

Mineral Industry Surveys

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COPPER IN MAY 2004

Average daily mine production in May rose by about 2% from that in April but remained slightly below that for May 2003, according to data compiled by the U.S. Geological Survey. Mine production for the first 5 months of the year was slightly lower than that for the same period in 2003. Average daily smelter production rose by 15% in May in large part owing to a recovery at Kennecott Utah Copper Inc.'s smelter, which had been operating substantially below capacity.

Wire rod and brass mill consumption (refined copper and scrap) and production, which had trended upward during the first 4 months of the year, fell significantly in May owing to reduced brass mill output. A fire in an electrical control room during the last week in April at Olin Corporation's mill in East Alton, IL, reduced its brass casting operations through the middle of May and was expected to affect earnings during the second quarter of the year by about \$10 million (Olin Corporation, 2004a). Olin had just posted a net income for the first quarter of the year of \$2.9 million on the basis of sales that rose by 25.3%, a sharp contrast to the \$39 million loss it incurred during the first quarter of 2003. The first quarter 2003 adjusted net income, however, was \$5.1 million before \$44.1 million in accounting and restructuring costs (Olin Corporation, 2004b).

In response to tight supplies, higher shipping costs, and higher producer and merchant premiums, U.S. brass mills announced that they were adding surcharges to the copper content of their mill products. Outokumpu American Brass began adding a 2.5-cent-per-pound surcharge to all sheet and strip products from its mill in Buffalo, NY, effective May 17. American Brass tied its surcharges to Kennecott's premium, quoted at the time at 6.1 cents per pound over the COMEX spot price, and planned to adjust it according to movements in Kennecott's prices. American Brass cited historic premiums as ranging between 3.25 and 3.6 cents per pound (Bresnick, 2004). Other companies were soon to follow suit, with Olin, Revere Copper Products Inc., Rome, NY, and Wolverine Tube Inc., Huntsville, AL, announcing similar price changes (American Metal Market, 2004).

Higher copper prices appeared to stimulate renewed interest in domestic copper production. In Utah, Constellation Copper

Corp. announced that its board of directors had approved a \$40 million debt financing package for the construction of the Lisbon Valley open pit and heap leach solvent extraction-electrowinning (SX-EW) project. Closing on the loan package and start of construction were targeted for the end of July. Constellation also reported that dismantling of the crushing and SX-EW processing facilities that it purchased from Equitorial Tonopah Inc.'s closed Tonopah, NV, mine was proceeding according to schedule, and that approximately 33% of the plant equipment has been dismantled and relocated to the Lisbon Valley site. Detailed engineering of the foundations for the processing facilities reportedly was well-advanced. The Lisbon Valley project is designed to produce 24,500 metric tons per year (t/yr) of copper cathode at a projected average cash operating cost of \$0.45 per pound (Constellation Copper Corp., 2004).

Nord Resources Corporation announced that it had issued tender/contract documents to four mining contractors for mining at the company's Johnson Camp Mine located in southern Arizona. Operations at Johnson Camp will involve the mining of about 8,000 metric tons per day (t/d) of ore and the removal of 4,500 t/d of overburden to produce 9,000 t/yr of electrowon cathode. Actual production of copper cathode is anticipated to begin within 3 months of a restart (Nord Resources Corp., 2004). Also in Nevada, GoldSpring, Inc. reported that it was proceeding to a third quarter 2004 start-up of leaching at its Big Mike project, near Winnemucca. The project calls for using the company's Eco-Vat leaching system to process about 1.1 million metric tons of stockpiled ore over a 5-to-6-year period to recover about 11,300 metric tons of electrowon copper (GoldSpring, Inc., 2004§¹).

The secondary smelting and refining industry, which has endured a continual decline in recent years, received a potential boost when American Iron & Metal Co. Inc. announced plans to restart its Warrenton, MO, fire refinery, the only remaining non-integrated secondary copper refinery in the United States. American Iron & Metal of Montreal, Canada, acquired

¹References that include a section mark (§) are found in the Internet References Cited section.

