

**ALUMINUM<sup>1</sup>**

(Data in thousand metric tons of metal unless otherwise noted)

**Domestic Production and Use:** In 2004, 6 companies operated 14 primary aluminum reduction plants; 6 smelters continued to be temporarily idled. Based upon published market prices, the value of primary metal production was \$4.5 billion. Aluminum consumption was centered in the East Central United States. Transportation accounted for an estimated 38% of domestic consumption; the remainder was used in packaging, 29%; building, 13%; consumer durables, 6%; electrical, 6%; and other, 8%.

<b>Salient Statistics—United States:</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004<sup>e</sup></b>
Production:					
Primary	3,668	2,637	2,707	2,703	2,500
Secondary (from old scrap)	1,370	1,210	1,170	1,070	1,200
Imports for consumption	3,910	3,740	4,060	4,130	4,300
Exports	1,760	1,590	1,590	1,540	1,700
Consumption, apparent <sup>2</sup>	7,530	6,230	6,320	6,130	6,300
Price, ingot, average U.S. market (spot), cents per pound	74.6	68.8	64.9	68.1	82.0
Stocks:					
Aluminum industry, yearend	1,550	1,300	1,320	1,400	1,500
LME, U.S. warehouses, yearend <sup>3</sup>	( <sup>4</sup> )	28	45	207	100
Employment, number <sup>5</sup>	77,800	71,200	61,700	58,300	58,200
Net import reliance <sup>6</sup> as a percentage of apparent consumption	33	38	39	38	41

**Recycling:** In 2004, aluminum recovered from purchased scrap was about 3 million tons, of which about 60% came from new (manufacturing) scrap and 40% from old scrap (discarded aluminum products). Aluminum recovered from old scrap was equivalent to about 19% of apparent consumption.

**Import Sources (2000-03):** Canada, 59%; Russia, 17%; Venezuela, 5%; Mexico, 2%; and other, 17%.

<b>Tariff: Item</b>	<b>Number</b>	<b>Normal Trade Relations 12-31-04</b>
Unwrought (in coils)	7601.10.3000	2.6% ad val.
Unwrought (other than aluminum alloys)	7601.10.6000	Free.
Waste and scrap	7602.00.0000	Free.

**Depletion Allowance:** Not applicable.<sup>1</sup>

**Government Stockpile:** None.

## ALUMINUM

**Events, Trends, and Issues:** Domestic primary aluminum production decreased owing to cutbacks attributed to increased energy and alumina costs. Most of the production decreases continued to take place in the Pacific Northwest. Domestic smelters operated at about 63% of rated or engineered capacity.

Imports for consumption continued to increase, filling some of the supply deficit created by increases in demand and decreases in domestic production. Canada and Russia continued to account for approximately three-fourths of total imports. U.S. exports also increased in 2004. Canada, Mexico, and China, in descending order, received more than 80% of total U.S. exports.

Although the price of primary aluminum fluctuated through September 2004, it generally trended upward. In January, the average monthly U.S. market price for primary ingot quoted by Platts Metals Week was 76.6 cents per pound; in September, the price was 84.4 cents per pound. Prices on the London Metal Exchange (LME) followed the trend of U.S. market prices, but contracts traded in a slightly narrower range. The monthly average LME cash price for September was 78.2 cents per pound.

World production continued to increase as capacity expansions outside the United States were brought onstream and became fully operational. Inventories of metal held by producers, as reported by the International Aluminium Institute, increased slightly through the end of August to about 3.1 million tons. Inventories of metal held by the LME decreased dramatically during the year. At the beginning of 2004, LME inventories exceeded 1.4 million tons, but by the end of September, inventories had fallen to 681 thousand tons, the lowest level since August 2001.

### World Smelter Production and Capacity:

	Production		Yearend capacity	
	2003	2004 <sup>e</sup>	2003	2004 <sup>e</sup>
United States	2,703	2,500	4,140	4,000
Australia	1,860	1,880	1,850	1,880
Brazil	1,380	1,450	1,420	1,450
Canada	2,790	2,640	2,790	2,850
China	5,450	6,100	5,700	6,800
Mozambique	405	510	410	540
Norway	1,150	1,250	1,200	1,300
Russia	3,480	3,600	3,500	3,600
South Africa	738	820	730	850
Venezuela	601	600	640	640
Other countries	7,160	7,500	8,100	8,400
World total (rounded)	27,700	28,900	30,500	32,300

**World Resources:** Domestic aluminum requirements cannot be met by domestic bauxite resources. Potential domestic nonbauxitic aluminum resources are abundant and could meet domestic aluminum demand. However, no processes for using these resources have been proven economically competitive with those now used for bauxite. The world reserve base for bauxite is sufficient to meet world demand for metal well into the 21st century.

**Substitutes:** Copper can replace aluminum in electrical applications; magnesium, titanium, and steel can substitute for aluminum in structural and ground transportation uses. Composites, steel, and wood can substitute for aluminum in construction. Glass, paper, plastics, and steel can substitute for aluminum in packaging.

<sup>e</sup>Estimated.

<sup>1</sup>See also Bauxite and Alumina.

<sup>2</sup>Domestic primary metal production + recovery from old aluminum scrap + net import reliance.

<sup>3</sup>Includes aluminum alloy.

<sup>4</sup>Less than ½ unit.

<sup>5</sup>Alumina and aluminum production workers (North American Industry Classification System—3313). Source: U.S. Department of Labor, Bureau of Labor Statistics.

<sup>6</sup>Defined as imports – exports + adjustments for Government and industry stock changes.