

## 2010 CSR Report

Corporate Social Responsibility

The Yokogawa Group aims to benefit society by providing solutions that protect the environment and being a positive influence for social change. On this page you can read about some of our CSR activities over the past year.



### Message from President



### Yokogawa's Approach to CSR

At Yokogawa, we are promoting CSR by prescribing guidelines for conduct that are based on our corporate philosophy and business standards.

### Governance and Compliance

By establishing an internal control system and implementing compliance management, we aim to be a healthy business that encourages open communication.

## CSR Highlights

Here are case studies that show how Yokogawa's solutions are benefiting society.

### To Protect the Global Environment



### For Safe and Secure Operations



## Environmental Management

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Yokogawa has assigned a very high priority to protecting the environment. We are helping our customers reduce the environmental impact of their business activities and are taking concrete steps to reduce our own environmental footprint.



### Key Topic

#### Energy Saving Diagnostics over the Lifecycle of a Plant

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This case study describes how our cutting-edge technologies are saving energy at a Thai customer's plants.

#### A Project to Protect the Woodlands of Tokyo

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In a collaborative effort with non-governmental organizations and local residents, we are helping to restore woodlands and promote biodiversity in the Tokyo metropolitan area.

## Human Rights and the Yokogawa Workforce

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Yokogawa adheres to the international standards on human rights, and strives to promote diversity in its workforce.



#### Developing Global-minded Personnel

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Two employees working at our headquarters give their thoughts on Yokogawa's approach to diversity.

#### Promoting Occupational Health and Safety Management

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Learn more about our safety and health policy and our occupational safety and health management system.

## Customers and Suppliers

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#### Customer Satisfaction and Quality Assurance

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Here we describe Yokogawa's quality management activities and initiatives to improve customer satisfaction.

#### Supplier Relations

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Here you can find out more about Yokogawa's basic procurement principles and what we are doing to promote socially and environmentally responsible supply chains.

## Yokogawa Corporate Citizenship

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Read about the Yokogawa Science Class, our cooperation with non-governmental organizations, and our efforts to make this world a better place.



## CSR Efforts by Yokogawa Group Companies

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Here you can learn more about the Yokogawa Group's environmental conservation, human resources management, and corporate citizenship activities.



Yokogawa selected again to the prestigious Dow Jones and SAM sustainability Asia Pacific index.



This is our **Communication on Progress** in implementing the principles of the **United Nations Global Compact**.

We welcome feedback on its contents.

## About the 2010 CSR Report

The 2010 CSR Report gives a complete overview of the CSR activities of the Yokogawa Group. Further key information is also provided in our annual report.

- Period covered by this report

April 1, 2009 through March 31, 2010

Where appropriate, information on events occurring outside this period may be included.

- Scope of data

This report covers Yokogawa Electric and its Group companies. When data having a different scope is provided, that is noted.

- Company names

In this report, “Yokogawa” and “Yokogawa Group” refer to the entire organization, “Yokogawa Electric” is only used with reference to Yokogawa Electric Corporation.

- Reference Guidelines

Environmental Reporting Guidelines (Fiscal year 2007 Version), published by the Ministry of the Environment, Japan

Environmental Accounting Guidelines (Fiscal year 2005 Version), published by the Ministry of the Environment, Japan

Sustainability Reporting Guidelines 2006, published by the Global Reporting Initiative

One reason for a company's existence is the contribution that it makes to society, and an important mission for any company is the enhancement of its corporate value through healthy and sustainable growth. The Yokogawa Group aims to build relationships of trust and meet the expectations that have been placed on it by society, and does so with the realization that it owes much to nature and the community. Without the acceptance and respect of society, we will not be able to sustain our business operations. As a global citizen, I would like to create value together with our customers and help to make our society more sustainable. We will always be looking for those contributions that only Yokogawa can make by leveraging our technical strengths, and will endeavor to be a socially responsible company with spirited employees who hold their heads high.



President Shuzo Kaihori

The Yokogawa Group has joined the United Nations Global Compact to affirm its support of fundamental principles in the areas of human rights, labor, the environment, and anti-corruption. We will make sure that all employees honor these principles.

## Our Identity

Our corporate philosophy is a declaration of the Group's identity: "As a company, our goal is to contribute to society through broad-ranging activities in the areas of measurement, control, and information." Although our business activities may not be well known to the general public, we are striving to fulfill our responsibilities to society through the products and services that we provide our customers, and take pride in our support of industries worldwide.

In 2000, we announced the VISION-21 and ACTION-21 long-term corporate strategy for the years leading up to 2010. VISION-21 states, "The Yokogawa Group will work together with its customers to create value in the fields of industrial and social systems. Thus, the Group aims to contribute to ward not only preserving the global environment in the 21st century and realizing resource recycling in society, but also realizing a thriving global society." VISION-21 also sets out our common values, which includes respect for individuals, the creation and sharing of value with our

## Winning Society's Trust

Trust provides the very foundation for a company's existence. The second part of our corporate philosophy makes clear our standard for personal conduct, affirming, "Individually, we aim to combine good citizenship with the courage to innovate."

In 1994, we set out our basic compliance policies in the Standards of Business Conduct for the Yokogawa Group. In addition, the Yokogawa Group Internal Control Systems have been established to enhance corporate governance. Thanks to a Groupwide commitment, both efforts have been effective, and we will take further steps to reinforce them. To promote understanding of our activities and build trust, we will also seek to disclose more information.

## Technological Innovation for Our Customers

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As indicated in a number of corporate image surveys, Yokogawa is known as a technology company. I believe society expects a contribution from us that is based on our high-quality products and services and utilizes our leading edge technology.

In 2006, the Group designated FY2010 as the Second Milestone for the VISION-21 and ACTION-21 strategy, which states, "Yokogawa will help customers solve problems from their point of view (Customer Centric Solutions), using optimum technical expertise (Leading Edge Technology)." We will do whatever it takes to meet our customers' needs.

## Global Human Resources

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Another initiative for the Second Milestone is "One Global YOKOGAWA." Regarding this initiative, we have stated, "We must be One Global YOKOGAWA in the eyes of our customers, no matter when, where, or how they encounter us." As developing and utilizing human resources is another important mission for a company, we will provide the kind of environment in which employees can fully demonstrate their true potential.

More than 50% of our consolidated sales come from outside Japan. Approximately one half of the Group's employees work in subsidiaries outside Japan, and just one fourth work for subsidiaries in Japan. In response to the increasing diversity of our business and its employees, we must achieve a truly consolidated operation that allows us to combine the strengths of this diverse workforce.

## Approach to Social and Environment Issues

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Humankind today faces many problems that involve society and the environment. We must ask ourselves what we can do as a company to respond to these problems and look for answers. Although major issues such as poverty, military conflict, and refugees cannot be immediately resolved by any one company acting on its own, there are many other areas like water, food, medicine, and housing where our business activities in fields such as measurement, control, and life science can have an immediate impact in people's lives.

Yokogawa is already moving forward on these fronts by leveraging its measurement, control, and information technologies to provide products and services that, for example, help to reduce energy consumption. Capitalizing on our expertise in such areas as renewable energy and water recycling and reuse, we will make further contributions with the aim of realizing a sustainable society.



Yokogawa has established the corporate philosophy and the standards of business conduct applied to all the group companies. These policies clearly describe Yokogawa's corporate responsibility.

Also, the Yokogawa Group Compliance Guidelines give clear rules and guidelines relating to human rights, obedience to the law, workplace safety, hygiene, etc.

## Yokogawa's Approach to CSR

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### Yokogawa's Contribution to Society through its Core Business

An enterprise should sustain itself and grow with the changing society. Yokogawa's corporate philosophy states that its goal is "to contribute to society through broad-ranging activities in the areas of measurement, control, and information." As Yokogawa takes pride in the fact that it is supporting the industries in the world, it is fulfilling our responsibility to society.

In addition, to address the issues that society and global environment are facing, Yokogawa contributes to the society by utilizing the "technology for measurements, controls, and information." It utilizes these methods in the areas of energy conservation solutions, new energy development support, energy load measurement and analysis, and medical and pharmaceutical development support.

### Responsibility to Stakeholders

In Standards of Business Conduct for the Yokogawa Group, five "Basic Principles" are defined: Realizing the Yokogawa Philosophy, Customer Satisfaction, Observance of Laws and Regulations, Respect for Human Rights, and Order and Safety of Community and Society. In addition, the Basic Attitude of the Yokogawa Group defines its contribution to global environmental protection and relationship with the stakeholders. Abiding by these principles, work is in progress to meet the expectations of stakeholders, which includes employees, customers, and stockholders.

At Yokogawa, all employees are considered an asset (human resource), and as such, it strives to continually improve its work environment and proactively provide its employees with opportunities to develop their abilities. In addition, it strives to meet the expectations of its customers, with its motto since the inception, "Quality First." Being also mindful as "good citizens," as declared in its corporate philosophy, Yokogawa is actively engaged with local communities and social action programs through its employee volunteers.

## Corporate Governance

To support a healthy and continued growth, Yokogawa is working to strengthen its corporate governance, striving to increase the transparency of the decision making by our Board of Directors and to enhance the audit functions. At the same time, Yokogawa is maintaining its internal control system to execute the business appropriately and effectively. In addition, as a business that is trusted by society through its fair and honest business activities, Yokogawa makes an effort to cultivate a corporate culture that gives compliance the highest priority above all else.



## CSR Promotion Structure

In 2008, the CSR Promotion Headquarters was newly established as a designated department for CSR. In 2009, departments in charge of compliance, environmental protection, occupational labor and safety, and corporate citizenship were consolidated as "CSR and Business Ethics Department," which was set up within the Audit and Compliance Headquarters that oversees internal control. The result is a structure for more comprehensive CSR activities across the entire group.

## The United Nations Global Compact

In January 2009, Yokogawa participated in the "United Nations Global Compact," an international initiative that promotes 10 principles concerning human rights, environment, and corruption prevention. As of February 2010, 7,542 groups are participating in the world, and Yokogawa is the 76th Japanese company to participate in it. An effort has been ongoing to share the ethos and the standard of the Global Compact with all workers within the Group and all the customers connected through its supply chains.



## Contributing to Society through Technologies for Measurement, Control and Information

Yokogawa is a corporate group that provides solutions in terms of industrial automation and measuring instruments. Since our founding in 1915, we have continued to contribute to the realization of an affluent human society by providing optimal solutions, in the form of technologies for measurement, control and information, to customers centered mainly in the manufacturing and social-infrastructure fields.

In recent years, as awareness about CSR (corporate social responsibility) has grown, concern for the global environment and customer demands for operational safety have become greater than ever before. Our control systems have been installed in factories throughout the world. We believe that by using our control systems as platforms and combining them with the latest energy-efficient technologies, operations possessing the world's highest level of efficiency can be achieved. Moreover, we take pride in the fact that our control systems, which support production processes that operate 24 hours a day, year round, provide a reliability equal to or greater than a seven-nines operating rate (99.99999% = 1 failure per 4500 years of operation). By closely monitoring and forecasting a factory's production conditions and anticipating changes in them, our control systems enable reliable, stable operations.

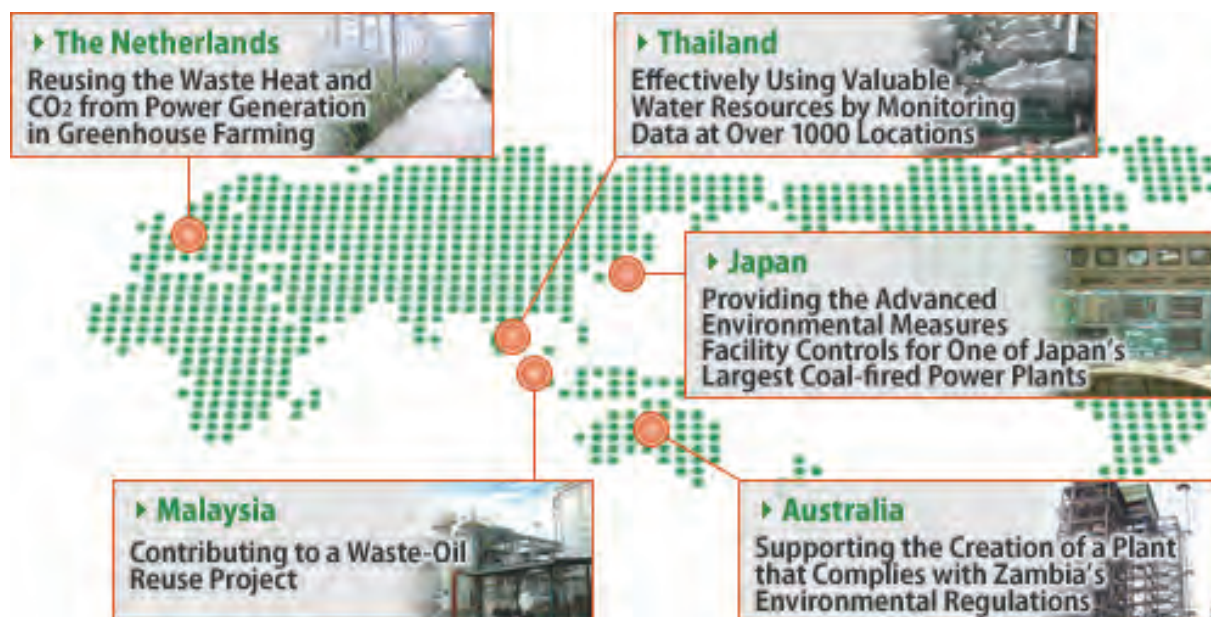
Yokogawa will continue to contribute to creating a safe, secure, and environmentally friendly society.



Yokogawa's control systems and field instruments are used worldwide for purposes of efficient energy utilization and wide-area monitoring to protect the environment.



High temperatures, high pressure, flammable materials, transport of hazardous materials? careful risk management is necessary for operating a factory. To protect the irreplaceable lives of people, Yokogawa uncompromisingly pursues the highest quality.