Warrenton from Philip Services Corp., of Houston, TX, in 2000 and operated it intermittently until yearend 2002. Operating as the newly formed Warrenton Copper LLC, the plant hopes to fill a domestic niche as a “stable consumer capable of consuming large amounts of No. 2 copper (scrap).” The first fire-refined ingot was scheduled to be cast by September at the latest. The facility includes wire-chopping lines, and plans called for adding a pre-shredder and granulator (McCann, 2004§).

Update

The Bureau of Industry and Security, U.S. Department of Commerce, issued its ruling on the petition filed by the Copper and Brass Fabricators Council, Inc. and the Non-Ferrous Founders’ Society that requested the monitoring and control of U.S. copper scrap and copper alloy scrap exports in accordance with the short supply provisions of the Export Administration Act of 1979, as amended (See Copper in February 2004.). The petitioners claimed that the growth in exports of copper scrap over the 1999–2003 period, especially those going to China, had unfairly increased their raw material costs, created a domestic shortage of copper raw materials, and caused economic hardship to the industries they represented. The Department of Commerce determined, however, that the short supply criteria had not been met and that neither monitoring nor controls were warranted. In its determination, the Department of Commerce concluded that:

- Though the volume of exports of copper-base scrap increased significantly over the study period, the increase is somewhat less significant when considered in relation to domestic demand and the erosion of the secondary smelting industry.
- Copper scrap prices did increase significantly, but the world market for copper cathode, not the level of U.S. exports of copper-base scrap, was the most important determinant in the fluctuations of domestic scrap prices.

- The evidence did not demonstrate the existence of a scrap shortage, nor did it demonstrate a significant adverse effect on the national economy or sector thereof.

The Commerce Department indicated, however, that it would work with the U.S. Census Bureau to refine schedule B classifications for copper-base scrap exports in order to better delineate the varieties of scrap being exported; review the new scrap export data in the coming year; and work closely with the office of the United States Trade Representative to address any foreign government practices that are distorting trade in copper-base scrap (U.S. Department of Commerce, 2004§).

References Cited

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TABLE 1
SALIENT STATISTICS OF THE COPPER INDUSTRY IN THE UNITED STATES¹

(Metric tons, unless otherwise specified)

	Source table ²	2004			
		2003 ^p	April	May	January - May
Production:					
Primary:					
Mine, recoverable	(2)	1,120,000	87,200 ^r	91,700	447,000
Refinery:					
Electrolytic:					
Domestic and foreign	(4)	662,000	59,000 ^r	55,600	269,000
Electrowon	(4)	591,000	47,600 ^r	49,100	238,000
Total	(4)	1,250,000	107,000	105,000	507,000
Secondary recoverable copper:					
Refineries	(5)	53,300	4,360	4,150	21,000
Ingot makers ³	(5)	119,000	9,890	9,890	49,400
Brass and wire-rod mills	(5)	676,000	62,400	58,600	306,000
Foundries, etc. ³	(5)	64,600	5,380	5,380	26,900
Smelter, total	(3)	539,000	44,400	52,900	208,000
Consumption:					
Apparent	(8)	2,450,000	252,000	NA	NA
Refined (reported)	(7)	2,300,000	217,000 ^r	209,000	1,050,000
Purchased copper-base scrap	(9)	1,150,000	103,000	98,300	508,000
Stocks at end of period:					
Total refined	(11)	656,000	344,000 ^r	303,000	XX
Blister, etc.	(11)	56,800	48,500	55,500	XX
Prices:					
U.S. producer cathode (cents per pound) ⁴	(12)	85.247	133.646	126.097	128.341
Imports:⁵					
Ores and concentrates ⁶	(14)	27,100	6,650	NA	NA
Refined	(14)	882,000	59,300	NA	NA
Exports:⁵					
Ores and concentrates ⁶	(15)	9,860	2,280	NA	NA
Refined	(15)	93,300	28,400	NA	NA

^pPreliminary. ^rRevised. NA Not available. XX Not applicable.

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

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

³Monthly data and 2003 cumulative data estimated based on 2002 monthly average.

⁴Source: Platts Metals Week.

⁵Source: U.S. Census Bureau.

⁶Copper content.

