

Mineral Industry Surveys

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

Elsie D. Isaac (Data)
Telephone: (703) 648-7950
Fax: (703) 648-7975
E-mail: eisaac@usgs.gov
MINES FaxBack: (703) 648-4999
Internet: <http://minerals.usgs.gov/minerals>

TIN IN OCTOBER 2000

Domestic consumption of primary tin in October was estimated by the U.S. Geological Survey to be about 2% higher than that in September and about 5% higher than that in October 1999.

The *Platt's Metals Week* average composite price for tin in October was \$3.62 per pound, 3% lower than in September, and 2% lower than in October 1999. The \$3.62 price represented the lowest average monthly price during 2000.

Tin import data available in October indicate that Peru had advanced from its position as the second-leading tin supplier for the United States in 1999 to become the leading U.S. source in the first 9 months of 2000.

Kawasaki Steel Corp. (Tokyo, Japan) announced the development of a new tin-free steel which, when used in the bodies of large-sized cans and pails, can be welded without the need for pre-weld grinding and waxing. Tin-free steels for such applications are coated with an electric insulating material that must be removed by grinding before welding. The new tin-free steel is as electrically conductive as thin tinplate so it can be welded just as easily as tinplate. In addition, the new steel has the same degree of smoothness as tinplate and has the same paintability as conventional tin-free steels. The new steel is produced at Kawasaki's Chiba Works, east of Tokyo (*American Metal Market*, 2000).

The largest Chilean steel producer, Compañía Siderúrgica Huachipato (CSH), a subsidiary of Chile's Cap Group, is celebrating its 50th anniversary. CSH is Chile's only integrated steelmaker. Located along the San Vicente Bay in southern Chile, the plant employs almost 3,000 workers and has the capacity to produce 1.2 million metric tons (t) of steel annually. Among its several finishing mills is a tin mill with a Ferrostan electrolytic tinning line that has an annual capacity of 100,000 t (*Metal Bulletin Monthly*, 2000b).

Compañía Siderúrgica Nacional (CSN), Brazil's largest steelmaker, announced that it is seeking contractors to modernize its no. 3 and no. 5 electrolytic tinning lines at its Volta Redonda Works. Work is expected to start in January 2001 on the \$150 million modernization. The upgrade will allow CSN to produce

thinner and more sophisticated grades of tinplate, including double-reduced grades as well as drawing and ironing grades for two-piece beverage cans. CSN has six tinning lines at Volta Redonda with a combined capacity of 1.1 million t of tinplate annually. CSN is the world's fifth largest tinplate producer and the largest on a single site. Currently, 70% of CSN's tinplate output is used domestically and 30% is exported (*Metal Bulletin*, 2000a).

China's largest tin producer, Yunnan Tin Corp., announced that it expects to complete installation of its new Ausmelt furnace, replacing seven reverberatory furnaces in its Gejiu City tin smelter by Summer 2001. Yunnan indicated that due to the age of its facility, the modernization program had encountered some delays. The new furnace will process 50,000 metric tons per year (t/yr) of tin concentrate and produce 24,000 t/yr of refined tin ingot (*Platt's Metals Week*, 2000).

In Australia, Murchison United Plc, owner of the Renison Bell tin mine, the country's largest, announced that its tin production in the third quarter of 2000 had declined about 17% from the third quarter of 1999. Officials attributed the decline to lower head grades as well as a maintenance shutdown in July. Recent head grades were reportedly 1.6% as compared to 1.8% in 1999. Murchison announced that a feasibility study had begun to examine the treatment of tailings at Renison Bell. Bechtel Corp. has completed a pre-feasibility study which suggests production costs of \$1,900 per ton. The mine has 19 million t of tailings grading 0.4%. Murchison is now also a bidder for Rio Tinto Plc's 49% stake in Somincor (Portugal), an important tin producer (*Metal Bulletin*, 2000b).