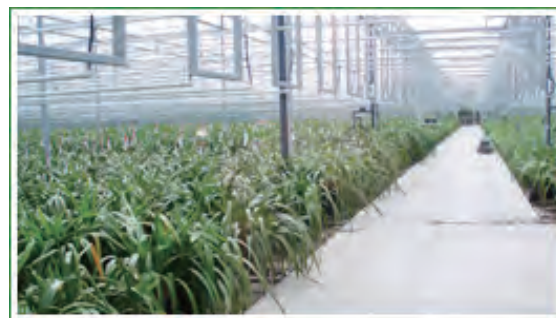


TOPIC 001

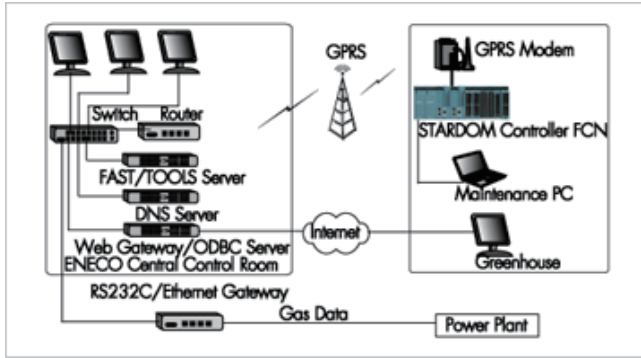
ENECO Energie (The Netherlands)

## Reusing the Waste Heat and CO<sub>2</sub> from Power Generation in Greenhouse Farming

ENECO Energie is one of the three main energy companies in the nederland. It provides a variety of services, including the supply of electricity, gas and heat. At its ROCA power station, it generates electricity by burning gas. Moreover, it is engaged in an environmentally friendly project by which the heat and CO<sub>2</sub> produced from that process are used in agriculture. Necessary for plant growth and photosynthesis, heat and CO<sub>2</sub> are transported by pipeline to the greenhouses of nearby farmers. This also contributes to reducing energy consumption and CO<sub>2</sub>.



With the system supplied by Yokogawa, STARDOM controllers, which are suitable for use in networks, have been installed in the greenhouses, and ENECO Energie remotely monitors and controls them through Internet cables. Moreover, provisions have been made so that each farmer can provide necessary instructions, and obtain information, through ENECO Energie's website.



STARDOM controller installed in the site cabinet

TOPIC 002

Metropolitan Water Authority (Thailand)

Effectively Using Valuable Water Resources by monitoring Data Over 1000 Locations

The Metropolitan Water Authority(MWA) supplies water to 1.8 million people in and around the city of Bangkok. To deal with the growing demand for water from the rapidly expanding city, MWA is also building a water-supply network divided into over 1000 blocks. With this network, however, water leakage and water loss, caused by pipe damage, equipment malfunction, inaccurate meters and more, had become a chronic problem, leading to water shortages.

In an MWA project in which Yokogawa participated, the goal was to reduce water loss by 30% by accurately monitoring pressure and flow in the water-supply network and promptly identifying places where leaks occurred. Thus, more than 200 STARDOM controllers and 1000 pressure transmitters and flowmeters were installed at key points in the network, and a system that centrally monitors the network via telephone lines was introduced as well. As a result, it has become possible to centrally monitor, in real time, data received from over 1000 block stations, and to immediately discover burst pipes and other abnormalities and readily identify leak locations. Thanks to this system, water loss has been greatly reduced and water resources are being more effectively used.



TOPIC 003

Aldwich Enviro-Management Sdn Bhd (Malaysia)

Contributing to a Waste-Oil Reuse Project

Recycling waste oil is less environmentally burdensome, and more cost-efficient, than refining new fossil fuel. Aldwich Enviro-Management provides such a service at its plant in Kemaman, Trengganu, Malaysia. Waste oil collected from various places by tanker truck and other means is brought to the plant, mixed in the ideal proportions and then stored, after which it goes through various refining processes, being transformed into diesel oil, naphtha, fuel oil, and other high-quality, value-added petroleum products.

Yokogawa's CENTUM CS 3000 R3 control system and field instruments were installed at the plant, where they are used to control all operations, from the loading and unloading of oil tanks to refining, shipping, and the emergency shutdown system.

Thanks to a system that combines highly reliable products with effective engineering and cooperative customers, stable waste-oil recycling has been realized.



TOPIC 004

## Xstrata Technology's Mufulira Copper Smelter (Australia)

### Supporting the Creation of a Plant that Complies with Zambia's Environmental Regulations

The Mufulira Copper Smelter processes more than 400,000 tons of copper ore a year. With the aging of the facilities, however, the electric furnace had been rebuilt.

A new smelter was now to be installed; and in order for it to comply with Zambia's environmental regulations, a sulfuric acid plant that would remove the sulfur oxide, particulate matter, and other environmental pollutants from the smelter's off-gas also had to be constructed.

In Australia, Yokogawa built a control system for the entire facility - smelter, acid supply, sulfuric acid plant, etc. - and shipped it to Zambia. So that local staff could operate the control system, Yokogawa also cooperated in their long-term training.

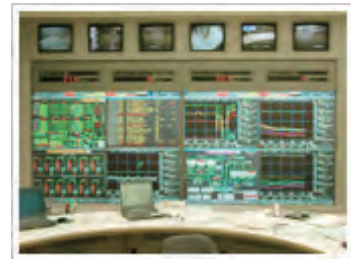
We believe that carrying out such environmental efforts and local support in developing countries will become increasingly important.

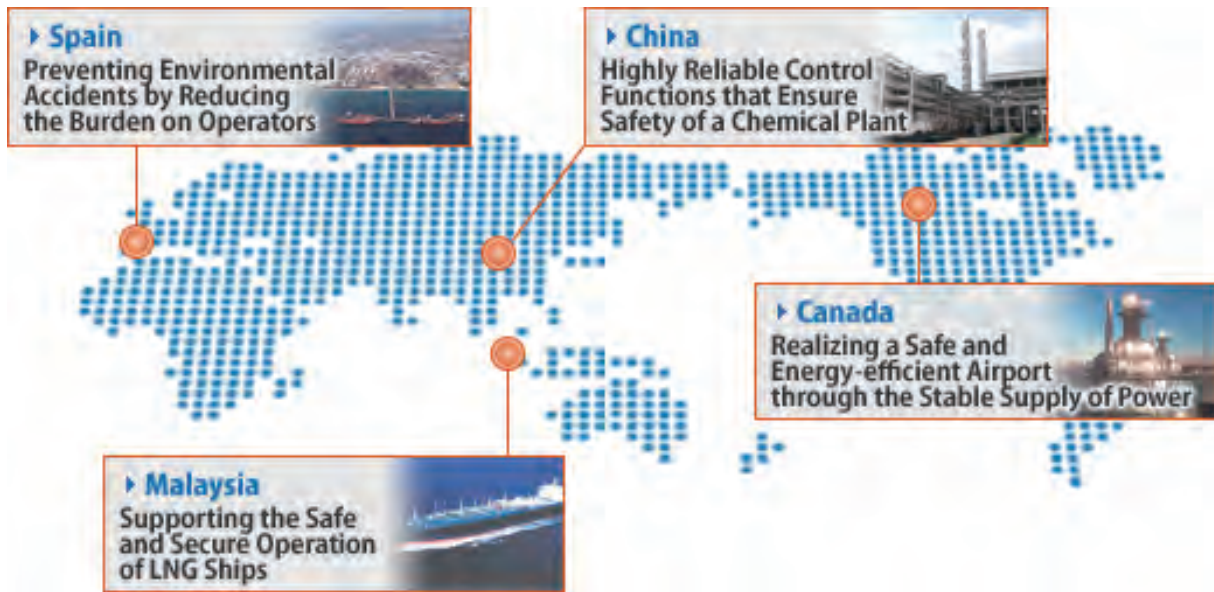




## Providing the Advanced Environmental Measures Facility Controls for One of Japan's Largest Coal-fired Power Plants

The Tachibanawan Thermal Power Station, owned by the Electric Power Development Co., Ltd., is located in Anan City, Tokushima Prefecture. With two 1,050 MW coal-fired generating units that began operating in 2000, it is one of the largest coal-fired power plants in Japan. A source of power for a wide area in western Japan, it stably supplies electricity to four regional utilities: Kansai Electric Power Co., Chugoku Electric Power Co., Shikoku Electric Power Co., and Kyushu Electric Power Co. Consideration was given to ensuring that the power station's design harmonized with the surrounding landscape. Moreover, as environmental protection measures, flue gas desulfurization systems and other state-of-the-art environmental facilities were installed to remove the NO<sub>x</sub> (nitrogen oxides), SO<sub>x</sub> (sulfur oxides) and ash dust. Part of the removed coal ash is reused as cement material. For the integrated monitoring and control of these extensive environmental facilities – gas desulfurization systems, electrostatic precipitator, coal storage and conveying facilities, ash treatment facilities, waste-water treatment facilities – Yokogawa's CENTUM CS 3000 is used. To centrally monitor the facilities, which are widely spread out and include approximately 30,000 data points, Yokogawa created a user-friendly interface equipped with two mouse-operated 100-inch screens and a guide system that employs surveillance monitors and sound. Thus, Yokogawa's control technology is helping to reduce the environmental burdens on the surrounding area while supporting the stable supply of electricity.





## TOPIC 001 CEPSA (Spain)

### Preventing Environmental Accidents by Reducing the Burden on Operators

CEPSA is Spain's second largest oil company, and its refinery in Alegegiras is its largest. This refinery produces all kinds of fuel products, including propane, butane, gasoline, jet fuel, gas-oil and fuel-oil, as well as high-quality petrochemical products such as benzene, toluene and xylene. At its offsite facilities for shipping, receiving and transport, it needs to control a complicated pipeline network used for moving and mixing crude oil. This network has a total length of 220 kilometers, and is normally involved in carrying out at least 100 jobs (shipping, receiving and transport jobs) at any one time. Accordingly, an integrated, highly reliable system able to solve the various problems that occur in such operations was needed.



Using Yokogawa's abundant offsite experience, an OMS (Oil Movement and Storage) system was installed. The resulting benefits include the following.

- Improved security monitoring during operations in the offsite area
- Reduction in operational errors that cause product contamination
- Prevention of environmental problems caused by tank overflow and other factors
- Reduction of burdens on operators through automation of operations

Operators can now understand the entire area; and operability has been increased, and safety greatly improved, by functions that can be conducted with a single button. Yokogawa's control technology has made it possible to increase the efficiency and the safety of operations at the same time.



## Highly Reliable Control Functions that Ensure Safety of a Chemical Plant

Yunnan Dawai Ammonia Co., Ltd. manufactures 500,000 tons of ammonia annually through coal gasification and air separation processes. With this manufacturing method, unlike the more commonly used methods of manufacturing ammonia from natural gas or crude oil, combustion is free of smoke emissions. On the other hand, the procedures for controlling the coal gasification process are extremely complicated, and adjusting the heat, feed amounts, coal-to-oxygen ratio and steam-to-oxygen ratio is considered quite difficult. However, with the CENTUM CS 3000's module control function and sequence control function, settings can easily be created for those factors.

The coal gasification process involves a maximum temperature of 1500°C and 40 bars of pressure, so a high level of safety is also required. If an accident were to occur, the effects on the surrounding area would be enormous, and the environmental damage incalculable. Countering such risk, the CENTUM CS 3000's reliability and ease of use are making an enormous contribution to the plant's safety.



## Realizing a Safe and Energy-efficient Airport through the Stable Supply of Power

Toronto Pearson International Airport is located in a million-person city in eastern Canada and near eight US states. In 2003, it shared the same power network with the surrounding area, and was troubled by frequent power outages caused by shortages of electricity. This was an extremely serious problem. It meant that the airport couldn't reliably fulfill its function as a public facility, and that its very ability to ensure the safety of air traffic was at risk. What was



clearly needed was a safe, reliable, independent source of electricity available 24 hours a day, year-round, without interruption.

As a result of considering both reliability and cost performance, a gas turbine cogeneration power plant from General Electric was selected. Yokogawa took charge of the plant's monitoring and control system.

Thanks to the new plant, it became possible to provide this international airport, an important part of the surrounding social infrastructure, with a stable supply of electricity, and airport safety and security have improved as well. Moreover, by effectively using the heat obtained from the plant's power generation and supplying the regional power network with any surplus power produced, the plant is playing a major role in conserving energy and reducing environmental burdens.



TOPIC 004

MISC (Malaysia)

## Supporting the Safe and Secure Operation of LNG Ships

The Malaysia International Shipping Corp. is Malaysia's largest maritime shipping company, and has ships exclusively used for carrying LNG (liquid natural gas). Until recently, for their operation and their cargo monitoring and control system, MISC used antiquated panel instrumentation and programmable logic controllers (PLCs). To extend the life of the ships, it was necessary to replace this system. The boiler control was also outdated and inefficient.

If something happens to a ship after it has left port and is alone at sea, the danger is greater than near land. Moreover, systems have to perform effectively in a unique installation environment subject to, among other things, irregular movements caused by wind and waves and fluctuations in a power source dependent on the boilers. Installing Yokogawa's CENTUM CS 3000 improved the visibility of information and made it possible to predict changes and promptly deal with them. Moreover, the system itself is highly reliable, thereby increasing the safety of the ships and improving the punctuality of operations and the fuel efficiency of the boilers.



Yokogawa participated in the planning of "Survey on energy saving by IT" which was launched in 2009 by the Ministry of Economy, Trade & Industry (METI) and the Green IT Promotion Council (GIPC). Yokogawa then performed energy saving diagnostics at two of its customers' plants in Thailand.

## Energy Saving Diagnostics at Two Factories in Thailand

From October 2009 to January 2010, Yokogawa performed diagnostics for energy saving at the plants of two customers who use the Yokogawa control systems. The diagnostics were done as part of the "Survey on energy saving by IT", started by the METI and GIPC. InsightSuiteAE, Yokogawa's equipment diagnostic system, was used as a tool to collect and analyze process data, and to perform a high-precision simulation of the energy-saving effects using multivariate analysis technology. This enables one to predict the effects of energy savings, and to actualize them without modifying the existing system.

