**MC’s Aluminum Business**

Aluminum ingots are produced by smelting powdered alumina through electrolysis. Such powdered alumina is refined from alumina compounds that are extracted from bauxite by dissolving it in caustic soda. The demand for aluminum products in Japan is around four million tons annually. These aluminum products are made by using aluminum ingots as a raw material, which is processed through methods such as rolling, extrusion and casting. In addition to the fact that aluminum is a highly recyclable material, the energy needed to produce recycled aluminum ingots is just 3% of the energy consumed in producing aluminum ingots from the raw material bauxite.

MC’s aluminum business revolves around two major areas of activity: resources development and trading. The resources development business involves development of and investment in new projects ranging from bauxite mining to alumina refining and aluminum smelting. The trading business involves trading of aluminum ingots, aluminum products and recycled aluminum ingots. MC also assists the operations of its business investment partners as part of the aluminum trading business.

The company’s involvement in the resources development activity was originally sparked by the oil crises of the 1970s. At the time, rising electricity prices made it difficult for aluminum smelters to conduct their operations in Japan. MC presently has investments in alumina refining and aluminum smelting projects in countries such as Brazil, Australia, Indonesia and Mozambique. The company’s annual volume of aluminum ingot production by share of its investments is 220,000 tons, making it the largest Japanese producer of alumina. MC also acquired bauxite exploration rights in the Republic of Guinea in December 2005.

The company’s annual trading volume of aluminum ingots is approximately 1.7 million tons worldwide, conducted through its main trading offices in Tokyo, the United States, the United Kingdom and Thailand. MC’s trading volume of aluminum ingots in Japan is approximately 600,000 tons per year.

**Overview of Mozal S.A.R.L.**

In 1998, MC, the Mozambican government, BHP Billiton Limited and the Industrial Development Corporation of South Africa Ltd, put down the foundations for Mozal S.A.R.L., an aluminum smelter joint venture in Mozambique. The project originally started out of the Mozambican government’s active desire for foreign investment to help rebuild the nation in the wake of recent civil war. At the time, the South African government had announced that it would supply Mozambique with affordable power, hoping to spur economic independence and stability in this neighboring country. Mozal S.A.R.L. imports raw material from Australia, using it to produce 560,000 tons of aluminum ingots annually for export. Aluminum smelting has since grown to become Mozambique’s largest industry, accounting for approximately 60% of the country’s commodity exports.

**Environmental Initiatives**

Mozal S.A.R.L. implements environmental initiatives within its business operations, mainly targeting the following three areas: reduction of greenhouse gas emissions, treatment of waste from spent pot linings, and wastewater treatment. The company recognizes the need for long-term solutions to reduce greenhouse gases emitted as a result of large-scale power consumption for electrolysis processes. It is working on ways to reduce power consumption as well as other initiatives such as converting the source of fuel for anode baking from heavy fuel oil to natural gas, a strategy first implemented in fiscal 2005.

The company is also addressing the issue of waste from spent pot linings. Electrolytic furnaces must be replaced after approximately five years, leaving toxic waste that results from the smelting process. Mozal S.A.R.L. is addressing this issue by working with the steel and cement industries to test new ways of recycling the waste for other applications.

Wastewater treatment is also carefully monitored by the company. All water used in ingot production processes and other processes is kept in a reservoir located adjacent to the plant. The company monitors the water quality on a daily basis to ensure that fluoride concentrations do not exceed the World Bank’s criteria. Water must meet this strict criteria before it can be released into the nearby Matola river.

**Job Creation, Education and Training**

The Mozal project is a major employer in the region, generating jobs for over 10,000 people directly and indirectly. The company presently maintains a workforce of approximately 1,100 employees, while its subcontractors employ a further 1,600 people. The project also indirectly creates jobs that involve harbor loading and unloading operations. Locally hired Mozambicans make up more than 90% of the plant’s workforce. Hiring began in 1998 with the construction of the plant and the company conducts extensive education and job training for all its employees in an effort to ensure high product quality. Training related to health and safety also receives a high priority at Mozal, and staff are required to monitor team activities and report dangerous incidents that could lead to occupational accidents. These initiatives have earned the company a strong reputation for developing skilled employees.

**Mozal Community Development Trust**

The Mozal Community Development Trust (MCDT) was launched in August 2000 for the purpose of making social contributions to local communities. It provides support in the following major areas: small business, education and training, health and environment, sports and culture, and community infrastructure. MCDT places an especially high priority on education and actively provides funds to build local schools, and to support other initiatives. Community health is being addressed through the construction of medical facilities for malaria prevention and the implementation of HIV awareness education. MCDT also supports local economic activities through the promotion of local agriculture and the commercial sales of local crafts. MCDT’s administrative board, of which MC is a member, meets regularly to examine the projects it supports.

The MCDT has funded around 200 projects to date. Its annual expenditure was originally around 2.5 million dollars, but this was increased to 5 million dollars starting from fiscal 2006. Since its establishment MCDT has expended a total of 13 million dollars.
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Manager’s View

Keijiro Shinohara
Manager, Resource Project Development
Aluminum Business Unit, Non-Ferrous Metals Division

MC’s investment in aluminum resources development is ultimately aimed at securing a stable supply of metal resources for resource-scarce Japan. By retaining resource rights abroad, the company is contributing to Japanese society while supporting economic development in other countries. These development activities are extremely meaningful in terms of supporting communities and the livelihoods of people.