
Annual Data 2009

COPPER • BRASS • BRONZE

**Copper Supply
& Consumption**

1988–2008

Preface

Statistical data on the supply and consumption of copper and copper alloys in the United States are available from many governmental and private sources. In this report, original data from these sources are brought together and rationalized by CDA and American Bureau of Metal Statistics Inc. (ABMS) to provide a set of data on U.S. copper supply and consumption that is both consistent and accurate in all aspects from mine to end-use market.

The main sources of information assembled here are the U.S. Geological Survey in the U.S. Department of the Interior, the Bureau of the Census in the U.S. Department of Commerce, and Copper Development Association Inc. Where data from different sources are conflicting, and where original data appear to be in error, the best judgment has been applied. General sources are shown in the tables throughout the report. Those interested to know the specific sources of any of the data should contact CDA.

The statistics are arranged in a logical sequence to trace the flow of copper in the U.S. economy from mining and scrap collection through smelting, refining and ingot making to the wire rod and wire mills, brass mills, and foundries and then on to the final end-use markets. This flow is shown schematically on pages 4 and 5. On this schematic flowsheet the major statistics of copper supply and consumption in the United States for 2008 appear. Along with each major statistic on the chart, a reference is shown. This reference identifies the table in the report where details on that item, from 1988 through 2008, will be

found. Most data for 2008 are preliminary.

There are four major tables in the report. **Table 1** covers the supply of primary copper. **Table 2** presents data on the supply of copper from secondary sources. In **Table 3**, statistics on the consumption of primary and secondary metals by mills, foundries and other industries are summarized. These three tables are provided by ABMS.

Finally, **Table 4** details the supply of mill, foundry and powder products and their consumption in the five end-use market areas. In each of these tables, additions to the flow (such as net imports) are indicated as positive numbers, while subtractions from the flow (such as melting losses or net additions to stocks) are shown in parentheses.

The arrangement of the data in the report can be illustrated with an example. Consider *Mine Production*, the upper left-hand box in the flowsheet on page 4. As shown in the box, mine production of copper in the United States totaled 1,444 thousand short tons in 2008. Beneath this figure a number appears referring to **Table 1**, abbreviated 1 (1). This means that in **Table 1**, on Line (1), mine production is shown for the full period 1988 through 2008. In **Table 1**, on Line (1), a further reference will be found after the item heading *Mine Production*, directing the reader elsewhere on page 6. In fact, on page 6, a table entitled **Table 1, Item 1** presents the data on mine production by state for 1988 through 2008. In this way all the data on supply and consumption appear in logical sequence proceeding through the report, eliminating the need for explanatory text.

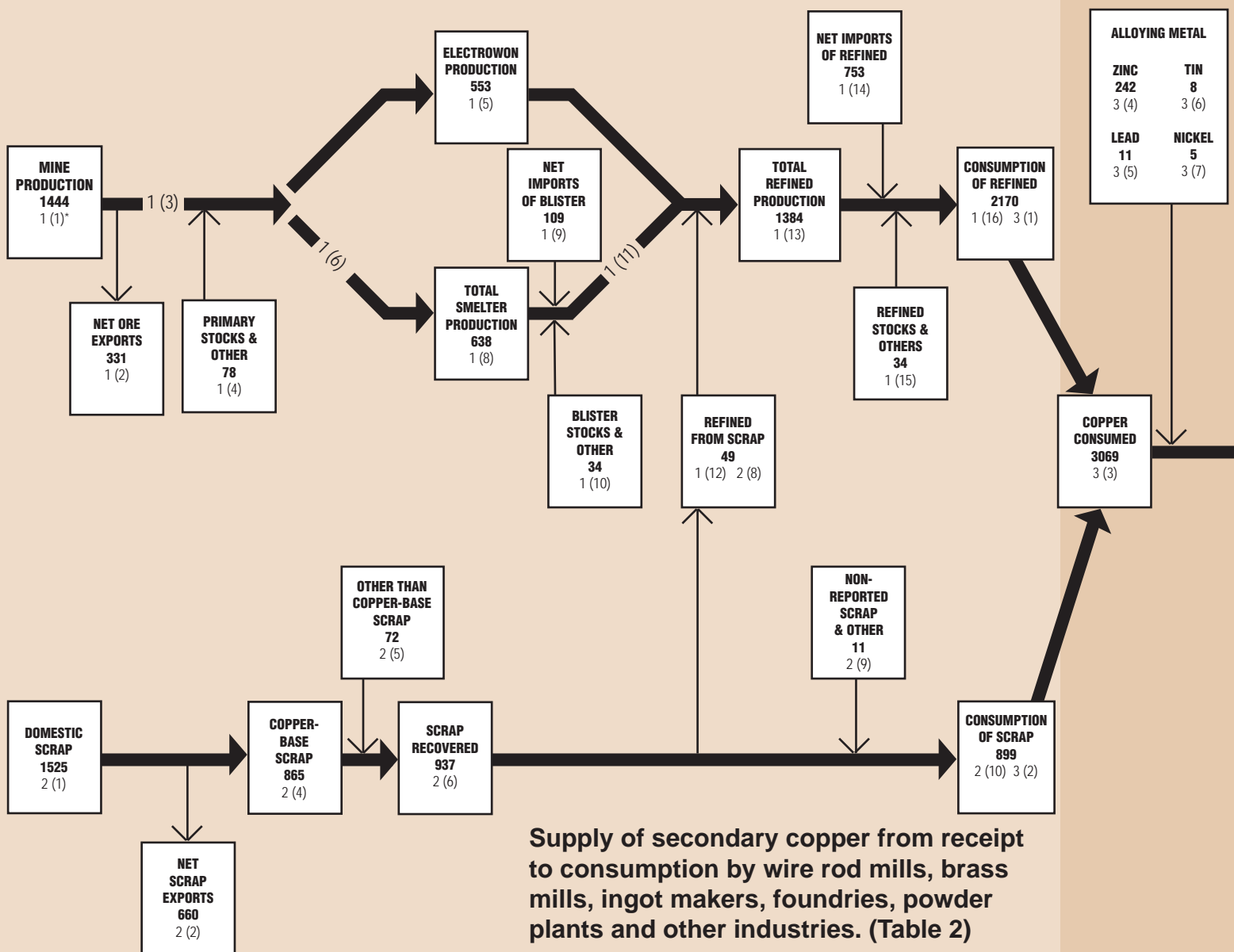
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Copper supply and consumption in the United States – 2008

Supply of primary copper from mine to consumption by wire rod mills, brass mills, ingot makers, foundries, powder plants and other industries. (Table 1)

COPPER CONTENT, thousands of short tons



Supply of secondary copper from receipt to consumption by wire rod mills, brass mills, ingot makers, foundries, powder plants and other industries. (Table 2)

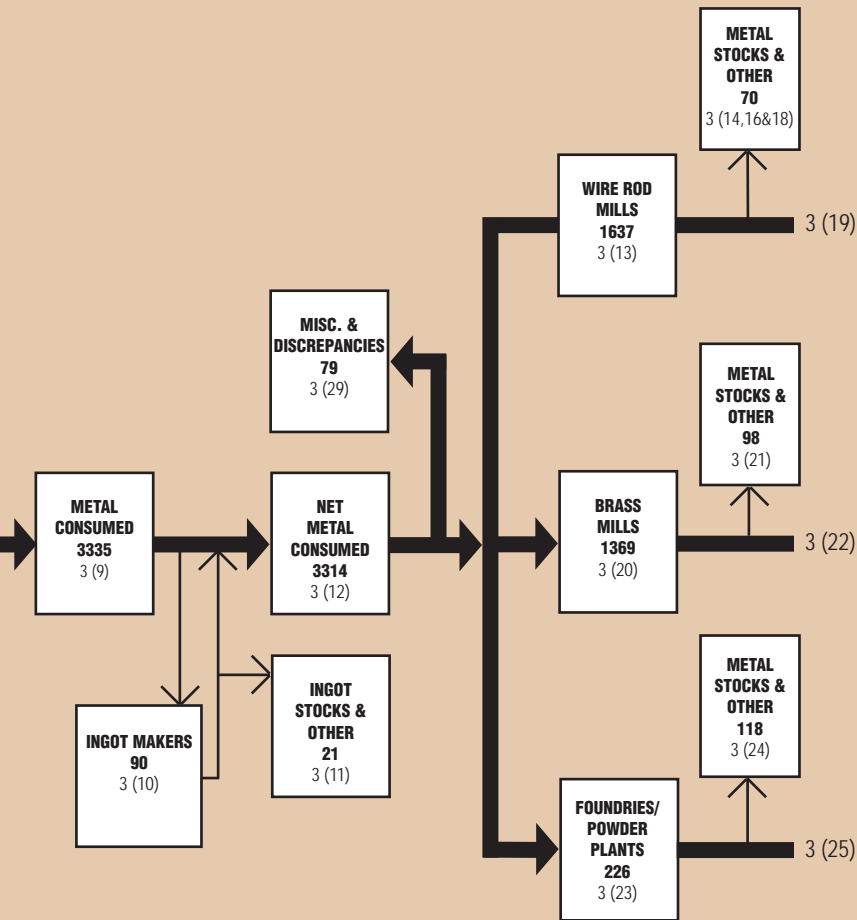
COPPER CONTENT, thousands of short tons

*1 (1) Refers to table and item in report where data for 1988 through 2008 appear.

Note: Numbers may not sum due to rounding.

