

Energy-Saving Model Factory Tour, Fujisawa Factory



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"There is a direct relationship between the efforts of each operating site to reduce energy consumption and its profit. As a corporation, we have a responsibility to the Earth and our grandchildren to reduce energy usage."

Energy Conservation and Monitoring Systems

Yamatake has developed a monitoring system that allows users to gather and manage data related to the consumption of electricity, gas, compressed air, and water through the collection and management of energy-related data. Collected data can be accessed by authorized personnel via the Internet.

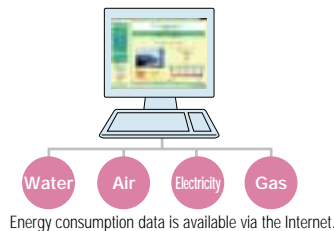


Explaining energy saving systems in front of centralized power management control panels

Energy-saving Model Factory Tour

The Yamatake Group participates in two types of environmental activities: one is to reduce the environmental impact of our business operations, and the other is to provide our customers with solutions that reduce the environmental impact of their operations. Both activities are evident at the Fujisawa factory, which strictly enforces its own comprehensive environmental measures beginning with energy and resource conservation, and serves as a model factory where the public can view actual examples of environmental solutions provided by Yamatake. In fiscal 2002, the Fujisawa factory was visited by a variety of stakeholders, including local citizens, students, and NGOs with interest in its energy saving solutions. Comments from participants are listed below.

Energy Management System



Fujisawa Factory's Electricity Consumption Trend

In 1996, the Fujisawa factory erected a new R&D building, and from the following year, the factory's electricity consumption showed a sharp rise. The factory began energy conservation activities in 1999. As a result, the Fujisawa factory has achieved a reduction in electricity usage, the factory's major source of energy consumption, by approximately 22% compared with levels in fiscal 1998.

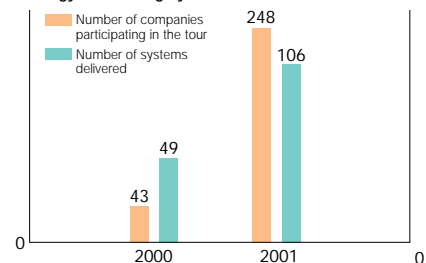


Fujisawa Factory Overview

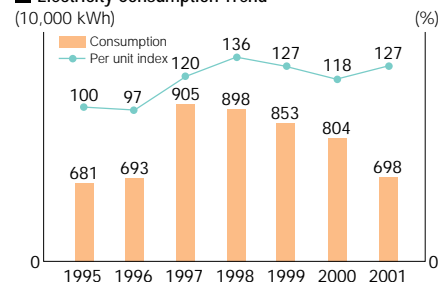
This factory manufactures a variety of control instruments, from all types of factory automation (FA) sensors – including photoelectric and proximity sensors – to digital and FA controllers. The factory also carries out R&D of semiconductor sensors.

Location: Fujisawa-shi, Kanagawa
Established: May 1961
Site area: 25,000 m²
Factory area: 33,500 m²

Number of energy-saving factory tour and number of energy monitoring system delivered



Electricity Consumption Trend



Comments from participants of the energy-saving model factory tour



From the perspective of town planning:

Kou Nakajima

Editor

It is true that towns and cities shape people, but we often hear how towns with much appeal are the product of those citizens who work hard to better their town. Cities and towns consist of corporations and citizens, and corporations that contribute to their towns are important citizens, since they themselves are an asset to their community. Upon touring the Fujisawa factory, we were able to see how serious Yamatake really is about its responsibilities as a local citizen.



From the perspective of a local resident:

Shoko Yamamoto

I have been living in this region for many years now, but had no idea that the Fujisawa factory was conducting so many different environmental preservation activities throughout the area. These activities are not immediately apparent, and I think it would be a good learning experience for children to tour the factory as we have today. The tour has made me think that my family should also be carrying out similar energy saving activities.

Power

Controlling air for power source with measurement and control systems

Compressed air and electricity are the main power sources used for the equipment at Fujisawa factory. To create compressed air, we installed gas-fuelled energy saving engines in our air compressors, and control air leaks using Yamatake's Harmonas, a measurement and control system. Harmonas can also be used for regulating the number of air compressors in operation according to the amount of air needed. With this system, we have been able to achieve a substantial reduction in the amount of energy used to power equipment.

The energy monitoring system on the opposite page is a measurement system, whereas Harmonas is an automation system that features both measurement and control functions.

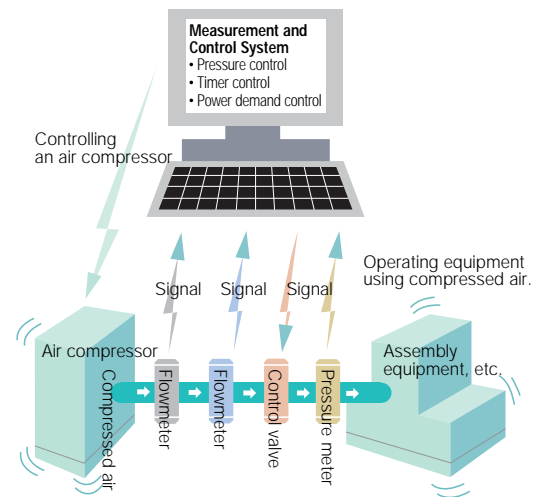


Checking for compressed air leaks (see the illustration on the right)



Air compressor room (see the illustration on the right)

Power Control Flow Using a Measurement and Control System



Air conditioning

Energy saving through ice thermal storage-type air conditioning systems and other devices

We achieved a significant reduction in the amount of energy consumed by our air conditioning systems through the synergistic effect of ice thermal storage-type air conditioning systems, double-pane windows, and air conditioning systems that can control by room or area.



Ice thermal storage-type air conditioning system for substantial energy savings.

Electric Power

Analyzing the power consumed by each equipment is the basis for energy conservation



Panel for centralized power management

By analyzing the amount of electricity consumed by each equipment, effective power saving can be realized. (Refer to the Electricity Consumption Trend graph on the opposite page.)



Awnings to shade outdoor air conditioner units realizes substantial energy savings.

Lighting & Office Automation Equipment

Importance of technology and lifestyle in energy-saving

Devices such as motion sensors that turn off the lights when no one is in the room, as well as skylights for natural light play an important role in energy conservation activities. By using a combination of such devices, we have achieved remarkable energy savings.



From the perspective of a citizen who knows about environmental activities of foreign corporations:

Midori Okabe

Scandinavian Government Tourist Bureau

I felt that Yamatake is helping to create a sustainable society through its energy monitoring systems, but that it also plays a quintessential role in the possibility of forming such a society. I hope that by adopting a long-term vision for the future and formulating a strategic environmental plan, Yamatake will become a more competitive and socially responsible company.



From the perspective of an environmentalogy student:

Sami Izutsu

Institute of Environmental Studies, Graduate School of Frontier Sciences, The University of Tokyo

I was surprised at the use of individual light switches that enable employees to turn off the light above them. Yamatake is not only implementing energy-saving measures through its technologies, but is also putting its efforts into the environmental education for employees. I think it's how to publicize its environmental activities that will become more important for Yamatake in the future.