TABLE 2
MINE PRODUCTION OF RECOVERABLE COPPER IN THE UNITED STATES¹

(Metric tons)

Period	Recoverable copper			Contained copper		
	Arizona	Others ²	Total	Electrowon	Concentrates ³	Total
2003: ^P						
January - May	304,000	148,000 ^r	452,000	246,000	212,000 ^r	458,000 ^r
May	62,400	31,300	93,700	50,400	44,400	94,800
June	65,100	29,400	94,600	49,600	46,400	96,000
July	63,900	34,200	98,100	49,500	50,100	99,600
August	63,400	31,400	94,700	50,500	45,400	95,900
September	59,700	34,100	93,900	50,600	44,400	94,900
October	62,300	33,200	95,500	49,600	47,000	96,600
November	60,200	31,800	92,000	46,200	47,000	93,200
December	62,000	33,400	95,300	49,600	46,900	96,500
Year	741,000	375,000	1,120,000	591,000	539,000	1,130,000
2004:						
January	58,500	32,300	90,800	48,700	43,200	91,900
February	55,200	29,600	84,800	44,700	41,100	85,800
March	61,400	31,500	92,900	48,400	45,700	94,100
April	55,600	31,600 ^r	87,200 ^r	47,600	40,700 ^r	88,300 ^r
May	56,900	34,800	91,700	49,100	43,600	92,700
January - May	288,000	160,000	447,000	238,000	214,000	453,000

^PPreliminary. ^rRevised.

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

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

³Includes copper content of precipitates and other metal concentrates.

TABLE 3
COPPER PRODUCED AT SMELTERS IN
THE UNITED STATES, BY SOURCE^{1,2}

(Metric tons, copper content)

Period	Anode production
2003: ^P	
January - May	208,000
May	46,000
June	49,700
July	46,600
August	49,200
September	46,000
October	44,100
November	47,800
December	47,400
Total	539,000
2004:	
January	39,700
February	30,100
March	41,300
April	44,400
May	52,900
January - May	208,000

^PPreliminary.

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

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

TABLE 4
PRODUCTION OF REFINED COPPER, BY SOURCE AND METHOD OF RECOVERY¹

(Metric tons)

Period	Primary materials			Scrap	Total refined
	Electrolytically refined ²	Electrowon	Total		
2003: ^P					
January - May	279,000 ^r	246,000	525,000 ^r	24,300 ^r	549,000 ^r
May	44,400	50,400	94,700	4,050	98,800
June	52,200	49,600	102,000	4,130	106,000
July	56,700	49,500	106,000	4,130	110,000
August	55,100	50,500	106,000	3,910	110,000
September	57,100	50,600	108,000	4,220	112,000
October	53,600	49,600	103,000	4,490	108,000
November	50,500	46,200	96,700	4,050	101,000
December	57,700	49,600	107,000	4,080	111,000
Year	662,000	591,000	1,250,000	53,300	1,310,000
2004:					
January	51,300	48,700	100,000	4,190	104,000
February	50,300	44,700	95,000	3,920	99,000
March	52,300	48,400	101,000	4,330	105,000
April	59,000 ^r	47,600	107,000 ^r	4,360	111,000 ^r
May	55,600	49,100	105,000	4,150	109,000
January - May	269,000	238,000	507,000	21,000	528,000

^PPreliminary. ^rRevised.

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

²From domestic- and foreign-source materials.

TABLE 5
COPPER RECOVERABLE IN UNALLOYED AND ALLOYED FORM FROM PURCHASED COPPER-BASE SCRAP¹

(Metric tons, copper content)

