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Mineral Industry Surveys

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TIN IN DECEMBER 2003

Domestic consumption of primary tin in December was estimated by the U.S. Geological Survey to be about 4% higher than that in November and about 3% higher than in December 2002.

The Platt's Metals Week average composite price for tin in December was $4.05 per pound, 11% higher than that in November, and 34% higher than that in December 2002.

In its October 2003 "Review," Natexis Metals Limited, a London Metal Exchange (LME) broker examined the remarkable strength in the recent prices of base metals, including tin. During 2003, the price of tin experienced about a 30% increase. Natexis highlighted a number of common themes that were driving the bull market in base metals—investment funds, China, accelerating global economic growth, relatively low inventories, lack of new capacity, and the weak U.S. dollar. The firm ranks nickel, copper, lead and tin as showing superior price performance that reflected strong fundamentals. The report indicates that Asia is the focus of base metals consumption, with China at the forefront. Industrial production in China increased 18% in December compared with that in December 2002. Key features of China's impact on the metal market are the remarkable rate of metal-intensive economic growth the country is experiencing, and the country's lack of sufficient raw materials to feed its rapidly growing non-ferrous metals production (Metal-Pages, 2004§[1]).

Natexis assessed the tin market as having strong demand growth as well as tight supply. Consumption is benefiting from the revival of the information technology and electronics sectors. On the supply side, a number of tin producers reported that they have no immediate plans to boost capacity/output—usually due to a shortage of concentrate (Metal-Pages, 2004§).

Update

On February 6, 2004, the Platts Metals Week composite price for tin was $4.32 per pound.

Malaysia Smelting Corp. (MSC) and PT Mitra Stania Prima (Indonesia) agreed to a production sharing alliance under which MSC will explore for and mine tin on parts of Bangka Island (Indonesia) for which PT Mitra holds exploration and mining permits. The permits cover several thousand acres within and adjacent to established tin mining districts on Bangka Island. MSC has approved spending $1.76 million on drilling and exploration programs in the given areas during 2004 and 2005, and indicated that the cooperation with PT Mitra was expected to provide substantial long-term tin production for the firm. MSC produces over 35,000 metric tons per year (t/yr) of tin metal at its smelter, accounting for about 15% of world production. In 2002, it acquired a 75% stake in Bangka Island-based tin miner and smelter PT Koba Tin. Indonesia has increased in importance to MSC over the last 3 years, contributing about 60% of the company's smelter feed (Platts Metals Week, 2004).

Australia's largest tin mine, Renison Bell in Tasmania, will remain closed, and part of the plant will be converted to process nickel ore if the leading bidder attempting to buy the mine, Allegiance Mining, is successful. Reportedly, Allegiance officials indicate that their sole interest in the facility is to alter it to be capable of treating nickel ore from its Avebury nickel project (Metal Bulletin, 2004).

In Brazil, Mamore Mineração e Metalurgia (MMM), part of Grupo Paranapanema, reportedly produced 7,500 t of tin in 2003, which was essentially unchanged from the production level of 2002. Output was maintained by reprocessing tailings from the exhausted Pitinga Mine and from tin ore from the new Rocha Sur site. Rocha Sur, a hard-rock deposit at Pitinga, produces about 2,850 t/yr of tin in concentrate. MMM hopes that later this year the state development bank, BNDES, will fund a $60 million project to expand capacity to 9,500 t/yr. MMM officials believe that if the Rocha Sur expansion is not completed by 2006, tin mining at Pitinga will no longer be viable (Mining Journal, 2004).

The LME amended its contract rules for tin trading, dropping its maximum ingot size to 30 kilograms (kg) from 50 kg, effective on or after March 29, 2004. LME-approved tin in ingot form will now weigh between 12 kg and 30 kg (Platts Metals Week, 2004).

[1]A reference that includes a section mark (§) is found in the Internet Reference Cited section.

In Australia, steel producer BHP Steel Ltd. announced that it had changed its name to BlueScope Steel Ltd. The name change was a condition of its separation from BHP Billiton. BlueScope is the leading steel producer in Australia and New Zealand, supplying about 80% of the flat-rolled steel sold in those markets from its steelworks at Port Kembla. The firm includes tinplate among its products (TIN World, 2004a).

In Japan, Oki Electric Co. and Furukawa Electric Co. announced that they have jointly developed a heating technology for lead-free soldering called "Component Temperature Control Reflow Technology." This new technology will enable manufacturers to automate soldering for low heat tolerance electronic components using lead-free solder that has a higher melting temperature than leaded solders. While the soldering process generally used increases the inner temperature evenly (which damages those components that have low-heat tolerance), this new technology combines far-infrared radiation with heated air to heat solder in a reflow furnace. With this new technology, Oki aims to complete the transition to lead-free solder for all its products manufactured for the domestic market by the end of the current fiscal year. Tin is the dominant material in conventional solders, and is the dominant component (often well into the 90% range) for almost all lead-free solders (TIN World, 2004b).

References Cited

Metal Bulletin, 2004, Nickel miner bids for Renison Bell tin mine: Metal Bulletin, no. 8824, January 12, p. 14.

Mining Journal, 2004, Paranapanema maintains tin output: Mining Journal, January 9, p. 3.

Platts Metals Week, 2003, LME drops maximum ingot size to 30 kg: Platts Metals Week, v. 74, no. 52, December 29, p. 10.

