



# Searching for multiple effects and working toward ongoing waste reduction

Through cooperation between the Manufacturing Department and the Environmental Department here at Okayama Murata, we were able to reduce the large amounts of waste generated by 90%. This activity has allowed us to not only reduce waste, but also contributed to the company's business by achieving a major decrease in processing costs. And that has resulted in a source of motivation for subsequent activities.

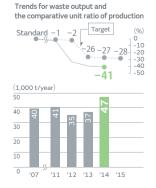
Such efforts towards waste reduction are in tune with the long history of environmental load reduction activities at Murata that have been in place for more than 20 years.

We have now reached a level of relative maturation in many of these activities, so the degree of difficulty in attaining further reductions has increased. However, more than merely trying to reduce waste, by searching for different effects from a diversity of angles, we are creating a new driving force to continue our unwavering activities in the future.

At Murata, "zero emissions"\* was attained in the domestic group during FY2003. We are currently tackling zero emissions overseas and the overall reduction of waste generation itself. We are also aiming at strengthening our waste management organization in order to more surely and more stably process that

Photo (from left) Okavama Murata Manufacturing Co., Ltd. Environmental Maintenance section Junichi Okuyama

Okavama Murata Manufacturing Co., Ltd. Production Engineering Section Kota Kondo



 ${\rm *Murata}\ defines\ "zero\ emissions"\ as\ generating\ no\ solid\ landfill\ waste,\ including\ direct\ and\ intermediate\ processing,\ and\ having\ a\ 100\%\ recycling\ rate.\ (This\ does\ not\ include\ waste\ that$ cannot be handled solely with in-company measures, such as excess septic tank sludge.

## Working in cooperation with all members to prevent global warming through air leakage inspections

Murata's production facilities utilize air that is compressed with a compressor. Air leakage at such facilities wastes the compressor's energy and is resultantly one cause of global warming.

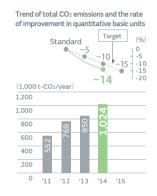
As a part of our energy-saving patrols at Komatsu Murata Manufacturing, we began air leakage inspections on equipment in all processes beginning from our fiscal 2012. These inspections are a constantly ongoing activity that, on days that the corresponding process is not in use, involves maintenance personnel using a leak tester to verify that there is no air leakage from the production equipment's connection hoses, and where any discovered leaks are repaired by the Manufacturing Department or Manufacturing Technology Department.

This measure requires close cooperation between the corresponding departments and, by also incorporating measures like visualization of circumstances through drawings and photos, it has been possible for those departments to continue their active collaboration. As a result, this activity was commended and awarded the Murata Group's Global Warming Prevention Special Committee Commendation in 2014. We are very pleased to have our persistent accomplishments recognized, and will continue to expand such activities in the future as we work towards completely eradicating air leaks.

At Murata, we are introducing a global warming prevention plan toward reducing the total amount of greenhouse gases emitted from our business activities. Centered on the Special Global Warming Prevention Committee, these measures will be implemented throughout the Murata Group toward achieving the corresponding goals.

Komatsu Murata Manufacturing Co., Ltd. General Administration Section

Mamoru Tenda Tsuyoshi Yamaguchi







# Increasing efficiency in domestic logistics through the consolidation of distribution warehouses

Murata has carried out a step-by-step review since 2013 to ensure that the flow to our domestic logistics network is as simple as possible. The main point of that assessment has been the consolidation of our distribution warehouses. Those distribution warehouses, which are used for shipping Murata products to customers, had been divided into multiple regional locations, and so we combined them into one single site. The result was the ability to merge all of the destinations to which items are shipped from production plants into one, and it became unnecessary to sort items by region or to intermediately transfer loads to different trucks (transshipment).

Furthermore, since that warehouse is now in one place, it is possible for us to also consolidate the operation routes of the trucks, something that had also been divided into several districts, and that further led to an improvement in carrying efficiency. The present result of this effort is that we were able to reduce CO<sub>2</sub> emissions per unit of real production from domestic distribution by 27% compared to fiscal 2013.

Murata is working to reduce our environmental impact not only at the manufacturing stage, but in the delivery phase of product transport as well. Along with reducing CO2 through more efficient transportation, waste is also being reduced by using less

Murata Manufacturing Co., Ltd. PSI System Design & Logistics Department SCM Design & Operation Group Koii Honda

## Coexisting with regional plants and animals in order to continue to be appreciated by the local community

In consideration of the impact on the ecosystem that is connected with our business activities, at Kanazawa Murata we are involved in raising trees and flowers that are indigenous to the area and are working on conserving that biodiversity. On the facility grounds, we have green spaces where beetles are bred naturally and a pond where spot-billed ducks, white herons and other birds can drop by; a variety of living creatures can be observed here. Our "Butterfly Garden", which is an image of a promenade of the butterflies that inhabit the local Hakusan area, has become a place of healing for customers and employees alike. We also visit local elementary schools and offer lessons on the theme of "The Environment and Science".

Through business activities that take biodiversity into consideration and through regional contribution activities, we will continue to aim at being an existence that is appreciated more and more by everyone in the area.

#### "Wanting the existence of Murata to be the pride of that area"

In order to actualize business management that is in a close relationship with the area, with the community, we are continuously conducting environmental study projects for elementary and junior high school students, natural woodland preservation activities, and factory greening activities, etc., called "Murata Woods".

Kanazawa Murata Manufacturing Co., Ltd. Environmental section Yuka Seto

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