Period	Refineries ²		Ingot makers ³		Brass and wire-rod mills		Foundries, etc. ³		Total ⁴
	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	
2003: ^P									
January - May	6,630	17,600 ^r	11,700 ^r	37,700 ^r	273,000 ^r	12,900 ^r	10,100 ^r	16,800 ^r	386,000 ^r
May	1,340	2,710	2,340	7,550	52,400	2,910	2,020	3,360	74,700
June	1,340	2,790	2,340	7,550	54,300	2,910	2,020	3,360	76,600
July	1,340	2,800	2,340	7,550	50,600	2,750	2,020	3,360	72,700
August	1,340	2,580	2,340	7,550	52,900	2,190	2,020	3,360	74,300
September	1,340	2,880	2,340	7,550	53,900	2,790	2,020	3,360	76,200
October	1,340	3,160	2,340	7,550	56,300	2,880	2,020	3,360	78,900
November	1,340	2,720	2,340	7,550	51,100	2,450	2,020	3,360	72,900
December	1,340	2,740	2,340	7,550	51,900	2,880	2,020	3,360	74,100
Year	16,000	37,300	28,100	90,600	644,000	31,800	24,300	40,300	912,000
2004:									
January	1,340	2,860	2,340	7,550	57,400	3,610	2,020	3,360	80,500
February	1,340	2,590	2,340	7,550	56,600	3,900	2,020	3,360	79,700
March	1,340	3,000	2,340	7,550	60,100	3,650	2,020	3,360	83,400
April	1,340	3,020	2,340	7,550	59,500	2,900	2,020	3,360	82,000
May	1,340	2,820	2,340	7,550	55,500	3,090	2,020	3,360	78,100
January - May	6,680	14,300	11,700	37,700	289,000	17,100	10,100	16,800	404,000

^PPreliminary. ^rRevised.

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

²Electrolytically refined and fire-refined scrap based on source of material at smelter level.

³Monthly data and 2003 cumulative data estimated based on 2002 annual data.

⁴Does not include an estimate, based on reported 2002 data of 3,100 tons per month from new scrap and 2,020 tons per monthly copper recovered from scrap other than copper-base.

TABLE 6
PRODUCTION, SHIPMENTS, AND STOCKS OF BRASS AND WIRE-ROD SEMIFABRICATES¹

(Metric tons, gross weight)

Period	Production		Shipments		Stocks, end of period	
	Brass mills	Wire-rod mills	Brass mills	Wire-rod mills	Brass mills	Wire-rod mills
2003: ^P						
January - May	570,000 ^r	674,000 ^r	571,000	676,000 ^r	XX	XX
May	111,000	128,000	112,000	132,000	58,200	33,400
June	114,000	126,000	114,000	125,000	57,700	34,800
July	107,000	123,000	110,000	126,000	54,800	31,400
August	111,000	140,000	112,000	142,000	53,500	29,900
September	117,000	142,000	118,000	147,000	53,200	24,900
October	120,000	156,000	119,000	159,000	54,000	21,600
November	110,000	139,000	111,000	136,000	53,500	24,700
December	106,000	131,000	106,000	134,000	53,800	22,200
Year	1,360,000	1,630,000	1,360,000	1,640,000	XX	XX
2004:						
January	115,000	158,000	116,000	151,000	52,400	29,400
February	117,000	146,000	120,000	147,000	52,200	28,500
March	123,000	158,000 ^r	124,000	168,000 ^r	51,300	19,100 ^r
April	125,000	159,000 ^r	124,000 ^r	160,000 ^r	52,300 ^r	18,300 ^r
May	115,000	160,000	116,000	148,000	51,000	29,600
January - May	595,000	781,000	601,000	774,000	XX	XX

^PPreliminary. ^rRevised. XX Not applicable.

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

TABLE 7
CONSUMPTION OF REFINED COPPER¹

(Metric tons)

Period and item	Wire-rod mills	Brass mills	Other plants ²	Total
2003: ^P				
January - May	678,000 ^r	246,000	28,200 ^r	952,000 ^r
May	131,000	49,900	5,630	187,000
June	130,000	50,400	5,630	186,000
July	122,000	49,500	5,630	177,000
August	143,000	46,800	5,630	195,000
September	143,000	48,000	5,630	197,000
October	157,000	49,500	5,630	212,000
November	140,000	49,600	5,630	195,000
December	128,000	46,900	5,630	181,000
Year	1,640,000	587,000	67,600	2,300,000
2003:				
January	156,000	47,900	5,630	210,000
February	146,000	49,600	5,630	201,000
March	158,000 ^r	54,300	5,630	218,000 ^r
April	158,000 ^r	53,400 ^r	5,630	217,000 ^r
May:				
Cathodes	156,000	32,800	818	190,000
Wire bars	--	--	(3)	(3)
Ingots and ingot bars	--	1,150	2,230	3,390
Cakes and slabs	--	(3)	(3)	(3)
Billets and other	W	12,800	2,580	15,400
Total	156,000	46,800	5,630	209,000
January - May	775,000	252,000	28,200	1,050,000

^PPreliminary. ^rRevised. W Withheld to avoid disclosing company proprietary data included with "Cathodes." -- Zero.

