

Feature 2

Ishikawa Prefecture

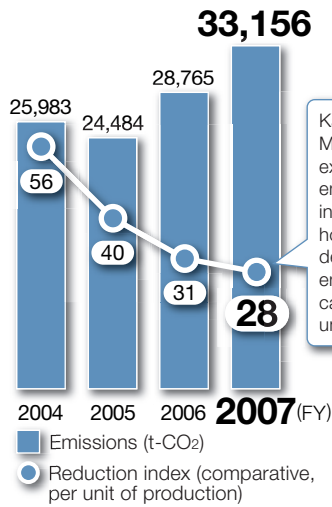
Kanazawa

Kanazawa Murata Manufacturing



A development and production base for electronic devices that operate in high-frequency bands

CO₂ Emissions at Kanazawa Murata Manufacturing



Kanazawa Murata Manufacturing is experiencing higher CO₂ emissions because of its increased production; however, we are seeing definite reductions in emissions when calculated from a per unit of production base.



Double-bundle turbo refrigeration equipment installed in the energy center building. This device can provide a sufficient quantity of hot water from spring to autumn meaning dramatic reductions in quantities of liquefied petroleum gas (LPG).

A Factory in Harmony with the Environment

Combining Improvements to Reduce CO₂ Emissions

Today, the prevention of global warming is a major issue for everyone. The Murata Group is striving to conserve energy at all of its facilities to curtail CO₂ emissions stemming from production activities.

We describe below some examples of our energy-saving activities, such as those at our flagship location, Kanazawa Murata Manufacturing.

Kanazawa Murata Manufacturing Awarded the Chairman Prize of ECCJ

Since the drafting of the Environmental Charter in 1995, Murata has been progressing with the formation of its environmental management systems, and at present, all production locations in Japan and overseas have acquired ISO14001 certification.*

Kanazawa Murata Manufacturing produces devices for mobile phones and sensors. It has been at the forefront of our energy conservation and other environment-related activities, as illustrated by its achieving ISO14001 certification in December 1997. In fiscal 2001, these efforts were recognized as the plant received the first Ishikawa Prefecture Governor's Commendation.

In fiscal 2007, Kanazawa Murata Manufacturing received the Chairman Prize of ECCJ at the Energy Saving Excellence Japan National Convention, hosted by the Energy Conservation Center, Japan. This award-winning plant was previously recognized with the Director General Prize of Chubu Bureau of Economy, Trade and Industry at the Awarding of Excellent Energy Conservation Factory & Building in fiscal 2004, and the Award for Excellence at the 2005 Successful Case of Energy Conservation in Factory & Building Convention.

*ISO14001: International standards for environmental management systems specified by the International Organization for Standardization (ISO).



From left: The FY2007 Chairman's Prize of ECCJ, the FY2005 Award for Excellence and the FY2004 Chubu Bureau of Economy, Trade and Industry Director-General's Prize

Energy Savings at Electrical Device Manufacturers Improvements to Clean Room Ventilation

Kanazawa Murata Manufacturing has achieved a major reduction in the energy used for air conditioning, which is required to maintain its clean room environments. Clean rooms require constant temperature and humidity control, and approximately half of the energy consumption at the plant is used for these purposes. Consequently, in November 2006, we

introduced double-bundle turbo refrigeration equipment (heat pump equipment that simultaneously generates cold and hot water), and thereby established a system in which the previously discarded waste heat generated in the production of cold water is recycled to generate hot water.

This plant monitors the levels of cleanliness in its clean rooms and uses the results to control filter units incorporating inverters, thus optimizing ventilation. In this way, the plant maintains product quality while reducing air-conditioning energy consumption. Through these initiatives, Kanazawa Murata Manufacturing has

reduced CO₂ emissions on a per unit sales basis to approximately 72% of the levels in fiscal 2002.

At this plant and many other locations in Japan and abroad, double-bundle turbo refrigeration equipment is being introduced, contributing to energy savings groupwide.