Consumption of metals by wire rod mills, brass mills, ingot makers, foundries, powder plants and other industries. (Table 3)

METAL CONTENT, thousands of short tons



Supply of wire mill, brass mill, foundry and powder products and their consumption in the end-use markets. (Table 4)

METAL CONTENT, millions of pounds

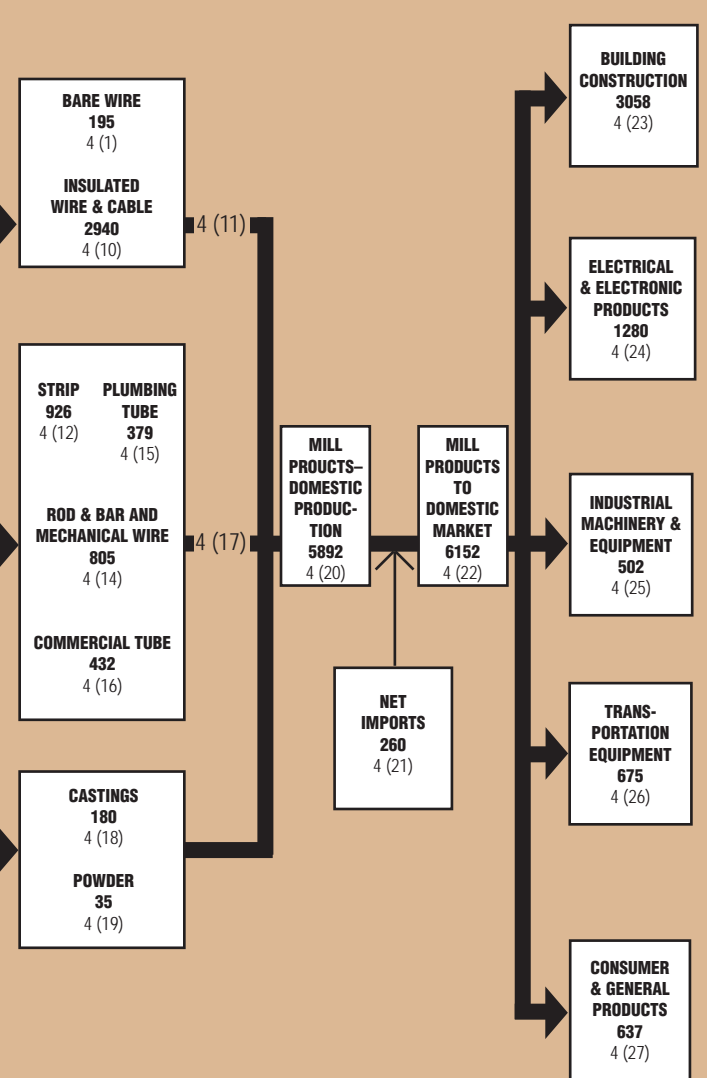


Table 1.

Supply of primary copper from mine to consumption by wire rod mills, brass mills, ingot makers, foundries, powder plants and other industries

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008p
(1) Mine Production (page 6).....	1,562	1,651	1,750	1,798	1,946	1,984	2,039	2,040	2,116	2,138	2,051	1,763	1,598	1,477	1,256	1,230	1,275 r	1,257	1,319	1,287 r	1,444
(2) Net Ore/Conc./Matte Imports (page 8) ^(a)	(230)	(252)	(128)	(198)	(186)	(211)	(200)	(159)	(174)	(153)	177	50	(225)	(24)	36	4	(24)	(195)	(222)	(214) r	(331)
(3) Total Primary.....	1,332	1,399	1,622	1,600	1,760	1,773	1,839	1,881	1,942	1,985	2,228	1,813	1,373	1,453	1,292	1,234	1,251 r	1,062	1,097 r	1,074 r	1,113
(4) Primary Stocks and Other.....	69	180	88	125	104	168	148	91	113	248	85	35	185	164	123	12	(10) r	126	39	162 r	78
(5) Electrowon Production.....	251	344	434	486	563	541	543	594	633	646	671	646	613	692	662	652	644	611	584	556 r	553
(6) Smelter Production from Primary.....	1,150	1,235	1,277	1,238	1,301	1,400	1,444	1,378	1,422	1,587	1,642	1,202	945	925	753	594	597	577	552	680 r	638
(7) Smelter Production from Scrap.....	366	396	336	402	434	452	441	390	374	314	256	226	157	88	—	—	—	—	—	—	—
(8) Total Smelter Production (page 8).....	1,515	1,631	1,613	1,639	1,735	1,852	1,885	1,768	1,796	1,901	1,898	1,428	1,102	1,013	753	594	597	577	552	680 r	638
(9) Net Imports of Blister/Anode (page 8).....	73	79	42	43	46	95	72	72	155	123	135	179	178	270	127	144	115	100	167	152	109
(10) Blister/Anode Stocks and Other (page 9).....	76	(30)	(14)	(29)	(92)	(144)	(177)	(70)	(154)	(133)	(125)	5	(3)	(87)	48	(9)	27	45	24	23 r	34
(11) Refined Production from Blister/Anode.....	1,664	1,680	1,640	1,654	1,688	1,803	1,780	1,770	1,797	1,891	1,908	1,612	1,277	1,196	928	729	740	721	744	855	781
(12) Refined Production from Scrap.....	127	133	150	59	113	136	135	151	168	180	162	81	87	72	77	59	56	52	49	51 r	49
(13) Total Refined Production (page 9).....	2,042	2,157	2,224	2,199	2,363	2,480	2,458	2,515	2,598	2,717	2,741	2,339	1,977	1,960	1,667	1,440	1,439	1,384	1,378	1,462 r	1,384
(14) Net Imports of Refined (page 9).....	300	175	54	19	110	139	338	233	497	611	703	981	1,019	1,295	1,136	622	636	1,023 r	1,117 r	861 r	753
(15) Refined Stocks and Other (page 10).....	89	100	86	36	(76)	(18)	158	51	(210)	(254)	(263)	(29)	339	(368)	(197)	462	587 r	99 r	(168) r	33 r	34
(16) Consumption of Refined (page 10).....	2,432	2,432	2,364	2,254	2,397	2,602	2,954	2,799	2,885	3,074	3,181	3,291	3,335	2,887	2,606	2,524	2,662 r	2,506 r	2,327	2,356 r	2,170

Sources: U.S. Department of the Interior, U.S. Geological Survey; U.S. Department of Commerce, Bureau of the Census; ABMS.

p - preliminary, r - revised
(a) - Included with domestic ore.

Numbers may not sum due to rounding.

Table 1, Item 1.

Copper content of mine production in the United States¹

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008p
Arizona.....	929	990	1,079	1,129	1,271	1,279	1,279	1,290	1,367	1,378	1,312	1,157	1,024	969	845	817	797	761	785	806 r	902
Missouri.....	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)
Montana.....	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)
New Mexico.....	(b)	(b)	(b)	(b)	(b)	(b)	(b)	276	282	285	278	217	215	155	123	97	134 r	144	125	119 r	116
Utah.....	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)
Other States ^(a)	633	661	671	669	675	706	761	474	467	475	461	389	359	353	288	316	344	352	410	363 r	426
TOTAL.....	1,562	1,651	1,750	1,798	1,946	1,984	2,039	2,040	2,116	2,138	2,051	1,763	1,598	1,477	1,256	1,230	1,275 r	1,257	1,319	1,287 r	1,444

Sources: U.S. Department of the Interior, U.S. Geological Survey; ABMS.

p - preliminary, r - revised
(a) - Includes California, Colorado, Idaho, Illinois, Kentucky, Maine, Michigan, Nevada, Oregon, Pennsylvania, Tennessee and Washington.
(b) - Included in Other States.

(1) Copper content of concentrates, precipitates, or electrowon.
Numbers may not sum due to rounding.

Table 1, Item 1a.

