

# Mineral Industry Surveys

## For information, contact:

Daniel M. Flanagan, Copper Commodity Specialist National Minerals Information Center U.S. Geological Survey 989 National Center Reston, VA 20192

Telephone: (703) 648-7726, Fax: (703) 648-7757

Email: dflanagan@usgs.gov

Samir Hakim (Data) Telephone: (703) 648-7955 Fax: (703) 648-7975 Email: shakim@usgs.gov

Internet: <a href="http://minerals.usgs.gov/minerals/">http://minerals.usgs.gov/minerals/</a>

## **COPPER IN AUGUST 2017**

In August 2017, domestic mine production of recoverable copper was 102,000 metric tons (t). The average daily mine production was 3,280 t, slightly less than that in July and a decrease of 20% compared with that in August 2016. Year-to-date recoverable mine production through August 2017 was 855,000 t, a decline of 11% relative to the same period in 2016 (fig. 1, table 2).

Total U.S. refinery production in August 2017 was 99,400 t; electrolytic and electrowon production data are in table 4. Average daily total refinery production was 3,210 t, an increase of 10% compared with that in July and slightly less than that in August 2016. Year-to-date refinery production through August 2017 was 749,000 t, a decline of 9% relative to the same period in 2016 (fig. 1, table 4).

Smelter production in August 2017 was 47,200 t. The average daily smelter production was 1,520 t, 3% greater than that in July and a slight decrease from the daily average in August 2016. Year-to-date smelter production through August 2017 was 340,000 t, a decline of 5% compared with the same period in the prior year (table 3).

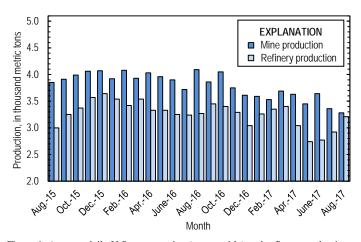


Figure 1. Average daily U.S. copper mine (recoverable) and refinery production from August 2015 through August 2017. Source: U.S. Geological Survey.

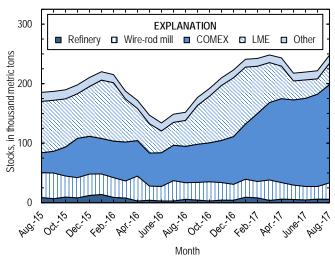


Figure 2. Monthly domestic refined copper stocks, by type, from August 2015 through August 2017. Sources: American Metal Market, London Metal Exchange Ltd., and U.S. Geological Survey.

## Stocks

Refined copper stocks in the United States totaled 248,000 t at the end of August 2017, an increase of 12% from those in July and 63% more than those in August 2016. Domestic stocks rose for the third consecutive month, consistent with reports of weak U.S. demand (Barker, 2017). COMEX stocks rose by 6%, stocks at wire-rod mills increased by 29%, and London Metal Exchange Ltd. stocks in U.S. warehouses were 39% higher compared with those at the end of July (fig. 2, table 10).

#### Prices

The average August 2017 COMEX spot copper price was \$2.96 per pound, an increase of 8% from \$2.73 per pound in July and 38% greater than \$2.14 per pound in August 2016 (fig. 3, table 11). The average price of New York dealers' number 2 scrap in August 2017 was \$1.90 per pound, up by 6% from \$1.80 in July and 22% higher than the average price in August 2016 (table 12).

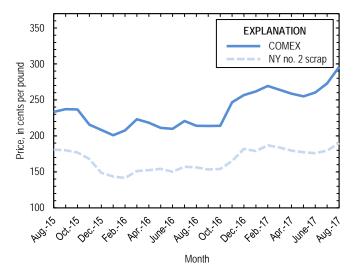


Figure 3. Monthly average COMEX copper price and New York no. 2 copper scrap price from August 2015 through August 2017. Sources: American Metal Market, Platts Metals Week.

