and miscellaneous manufacturers are estimated based on the monthly average of 2015 annual data.

 $\label{eq:table 8} \text{U.S. APPARENT CONSUMPTION OF COPPER}^1$

(Metric tons)

	Refined copper	Copper in	Refined general	Refined	Stock change	Apparent
Period	production	old scrap ²	imports ³	exports ³	during period	consumption
2016: ^p						_
January-June	593,000	83,500	311,000	85,300	(76,500)	979,000
July	97,200	12,400	68,200	6,510	14,700	157,000
August	97,900	12,600	62,200	6,420	3,210	163,000
September	99,500	13,100	66,800	6,630	24,900	148,000
October	102,000	13,000	67,600	7,750	15,100	160,000
November	95,300	12,800	65,900	13,100	17,900	143,000
December	90,800	12,700	59,400	8,040	13,200	142,000
January-December	1,180,000	160,000	701,000	134,000	12,600	1,890,000
2017:						
January	97,900	13,100	72,400	12,300	18,000	153,000
February	89,800	13,600	53,500	9,100	1,420	146,000
March	102,000	12,900	73,800	9,760	5,800	173,000
April	87,800	12,900	51,400	12,200	(5,100)	145,000
May	81,400	13,100	63,200	9,230	(25,200)	174,000
June	79,800	12,900	79,500	6,140	1,300 r	165,000
July	78,000	12,800	91,800	7,140	2,440	173,000
January–July	617,000	91,100	486,000	65,900	(1,340)	1,130,000

^pPreliminary. ^rRevised.

 ${\it TABLE~9}$ CONSUMPTION OF PURCHASED COPPER-BASE SCRAP 1

(Metric tons, gross weight)

	Sme	lters			Brass	s and			
	and ref	ineries	Ingot n	nakers ²	wire-rod mills ³		Foundri	es, etc. ²	Total scrap
Period	New scrap	Old scrap	New scrap		New scrap	Old scrap	New scrap	Old scrap	used
2016: ^p									
January-June	10,200	12,900	17,300	32,700	336,000	18,700	21,900	5,950	456,000
July	1,730	1,590	2,890	5,460	56,200	2,670	3,660	992	75,100
August	1,730	1,590	2,890	5,460	56,900	2,870	3,660	992	76,000
September	1,730	1,590	2,890	5,460	57,600	2,800	3,660	992	76,700
October	1,730	1,590	2,890	5,460	59,800	3,120	3,660	992	79,200
November	1,730	1,590	2,890	5,460	58,000	3,250	3,660	992	77,500
December	1,730	1,590	2,890	5,460	57,100	2,990	3,660	992	76,400
January-December	20,500	22,400	34,700	65,500	681,000	36,400	43,900	11,900	917,000
2017:									
January	1,820	4,630	2,890	5,460	57,500	3,490	3,660	992	80,400
February	1,820	4,630	2,890	5,460	58,000	3,040	3,660	992	80,500
March	1,820	4,630	2,890	5,460	60,100	3,240	3,660	992	82,700
April	1,820	4,630	2,890	5,460	59,300	3,190	3,660	992	81,900
May	1,820	4,630	2,890	5,460	60,100	3,250	3,660	992	82,800
June	1,820	4,630	2,890	5,460	59,300	3,180	3,660	992	82,000
July	1,820	4,630	2,890	5,460	58,700	3,070	3,660	992	81,200
January–July	12,800	32,400	20,200	38,200	413,000	22,500	25,600	6,940	572,000

^pPreliminary.

 $^{^{1}\}mathrm{Data}$ are rounded to no more than three significant digits; may not add to totals shown.

²Includes reported monthly production of copper from old scrap of copper-base, an estimate for annual reporters, and a monthly average of copper from non-copper-base materials based on 2015 annual data.

³Source: U.S. Census Bureau.

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

²Monthly data estimated based on the monthly average of 2015 annual data.

³Consumption at brass and wire-rod mills assumed equal to receipts.