PT Timah (Jakarta, Indonesia), the country's largest tin producer and the world's largest tin-producing organization, announced that it expected its refined tin production to decline to 36,000 t in 2000, compared to 41,000 t in 1999. It forecast 2001 production at 33,000 t. Timah attributed lower output next year to predicted poor weather and declining resources. Timah is still attempting to resolve long-standing land ownership issues with local inhabitants on the islands of Bangka and Belitung, the sites of most of its tin mining and smelting. Timah acknowledged that

additional uncertainty looms as the Indonesian Government appears set to declare Bangka Island as a province, possibly giving local authorities autonomous powers. If that becomes a reality, Timah may be forced to pay separate royalties to the local Bangka provincial administration. Timah is currently seeking opportunities to expand its tin operations into Burma, Cambodia, and Vietnam (Metal Bulletin, 2000c).

In Malaysia, the Kuala Lumpur Tin Market (KLTM) announced that it has received the needed approvals for trading its tin contracts in United States dollars; its board subsequently decided to change contract pricing from the Malaysian ringgit to the dollar starting on February 2, 2001. The KLTM was established in 1984 as a physical market to provide facilities for buying and selling tin and for the daily determination of tin prices. Its contract calls for trading tin on warrants for prompt delivery, within four business days, of the following brands: MSC (Malaysia), Thaisarco (Thailand), and Bangka and Mentok (both Indonesia). The KLTM daily price quotation has been traditionally used as a reference price for contract pricing for producers and consumers in the Asia-Pacific region which produces over 80% of the world's tin. Although Malaysia, for most of the past century the world's foremost tin producer, has seen its tin mine production fall drastically to less than 3% of world supply, it is still an important center for tin smelting and also a growing user of tin. Malaysian mines now produce around 7,000 t of tin yearly and consumption is about 5,000 t yearly. More than 80% of KLTM's monthly turnover is contributed by foreign suppliers-miners-smelters-traders. Along with the change to a dollar contract, the KLTM board also decided to introduce electronic daily trading to replace the current pit system of daily price setting. This new system is to be implemented by June 2001 (Tin International, 2000).

A recently published periodical article focuses on competitive pressures in the European beverage container market, where tinplated steel competes against aluminum, glass, and plastics. Small, single-serving plastic bottles have become more competitive against metal containers in the soft drink sector of the European market in recent years. The European beverage container market is about one-third the size of its counterpart in the United States (33 billion containers versus 100 billion containers) (Metal Bulletin Monthly, 2000a).

Update

On December 8, 2001, the *Platt's Metals Week* composite price for tin was \$3.62 per pound.

References Cited

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- Metal Bulletin, 2000a, CSN upgrades two tinning lines: Metal Bulletin, no. 8528, November 23, p. 17.
- 2000b, Murchison's Renison Bell mine sees lower output: Metal Bulletin, no. 8522, November 2, p. 5.
- 2000c, PT Timah predicts output will decline in 2001: Metal Bulletin, no. 8526, November 16, p. 9.
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- 2000b, Huachipato ready for better times: Metal Bulletin Monthly, no. 358, October, p. 25.
- Platt's Metals Week, 2000, Yunnan to complete upgrade: Platt's Metals Week, v. 71, no. 47, November 20, p. 2.
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TABLE 1
SALIENT TIN STATISTICS 1/

(Metric tons, unless otherwise noted)

	1999	2000		January- October
		September	October	
Production, secondary e/ 2/	16,300	900	900	9,000
Consumption:				
Primary	38,400	3,510	3,570	35,400
Secondary	8,890	887	890	8,940
Imports for consumption, metal	47,500	3,090	NA	NA
Exports, metal	6,770	607	NA	NA
Stocks at end of period	10,700	8,210	7,640	XX
Prices (average cents per pound): 3/				
Metals Week composite 4/	365.98	372.11	362.14	XX
Metals Week New York dealer	254.54	257.31	247.50	XX
London, standard grade, cash	245.00	248.00	240.00	XX
Kuala Lumpur	240.70	245.07	238.20	XX

e/ Estimated. 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: Platt's 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
1999:			
October	383.67	363.53	369.61
November	397.54	385.56	391.55
December	403.52	381.53	386.61
Year	403.52	343.72	365.98
2000:			
January	405.27	390.75	397.72
February	391.72	377.25	382.84
March	383.26	364.68	373.01
April	371.49	365.85	368.16
May	369.58	363.91	367.72
June	373.83	362.99	368.23
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

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: Platt's Metals Week.

