

# Mineral Industry Surveys

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## TIN IN AUGUST 2001

Domestic consumption of primary tin in August was estimated by the U.S. Geological Survey to be 2% higher than that in July and 8% lower than that in August 2000.

The Platts Metals Week average composite price for tin in August was \$2.69 per pound, 12% lower than that in July and 26% lower than that in August 2000. The August price decline was substantial, and the August price represented the lowest price of any month in 2001. Industry observers attributed the lower price to a slackening economy in many countries.

Continuing low tin prices have put various segments of the industry, especially tin miners, under considerable pressure. Reports from Russia indicate that some mining operations there have been closed down for the foreseeable future. Some mining operations, notably the newly established mines using the latest technologies (such as Marlborough Resources' Ardlethan Mine in Australia), do operate at very low costs. Others also may weather low prices with alert hedging arrangements, and still others may "produce" their way out of difficulty by keeping margins up with increased production. However, some producers' costs are now higher than London Metal Exchange (LME) tin prices and may cease operations. The depressed prices on the LME are partly due to the economic downturn in Japan and the United States (Tin International, 2001d).

Weirton Steel Corp. (Weirton, WV), a major domestic tinplate producer and user of tin, acknowledged continuing financial problems and announced that it would eliminate 550 positions from its workforce of about 4,000. The company also planned to reorganize in order to increase its focus on tinplate. Tin mill products account for about 40% of Weirton's revenues. Weirton is the 8th largest integrated domestic steel producer and is the second largest domestic tin mill products producer, behind only U.S. Steel Corp. (American Metal Market, 2001b).

In Bolivia, it was announced that Minera Huanuni SA, the wholly owned Bolivian subsidiary of Allied Deals Plc (England), is progressing with plans to lift production at its

Huanuni Tin mine. Engineering studies for the construction of a new ramped entrance to the underground mining operation were expected to be completed in September. The ramp entrance, about 1,800 meters in length, will provide access to new areas of mineralization and facilitate ore extraction. Huanuni is now producing about 750 metric tons (t) of tin ore daily, up from 350 t daily in 1999 before Allied Deals took control from Corporación Minera de Bolivia (COMIBOL) following its March 2000 privatization. The company expects its improvements to double mine output to about 1,500 t daily over the next year. Further investment is simultaneously planned to increase mill capacity and replace obsolete concentrator equipment; managers expected to increase recovery levels from the current 82% to 90% (American Metal Market, 2001a).

In Indonesia, PT Tambang Timah, the world's largest integrated tin producer, announced that it might abandon its operations on Bangka Island if the company loses its appeal against a proposed 20% tin sales tax by the regional government. As part of the ongoing devolution of powers from central to regional assemblies in Indonesia, responsibility for mining laws passed to states earlier this year. The 20% tax was proposed at the end of August, but there is a period of one month for appeals (Tin International, 2001c).

In China, reports indicate that the Nandan Tin mine flooded on July 17 in a major catastrophe. The mine reportedly accounted for about 7,000 t of tin-in-concentrate production annually. After central government officials took over the investigation, a number of people were arrested, including mine operators and local government officials. At least 80 workers were killed in the accident. The accident may have occurred because drilling was conducted too close to an abandoned water-filled shaft. Since the accident, the Government has been acting to eradicate illegal mining. All mining in the immediate region was halted (Tin International, 2001a).

In England, Baseresult, Plc, the company that owns the South Crofty Tin mine in the Cornwall district, announced that it

would pump water from flooded mineshafts by yearend. South Crofty, the last deep mine operating in England, was closed 3 years ago. Baseresult expects to be producing up to 2,000 t annually at a cost of less than \$4,000 per t (Tin International, 2001b).

In Thailand, the Department of Industry is proposing to eliminate buffer stock fees and reduce royalty fees collected from the country's tin miners. The number of tin mining companies in Thailand totals fewer than 35 compared with more than 600 before 1985. Thailand's only tin smelter, Thailand Smelting & Refining Co. (Thaisarco), continues to rely on imported tin ore. The company imported about 30,000 t of tin concentrates in 2000, mostly from Australia, Laos, and Peru. Of the 17,500 t of tin metal produced by Thaisarco in 2000, only 2,100 t came from domestically produced ore. However, Thai concentrates had an average grade of 72% tin compared with only 50% tin in the case of much of the imported ore. Only 4,500 t of Thaisarco's (2000) tin output was consumed domestically, with the remainder exported mostly to Japan, the Netherlands, and the United States (American Metal Market, 2001c).

In London, it was reported that a major tin trading firm, RMT Metals Plc, was forced to cease trading in mid-August due to cash flow problems relating to the sharp decline in tin prices this year. The firm also has a New York office. Court-appointed administrators have taken control of the firm, and hope to achieve stability (Platts Metals Week, 2001).

European tinsplate producers are concerned about plans to revise the European Commission's packaging directive this fall, fearing the revisions would put an unfair recycling burden on the industry. The European organization for Packaging and the Environment and APEAL, a European trade lobbying group for the metal packaging industry, have been two of the most prominent organizations challenging the new plans. The new plan will likely call for overall packaging material recycling targets in each member state to be increased to 60%, from 55%. And, for the first time, individual targets of at least 15% to 20% are proposed for each type of packaging material, although the target for steel and aluminum, both easier to

recycle than plastics, may be as high as 70%. Opponents believe the new recycling targets for steel (tin cans) and aluminum may be too high and could lead to punitive costs. APEAL stated that a 60% tinsplate recycling target is achievable but that it would take time to build the necessary infrastructure in each member state. APEAL data for 1999 indicate that steel packaging recycling rates ranged from 10% in Italy to 80% in Germany (American Metal Market, 2001d).

