

An Environmental Management System (EMS) Designed for Global Deployment

Yokogawa believes that we are all responsible for protecting the global environment. Based on this understanding, Yokogawa developed and continues to improve its efficient, effective EMS. The latest step was to deploy the system globally throughout the Group.

Global Deployment Throughout the Group

Yokogawa's environmental management practices are grounded in its belief that both economic growth and global environmental protection are critical for building a sustainable society. As stated in the Yokogawa Group Basic Environmental Management Rules, all firms in the Group will: (1) strive to carry out resource recycling-based operations with the aim of achieving zero emissions; (2) contribute to global environmental protection by supplying society with environmentally friendly products and environmental solutions that contribute to global environmental protection; and (3) encourage their employees to proactively engage in activities to protect the environment.

In fiscal year 2003, in order to make these initiatives even more effective, Yokogawa developed new environmental activities and deployed EMS globally throughout the Group.

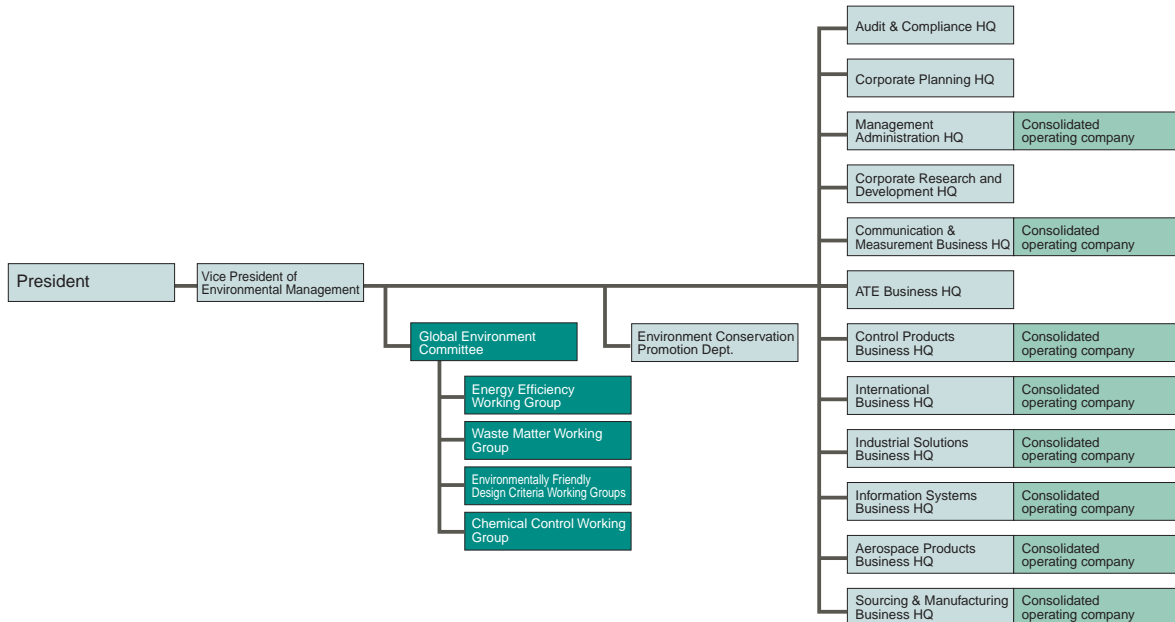


EMS Maintenance and Deployment Under Local Site Direction

The Group's EMS system is centered around twelve headquarters and divisions at the main office/factory, which provide guidance and support to the consolidated operating companies in their respective areas, for implementation, maintenance, and improvement of the EMS. Under strong leadership from managers at local sites, the Group's firms in Japan and abroad have developed a system for promoting environmental protection activities that is closely integrated with business processes.



Organization Chart for Promotion of Yokogawa's Environmental Activities (fiscal year 2003)



ISO14001 Certification

EMS is indispensable for environmental management practices aimed at building a sustainable society. As stated in the Yokogawa Group Basic Environmental Management Rules (see page 4), establishing an environmental management system provides the base for environmental activities. The Group recommends ISO14001 certification for production sites with heavy environmental burdens. For non-production sites, the Group has developed a proprietary, simplified EMS system to promote environmental activities. As of the end of March 2004, there were twelve ISO14001-certified sites in Japan and six overseas. The employees working at certified sites account for 63% of all Group employees.

Environmental Auditing

(1) Internal Audits

Yearly audits were conducted (systems audit, legal compliance audit, performance audit, and operations check under changed environmental organization). Although some inconsistencies and observation items were discovered in some business headquarters, these issues were quickly addressed and corrected.