Copper content of world mine production¹

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008p
Australasia																					
Australia.....	263	325	361	353	417	443	458	438	603	615	669	792	914	960	968	915	941 r	1,010	947	960 r	976
Papua New Guinea.....	241	225	188	225	213	224	228	234	205	123	167	207	224	225	233	216	191	213	214	187	176
Total Australasia.....	504	550	548	578	630	667	686	673	808	738	836	999	1,138	1,185	1,201	1,131	1,133	1,223	1,161	1,147 r	1,152
Americas																					
Argentina.....	—	—	—	—	—	—	—	—	—	34	171	220	160	211	225	219	194	206 r	199	199	173
Brazil.....	49	49	40	42	44	48	44	53	48	43	42	32	34	33	34	30	109	144	158	219	232
Canada.....	856	797	875	894	847	808	681	801	759	727	777	684	699	698	665	615	620	656	665	657 r	669
Chile.....	1,600	1,774	1,751	2,000	2,130	2,266	2,447	2,743	3,435	3,739	4,064	4,840	5,073	5,224	5,049	5,406	5,966	5,865	5,909	6,125	5,876
Mexico.....	308	275	321	294	306	332	337	368	376	431	424	420	402	409	363	394	447	473	368	372 r	272
Peru.....	329	402	350	414	407	413	397	452	534	560	533	591	611	796	931	929	1,142	1,113	1,156	1,312	1,398
United States.....	1,562	1,651	1,750	1,798	1,946	1,984	2,039	2,040	2,116	2,138	2,051	1,763	1,598	1,477	1,256	1,230	1,275 r	1,257	1,319 r	1,287 r	1,444
Total Americas.....	4,704	4,947	5,087	5,442	5,680	5,851	5,944	6,500	7,304	7,714	8,089	8,550	8,577	8,848	8,523	8,823	9,754 r	9,715	9,774 r	10,172 r	10,064
Europe																					
Bulgaria.....	55	43	36	52	52	67	83	85	96	95	93	107	103	107	105	103	104	104	122	121	116
Poland.....	486	394	363	353	366	422	415	424	466	457	481	511	501	522	554	546	585	564	548	498	473
Portugal.....	6	114	176	173	166	166	144	143	119	117	126	110	84	91	85	85	105 r	99	87	99	98
Scandinavia.....	122	111	117	121	123	120	106	110	98	112	92	89	99	95	95	108	108	112	110	84	78
Serbia & Montenegro.....	97	131	131	125	116	83	100	82	77	81	78	57	51	30	34	23	13 r	14	13	18	21
Total Europe.....	766	793	823	824	823	856	849	845	856	862	870	873	838	845	873	865	916	893 r	880 r	821 r	786
Asia																					
Russian Federation.....	1,091	1,047	992	926	770	643	632	580	577	557	584	590	584	595	730	694	694 r	705	744	761	777
China (including Mongolia).....	542	466	463	435	482	507	568	623	621	687	678	737	795	802	780	816	977	998	1,126	1,189 r	1,270
India.....	57	59	57	56	54	55	51	51	53	41	44	38	37	38	34	32	33	25 r	32	36	34
Indonesia.....	139	164	186	242	321	341	368	507	579	604	892	866	1,107	1,155	1,282	1,106	929 r	1,174	900	870	717
Iran.....	56	75	73	93	116	96	130	112	114	131	141	143	143	146	146	162	161	181	238	269 r	273
Japan ⁽³⁾	18	16	14	14	13	11	7	—	—	—	—	—	—	—	—	—	1 r	1 r	—	—	—
Kazakhstan ⁽²⁾	NA	NA	NA	NA	276	290	237	256	276	349	373	412	474	518	522	535	509	443	479	448	463
Philippines.....	240	213	201	164	136	150	128	119	68	54	50	41	35	26	21	22	18	18	19	24	20
Total Asia.....	2,144	2,040	1,986	1,929	2,168	2,093	2,120	2,248	2,288	2,423	2,762	2,827	3,175	3,280	3,515	3,367	3,323 r	3,545 r	3,538	3,597 r	3,554
Africa																					
Namibia.....	43	34	36	39	38	37	32	25	20	20	7	—	6	17	20	18	15	12	7	11	10
South Africa.....	212	217	217	213	218	208	203	208	208	205	207	177	179	123	100	99	96	98	99	107 r	120
Congo.....	513	486	392	321	159	51	33	39	55	44	39	34	36	42	42	70	82	111	141	157	236
Zambia.....	525	562	547	455	477	476	424	347	400	383	347	309	275	349	376	384	443	477	523	561 r	601
Total Africa.....	1,293	1,299	1,191	1,027	892	771	692	619	683	652	600	520	496	531	538	571	636 r	697	769	836 r	967
Other⁽⁴⁾																					
Other⁽⁴⁾.....	261	287	238	225	203	198	188	255	335	348	339	333	339	331	320	320	519 r	547 r	600 r	666 r	660
TOTAL WORLD.....	9,670	9,915	9,873	10,025	10,395	10,435	10,478	11,140	12,274	12,737	13,497	14,103	14,563	15,020	14,970	15,077	16,087 r	16,414 r	16,523 r	17,040 r	17,008

Sources: International Copper Study Group; ABMS.

p - preliminary r -revised

(1) Copper content of concentrates, precipitates, or electrowon.

(2) Kazakhstan reported separately from the Russian Federation starting in 1992; included with Russian Federation for 1986-1991.

(3) Included in "Other" starting in 1995.

(4) Includes countries from various continents, making the continent totals somewhat low.

Numbers may not sum due to rounding.

Table 1, Item 2.

Imports and exports of copper ore, concentrates and matte in the United States

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008p
Imports (Ore, Concentrate, Matte).....	9	52	160	69	107	40	89	143	82	51	242	160	2	52	80	32	27	2	2	3 r	2
Exports (Ore, Concentrate, Matte).....	(239)	(304)	(288)	(267)	(294)	(251)	(289)	(302)	(256)	(204)	(65)	(110)	(227)	(76)	(44)	(28)	(51)	(197)	(224)	(217) r	(333)
Net Imports (Ore, Concentrate, Matte)^(a).....	(230)	(252)	(128)	(198)	(186)	(211)	(200)	(159)	(174)	(153)	177	50	(225)	(24)	36	4	(24)	(195)	(222)	(214) r	(331)

Source: U.S. Department of Commerce, Bureau of the Census.

p - preliminary, r - revised

(a) - () sign denotes net exports.

Numbers may not sum due to rounding.

Table 1, Item 8.

Smelter production of copper in the United States

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008p
Smelter Production - Domestic Ore (Table 1, Item 6).....	1,150	1,235	1,277	1,238	1,301	1,400	1,444	1,378	1,422	1,587	1,642	1,202	945	925	753	594	597	577	552	680 r	638
Smelter Production - Foreign Ore	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Smelter Production - Scrap (Table 1, Item 7).....	366	396	336	402	434	452	441	390	374	314	256	226	157	88	—	—	—	—	—	—	—
TOTAL SMELTER PRODUCTION.....	1,515	1,631	1,613	1,639	1,735	1,852	1,885	1,768	1,796	1,901	1,898	1,428	1,102	1,013	753	594	597	577	552	680 r	638

Source: U.S. Department of the Interior, U.S. Geological Survey.

p - preliminary, r - revised

(a) - Included with domestic ore.

Numbers may not sum due to rounding.

Table 1, Item 9.

Imports and exports of blister and anode copper in the United States

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008p
Imports of Blister/Anode Copper.....	109	85	49	67	64	108	85	104	181	158	165	213	204	299	163	173	166	146	188	169	135
Exports of Blister/Anode Copper.....	(36)	(6)	(7)	(23)	(19)	(13)	(13)	(33)	(26)	(35)	(30)	(34)	(26)	(29)	(36)	(29)	(51)	(46)	(21)	(17)	(26)
Net Imports of Blister/Anode Copper.....	73	79	42	43	46	95	72	72	155	123	135	179	178	270	127	144	115	100	167	152	109

Source: U.S. Department of Commerce, Bureau of the Census.

p - preliminary, r - revised

Numbers may not sum due to rounding.

Table 1, Item 10.

Blister and anode stocks and other

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008p
End-of-Year Blister/Anode Copper Stocks.....	133	146	131	149	183	161	189	192	191	198	176	152	134	108	49	63	57	49	21	29 r	26
Net Change ^(a)	(32)	12	(14)	18	34	(22)	28	3	(1)	7	(22)	(24)	(18)	(26)	(59)	14	(6)	(8)	(28)	8 r	(3)
Apparent Change ^(b)	(76)	30	14	29	92	144	177	70	154	133	125	(5)	3	87	(48)	9	(27)	(45)	(24)	(23) r	(34)

Source: U.S. Department of the Interior, U.S. Geological Survey; ABMS.

p - preliminary, r - revised

(a) - Net Change - the year-to-year increase (+) or decrease () of blister copper stocks as reported.

(b) - Apparent Change - the difference between Line 11 and the sum of Lines 8 & 9 in Table 1, required to rationalize the CDA flow sheet. Factors other than changes in stocks are included in the apparent change.

The sign of the data + or () is opposite that shown in Table 1.

Numbers may not sum due to rounding.

Table 1, Item 13.

Production of refined copper in the United States

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008p	
Refined Production - Primary Sources																						
(Table 1, Items 1,2,4,9 and 10).....	1,550	1,628	1,738	1,739	1,817	1,893	1,883	1,974	2,056	2,223	2,323	2,032	1,733	1,800	1,590	1,381	1,383	1,332	1,328	1,411 r	1,335	
Refined Production - Scrap at Smelters																						
(Table 1, Item 7).....	366	396	336	402	434	452	441	390	374	314	256	226	157	88	—	—	—	—	—	—	—	
Refined Production - Scrap at Refiners																						
(Table 1, Item 12).....	127	133	150	59	113	136	135	151	168	180	162	81	87	72	77	59	56	52	49	51 r	49	
TOTAL REFINED PRODUCTION	2,042	2,157	2,224	2,199	2,363	2,480	2,458	2,515	2,598	2,717	2,741	2,339	1,977	1,960	1,667	1,440	1,439	1,384	1,378	1,462 r	1,384	

Source: U.S. Department of the Interior, U.S. Geological Survey; U.S. Department of Commerce, Bureau of the Census.

p - preliminary, r - revised

Numbers may not sum due to rounding.

Table 1, Item 14.

Imports and exports of refined copper in the United States

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008p
General Imports of Refined Copper ¹	367	335	288	318	319	379	512	473	684	714	799	1,009	1,126	1,321	1,168	758	776	1,077	1,184 r	917	795
Total Exports of Refined Copper.....	(67)	(160)	(235)	(299)	(209)	(239)	(174)	(240)	(187)	(103)	(96)	(28)	(107)	(26)	(32)	(136)	(140)	(54) r	(67) r	(56) r	(42)
Net Imports of Refined Copper	300	175	54	19	110	139	338	233	497	611	703	981	1,019	1,295	1,136	622	636	1,023 r	1,117 r	861 r	753

Source: U.S. Department of Commerce, Bureau of the Census.

p - preliminary, r - revised

¹ General Imports measure the total physical arrivals of merchandise from foreign countries, whether such merchandise enters consumption channels immediately or is entered into bonded warehouses or Foreign Trade Zones under Customs custody.