Using Energy Saving Workshops to Spread Information and Know-how

At Kanazawa Murata Manufacturing, in addition to saving energy through improvements to equipment, the plant calculates environmental costs, such as expenses incurred by improvements to facilities required for environmental conservation activities and waste processing expenses. This information is used as source data for environmental management.

This plant is promoting the reuse and recycling of waste products and by December 2003 had achieved zero emissions. It has also planted fruit trees and cultivated gardens onsite, in addition to contributing to regional environmental conservation by participating in volunteer activities, such as beach and river clean-ups.

Of course, environmental conservation activities such as these are not limited to Kanazawa Murata Manufacturing. Environmental management departments at each Group company in Japan periodically meet and hold workshops about saving energy to discuss issues and problems and to share information and expertise. Each Group company applies this information to its activities.

In the future, we will expand the energy-saving and environmental measures that have proven effective within Japan to overseas locations. Moreover, we plan to increase the effectiveness of our energy-saving and environmental conservation activities throughout the Murata Group.

Employee Perspective

Emphasizing Both New Facilities and Small Improvements



Shuichi Sakaida

Chief, Environmental Management Sec., Administration Dept., Kanazawa Murata Manufacturing Co., Ltd.

In the 22 years since Murata was founded, it has introduced efficient, energy-saving equipment. The Company has also continued to make incremental improvements; for example, in November 2007, it started operation of its newest section, featuring the latest energy-saving equipment. We will continue our efforts to save energy in every way possible.

More Energy Savings in Factories Worldwide

column

Wuxi Murata Electronics Co., Ltd. Wins the Wuxi Fiscal 2007 Clean Production Award



In recognition of its high standards of risk management for issues relating to the environment, workers' health and workplace safety, Wuxi Murata Electronics was awarded the highest grade of the Wuxi fiscal 2007 Clean Production Award (Grade 1) by the Wuxi City Economy and Trade Committee and the Wuxi City Environmental Protection Bureau.

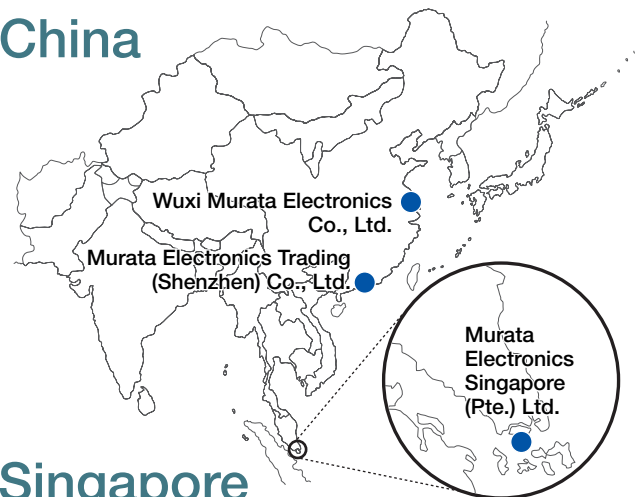
China has readily supported Clean Production, as spelled out by the UN Conference on Environment and Development. China's Cleaner Production Promotion Law came into effect in 2003 and strictly enforces reductions in the impact on the environment stemming from production, servicing and product usage processes. Among companies covered by this law, Wuxi Murata Electronics has garnered praise for having achieved particularly high levels of clean production.

▼ Murata Electronics Trading (Shenzhen) Co., Ltd.



At regular gatherings of energy controllers and facility managers from Murata's three plants and technical centers in China, we confirm the operational management status of site facilities and detailed points for improvement. We also hold energy-saving workshops at which we introduce case studies of companies in Japan that have achieved outstanding energy savings.

China



Singapore

▼ Murata Electronics Singapore (Pte.) Ltd.



We have dispatched staff specially trained in energy savings from our Head Office to our Singapore factory. We have also carried out in-house energy-savings inspections that reveal ways to invest in energy efficiency and improve operations so that we can reduce wasted time and energy. These inspections have shown that implementing energy-saving measures will contribute to a reduction of 3,000 t/year in CO₂ emissions.