

## JAPAN

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**T**he current historic global downturn in metal prices and the strong yen have been unfavourable to Japan's non-ferrous metal industry. In addition, a number of manufacturers in sectors such as automobiles and electronics, have been shifting their operations offshore and this caused a decline in domestic demand for metals in 2002. However, Japan's major metal mining and smelting companies implemented several operational reforms and business alliances aimed at strengthening productivity further and improving profitability. Among six major Japanese mining and smelting companies, two of them, Sumitomo Metal Mining and Mitsui Metal Mining, achieved better results in the year ending March 2003 than in the previous year. Most of the companies carried out cost-reduction plans in production processes, and this contributed most toward an improvement in the financial results. However, major smelting companies experienced lower profits in 2002 because of global excess supply.

According to the consolidated final reports for the financial year ended March 31, 2003, most of Japan's six major metal companies achieved better results than in the preceding year. Mitsubishi Materials and Furukawa both managed to reduce their net losses. For Mitsubishi Materials, the net loss decreased to ¥26.8 billion from ¥61.3 billion, and the net loss for Furukawa reduced to ¥17.9 billion from ¥18.6 billion.

Sumitomo Metal Mining increased its ordinary profit in the metal/processing sector to ¥14.5 billion, and Nippon Mining Mining and Metals (part of Nippon Mining holdings Inc.) posted a 24% improvement to to ¥.4 billion. Mitsui Metal Mining achieved a net profit of ¥3.0 billion, a 55% improvement on the preceding year. Dowa Mining achieved a 75% increase, to ¥0.2 billion in its metals processing business, but in the smelting sector it reported a 46% fall in earnings to ¥1.6 billion.

### **Production**

Metal production by smelters compared with the previous year are as follows: gold (electrolytic) 144,748 kg (-7.1%), silver (electrolytic) 2,260 t (-1.5%), copper (electrolytic) 1,401,079 t (-1.7%), lead 213,138 t (-9.7%), zinc 639,925 t (-0.7%). Nickel production in 2002 was 32,303 t, a decreased of 6.3%.

The latest production plan by eight major smelting companies reveals that nickel I (electrolytic) production will be higher in the first half (April-September 2003) in anticipation of robust demand. Copper and zinc production is not expected to rise because of the difficulty in obtaining sufficient quality ores and an anticipated continuation of weak prices for both metals. Sumitomo Metal Mining is to increase its electrolytic nickel production capacity by investing ¥2.4 billion in refining equipment for high quality electrolytic nickel. The company aims to achieve a total production of 60,000 t/y.

Nippon Mining & Metals Co., Ltd (part of Nippon Mining Holdings Inc.) has cut total copper metal production for the first half this year to 200,000 t, which is 16,000 t or 7% less than the previous year. Sumitomo Metal Mining is planning to produce 136,000 t for the first half of this year (including commissioned production) which would be 16,000 t or 12% more than in 2002. Copper production planned by Mitsubishi Materials is 26,393 t/mth for the first half, 1.7% less than the monthly production of 26,876 t during the same period in 2002

Mitsui Metal Mining Co., Ltd expects that its zinc production for the first half of 2003 will be 98,600 t, which is 2.5% more than in the first half of 2002. Zinc production by Toho Zinc is planned at 60,614 t, and the monthly production plan by Mitsubishi Materials is for 892 t, a reduction from the previous year.

### **Demand**

In 2002, the total demand for nickel increased by 3% to 64,366 t. There was a slight decrease in copper demand to 1,026,614 t (1,099,864 t), zinc demand amounted to 470,035 t (545,106 t) and lead demand totalled 206,893 t (243,651 t).

The Japan Aluminium Association estimates demand in the 2003 financial year for aluminium metal and primary processed products at 3,951,815 t, representing a 1.9% increase for two consecutive years. Consumption in the building sector is forecast to remain largely unchanged, unlike the automobile sector, which has been catching up since the last year. Demand by the automobile sector is expected to increase by 0.8% to 394,000 t for casting products, by 1.4% to 732,000 t for die-cast products and by 4.2% to 35,000 t for forging products. Demand in the building sector is forecast to slip by 0.3%.

The Japan Electric Wire & Cable Makers' Association expects demand for copper cables will continue to decline, with lower consumption by the electric power sector and a slowdown in the automobile sector. Thus, total copper shipments are forecast at 794,000 t, 2.6% less than in 2002.

Domestic consumption of elongated copper will be 816,900 t, 0.4% less than 2002 exports will be 2.6% higher than the previous year, at 172,100 t, according to the Japan Copper and Brass Association's outlook.