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

²Consumption by ingot makers, chemical plants, foundries, and miscellaneous manufacturers is estimated based on 2002 annual data.

³Withheld to avoid disclosing company proprietary data; included with "Billets and others."

TABLE 8
U.S. APPARENT CONSUMPTION OF COPPER¹

(Metric tons)

Period	Refined copper production	Copper in old scrap ²	Refined general imports ³	Refined exports ³	Stock change during period	Apparent consumption
2003: ^P						
January - April	430,000 ^r	76,700 ^r	231,000 ^r	5,420	(93,500) ^r	826,000 ^r
April	92,600	20,700	52,200	606	(4,410)	169,000
May	94,700	18,600	56,000	15,900	(73,100)	226,000
June	102,000	18,600	51,500	23,000	(59,200)	208,000
July	106,000	18,500	40,700	5,080	(36,300)	197,000
August	106,000	17,700	72,700	4,080	5,710	186,000
September	108,000	18,600	46,000	4,330	(30,600)	198,000
October	103,000	19,000	69,100	4,640	(58,300)	245,000
November	96,700	18,100	63,300	8,470	(24,400)	194,000
December	107,000	18,600	57,200	22,300	(11,000)	172,000
Year	1,250,000	224,000	687,000	93,300	(381,000)	2,450,000
2004:						
January	100,000	19,400	43,700	11,000	(77,100)	229,000
February	95,000	19,400	45,400	18,500	(63,600)	205,000
March	101,000	19,600	62,500	23,900	(75,100) ^r	234,000 ^r
April	107,000 ^r	18,900	59,300	28,400	(96,000) ^r	252,000 ^r
May	105,000	18,800	NA	NA	(41,100)	NA
January - April	402,000	77,300	211,000	81,800	(312,000)	921,000

^PPreliminary. ^rRevised. NA Not available.

¹Data 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 2002 data.

³Source: U.S. Census Bureau.

TABLE 9
CONSUMPTION OF PURCHASED COPPER-BASE SCRAP¹

(Metric tons, gross weight)

Period	Smelters and refineries		Ingot makers ²		Brass and wire-rod mills ³		Foundries, etc. ²		Total scrap used
	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	
2003: ^P									
January - May	6,700	18,000	17,500 ^r	53,400 ^r	344,000 ^r	13,200 ^r	17,600 ^r	18,700 ^r	489,000 ^r
May	1,350	2,750	3,490	10,700	65,700	2,960	3,530	3,730	94,200
June	1,380	2,790	3,490	10,700	67,900	2,970	3,530	3,730	96,400
July	1,390	2,780	3,490	10,700	62,800	2,790	3,530	3,730	91,200
August	1,350	2,600	3,490	10,700	65,900	2,230	3,530	3,730	93,600
September	1,350	2,900	3,490	10,700	67,500	2,850	3,530	3,730	96,000
October	1,350	3,180	3,490	10,700	70,800	2,990	3,530	3,730	99,800
November	1,350	2,560	3,490	10,700	64,000	2,550	3,530	3,730	91,900
December	1,350	2,760	3,490	10,700	65,200	2,980	3,530	3,730	93,700
Year	16,200	37,600	41,900	128,000	808,000	32,600	42,300	44,800	1,150,000
2004:									
January	1,350	2,880	3,490	10,700	71,900	3,730	3,530	3,730	101,000
February	1,350	2,610	3,490	10,700	70,800	4,020	3,530	3,730	100,000
March	1,350	3,020	3,490	10,700	75,900	3,760	3,530	3,730	105,000
April	1,350	3,050	3,490	10,700	74,500	2,930	3,530	3,730	103,000
May	1,350	2,770	3,490	10,700	69,500	3,200	3,530	3,730	98,300
January - May	6,750	14,300	17,500	53,400	363,000	17,600	17,600	18,700	508,000

^PPreliminary. ^rRevised.

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

²Monthly data and 2003 cumulative data estimated from 2002 annual data.