### Rayong Olefins Co., Ltd.

Rayong Olefins Co., Ltd. (ROC) is the second largest petrochemical company in Thailand, producing 1.2 million tons of olefin products annually in Rayong, Thailand. The diagnostics revealed that the following energy savings were possible per year, for every single unit of heat exchanger and 13 units of ethylene cracking furnaces.

- Electricity: 807,000 KWh (450 Tons-CO<sub>2</sub>)
- Steam: 1,700 Ton (270 Tons-CO<sub>2</sub>)
- Fuel: 300 Ton (800 Tons-CO<sub>2</sub>)



ROC plant

Energy saving diagnostics were performed against heat exchangers and ethylene cracking furnaces, two of the most energy-consuming equipments.

Heat exchangers tend to lose their heat transfer efficiency with operations due to fouling inside the shell and the tubes causing an increase in energy consumption. As a result, cleaning of the shell and inside the tubes in regular maintenance is necessary. ROC has several hundred units of heat exchangers; however, without the proper tools to measure their heat performance, they must rely on experience to determine the equipment to be cleaned. To solve this problem, InsightSuiteAE was installed to measure the fouling buildup of the heat exchangers up to date. Then, future estimated extent of each fouling buildup is calculated and an appropriate maintenance schedule was proposed to the customer.

Ethylene cracking furnaces also have several coil tubes set inside, through which ethylene raw materials (e.g., naphtha) flow and are thermally decomposed. Over time, the coke buildup inside these coil tubes lowers the furnaces' heat transfer efficiency. This increases their energy consumption, necessitating regular decoking which means removal of the coke buildup. Currently, ROC does not have the means to measure the extent of the coke buildup. Without this measurement, they must use equal amounts of steam to decarbonize in all coil tubes, regardless of the extent of the buildup for each coil tube. This means that more steam is used than necessary for the coil tubes with only small amounts of buildup. To solve this problem, InsightSuiteAE was installed to perform multivariate statistical analysis on 220,000 operational points, and the appropriate amount of steam was available for each coil tube according its measured coke buildup. For this control, Yokogawa proposed the steam supply optimization algorithm of Exapilot, its operation efficiency improvement package, to ROC.



Diagnostics in progress

## Thai Acrylic Fibre Co., Ltd.

Thai Acrylic Fibre Co., Ltd. (TAF), a member of the Aditya Birla Group of India, produces 100,000 tons of one of the world's three best quality acrylic fibers each year at their Saraburi, Thailand plant. At this plant, Yokogawa's diagnostics revealed that the current operating condition (two lines) could be improved to yield the following energy savings per year:

- Steam: 3,100 Tons (490 Tons-CO<sub>2</sub>)
- Electricity: 6,400 kWh (4 Tons-CO<sub>2</sub>) (As a side-effect of control valves' stability)

Diagnostics were performed on the drying machine, which uses the most amount of steam in the entire plant, and on the plant's main control valves. InsightSuiteAE's diagnostic devices for the control loops and the control valves were installed to check the temperature control conditions. The results showed that the temperature controller of the drying machine is unstable, causing more steam to be consumed than necessary, and that the control valves are unsettled, causing wasting of air.

## Yokogawa's Contributions

These efforts were made as part of Yokogawa's new service-based solution called "VigilantPlant Service™", announced in February 2010. With VigilantPlant Services™, Yokogawa works with its customers to detect and solve various problems and to maintain the effectiveness of the plant throughout its lifecycle.

For this occasion, Yokogawa worked in collaboration with its customers in Thailand who use Yokogawa control systems, by adding InsightSuiteAE and Exapilot on their existing system and performing energy saving diagnostics. As a result, potential opportunities for significant energy savings were identified. Based on these findings, Yokogawa and its customers will be looking into ways to improve the controllability that actualizes energy savings.

In order to continue the energy-saving efforts throughout the lifecycle of a plant, it is important to not only offer solutions, but also to educate the local users and provide long-term support. Yokogawa recognizes its responsibility as a global provider of control systems, and is committed to promoting global energy conservation, not only by offering products and solutions, but also by supporting its customers' plants with a long-term perspective.



## "Measurement Seminar" Held for Technical Education

The "Measurement Seminar" started in 2008 as a response to a request from the local communities to help provide technical education. In 2009, this seminar was held 13 times in 12 locations throughout Japan.

Each of the seminars is usually limited to 20 to 30 people, because there are demonstrations and exercises using the actual devices. When the seminars first started, the curriculum consisted of fundamentals, much like an extension of school education. However, more recently, Yokogawa has been working with the host organization to design the curriculum ahead of time, so that the material fits the local industry.

For the attendees, the knowledge and skills gained from the seminar can be used immediately in their workplaces. Yokogawa will continue to hold these events, hoping to help boost the local economy and expand employment.



"Power Measurement/Low-Frequency  
EMC Measurement Seminar"  
at Iwate Industrial Research Institute,  
in collaboration with NF Corporation.



## Activities to Improve Customer Satisfaction

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In 2008, a customer satisfaction survey was conducted of customers who attended the product information course at the training center in Yokogawa Electric (Japan). For 2009, the survey results were tallied up, analyzed, and a structure was set up to share the results with the employees over the Intranet. In addition, a system was set up so that the customers' opinion can be addressed in the business activities.

Through activities such as these, Yokogawa will continue to provide products and solutions that can satisfy the customers even more.

## Quality First Approach

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Since the establishment, we have implemented our quality management system across all processes, as we are convinced that Quality First Approach is the basis of customer satisfaction. All the main Group companies have attained ISO9001 certification starting with Yokogawa Electric in 1992, which has made delivery of the same quality worldwide a reality.

We have continuously valued our customers' feedback to develop satisfactory products, and have gained a high level of satisfaction from our customers with respect to the accuracy and functionality of our products.

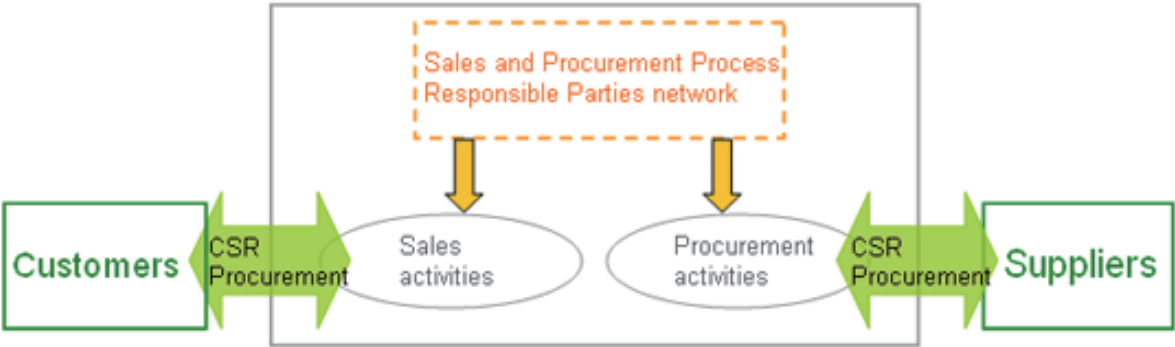
## Improvement of the Management Structure as Part of Internal Control

As part of the Yokogawa Group's internal control, Yokogawa's management structure governs the overall business processes, including its relationship with customers and suppliers. For the sales and procurement processes in the supply chain, Yokogawa Group's "Group Sales Operations Code" and "Group Procurement Code" have been defined based on its Corporate Philosophy and Standards of Business Conduct, to ensure fair and equitable transactions. Yokogawa observes the local ordinances of the country and regions with whom we do business, and focuses on establishing a supply chain that considers environmental protection.

In 2008, the Yokogawa Group Supply Chain CSR Guideline, which is compliant with JEITA\*, was created and published. In addition, Yokogawa's basic procurement policy, which is summarized in three points, is used as a set of principles to guide its every day operations. In 2009, a network of responsible parties of Yokogawa Group's sales and procurement processes was built as a foundation for all supply chain CSR activities.

## Three Basic Procurement Principles

1. Create an ethical, clear, and open corporate culture and establish ourselves as a company that can be trusted by society.
2. Promote socially responsible procurement activities throughout the supply chain, including not only the Yokogawa Group, but also the suppliers of Yokogawa.
3. Comprehensively evaluate and select suppliers, giving priority to our commitment to being a good corporate citizen.



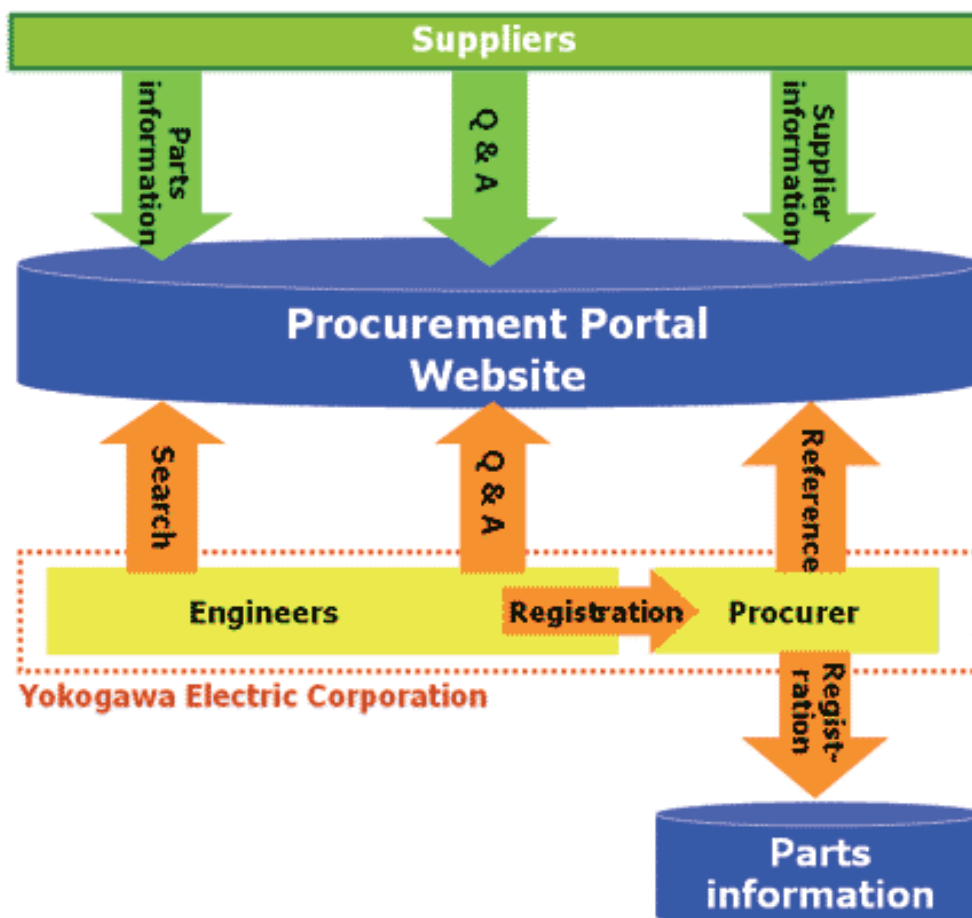
## Strengthening of Partnerships with the Suppliers

Yokogawa strives to strengthen its partnership with its key suppliers, through regular exchanges with the supplier's management. In April 2010, Yokogawa invited 100 people from the suppliers' management to an informational meeting at its corporate headquarters to explain its procurement policy. After the corporate policy, business plan, and procurement strategies were explained, a trophy and a certificate of appreciation were awarded to the company recognized as the Yokogawa's best supplier from the previous year.



## Portal Site Connecting Suppliers with Yokogawa

Yokogawa has launched a portal site connecting the suppliers and Yokogawa engineers to improve the quality of information and work efficiency in adopting and designing of parts. As a result, accurate information from the suppliers can be shared internally in a timely manner. In addition, because it follows the standard format specified by JEITA, the work efficiency for both the suppliers and Yokogawa has improved, from adopting to designing of parts.



\*JEITA: Japan Electronics and Information Technology Industries Association

Yokogawa is actively engaged in fulfilling its corporate social responsibilities in the areas of society and environment, business activities, human resources, and management.

Aiming to be a company that is trusted in the global markets, we have positioned compliance as our number one management priority. We have also strengthened our internal control system and risk management.

## Corporate Governance

Yokogawa's basic system of corporate governance including business execution system, board of directors, board of auditors, and whole structure

## Compliance

System to promote compliance, compliance training, compliance hotline, and global opinion survey

## Risk Management

Risk survey, classification of risks, management system, and risk reporting

## Information Security

Information security measures to address three aspects: people, equipment, and information technology

## Quality Control

Yokogawa's policy and management system for **Quality First Approach** and ISO9001 certification

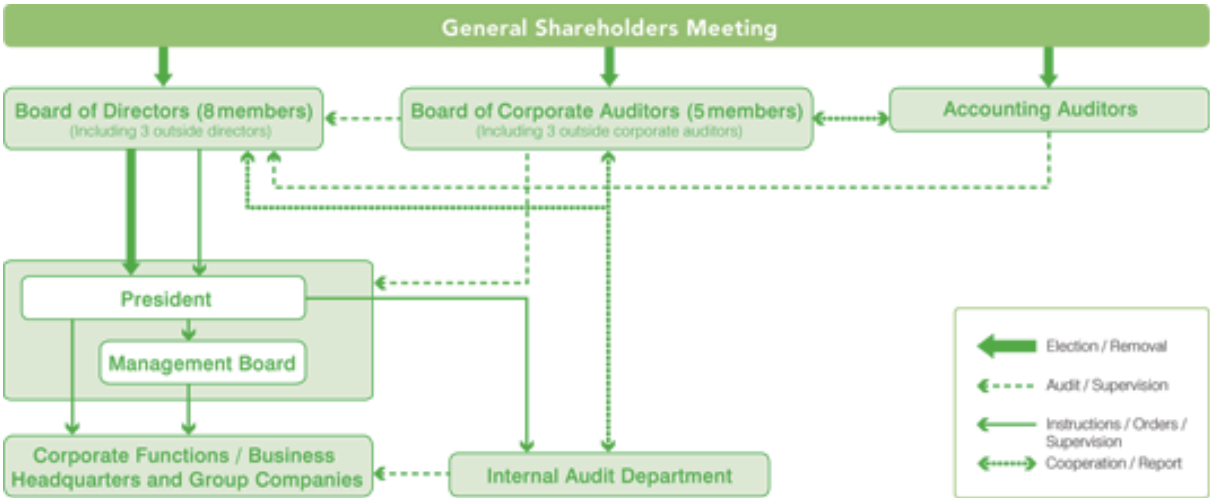
The Yokogawa Group recognizes that the basic mission of corporate management is to secure sound and sustainable growth, and to build a relationship based on trust with stakeholders, including shareholders. Accordingly, the Group is implementing important measures to enhance corporate governance in order to achieve a healthy and profitable operation.

