

Mineral Industry Surveys

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TIN IN JULY 2003

Domestic consumption of primary tin in July was estimated by the U.S. Geological Survey to be just slightly less than that in the preceding month and in July 2002.

The Platts Metals Week average composite price for tin in July was \$3.31 per pound, just slightly above that in June and 7% above that in July 2002. The average composite price in July represented the highest level in the past two years. Peru maintained its dominance as the leading source of U.S. tin imports. Peru contributed 52% of U.S. imports during the first 6 months.

In China, the world's largest tin producer, the Ministry of Land and Resources (MLR) recently issued regulations to control the production of antimony, rare earths, and tin. Following earlier reports that China was tightening its control over these industries, the ministry announced that unlicensed mining activities and companies that wasted the country's natural resources, ignored safety and environmental legislation, or violated industry policies would be closed. The MLR also intends to investigate all Chinese mineral reserves and mining projects involved in the production of antimony, rare earths and tin. It has called on local land and resource offices throughout the country to provide, by October 1, a list of enterprises producing these metals. In addition, all companies on the list must provide copies of mining permits and copies of certificates granted by the health and safety authorities and the environmental protection bureau. Based on this information and on spot checks, the MLR will publish a list of firms authorized to mine the three metals (Metal-Pages, 2003a§¹).

The Liuzhou China Tin Group Co. Ltd. plans to develop a new tin mine in China in an attempt to counteract a continuing supply problem. Reports indicate there has been a tin-concentrate shortage in China since the closure of yet another unspecified tin mine due to safety concerns. In response, the Hong Kong-based Liuzhou aims to develop a project in Nandan, in the southwestern province of Guangxi, subject to approval from the central government. The new mine is expected to raise

Liuzhou's tin production toward the 22,000 metric tons (t) it produced 3 years ago (Metal-Pages, 2003b§).

Senior representatives from Malaysia Smelting Corp. Bhd (MSC) have been in Australia to examine a number of new tin mining opportunities. MSC officials met in Perth with executives from Marlborough Resources NL, which owns and operates the Ardlethan tin mine in New South Wales. Four or five mines were discussed, and MSC planned to examine three others. MSC recently purchased a 30% stake in Sydney-listed Marlborough for \$3 million. MSC buys all the tin concentrate produced at Ardlethan. MSC is running its Penang, Malaysia, tin smelter at about 1,200 t monthly after halving output in response to low demand and prices. Tin output at Penang is expected to reach 15,000 t in 2003. MSC also owns a 75% stake in PT Koba Tin, itself a producer of about 15,000 t of tin annually (t/yr) (Metal Bulletin, 2003).

In Brazil, the Paranapanema Group is awaiting decisions on financing from the BNDES Development Bank and WestLB AG before it can proceed with its Rocha Sa tin-niobium-tantalum mine project. Quoted estimates for financing needs for the entire project have varied widely from \$60 to \$400 million. Paranapanema produced 9,100 t of refined tin in 2002, but is struggling to maintain output as a result of the exhaustion of reserves at the Pitinga Mine (CRU Tin Monitor, 2003a).

Malaysia Smelting Corporation reportedly will acquire a 25% stake in ZR Network Sdn Bhd, the scientific equipment company that recently bought Rahman Hydraulic Tin Bhd, Malaysia's largest remaining tin miner. The acquisition will cost \$630,000. Rahman operates the Klian Intan open pit operation in Northern Perak. The mine produces some 1,400 t/yr and employs 350 people (CRU Tin Monitor, 2003b).

In Indonesia, a new tin smelting company, CV Donna Kembara Jaya, began operations on Bangka Island, in March. It reportedly has a capacity of 6,000 t/yr. Four other companies are reported to have submitted plans for tin smelters, taking advantage of the Indonesian ban on exports of concentrates introduced in June (CRU Tin Monitor, 2003b).

A recent survey shows that the Japanese electronics industry is still behind the forecast schedule of the Japan Electronics and Information Technology Industries Association (JEITA), which

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

projected a 50% conversion to lead-free solders by 2002. The lack of a standardized method for evaluating the reliability of lead-free solders has caused Japanese electronics manufacturers to resist a change to lead-free solders. JEITA has, therefore, instituted a project to establish standards for lead-free solders to be completed by the end of 2003. However, the Japanese industry still needs to comply with the European Union's schedule for a lead-free electronics industry by 2006, if it expects to sell electronics to the European market (Metal-Pages, 2003c§).

Researchers in several countries continue to seek solutions for advanced and sustainable lead-free soldering—including processes that utilize tin as a substitute for lead. One of the major projects in such research is the Next Generation Environment-Friendly Soldering Technology (EFSOT) initiative—an 11-million-Euro project utilizing 132 person-years of research to investigate lead-free soldering technologies. The European Union, and the Governments of Korea and Japan are providing funding for the project (EFSOT, 2003§).

Update

On August 29, 2003, the Platts Metals Week composite price for tin was \$3.38 per pound.

References Cited

CRU Tin Monitor, 2003a, Industry News: CRU International Ltd., August, p. 7.
CRU Tin Monitor, 2003b, Industry News: CRU International Ltd., August, p. 8.
Metal Bulletin, 2003, MSC, Marlborough explore tin mining projects: Metal Bulletin, no. 8800, August 21, p. 6.

Internet References Cited

EFSOT, 2003 (February 17), EFSOT—Next generation environment-friendly soldering technology website, accessed August 11, 2003 at URL <http://www.efsot-europe.info>.
Metal-Pages, 2003a (August 11), China clamps down on rare earth, tin and antimony production, accessed August 12, 2003 at URL <http://www.metal-pages.com>.
Metal-Pages, 2003b (August 18), China to develop new tin mine in Nandan, accessed August 25, 2003 at URL <http://www.metal-pages.com>.
Metal-Pages, 2003c (July 29), Japan slow to take up lead-free solders, accessed June 25, 2003 at URL <http://www.metal-pages.com>.