# **Industry News**

At the end of August, Freeport-McMoRan Inc. (Phoenix, AZ) reached a tentative agreement with the Government of Indonesia to construct a copper smelter in the country within 5 years and divest 51% of its ownership of the Grasberg Mine to local entities. In return, the company's license to operate Grasberg, which was set to expire in 2021, would be extended to 2041, with fixed financial and legal stipulations for the duration of

mining operations (Freeport-McMoRan Inc., 2017). The timing and financial terms of the divestment remained uncertain.

Glencore plc (Switzerland) partially suspended operations at the Mufulira and Nkana Mines in Zambia for 2 weeks owing to a dispute over electricity rates (CRU International Ltd., 2017, p. 11). In 2016, these mines produced a combined 110,000 t of copper in concentrate (Glencore plc, 2017, p. 11).

#### **References Cited**

Barker, Dalton, 2017, Copper cathode market tied to low premiums: American Metal Market, August 15. (Accessed August 18, 2017, via http://www.amm.com/.)

CRU International Ltd., 2017, CRU copper monitor: London, United Kingdom, CRU International Ltd., August 31, 21 p. (Accessed September 5, 2017, via http://www.crugroup.com/.)

Freeport-McMoRan Inc., 2017, Freeport-McMoRan announces framework for agreement with Indonesian Government regarding long-term operating rights for PT Freeport Indonesia: Phoenix, AZ, Freeport-McMoRan Inc. press release, August 29. (Accessed December 6, 2017, at https://investors.fcx.com/investors/news-releases/news-release-details/2017/Freeport-McMoRan-Announces-Framework-for-Agreement-with-Indonesian-Government-Regarding-Long-Term-Operating-Rights-for-PT-Freeport-Indonesia/default.aspx.)

Glencore plc, 2017, Production report for the 12 months ended 31 December 2016: Baar, Switzerland, Glencore plc news release, February 2, 19 p. (Accessed December 6, 2017, at http://www.glencore.com/assets/investors/doc/reports\_and\_results/2016/GLEN-2016-Annual-Report.pdf.)

List services and web feed subscribers are the first to receive notification of USGS minerals information publications and data releases. For information on how to subscribe, go to <a href="http://minerals.usgs.gov/minerals/">http://minerals.usgs.gov/minerals/</a>.

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

(Metric tons of copper content, unless otherwise specified)

				20	17	
	Source		_			January–
	table <sup>2</sup>	2016 <sup>p</sup>	June	July	August	August
Production:						
Primary:						
Mine, recoverable	(2)	1,430,000	109,000	104,000 <sup>r</sup>	102,000	855,000
Smelter, total	(3)	563,000	37,100	45,800	47,200	340,000
Refinery:						_
Electrolytic, domestic and foreign	(4)	561,000	33,100	42,400 <sup>r</sup>	49,200	352,000
Electrowon	(4)	615,000	46,600	44,900	46,900	370,000
Total	(4)	1,180,000	79,800	87,300 <sup>r</sup>	96,100	722,000
Secondary recoverable copper: <sup>3</sup>						
Refineries	(5)	46,300	3,280	3,220	3,340	27,000
Ingot makers <sup>4</sup>	(5)	73,100	6,090	6,090	6,090	48,700
Brass and wire-rod mills	(5)	621,000	54,400	53,700	55,500	434,000
Foundries, etc. <sup>4</sup>	(5)	47,200	3,940	3,940	3,940	31,500
Consumption:						
Apparent	(8)	1,890,000	165,000	182,000 <sup>r</sup>	131,000	1,270,000
Refined (reported)	(7)	1,810,000	155,000	137,000	140,000	1,200,000
Purchased copper-base scrap	(9)	917,000	82,000	81,200	83,000	655,000
Stocks at end of period:						
Total refined	(10)	223,000	219,000	222,000	248,000	248,000
Blister, etc.	(10)	14,400	11,000	11,000 <sup>r</sup>	7,350	7,350
Prices, U.S. producers cathode (cents per pound) <sup>5</sup>	(11)	224.873	265.143	277.821	300.928	272.120
Imports: <sup>6</sup>						
Ore and concentrate	(13)	67	3			10,700
Refined	(13)	708,000	66,100	72,500	55,200	526,000
Exports: <sup>6</sup>						
Ore and concentrate	(14)	331,000	21,100	25,100	20,400	156,000
Refined	(14)	134,000	6,140	7,140	6,680	72,600

<sup>&</sup>lt;sup>p</sup>Preliminary. <sup>r</sup>Revised. -- Zero.