$\label{eq:table 10} \text{COPPER STOCKS AT END OF PERIOD}^1$

(Metric tons)

·				I	Refined copper	·		
	Crude		Wire-rod					Total
Period	copper ²	Refineries ³	$mills^3$	Brass mills ³	Other ⁴	Comex	LME ⁵	refined
2016: ^p								
July	13,500	3,040	34,100	7,940	5,730	59,300	38,600	149,000
August	12,500	5,660	28,000	7,930	5,730	61,000	43,600	152,000
September	12,600	4,230	30,000	7,650	5,730	64,000	65,200	177,000
October	14,700	3,230	32,000	7,270	5,730	65,300	78,400	192,000
November	13,800	4,290	29,700	7,070	5,730	70,600	92,400	210,000
December	14,400	4,190	26,700	7,380	5,730	80,100	98,900	223,000
2017:								
January	11,700	9,250	30,300	7,430	5,730	92,600	95,700	241,000
February	13,200	8,010	27,700	7,330	5,730	114,000	79,600	242,000
March	13,500	3,860	34,400	7,050	5,730	130,000	67,200	248,000
April	26,100	5,980	27,900	8,030	5,730	141,000	54,700	243,000
May	11,000	5,280	24,400	7,410	5,730	143,000	31,900	218,000
June	11,000	4,670	22,700	7,430 ^r	5,730	148,000	31,000	219,000
July	11,900	5,340	21,500	7,920	5,730	155,000	25,800	222,000

^pPreliminary. ^rRevised.

TABLE 11 AVERAGE PRICE OF COPPER IN THE UNITED STATES AND ON THE LONDON METAL EXCHANGE

(Cents per pound)

		Comex	LME
	U.S. producers	first	cash price
Period	cathode1	position ²	Grade A
2016:			
July	226.296	220.733	220.235
August	219.284	214.096	215.811
September	218.752	213.752	213.496
October	218.885	214.010	214.629
November	251.388	246.638	246.878
December	261.183	256.683	256.997
January-December	224.873	219.727	220.571
2017:			
January	266.363	261.863	260.225
February	274.051	269.426	269.484
March	269.122	264.122	264.040
April	263.626	258.626	258.428
May	259.902	254.902	253.608
June	265.143	260.193	258.506
July	277.821	272.883	271.162
January–July	268.004	263.145	262.208

¹Sum of "Comex high grade first position" and "NY dealer premium cathode."

Source: Platts Metals Week.

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

²Copper content of blister and anode.

³Stocks of refined copper as reported; no estimates are made for nonrespondents.

⁴Monthly estimates based on 2015 annual data, comprising stocks at ingot makers, chemical plants, foundries, and miscellaneous manufacturers.

⁵London Metal Exchange Ltd., U.S. warehouses.

²Listed as "Comex high grade first position."

TABLE 12 AVERAGE BUYING PRICES FOR COPPER SCRAP

(Cents per pound)

			Dealers	(New York)
				Red brass
	Brass mills	Refiners	No. 2	turnings and
Month	No. 1 scrap	No. 2 scrap	scrap	borings
2016:				
July	221.00	201.70	157.15	134.10
August	213.54	192.26	156.20	133.35
September	213.43	191.88	153.21	131.57
October	212.71	190.05	153.88	131.95
November	241.32	218.05	165.00	137.50
December	248.38	224.48	181.98	146.00
January-December	218.01	197.52	155.05	132.17
2017:				
January	254.78	228.38	178.80	144.65
February	261.50	234.00	186.97	148.00
March	256.70	228.57	183.67	146.30
April	251.10	225.95	179.50	145.00
May	249.41	225.32	177.23	144.36
June	255.59	232.27	175.95	144.00
July	267.82	243.18	179.50	146.00
January–July	256.70	231.10	180.23	145.47

Source: American Metal Market.

 $\label{table 13} \textbf{U.S. IMPORTS FOR CONSUMPTION OF COPPER (UNMANUFACTURED), BY CLASS}^1$

(Metric tons, copper content)

	Ore and concentrate			Matte, ash, and precipitates			Blis	ster and anode	es	Refined		
		2017 January–			2017 January–			2017 January–			2017	
Country or	•						•					January-
locality	2016	July	July	2016	July	July	2016	July	July	2016	July	July
Belgium				27		25						(2)
Canada	33		2	355	1	111	2			193,000	20,000	113,000
Chile										354,000	36,100	288,000
China							(2)			76	7	31
Congo (Kinshasa)										21,100	2,140	7,210
Finland							175	34	200	110		2
Germany							(2)			1,830	299	1,370
India	3									1,210		224
Japan				109	50	51	3	(2)	1	4,090	402	2,660
Mexico	3		10,600	41	7	18				102,000	7,610	46,500
Netherlands				69	30	87	(2)	1	3	(2)		3
Peru										24,800	4,310	6,760
Other	27		9	205	96	379	93	(2)	48	4,100	1,700	4,460
Total	67		10,700	806	184	670	274	35	251	708,000	72,500	471,000

⁻⁻ Zero

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

²Less than ½ unit.

