

# Mineral Industry Surveys

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**For information, contact:**

James F. Carlin, Jr., Tin Commodity Specialist  
U.S. Geological Survey  
989 National Center  
Reston, VA 20192  
Telephone: (703) 648-4985, Fax: (703) 648-7757  
E-mail: jcarlin@usgs.gov

Evangeline J. Hemphill (Data)  
Telephone: (703) 648-7974  
Fax: (703) 648-7975  
E-mail: eisaac@usgs.gov

**Internet:** <http://minerals.usgs.gov/minerals>

## TIN IN DECEMBER 2006

Domestic consumption of primary tin in December was estimated to be 1%\* below that in November and 14%\* below that in December 2005. Estimated domestic consumption of primary tin in 2006 was 7% below that for 2005. Imports of refined tin during the first 11 months of 2006 were 39,800 metric tons (t), an increase of 11% compared with those for the comparable period of 2005.

The Platts Metals Week average composite price for tin in December was \$7.00 per pound, 9% above that in November and 58% higher than that in December 2005.

In the final week of December, the tin price edged upward to a new all-time high on the London Metal Exchange (LME) owing to continued concerns over supplies from Indonesia. The tin market is one of the smaller contracts on the LME, with less than 400,000 t being consumed worldwide in a year. However, developments in Indonesia have caused world tin shortages, leading to significant price increases. Illegal mines and smelters have been closed down by order of the Indonesian Government, raising expectations of sharp disruptions to 2007 supplies (Platts Metals Week, 2007).

According to the World Bureau of Metal Statistics (WBMS) (Ware, United Kingdom), the global tin market recorded a calculated market deficit of 4,700 t in the period January through October after allowing for reported Defense Logistics Agency (DLA) deliveries. World tin mine production was 283,000 t, almost 3% above the total for the previous year. Reported world production of refined tin was down by 2% to 306,200 t, compared with that in the first 10 months of 2005, and DLA deliveries were 8,100 t, bringing the total availability to about 314,000 t. World demand totaled 319,000 t. WBMS said that all of the increase was recorded in China. Global consumption rose by 31,000 t, with increases recorded in Japan (21%), China (16%), and the United States (6%) (Platts Metals Week, 2006).

Bluestone Tin Ltd. (Perth, Western Australia, Australia) reported a sharp increase in production at its Collingwood tin mine in Queensland, during the quarter ending December 31. Ore throughput was 260% higher than in the previous quarter, and with grades rising slightly to 1.21% tin, the tin content of the concentrates produced rose 300% to 600 t. Although

production at Collingwood was still falling short of target, the operation became profitable in December. The company also reported that studies to recommence production from the Renison and Mount Bischoff tin mines in Tasmania were entering the final mining approval phase. Bluestone has been carrying out site work to install a new primary crusher at Renison, which would treat ore from both mines. Also, a bankable feasibility study on tailings re-treatment at Renison was expected to start later in 2007, following larger scale test work to confirm likely tin recoveries (CRU Week in the News, 2007b§<sup>1</sup>).

On January 11, 2007, the Governor of the island of Bangka, Indonesia, gave privately owned tin smelters permission to apply for new operating permits after they were closed in October. The permits will only be awarded to companies which meet new, stricter standards, and it is unclear whether all smelters will be able to restart operations. Government officials observed that at least eight producers, including the three largest (in terms of production) privately owned smelters on the island, should have no problem receiving permits. Under the new guidelines, companies must have a valid mining license, install certain waste and pollution facilities, meet health and safety requirements, and source tin either from their own mining concessions or from other approved sources. Only smelters producing LME-grade material, with 99.85% tin content, will be allowed to export. Smelters will be fined if they do not pay royalties. More than 20 privately owned smelters on Bangka Island were shuttered in October in a dispute over mining licences and royalty payments, helping to drive LME prices to record highs. The eight smelters expected to be the first to receive permits include six from Bangka Island and two from nearby Belitung Island. The most likely to get licences are CV Donna Kembara Jaya, CV DS Jaya Abadi, PT Bangka Putra Karya, PT Bukit Timah, PT Bellitin Makmur Lestari, and PT Tinindo Internusa. Another 19 smelters on Bangka Island and Belitung Island may receive permits in the future, though it is unlikely that all will be allowed to restart. Private tin smelters

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\*Correction posted April 24, 2007.

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

are estimated to account for about one-half of output and exports from Bangka. PT Timah and PT Koba Tin account for the other half (Metal Bulletin, 2007).

The Indonesian Government announced that it would regulate inter-island trade of tin ore in 2007. The law will apply to shipments from Bangka Island, Belitung Island, and the Riau Islands. The aim of the restrictions is to close a loophole in the ban on exports of tin concentrates to other countries that has been in force since 2002. Restrictions on exports of semi-refined tin metal are also being considered as part of the Government's policy of clamping down on illegal mining (CRU Week in the News, 2007a§).

