

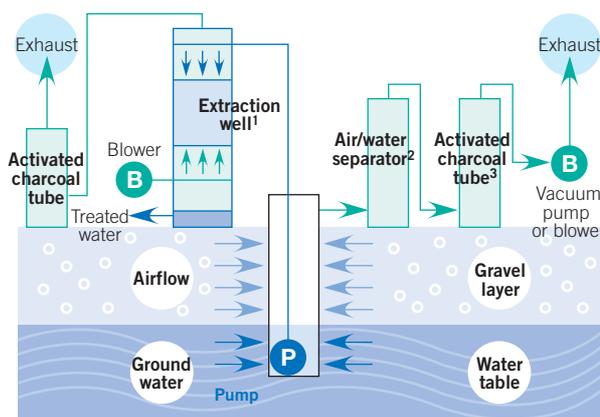
“Minebea’s manufacturing activities depend on the communities in which its plants are located. Accordingly, we must strive to contribute to these communities and to not be a burden on them.” These words were spoken in June 1993 by then-president Goro Ogino at a meeting of the Corporate Environmental 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.

■ **Rehabilitation of Contaminated Soil and Groundwater**

>> **Cleanup of Contamination from Organic Chlorinated Solvents**

The superb cleaning capabilities of tetrachloroethylene, trichloroethylene and other organic chlorinated solvents supported their widespread, long-term use in cleaning processes for precision components, PCs and electronic components. However, because these solvents are heavier than either water or air, leakage from facilities and containers—in the form of liquid and vapor—has resulted in significant accumulations in soil and groundwater.

Because it had previously used organic chlorinated solvents in its manufacturing processes, Minebea conducted voluntary inspections of its plants in Japan. These inspections confirmed contamination at the Karuziwa and Fujisawa manufacturing units, the site of the former Ichinoseki Factory and the Omori Manufacturing Unit. Minebea promptly informed local authorities of the results of its inspections and, in line with directives issued thereof, implemented cleanup measures. The principal methods in use here are two-phase extraction and air stripping. These efforts have contributed to a significant improvement in contamination levels at all three facilities.



Dual-phase extraction and air stripping system

Glossary

1. **Extraction well**
Extracted groundwater is drawn up and discharged into the well from the top, while air is driven up from the bottom. The airflow strips solvent contaminants from the groundwater.
2. **Air/water separator**
This device is used to separate the airflow into vapor and water.
3. **Activated charcoal tube**
The airflow is passed through a tube of activated charcoal, which adsorbs the contaminants.

■ **Activities of Overseas Subsidiaries**

>> **New Hampshire Ball Bearings, Inc. (NHBB) (Chatsworth Plant)**

U.S. subsidiary NHBB’s plant in Chatsworth, California, currently saves more than 52,000 gallons (approximately 197,000 liters) of water annually by using specific recycling and water reduction activities. The plant is also engaged in a number of other activities aimed at preserving the environment. These include:

- Recycling solvents on site
- Separating paper, computer batteries, pallets, scrap metal, green waste, cans and cardboard for recycling
- Recycling rinse water used in surface treatment of ball bearing components using an ion exchange system
- Treating ion exchange backwash water on-site to facilitate recycling
- Taking steps to lower emissions of volatile organic compounds (VOCs), which dropped to 3.5 tons in 2002, from 11 tons in 1999.



NHBB’s Chatsworth Plant

In recognition of these and other activities, in December 2003 California’s Department of Toxic Substance Control announced it had selected the Chatsworth Plant as a recipient of its award for exemplary pollution prevention activities implemented in 2003.

■ **Reduction of Waste Output/“3R” Activities**
 >> **Dynamic Filtration System for Lubricating Oil Used in Fastener Production (Fujisawa Manufacturing Unit)**

Production processes for fasteners require a significant amount of lubricating oil. To extend the useful life of lubricating oil, thereby reducing consumption, the Fujisawa Manufacturing Unit has introduced a dynamic filtration system. In fiscal 2004, this system contributed to a 15,000-liter reduction in the amount of lubricating oil used at the Fujisawa Manufacturing Unit and to a considerable decrease in manufacturing costs.



Dynamic filtration system (Fujisawa Manufacturing Unit)

■ **Reduction of Energy Consumption/ Contribution to Prevention of Global Warming**
 >> **Switch to Compressors with Inverters (Hamamatsu Manufacturing Unit)**

In June 2003, the Hamamatsu Manufacturing Unit switched to compressors with inverters in its Energy Center. The new compressors use approximately 40% less electricity than the units they replaced.

