

## Outline of Initiatives to Date

Below we introduce an outline of Murata's global environmental preservation initiatives and social activities to date.

### Policy & System

To promote the preservation of the global environment company-wide, we have developed the following policy, plan and system.

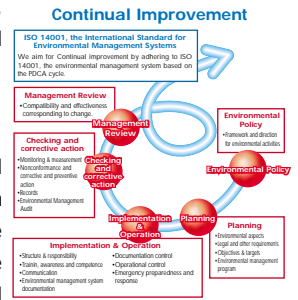
- October 1994 The Murata Environmental Committee is established as an advisory organ for top management to devise strategies for global environmental preservation.
- January 1995 A special sub-committee is established as the lower branch of the Environmental Committee to carry out planning and drafting of documents classified by individual theme.
- May 1995 The Murata Environmental Charter is adopted.
- May 1995 The Environmental Management Department is established in the head office as a body dedicated to promoting global environmental preservation.
- May 2001 The Murata Environmental Charter is revised.

See pages 5 and 6.

### Environmental Management System

We have developed and maintained an environmental management system as part of the plan to promote the Murata Environmental Charter.

- The international standard for environmental management systems (ISO 14001) A total of 25 of the Company's production sites, both domestic and international, have acquired registration of ISO 14001 certification.



- Internal environmental audit The Company has undertaken a four-pronged audit of internal operations, including an internal audit by plants, an audit by the Environmental Management Department of the head office, an inspection by the auditor, and an audit by the ISO 14001 certification body.

See pages 9 to 13.

### Dealing with Environmental Risk

Since 1995, we have been taking initiatives to avoid the possibility of any chemical substances permeating soil and groundwater, including moving storage tanks from below ground to above ground; moving underground plumbing overhead; and adopting voluntary standards for coatings to prevent permeation. In fiscal 2002, Murata completed all steps required in order to comply with this voluntary standard.



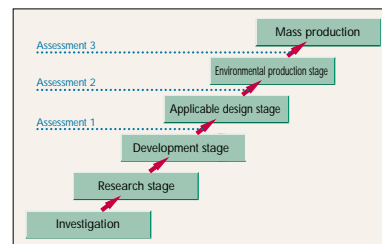
See page 13.

### Environmentally Conscious Design

We have focused attention on the environmental impact of each product and have been promoting initiatives to reduce that impact.

The Product Assessment Sub-Committee (former LCA, Life Cycle Assessment Sub-Committee), a specialized Sub-Committee of the Environmental Committee, carries out LCA data analyses of Murata's representative products and compiles the company's unique LCA guidelines.

#### Product Assessment Process



In addition, while carrying forward this activity step-by-step, we are developing a product assessment plan that addresses environmental considerations during the product design stage.

See page 14.

### Environmentally Hazardous Substances and Lead-Free Solder

We have been promoting an initiative to reduce consumption or adopt substitutes for toxic substances (environmentally hazardous substances) included in our products.

Murata has adopted a voluntary regulation chart especially for environmentally hazardous substances that are related to our products. Since April 1996, we have been implementing systematic reductions and substitutions.

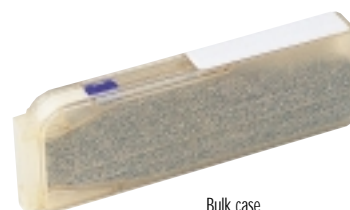
In addition to this initiative, we have established the Lead-Free Solder Project as a strategy for promoting the use of solder containing no lead. As a result, we have been promoting a lead-free solder policy.

See pages 15 and 16.

### Packaging & Distribution

To reduce the amount of packaging material that is supplied with products provided to our main customers, we have promoted an initiative targeting resource conservation through a policy of reuse and recycling.

Previously, we collected and reused taping packaging reels and incorporated simple packaging, especially reused packaging material. To contribute to energy conservation during distribution, we



Bulk case

have been focusing on bulk case packaging, which has brought about considerable benefits.

See pages 17 and 18.