Vostek announced plans to build an \$80 million float glass factory in the Tver region of Russia in partnership with Chinese development company, the Ronghua Group. Construction was scheduled to begin in March 2007, and China State Construction Engineering Corp. will serve as the general contractor. The factory was projected to produce about 500 t of flat glass annually. The float glass process uses considerable amounts of molten tin, a process in which the molten glass is floated over molten tin (Glass Magazine, 2007).

Pilkington Group Ltd. (St. Helens, United Kingdom) now part of Nippon Sheet Glass Co. Ltd. (Tokyo, Japan), announced that it has entered a joint venture with Al Hamed Enterprises (Abu

Dhabi, United Arab Emirates) to build a \$200 million float glass facility in the Abu Dhabi Industrial Development Zone. The plant was expected to start operation in late 2008 (Glass Magazine, 2007).

### **Update**

On January 19, 2007, the Platts Metals Week composite price for tin was \$7.12 per pound.

### **References Cited**

- Glass Magazine, 2007, International briefs: Glass Magazine, v. 57, no. 1, January, p. 15-16.
- Metal Bulletin, 2007, Bangka tin smelters get permission to apply for new operating permits: Metal Bulletin, no. 8978, January 15, p. 8.
- Platts Metals Week, 2006, Tin: Platts Metals Week, v. 77, no. 51, December 18, p. 9.
- Platts Metals Week, 2007, LME tin price hits fresh record as supply problems persist: Platts Metals Week, v. 78, no. 1, January 1, p. 1, 11.

### **Internet References Cited**

- CRU Week in the News, 2007a (January 4), TIN, accessed January 4, 2007, via URL <http://www.crumonitor.com>.
- CRU Week in the News, 2007b (February 1), TIN, accessed February 1, 2007, via URL <http://www.crumonitor.com>.

TABLE 1  
SALIENT TIN STATISTICS<sup>1</sup>

(Metric tons, unless otherwise noted)

	2005	2006		
	January- December <sup>p</sup>	November	December	January- December
Production, secondary <sup>e, 2</sup>	10,800	900	900	10,800
Consumption:				
Primary	35,900	2,710 <sup>r</sup>	2,670	33,800
Secondary	10,800	697	686	8,350
Imports for consumption, metal	37,500	4,320	NA	NA
Exports, metal	4,330	547	NA	NA
Stocks at end of period	5,400	5,830 <sup>r</sup>	5,700	XX
Prices (average cents per pound): <sup>3</sup>				
Metals Week composite <sup>4</sup>	483.04	640.18	699.98	XX
Metals Week New York dealer	329.69	480.00	526.53	XX
London, standard grade, cash	304.00	457.00 <sup>r</sup>	505.00	XX
Kuala Lumpur	301.83	457.07	503.05	XX

<sup>e</sup>Estimated. <sup>p</sup>Preliminary. <sup>r</sup>Revised. NA Not available. XX Not applicable.

<sup>1</sup>Data are rounded to no more than three significant digits, except prices.

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

<sup>3</sup>Source: Platts Metals Week.

<sup>4</sup>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<sup>1</sup>

(Cents per pound)

Period	High	Low	Average
2005	496.08	469.82	483.04
2006:			
January	521.70	492.15	503.78
February	517.39	499.65	507.70
March	533.89	508.89	517.91
April	605.47	508.89	569.88
May	609.29	527.83	572.77
June	533.94	504.15	516.34
July	570.52	521.54	545.14
August	572.74	538.14	548.13
September	589.75	575.67	578.78
October	673.37	574.43	620.68
November	655.39	623.76	640.18
December	748.50	676.50	699.98

<sup>1</sup>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<sup>1</sup>

(Metric tons, unless otherwise noted)

Period	Tinplate waste (waste, strips, cobble, etc.) (gross weight)	Tinplate (all forms)			Shipments <sup>2</sup>
		Gross weight	Tin content	Tin per metric ton of plate (kilograms)	
2005 <sup>P</sup>	W	2,270,000	7,670	3.4	1,860,000
2006:					
January	4,890	190,000 <sup>r</sup>	578 <sup>r</sup>	3.0 <sup>r</sup>	166,000
February	4,640	181,000 <sup>r</sup>	585 <sup>r</sup>	3.2 <sup>r</sup>	138,000
March	4,870	192,000 <sup>r</sup>	620 <sup>r</sup>	3.2 <sup>r</sup>	166,000
April	4,640	176,000 <sup>r</sup>	596 <sup>r</sup>	3.4 <sup>r</sup>	144,000
May	4,860	186,000 <sup>r</sup>	598 <sup>r</sup>	3.2 <sup>r</sup>	166,000
June	4,820	196,000 <sup>r</sup>	633 <sup>r</sup>	3.2 <sup>r</sup>	165,000
July	4,660	175,000 <sup>r</sup>	555 <sup>r</sup>	3.2 <sup>r</sup>	152,000
August	5,210	166,000 <sup>r</sup>	534 <sup>r</sup>	3.2 <sup>r</sup>	159,000
September	4,420	171,000 <sup>r</sup>	541 <sup>r</sup>	3.2 <sup>r</sup>	143,000
October	4,730	168,000 <sup>r</sup>	532 <sup>r</sup>	3.2 <sup>r</sup>	144,000
November	4,700	168,000 <sup>r</sup>	526 <sup>r</sup>	3.1 <sup>r</sup>	127,000
December	3,980	162,000	510	3.1	NA