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

TABLE 10
CONSUMPTION OF PURCHASED COPPER-BASE SCRAP^{1,2}

(Metric tons, gross weight)

Scrap type and processor	2003 ^p		2004			
	January - May	Year	March	April	May	January - May
No. 1 wire and heavy:						
Smelters and refiners	29,200 ^r	70,200 ^r	5,860 ^r	5,860 ^r	5,860	29,300
Brass and wire-rod mills	157,000 ^r	377,000	34,900	35,700	33,600	174,000
No. 2 mixed heavy and light:						
Smelters and refiners	15,200 ^r	30,800	2,440	2,470	2,200	11,500
Brass and wire-rod mills	2,320	5,750	865	573	533	3,380
Total unalloyed scrap:						
Smelters and refiners	44,400 ^r	101,000	8,300 ^r	8,330 ^r	8,060	40,700
Brass and wire-rod mills	160,000 ^r	383,000	35,800	36,300	34,100	177,000
Red brass:³						
All plants	20,400 ^r	49,200 ^r	4,370 ^r	4,230 ^r	4,310	21,600
Leaded yellow brass:						
All plants	134,000	311,000 ^r	29,800	28,000	26,600	138,000
Yellow and low brass:						
All plants	22,800 ^r	49,900 ^r	3,380 ^r	3,420 ^r	3,390	16,900
Cartridge cases and brass:						
Smelters and refiners	W	W	W	W	W	W
Brass mills	33,100	78,700	7,800	7,040	6,240	35,300
Auto radiators:						
Smelters and refiners	16,800 ^r	40,200 ^r	3,350 ^r	3,350 ^r	3,350	16,800
Bronzes:						
Smelters and refiners	4,230 ^r	10,100	845 ^r	845 ^r	845	4,230
Brass mills	2,380	5,390	596	611	597	2,770
Nickel-copper alloys:						
All plants	6,620 ^r	16,700	2,100	2,030	1,670	9,040
Low grade and residues:						
Smelters and refiners	6,750 ^r	16,200 ^r	1,350 ^r	1,350 ^r	1,350	6,750
Other alloy scrap:⁴						
Smelters and refiners ⁵	1,590 ^r	3,810 ^r	317 ^r	317 ^r	317	1,590
Brass mills	1,530	4,110	513	419	428	2,390
Total alloyed scrap:						
Smelters and refiners	52,800 ^r	127,000 ^r	10,600 ^r	10,600 ^r	10,600	52,800
Brass mills	198,000	458,000	43,900	41,100	38,600	203,000
Total scrap:						
Smelters and refiners	97,200 ^r	228,000 ^r	18,900 ^r	18,900 ^r	18,600	93,600
Brass and wire-rod mills	357,000 ^r	841,000	79,700	77,400	72,700	380,000

^pPreliminary. ^rRevised. W Withheld to avoid disclosing company proprietary data; included in "Other alloy scrap: Smelters and refiners."

¹Does not include: consumption by foundries, chemical plants, and miscellaneous manufacturers, estimated to total about 7,240 tons of scrap per month based on 2002 annual data; monthly data include estimates of about 14,200 tons of scrap per month consumed by ingot makers.

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

³Includes composition turnings, silicon bronze, zinc bronze, railroad car boxes, cocks and faucets, gilding metal, and commercial bronze.

⁴Includes refinery brass, beryllium copper, phosphor copper, and aluminum bronze.

⁵Includes items indicated by symbol W.

TABLE 11
COPPER STOCKS AT END OF PERIOD¹

(Metric tons)

Period	Crude copper ²	Refined copper					LME ⁶	Total refined
		Refineries ³	Wire-rod mills ³	Brass mills ³	Other ⁴	Comex ⁵		
2003: ^p								
May	46,900	7,160	42,500	16,100	3,600	305,000	495,000	869,000
June	45,800	4,750	36,200	21,500	3,600	291,000	453,000	810,000
July	42,300	4,820	28,400	23,700	3,600	282,000	431,000	774,000
August	47,900	5,310	30,100	20,400	3,600	276,000	444,000	780,000
September	44,500	4,100	33,300	17,600	3,600	271,000	419,000	749,000
October	51,700	3,590	23,200	14,700	3,600	267,000	379,000	691,000
November	57,500	6,960	20,900	19,500	3,600	262,000	353,000	667,000
December	56,800	12,100	29,700	20,200	3,600	255,000	335,000	656,000
2004:								
January	49,900	9,840	22,500	12,500	3,600	239,000	291,000	578,000
February	48,100	10,100	25,200	16,300	3,600	219,000	240,000	515,000
March	43,200	10,800	30,700 ^r	14,200	3,600	213,000	167,000	440,000 ^r
April	48,500	8,510	19,100 ^r	14,600 ^r	3,600	172,000	126,000	344,000 ^r
May	55,500	11,100	27,500	15,100	3,600	132,000	114,000	303,000

