

# Mineral Industry Surveys

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## TIN IN JULY 2001

Domestic consumption of primary tin in July was estimated by the U.S. Geological Survey to be 2% lower than that in June and 10% lower than that in July 2000.

The Platts Metals Week average composite price for tin in July was \$3.07 per pound, 8% lower than that in June and 16% lower than that in July 2000.

Along with most other base metals, the price of tin has been falling on the world's metals exchanges as a consequence of a global economic slowdown in the manufacturing sector. During July, the tin price steadily declined, breaching the post-1985 "Tin Crash" London Metal Exchange (LME) cash low of \$4,310 per metric ton (t) seen in September 1993. The tin price reached a modern all-time low LME cash price of \$3,630 per t on August 7 (Tin International, 2001h).

U.S. Steel Corp. (Pittsburgh, PA), citing poor market conditions, announced the permanent closure of the cold rolling and tin mill operations at its Fairless Works (PA) by November 12. The closure, along with U.S. Steel's recent shutdown of the former LTV Steel tin mill (U.S. Steel had acquired all of LTV's various tin mills late in 2000) in Aliquippa, PA, will remove about 1 million metric tons (Mt) of tin mill capacity from the North American market. Domestic demand for tin mill products has been relatively flat for the past decade, at an estimated 4 to 4.5 Mt per year. U.S. Steel will have 1.2 Mt per year of tin mill capacity after Fairless closes. The corporation also has an additional 530,000 t of tin mill capacity at USS-Posco Industries Inc., its joint venture steel plant with Pohang Iron and Steel Co. (South Korea) in Pittsburgh, CA. The Fairless facility can produce about 1.5 Mt per year of cold rolled and tin mill products. The firm indicated that nearly 600 of the roughly 700 unionized employees at Fairless would be affected by the closure. Peak employment at the plant was over 8,000 workers in 1974 (Metal Bulletin, 2001).

In China, a tin mining disaster on July 17, at Nandan, in Guangxi province, reportedly claimed the lives of an unknown but substantial number of miners and halted production.

According to some reports, up to 400 miners may have been killed when the tin mine was flooded (Tin International, 2001f).

Tin Technology Ltd., in Uxbridge, England, the organization representing major tin producers, smelters, and consuming industries, has signed a co-operative agreement with Yunnan Tin Corp., China's largest tin producer. The agreement commits the two parties to a number of initiatives including joint research projects, technology transfer, and market development in China (Tin International, 2001b).

Murchison United Ltd. announced progress toward finalizing an agreement to acquire Rio Tinto plc's 49% interest in Somincor, the holding company for the Neves Corvo copper/tin mine in Southern Portugal. The agreement is conditional upon the approval of the Portuguese Government. Murchison already owns and operates the large Renison Bell tin mine in Tasmania, Australia (Tin International, 2001e).

In Australia, Marlborough Resources Ltd. announced the start-up of their Ardlethan tin mine ahead of schedule, on June 29 (Tin International, 2001d).

In Bolivia, Allied Deals Corp. announced substantial progress with their Vinto tin smelter and their Huanuni tin mine, both acquired in March 2000. The Huanuni tin mine is currently Allied's major focus, with the firm committed to investing \$10 million by March 2002. The first major investment at the mine will be to replace shaft mining with ramp mining. The ramp construction was scheduled to begin by yearend. At the time of the takeover, head grades at the mine were around 4.5%. The second project will be to modernize the mill. For much of 2000, Huanuni was beset with civil unrest, including theft from the mine and attacks on employees. Allied reports that Huanuni's output has increased by 40-50% compared to when it was part of the Government's COMIBOL operation (Tin International, 2001a).

Crown Cork and Seal Corp. (Philadelphia, PA) is the world's largest container manufacturer and also the largest user of tinsplate. It uses over 1.8 Mt annually. In Europe alone, Crown uses about 1.3 Mt of tinsplate yearly. In Europe, food packaging

is the firm's major use of tinplate, with over 800,000 t of tinplate used annually to make food cans. Crown has worldwide sales of \$7.3 billion, of which 45% are in Europe. The company employs 35,000 people in 51 countries, operating 223 plants (Tin International, 2001c).