Speedy decision making and transparency are ensured through deliberations among directors who are well versed in the Group's business, including completely independent outside directors. Through audits by the corporate auditors, including outside corporate directors, the legality, efficiency, and rationality of the directors' activities and the appropriateness of their decisions are rigorously examined.

The Yokogawa Group has set forth its basic compliance policies in the Standards of Business Conduct for the Yokogawa Group, and directors take the lead in working to see that business ethics are upheld and embraced throughout the Group. In addition, the Yokogawa Group Internal Control Systems, which are intended in part to help ensure the reliability of financial statements and the propriety of decision making, guarantee the appropriateness and efficiency of Group operations.

The department in charge of internal auditing audits the effectiveness of the internal control systems based on an annual audit plan and reports important matters to the Board of Directors and the corporate auditors.

## Corporate Governance Structure



At Yokogawa, "internal control" is a management process in which business resources, such as human resources, assets, and budgets, etc., are allocated appropriately and moved functionally to increase the corporate value. An internal control system is constructed as a means to achieve internal control; this is used to control both the positive and negative aspects. By doing this, Yokogawa aims at improving the corporate value of the entire Group.

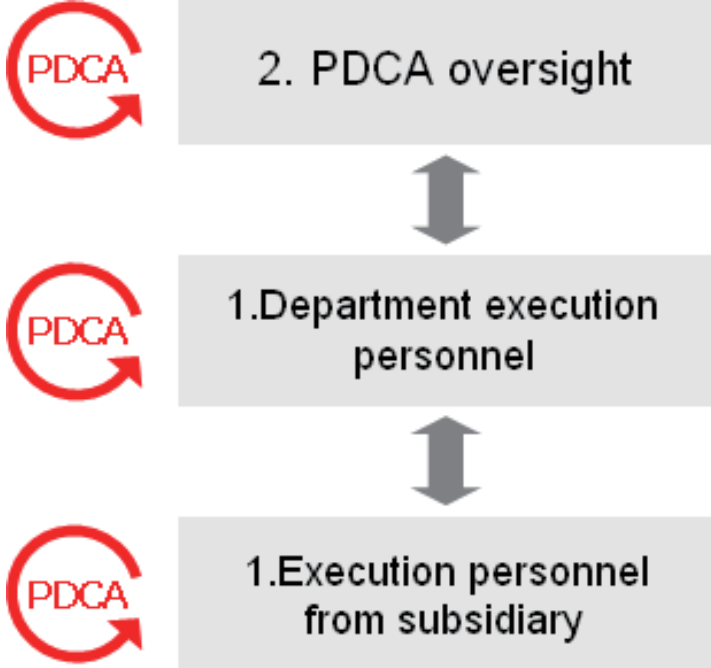
## The Structure of the Internal Control System

The internal control system of the Yokogawa Group consists of 10 control systems and 4 subsystems as shown in the table below: Each control system sweeps across all divisions that are conducting business activities.

Internal Control Systems	Subsystems	Primary laws (excerpt)
Business Ethics		General law, Whistleblower Protection Act, etc.
Decision Making		Corporate law etc.
Quality Management		Laws concerning products, such as Product Liability Act and Measurement Act, etc.
Labor Management		Labor Standards Act, Act on Securing, Etc. of Equal Opportunity and Treatment between Men and Women in Employment, etc.
Environmental, Safety and Health		General environmental laws, Industrial Safety and Health Act, etc.
Information Security Management		Unfair Competition Prevention Act, Act on the Protection of Personal Information, etc.
Export Control		Foreign Exchange Law, etc.
Financial Reporting	Financial reporting	Financial Instruments and Exchange Act
	Procurement management	Financial Instruments and Exchange Act, Act against Delay in Payment of Subcontract Proceeds, Etc. to Subcontractors
	Insider Trading Prevention	Financial Instruments and Exchange Law
	Information Disclosure	Corporate law, Financial Instruments and Exchange Law, etc.
Crisis Management		General laws
Corporate Auditing Infrastructure		Corporate law

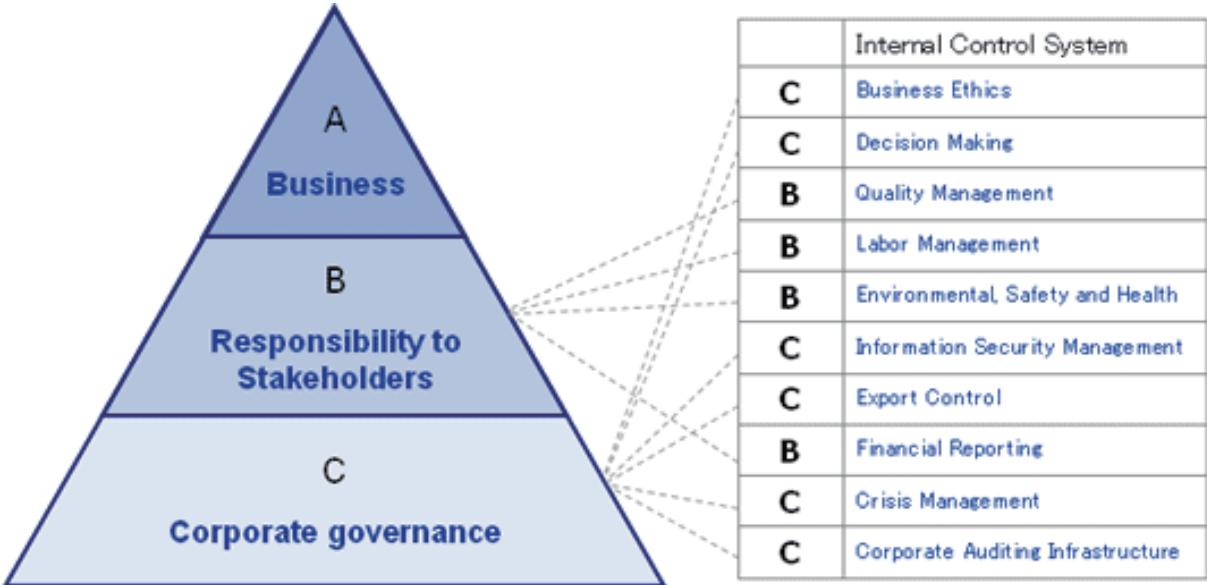


In addition, each internal control system consists of a layered structure as shown in the figure below. The system clarifies the roles, e.g., 1. execution of PDCA cycle at the site, and 2. oversight of PDCA cycle from a specialized perspective.



**Internal Control Systems and CSR**

There two sides to CSR activities that fulfill the corporate social responsibilities: one side has to do with managing relations outside the company, e.g., stake-holders, and the other side has to do with managing the internal affairs of the Group. The internal control system of Yokogawa chiefly manages the activities of the entire Group concerning corporate ethics, quality, personnel management, and occupational safety and health, etc. In the figure below, B and C correspond to the internal control systems. The figure indicates that the CSR activities are promoted by appropriate operation of the internal control system.



Yokogawa promotes compliance management strongly throughout its entire group, with the mantra, "compliance over everything else." It aims to be a healthy and open business with two pillars: "systems that prevent ethical misconduct," and "culture that encourages ethical conduct."

## Provision of Compliance Promotion Structure

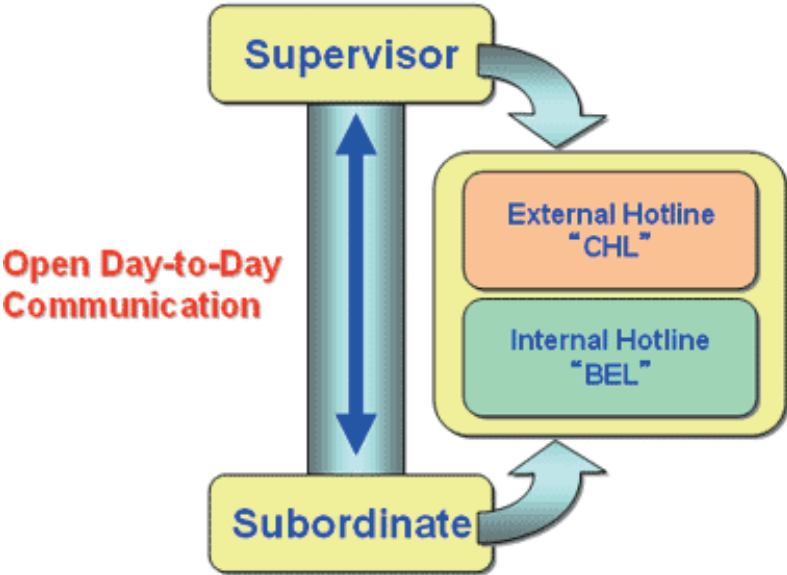
To establish "systems that prevent ethical misconduct," and " culture that encourages ethical conduct," a compliance promotion structure has been set in place globally. In Japan, a poster of the "compliance facilitator (advisor in the office)" was posted in each office to cultivate a compliant culture within the workplace. At the same time, compliance training—custom designed for each work environment—was started and led by the compliance facilitator.

## Conducting Enlightenment Activities

Compliance training and business ethics campaign are conducted.

## Review and Use of Consultation and Reporting System

To quickly identify and address compliance issues, a report and inquiry channel has been established. In Japan two hotlines are available: an internal hotline (Business Ethics Line: BEL), and an external hotline, staffed with lawyers (Compliance Hot Line: CHL). In addition, reporting systems have been set in place in Group companies overseas, and information is exchanged through monitoring.



## Performing of Global Awareness Survey

An awareness survey regarding compliance is conducted for all Yokogawa Group employees every year. By analyzing the results by workplace and functions, the results are utilized to enhance employees' awareness in the following year.

## Conducting Compliance Training

Yokogawa conducts compliance education and training to instill ethical values to every employee to establish unshakable convictions. In the fiscal year 2009, Yokogawa conducted the following training to help foster awareness of compliance throughout the Group.

- Business ethics training for managers of the Yokogawa Group in Japan
- Business ethics training for general employees in the Yokogawa Group
- Business ethics education for Japan employees who are to be posted in countries
- Business ethics education for new employees of the Yokogawa Group



## Use of Compliance Guidelines in English and Chinese

In 2008, the English and Chinese versions of "Compliance Guidelines for Yokogawa Group" (issued on 2007) were published. In the fiscal year 2010, Yokogawa will be using these guidelines to strengthen the training provided by compliance personnel overseas.

## Compliance News Issued

The "Compliance News" is issued bimonthly; with specific content that is current to the time they are issued, to prevent employees from any ethical misconduct.



## Revised Misconduct Case Studies Issued

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In the fiscal year 2009, a revised version of the "Misconduct Case Studies," originally published in 2008, was re-published with recent case studies that have educational value. The case studies are used as teaching material in employee training and study sessions at each workplace. In addition, "Activity Guidance," used for consultation in the office by the compliance facilitator is added and used.

## Business Ethics Week

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In the fiscal year 2009, Business Ethics Week campaign was conducted for all Group employees in Japan to help "permeate and embed awareness of compliance. " The week consisted of the following:

- A message from president Kaihori regarding "Compliance above everything else
- E-learning for all employees to help deepen their understanding of compliance.
- A "Compliance Senryu (three-line Japanese poem) Contest" was held. Out of the 500 entries submitted, 30 entries were given an award of excellence and announced via the intranet. The chosen Senryu were used as a tool to promote compliance. Other entries will also be introduced and used via the intranet.