<sup>P</sup>Preliminary. <sup>r</sup>Revised. NA Not available. W Withheld to avoid disclosing company proprietary data.

<sup>1</sup>Data are rounded to no more than three significant digits.

<sup>2</sup>Source: American Iron and Steel Institute monthly publication.

TABLE 4  
U.S. TIN IMPORTS FOR CONSUMPTION AND EXPORTS<sup>1</sup>

(Metric tons)

Country or product	2005	2006		
		October	November	January- November
<b>Imports:</b>				
<b>Metal (unwrought tin):</b>				
Bolivia	5,400	525	527	7,650
Brazil	2,150	184	200	1,050
Chile	20	--	--	--
China	4,510	396	373	3,970
Hong Kong	--	99	--	99
Indonesia	5,220	45	674	4,300
Malaysia	1,530	--	--	245
Peru	18,300	2,720	2,370	19,800
Thailand	45	--	150	210
United Kingdom	67	198	--	1,290
Other	264	5	20	1,160
<b>Total</b>	<b>37,500</b>	<b>4,180</b>	<b>4,320</b>	<b>39,800</b>
<b>Other (gross weight):</b>				
Alloys	7,460	300	285	6,060
Bars and rods	1,030	266	289	2,370
Foil, tubes, pipes	8	3	21	32
Plates, sheets, strip	324	12	27	248
Waste and scrap	3,530	266	678	2,100
Miscellaneous	3,310	494	242	3,230
<b>Total</b>	<b>15,700</b>	<b>1,340</b>	<b>1,540</b>	<b>14,000</b>
Exports (metal)	4,330	485	547	4,930

-- Zero.

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

Source: U.S. Census Bureau.

TABLE 5  
CONSUMPTION OF TIN IN THE UNITED STATES, BY FINISHED PRODUCT<sup>1</sup>

(Metric tons of contained tin)

Product	2005			2006				
	January	November			December			January-
	December <sup>p</sup>	Primary	Secondary	Total	Primary	Secondary	Total	December
Alloys (miscellaneous) <sup>2</sup>	1,240	179 <sup>r</sup>	--	179 <sup>r</sup>	175	--	175	1,920
Babbitt	276	18 <sup>r</sup>	W	18 <sup>r</sup>	18	W	18	247
Bar tin and anodes	275	26	W	26	26	W	26	312
Bronze and brass	3,700	106	139	245	96	127	223	3,070
Chemicals	8,680	616	W	616	616	W	616	7,670
Collapsible tubes and foil	W	W	W	W	W	W	W	W
Solder	12,200	573 <sup>r</sup>	250	823 <sup>r</sup>	567	250	816	10,200
Tinning	740	37 <sup>r</sup>	--	37 <sup>r</sup>	34	--	34	477
Tinplate <sup>3</sup>	7,670	526 <sup>r</sup>	--	526 <sup>r</sup>	510	--	510	6,890
Tin powder	W	W	--	W	W	--	W	W
White metal <sup>4</sup>	W	W	--	W	W	--	W	W
Other	1,070	33 <sup>r</sup>	8	41 <sup>r</sup>	31	9	40	551
Total reported	35,900	2,110 <sup>r</sup>	397	2,510 <sup>r</sup>	2,070	386	2,460	31,300
Estimated undistributed consumption <sup>5</sup>	10,800	600	300	900	600	300	900	10,800
Grand total	46,700	2,710 <sup>r</sup>	697	3,410 <sup>r</sup>	2,670	686	3,360	42,100

<sup>p</sup>Preliminary. <sup>r</sup>Revised. W Withheld to avoid disclosing company proprietary data; included with "Other." -- Zero.

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

<sup>2</sup>Includes terne metal.

<sup>3</sup>Includes secondary pig tin and tin components of tinplating chemical solutions.

<sup>4</sup>Includes pewter, britannia metal, and jewelers' metal.

<sup>5</sup>Estimated consumption of plants reporting on an annual basis.