

Mineral Industry Surveys

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TIN IN FEBRUARY 2006

Domestic consumption of primary tin in February was estimated by the U.S. Geological Survey to be about 6% lower than that in January 2006 and about 7% lower than that in February 2005. Consumption of primary tin for the first 2 months of 2006 totaled 6,200 metric tons (t), a decline of 5% from that in the comparable period of 2005.

The Platts Metals Week average composite price for tin in February was \$5.08 per pound, about 9% higher than that in January and 3% lower than that in February 2005.

Apparent consumption of tin in China in 2005 increased by about 15% to more than 100,000 t. The Chinese market for tin is now more than twice the size of the United States market and three times the size of the Japanese market (CRU Tin Monitor, 2006a).

The importance of China in the tin world was emphasized by a recent ranking of the world's leading tin smelters. The list included 4 Chinese smelters among the top 10, led by Yunnan Tin Co. Recent reports indicate that Yunnan may acquire Liuzhou China Tin Corp., which would propel it further ahead of the other leading tin smelters in size. The world's top 10 tin smelters, in decreasing order, were: Yunnan Tin Co. (China), PT Timah Tbk (Indonesia), Minsur SA (Peru), Malaysia Smelting Corp. (Malaysia), Thailand Smelting and Refining Co. Ltd. (Thailand), PT Koba Tin (Indonesia), Yunnan Chengfeng Non-ferrous Metals Co. Ltd. (China), CM Colquiri (Bolivia), Liuzhou China Tin Corp. (China), and Gejui Zi-Li (China) (CRU Tin Monitor, 2006c).

A new survey commissioned by ITRI Ltd. and conducted by Commodities Research Unit Ltd. and the World Bureau of Metal Statistics indicated that tin usage in solders throughout the world was considerably larger than previously estimated. Solders and tinplate have long been regarded as the "big two" applications for tin, but the new survey indicated that the global solder market was now more than twice the size of the tinplate sector. Tin usage in solder in 2004 was an estimated 141,000 t, 45% of total consumption, while tinplate usage was estimated at 63,000 t, or 20% of the world tin market. The third ranked

application, inorganic and organic tin chemicals, accounted for an estimated 48,000 t of tin, or 15% of the global market. Regional consumption patterns also emerged from the study. Asian producers of solder now dominated the global solder sector. About 100,000 t of tin went into solder making in Asia, and about one half of that amount was produced in China. The study also showed that 65% of China's solder sales were to the electronics market (CRU Tin Monitor, 2006b).

The production of flat glass for automotive windshields and office and residential windows has, for the past 35 years, been a small but important and growing segment of the tin usage pattern worldwide. Using a technique called "float glass," the glass is floated over a large vat of molten tin, and while the tin does not alloy with the glass, it has the proper characteristics of surface tension and vapor pressure to give the glass the desired properties of flatness and freedom from distortion. In recent years there has been concern among industry observers about overcapacity of float-glass production lines in China. Among the leading producers in China are: Asahi Glass Co. (Japan); Saint-Gobain Hankuk Co.; Shanghai Yaohua Pilkington Glass Co.; Fuyao Co.; and CSG Holding Co. Observers believe the float-glass industry in China may be ripe for consolidation (Glass Week, 2006).

Update

On April 21, 2006, the Platts Metals Week composite price for tin was \$5.83 per pound.

References Cited

- CRU Tin Monitor, 2006a, China drives consumption growth: CRU Tin Monitor, February, p. 3.
- CRU Tin Monitor, 2006b, Focus; survey of tin end-uses: CRU Tin Monitor, February, p. 6.
- CRU Tin Monitor, 2006c, The 2005 tin top ten: CRU Tin Monitor, February, p. 3.
- Glass Week, 2006, Chinese producers head toward consolidation: Glass Week, v. 56, no. 3, March, p. 13.

TABLE 1
SALIENT TIN STATISTICS¹

(Metric tons, unless otherwise noted)

	2005 ^P	2006		
	January- December	January	February	January- February
Production, secondary ^{e,2}	10,800	900	900	1,800
Consumption:				
Primary	35,900	3,190	3,010	6,200
Secondary	10,800	687	694	1,380
Imports for consumption, metal	37,500	4,370	NA	NA
Exports, metal	4,330	412	NA	NA
Stocks at end of period	5,400	5,380 ^f	5,400	XX
Prices (average cents per pound): ³				
Metals Week composite ⁴	443.03	463.85	507.70	XX
Metals Week New York dealer	329.69	340.11	375.87	XX
London, standard grade, cash	304.00	319.00	359.00	XX
Kuala Lumpur	301.83	317.41	351.84	XX

^eEstimated. ^PPreliminary. ^fRevised. 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
2005, December	457.37	418.38	443.03
2006:			
January	521.70	492.15	503.78
February	517.39	499.65	507.70

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, cobbles, etc.) (gross weight)	Tinplate (all forms)			Shipments ²
		Gross weight	Tin content	Tin per metric ton of plate (kilograms)	
2005 ^P	W	2,270,000	7,670	3.4	1,860,000
2006:					
January	4,670	179,000	569	3.2	166,000
February	4,640	173,000	563	3.2	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	2005		2006
	Year	December	January
Imports:			
Metal (unwrought tin):			
Bolivia	5,400	--	1,040
Brazil	2,150	125	100
Chile	20	--	--
China	4,510	526	256
Indonesia	5,220	475	1,400
Japan	--	--	--
Malaysia	1,530	96	--
Peru	18,300	540	1,570
Switzerland	--	--	--
Thailand	45	--	--
United Kingdom	67	21	--
Other	264	2	--
Total	37,500	1,780	4,370
Other (gross weight):			
Alloys	7,460	515	973
Bars and rods	1,030	65	91
Foil, tubes, pipes	8	--	(2)
Plates, sheets, strip	324	6	25
Waste and scrap	3,530	673	558
Miscellaneous	3,310	241	158
Total	15,700	1,500	1,810
Exports (metal)	4,330	307	412

-- Zero.

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

²Less than ½ unit.

Source: U.S. Census Bureau.

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

(Metric tons of contained tin)

Product	2005			2006				
	January- December ^p	January			February			January- February
		Primary	Secondary	Total	Primary	Secondary	Total	
Alloys (miscellaneous) ²	1,240	105	--	105 ^r	137	--	137	242
Babbitt	276	20 ^r	W	20 ^r	19	W	19	38
Bar tin and anodes	275	26 ^r	W	26 ^r	26	W	26	51
Bronze and brass	3,700	175	128	303	172	136	308	612
Chemicals	8,680	758	W	758	754	W	754	1,510
Collapsible tubes and foil	W	W	W	W	W	W	W	W
Solder	12,200	799 ^r	250 ^r	1,050	625	250	875	1,920
Tinning	740	69	--	69	72	--	72	141
Tinplate ³	7,670	569	--	569	563	--	563	1,130
Tin powder	W	W	--	W	W	--	W	W
White metal ⁴	W	W	--	W	W	--	W	W
Other	1,070	71	10	81	41	8	49	131
Total reported	35,900	2,590	387	2,980	2,410	394	2,800	5,780
Estimated undistributed consumption ⁵	10,800	600	300	900	600	300	900	1,800
Grand total	46,700	3,190	687	3,880	3,010	694	3,700	7,580

^pPreliminary. ^rRevised. W Withheld to avoid disclosing company 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.