Numbers may not sum due to rounding.

Table 1, Item 15.

Refined stocks and other

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008p
End-of year Refined Copper Stocks at:																					
Refineries.....	43	56	52	42	30	29	25	42	36	66	49	11	16	32	13	13	11	9	31	24 r	27
Wire Rod Mills.....	32	35	27	33	41	38	44	27	35	27	41	37	44	41	25	33	22	22	24	23 r	36
Brass Mills.....	19	13	11	12	14	16	9	8	15	16	23	26	26	28	32	22	24	27	38	11 r	17
Other Processors.....	10	11	9	7	9	7	11	3	3	4	4	4	5	5	5	5	4	6	6	6	6
Government.....	22	22	22	22	22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Commodity Exchange.....	13	16	20	34	106	74	27	24	29	92	94	92	65	269	399	281	48	7	34	15	35
London Metal Exchange ¹	—	—	—	—	—	—	—	75	42	142	376	454	225	680	662	369	39	1	83	67	117
End-of Year Total.....	140	154	142	149	221	164	116	179	160	347	587	624	381	1,055	1,136	723	148	73	216	146 r	237
Net Change ^(a)	(22)	15	(13)	8	72	(58)	(48)	64	(19)	187	240	37	(243)	674	81	(413)	(575)	(75)	144	(70) r	91
Apparent Change ^(b)	(89)	(100)	(86)	(36)	76	18	(158)	(51)	210	254	263	29	(339)	368	197	(462)	(587) r	(99) r	168 r	(33) r	(34)

Sources: U.S. Department of the Interior, U.S. Geological Survey; ABMS.

p - preliminary, r - revised

(a) - Net Change - the year-to-year increase (+) or decrease () of refined copper stocks as reported.

(b) - Apparent Change - the difference between Line 16 and the sum of Lines 13 and 14 in Table 1, required to rationalize the CDA flow sheet. Factors other than changes in stocks are included in the appar

¹ Prior to 1995 there were no LME warehouses in the USA.

Numbers may not sum due to rounding.

Table 1, Item 16.

Consumption of refined copper in the United States

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008p
Consumption of Refined Copper by:																					
Wire Rod Mills.....	1,838	1,872	1,823	1,755	1,846	2,006	2,271	2,149	2,183	2,362	2,396	2,458	2,469	2,138	1,885	1,809	1,962	1,852	1,731	1,775	1,612
Brass Mills.....	544	508	491	457	505	555	626	588	648	659	727	762	797	687	654	647	632	582	540	525 r	502
Ingot Makers.....	6	6	6	5	6	5	8	9	4	5	6	5	5	5	5	5	5	5	5	5	5
Foundries and Other Industries.....	17	17	17	14	15	14	19	53	50	52	57	66	64	57	62	63 r	63	67	51	51 r	51
Powder Plants.....	9	9	9	8	8	7	10	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Other Industries.....	19	19	18	16	17	15	21	0	0	(4)	(5)	—	—	—	—	—	—	—	—	—	—
TOTAL REFINED CONSUMPTION.....	2,432	2,432	2,364	2,254	2,397	2,602	2,954	2,799	2,885	3,074	3,181	3,291	3,335	2,887	2,606	2,524	2,662 r	2,506	2,327	2,356 r	2,170

Sources: U.S. Department of the Interior, U.S. Geological Survey; U.S. Department of Commerce, Bureau of the Census; ABMS.

p - preliminary, r - revised

(a) - Starting with 1995 Powder Plants data are included with Foundries.

Numbers may not sum due to rounding.

Table 2.

Supply of secondary copper from receipt to consumption by brass mills, ingot makers, foundries, powder plants and other industries

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008p
(1) Receipts of Domestic Scrap.....	1,709	1,736	1,650	1,527	1,510	1,570	1,769	1,595	1,534	1,696	1,598	1,542	1,667	1,570	1,423	1,511	1,557	1,511	1,623 r	1,559 r	1,525
(2) Net Scrap Imports (page 12) ^(a)	(207)	(241)	(182)	(174)	(77)	(71)	(154)	(239)	(161)	(154)	(115)	(157)	(312)	(384)	(359)	(538)	(549)	(512)	(628) r	(653)	(660)
(3) Scrap Stocks (page 12).....	(13)	13	11	—	—	6	(18)	24	3	(11)	1	(5)	9	11	3	3	(11)	(9)	(2)	30 r	—
(4) Recovery from Copper-Base Scrap (page 13)	1,490	1,509	1,479	1,353	1,434	1,504	1,597	1,380	1,375	1,531	1,484	1,380	1,364	1,198	1,067	977	996	990	992	937 r	865
(5) Recovery from Other Scrap (page 13).....	50	51	50	46	48	51	54	72	79	82	84	86	82	69	68	64	68	61	77 r	83 r	72
(6) Total Scrap Recovery (page 13).....	1,540	1,560	1,529	1,399	1,482	1,555	1,651	1,452	1,454	1,613	1,568	1,466	1,446	1,267	1,135	1,041	1,064	1,051	1,069 r	1,020 r	937
(7) Smelter Production from Scrap.....	(366)	(396)	(336)	(402)	(434)	(452)	(441)	(390)	(374)	(314)	(256)	(226)	(157)	(88)	—	—	—	—	—	—	—
(8) Refined Production from Scrap.....	(127)	(133)	(150)	(59)	(113)	(136)	(135)	(151)	(168)	(180)	(162)	(81)	(87)	(72)	(77)	(59)	(56)	(52)	(49)	(51) r	(49)
(9) Non-Reported Scrap & Other.....	NA	NA	NA	NA	NA	NA	NA	153	162	42	33	55	15	(31)	(2)	8	8	8	8	9 r	11
(10) Consumption of Scrap (page 13).....	1,048	1,031	1,043	938	936	967	1,075	1,064	1,074	1,161	1,183	1,214	1,217	1,076	1,056	990	1,016	1,006	1,027 r	978 r	899

Sources: U.S. Department of the Interior, U.S. Geological Survey; U.S. Department of Commerce, Bureau of the Census; ABMS.

p - preliminary, r - revised

(a) - () sign denotes net exports.

Numbers may not sum due to rounding.

Table 2, Item 2.

Imports and exports of copper-base scrap in the United States

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008p
Imports of Copper-Base Scrap.....	81	96	116	107	148	167	165	173	196	196	148	119	124	100	89	78	88	100	101	124	95
Exports of Copper-Base Scrap.....	(287)	(337)	(298)	(281)	(224)	(238)	(319)	(412)	(357)	(350)	(263)	(276)	(436)	(484)	(448)	(616)	(637)	(612)	(729) r	(777)	(754)
Net Imports of Copper-Base Scrap^(a).....	(207)	(241)	(182)	(174)	(77)	(71)	(154)	(239)	(161)	(154)	(115)	(157)	(312)	(384)	(359)	(538)	(549)	(512)	(628) r	(653)	(660)

Source: U.S. Department of Commerce, Bureau of the Census; ABMS

p - preliminary, r - revised

(a) - The () sign for each year is used to be consistent with the convention used in Tables 1, 2 and 4, namely that imports are **additions** to the domestic flow, and therefore (+), while exports are **subtractions** from the flow, and therefore ().

Numbers may not sum due to rounding.

Table 2, Item 3.

Copper-base scrap stocks

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008p
Scrap Copper-Base Stocks at:																					
Brass Mills.....	42	36	33	27	39	33	41	36	35	38	46	50	50	43	42	40	51	56	58	33 r	33
Secondary Smelters & Primary Producers.....	48	43	36	41	30	31	40	24	23	31	23	23	14	10	8	7	7	12	12	7 r	7
Foundries.....	9	8	7	7	7	6	8	} 6	5	5	4	5	5	5	5	5	4	4	4	3 r	3
Other Processors.....	3	2	2	2	2	2	2		5	5	4	5	5	5	5	5	5	4	4	4	3 r
End-of Year Total.....	102	89	78	78	77	72	90	66	63	74	73	78	69	58	55	52	63	72	74	43 r	43
Net Change^(a).....	13	(13)	(11)	—	—	(6)	18	(24)	(3)	11	(1)	5	(9)	(11)	(3)	(3)	11	9	2	(30) r	—

Source: U.S. Department of the Interior, U.S. Geological Survey; ABMS.

p - preliminary, r - revised

(a) - Net Change - the year-to-year increase (+) or decrease () of stocks as reported. The sign of the data (+) or () is opposite that shown in Table 2.

Numbers may not sum due to rounding.

Table 2, Item 6.