TABLE 1
SALIENT TIN STATISTICS¹

(Metric tons, unless otherwise noted)

	2003			
	2002 ^p	June	July	January- July
Production, secondary ^{e,2}	10,800	900	900	6,300
Consumption:				
Primary	35,800	3,100 ^r	3,090	21,800
Secondary	10,800	714	711	4,890
Imports for consumption, metal	42,200	2,850	NA	NA
Exports, metal	2,940	385	NA	NA
Stocks at end of period	7,280	6,380	6,470	XX
Prices (average cents per pound): ³				
Metals Week composite ⁴	291.97	329.44	331.38	XX
Metals Week New York dealer	194.75	223.22	226.33	XX
London, standard grade, cash	184.00	213.00	215.00	XX
Kuala Lumpur	184.35	214.32	215.35	XX

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

¹Data are rounded to no more than three significant digits, except prices.

²Includes tin recovered from alloys and tinplate. The detinning of tinplate (coated steel) yields only a small part of the total.

³Source: Platts Metals Week.

⁴The Metals Week composite price is a calculated formula, not a market price, that includes fixed and finance charges, and a risk factor. It is normally substantially higher than other tin prices.

TABLE 2
METALS WEEK COMPOSITE PRICE¹

(Cents per pound)

Period	High	Low	Average
2002:			
July	316.83	290.53	308.64
August	286.95	272.37	279.74
September	295.72	277.95	286.19
October	308.99	294.63	302.39
November	306.01	297.88	301.54
December	306.94	298.78	302.37
Year	316.83	267.12	291.97
2003:			
January	320.43	303.14	313.84
February	333.87	310.69	322.82
March	330.75	318.70	323.84
April	326.53	317.74	321.54
May	333.80	325.19	330.58
June	335.08	324.38	329.44
July	335.48	324.04	331.38

¹The Metals Week composite price is a calculated formula, not a market price that includes fixed and finance charges, and a risk factor. It is normally substantially higher than other tin prices.

Source: Platts Metals Week.

TABLE 3
TINPLATE PRODUCTION AND SHIPMENTS IN THE UNITED STATES¹

(Metric tons, unless otherwise noted)

Period	Tinplate waste (waste, strips, cobble, etc.) (gross weight)	Tinplate (all forms)			Shipments ²
		Gross weight	Tin content	Tin per metric ton of plate (kilograms)	
2002 ^p	61,100	2,400,000	7,440	3.1	2,100,000
2003:					
January	2,790	216,000	642	3.0	180,000
February	2,510	214,000	640	3.0	156,000
March	W	225,000	686	3.1	156,000
April	W	217,000	704	3.2	165,000
May	1,780	215,000	536	2.5	158,000
June	W	208,000	675	3.2	173,000
July	W	209,000	620	3.0	NA

^pPreliminary. NA Not available. W Withheld to avoid disclosing company proprietary data.

¹Data are rounded to no more than three significant digits.

²Source: American Iron and Steel Institute monthly publication.

TABLE 4
U.S. TIN IMPORTS FOR CONSUMPTION AND EXPORTS¹

(Metric tons)

Country or product	2002	2003		
		May	June	January- June
Imports:				
Metal (unwrought tin):				
Bolivia	6,150	765	515	3,210
Brazil	4,840	400	400	1,790
China	7,600	218	155	2,400
Indonesia	3,340	60	230	1,500
Malaysia	122	40	80	295
Peru	19,900	2,050	1,300	10,300
Russia	21	--	--	--
United Kingdom	2	--	49	49
Other	264	71	124	386
Total	42,200	3,600	2,850	19,900
Other (gross weight):				
Alloys	3,530	290	198	1,570
Bars and rods	224	33	20	200
Foil, tubes, pipes	1	-2	-2	3
Plates, sheets, strip	128	5	3	27
Waste and scrap	561	40	98	650
Miscellaneous	7,810	211	192	1,250
Total	12,300	579	511	3,700
Exports (metal)	2,940	302	385	1,710

-- 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 5
CONSUMPTION OF TIN IN THE UNITED STATES, BY FINISHED PRODUCT¹

(Metric tons of contained tin)

Product	2003							
	2002 ^P	June			July			January- July
		Primary	Secondary	Total	Primary	Secondary	Total	
Alloys (miscellaneous) ²	1,660	171	W	171	143	W	143	1,080
Babbitt	501	15	W	15	15	W	15	140
Bar tin and anodes	192	14	W	14	14	W	14	166
Bronze and brass	2,390	91	132	223	85	130	215	1,310
Chemicals	7,550	697	W	697	697	W	697	4,880
Collapsible tubes and foil	W	W	W	W	W	W	W	W
Solder	14,500	740 ^r	266	1,010 ^r	796	266	1,060	7,370
Tinning	411	44	--	44	37	--	37	252
Tinplate ³	7,440	675	--	675	620	--	620	4,490
Tin powder	W	W	--	W	W	--	W	W
White metal ⁴	W	W	--	W	W	--	W	W
Other	1,110	56	16	72	82	15	97	696
Total reported	35,800	2,500 ^r	414	2,920 ^r	2,490	411	2,900	20,400
Estimated undistributed consumption ⁵	10,800	600	300	900	600	300	900	6,300
Grand total	46,600	3,100 ^r	714	3,820 ^r	3,090	711	3,800	26,700

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

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

²Includes terne metal.

³Includes secondary pig tin and tin components of tinplating chemical solutions.

⁴Includes pewter, britannia metal, and jewelers' metal.

⁵Estimated consumption of plants reporting on an annual basis.