### **Environment**

A number of metal-mining companies in Japan are engaged in positive environmental activities such as more recycling and improved industrial waste treatment. The environmental sector is becoming increasingly considered as one of the core businesses in the industry.

Last year, for example, Mitsubishi Materials' Naoshima copper smelter and the local government launched Naoshima Eco-Town (located in Kagawa prefecture) as a recycling facility for past illegally abandoned industrial waste amounting to some 500,000 t.

Also, Mitsubishi Materials (20%), Hino metal Industry Co., Ltd (40%) and Wako Metal Industry Co., Ltd (40%) established a new recycling company to

focus on recycling metals such as gold, silver copper, aluminium and glass. The company will concentrate its business on handling any materials dismantled by hand.

Dowa Mining plans to invest ¥25 billion this year as part of a three-year ¥60 billion expansion of its environmental division. The company's Shredder Dust Technology can process 4,400 t/mth. Dowa will also invest in further capacity for extracting platinum group metals from used car catalysts, increasing processing capacity from 450 t/mth to 800 t/mth.

Further metal recycling development has been taking place by four major smelting companies, Mitsubishi Materials, Furukawa Electric, Mitsui Mining & Smelting Co. and Sumitomo Metal Mining, in co-operation with New Energy, Industrial Technology Development Organisation (NEDO) and the Centre for Eco-Mining (CEM). The joint project will recycle copper, lead and zinc from shredder dust and is expected to develop a key technology for complying with Japan's new Vehicle Recycling Legislation, already partially in force.

Dowa Mining (95.5%) and Fujita Kanko (4.5%) have established an environmental company to deal specifically with environmental research and reclamation of contaminated soil, together with soil surveys and construction consultancy. The new company is due to be launched in April 2003.

Also, Mitsui Metal Mining is to invest ¥12 billion in environmental business. Sumitomo Metal Mining's environmental subsidiaries aim to strengthen their businesses in areas such as reclamation technology on contaminated land, soil/metal research as well as recycling metal from used catalysts from oil refineries. These operations will boost consolidated turnovers and profits for the group.

Toho Zinc Co., Ltd plans to activate its environmental sector and envisages increasing its battery recycling production by 50% during 2003 to 6,000 t/y.

### **Business Alliances and Mergers**

There were several instances last year of Japanese metal producers and trading houses merging in a bid to improve their profitability. The mergers have been spurred by weak domestic demand for metals and deteriorating profits for smelters as they have had to contend with a global excess supply of their products. Domestic demand for lead was weak owing to the relocation of car and computer battery manufacturers' production to China and other Asian countries.

Toho Zinc Co Ltd and Mitsui Metal Mining agreed on joint development of their lead production in order to increase their annual production to 12,000 t, beginning in 2003, and Dowa Mining and Mitsubishi Materials established a new zinc processing company to strengthen zinc supply, including sales of zinc metal and Zinc alloy. The company (Dowa 85%, Mitsubishi 15%) is due to start its operation in April 2003. The move follows the decision by Mitsui Metal Mining and Sumitomo Metal Mining in October last year to develop a joint zinc business with an expected annual turnover of ¥25 billion.

The largest business merger in the aluminium sector is between Furukawa Electric and Sky Aluminium Co., Ltd. Scheduled to take place in October this year, it is aiming for aluminium packaging, as well as automobile body part materials. Production capacity will be 32,000 t /mth.

In January this year, the aluminium ingot producer Poland Smelting Technologies Sp. z o.o (POLST) was formed and will produce 22,000 t/y, specifically to meet the strong demand in Europe for spare parts for Japanese cars produced by the European plants of Toyota Tsusyo Corp. (85.1%) Toyota Tsusyo Europe (14.9%) and Daiki Aluminium Industry (15.1%).

The establishment of a joint holding company, Nippon Mining Holdings Inc., was announced by Japan Energy Corp. and Japan's largest copper smelting company Nippon Mining & Metals Co Ltd. Japan Energy Corp., Nippon Mining & Metals Co., Ltd, and Nikko Materials Co Ltd., have become wholly-owned subsidiaries of Nippon Mining Holdings which has a capital of ¥40 billion. The new group is aiming for a consolidated profit of ¥75 billion by 2005. The company will invest ¥156 billion by March 2006, and will allocate ¥50 billion mainly for overseas copper and zinc projects.

It is expected that alliances between major non-ferrous companies will continue to take place both at home and abroad.

#### **Other**

As from 2004, Japan has announced its intention that it no longer intends to be a member of the International Lead and Zinc Study Group, the International Copper Study Group and the International Nickel Study Group. The withdrawal has drawn criticism from Japan's metal producers who believe that the decision will put them at a disadvantage.