Recovery of copper from scrap

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008p
Copper Recovered from Copper-Base Scrap.....																					
New Scrap.....	833	804	804	739	774	820	906	922	941	1,017	1,008	995	1,002	876	885	773	810	805	851	797 r	733
Old Scrap.....	657	705	675	614	659	684	691	458	434	514	476	385	362	322	182	204	186	185	141	140 r	132
Total (Table 2, Item 4).....	1,490	1,509	1,479	1,353	1,434	1,504	1,597	1,380	1,375	1,531	1,484	1,380	1,364	1,198	1,067	977	996	990	992	937 r	865
Copper Recovered from Scrap other than Copper-Base																					
New Scrap.....	27	26	26	24	25	26	29	41	42	48	47	51	50	42	41	40	43	44	52	50 r	50
Old Scrap.....	24	26	24	22	24	25	25	31	37	34	37	35	32	27	27	24	25	17	25 r	33 r	22
Total (Table 2, Item5).....	50	51	50	46	48	51	54	72	79	82	84	86	82	69	68	64	68	61	77 r	83 r	72
Copper Recovered from All Scrap																					
New Scrap.....	860	829	829	763	799	846	935	963	983	1,065	1,055	1,046	1,052	918	926	813	853	848	902 r	846 r	783
Old Scrap.....	681	731	700	636	683	709	716	489	471	548	513	420	394	349	209	228	211	202	166 r	173 r	154
Total Copper Recovered (Table 2, Item6).....	1,540	1,560	1,529	1,399	1,482	1,555	1,651	1,452	1,454	1,613	1,568	1,466	1,446	1,267	1,135	1,041	1,064	1,051	1,069 r	1,020 r	937

Source: U.S. Department of the Interior, U.S. Geological Survey; ABMS

p - preliminary, r - revised

Numbers may not sum due to rounding.

Table 2, Item 10.

Consumption of copper scrap in the United States

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2,004	2,005	2,006	2,007	2008p
Consumption of Copper Scrap by:																					
Wire Rod Mills.....	24	31	27	20	20	26	24	29	30	33	33	34	35	30	30	28	29	29	30	28 r	26
Brass Mills.....	647	613	637	598	597	624	732	757	768	853	861	880	896	771	779	717	748	739	763	710 r	658
Ingot Makers.....	213	218	214	182	181	185	183	140	137	138	149	143	130	135	109	101	99	104	91	100 r	83
Foundries.....	83	85	83	70	69	66	66	69	59	61	57	70	75	71	70	71	63	65	57	51 r	53
Powder Plants ^(a)	13	14	13	11	11	11	15	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Chemical Plants ^(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	13	12	9	9	9	9	9	9	6 r	6
Non-copper based scrap	68	70	69	58	57	55	56	72	79	82	84	86	82	69	68	64	68	61	77 r	83 r	72
Miscellaneous Adjustments	—	—	-1	—	1	—	(1)	(3)	1	(6)	(1)	(12)	(13)	(9)	(9)	—	—	—	—	1	2
TOTAL COPPER CONSUMED.....	1,048	1,031	1,043	938	936	967	1,075	1,064	1,074	1,161	1,183	1,214	1,217	1,076	1,056	990	1,016	1,006	1,027 r	978 r	899

Source: U.S. Department of the Interior, U.S. Geological Survey; U.S. Department of Commerce, Bureau of the Census; ABMS

p - preliminary, r - revised

(a) - Starting with 1995 Powder Plants data are included with Foundries.

(b) Source data expanded in 1999 to include copper chemicals.

Numbers may not sum due to rounding.

Table 3.
Consumption of metals by wire rod mills, brass mills,
ingot makers, foundries, powder plants and other industries

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008p
(1) Consumption of Refined Copper (Table 1, Item 16).....	2,432	2,432	2,364	2,254	2,397	2,602	2,954	2,799	2,885	3,074	3,181	3,291	3,335	2,887	2,606	2,524	2,662 r	2,506	2,327	2,356 r	2,170
(2) Consumption of Copper in Scrap (Table 2, Item 10).....	1,048	1,031	1,043	938	936	967	1,075	1,064	1,074	1,161	1,183	1,214	1,217	1,076	1,056	990	1,016	1,006	1,027 r	978 r	899
(3) Total Copper Consumed (page 15).....	3,480	3,462	3,407	3,192	3,333	3,569	4,029	3,863	3,959	4,235	4,364	4,505	4,552	3,963	3,662	3,514	3,678 r	3,512	3,354 r	3,334 r	3,069
(4) Consumption of Zinc.....	341	321	313	305	335	346	393	283	292	300	305	312	329	283	296	266	284	273	268	253 r	242
(5) Consumption of Lead.....	30	30	29	26	27	27	28	19	19	20	20	19	19	17	15	13	14	11	11 r	11	11
(6) Consumption of Tin.....	15	15	15	13	13	13	13	9	8	9	10	9	11	11	10	8	8	9	9 r	9 r	8
(7) Consumption of Nickel.....	10	10	9	9	10	11	12	9	8	7	8	11	11	8	6	6	7	7	6 r	6 r	5
(8) Total Alloying Metal Consumed (page 16)..	396	376	366	353	385	396	446	320	327	336	343	351	370	319	327	293	314 r	300 r	295 r	278 r	266
(9) Total Metal Consumed.....	3,876	3,838	3,773	3,545	3,718	3,965	4,475	4,183	4,286	4,571	4,707	4,856	4,922	4,282	3,989	3,807	3,992 r	3,812 r	3,649 r	3,611 r	3,335
(10) Ingot Consumed (page 17) ^(a)	203	207	203	173	175	167	180	134	136	140	125	139	137	126	122	112	109 r	102	97 r	90 r	90
(11) Ingot Stocks & Other ^(a,b)	(92)	(95)	(93)	(79)	(77)	(89)	(83)	(13)	(38)	(39)	(66)	(40)	(32)	(45)	(16)	(14)	(17)	(27)	(20) r	(38) r	(21)
(12) Net Metal Consumed (page 17).....	3,784	3,743	3,679	3,466	3,641	3,877	4,392	4,170	4,248	4,532	4,641	4,816	4,890	4,237	3,972	3,793	3,974 r	3,785	3,629 r	3,573 r	3,314
(13) Wire Rod Mills - Net Metal Consumed (p 17)	1,862	1,903	1,850	1,774	1,866	2,033	2,295	2,178	2,213	2,395	2,429	2,492	2,504	2,168	1,915	1,837	1,991	1,881	1,760	1,802 r	1,637
(14) Wire Rod Mills - Metal Stocks & Other	(175)	(236)	(47)	(132)	(145)	(129)	(190)	(235)	8	(72)	(53)	(154)	(148)	(114)	32	(29)	(30) r	(201) r	(13) r	(40) r	(32)
(15) Wire Rod Mills - Shipments.....	1,688	1,668	1,802	1,642	1,721	1,904	2,105	1,943	2,221	2,323	2,376	2,338	2,356	2,054	1,947	1,808	1,961 r	1,680 r	1,747 r	1,763 r	1,606
(16) Wire Rod - Net Imports.....	(10)	(12)	(10)	(12)	(18)	(25)	(54)	(10)	(6)	18	51	197	237	351	339	241	208	486 r	446 r	159 r	78
(17) Wire Mills - Net Metal Consumed.....	1,678	1,656	1,792	1,631	1,703	1,878	2,051	1,933	2,215	2,341	2,427	2,535	2,593	2,405	2,286	2,049	2,169 r	2,166 r	2,193 r	1,922 r	1,683
(18) Wire Mills - Metal Stocks & Other.....	(44)	(16)	(118)	(43)	(73)	(158)	(143)	(136)	(370)	(327)	(320)	(351)	(422)	(439)	(540)	(197)	(151) r	(109) r	(304) r	(181) r	(116)
(19) Wire Mills - Metal Contained in Products Supplied (Table 4, Item 11).....	1,634	1,641	1,675	1,588	1,630	1,720	1,909	1,797	1,846	2,014	2,108	2,184	2,172	1,966	1,747	1,852	2,018 r	2,057 r	1,889 r	1,741 r	1,568
(20) Brass Mills - Net Metal Consumed (p 17)....	1,515	1,423	1,421	1,347	1,427	1,516	1,738	1,599	1,680	1,783	1,867	1,934	1,998	1,717	1,712	1,609	1,637 r	1,571	1,547 r	1,455 r	1,369
(21) Brass Mills - Metal Stocks & Other.....	(55)	(22)	(90)	(10)	29	(12)	(31)	81	104	69	30	52	18	(53)	(46)	(21)	82 r	128	74 r	(7) r	(98)
(22) Brass Mills - Metal Contained in Products Supplied (Table 4, Item 17).....	1,460	1,401	1,331	1,337	1,456	1,505	1,708	1,680	1,784	1,852	1,897	1,986	2,016	1,664	1,666	1,588	1,720	1,699	1,621	1,448	1,271
(23) Foundries - Net Metal Consumed (page 17)	255	261	256	216	217	205	218	287	275	282	267	303	307	283	278	274	270 r	264 r	238 r	223 r	226
(24) Foundries - Metal Stocks & Other.....	(5)	(24)	(45)	(23)	(27)	(18)	(19)	(77)	(64)	(70)	(54)	(86)	(90)	(113)	(121)	(127)	(130) r	(127) r	(108) r	(103) r	(118)
(25) Foundries - Metal Contained in Products Supplied	250	237	211	193	190	188	199	211	212	213	214	217	218	171	158	148	140	138	130	120	108
(26) Powder Plants - Net Metal Consumed ^(c)	27	28	27	23	24	22	31	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)
(27) Powder Plants - Metal Stocks & Other ^(c)	(5)	(7)	(9)	(7)	(6)	(3)	(8)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)
(28) Powder Plants - Metal Contained in Products Supplied ^(c)	22	21	18	16	18	19	23	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)
(29) Other Industries - Net Metal Consumed	125	128	126	106	107	101	110														
Miscellaneous and Discrepancies								106	80	72	78	87	81	69	67	73	77 r	70 r	86 r	90 r	79

Sources: U.S. Department of the Interior, U.S. Geological Survey; ABMS.

p - preliminary, r - revised, NA - not available

(a) - Direct consumption only; not including consumption of copper in ingots from ingot makers.