## Risk Survey

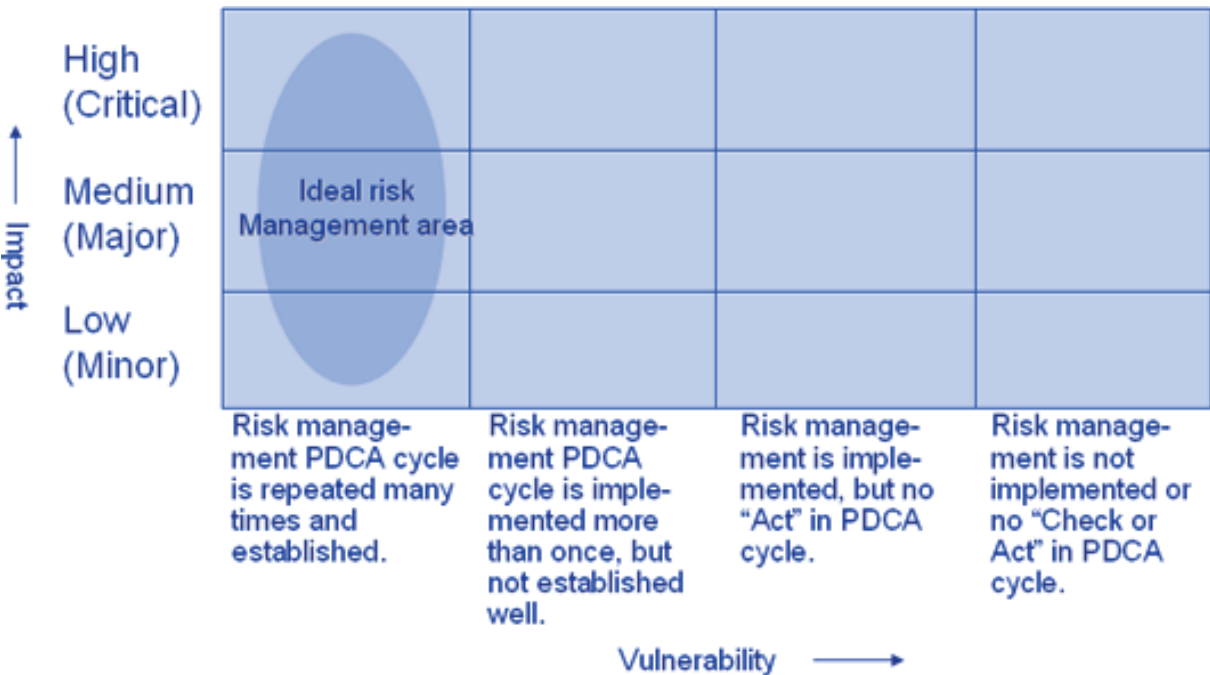
We are conducting a risk survey for all domestic and foreign affiliates and for the headquarters in the Yokogawa Group. The survey is conducted as a self-assessment of the state of risk extraction and risk management, using a risk survey sheet based on the book, *Learn Risk Management from Leading Companies -- Practice Text*, issued by METI. "Risk" is defined as something that could affect the management of the Yokogawa Group. We further define risks that occurred in the past or is currently occurring as "explicit risks", and foreseeable risks that have not yet surfaced as "implicit risks".  
 METI: the Ministry of Economy, Trade and Industry

## Classification of Risks

The risks extracted from the survey were classified into two categories, "corporate risks" and "business risks". "Corporate risks" deal with the Yokogawa Group's internal control systems, and is handled from 10 perspectives (e.g. quality, environment-health and safety, and information security, etc.) "Business risks" deal with our decision making. They are classified into "1. risks relating to the external environment", "2. risks relating to achieving business plan", "3. risks relating to partnerships with other companies", and "4. risks relating to human resources (recruiting, training, and utilization, etc.)".

## Risk Management

We use the PDCA cycle management to avoid, reduce, transfer and retain risks. The risk map is used to analyze situations in risk management.



## Reporting the Results of the Risk Survey and Risk Management

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We reported the results of the risk survey and the risk management at the board and management meetings. We are continuously improving the risks that are not well managed, and are also strengthening our risk management. Some of the examples for strengthening risk management include "counter-measures against the new flu pandemic", "strengthening information security", and "business continuity management in preparation for large earthquakes".

## Escalation of Information

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In the event of a disaster, accident, or incident that can seriously impact the Yokogawa Group companies' management and/or the lives of their officers and employees, the concerned organization must take prompt action to minimize the damage by gathering information and reporting back to the Group's top management.

To address this issue, we have created the "Guidelines for Reporting Disasters, Accidents, and Incidents". These guidelines have been prepared to advise all departments and affiliates in the Yokogawa Group on the reporting procedures to follow in the event of such disasters.



The Yokogawa Group works together with customers to provide them with solutions. To protect important information entrusted to us by our stakeholders, we implement information security measures to address three aspects: people, equipment, and information technology (IT).

## People: Information Security Training

An important way to protect information is to raise the security awareness of each employee by training them on how to handle information. To ensure that Yokogawa's employees appreciate on the importance of information security and keep their knowledge up to date, the Yokogawa Group uses an e-learning system to annually provide training to all employees. Based on the belief that "a good beginning makes a good ending," the Group provides training to new employees who are entering straight out of university or in mid-career to familiarize them with the rules of their new workplace. We also review the details and results of the training through information security audits.

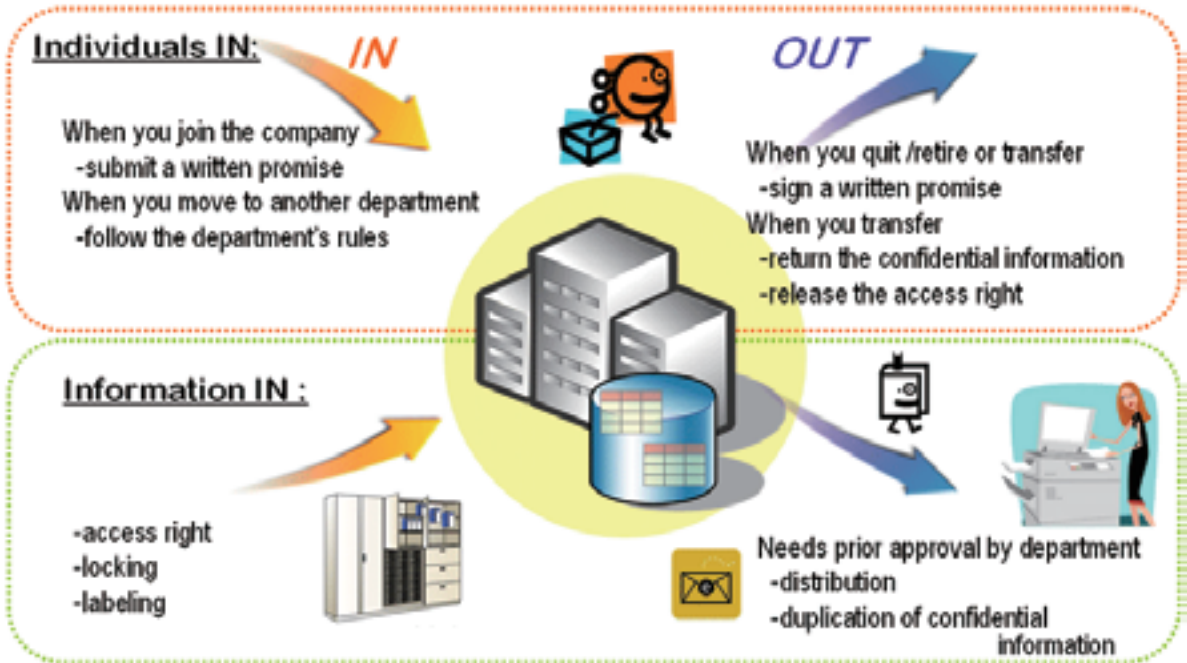


Image from ISMS text

## Equipment: Continuous Improvement

We implement anti -theft, fire-prevention, and other security measures to protect locations where information is stored. Our facilities and equipment are kept under continual surveillance, and efforts are made to replace obsolete facilities and equipment with state-of-the-art ones. For R&D facilities that require advanced security, we implement a variety of security measures including the introduction of iris authentication for facility access control and the use of storage cabinets that can only be unlocked with an employee ID card.



Opening a locked cabinet with an employee ID card

## Information Technology (IT): Protection Behind the Scenes

The most vulnerable point with regards to information security breaches is people. People can leak information by mistake and misuse information out of ignorance. IT systems provide ways to prevent such human errors.

### 1. Measures to prevent data leakage from PCs

We create a more secure environment by installing antivirus software, implementing biometric authentication, using data encryption, and more.

### 2. Anti-spam measures

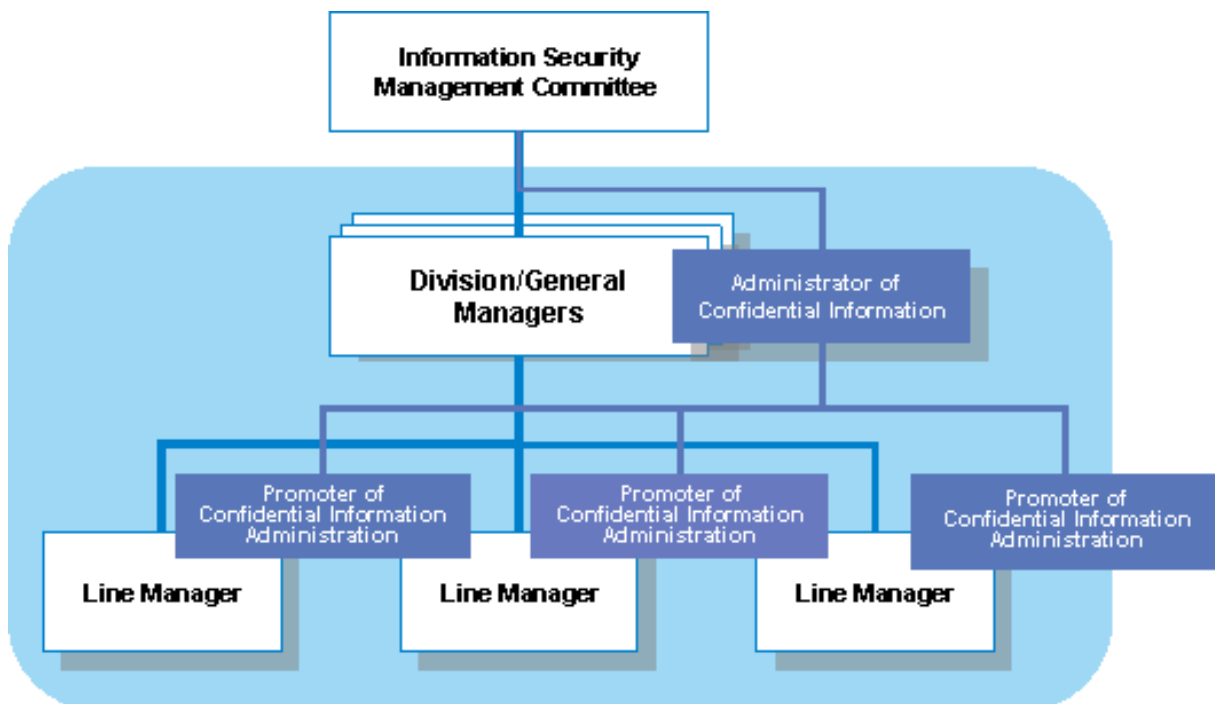
We have implemented an anti-spam filtering system, because spam mail is not only bothersome but also includes malicious mail that may cause data leakage and virus infection.

### 3. Network connection device management

To protect against unauthorized access and data leakage, we prevent unregistered PCs and related devices from being connected to the network.

## Organization

There is an Information Security Management Committee that discusses and determines information security measures and policies. In addition, there is an information security department or section for each of the Yokogawa Group's headquarters and business headquarters, as well as for each Group company. A PDCA, or Plan-Do-Check-Act, cycle is implemented to ensure information security activities are implemented smoothly.



Information security organization of Yokogawa Electric Corporation

## Customers and Quality First

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Since the establishment, we have implemented our quality management system across all processes, as we are convinced that Quality First Approach is the basis of customer satisfaction. All the main Group companies have attained ISO9001 certification starting with Yokogawa Electric in 1992, which has made delivery of the same quality worldwide a reality.

We have continuously valued our customers' feedback to develop satisfactory products, and have gained a high level of satisfaction from our customers with respect to the accuracy and functionality of our products.

In addition to getting customer feedback through conversations at the management level or third parties researches, we have started conducting customer surveys for the users who attended our training courses at our training center in Japan in fiscal 2008.

We will analyze and make use of this information to offer more desirable products and solutions.

The United Nations has put forward a set of ten principles, The UN Global Compact, relating to human rights, labor, the environment, and anti-corruption. On January 5, 2009, Yokogawa signed on as a participating company.

Kofi Annan, former Secretary-General of the UN, first proposed the Global Compact at the World Economic Forum in 1999; the UN officially launched it in 2000. Participating companies are expected to uphold and practice international standards relating to human rights, labor, the environment, and anti-corruption.

Today, Yokogawa does business around the world and its actions affect economies, societies, and the environment. Recognizing its role as a global company, it abides by international norms and actively works to address urgent international issues such as the environment and human rights.

⇒**Press release of January 7, 2009, announcing Yokogawa's participation in the UN Global Compact**

Below are the ten principles of the UN Global Compact, followed by Yokogawa's efforts in each area:

## Human Rights

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### **Principle 1:**

Businesses should support and respect the protection of internationally proclaimed human rights; and

### **Principle 2:**

make sure that they are not complicit in human rights abuses.

## Yokogawa's Efforts:

⇒**Human rights policies**

⇒**Extends CSR through the supply chain**

⇒**Addresses social issues**

## Labor Standards

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### **Principle 3:**

Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;

### **Principle 4:**

the elimination of all forms of forced and compulsory labor;

### **Principle 5:**

the effective abolition of child labor; and

### **Principle 6:**

the elimination of discrimination in respect of employment and occupation.

## Yokogawa's Efforts:

- ⇒ Encourages the use of human resources with an emphasis on diversity
- ⇒ Employs the disabled
- ⇒ Maintains workplace safety and hygiene

## Environment

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### **Principle 7:**

Businesses should support a precautionary approach to environmental challenges;

### **Principle 8:**

tundertake initiatives to promote greater environmental responsibility; and

### **Principle 9:**

encourage the development and diffusion of environmentally friendly technologies.

## Yokogawa's Efforts:

- ⇒ Environmental management
- ⇒ Adopts solutions aimed at reducing energy consumption
- ⇒ Environmental equipment and instruments

## Anti-Corruption

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### **Principle 10:**

Businesses should work against corruption in all its forms, including extortion and bribery

## Yokogawa's Efforts:

- ⇒ Business Ethics and Compliance

## Promote utilization of human resources from the diversity perspectives

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Human Resources are an important asset for Yokogawa. It is stated in the Standards of Business Conduct for the Yokogawa Group that "we value and respect the dignity of each individuals and all basic human rights". Irrespective of race, nationality, sex, educational background, age, etc., we provide employees with career opportunities that allow them to fully maximize their potential, and actively seek to ensure that our employees maintain a sound work-life balance. We also encourage the employment of people with disabilities

Yokogawa has explicitly defined respect for human rights as part of the group's overall goals, in its Philosophy, Standards of Business Conduct, and Group Management Standards. The company has also set up compliance hotlines for everyone working at Yokogawa as a way to avoid human-rights violations before they happen.

## Philosophy

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Yokogawa's corporate philosophy defines "contributing to society" as a corporate mission, and calls for its employees to be good citizens.