In the Republic of Korea, POSCO, one of the world's major steel producers and a top tinplate maker, announced the start of a project to improve tinplate production at its Pohang Works. The project, due to be completed by March 2002, is for increasing maximum tinplate coil width to 1,220 millimeters (mm) from the present 1,016 mm. When the project is completed, POSCO will be able to increase its annual tinplate production capacity by 50,000 t to a total of 247,000 t. POSCO considers the project essential to meet the growing preference for wider tinplate coils among can makers (Tin International, 2001g).

### **Update**

On August 31, 2001, the Platts Metals Week composite price for tin was \$2.80 per pound, a rebound of a few cents

from the modern all-time low.

### **References Cited**

- Metal Bulletin, 2001, USS shuts CR and tin mill operations at Fairless and blames unfair imports: Metal Bulletin, no. 8600, August 16, 2001, p. 3.
- Tin International, 2001a, Allied Deals on track with Vinto operation: Tin International, v. 74, no. 6, July/August, p. 6-8.
- 2001b, Co-operation agreement signed between Tin Technology and Chinese tin industry: Tin International, v. 74, no. 6, July/August, p. 3.
- 2001c, Crown Cork and Seal part 1: Tin International, v. 74, no. 6, July/August, p. 9-15.
- 2001d, Marlborough brings Ardlethan onstream ahead of schedule: Tin International, v. 74, no. 6, July/August, p. 5.
- 2001e, Murchison to complete Somincor deal soon: Tin International, v. 74, no. 6, July/August, p. 5.
- 2001f, Mine disaster in China claims many lives, stops production: Tin International, v. 74, no. 6, July/August, p. 2.
- 2001g, POSCO expands tin mill facilities: Tin International, v. 74, no. 6, July/August, p. 20.
- 2001h, Tin price falls to modern all-time low: Tin International, v. 74, no. 6, July/August, p. 2.

TABLE 1  
SALIENT TIN STATISTICS 1/

(Metric tons, unless otherwise noted)

|                                      | 2000 p/ | 2001     |        |                  |
|--------------------------------------|---------|----------|--------|------------------|
|                                      |         | June     | July   | January-<br>July |
| Production, secondary e/ 2/          | 10,800  | 900      | 900    | 6,300            |
| Consumption:                         |         |          |        |                  |
| Primary                              | 42,000  | 3,270    | 3,200  | 22,900           |
| Secondary                            | 10,700  | 858      | 855    | 6,070            |
| Imports for consumption, metal       | 44,900  | 2,670    | NA     | NA               |
| Exports, metal                       | 6,640   | 350      | NA     | NA               |
| Stocks at end of period              | 10,400  | 8,760 r/ | 8,970  | XX               |
| Prices (average cents per pound): 3/ |         |          |        |                  |
| Metals Week composite 4/             | 370.16  | 332.74   | 306.98 | XX               |
| Metals Week New York dealer          | 254.92  | 226.90   | 204.94 | XX               |
| London, standard grade, cash         | 246.00  | 219.00   | 197.00 | XX               |
| Kuala Lumpur                         | 244.12  | 214.29   | 194.54 | 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 |
|-----------|--------|--------|---------|
| 2000:     |        |        |         |
| July      | 372.25 | 362.15 | 366.03  |
| 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  |
| 2001:     |        |        |         |
| 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  |

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.

Source: Platts Metals Week.