^pPreliminary. ^rRevised.

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

²Copper content of blister and other materials in transit and in process of refining.

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

⁴Monthly estimates based on reported and 2002 annual data, comprising stocks at ingot makers, chemical plants, foundries, and miscellaneous manufacturers.

⁵Commodity Exchange Inc., New York.

⁶London Metal Exchange Ltd., U.S. warehouses.

TABLE 12
AVERAGE PRICE OF COPPER IN THE UNITED STATES
AND ON THE LONDON METAL EXCHANGE

(Cents per pound)

Period	U.S. producers delivered price cathode ¹	Comex first position ²	LME cash price Grade A
2003:			
May	78.020	75.045	74.746
June	79.716	76.926	76.484
July	82.245	78.055	77.549
August	84.165	79.995	79.826
September	86.030	81.840	81.152
October	92.290	88.104	87.099
November	96.867	92.681	93.215
December	103.917	99.731	99.831
Year	85.247	81.050	80.684
2004:			
January	114.336	110.150	109.911
February	129.302	125.116	125.144
March	138.323	134.137	136.439
April	133.646	128.481	133.694
May	126.097	120.968	123.960
January - May	128.341	123.770	125.830

¹Listed as "U.S. producer cathode."

²Listed as "Comex high grade first position."

Sources: Platts Metals Week and American Metal Market.

TABLE 13
NEW YORK AVERAGE BUYING PRICES FOR COPPER SCRAP

(Cents per pound)

Month	Brass mills No. 1 scrap	Refiners No. 2 scrap	Dealers (New York)	
			No. 2 Scrap	Red brass turnings and borings
2003:				
May	73.95	64.53	49.00	38.00
June	76.29	67.36	49.00	38.00
July	73.86	65.00	46.77	36.27
August	79.48	69.43	49.00	38.00
September	81.96	72.75	54.43	38.00
October	87.09	77.89	55.18	38.00
November	92.22	82.81	59.44	38.44
December	98.76	89.69	67.00	46.00
Year	79.86	70.15	52.51	38.50
2004:				
January	108.80	98.38	72.60	50.20
February	124.08	112.66	75.84	52.37
March	132.89	118.57	91.00	60.30
April	127.30	107.18	90.91	58.82
May	119.65	96.28	89.00	55.00
January - May	122.54	106.61	83.87	55.34

Source: American Metal Market.

TABLE 14
U.S. IMPORTS FOR CONSUMPTION OF COPPER (UNMANUFACTURED), BY CLASS¹

(Metric tons, copper content)

Country or territory	Ore and concentrate			Matte, ash and precipitates			Blister and anodes			Refined		
	2003	2004		2003	2004		2003	2004		2003	2004	
		April	January - April		April	January - April		April	January - April		April	January - April
Brazil	--	--	--	--	--	--	(2)	--	--	11,800	--	4
Canada	86	--	--	187	--	27	83,600	5,870	28,300	218,000	22,100	99,100
Chile	4,940	--	--	--	--	--	45,200	--	11,700	348,000	17,700	67,100
Germany	--	--	--	59	--	--	--	--	--	8,530	246	3,810
Mexico	22,000	6,650	15,300	501	17	86	10,200	694	2,390	21,600	4,290	5,520
Namibia	--	--	--	--	--	--	17,700	--	4,000	--	--	--
Peru	--	--	--	--	--	--	5	--	--	258,000	14,700	57,000
Taiwan	--	--	--	699	99	326	--	--	--	--	--	(2)
United Kingdom	--	--	--	--	--	--	2	(2)	1	10,100	--	10
Other	--	--	--	54	--	33	23	12	30	6,240 [†]	325	1,650
Total	27,100	6,650	15,300	1,500	116	472	157,000	6,580	46,400	882,000	59,300	234,000

[†]Revised. -- Zero.