Based on this philosophy, Yokogawa uses measurement, control and information as tools to contribute to social infrastructures that support people's daily living such as energy, communications, waterworks, etc, and to contribute to industry infrastructures, to make them run more efficiently and to help people work more safely. This philosophy is practiced by every employee and in all of the countries where Yokogawa operates, its employees have been willing volunteers, helping out when natural disasters occur.

## Standards of Business Conduct

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One of the five pillars in our Standards of Business Conduct explicitly states that the company will uphold respect for human rights and respect the dignity of all. Some of the particular courses of action that follow from this are preventing harassment, discrimination, privacy intrusions and maintaining an overall healthy workplace.

## Yokogawa Group Management Standards

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The Yokogawa Group Management Standards, which states in writing the basic policies required of group management, applies to every branch of the Yokogawa group. It gives clear rules and guidelines relating to human rights, obedience to the law, workplace safety, hygiene, etc.

The Yokogawa Group Compliance Guidelines make the following statement regarding human rights:

## 03 Respect for basic human rights

The Yokogawa Group always respects the basic human rights and personal dignity of every person with whom we are involved.



## 27 Equal Opportunity

Thanks to our fair and impartial personnel system operating under the basic policy of the Yokogawa Group, each employee is afforded equal opportunities in hiring, placement, promotion, pay rises, training, etc. An employee in a position of management or leadership must have a basic knowledge of the labor laws of the country in question, and must have a thorough knowledge of labor contracts and work regulations. It is important that he or she work on the basis of this knowledge to maintain a workplace free of unfair discrimination, engaging in ample communication with his or her subordinates and ensuring that day-to-day personnel management goes smoothly.

## 28 Prohibition of forced labor/child labor

Forced labor in any form whatsoever is not to be allowed; nor is any person to be made to work against their will; nor is it acceptable for children below the minimum working age of each country to be employed.

Care must be taken to ensure that we do not support inhumane conduct even indirectly, for example through the actions of business partners.

## 29 Ensuring health and safety

In addition to observing the laws relating to occupational safety and health, we have established our own independent standards and are striving to improve safety and health. We are working on a program of improvements to ensure the safety of every employee working for the Yokogawa Group, promote better health, and create a pleasant working environment. Each and every employee must act to cooperate with the safety and health measures that have been decided upon.

## 30 Prohibition of harassment

No form of harassment whatsoever is acceptable, whether it be sexual harassment, stalking, or power harassment. We respect each other as individual human beings, and have built up a corporate atmosphere in which harassment is not accepted.

## Attention to human rights in the supply chain

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Following its Group Management Standards, Yokogawa upholds their philosophy for human rights throughout its supply chain. The Supply Chain CSR Guidelines include guidelines prohibiting forced labor, inhumane treatment and infringements of human rights, child labor, and discrimination, while ensuring appropriate wages, regulated working hours, and the right to freedom of association, and vendors are asked to follow these guidelines.



## UN Global Compact

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Yokogawa has declared its support for the UN Global Compact. The company respects the human-rights guidelines proclaimed in the Global Compact, and upholds international human-rights standards.

Development and utilization of diverse human resources is Yokogawa's strength and a requirement for global expansion of its business. Yokogawa has set up its organization to enable decision-making with a global perspective, by placing human resources from diverse ethnicities and nationalities in strategic positions.

In addition, Yokogawa makes it clear across the entire Group, its compliance to the international standards of human rights, its awareness regarding regional/cultural differences among the employees' execution of tasks, and its policy against any discrimination based on ethnicity, nationality, sex, or disability. These notions are clearly laid out in the compliance guideline.

By forming a team of diverse human resources and promoting good communication, each employee is given an opportunity to learn new ways of thinking. It is in this type of environment that new solutions and innovations are birthed.

Here are comments on Yokogawa's approach to diversity from some of the members working in its headquarters.



Fatmadian Darman  
Manager,  
Human Resources Division



Kersi Framji Aspar  
General Manager,  
Global Sales department,  
Field Instruments Business Center

### “People at Yokogawa headquarters are truly committed to globalization.”

I was assigned as an expatriate employee to a global human resources management role in the Human Resources Department at Yokogawa headquarters. I am honored to have this opportunity, but at the same time, it has been a challenge for me to be able to perform in a different environment. My first impression of my colleagues at Yokogawa headquarters was that they were not focused on where I came from; in other words, they have a good respect for diversity and do not treat people of other nationalities any differently.

Furthermore, even though my Japanese language skills are somewhat limited, I and my Japanese colleagues can always find a way to communicate. Their passion in trying to make contact is the best foundation for building good communication. It is so interesting and humorous to recall the many ways we use to communicate, such as gestures, pictures, and examples.

These types of behaviors and attitudes are especially important now that we are accelerating toward globalization. Respect for diversity is key to achieving optimum synergy in the organization. We don't need to force people to adopt the same style, way of thinking, or behaviors, and we can utilize our differences to create something greater than what we could accomplish on our own. I believe that all people around the world have something of value to offer; by bringing them together and building cooperation, amazing results can be achieved.

Through my experiences, I am learning about the Japanese culture and getting a better grasp of how things work at Yokogawa headquarters. I am trying to find the best approach for bridging the differences and am looking for common ground... Having the same basic goals and framework makes all the differences and the aforementioned language difficulties easier to deal with. I have also tried to utilize people's strengths and encouraged them to do more and exceed their expectations. It turns out that we learn many things from each other.

While trying to find common ground and to work based on such an approach, I have come to the realization that people at Yokogawa headquarters are truly committed to globalization. In fact, I've gained operational experience in assisting people who have asked for training programs to improve their subordinates' capabilities in dealing with their colleagues outside Japan. At Yokogawa headquarters, the HR Division, particularly the HR Development Group, began last year to proactively create new cultural communication training programs especially for newcomers and expatriates (the pre-assignment program). By providing such programs, they have helped participants develop a greater understanding of interpersonal communications, especially between cultures. Again, it shows how strong the commitment is at Yokogawa headquarters to diversity and globalization.



Fatmadian Darman  
Manager,  
Human Resources Division

Regarding this diversity, my future challenge is to make a strong bridge between the people at Yokogawa headquarters and those outside Japan, especially in HR matters. As it sometimes appears, not all employees outside Japan have a good understanding of how things work at the headquarters and differ in terms of practices and approaches. We need to accommodate the needs of those outside Japan and improve their cooperation with Yokogawa headquarters to produce the effective collaboration that is key to our business growth. It's going to be a challenging job for us since it will involve many people from many different countries and backgrounds. Thanks to the good foundation of respect for diversity that we all share, I believe this will bring us success in the near future.

### “Diversity has become a critically important factor for Yokogawa.”

#### -How do you feel about Yokogawa and its human resource management polices?

Yokogawa has provided me with a lot of growth opportunities and I feel very proud to be associated with the company. I have gained a wealth of experience in a variety of business units and countries, and it has been both challenging and rewarding to play a role in making Yokogawa a leader in the industrial automation field. The vigilant spirit of Yokogawa has been a cornerstone in achieving the above.

It is too early for me to comment on Yokogawa's human resource policies as I have just commenced my assignment here. However, I will say that HR management policies are critically important in a multinational company. In today's world, where markets and the business situation are changing at a phenomenal speed, we need to identify, train, and groom future leaders who will be able to make Yokogawa a world leader. Yokogawa now faces major challenges with a saturated home market and fierce global competition, and diversity has become a critically important factor. Diversification is the route to globalization.



Kersi Framji Aspar  
General Manager,  
Global Sales department,  
Field Instruments Business  
Center

#### -Why do you think diversity is so important for us now?

As a multinational company, it is a strength to have a diverse workforce. Outstanding professionals come from all regions, religious backgrounds, and walks of life. Nevertheless, we need to identify and build on the strengths of an emerging breed of hybrid leaders. Hybrid leaders tend to be hopeful about the prospects for changing the world because of their view of human nature. Some notable examples include Barak Hussein Obama, Carlos Ghosen, and Indre Nooyi. Mr. Ghosen is a French-Lebanese-Brazilian executive who runs both a French automaker (Renault) and a Japanese one (Nissan). Ms. Nooyi is an India-born American citizen who is the Chairwoman of PepsiCo and speaks of entering American politics some day.

When leaders are able to draw on diverse teams, they can potentially harness and funnel high levels of innovation which in turn can produce creative solutions and ideas. With diverse life experiences and world views often comes diversity of perspective and thought – things that can enrich both learning and the team environment. Hence, we must embrace diversity as we look to the future.

#### -How do you plan to contribute to Yokogawa?

I have worked for 24 years in areas such as test & measurement, IA systems and products, and marketing, and can say that we managed to grow our business in the Southeast Asian market and achieved the No. 1 share in certain field product categories. The key to success was differentiating our products and services by offering a total solution, going the extra mile to help the customer, and never giving up. Implementing

the above gave us a big success. Based on the above guidelines, I plan to use my past experience to motivate our global sales force and work with them to make Yokogawa a leader in their respective territories.

If you believe with your heart and not just with your head, you can achieve anything.

**-What are your challenges?**

It is a very interesting question. The most difficult point is communication. Language is one of the most critical hurdles, although I find people here are extremely helpful and supportive, and go out of their way to help. The next challenge is to understand the culture and encourage team members to look beyond their immediate confines to strengthen our global competitiveness and achieve our goal of globalization.



## Career development for the growth of both employees and organization

We carry out HR measures to realize “the right person on the right job” so that each employee is able to perform at their full capacity.

We have created a system where the employees are able to notify their short-term and mid-term career plans to their managers and also promote their acquired skills and experiences to the managers of other department. These systems allow the employees to autonomously build their own careers.

Under the job opportunity system, employees are able to submit their career plans without approval from his/her superiors. Such a system helps to expedite the speedy deployment of the resources especially under the circumstances where there is a manpower requirement due to new business or project.

Moreover, we have an on-the-job training program by exchanging members between Japan and group companies in overseas. This program is aimed at developing global players who can contribute to the global business operations.

## "Refresh & Challenge" Program to Support Employees Work-Life Balance

We provide a program to help the employees design their career and life when they reach a turning point in his or her career. This is an awareness program for managing health and for building future life plan.

As the program name "Refresh & Challenge" suggests, participants are given a fixed number of off days after the training for refreshing themselves physically and mentally. The program provides ideas to support the employees in setting new goals.

In particular, in the training provided for employees at the age of 45, participants are able to take 15 days of leave from work. They can utilize this leave freely. Some of the participants join the training course to obtain qualifications and others review their future plans on private life and career. These 15 days of leave help the employees to regain their motivation and energy.



## Improving Employee Motivation by Promoting Work-Life Balance

We make an effort to provide a work environment where the employees are able to gain satisfaction while maintaining a good balance between their work and private life.

For instance, the employees are able to utilize work hours for child-care and nursing of elderly family members, in addition to the number hours specified under the statutory benefit. We have also introduced a system to provide financial support to our employees who are raising children. Employees under such conditions are able to receive 100,000 yen annually per children.

Many of our employees, both male and female, are making full use of other company supports such as flexible working hours or paid maternal leave. These systems are helping increase employees' motivation.

In September 2006, we opened a day care center near Yokogawa Headquarters.

The center is contributing to the local communities as it can be utilized by both the employees of Yokogawa and the people living in the vicinities.

In fiscal year 2007, Yokogawa was certified by the Chief of the Tokyo Labor Bureau as an Enterprise Supporting Balanced Work and Family life.

## Comment from an Employee who Took a Maternal Leave

### **Fumiko Sasaki in HR headquarters**

At Yokogawa, there is a good support system for child-care, and many employees utilize them.

I was able to take a maternal leave without hesitation or concern in view of the strong support provided by the company.

I took time off until my child was 18 months old, and I was able to spend enough time with him. It was a valuable period for me.

Also, it was a good opportunity to think about my work from new point of view.

Lifestyle and working style change due to events such as marriage, childbirth and child-raising.

I am thankful for the support system that helped me to continue working at Yokogawa after childbirth.

## EAP (employee assistance program) to help promote a healthy working life

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We introduced the Employee Assistance Program (EAP) to achieve maximum employee performance by preventing situations where workplace stress may prevent employees from adequately demonstrating their innate abilities. In the area of mental health, Yokogawa EAP enables employees to lead healthy, rewarding company lives by providing mental health support for the prevention of mental disorders as well as early detection, early care and treatment, and assistance for returning to the workplace.

As measures for promoting sound mental health, EAP promotes awareness of mental health by holding seminars, providing useful information and sponsoring activities aimed at creating a pleasant workplace environment where fellow employees show consideration for each other and make efforts to ensure that adequate communication takes place on a daily basis. The program also conducts stress surveys and sponsors lectures on preventive measures for reducing stress that take into consideration the workplace environment. To assist in workplace improvement, the program also plays an active role in prevention and early detection of mental disorders. It has established a system to enable appropriate support at each stage for employees with mental health disorders, employees on leave, and for the care and smooth integration of those employees returning to employment.

EAP also has a system of consultation both internally and externally and provides consultation in various areas including career consultation as well as mental health consultation.

## Employing and developing people with disabilities

Since the beginning of the "Normalization Project" in 1992, we have made a proactive effort to employ people with disabilities.

In addition to meeting the legal employment rate of people with disabilities on a non-consolidated basis, the Group as a whole has worked to promote the employment of people with disabilities and to ensure that they are provided with career opportunities.