TABLE 3  
TINPLATE PRODUCTION AND SHIPMENTS IN THE UNITED STATES 1/

(Metric tons, unless otherwise noted)

| Period   | Tinplate waste<br>(waste, strips,<br>cobble, etc.)<br>(gross weight) | Tinplate (all forms) |                |  | Shipments 2/ |
|----------|--|----------------------|----------------|--|--------------|
|          |  | Gross<br>weight      | Tin<br>content | Tin per<br>metric ton<br>of plate<br>(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  | 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  |       |                  |
|------------------------|--------|-------|-------|------------------|
|                        |        | May   | June  | January-<br>June |
| Imports:               |        |       |       |                  |
| Metal (unwrought tin): |        |       |       |                  |
| Bolivia                | 6,330  | 120   | 1,220 | 3,400            |
| Brazil                 | 5,860  | 641   | 381   | 2,540            |
| Chile                  | 2,630  | --    | --    | 122              |
| China                  | 10,200 | 708   | 495   | 4,950            |
| Hong Kong              | 397    | 20    | --    | 20               |
| Indonesia              | 5,320  | 620   | 140   | 2,180            |
| Malaysia               | 214    | 60    | 6     | 222              |
| Peru                   | 12,800 | 1,560 | 400   | 7,020            |
| Russia                 | 145    | --    | --    | 141              |
| Singapore              | 20     | 105   | --    | 105              |
| United Kingdom         | 514    | --    | --    | 107              |
| Other                  | 434    | 65    | 23    | 288              |
| Total                  | 44,900 | 3,900 | 2,670 | 21,100           |
| Other (gross weight):  |        |       |       |                  |
| Alloys                 | 4,370  | 196   | 299   | 1,750            |
| Bars and rods          | 993    | 45    | 41    | 326              |
| Foil, tubes, pipes     | (2/)   | (2/)  | (2/)  | (2/)             |
| Plates, sheets, strip  | 588    | 3     | 1     | 28               |
| Waste and scrap        | 2,340  | 97    | 142   | 3,330            |
| Miscellaneous          | 8,510  | 1,010 | 1,730 | 7,790            |
| Total                  | 16,800 | 1,350 | 2,210 | 13,200           |
| Exports (metal)        | 6,640  | 309   | 350   | 2,670            |

-- 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    |           |       |         |           |       | January-<br>July |
|---|---------|---------|-----------|-------|---------|-----------|-------|------------------|
|   |         | June    |           |       | July    |           |       |                  |
|   |         | Primary | Secondary | Total | Primary | Secondary | Total |                  |
| Alloys (miscellaneous) 2/                 | 1,430   | 122     | W         | 122   | 122     | W         | 122   | 873              |
| Babbitt                                   | 249     | 28      | W         | 28    | 30      | W         | 30    | 217              |
| Bar tin and anodes                        | 294     | 20      | W         | 20    | 20      | W         | 20    | 146              |
| Bronze and brass                          | 2,800   | 109     | 119       | 228   | 89      | 109       | 198   | 1,530            |
| Chemicals                                 | 8,180   | 668     | W         | 668   | 668     | W         | 668   | 4,680            |
| Collapsible tubes and foil                | W       | W       | W         | W     | W       | W         | W     | W                |
| Solder                                    | 16,900  | 888     | 404       | 1,290 | 998     | 411       | 1,410 | 9,360            |
| Tinning                                   | 666     | 76      | --        | 76    | 73      | --        | 73    | 540              |
| Tinplate 3/                               | 9,020   | 666     | --        | 666   | 514     | --        | 514   | 4,610            |
| Tin powder                                | 195     | W       | W         | W     | W       | W         | W     | W                |
| White metal 4/                            | 10      | W       | W         | W     | W       | W         | W     | W                |
| Other                                     | 2,240   | 88      | 35        | 123   | 86      | 35        | 121   | 745              |
| Total reported                            | 41,900  | 2,670   | 558       | 3,220 | 2,600   | 555       | 3,160 | 22,700           |
| Estimated undistributed<br>consumption 5/ | 10,800  | 600     | 300       | 900   | 600     | 300       | 900   | 6,300            |
| Grand total                               | 52,700  | 3,270   | 858       | 4,120 | 3,200   | 855       | 4,060 | 29,000           |

p/ Preliminary. 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 terre 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.