## Green Procurement

If a Murata product is to be environmentally benign, the materials supplied for making that product, as well as the process by which the product is manufactured, must be environmentally benign as well.

In 2001, Murata distributed its Green Procurement Guide for procurement suppliers within Japan. In conducting our material procurement activities, we have sought the understanding and cooperation of our suppliers in Japan as part of our approach to reducing environmental impacts.



See page 19.

## Preventing Global Warming

In the effort to prevent global warming, Murata has been aggressively promoting energy-saving initiatives in the utility and production facilities of plants and subsidiaries. As a result of various initiatives implemented in 2002, we have achieved a number of successes in individual circumstances. However, CO<sub>2</sub> emissions per unit net sales (carbon dioxide emissions per basic unit of net sales) worsened by 45% compared with 1990 levels. This



resulted from the significant reduction in unit pricing of our products against the increase in our production volume in 2002, which caused our net sales to decrease.

See pages 21 and 22.

## Waste Reduction and Zero Emission

We have reviewed our production processes, controlled the production of waste, and promoted initiatives to recycle the resources in any waste that is produced.

### Main Initiatives

- Recycling of films with ceramics
- Introduction of composting facilities for raw food waste from company canteen
- Introduction of a Sludge Dryer
- Recycling of Uniforms
- Production of high-temperature molten slag from sludge

As a result of these efforts, the Murata Group's total recycling rate in Japan was 84.9% as of the end of fiscal 2002, a considerable improvement over the fiscal 2001 rate of 53.3%.

See pages 23 and 24.

## Soil & Groundwater Strategies

After the fiscal 1983, the year the carcinogenic characteristics of chlorinated organic solvents such as trichloroethylene became a problem, we have recognized that such substances are an important issue. We set out to eliminate the use of such solvents, and by the fiscal 1995 we succeeded in eliminating their use in all but one location. One factory reluctantly continued use of the product because of the product preferences of a particular customer; anyway, we eliminated the use of this substance at this factory in March 1998.

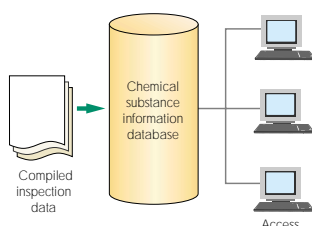
Furthermore, we have been conducting soil and groundwater surveys because we had used chlorinated organic solvents in the past. At plants that were deemed to be in need of remediation, we established purification facilities in contaminated regions and drilled wells on the borders of such sites. We actively promoted remediation of the contaminated soil and groundwater in order to prevent their diffusion outside company grounds.

See pages 27 and 28.

## Management of Chemical Substances

To ensure that chemical substances are used properly across the entire group of companies in Japan, we have introduced a chemical substance inspection and registration system in 2000. Before a chemical substance is introduced in a production process, specialist staff examine the substance beforehand. If judged acceptable, it is assigned a unique number and information on the substance is registered in a database; only then can it be purchased and used. To ensure that such chemical substances are used properly, we are planning on sharing all relevant information.

Also, in 1997, we created a voluntary regulation chart for chemical substances that impart an environmental impact that are used in the production process. In this way we are promoting the reduced use and substitution of such products.



See pages 25, 26 and 29.

## Occupational Health and Safety, Contributing to the Community, and Afforestation of Company Grounds

Regarding worker health and safety, although we previously addressed this issue, in 2000 we introduced a system for advance investigation and registration of chemical substances that may affect worker health and safety before a chemical substance is introduced at the production stage. Moreover, in 2001 we introduced a risk assessment system for development of production facilities. In addition, we established a periodic health and safety forum in order to improve the level of health and safety throughout Murata while promoting activities targeting employee health.

We are also promoting active afforestation of company grounds in order to gain the interest of regional society while enriching the work environment. Also, aware of our role as a member of the local community, we will cooperate with local citizens and local governments. Additionally, we are promoting community initiatives such as the community clean-up activities and opening company green tracts to the public.

See pages 30 to 32.