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

(Metric tons, unless otherwise noted)

Period	Tinplate waste (waste, strips, cobble, etc.) (gross weight)	Tinplate (all forms)			Shipments 2/
		Gross weight	Tin content	Tin per metric ton of plate (kilograms)	
1999	W	1,750,000	9,080	5.2	2,370,000
2000:					
January	W	141,000	718	5.1	184,000
February	W	144,000	785	5.5	175,000
March	W	155,000	810	5.2	203,000
April	W	149,000	736	4.9	170,000
May	W	156,000	816	5.2	219,000
June	W	149,000	795	5.3	203,000
July	W	165,000	780	4.7	182,000
August	W	157,000	795	5.1	214,000
September	W	145,000	761	5.3	203,000
October	W	138,000	724	5.2	NA

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			
	1999	August	September	January- September
Imports:				
Metal (unwrought tin):				
Bolivia	3,850	339	279	5,350
Brazil	4,700	620	440	4,460
Chile	3,980	--	368	2,090
China	13,900	722	578	7,760
Hong Kong	261	--	--	397
Indonesia	7,930	419	539	4,140
Japan	282	--	--	--
Malaysia	944	--	--	--
Peru	11,000	1,430	845	9,330
Russia	--	--	--	145
Singapore	60	--	--	20
Thailand	20	--	--	--
United Kingdom	60	2	--	216
Other	533	20	45	424
Total	47,500	3,550	3,090	34,300
Other (gross weight):				
Alloys	3,090	359	279	3,050
Bars and rods	872	95	101	776
Foil, tubes, pipes	1	--	--	--
Plates, sheets, strip	122	136	18	569
Waste and scrap	2,730	181	233	1,670
Miscellaneous	2,290	605	1,580	6,730
Total	9,100	1,380	2,210	12,800
Exports (metal)	6,770	568	607	4,570

-- Zero.

1/ 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 1/

(Metric tons of contained tin)

Product	2000							
	1999	September			October			January- October total 2/
		Primary	Secondary	Total	Primary	Secondary	Total	
Alloys (miscellaneous) 3/	W	119	W	119	124	W	124	1,220
Babbitt	1,610	W	W	W	W	W	W	249
Bar tin and anodes	718	24	W	24	25	W	25	245
Bronze and brass	3,410	108	125	233	106	128	234	2,410
Chemicals	8,220	682	W	682	682	W	682	6,810
Collapsible tubes and foil	45	W	W	W	W	W	W	W
Solder	18,700	876	417	1,290	909	417	1,330	14,000
Tinning	862	57	--	57	47	--	47	574
Tinplate 4/	9,150	761	--	761	724	--	724	7,720
Tin powder	W	48	--	48	W	--	W	195
White metal 5/	892	W	--	W	W	W	W	10
Other	3,620	236	45	281	352	45	397	1,940
Total reported	47,300	2,910	587	3,500	2,970	590	3,560	35,300
Estimated undistributed consumption 6/	--	600	300	900	600	300	900	8,970
Grand total	47,300	3,510	887	4,400	3,570	890	4,460	44,300

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/ May include revisions for prior months.

3/ Includes terre metal.

4/ Includes secondary pig tin and tin components of tinplating chemical solutions.

5/ Includes pewter, britannia metal, and jewelers' metal.

6/ Estimated consumption of plants reporting on an annual basis.