

Murata Eco Management

**Contributing to reducing the environmental impact through technology, products and services**

Murata Manufacturing Co., Ltd.  
Senior Executive Vice President,  
Member of the Board of Directors  
Koji Makino



Global Warming Prevention (compressed air)

**Eliminating waste in the use of compressed air, further heightening its usage efficiency, and contributing to the prevention of global warming**

Photo (from left)  
Murata Manufacturing Co., Ltd.  
Administration Department  
Takashi Uemura  
Murata Manufacturing Co., Ltd.  
Ceramics Production Department  
Naoto Yoshikawa  
Murata Manufacturing Co., Ltd.  
Yokaichi Production  
Engineering Department  
Masanori Fukushima

**Thinking and acting on our own in order to live together with the local community, together with the Earth**

Eco management at Murata involves contributing to the reduction of the environmental impact through our technology, products and services, and reducing as much as possible the environmental burden that is generated when these outputs are produced. Our corporate activity is comprised of “inputting something, converting it into something of value, and outputting it”, and we think that it is important to raise this conversion efficiency even further. First of all, in regard to output, we are currently focusing on whether we can contribute to a reduction in the environmental burden that results from the use of Murata products. For example, in the field of energy saving, we are contributing to this by providing parts and services for systems like HEMS<sup>1</sup> and BEMS<sup>2</sup>, in addition to supplying parts that require minimal energy consumption. It is Murata’s view that, when offering a product, we should actively offer proposals so that our customers can produce even better goods. Such active proposals not only contribute to reducing the environmental impact, they also lead to other business opportunities. On the other hand, Murata also places a load in the environment during the processes in which our products are produced. Thus, we also feel that we must surely follow those measures that need to be followed toward a reduction in

our environmental impact at the time of production. At Murata, since we carry out integrated production from the material to the product, we use a lot of both energy and materials. In order to minimize the input resources, we positively promote increased efficiency toward saving energy, saving resources, etc. We have established an in-company standard for environmentally-harmful chemical substances, and are working to minimize the amounts used, such as by developing alternative technologies. For exhaust, drainage and waste, more than merely doing what is necessary to simply obey the law, we also consider symbiosis with the local area, and have established and managed independent standards. In order to realize these ideals, we make determinations with a long-term view and are invested in both environmental impact reduction and economical efficiency. And, in order to continue such activities, it is necessary for top management to persist in transmitting their thoughts to employees as well as for those employees to understand the viewpoint of the company and then think and act on their own. From here on, the company as a whole will act as one in order to continue to reduce the environmental burden as much as possible while also offering attractive products.

1: Home Energy Management System  
2: Building Energy Management System

Mechanisms for managing the energy in homes and buildings and achieving the coexistence of comfort and energy saving

**Bringing “Team Air” measures to all of Murata with an enthusiasm toward accomplishment**

Our Yokaichi Plant is a core factory for manufacturing raw materials and ceramic electronic components, but it can also be noted that its CO<sub>2</sub> emissions are amongst the highest in the Murata Group. Our point of view was shifted from company-wide activities to prevent the leakage of compressed air\* in the manufacturing process to the prevention of global warming, resulting in the Yokaichi Plant challenging comprehensive activities to reduce waste in the use of that compressed air. The amount of electricity consumed by the utility equipment that produces compressed air accounts for about 60 percent of the total electricity consumed by all of the utility equipment at the Yokaichi Plant. So, through a greater reduction of the waste that occurs in the use of compressed air and by heightening the efficiency of its usage, we can expect a large energy-saving effect for that equipment. As a start to those activities, our Manufacturing, Production Technology, and Environment Divisions came together to form “Team Air”, they decided on a model line in the manufacturing process, and, in order to visualize values related to compressed air, took detailed measurements on the usage application and the amount of compressed air

used in that model line. As a result, the fact that compressed air was being consumed regardless of whether a piece of production equipment was in operation or offline emerged as one issue to deal with. And, as this activity was related to production equipment that require compressed air, there was also a concern about the effect on stoppage of that production equipment as well as aspects of quality, etc. Ultimately, we were able to share both knowledge and technology from the standpoints of each of the departments that produce the compressed air, the departments that use it, and the departments that provide the corresponding technical assistance towards a comprehensive reduction of waste in the use of compressed air. A great deal of know-how was thus acquired through that model line, and the effect of the measures implemented with that line resulted in a reduction of 100 tons per year in CO<sub>2</sub> emissions and millions of yen in costs. From here on, and with “Team Air” serving as the nucleus, the knowledge and results that were obtained with this model line will be developed so that corresponding measures can be advanced throughout all of our plants and the whole of the Murata Group.

\* Compressed air: Air to which pressure is applied using a compressor etc., thus reducing its volume and making it highly pressurized. Along with electricity, compressed air is the most useful form of energy for a factory. Used as the source of power for various tools and production equipment, it thus plays an important role in any factory.

Trend of total CO<sub>2</sub> emissions and the rate of improvement in quantitative basic units