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

²Less than 1/2 unit.

Source: U.S. Census Bureau.

TABLE 15
U.S. EXPORTS OF COPPER (UNMANUFACTURED), BY CLASS¹

(Metric tons, copper content)

Country or territory	Ore and concentrate			Matte, ash and precipitates			Blister and anodes			Refined		
	2004			2,004			2004			2004		
	2003	April	January - April	2003	April	January - April	2003	April	January - April	2003	April	January - April
Canada	7,540	2,110	9,040	6,740	1,230	5,850	17,200	3,610	10,400	2,100	411	662
China	1,380	--	288	153	32	32	567	19	99	71,600	3,020	19,100
Costa Rica	--	--	--	3	--	--	1	--	--	254	695	1,290
Hong Kong	27	2	32	74	11	12	2,650	360	1,280	52	--	2
India	--	5	36	175	--	20	118	3	57	1,370	515	1,180
Italy	--	--	--	5	--	--	219	--	35	81	10,600	18,200
Korea, Republic of	--	--	23	12	4	4	788	769	1,110	742	136	3,160
Mexico	224	20	59	8,090	167	1,160	252	--	24	12,200	688	1,610
Saudi Arabia	--	--	--	--	--	--	--	--	--	28	3,980	7,840
Taiwan	11	96	96	--	--	--	1,270	120	519	3,630	8,280	27,500
Other	677 ^r	48	133	383 ^r	12	219	3,050 ^r	783	1,910	1,300 ^r	75	1,220
Total	9,860	2,280	9,700	15,600	1,450	7,300	26,100	5,670	15,400	93,300	28,400	81,800

^rRevised. -- Zero.

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

Source: U.S. Census Bureau.

TABLE 16
U.S. COPPER SCRAP TRADE¹

(Metric tons, gross weight)

Country or territory	Imports						Exports					
	Unalloyed			Alloyed			Unalloyed			Alloyed		
	2004			2004			2004			2004		
	2003	April	January - April	2003	April	January - April	2003	April	January - April	2003	April	January - April
Belgium	--	--	--	46	--	--	2,630	282	1,370	6,010	847	2,310
Canada	4,130	342	1,610	37,300	3,930	15,300	21,200	3,600	9,430	17,500	1,110	4,670
China	--	--	--	824	1	233	225,000	20,200	68,400	245,000	23,900	91,200
Costa Rica	921	136	380	404	23	126	--	--	--	6	--	--
Dominican Republic	1,100	59	336	766	42	249	--	--	--	4	--	--
Germany	19	--	2	5,250	189	1,100	7,900	263	1,570	7,680	782	3,150
Guatemala	474	36	156	869	45	136	--	--	--	--	--	--
Honduras	534	27	262	488	20	179	--	--	--	--	--	--
Hong Kong	--	--	--	--	--	--	2,530	658	2,500	9,600	1,280	5,380
India	--	--	--	18	--	--	5,550	238	1,720	45,400	3,380	11,200
Jamaica	640	67	216	140	25	70	--	--	--	--	--	--
Japan	77	8	30	261	37	38	6,790	912	2,530	9,110	865	2,600
Korea, Republic of	--	--	--	21	--	--	25,400	3,050	11,700	15,500	1,970	6,510
Malaysia	--	--	--	272	--	48	3,620	--	--	88	--	28
Mexico	9,950	936	3,190	18,700	1,970	7,590	3,200	509	1,650	808	84	392
Taiwan	--	--	--	462	175	945	8,500	993	4,000	6,860	1,310	5,740
United Kingdom	278	45	105	781	120	317	97	--	--	857	199	588
Other	1,480 ^r	176	677	4,390 ^r	299	1,170	2,940 ^r	106	383	9,070 ^r	1,360	3,960
Total	19,600	1,830	6,960	71,000	6,870	27,500	316,000	30,900	105,000	373,000	37,100	138,000

^rRevised. -- Zero.

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

Source: U.S. Census Bureau.