Platts Metals Week, 2004, MSC to explore on Bangka Island: Platts Metals Week, v. 75, no. 1, January 5, p. 11.

TIN World, 2004a, BHP becomes BlueScope Steel: TIN World, no. 2, December/January, p. 11.

TIN World, 2004b, Oki and Furukawa jointly develop new technology for lead-free soldering: TIN World, no. 2, December/January, p. 17.

Internet Reference Cited

Metal-Pages, 2004 (January 30), Base metal bull run to gather pace in 2004—Natexis Metals, accessed February 2, 2004, at URL http://www.metal-pages.com.

TABLE 1
SALIENT TIN STATISTICS[1]

(Metric tons, unless otherwise noted)

		2003		
	2002	November	December	January-December
Production, secondary[e, 2]	10,000	900	900	10,800
Consumption:				
Primary	34,000	3,050 [r]	3,170	37,400
Secondary	5,830	714	717	8,460
Imports for consumption, metal	42,200	2,960	NA	NA
Exports, metal	2,940	349	NA	NA
Stocks at end of period	9,100	6,340 [r]	6,520	XX
Prices (average cents per pound):[3]				
Metals Week composite[4]	291.97	364.20	404.65	XX
Metals Week New York dealer	194.75	251.71	284.81	XX
London, standard grade, cash	184.00	243.00	275.00	XX
Kuala Lumpur	184.35	239.92	271.61	XX

[e]Estimated. [r]Revised. NA Not available. XX Not applicable.

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

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

[3]Source: Platts Metals Week.

[4]The 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 PRICE[1]

(Cents per pound)

Period	High	Low	Average
2002:			
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
August	339.23	332.37	335.84
September	347.80	336.59	340.70
October	366.28	346.47	359.21
November	373.73	356.40	364.20
December	437.61	378.77	404.65

[1]The 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 STATES[1]

(Metric tons, unless otherwise noted)

Period	Tinplate waste (waste, strips, cobbles, etc.) (gross weight)	Tinplate (all forms)			
		Gross weight	Tin content	Tin per metric ton of plate (kilograms)	Shipments[2]
2002	45,900	2,450,000	7,750	3.2	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	732	3.5	173,000
July	W	205,000	659	3.2	176,000
August	W	199,000	692	3.5	170,000
September	W	198,000	625	3.2	169,000
October	W	203,000	635	3.1	163,000
November	W	198,000	605 r	3.1	137,000
December	W	204,000	647	3.2	NA

rRevised. NA Not available. W Withheld to avoid disclosing company proprietary data.
[1]Data are rounded to no more than three significant digits.
[2]Source: American Iron and Steel Institute monthly publication.

TABLE 4
U.S. TIN IMPORTS FOR CONSUMPTION AND EXPORTS[1]

(Metric tons)

Country or product	2002	2003		
		October	November	January-November
Imports:				
Metal (unwrought tin):				
Bolivia	6,150	130	120	5,400
Brazil	4,840	150	150	2,740
China	7,600	372	348	4,030
Indonesia	3,340	160	160	2,950
Malaysia	122	40	20	425
Peru	19,900	1,190	1,920	17,700
Russia	21	--	--	--
United Kingdom	2	--	--	104
Other	264	181	242	1,140
Total	42,200	2,220	2,960	34,400
Other (gross weight):				
Alloys	3,530	201	323	3,230
Bars and rods	224	26	18	309
Foil, tubes, pipes	1	(2)	(2)	4
Plates, sheets, strip	128	27	46	231
Waste and scrap	561	84	41	860
Miscellaneous	7,810	280	265	2,440
Total	12,300	618	693	7,080
Exports (metal)	2,940	297	349	3,350

-- Zero.
[1]Data are rounded to no more than three significant digits; may not add to totals shown.
[2]Less than 1/2 unit.

Source: U.S. Census Bureau.

TABLE 5
CONSUMPTION OF TIN IN THE UNITED STATES, BY FINISHED PRODUCT[1]

(Metric tons of contained tin)

Product	2002	2003						
		November			December			January-December
		Primary	Secondary	Total	Primary	Secondary	Total	
Alloys (miscellaneous)[2]	W	171	W	171	145	W	145	1,820
Babbitt	1,310	11	W	11	13	W	13	204
Bar tin and anodes	617	14	W	14	14	W	14	241
Bronze and brass	3,040	98	137	235	101	140	241	2,520
Chemicals	8,400	697	W	697	697	W	697	8,360
Collapsible tubes and foil	W	W	W	W	W	W	W	W
Solder	13,800	755	265	1,020	848	265	1,110	12,600
Tinning	679	41 r	--	41 r	42	--	42	450
Tinplate[3]	7,750	605 r	--	605 r	647	--	647	7,730
Tin powder	W	W	--	W	W	--	W	W
White metal[4]	1,320	W	--	W	W	--	W	W
Other	2,920	55	12	67 r	67	12	79	1,130
Total reported	39,800	2,450 r	414	2,860 r	2,570	417	2,990	35,000
Estimated undistributed consumption[5]	--	600	300	900	600	300	900	10,800
Grand total	39,800	3,050 r	714	3,760 r	3,170	717	3,890	45,800

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

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

[2]Includes terne metal.

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

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

[5]Estimated consumption of plants reporting on an annual basis.