 $\label{eq:table 14} \text{U.S. EXPORTS OF COPPER (UNMANUFACTURED), BY CLASS}^1$

(Metric tons, copper content)

	Ore and concentrate			Matte, ash, and precipitates			Blis	ster and anode	es	Refined		
	2017			2017			2017				2017	
Country or	•	January-		- -	January-		•	January-		•		January-
locality	2016	July	July	2016	July	July	2016	July	July	2016	July	July
Belgium	(2)			5,700	580	3,950	679	22	236			(2)
Canada	25,800	1,650	16,200	12,300	1,180	8,520	2,050	176	2,000	32,400	1,250	13,000
China	57,100	7,960	33,700	52	18	22	485	30	129	32,600	(2)	10,000
Germany				204	40	493	517	8	89	21	10	13
Hong Kong				36			1,070	158	738			
Italy						15	377	21	131	240	4	7
Japan	20,400		19	180		164	453	1	42	157	1	9
Korea, Republic of	138	1	65	352	17	164	1,420	100	1,130	85	11	2,450
Mexico	226,000	15,500	86,000				99	1	79	67,700	5,850	39,800
Singapore							42	20	36	13	1	5
Spain				40		116	266		81	4		1
Switzerland							24	6	22	5		1
Taiwan				359		54	60	20	80	62		8
Other	853	13	77	883	97	173	1,970	53	907	518	18	621
Total	331,000	25,100	136,000	20,100	1,930	13,700	9,510	617	5,700	134,000	7,140	65,900

⁻⁻ Zero.

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

²Less than ½ unit.

 $\label{eq:table 15} \text{U.S. COPPER SCRAP IMPORTS}^1$

(Metric tons, gross weight)

		Unalloyed	Alloyed				
		201	7		201	17	
Country or	-		January-	-		January-	
locality	2016	July	July	July 2016		July	
Canada	13,300	1,260	11,600	52,200	7,100	47,800	
Chile	41	20	38	211		208	
Colombia	259	17	263	1,180	129	830	
Costa Rica	344	25	354	1,030	89	610	
Guatemala			29	326	39	233	
Honduras	102	14	33	357	40	203	
Mexico	12,900	1,050	5,800	34,400	2,930	20,700	
Nicaragua				264	19	127	
Other	2,170	369	2,010	6,180	1,120	5,160	
Total	29,100	2,760	20,100	96,100	11,500	75,900	

⁻⁻ Zero.

 $^{^{1}\}mathrm{Data}$ are rounded to no more than three significant digits; may not add to totals shown.

TABLE 16
U.S. COPPER SCRAP EXPORTS¹

(Metric tons, gross weight)

	Unalloyed								Alloyed					
				201	.7		2017							
	No		No. 1		No. 2 January–		Other January–		Segregated January-		Unsegregated			
Country or		January-										January-		
locality	2016	July	July	July	July	July	July	2016	July	July	July	July		
Belgium	9,030	684	1,990	194	1,130	82	1,090	8,390	150	790	796	3,450		
Canada	23,400					3,190	26,500	51,200			3,180	31,900		
China	284,000	10,300	70,800	8,410	50,700	11,600	74,200	376,000	9,530	65,400	19,900	142,000		
Germany	24,900	1,570	8,720	724	2,320	30	620	8,130	215	691	831	4,430		
Hong Kong	6,550	163	1,290	49	782	102	2,830	17,100	979	4,520	2,410	14,500		
India	1,670	118	772	106	358	37	1,140	23,000	1,420	11,200	39	1,460		
Japan	6,460	75	741	453	3,220	285	2,390	8,730	40	400	431	5,560		
Korea, Republic of	17,000	962	5,300	51	464	366	2,720	10,300	708	3,930	919	2,770		
Mexico	1,660	234	1,660			5	103	950	9	31	37	283		
Netherlands	12,100	197	1,560	19	137	386	2,410	1,170			40	78		
Spain	182	2	142	59	177		20	7,770		385	410	2,790		
Taiwan	8,290	334	2,380	187	807	124	288	1,740	77	469	20	501		
Thailand	121		79				4	1,050		139				
Other	16,100	217	5,600	115	902	118	684	16,900	74	1,670	1,530	8,830		
Total	411,000	14,900	101,000	10,400	60,900	16,300	115,000	532,000	13,200	89,600	30,500	219,000		

⁻⁻ Zero.

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