A new lanthanum-nickel-tin alloy with a high hydrogen storage capacity that does not decay over many charge-discharge cycles has been developed by the Department of Energy's Brookhaven National Laboratory in Upton, NY. The alloy is said to be relatively inexpensive and environmentally benign (Advanced Materials & Processes, 2001).

### Update

On September 28, 2001, the Platts Metals Week composite price for tin was \$2.71 per pound.

### References Cited

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- 2001b, South Crofty clear to reopen: Tin International, v. 74, no. 7, September, p. 4.
- 2001c, Timah threatens to leave Bangka: Tin International, v. 74, no. 7, September, p. 2.
- 2001d, Uncertainty clouds industry horizon: Tin International, v. 74, no. 7, September, p. 2.

TABLE 1  
SALIENT TIN STATISTICS 1/

(Metric tons, unless otherwise noted)

	2000 p/	2001		January- August
		July	August	
Production, secondary e/ 2/	10,800	900	900	7,200
<b>Consumption:</b>				
Primary	42,000	3,200	3,280	26,200
Secondary	10,700	855	883	6,950
Imports for consumption, metal	44,900	3,630	NA	NA
Exports, metal	6,640	245	NA	NA
Stocks at end of period	10,400	8,760 r/	8,970	XX
<b>Prices (average cents per pound): 3/</b>				
Metals Week composite 4/	370.16	306.98	268.50	XX
Metals Week New York dealer	254.92	204.94	185.28	XX
London, standard grade, cash	246.00	197.00	177.00	XX
Kuala Lumpur	244.12	194.54	173.21	XX

e/ Estimated. p/ Preliminary. 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
<b>2000:</b>			
August	372.25	362.15	363.52
September	375.60	365.86	372.11
October	368.35	355.28	362.14
November	364.20	355.77	361.05
December	361.83	355.46	359.43
Year	405.27	355.46	370.16
<b>2001:</b>			
January	359.90	350.60	355.86
February	355.03	349.76	352.96
March	352.74	341.70	348.45
April	346.75	340.32	342.70
May	348.21	336.94	342.78
June	359.89	325.63	332.74
July	359.89	291.50	306.98
August	291.44	270.73	268.50

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)			Shipments 2/
		Gross weight	Tin content	Tin per metric ton of plate (kilograms)	
2000 p/	W	1,720,000	8,990	5.2	2,290,000
2000:					
December	W	107,000	646	6.0	162,000
2001:					
January	W	W	710	7.3	179,000
February	W	92,800	679	7.3	160,000
March	W	102,000	663	6.5	167,000
April	W	90,700	698	7.7	162,000
May	W	88,900	679	7.6	181,000
June	W	80,600	666	8.3	175,000
July	W	80,300	514	6.4	167,000
August	W	W	511	6.2	NA

p/ Preliminary. 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	2000	2001		
		June	July	January- July
<b>Imports:</b>				
<b>Metal (unwrought tin):</b>				
Bolivia	6,330	1,220	891	4,300
Brazil	5,860	381	360	2,900
Chile	2,630	--	--	122
China	10,200	495	339	5,280
Hong Kong	397	--	--	20
Indonesia	5,320	140	299	2,480
Malaysia	214	6	--	222
Peru	12,800	400	1,710	8,730
Russia	145	--	--	141
Singapore	20	--	--	105
United Kingdom	514	--	12	118
Other	434	23	24	313
<b>Total</b>	<b>44,900</b>	<b>2,670</b>	<b>3,630</b>	<b>24,700</b>
<b>Other (gross weight):</b>				
Alloys	4,370	299	130	1,880
Bars and rods	993	41	20	346
Foil, tubes, pipes	(2/)	(2/)	(2/)	(2/)
Plates, sheets, strip	588	1	6	34
Waste and scrap	2,340	142	61	3,390
Miscellaneous	8,510	1,730	1,000	8,790
<b>Total</b>	<b>16,800</b>	<b>2,210</b>	<b>1,220</b>	<b>14,400</b>
<b>Exports (metal)</b>	<b>6,640</b>	<b>350</b>	<b>245</b>	<b>2,910</b>

-- 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	2000 p/	2001						
		July			August			January- August
		Primary	Secondary	Total	Primary	Secondary	Total	
Alloys (miscellaneous) 2/	1,430	124 r/	W	124 r/	126	W	126	1,000
Babbitt	249	30	W	30	25	W	25	242
Bar tin and anodes	294	20	W	20	20	W	20	166
Bronze and brass	2,800	89	109	198	114	138	252	1,780
Chemicals	8,180	668	W	668	668	W	668	5,350
Collapsible tubes and foil	W	W	W	W	W	W	W	W
Solder	16,900	998	411	1,410	1,050	410	1,460	10,800
Tinning	666	73	--	73	74	--	74	614
Tinplate 3/	9,020	514	--	514	511	--	511	5,120
Tin powder	195	W	W	W	W	W	W	W
White metal 4/	10	W	W	W	W	W	W	W
Other	2,240	86	35	121	83	35	118	863
Total reported	41,900	2,600	555	3,160	2,680	583	3,260	26,000
Estimated undistributed consumption 5/	10,800	600	300	900	600	300	900	7,200
Grand total	52,700	3,200	855	4,060	3,280	883	4,160	33,200

p/ Preliminary. r/ Revised. W Withheld to avoid disclosing company 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.