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

<sup>&</sup>lt;sup>2</sup>Numbers in parentheses refer to the tables where these data are located.

<sup>&</sup>lt;sup>3</sup>Copper recovered from copper-base scrap only.

<sup>&</sup>lt;sup>4</sup>Estimated based on the monthly average of 2015 annual data.

<sup>&</sup>lt;sup>5</sup>Source: Platts Metals Week.

<sup>&</sup>lt;sup>6</sup>Source: U.S. Census Bureau.

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

## (Metric tons)

	Recoverable copper			Contained copper			
Period	Arizona	Others <sup>2</sup>	Total	Electrowon	Concentrates <sup>3</sup>	Total	
2016: <sup>p</sup>							
January–July	570,000	267,000	838,000	360,000	497,000	857,000	
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	109,000	46,600	64,700	111,000	
July	73,500 <sup>r</sup>	30,600 <sup>r</sup>	104,000 <sup>r</sup>	44,900	61,600 <sup>r</sup>	107,000 <sup>r</sup>	
August	71,200	30,600	102,000	46,900	57,100	104,000	
January-August	577,000	278,000	855,000	370,000	504,000	875,000	

<sup>&</sup>lt;sup>p</sup>Preliminary. <sup>r</sup>Revised.

 $\begin{tabular}{ll} TABLE 3 \\ COPPER PRODUCED AT SMELTERS IN \\ THE UNITED STATES $^{1,2}$ \\ \end{tabular}$ 

(Metric tons, copper content)

	Anode
Period	production
2016: <sup>p</sup>	
January–July	311,000
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
August	47,200
January-August	340,000

<sup>&</sup>lt;sup>p</sup>Preliminary.

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

<sup>&</sup>lt;sup>2</sup>Includes production from Michigan, Missouri, Montana, Nevada, New Mexico, and Utah.

<sup>&</sup>lt;sup>3</sup>Includes copper content of precipitates and other metal concentrates.

<sup>&</sup>lt;sup>1</sup>Includes blister and copper anode from primary or secondary sources.

<sup>&</sup>lt;sup>2</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

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

#### (Metric tons)

	Pri	mary materials			
	Electrolytically				Total
Period	refined <sup>2</sup>	Electrowon	Total	Scrap	refined
2016: <sup>p</sup>					
January–July	330,000	360,000	690,000	29,200	720,000
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	3,390	84,800
June	33,100	46,600	79,800	3,280	83,000
July	42,400 <sup>r</sup>	44,900	87,300 <sup>r</sup>	3,220	90,600 1
August	49,200	46,900	96,100	3,340	99,400
January-August	352,000	370,000	722,000	27,000	749,000

<sup>&</sup>lt;sup>p</sup>Preliminary. <sup>r</sup>Revised.

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

# (Metric tons, copper content)

	Refin	eries <sup>2</sup>	Ingot n	nakers <sup>3</sup>	Brass and w	ire-rod mills	Foundri	es, etc. <sup>3</sup>	
Period	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	Total <sup>4</sup>
2016: <sup>p</sup>									
January-July	11,500	17,700	9,010	33,600	337,000	20,800	21,300	6,290	457,000
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
August	1,680	1,660	1,290	4,800	52,100	3,360	3,040	898	68,800
January-August	13,400	13,600	10,300	38,400	409,000	25,100	24,300	7,180	541,000

Preliminary.

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

<sup>&</sup>lt;sup>2</sup>From domestic and foreign source materials.

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

<sup>&</sup>lt;sup>2</sup>Electrolytically refined and fire refined from scrap based on source of material at smelter or refinery level.