(b) - Ingot makers consume refined copper, scrap copper and alloying metal and ship to foundries, brass mills, powder plants and other industries.

(c) -Starting with 1995 Powder Plants are combined with "Foundries."

Numbers may not sum due to rounding.

Table 3, Item 3.

Consumption of copper by wire rod mills, brass mills, ingot makers, foundries, powder plants and other industries

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008p
Consumption of Copper by:																					
Wire Rod Mills																					
Refined.....	1,838	1,872	1,823	1,755	1,846	2,006	2,271	2,149	2,183	2,362	2,396	2,458	2,469	2,138	1,885	1,809	1,962	1,852	1,731	1,775	1,612
Scrap.....	24	31	27	20	20	26	24	29	30	33	33	34	35	30	30	28	29	29	30	28 r	26
Total.....	1,862	1,903	1,850	1,774	1,866	2,033	2,295	2,178	2,213	2,395	2,429	2,492	2,504	2,168	1,915	1,837	1,991	1,881	1,760	1,802 r	1,637
Brass Mills ^(a)																					
Refined.....	544	508	491	457	505	555	626	588	648	659	727	762	797	687	654	647	632	582	540	525 r	502
Scrap.....	647	613	637	598	597	624	732	757	768	853	861	880	896	771	779	717	748	739	763	710 r	658
Total.....	1,190	1,121	1,128	1,054	1,102	1,179	1,358	1,345	1,416	1,512	1,588	1,642	1,693	1,458	1,433	1,364	1,380	1,321	1,303	1,235 r	1,161
Ingot Makers ^(b)																					
Refined.....	6	6	6	5	6	5	8	9	4	5	6	5	5	5	5	5	5	5	5	5	5
Scrap.....	213	218	214	182	181	185	183	140	137	138	149	143	130	135	109	101	99	104	91	100 r	83
Total.....	219	225	220	187	187	190	191	149	141	143	155	148	135	140	114	106	104	109	96	105 r	88
Foundries and Other Industries ^(b,c)																					
Refined.....	17	17	17	14	15	14	19	53	50	52	57	66	64	57	62	63	63 r	67 r	51 r	51 r	51
Scrap.....	83	85	83	70	69	66	66	69	59	61	57	70	75	71	70	71	63	65	57	51 r	53
Total.....	99	102	100	84	85	80	85	122	109	113	114	136	139	128	132	134	127 r	132 r	109 r	103 r	104
Powder Plants ^(d)																					
Refined.....	9	9	9	8	8	7	10	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)
Scrap.....	13	14	13	11	11	11	15	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)
Total.....	22	23	22	19	19	18	25	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)
Miscellaneous ^(d)																					
Refined.....	19	19	18	16	17	15	21	—	—	(4)	(5)	—	—	—	—	—	—	—	—	—	—
Scrap.....	68	70	69	58	57	55	56	69	80	76	83	87	81	69	68	73	77	70	86 r	89 r	79
Total.....	87	89	87	74	74	70	76	69	80	72	78	87	81	69	68	73	77	70	86 r	89 r	79
All Industries																					
Refined (Table 1, Item 16).....	2,432	2,432	2,364	2,254	2,397	2,602	2,954	2,799	2,885	3,074	3,181	3,291	3,335	2,887	2,606	2,524	2,662 r	2,506	2,327	2,356 r	2,170
Scrap (Table 2, Item 10).....	1,048	1,031	1,043	938	936	967	1,075	1,064	1,074	1,161	1,183	1,214	1,217	1,076	1,056	990	1,016	1,006	1,027 r	978 r	899
TOTAL COPPER CONSUMED																					
(Table 3, Item 3).....	3,480	3,462	3,407	3,192	3,333	3,569	4,029	3,863	3,959	4,235	4,364	4,505	4,552	3,963	3,662	3,514	3,678 r	3,512	3,354 r	3,334 r	3,069

Sources: U.S. Department of the Interior, U.S. Geological Survey; ABMS.

p - preliminary, r - revised

(a) - Direct consumption only; not including consumption of copper in ingots

(b) - Ingot makers consume refined copper, scrap copper and alloying metal and ship to foundries, brass mills, powder plants and other industries.

(c) - Starting with 1995 Powder Plants and Other Industries data are included with "Foundries and Other Industries."

(d) - Miscellaneous - reconciles discrepancies between USGS reports

Numbers may not sum due to rounding.

Table 3, Item 8.

Consumption of alloying metal by brass mills, ingot makers, foundries and powder plants

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008p
Consumption of Alloying Metal by:																					
Brass Mills ^(a)																					
Zinc:Unalloyed & in Secondary Copper Alloys.....	289	269	260	261	290	302	340	236	246	253	259	269	501	241	263	231	241 r	236	230	209 r	198
Lead:Unalloyed & in Secondary Copper Alloys.....	8	7	7	7	8	8	9	7	8	9	9	9	8	7	7	6	7	4	4	3 r	3
Tin:Unalloyed & in Secondary Copper Alloys.....	2	2	2	2	2	2	2	2	2	2	3	3	4	3	3	2	2	3	4	3 r	2
Nickel:Unalloyed & in Secondary Copper Alloys.....	10	9	9	9	10	10	11	9	8	7	8	11	11	8	6	6	7	7	6 r	5 r	5
Total.....	308	286	278	278	309	321	361	254	264	271	279	292	305	259	279	245	256	250	243 r	221 r	209
Ingot Makers																					
Zinc:Unalloyed & in Secondary Copper Alloys.....	43	44	44	37	38	38	44	19	19	20	20	17	18	16	12	10	12	10	10 r	12 r	12
Lead:Unalloyed & in Secondary Copper Alloys.....	20	21	20	17	17	18	18	10	9	10	10	9	10	9	7	6	6	6	6	7 r	7
Tin:Unalloyed & in Secondary Copper Alloys.....	11	12	11	10	10	10	10	6	5	6	6	5	6	6	5	4	4	4	4	5 r	5
Nickel:Unalloyed.....	1	1	1	0	0	1	1	—	—	—	—	—	—	—	—	—	0	0	0	0	0
Total.....	76	77	76	64	65	65	73	35	33	36	36	31	34	31	24	20	22	20	20 r	24 r	24
Foundries and Other Industries ^(a)																					
Zinc:Unalloyed & in Secondary Copper Alloys.....	3 r	3 r	3 r	2 r	3 r	2 r	3 r	28	27	27	26	26	29	26	21	25 r	32	27	28	32 r	32
Lead:Unalloyed & in Secondary Copper Alloys.....	4 r	4 r	4 r	3 r	3 r	3 r	3 r	2	2	1	1	1	1	1	1	2	1	1	1	0 r	0
Tin:Unalloyed & in Secondary Copper Alloys.....	2	2	2	2	2	2	2	1	1	1	1	1	1	2	2	2 r	2	2	2	1 r	1
Nickel:Unalloyed.....	2	2	2	1	1	1	1	—	—	—	—	—	—	—	—	—	0	0	0	0	0
Total.....	10	10	10	8	9	8	9	31	30	29	28	28	31	29	24	29 r	35	30	31	33 r	33
Powder Plants ^(a)																					
Zinc-Slab.....	1	1	1	1	1	1	1	}	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)
Zinc in Scrap.....	1	1	1	1	1	1	1														
Tin-Refined.....	1	1	1	1	1	1	1														
Total.....	3	3	3	2	2	2	3														
All Industries																					
Zinc:Unalloyed & in Secondary Copper Alloys.....	341	322	313	305	335	346	392	283	292	300	305	312	329	283	296	266	284	273	268	253 r	242
Lead:Unalloyed & in Secondary Copper Alloys.....	30	30	29	26	27	27	28	19	19	20	20	19	19	17	15	13	14	11	11	11	11
Tin:Unalloyed & in Secondary Copper Alloys.....	15	15	15	13	13	13	13	9	8	9	10	9	11	11	10	8	8	9	9 r	9 r	8
Nickel:Unalloyed & in Secondary Copper Alloys.....	10	9	9	9	10	10	11	9	8	7	8	11	11	8	6	6	7	7	6 r	6 r	5
TOTAL ALLOYING METAL CONSUMED																					
(Table 3, Item 8)	396	376	366	353	385	396	446	320	327	336	343	351	370	319	327	293	314 r	300 r	295 r	278 r	266

Sources: U.S. Department of the Interior, U.S. Geological Survey; ABMS.

p - preliminary, r - revised

(a) - Direct consumption only; not including consumption of alloying metal in it

(b) - Starting with 1995 Powder Plants data are included with "Foundries and Other Industries."

Numbers may not sum due to rounding.

Table 3, Item 12.