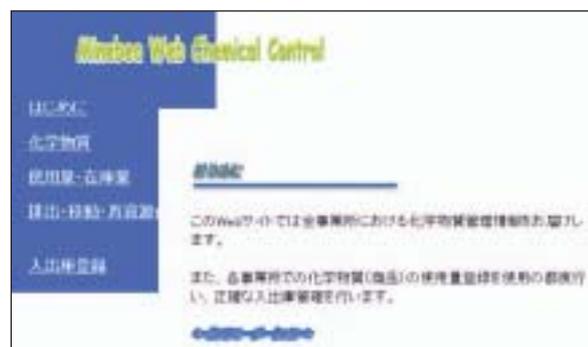


New compressors with inverters (Hamamatsu Manufacturing Unit)

■ **Management of Chemical Substances**
 >> **MMDB-II Chemical Substance Management Database (Minebea Group)**

Minebea has developed its own advanced web-based chemical substance management database. Each plant, sales office and division is required to register the chemical substances it uses in the database, as well as incoming and outgoing inventories, thereby facilitating the effective management of amounts used and stored.

The database also enables automated calculation of the amount of PRTR chemicals used and stored, and provides links to pertinent material data safety sheets (MSDSs¹) for easy access. The database is currently available in Japanese only, but Minebea is in the process of developing an English-language version.



Minebea's chemical substance management database

Glossary

1. Material data safety sheet (MSDS)

An MSDS is designed to provide parties taking delivery of a particular chemical substance with information on the substances' nature, as well as on hazards and proper procedures for handling or working with the substance.

■ **Prevention of Water Contamination**
➤ **Reuse of Water Resources (Fujisawa Manufacturing Unit)**

The Fujisawa Manufacturing Unit's comprehensive wastewater processing facility, which was established in fiscal 2003, processes oily wastewater generated during production and returns it to a state that enables reuse. In fiscal 2004, the facility processed 6,400 tons of wastewater, resulting in a cost reduction of ¥2.43 million.



Comprehensive wastewater processing facility (Fujisawa Manufacturing Unit)

■ **Other Activities**
➤ **Regular Audits of Waste Processing Service Providers (Karuzawa Manufacturing Unit, Others)**

Minebea conducts regular audits of companies it subcontracts to provide disposal, recycling and other waste processing services. These audits involved annual scheduled on-site inspections of waste processing facilities and manifests, recycled products and other items contained in a detailed checklist. If service providers fail to meet audit criteria, Minebea fulfills its responsibility as a waste-generating manufacturer by requesting improvements and monitoring measures implemented in response.



Minebea auditors and representative of subcontractor



On-site inspection

»» **Greening of Plant Site (Minebea Electronics & Hi-Tech Components (Shanghai) Ltd.)**

Minebea Electronics & Hi-Tech Components (Shanghai)'s Shanghai Factory is located near Lake Daishan-hu, the principal source of drinking water for Shanghai's residents. As this area is a famous tourist spot, the company has installed state-of-the-art wastewater processing facilities and established green areas over more than 30% of the site it occupies. Minebea Electronics & Hi-Tech Components (Shanghai) has also built an artificial pond on its site that simulates the natural habitat of herons and other wild birds.

Company name:	Minebea Electronics & Hi-Tech Components (Shanghai) Ltd.
Site area:	495,834 m ²
Plant floor space:	90,203 m ²



Factory buildings surrounded by rape blossoms in full flower (Shanghai Factory)

»» **Support for Suppliers' Environmental Management Systems (Hi-Tech Division, NHBB)**

In April 2004, the Hi-Tech Division of NHBB received an Environmental Merit Award from the U.S. Environmental Protection Agency (EPA) in recognition of its efforts to help its suppliers implement effective environmental management systems.

Realizing that its suppliers have a major impact on the environment, NHBB partnered with the U.S. EPA's New England Office to train nine of its suppliers in New England in the development and implementation of environmental management systems. This pilot project included six months of training and offered participating companies such incentives as closer relations with senior NHBB management and preferred supplier status if they established environmental management systems.

NHBB has been a member of the U.S. EPA's National Environmental Performance Track program since 2000. Since then, the company has devoted extensive efforts to improving the environment.



NHBB employees (center) and U.S. EPA officials, U.S. EPA Environmental Merit Award ceremony