<sup>&</sup>lt;sup>3</sup>Monthly data estimated based on the monthly average of 2015 annual data.

<sup>&</sup>lt;sup>4</sup>Does 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, e	end of period
Period	Brass mills	Wire-rod mills	Brass mills	Wire-rod mills	Brass mills	Wire-rod mills
2016: <sup>p</sup>						
January–July	513,000	777,000	512,000	768,000	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	117,000	28,600	26,400
July	73,000	97,200	73,200	97,400	28,400	26,700
August	75,000	111,000	74,200	112,000	29,300	25,800
January-August	589,000	883,000	588,000	882,000	29,300	25,800

<sup>&</sup>lt;sup>p</sup>Preliminary.

 $\label{table 7} {\sf CONSUMPTION} \ {\sf OF} \ {\sf REFINED} \ {\sf COPPER}^1$ 

# (Metric tons)

	Brass	Wire-rod	Other	
Period	mills	mills	plants <sup>2</sup>	Total
2016: <sup>p</sup>				
January–July	246,000	770,000	40,700	1,060,000
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
August	35,300	98,600	5,820	140,000
January-August	279,000	877,000	46,500	1,200,000

<sup>&</sup>lt;sup>p</sup>Preliminary.

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

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

<sup>&</sup>lt;sup>2</sup>Monthly consumption data by ingot makers, chemical plants, foundries, and miscellaneous manufacturers are estimated based on the monthly average of 2015 annual data.

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

## (Metric tons)

Period	Refined copper	Copper in	Refined general	Refined	Stock change	Apparent
	production	old scrap <sup>2</sup>	imports <sup>3</sup>	exports <sup>3</sup>	during period	consumption
2016: <sup>p</sup>						
January–July	690,000	96,000	379,000	91,800	(61,800)	1,140,000
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	165,000
July	87,300 <sup>r</sup>	12,800	91,800	7,140	2,900 r	182,000
August	96,100	13,200	54,300	6,680	25,600	131,000
January–August	722,000	104,000	540,000	72,600	24,700	1,270,000

<sup>&</sup>lt;sup>p</sup>Preliminary. <sup>r</sup>Revised.

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

# (Metric tons, gross weight)

	Sme	lters			Brass	s and			
	and ref	ineries	Ingot n	nakers <sup>2</sup>	wire-ro	d mills <sup>3</sup>	Foundri	es, etc. <sup>2</sup>	Total scrap
Period	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	used
2016: <sup>p</sup>									
January–July	11,900	14,500	20,200	38,200	392,000	21,400	25,600	6,940	531,000
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	4,690 <sup>r</sup>	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
August	1,820	4,630	2,890	5,460	60,100	3,450	3,660	992	83,000
January-August	14,600	37,100	23,100	43,600	473,000	25,900	29,300	7,940	655,000

<sup>&</sup>lt;sup>p</sup>Preliminary. <sup>r</sup>Revised.

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

<sup>&</sup>lt;sup>2</sup>Includes 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.

<sup>&</sup>lt;sup>3</sup>Source: U.S. Census Bureau.

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

<sup>&</sup>lt;sup>2</sup>Monthly data estimated based on the monthly average of 2015 annual data.

<sup>&</sup>lt;sup>3</sup>Consumption at brass and wire-rod mills assumed equal to receipts.

# TABLE 10 COPPER STOCKS AT END OF PERIOD $^{\rm I}$

## (Metric tons)

				l	Refined copper			
	Crude		Wire-rod					Total
Period	copper <sup>2</sup>	Refineries <sup>3</sup>	$mills^3$	Brass mills <sup>3</sup>	Other <sup>4</sup>	Comex	LME <sup>5</sup>	refined
2016: <sup>p</sup>	•							
August	12,500	5,660	28,000	7,930	5,730	61,000	43,600	152,00
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	223,00
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	5,730	148,000	31,000	219,00
July	11,000 <sup>r</sup>	5,810	21,500	7,920	5,730	155,000	25,800	222,00
August	7,350	5,610	27,800	7,740	5,730	165,000	35,900	248,000

<sup>&</sup>lt;sup>p</sup>Preliminary. <sup>r</sup>Revised.