(2) Environmental Processes Audits

In addition to the internal audit items, Yokogawa gives high priority to environmental measures. Therefore, paper inspections as well as site inspections were conducted at the YMF Komine factory, YMF Kofu factory, and YMF Ome factory. In addition, the person in charge of general environmental management and the general affairs office were audited. These audits confirmed that the EMS system is operating properly and being implemented properly.

(3) Periodic Inspections

Four sites (the main office/factory, YMF Komine factory, YMF Kofu factory, and YMF Ome factory) underwent biannual surveillance inspections conducted by the certifying organization. The sites received high evaluations, with comments like “conducts self-directed study of soil pollution”, “applies the environmental protection system to consolidated operating companies”, and “works to popularize energy saving products.” As a result, the sites maintained their registrations with an "Improved" evaluation.

ISO14001 Certifications (as of end of March 2004)

Site		Registration date
Yokogawa Electric Corporation	main office/factory	July 1997
Yokogawa Electronics Manufacturing Corp.	Main office/Komine factory	July 1997
	Kofu factory	July 1997
	Ome factory	July 1997
	Mie factory	August 1998
	Matsukawa factory, Komagane factory	November 1999
Kokusai Chart Corp.		January 1999
Yokogawa Trading Corp.		February 1999
Ando Electric Co., Ltd.		February 1999
Yokogawa M&C Corp.		April 1999
Yokogawa Engineering Service Corp.		February 2000
Yokogawa Denshikiki Co., Ltd.		November 2000
Suzhou Yokogawa Meter Company	China (Suzhou)	May 1998
Yokogawa Electric Asia Pte. Ltd.	Singapore	October 1998
Yokogawa Shanghai Instrumentation Co., Ltd.	China (Shanghai)	March 2000
P.T. Yokogawa Manufacturing Batam	Indonesia	April 2000
Yokogawa Sichuan Instrument Co., Ltd.	China (Chongqing)	December 2000
Yokogawa Engineering Asia Pte. Ltd.	Singapore	August 2001

* The following sites have general certification: Yokogawa main office/factory, YMF main office / YMF Komine factory, YMF Kofu factory, and YMF Ome factory.

Environmental Audit Inspection Items

Environmental processes audit	Internal audits	Systems audit	Audit of organization/system, target management, education, operations management/corrections, and other data to check whether the system is functioning effectively.
		Legal compliance audit	Audits the operation and monitoring of regulated values (qualifications, notice submissions, and measurement data) and other data to check whether legal and other requirements are being followed.
		Performance audit	Audits targets and actual results, regulated values, and other data to check whether the self-determined operation items are being implemented properly.
	Environmental measures	Audits contributions to a recycling-based society, reductions in environment-polluting substances, environmentally friendly products and solutions, contributions to society, transparency of environmental information, and other data to check whether the environmental strategy is functioning properly.	

Overview of Environmental Activities in Fiscal Year 2003

In providing products to its customers, the Group seeks to deliver new types of value, while striving to lessen the impact of its own operations on the global environment and addressing a variety of challenges.

Fiscal Year 2003 Summary

In fiscal year 2003 Yokogawa engaged in environmental activities with 16 target items, and was successful in satisfying all of the targets. Going forward, Yokogawa will continue to deliver new types of value to its many customers through products related to measurement, control, and information processing. Yokogawa takes its responsibility as a global corporation very seriously, and will work hard to expand its environmental activities in the future. The major results from fiscal year 2003 are summarized below.

and YMF Ome factory underwent their biannual survey inspections in July 2003 and successfully maintained their ISO14001 general certification.

Promotion of Recycling-based Management

For the four sites with ISO14001 general certification, Yokogawa established a plan to reduce CO₂ emissions by 15% compared to fiscal year 1990, on a sales unit basis. At the end of fiscal year 2003, we achieved a reduction of 29%, a full 14 percentage points better than our target. In addition, these sites achieved a waste recycling rate of 95.8%, a 1.8-point improvement over the 94% target.

EMS Implementation, Management and Improvement

The Group has deployed an EMS promotion system, which is integrated with its business processes, at each of the business headquarters of Yokogawa as well as the consolidated operating companies as part of a global deployment throughout the group. In addition, the main office/factory, YMF Komine factory, YMF Kofu factory,

Reducing Environmental Pollutants

Yokogawa had already been using lead-free soldering technology in four different power supply units. In fiscal year 2003, lead-free technology was also applied to the Xancia™ controller, which integrates control functions and