Net consumption of metals by wire rod mills, brass mills, foundries, powder plants and other industries

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008p
Net Metal Consumed by:																					
Wire Rod Mills - Copper (Table 3, Item 13).....	1,862	1,903	1,850	1,774	1,866	2,033	2,295	2,178	2,213	2,395	2,429	2,492	2,504	2,168	1,915	1,837	1,991	1,881	1,760	1,802 r	1,637
Brass Mills																					
Copper.....	1,190	1,121	1,128	1,054	1,102	1,179	1,358	1,345	1,416	1,512	1,588	1,642	1,693	1,458	1,433	1,364	1,380	1,321	1,303	1,235 r	1,161
Alloy.....	308	286	278	278	309	321	361	254	264	271	279	292	305	259	279	245	256	250	243 r	221 r	209
Ingot.....	17	16	16	15	16	17	19										2 r				
Total (Table 3, Item 20).....	1,515	1,423	1,421	1,347	1,427	1,516	1,738	1,599	1,680	1,783	1,867	1,934	1,998	1,717	1,712	1,609	1,637 r	1,571	1,547 r	1,455 r	1,369
Foundries^(a)																					
Copper.....	99	102	100	84	85	80	85	122	109	113	114	136	139	128	132	134	128 r	132 r	110 r	100 r	102
Alloy.....	10	10	10	8	9	8	9	31	30	29	28	28	31	29	24	28	35	30	31	33 r	33
Ingot.....	146	149	146	123	124	117	124	134	136	140	125	139	137	126	122	112	109 r	102	97 r	90 r	90
Total (Table 3, Item 23).....	255	261	256	216	217	205	218	287	275	282	267	303	307	283	278	274	272 r	264 r	238 r	223 r	226
Powder Plants^(a)																					
Copper.....	22	23	22	19	19	18	25	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Alloy.....	3	3	3	2	2	2	3	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Ingot.....	2	3	2	2	2	2	3	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Total.....	27	28	27	23	24	22	31	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Other Industries^(a)																					
Copper.....	87	89	87	74	74	70	76	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Alloy.....	39	39	39	33	33	31	34	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Ingot.....	125	128	126	106	107	101	110	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Total (Table 3, Item 29).....																					
Miscellaneous and Discrepancies																					
Copper (Table 3, Item 29).....								106	80	72	78	87	81	69	67	73	77 r	70 r	86 r	89 r	79
Ingot.....																					
All Industries																					
Copper.....	3,260	3,238	3,186	3,005	3,146	3,379	3,839	3,751	3,818	4,092	4,209	4,357	4,417	3,823	3,547	3,408	3,575 r	3,403	3,258 r	3,229 r	2,981
Alloy.....	321	299	290	288	320	331	373	285	294	300	307	320	336	288	303	273	291	280	274 r	254 r	242
Ingot (Table 3, Item 10) ^(b)	203 r	207 r	203 r	173 r	175 r	167 r	180 r	134	136	140	125	139	137	126	122	112	109 r	102	97 r	90 r	90
NET METAL CONSUMED																					
(Table 3, Item 12).....	3,784 r	3,743 r	3,679 r	3,466 r	3,641 r	3,877 r	4,392 r	4,170	4,248	4,532	4,641	4,816	4,890	4,237	3,972	3,793	3,974 r	3,785	3,629 r	3,573 r	3,314

Sources: U.S. Department of the Interior, U.S. Geological Survey; ABMS.

p - preliminary, r - revised

(a) - Starting with 1995 Powder Plants and Other Industries data are included w

(b) - Total consumption of ingot shown here is less than the consumption of me melting and other losses in the making of ingot.

Numbers may not sum due to rounding.

Table 4.

Supply of wire mill, brass mill, foundry and powder products and their consumption in the end-use markets

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008p
(1) Bare Wire.....	162	182	205	192	188	213	290	310	290	300	320	330	340	310	290	270	260	255	225	200	195
(2) Telecommunications Cable.....	475	450	502	429	487	491	497	502	563	609	697	628	749	599	384	395	366	375	359	292 r	300
(3) Electronic Wire and Cable.....	196	168	175	170	176	192	228	207	202	241	241	246	290	232	178	238	255	256	265	290 r	260
(4) Building Wire.....	1,117	1,092	1,146	1,114	1,079	1,114	1,256	1,223	1,172	1,393	1,447	1,562	1,358	1,329	1,270	1,425	1,664	1,700	1,533	1,426 r	1,270
(5) Magnet Wire.....	520	519	503	500	540	568	659	672	714	719	700	778	714	615	573	561	570	532	536	493 r	450
(6) Power Cable.....	289	339	299	275	287	302	281	246	266	267	286	303	333	319	288	294	300	372	315	249 r	225
(7) Apparatus Wire and Cordage.....	199	197	180	175	175	212	237	184	210	211	229	235	250	216	185	193	140	140	89	86 r	75
(8) Automotive Wire and Cable (except Magnet)	239	243 r	228 r	298 r	329 r	368 r	415 r	407 r	401 r	411 r	407 r	442 r	433 r	387 r	407 r	398 r	397 r	391 r	336 r	355 r	275
(9) Other Insulated Wire and Cable.....	70	72	88	82	80	80	85	70	85	89	85	56	69	80	80	82	85	93	119	90 r	85
(10) Total Insulated Wire and Cable.....	3,105	3,080 r	3,121 r	3,043 r	3,153 r	3,327 r	3,658 r	3,511 r	3,612 r	3,940 r	4,092 r	4,250 r	4,196 r	3,776 r	3,365 r	3,586 r	3,777 r	3,859 r	3,552 r	3,281 r	2,940
(11) Total Wire Mill Products ^(a)	3,267	3,262 r	3,326 r	3,235 r	3,341 r	3,540 r	3,948 r	3,821 r	3,902 r	4,240 r	4,412 r	4,580 r	4,536 r	4,086 r	3,655 r	3,856 r	4,037 r	4,114 r	3,777 r	3,481 r	3,135
(12) Strip, Sheet, Plate and Foil.....	989	920	896	860	928	995	1,154	1,122	1,178	1,230	1,262	1,356	1,421	1,018	1,019	957	1,068	1,035	1,067	999	926
(13) Mechanical Wire.....	69	72	74	73	79	80	85	88	93	96	98	94	99	85	78	72	80	75	72	62	—
(14) Rod and Bar.....	949	904	881	881	985	970	1,085	1,053	1,096	1,193	1,190	1,238	1,247	1,025	1,038	965	1,059	1,032	1,022	882	805
(15) Plumbing Tube and Pipe.....	529	524	526	499	531	575	608	585	630	653	686	716	691	689	689	682	700	713	548	476	379
(16) Commercial Tube and Pipe.....	384	382	285	360	388	389	483	512	570	531	558	569	575	513	509	501	533	543	533	477	432
(17) Total Brass Mill Products (page 19).....	2,920	2,802	2,662	2,673	2,911	3,009	3,415	3,360	3,567	3,703	3,794	3,973	4,033	3,329	3,332	3,177	3,439	3,397	3,241	2,896	2,542
(18) Total Foundry Products.....	500	474	421	385	380	375	397	380	381	382	383	384	385	300	270	250	230	225	215	200	180
(19) Total Powder Products.....	44	41	36	32	35	38	46	41	42	43	44	50	50	41	45	45	50	50	45	40	35
(20) Domestic Products - Total.....	6,731	6,579 r	6,445 r	6,325 r	6,667 r	6,962 r	7,806 r	7,602 r	7,892 r	8,368 r	8,633 r	8,986 r	9,004 r	7,756 r	7,302 r	7,328 r	7,756 r	7,786 r	7,279 r	6,617 r	5,892
(21) Net Imports of Mill Products (page 20).....	369	284	197	61	41	38	135	130	108	126	223	376	568	276	249	265	343	266	319	311	260
(22) Mill Products to Domestic Market*.....	7,100	6,863 r	6,642 r	6,386 r	6,708 r	7,000 r	7,941 r	7,732 r	8,000 r	8,494 r	8,856 r	9,362 r	9,572 r	8,033 r	7,551 r	7,593 r	8,099 r	8,052 r	7,597 r	6,928 r	6,152
(23) Building Construction.....	2,908	2,799	2,696	2,635	2,702	2,825	3,179	3,111	3,221	3,455	3,635	3,900	3,918	3,584	3,532	3,640	4,035	4,071	3,721	3,405 r	3,058
(24) Electrical and Electronic Products.....	1,660	1,612	1,655	1,537	1,655	1,761	1,934	1,915	2,020	2,170	2,329	2,400	2,517	2,016	1,598	1,582	1,569	1,525	1,533	1,400 r	1,280
(25) Industrial Machinery and Equipment.....	993	981	902	820	858	825	962	919	946	972	965	1,005	965	749	729	697	682	701	682	575 r	502
(26) Transportation Equipment.....	844	806 r	770 r	715 r	774 r	878 r	959 r	819 r	841 r	875 r	855 r	915 r	894 r	718 r	754 r	749 r	978 r	961 r	883 r	811 r	675
(27) Consumer and General Products.....	695	685	642	620	638	611	776	741	761	811	875	930	1,085	810	776	773	836	794	778	737 r	637

Sources: U.S. Department of Commerce, Bureau of the Census; National Electrical Manufacturers Association; IPC Technology/Marketing Research Council; Metal Powder Producers Association; CDA.

Note: Totals may not sum due to rounding.

p - preliminary, r - revised

(a) - Copper content.

* Markets include:

Building Construction - Building Wire; Plumbing & Heating; Air Conditioning & Commercial Refrigeration; Builders Hardware; Architectural

Electrical & Electronic Products - Power Utilities; Telecommunications; Business Electronics; Lighting & Wiring Devices

Industrial Machinery & Equipment - In-Plant Equipment; Industrial Valves & Fittings; Non-Electrical Instruments; Off-Highway Vehicles; Heat Exchangers

Transportation Equipment - Automobile, Truck & Bus; Railroad; Marine; Aircraft & Aerospace

Consumer & General Products - Appliances; Cord Sets; Military & Commercial Ordnance; Consumer Electronics; Fasteners & Closures; Coinage; Utensils & Cutlery; Miscellaneous

Numbers may not sum due to rounding.

Table 4, Item 17.