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
cathode1	position <sup>2</sup>	Grade A
219.284	214.096	215.811
218.752	213.752	213.496
218.885	214.010	214.629
251.388	246.638	246.878
261.183	256.683	256.997
224.873	219.727	220.571
266.363	261.863	260.225
274.051	269.426	269.484
269.122	264.122	264.040
263.626	258.626	258.428
259.902	254.902	253.608
265.143	260.193	258.506
277.821	272.883	271.162
300.928	295.878	293.822
272.120	267.237	266.159
	219.284 218.752 218.885 251.388 261.183 224.873 266.363 274.051 269.122 263.626 259.902 265.143 277.821 300.928	U.S. producers cathode position position 2  219.284 214.096 218.752 213.752 218.885 214.010 251.388 246.638 261.183 256.683 224.873 219.727  266.363 261.863 274.051 269.426 269.122 264.122 263.626 258.626 259.902 254.902 265.143 260.193 277.821 272.883 300.928 295.878

<sup>&</sup>lt;sup>1</sup>Sum of "Comex high grade first position" and "NY dealer premium cathode."

Source: Platts Metals Week.

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

<sup>&</sup>lt;sup>2</sup>Copper content of blister and anode.

<sup>&</sup>lt;sup>3</sup>Stocks of refined copper as reported; no estimates are made for nonrespondents.

<sup>&</sup>lt;sup>4</sup>Monthly estimates based on 2015 annual data, comprising stocks at ingot makers, chemical plants, foundries, and miscellaneous manufacturers.

<sup>&</sup>lt;sup>5</sup>London Metal Exchange Ltd., U.S. warehouses.

<sup>&</sup>lt;sup>2</sup>Listed as "Comex high grade first position."

 $\label{eq:table 12} \textbf{AVERAGE BUYING PRICES FOR COPPER SCRAP}$ 

# (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:				
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
August	285.74	260.67	190.07	151.17
January-August	260.33	234.79	181.46	146.19

Source: American Metal Market.

 ${\it TABLE~13}$  U.S. IMPORTS FOR CONSUMPTION OF COPPER (UNMANUFACTURED), BY  ${\it CLASS}^1$ 

(Metric tons, copper content)

	Ore and concentrate			Matte, ash, and precipitates			Bli	ster and anoc	les	Refined		
	2017				2017			2017			2017	
Country or		January-			January-			January-				January-
locality	2016	August	August	2016	August	August	2016	August	August	2016	August	August
Belgium				27		25						(2)
Canada	33		2	355	37	148	2			193,000	17,500	131,000
Chile										354,000	29,000	317,000
China							(2)			76	10	41
Congo (Kinshasa)										21,100	431	7,640
Finland							175	51	251	110	1	3
Germany							(2)			1,830	172	1,540
India	3									1,210		224
Japan				109	25	76	3	(2)	1	4,090	462	3,120
Mexico	3		10,600	41		18				102,000	6,970	53,500
Netherlands				69	32	120	(2)	(2)	3	(2)	(2)	3
Peru										24,800		6,760
Other	27		9	205	6	385	93	1	49	4,100	647	5,110
Total	67		10,700	806	101	770	274	52	304	708,000	55,200	526,000

<sup>--</sup> Zero

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

<sup>&</sup>lt;sup>2</sup>Less than ½ unit.

