

Feature Articles: The Environment — “Global Warming Prevention”

Expendig efforts towards saving energy and affirmative reexamination of production methods result in a dramatic reduction in CO₂

Fulfilling our responsibility as a so-called “Mother Factory” to our Group and to society as a whole

Fukui Murata Manufacturing is the largest production site in the Murata Group but, with on-site development capabilities, we also represent the closest development base to any of the Group’s production sites. Involved in the development of new products and the new production techniques and manufacturing and production technology that are required for mass-production, we play the role of a so-called “Mother Factory” in preparing the way for mass-production and then transferring that know-how to other Group businesses. We also recognize that Fukui Murata Manufacturing is in a unique position to take the lead in providing solutions to the issues of energy saving and CO₂ reduction. Here, with the development team situated in the same locale as the mass-production line, mutual cooperation and exchange enables the design of products and the development of production methods and equipment that are more environmentally-considerate. With our core item, monolithic ceramic capacitors, we have attained an approximate 45% reduction in CO₂ emissions over fiscal 2007 when calculated based on production level. However, as production volume has doubled, we have actually experienced a 10% increase in CO₂ emissions overall. From upstream to downstream, little by little, each and every department is exerting its accumulated efforts towards saving energy. However, based on the prediction that the demand for micro, high-capacity monolithic ceramic capacitors will grow even further from here on, I sense the necessity for a more fundamental energy-saving policy. For example, under the present circumstances, the issue of temperature distribution means that only the central portion of the furnace can be used for calcination, the largest source of energy use in the overall process. Furthermore, in order to achieve dimensional accuracy within the extreme miniaturization that is taking place in the base ceramic substrate, only a portion of the whole is usable, and the remainder must be discarded. By investigating these problems thoroughly, on paper, it should be possible to lower the energy cost per piece to 1/10th its current level. Although the spread of small high-capacity monolithic ceramic capacitors itself is contributing to energy savings in electronic devices, we can attain further energy savings during the manufacturing process.... And I think that it is the very mission of Fukui Murata Manufacturing.

Fukui Murata Manufacturing Co., Ltd.
Director
Takaichi Kitahata

Feature Articles: The Environment — “Mega Solar”

Operating large-scale solar power generation systems in order to make social contributions through renewable energy

[Shenzhen Murata Technology Co., Ltd.]
Achieving a 10%-equivalent reduction in power consumption even within the remarkable economic growth of China

These days in China, the country’s rapid economic growth has resulted in chronic electric power outages, with power shortages in summer being especially serious. In line with that, the need for companies to save energy and reduce their environmental impact is growing larger due to the government’s environmental policies, which include CO₂ emission control. At Shenzhen Murata Technology, our rate of annual power consumption exceeds 10 million kWh and accounts for a large portion of this area’s energy consumption, making this one of the most important problems that we needed to immediately improve. So we installed a solar power generation system in order to contribute to the spread of renewable energy as well as to the elimination of the area’s electric power shortages. With this system, we are able to realize a reduction of about 1.1 million kWh of electric power per year and about 812 tons in CO₂ emissions. This is equivalent to around 10% of our total annual power consumption. As a company that does business in China, we will continuously strive to be a positive stimulus to the whole Murata Group while enthusiastically fulfilling our local social responsibilities.

Shenzhen Murata Technology Co., Ltd. Administration Dept.
Wen Fang Jing

[Yasu Plant]
Proposing a post-disaster energy supply system:
Mega Solar systems that can serve 200 average households

Following the example of Shenzhen Murata Technology Co., Ltd. in China, we completed “Mega Solar Yasu”, a mega-solar power system, at our Yasu Plant, and have initiated the generation of electrical power there. We introduced this solar power generation system in connection with the deregulation and promotion measures for renewable energy that emerged in line with Japan’s reexamination of its post-disaster energy supply structure. Using this system, we are generating 910,000 kWh of electric power per year, equivalent to the use in about 200 average households, and we sell all of that electricity to the local electric power company. Although we experienced many difficulties and hardships during construction of the system, such as problems with the foundation, problems with materials, and problems with the equipment itself, it was finally completed and began generating power safely. While continuing the spread and promotion of renewable energy, and assisting towards the elimination of electric power shortages in this area, we will also continue to cooperate with local governing bodies in order to be of use in local environmental research and learning.

Photo, from left to right:
Murata Manufacturing Co., Ltd.
Planning Dept., EMI Filter Division,
Components Business Unit
Katsuya Imagawa
Murata Manufacturing Co., Ltd.
Environment Dept., Administration Group
Yoshiaki Sakata
Hiroaki Otsuka
Murata Manufacturing Co., Ltd.
Yasu Plant Administration Dept.
Hiroyuki Tsutsumi
Yoshiaki Kishimura
Fumitaka Kojima