Supply of brass mill products in the United States

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008p
Strip, Sheet, Plate and Foil																					
Copper.....	302	288	287	256	274	291	343	364	383	405	435	477	531	390	363	341	390	391	394	378	341
Alloy.....	687	632	609	604	654	704	811	758	795	825	827	879	890	628	655	616	677	644	673	621	586
Total.....	989	920	896	860	928	995	1,154	1,122	1,178	1,230	1,262	1,356	1,421	1,018	1,019	957	1,068	1,035	1,067	999	926
Mechanical Wire																					
Copper.....	11	11	13	15	18	18	21	19	21	22	22	22	22	18	16	16	19	18	14	11	1
Alloy.....	58	61	61	58	61	62	64	69	72	74	76	72	77	67	62	56	61	57	58	51	—
Total.....	69	72	74	73	79	80	85	88	93	96	98	94	99	85	78	72	80	75	72	62	1
Rod and Bar																					
Copper.....	130	134	141	133	137	145	168	175	183	206	206	217	245	207	177	170	205	212	211	201	183
Alloy.....	819	770	740	748	848	825	917	878	913	987	984	1,021	1,003	818	861	795	854	820	812	681	621
Total.....	949	904	881	881	985	970	1,085	1,053	1,096	1,193	1,190	1,238	1,247	1,025	1,038	965	1,059	1,032	1,022	882	804
Plumbing Tube and Pipe																					
Copper.....	524	521	520	495	525	572	608	585	630	653	686	716	691	689	689	682	700	713	548	476	379
Alloy.....	5	3	6	4	6	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total.....	529	524	526	499	531	575	608	585	630	653	686	716	691	689	689	682	700	713	548	476	379
Commercial Tube and Pipe																					
Copper.....	328	327	233	303	328	333	420	452	513	476	502	531	543	490	490	486	517	530	518	464	420
Alloy.....	56	55	52	57	60	56	63	60	57	55	56	38	32	22	19	14	15	13	14	13	13
Total.....	384	382	285	360	388	389	483	512	570	531	558	569	575	513	509	501	533	543	532	477	432
All Mill Products																					
Copper.....	1,295	1,281	1,194	1,202	1,282	1,359	1,560	1,595	1,730	1,762	1,851	1,963	2,032	1,794	1,735	1,695	1,832	1,863	1,685	1,529	1,323
Alloy.....	1,625	1,521	1,468	1,471	1,629	1,650	1,855	1,765	1,837	1,941	1,943	2,010	2,001	1,535	1,597	1,482	1,607	1,534	1,556	1,367	1,219
TOTAL BRASS MILL PRODUCTS.....	2,920	2,802	2,662	2,673	2,911	3,009	3,415	3,360	3,567	3,703	3,794	3,973	4,033	3,329	3,332	3,177	3,439	3,397	3,241	2,896	2,542

Sources: CDA; IPC Technology/Marketing Research Council (Copper Foil - 1986-1996).

Numbers may not sum due to rounding.

Table 4, Item 17a.

Supply of brass mill products in selected countries

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008p	
Benelux.....	201	220	247	243	246	251	269	288	285	305	289	327	365	332	292	277	266	266	277	r	278	
France.....	609	619	615	610	601	538	1,090	668	584	747	769	742	461	393	369	263	213	r	201	201	r	421
Germany.....	1,748	1,798	1,805	1,915	1,961	1,852	2,115	2,152	1,951	2,196	2,296	2,324	2,620	2,464	2,412	2,328	2,561	2,510	r	2,585	r	4,096
Italy.....	1,087	1,186	1,211	1,337	1,417	1,352	1,556	1,746	1,672	1,337	1,988	1,938	2,186	2,051	1,980	1,957	1,682	1,369	r	2,020	1,836	r
Japan.....	2,393	2,495	2,574	2,717	2,406	2,387	2,532	2,653	2,607	2,611	2,239	2,324	2,559	2,162	2,114	2,175	2,290	2,075	2,195	2,200	r	1,497
Mexico ¹	NA	NA	NA	NA	NA	NA	309	208	163	179	329	346	340	311	307	311	319	276	229	r	258	r
Scandinavia.....	410	411	433	390	367	395	401	438	425	438	453	420	444	429	445	442	469	464	478	381	r	437
South Korea ²	290	297	333	365	354	569	241	291	307	373	524	640	669	675	708	723	701	720	r	720	r	823
Spain.....	192	196	188	189	199	178	212	228	211	233	262	285	291	218	250	213	166	194	185	r	194	r
Turkey ³	31	38	147	164	248	262	214	293	314	134	148	143	176	139	97	88	88	144	r	160	r	141
United Kingdom.....	568	544	521	454	421	432	463	492	452	440	409	385	403	178	162	NA	NA	NA	NA	NA	NA	NA
United States.....	2,920	2,802	2,662	2,673	2,911	3,009	3,415	3,360	3,567	3,703	3,794	3,973	4,033	3,329	3,332	3,177	3,439	3,397	3,241	2,896	2,542	

Sources: World Bureau of Metal Statistics; CDA.

Numbers may not sum due to rounding.

p - preliminary, r - revised, NA - not available

¹ Mexico brass mill supply reported starting in 1994.

² South Korea brass mill supply reported starting in 1988.

³ Turkey brass mill supply reported starting in 1985.

Table 4, Item 21.

Imports and exports of wire mill, brass mill and powder products

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008p
Imports of:																					
Bare Wire (including Stranded).....	40	21	20	8	19	44	12	12	15	24	118	162	200	40	47	50	42	56	39	38	43
Insulated Wire and Cable.....	139	115	107	90	95	104	127	165	176	213	273	305	356	324	297	314	334	405	418	417	345
Total Wire Mill Products⁽¹⁾.....	178	136	127	98	114	148	139	177	191	237	391	468	555	364	344	364	376	461	457	455	388
Copper-Strip, Sheet, Plate and Foil.....	83	76	86	79	73	76	83	85	94	113	113	132	174	168	120	111	135	111	120	84	87
Rod and Bar.....	17	12	8	8	11	10	14	30	31	33	32	46	58	59	40	36	51	49	48	63	48
Tube and Pipe.....	93	73	55	36	39	43	66	76	121	122	123	149	180	166	170	188	227	225	285	259	262
Alloy-Strip, Sheet, Plate and Foil.....	124	109	98	84	76	73	85	81	83	84	99	104	155	120	115	93	118	95	92	74	61
Mechanical Wire.....	26	27	25	22	29	28	31	32	34	37	41	37	48	37	35	37	41	35	36	33	36
Rod and Bar.....	75	76	61	44	45	66	126	147	102	152	128	127	183	107	109	114	139	120	132	115	121
Tube and Pipe.....	61	67	57	51	55	61	71	70	55	60	56	69	75	71	71	68	77	66	59	51	52
Total Brass Mill Products.....	478	439	391	324	326	358	477	520	520	600	591	664	872	729	660	648	790	700	771	679	667
Total Powder Products.....	3	3	3	3	4	4	4	4	4	5	6	5	5	4	6	8	6	8	10	10	8
TOTAL IMPORTS.....	659	578	521	425	444	509	620	702	715	842	988	1,137	1,433	1,097	1,010	1,019	1,172	1,169	1,238	1,144	1,063
Exports of:																					
Bare Wire (including Stranded).....	27	39	40	46	64	74	48	32	37	65	71	80	113	93	104	82	99	107	102	103	88
Insulated Wire and Cable.....	130	95	108	138	151	201	198	253	278	316	333	355	398	412	370	362	379	392	423	367	400
Total Wire Mill Products⁽¹⁾.....	157	134	148	184	215	275	247	284	315	381	403	435	511	504	475	444	478	498	525	470	488
Copper-Strip, Sheet, Plate and Foil.....	11	9	17	19	23	25	29	33	33	50	47	65	65	43	32	33	38	34	36	32	30
Rod and Bar.....	3	4	6	4	4	3	4	4	5	11	7	5	5	16	16	9	21	33	37	40	44
Tube and Pipe.....	22	45	35	45	44	42	43	48	55	55	61	58	76	68	71	81	70	80	76	77	48
Alloy-Strip, Sheet, Plate and Foil.....	35	21	37	34	33	39	59	69	79	81	121	73	77	67	52	63	72	96	81	72	71
Mechanical Wire.....	17	8	10	13	12	12	18	18	10	20	18	16	24	19	17	16	20	21	29	34	33
Rod and Bar.....	25	58	54	45	53	55	57	66	61	77	71	70	71	70	71	77	88	95	95	64	50
Tube and Pipe.....	16	9	11	13	13	13	21	39	39	31	23	24	22	20	14	17	21	18	16	18	21
Total Brass Mill Products.....	127	154	171	173	181	189	230	277	281	324	348	311	339	304	273	297	331	377	369	337	297
Total Powder Products.....	6	5	5	7	7	7	9	10	11	11	13	15	14	13	14	13	21	27	26	25	19
TOTAL EXPORTS.....	290	294	325	364	402	471	485	571	607	717	764	761	864	821	761	754	829	902	920	833	804
NET IMPORTS (Table 4, Item 21).....	369	284	197	61	41	38	135	130	108	126	223	376	568	276	249	265	343	266	319	311	260

Sources: U.S. Department of Commerce, Bureau of the Census; Copper & Brass Fabricators Council, Inc; CDA.

p - preliminary, r - revised

Numbers may not sum due to rounding.

(1) - In previous additions, wire rod exports were included in the table. Starting with 1999, net wire rod imports are shown as line 16 on table 3, page 14. Appropriate adjustments have been made for all years.



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