 ${\it TABLE~14} \\ {\it U.S.~EXPORTS~OF~COPPER~(UNMANUFACTURED),~BY~CLASS}^1$ 

(Metric tons, copper content)

	Ore and concentrate			Matte, ash, and precipitates			Bli	ster and anod	es	Refined		
		2017		2017				2017			2017	
Country or			January-		January-			January-				January-
locality	2016	August	August	2016	August	August	2016	August	August	2016	August	August
Belgium	(2)			5,700	254	4,200	679	37	273			(2)
Canada	25,800	1,090	17,300	12,300	1,700	10,200	2,050	166	2,160	32,400	2,560	15,600
China	57,100	7,650	41,300	52	53	75	485	20	149	32,600	1	10,000
Germany				204	17	510	517	20	109	21		13
Hong Kong				36			1,070	99	837		(2)	(2)
Italy						15	377	40	171	240	2	9
Japan	20,400		19	180		164	453		42	157	(2)	9
Korea, Republic of	138	34	99	352	18	182	1,420	116	1,240	85	1	2,450
Mexico	226,000	11,600	97,600				99	6	85	67,700	4,100	43,900
Singapore							42	1	38	13		5
Spain				40		116	266		81	4		1
Switzerland							24		22	5	2	3
Taiwan				359		54	60	3	82	62		8
Other	853	9	86	883	76	248	1,970	163	1,070	518	10	630
Total	331,000	20,400	156,000	20,100	2,120	15,800	9,510	671	6,370	134,000	6,680	72,600

<sup>--</sup> Zero

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

<sup>&</sup>lt;sup>2</sup>Less than ½ unit.

 ${\small \mbox{TABLE 15}} \\ {\small \mbox{U.S. COPPER SCRAP IMPORTS}^{1}}$ 

(Metric tons, gross weight)

		Unalloyed		Alloyed				
		201	7		2017			
Country or			January–	•		January–		
locality	2016	August	August	2016	August	August		
Canada	13,300	1,500	13,100	52,200	7,810	55,600		
Chile	41	19	57	211	19	228		
Colombia	259	17	280	1,180	92	921		
Costa Rica	344	29	384	1,030	60	670		
Guatemala			29	326	37	270		
Honduras	102	10	43	357	45	248		
Mexico	12,900	909	6,710	34,400	3,140	23,800		
Nicaragua				264	39	166		
Other	2,170	467	2,480	6,180	499	5,660		
Total	29,100	2,960	23,100	96,100	11,700	87,600		
Zero.								

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

TABLE 16 U.S. COPPER SCRAP EXPORTS<sup>1</sup>

(Metric tons, gross weight)

	Unalloyed								Alloyed					
				20	17		2017							
		No. 1 No. 2  January— January—		. 2	Other January–			Segregated January-		Unsegregated				
Country or				January-							January-			
locality	2016	August	August	August	August	August	August	2016	August	August	August	August		
Belgium	9,030	484	2,480	234	1,360	217	1,310	8,390	435	1,230	714	4,170		
Canada	23,400					3,690	30,200	51,200			3,780	35,700		
China	284,000	10,800	81,600	8,340	59,000	10,400	84,600	376,000	7,170	72,500	23,700	166,000		
Germany	24,900	1,060	9,780	464	2,780	150	770	8,130	132	823	1,010	5,440		
Hong Kong	6,550	140	1,430	40	822	63	2,890	17,100	1,110	5,630	2,150	16,600		
India	1,670	417	1,190	11	369	39	1,180	23,000	1,350	12,600	183	1,650		
Japan	6,460	217	957	499	3,720	289	2,680	8,730	31	431	628	6,180		
Korea, Republic of	17,000	1,200	6,500	21	485	526	3,240	10,300	816	4,740	821	3,590		
Mexico	1,660	269	1,930			5	109	950	2	33	58	341		
Netherlands	12,100	116	1,680	60	197	330	2,740	1,170	19	19	400	478		
Spain	182	54	196	171	348		20	7,770	40	426	310	3,100		
Taiwan	8,290	446	2,830	109	915	60	348	1,740	38	507	67	568		
Thailand	121		79			(2)	4	1,050		139	58	58		
Other	16,100	514	6,110	185	1,090	92	776	16,900	57	1,730	1,160	10,000		
Total	411,000	15,700	117,000	10,100	71,100	15,900	131,000	532,000	11,200	101,000	35,000	254,000		

<sup>--</sup> Zero.

 $<sup>^1</sup>Data$  are rounded to no more than three significant digits; may not add to totals shown.  $^2Less$  than ½ unit.