Environmental Policy of the Group	
EMS implementation, maintenance, and improvement	Establish an EMS to promote and improve environmental protection activities. In order to achieve this, it is necessary to accurately understand the impact of business activities on the environment, establish environmental targets that are technically and economically feasible, and work to achieve these targets while conducting environmental audits to maintain and improve the system.
Implementation of environmental education	Provide all employees with environmental education so that they understand the Environmental Policy, improve their environmental awareness, and consider environmental protection throughout their corporate and civil activities under their own initiative.
Legal compliance	Comply with all legislation, directives, regulations, agreements, and industrial guidelines pertaining to the environment, and strive to protect the global environment.
Promotion of recycling-based management	Strive to use resources and energy efficiently throughout corporate activities, reduce waste, and increase reuse and recycling, with the aim of achieving zero emissions.
Reduction of environmental pollutants	Reduce the use of substances that adversely affect the environment, such as toxic, global-warming, and ozone-depleting substances, by adopting alternative techniques as much as possible.
Environmentally friendly product development	Supply products with low environmental impact by developing and manufacturing products with careful consideration for their impact on the environment throughout their lifecycle, from materials purchasing, manufacturing, and distribution, through usage and disposal.
Providing environmental solutions	Help protect the global environment by supplying value-added products and services, based on measurement, control, and information processing technologies.
Contributing to society by protecting the environment	Participate in regional environmental protection activities, support employees who initiate such activities, and strive to maintain harmony with local communities as a responsible corporate citizen.
Transparency of environmental information	Make the Environmental Policy and information on the Group's global environmental protection activities publicly available to broaden communications with communities.

information processing functions. In addition, powder application technology was established as an alternative technology for reducing usage of toluene and xylene.

Development of Environmentally Friendly Products

In response to the enactment of the Waste Electrical and Electronic Equipment (WEEE) and Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) directives in Europe, the Group has announced that it will aim to completely eliminate its use of six RoHS substances by July 2006. In addition, Yokogawa has applied its own LCA standard in developing new products designed to reduce CO₂ emissions by at least 25% compared to existing products. So far, seven models registered as alternative products have been completed.

Providing Environmental Solutions

Yokogawa has seen an increase in purchase orders for its Econo-Pilot energy saving control system, as well as Dr. Y.E.S., a boiler operation efficiency and improvement support solution. In addition, the InfoEnergy energy saving support system is also off to a good start.

Contributing to Society by Protecting the Environment

Group companies are engaged in local green campaigns throughout the world. For example, the YMF Kofu factory and YMF Ome factory, as well as Yokogawa Sichuan Instrument Co., Ltd. in China, are all involved in local green campaigns.

Fiscal year 2003 (data for four sites with ISO14001 general certification)				Ref. page(s)
Item	Target or goal	Fiscal 2003 result	Self evaluation	
•Environmental business process accounting	•Conduct environmental business process audits for the four sites with general certification	•Completed	Successful	13
•Provide basic environmental education	•Provide basic environmental education to all employees	•Completed	Successful	33
•Provide advanced environmental education	•Provide advanced environmental education to all employees	•Completed	Successful	
•Establish Group management standards	•Create toxic discharge facility installation standard	•Completed	Successful	24
•Energy conservation	•Reduce CO ₂ emissions by 15% on unit sales basis (compared to fiscal 1990)	•15% reduction target met	Successful	14
•Zero emissions	•Recycle 94% of waste matter	•95.8% achieved	Successful	14
•Study alternatives for hexavalent chromium, cyan, toluene, and xylene	•Study alternative technologies for hexavalent chromium •Study alternatives for cyan, toluene, and xylene	•Studied •Introduced powder application technology to reduce toluene and xylene	Successful Successful	27 24
•Rollout of products with lead-free soldering	•Introduce equipment supporting lead-free soldering and roll-out lead-free soldered products	•Achieved commercial rollout with Xancia(tm) controller	Successful	27
•Improve design rules	•Collect information on WEEE and RoHS directives, and investigate and study how to respond to these directives	•Clarification of the Group's response	Successful	15.27
•Develop new products	•Apply product assessment standards and LCA standards to reduce CO ₂ of developed products by 25%	•Seven models completed	Successful	19
•Increase number of products with environmentally friendly packaging	•Increase number of products with environmentally friendly packaging	•Completed for 16 models	Successful	29
•Increase purchasing of green products and materials	•Increase purchasing of green products and materials to 80%	•Purchasing of green products and materials increased to 87%	Successful	18
•Establish and popularize environmental solutions	•Establish and popularize environmental solutions	•Held outreach meetings, exhibited products at measuring instrument shows	Successful	20.21.35
•Promote environmental activities in communities	•Participate in community and regional activities	•Provided backing for 350th anniversary of the construction of the Tamagawa Josui, sponsored by Musashino City •Participated in various regional cleaning activities, such as the green campaign sponsored by Yamanashi Prefecture	Successful Successful	34
•Improve Environmental Report	•Increased number of data sources	•Data sources expanded to include Group companies •Environmental Reports published by subsidiaries in Chongqing, Suzhou, and Shanghai	Successful Successful	35