

# Aluminum and Copper Segment

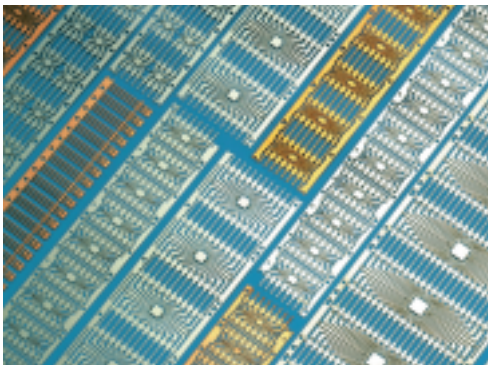
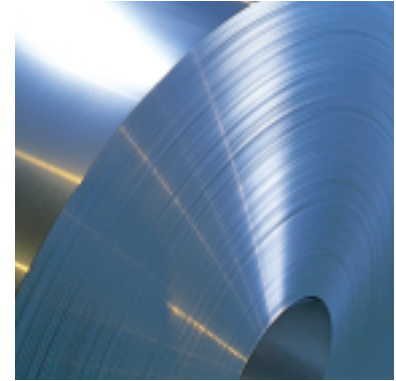
Demand for aluminum can stock, a major product, declined slightly from the previous fiscal year, largely attributable to the decline in demand caused by the unseasonably cool summer. Another factor was the decrease in aluminum can end stock for steel cans, a result of the increased use of PET bottles for soft drinks. There were, however, positive factors such as of the growing adoption of aluminum bottle cans.

On the other hand, the industry as a whole achieved record domestic shipments of automotive aluminum sheet as well as plate for semiconductor and LCD manufacturing equipment. We consequently achieved higher sales for rolled aluminum products.

Aluminum forgings found growing application in automobile suspension systems. We also enjoyed strong demand for aluminum vacuum chambers used in semiconductor and LCD manufacturing equipment. These factors contributed to year-on-year sales growth in this product area.

Sales of rolled copper products for electronic materials also increased. Sales of copper tubing remained on par with the previous year, impacted by lower imports of air conditioners and components made overseas by Japanese manufacturers.

Looking at aggregate results, despite the increase in the sales value of products, overall sales in this segment declined 1.9%, to ¥243.3 billion, reflecting our withdrawal from the aluminum smelting business. In contrast, operating income rose 20.4% from a year earlier, to ¥14.9 billion, thanks to higher product shipments and comprehensive cost reduction.



Kobe Steel has developed high strength, high conductivity copper alloys for terminals, connectors, and semiconductor leadframes.



We supply can stock for aluminum cans as well as aluminum bottles, which are growing in popularity. Easy to use, these containers are convenient and recyclable.

## During the term

We refocused our alliance with Alcoa Inc. on automotive aluminum. In addition to the existing R&D in aluminum sheet, our activities encompass extruded, cast and forged products.

Mitsubishi Materials Corporation and we integrated our copper tubing businesses. In April this year, Kobelco & Materials Copper Tube, Ltd. started operation. With production and sales bases in Thailand and Malaysia, this new company aims to become a leader in Japan and Asia.

## Research and development

R&D is focused on materials for the automotive, IT and semiconductor markets, where demand is likely to grow, with the goal of developing high-margin products that dominate their markets.

For example, our product development initiatives in the automotive field, include high formability sheet, thin-walled extrusions and high-strength forgings. We also use our technologies in surface treatment, welding and structural analysis to develop aluminum hoods that reduce the impact and resultant injury for pedestrians in the event of an accident, bumper reinforcement materials that boast high shock absorption, and aluminum forgings for suspension systems.

For the IT and semiconductor market, we have made solid progress in developing new tin plating compatible with lead-free soldering, high-strength copper alloys for springs, terminals, connectors aluminum substrates for magnetic disks and materials for electrodes with highly durable surface treatment that are used in the production of semiconductors and LCDs.

## Overseas

We established a company to manufacture aluminum forgings for suspension systems for the North American market. Kobe Aluminum Automotive Products LLC, is slated to



Aluminum vacuum chamber for LCD manufacturing equipment

Aluminum forgings in suspension systems contribute to lighter cars. Demand for these and other aluminum products are expected to grow.



begin operation in June 2005. In leadframes, our subsidiary Kobe Leadmikk, Ltd. will establish a manufacturing base in Wuxi (Jiangsu Province, China), with production to begin in January 2005. Meanwhile, we sold our equity stake in an alumina refinery in Worsley, Australia.

For overseas operations, we will continue to concentrate our management resources on carefully selected core businesses.

## Looking ahead

In the year ending March 2005, we anticipate that demand for aluminum and copper products will remain firm. Demand from semiconductor manufacturers has fully recovered and demand for automotive materials is expected to remain strong.

Both resealable and recyclable, bottle cans account for 40% of the aluminum cans for soft drinks in Japan. As such, we expect the market for aluminum can stock to continue growing.

The Kobe Steel Group calls on its technological capabilities to create new markets in aluminum and copper. As a leader in these markets, we're aiming to be a company that is internationally competitive in cost, quality and customer service.

We have developed numerous aluminum alloys, such as high-strength, highly formable alloys for automobile body panels. Kobe Steel is well known in the automobile industry, both in Japan and abroad, for its innovative, quality products.

