

“Minebea’s manufacturing activities depend on the communities in which its plants are located. Accordingly, we must strive to contribute to these communities and to not be a burden on them.” These words were spoken in June 1993 by then-president Goro Ogino at a meeting of the Corporate Environmental Protection Committee. Today, this conviction is shared by all Minebea Group companies and serves as a guideline for environmental protection and other efforts at Group plants.

◆ Reduction of Energy Consumption/Contribution to Prevention of Global Warming

● Trial Use of Photovoltaic Panels (Karuizawa Plant)

As part of its effort to reduce power consumption, the Karuizawa Plant began using photovoltaic panels on a trial basis. Minebea also plans to introduce these panels at plants overseas.



Photovoltaic panels at the Karuizawa Plant with Mt. Asama in the background

● Switch to Environment-Friendly Fuel (Fujisawa Plant)

For several decades, the Fujisawa Plant has used liquefied petroleum gas (LPG) butane for heat-treatment processes. In fiscal 2005, however, the plant switched to city (natural) gas. This, together with efforts to reduce the volume of fuel used, enabled the plant to lower CO₂ emissions* into the atmosphere by approximately 19% (monthly average). This move also facilitated the removal of the LPG plant, reducing the risk of fire and gas explosions.



LPG plant

* Comparison of CO₂ emissions by different fuels (index):
Diesel: 100; Gasoline: 98; LPG: 87; city gas: 74

Note: The above were calculated based on the Guidance for Calculation of Greenhouse Gas Emissions from Businesses, Annex 1: Fuel Consumption Emission Factor.



Site of LPG plant after removal

● **Effective Use of Cooling Tower to Lower Energy Consumption (Shanghai Shunding Technologies Ltd.)**

Until recently, Shanghai Shunding Technologies used refrigeration units year-round to create cooling water for use in production. By introducing free cooling, which uses low-temperature winter air to cool water within the cooling tower, the company was able to shut off refrigeration units during the winter, thereby reducing electric power used by an amount equivalent to a 2% decline in annual energy consumption.



Shanghai Shunding Technologies' cooling tower

● **Use of Heat-Resistant Paint on Plant Building Roofs (Rojana Plant, Thailand)**

In a bid to counter the impact of intense summer sunlight, the Rojana Plant coated the roofs of plant buildings (a total area of 19,000 m²) with heat-resistant paint. As a result, ceiling-level air temperatures inside plant buildings decreased to 43°C, from 50°C, facilitating a significant reduction in energy used for air conditioning.



Workers coat the roof of the Rojana Plant with heat-resistant paint

● **Introduction of Electric Transport Vehicles (Lop Buri Plant, Thailand)**

With the aim of improving the environmental soundness of on-site product movement, the Lop Buri Plant introduced electric vehicles to transport small lots, replacing the diesel-powered trucks previously used for this purpose. This move enabled the plant to reduce CO₂ emissions from the combustion of diesel fuel during on-site product transport by approximately 60%. Plans are in place to expand use of these vehicles by introducing them at other group plants in Thailand, including the Bang Pa-in Plant.



Electric vehicle used for product transport at the Lop Buri Plant

◆ Earthquake Safety Measures

◎ Application of Shatter-Resistant Window Film (Karuzawa Plant)

During earthquakes, shards of glass from shattered windows are a cause of secondary injuries. To mitigate this hazard to employee safety, the Karuzawa Plant has applied shatter-resistant film to windows, primarily those that are high up.



Shatter-resistant film on the windows of the Karuzawa Plant's cafeteria

◆ Management of Industrial Waste

◎ Audits of Waste Disposal Facilities (Japan, China and Thailand)

To ensure waste from its various plants is disposed of appropriately, Minebea periodically audits the facilities of subcontracted disposal and recycling firms to examine facilities in operation and manifests.



Audit of facility of subcontracted waste disposal firm (Thailand)

Management of Hazardous Chemical Substances

Acquisition of ISO/IEC 17025 for Testing Laboratories (Thailand and China)

The R&D centers of Minebea's largest and second-largest production bases, in Thailand and China, acquired ISO/IEC 17025, the global standard for testing laboratories established by the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC). Under a Mutual Recognition Arrangement (MRA), testing certificates issued by accredited laboratories are valid for use in international trade.

In March 2006, Minebea succeeded in eliminating all substances targeted by the RoHS directive from its products. Establishing a testing program that assures its products contain no regulated chemical substances is an important step that will help the Company further reduce the impact of its products on the environment.



Certificate of accreditation from the Thai Industrial Standards Institute, Ministry of Industry



Certificate of accreditation from the China National Accreditation Board for Laboratories

Rehabilitation of Contaminated Soil and Groundwater

Cleanup of Contamination from Organic Chlorinated Solvents

Since it previously used organic chlorinated solvents in its manufacturing processes, Minebea has conducted voluntary inspections of its plants in Japan. These inspections confirmed the presence of contamination at the Karuizawa, Fujisawa and Omori plants, as well as at the site of the former Ichinoseki Plant. Minebea promptly informed local authorities and, in line with directives issued thereof, is implementing cleanup measures.