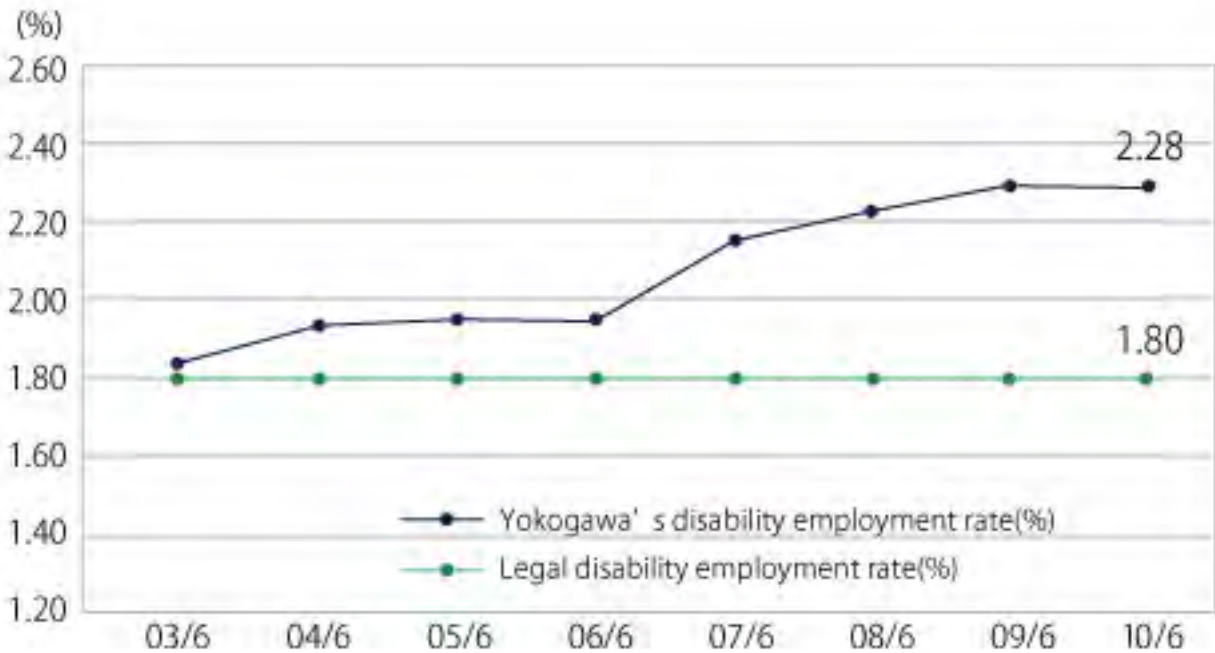
With the goal of recruiting people with mental disabilities, we established the Yokogawa Foundry Corporation in 1999, and the company was certified in the same year with a special subsidiary for the employment of disabled individuals.

Employees of Yokogawa Foundry received full training programs to improve their skills, and are provided with many types of challenging jobs as well as opportunities to broaden the scope of their daily lives.

Furthermore, Yokogawa Foundry employees are also active outside of the Company, and have, for example, won awards at the Abilympics.

We Yokogawa keep on providing opportunities for people with disabilities to play an active role at workplace.

### Disability employment rate



## Comment from Employees of Yokogawa Foundry Corporation Who was Awarded at the Abilympics

### Yoshihiro Hashimoto in Yokogawa Foundry

Silver award in the world competition 2007  
I wanted to compare my skills in data input with the other participants. That is the reason why I competed in the Abilympics. I felt very happy that I could display my skills and efforts to the audiences. I trained hard until just before the competition started, so I could make a good result. In the future, I want to try not only data input but also other skills.



### Tsuyoshi Kubo in Yokogawa Foundry

Silver award in the Japanese competition 2008  
Aiming to win at least a bronze medal at Abilympics, I got a better result. I trained very hard for my sake and for the sake of my co-workers, and as a result earned a silver medal. My skills are not yet perfect, so I want to keep working hard to improve my skills.



## The Abilympics challengers



A lot of employees challenge in the Abilympics every year.

In 2006, the Yokogawa Group established the "Yokogawa Group Health and Safety Policy" and began implementing the Occupational Safety and Health Management System (OSHMS). Since 2007, the Yokogawa Group has implemented the OSHMS in each of its companies to promote a higher level of safety and health by making continual improvements through risk assessment and other methods.

## Operation of the Occupational Safety and Health Management System (OSHMS)

Recognizing that "safety and health are a basic responsibility of the management," the Yokogawa Group implements OSHMS to ensure the safety and health of all of its employees and its sub-contractors. Improvements are made in phases, with constant assessments to eliminate or minimize potential risks. Regular evaluations and reviews of the activities are also done through audits. The effectiveness of the system has improved by combining conventional activities, such as safety patrols, and countermeasures against occupational incidences and near misses.



Management audit at Yokogawa Electric China Co., Ltd. (Suzhou)

Sixty-four Yokogawa Group companies in and outside Japan share the same safety and health objectives for all workers, including subcontractors. Moreover, sixteen Yokogawa Group companies have acquired certifications in compliance with OHSAS18001\*1, which is internationally recognized.

\*1. Occupational Health and Safety Assessment Series. A certification standard for Occupational Safety and Health Management System.

## Safety and Health Education

To ensure that the "Yokogawa Group Safety and Health Policy" is adhered to across the entire Yokogawa Group, the "Safety and Health Guide Book," which contains basic information and day-to-day rules regarding safety and health, has been created and distributed to all staff and engineers at every Yokogawa Group company. To maintain and improve all levels of activities throughout, persons in charge, committee members and newly appointed personnel are educated through safety and health committee workshops, as well as on-site safety training at customer plants and factories.

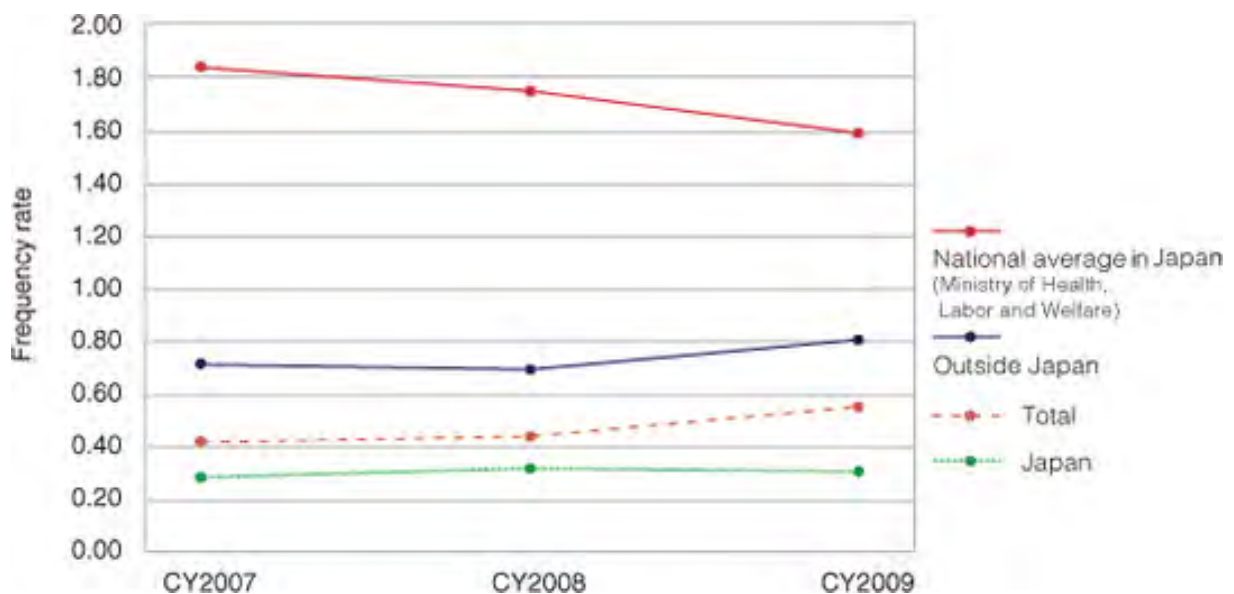


Safety and Health Guide Book

## Occupational Incident and Accident Data

Since the implementation of OSHMS in 2007, the Yokogawa Group has compiled quarterly data of all occupational incidents and accidents at its subsidiaries in and outside Japan. The results are used to improve operations. The number of days lost due to accidents has decreased by 15%, although the total recordable incidents in 2009 have risen marginally since 2008.

### Frequency Rate of Occupational Incident and Accident Data



FR=(No. of workers having occupational accident with lost days / total working hours) × 1,000,000



## Vietnam Safety and Health Officials Visit Yokogawa Electric

In August 2009, at the request of the Japan Industrial Safety and Health Association, Yokogawa Electric met with a group of officials from Vietnam, including the Vice Minister of Labor, War Invalids and Social Affairs. The group visited Japan to conduct a research into laws and business activities related to occupational safety and health. In visiting Yokogawa Electric, they collected information regarding our safety and health system and activities.

On the day of the visit, the group was briefed on our implementation and execution of OSHMS, educational system, and case studies of our success in improving our work environment over the years. They also visited the clinical center to observe the MRI and CT equipment that we have installed, and to exchange information regarding health management with our industrial physician. The group observed our safety and health system and activities extensively, and intently inquired into our educational and training programs, employee awareness plans, and legal basis of such programs and activities.



Meeting with Officials from Vietnam

Afterwards, one of the visitors commented, "With the growth of the industries in Vietnam, the rate of occupational incident and accident is rising. As part of strategizing how to integrate our national safety and health laws, credential certification systems, and OH&S (Occupational Health and Safety) programs into the businesses in Vietnam, we visited Japan to conduct a research into the safety laws of Japan and the activities within its businesses. On visiting and exchanging information with Yokogawa Electric, we saw firsthand the vast differences from our country. Everything we learned will serve as a valuable reference to improve our legal system as well as to plan improved operation methods under the new system."

We will continue to actively network with other groups to mutually grow in the area of safety and health.



The Yokogawa philosophy states, "As a company, our goal is to contribute to society through broad-ranging activities in the areas of measurement, control, and information. Individually, we aim to combine good citizenship with the courage to innovate." Yokogawa uses its technology for "measurement, control, and information" to contribute to environmental conservation—a concern shared by all humanity.

Yokogawa has always promoted environmental management and has positioned environmental conservation as one of the most important issues in company management. Yokogawa has reduced its own environmental load by promoting environment management in all business areas within the company, including development and production. Based on this technology and experience, Yokogawa has launched the "Energy Conservation and Environment Protection Solution Business" to continue promoting environmental management to its customers.

In December 2009, Yokogawa appointed a CGO (Chief Green Officer) to be in charge of promoting environmental conservation. With this CGO, Yokogawa plans to further strengthen its "Energy Conservation and Environmental Protection Solution Business" and all of its activities related to energy conservation and environmental conservation within the Group.

# The two pillars of environmental management

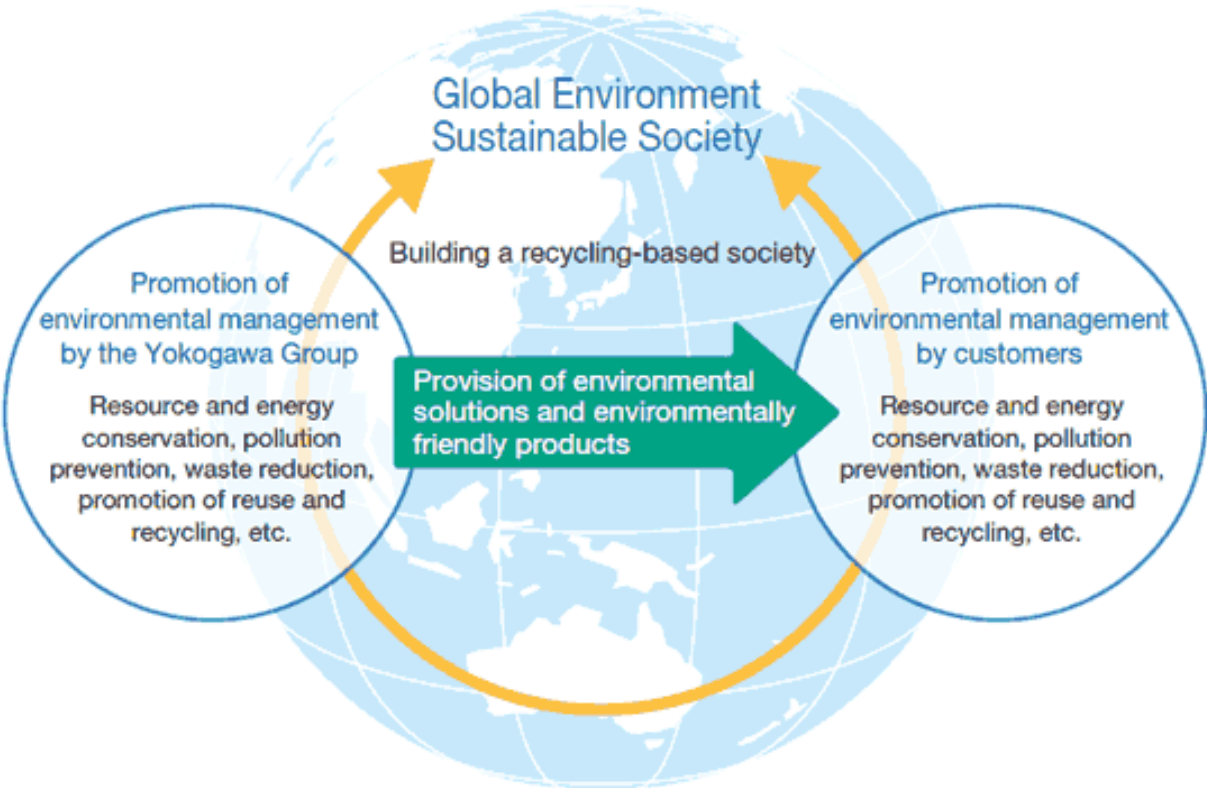
Yokogawa's management has assigned a very high priority to protection of the environment. We have established an environmental management system with the aim of making continuous improvements in our environmental performance.

We have two environmental management objectives. The first is to help our customers reduce the environmental impact of their business activities. To achieve this goal, we develop and provide products that are in harmony with the environment, and propose solutions that can be used by our customers to analyze and reduce the environmental impact of their business activities.

The second objective is to reduce the environmental impact of our own business activities. We are working toward this end by optimizing our operations to reduce the usage of energy and other resources, starting with activities on our production lines and extending to all other areas of our business including development, sales, procurement, and logistics.

Through these efforts, Yokogawa is working together with its customers to build a sustainable society.

## The Yokogawa Group's Environmental Management



The Yokogawa Group aims to reduce its global environmental burden across all its operations by:

- Proactively implementing environmental activities
- Providing environmental solutions and environmentally friendly products to customers

Through these activities, the Yokogawa Group will contribute to building a sustainable society together with its customers.

All operations: Senior management, planning, R&D, design, sales, procurement, production, distribution, service, recovery and recycling

Environmental activities: Resource and energy conservation, pollution prevention, waste reduction, promotion of reuse and recycling, etc.

In conformity with Basic Environmental Management Rules for the Yokogawa Group, each site of the Group shall strive, in all its activities, to:

1. **Establish, maintain, and improve its environmental management system.**  
Each site establishes an environmental management system in order to promote and continuously improve its global environmental conservation activities. To maintain and improve the system, each site accurately evaluates the burden of its activities on the environment, sets environmental objectives and targets that are technically and economically viable, and carries out environmental audits.
2. **Provide environmental training.**  
Each site actively provides training for global environmental conservation to ensure that employees understand the Environmental Philosophy, Code of Conduct for Environmental Conservation, and Environmental Policy of the Yokogawa Group to improve their environmental awareness, and to act autonomously with consideration of the environment in both their work and life in the local community.
3. **Abide by legal regulations.**  
Each site abides by laws, legal regulations, and other requirements concerning the environment, in order to proactively conserve the global environment.
4. **Carry out resource recycling-based operations.**  
Throughout its activities, each site endeavors to utilize energy and resources efficiently, to prevent global warming, to reduce waste, and to promote the reuse and recycling of resources with the aim of eliminating emissions.
5. **Minimize environmental pollution.**  
Each site strives to eliminate the use of substances that adversely impact the environment, such as toxic chemicals, and ozone-destroying substances, by using safe substitutes or employing safe technologies to avoid the risk of environmental pollution.
6. **Create environmentally friendly products.**  
Each site develops and produces environmentally friendly “green” products in consideration of the environmental burden throughout the products’ lifecycles, from material purchase, manufacture, and distribution to their use and disposal.
7. **Supply society with environmental solutions.**  
Each site supplies society with value-added products and services for conserving the earth’s environment through measurement, control, and information technologies.
8. **Contribute to local communities.**  
Each site encourages its employees to participate in environmental conservation activities under their own initiative as good corporate citizens.
9. **Make environmental information available to the public.**  
Each site actively makes environmental information, including its environmental policy and conservation activities, available to the general public.

April 2009  
**Shuhei Sakuno**  
Environmental Officer  
Yokogawa Electric Corporation

Yokogawa Group's ISO 14001-certified sites (including KES\*) are as follows:

## ISO14001

As of the end of March 2010

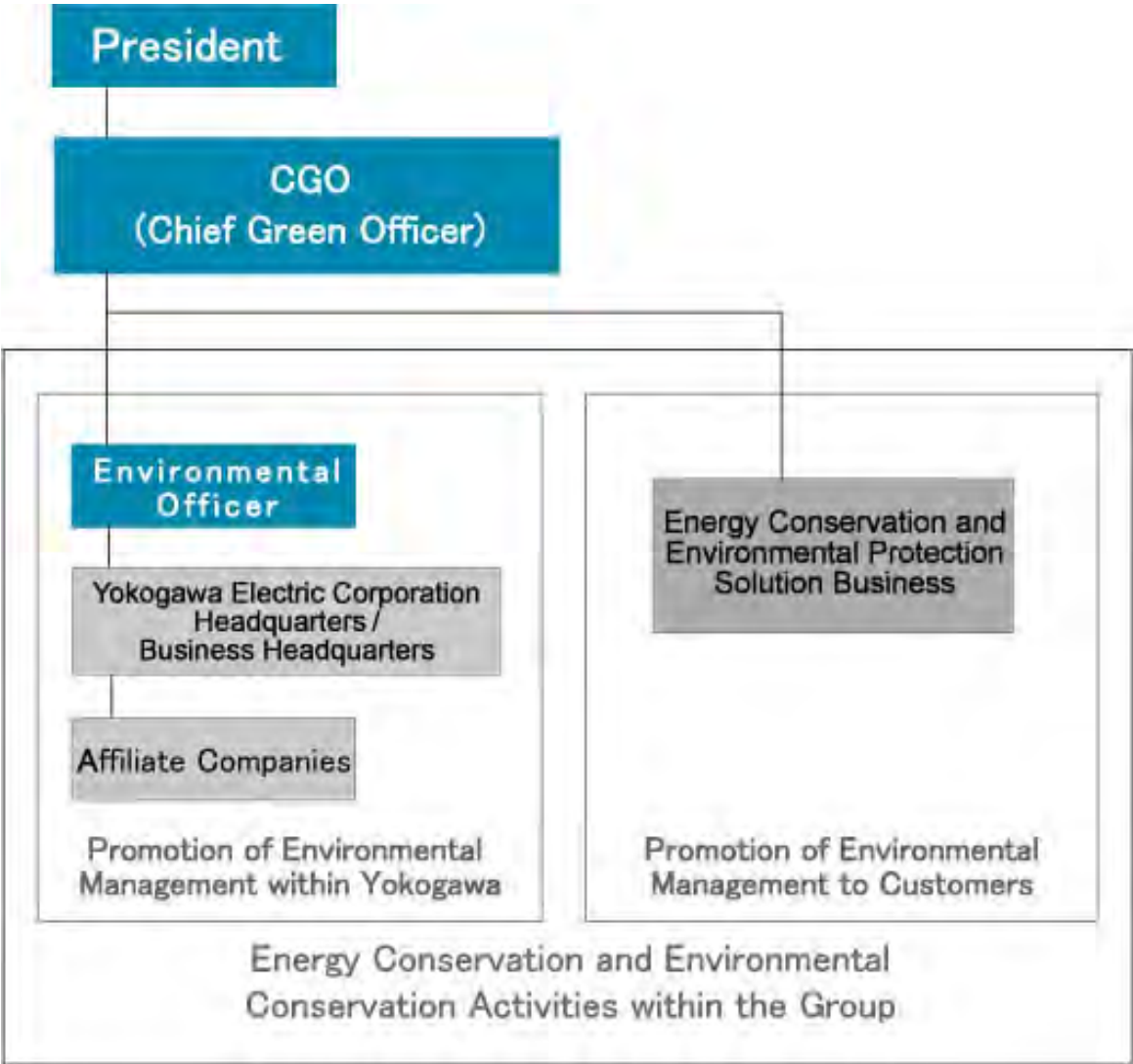
Factories		Date Certified
Yokogawa Electric Corporation Headquarters & Main Factory		July 1997
Yokogawa Manufacturing Corporation Consolidated certification covering Komine, Kofu, Ome, Uenohara and Headquarters Factories		July 1997
Yokogawa Meters & Instruments Corporation		July 1997
Kokusai Chart Corporation		January 1999
Yokogawa Field Engineering Service Corporation		February 2000
Yokogawa Denshikiki Co., Ltd.		November 2000
Yokogawa Digital Computer Corporation		September 2007
Suzhou Yokogawa Meter Company	China (Suzhou)	May 1998
Yokogawa Shanghai Instrumentation Co., Ltd.	China (Shanghai)	March 2000
Yokogawa Sichuan Instrument Co., Ltd.	China (Chongqing)	December 2000
Yokogawa Electric China Co., Ltd.	China (Suzhou)	May 2004
Yokogawa Electric Asia Pte. Ltd.	Singapore	October 1998
Yokogawa Engineering Asia Pte. Ltd.	Singapore	August 2001
P.T. Yokogawa Manufacturing Batam	Indonesia	April 2000
Yokogawa Corporation of America	USA	June 2005
Yokogawa Electronics Manufacturing Korea Co., Ltd.	South Korea	December 2004
Yokogawa Measuring Instruments Korea Corp.	South Korea	March 2007
Yokogawa Philippines, Inc.	Philippines	June 2007

\* "KES" refers to the KES Environmental Management System Standard.



In the organization of Yokogawa's environmental management promotion, a CGO (Chief Green Officer) was appointed in December 2009. The CGO is responsible for Yokogawa's environmental activities and for operating environmental management and energy conservation within the Group while promoting environmental management and environmental conservation to Yokogawa's customers.

## Organization of Environmental Management Promotion



Various global environmental conservation activities had been carried out before Yokogawa Kofu office was certified with the ISO14001 certification in 1997 followed by officially implementing the environmental management system across the entire Yokogawa group. The environmental practices of Yokogawa group since 1971 are listed below in chronological order.

## History of Environmental Practices of Yokogawa (in time series)

- 1971~
- 1980~
- 1990~
- 2000~
- 2010~

1971		Yokogawa establishes a pollution prevention organization
1974	July	Yokogawa completes construction of wastewater treatment facilities to comply with ordinance of Tokyo compliant with municipal bylaws
1987	May	Yokogawa begins environmental assessment studies
1989	October	Yokogawa establishes a chlorofluorocarbon (CFC) reduction committee
1991	April August	Yokogawa sets up an organization to promote an Environment management Yokogawa starts "Save the Earth" campaign
1993	February July	Yokogawa appoints a Vice President of Environmental Management and forms a Global Environment Committee Yokogawa establishes a voluntary environmental activities plan
1994	August December	Yokogawa reports the results of voluntary environmental activities in fiscal year 1993 Yokogawa completely eliminates specific CFCs and trichloroethane for cleaning
1995	June October	Yokogawa Board of Directors decided to obtain ISO14001 certification and merge a voluntary environmental activity plan into ISO14001 plan. Yokogawa reorganize a Global Environment Committee
1996	March May	Yokogawa establishes corporate rules for environmental management Yokogawa forms a Global Environment Committee at Yokogawa Electric Headquarters & Main Factory, Kofu Office (current Yokogawa Manufacturing Kofu Factory), and Komine Factory (current Yokogawa Manufacturing Komine Factory). Solar power generators for disaster use installed at Yokogawa Electric Headquarters & Main Factory. Yokogawa signs a disaster prevention accord with Musashino City.
1997	April July	Issued "Green Times", a company newsletter The Kofu Office (current Yokogawa Manufacturing Kofu Factory) obtains ISO14001 certification

1998	February	Yokogawa Electric Headquarters & Main Factory and the Komine Factory (current Yokogawa Manufacturing Komine Factory) obtain ISO14001 certification
	May	Two co-generation power generators (585 kw) go online at the new main building of Yokogawa Electric Headquarters & Main Factory
	June	Yokogawa begins publishing Yokogawa Environmental Catalogue
1999	September	Yokogawa publishes Yokogawa Environmental Report 1999. Also the company introduces environmental accounting and makes data available to public.
	November	Yokogawa introduces environmental labeling (Type II)
2000	July	Yokogawa Electric Headquarters & Main Factory reached its goal of generating zero landfilled waste
	August	Yokogawa introduces Japan's first returnable container recycling service for customers
	September	Yokogawa publishes Yokogawa Group Environmental Report 2000 and introduces third-party verification system
	November	Suzhou Yokogawa Meter Co. joins the China-Japan 3E (Energy, Environment, and Economy) Research Project and is selected as a model company for environmental accounting study
2001	March	Yokogawa establishes The principles of Yokogawa Group Environmental Management Standards.
	July	Yokogawa publishes Yokogawa Group Environmental Report 2001
	September	Three Yokogawa sites receive comprehensive ISO14001 certification
	November	The Kofu Office (current Yokogawa Manufacturing Kofu Factory) reached its goal of generating zero landfill waste
2002	February	The Yokogawa Manufacturing Akiruno Office (current Yokogawa Manufacturing Komine Factory) accomplishes its goal of generating zero landfill waste. The Kofu Office (current Yokogawa Manufacturing Kofu Factory) installs a light through type solar power generating system
	July	Yokogawa publishes Yokogawa Group Environmental Report 2002
	August	Four Yokogawa sites receive comprehensive ISO14001 certification
2003	February	The Econo-Pilot energy-saving system for water pumps receive the Agency of Natural Resources and Energy Director-General's Award at the Energy Conservation Award ceremony. The Kofu Office (current Yokogawa Manufacturing Kofu Factory) receives award from the Director-General of the Kanto Bureau of Economy, Trade and Industry in recognition of its achievements in reducing energy consumption.
	July	Yokogawa publishes Yokogawa Group Environmental Report 2003
	October	The Plant of newly established Yokogawa Electric China starts operations in Suzhou as an environmentally aware manufacturing site
2004	March	New environmentally optimized facilities at the Yokogawa Manufacturing Komine Factory and Kofu Factory start operations
	June	Yokogawa publishes Yokogawa Group Environmental Management Report 2004
	August	Yokogawa Electric Headquarters & Main Factory obtain a separate ISO14001 certification
2005	March	Energy Conservation Guided Tours start at the Yokogawa Manufacturing Kofu Factory
	April	Yokogawa joins the Team Minus 6% national campaign
	June	Yokogawa publishes Yokogawa Group Environmental Management Report 2005

2006	March	Yokogawa Manufacturing Kofu Factory and Komagane Factory attain zero CO2 emissions
	September	Yokogawa publishes Yokogawa Group Sustainability Report 2006
	October	Yokogawa introduces the Green Power Certification System (300,000kwh) The Kanazawa Office receives the New Office Promotion Award, Environment Award and Good Design Award for architectural design
2007	June	Yokogawa publishes Yokogawa Group Corporate Social Responsibility Report 2006
	September	Yokogawa Group establishes the Energy Conservation and Environment Protection Solution Division in order to promote environmental management solutions to customers
2008	June	Yokogawa publishes Yokogawa Group Corporate Social Responsibility Report 2007
2009	May	Yokogawa completely abolishes the usage of HCFC
	June	Yokogawa publishes Environmental Report 2009 on its website.
	October	The Kofu Office receives "Green IT Award 2009 Minister of Economy, Trade and Industry Award" for its energy-saving activities
2010	February	The ESCO business receives the 2009 Energy Conservation Grand Prize

Yokogawa promotes environmental management within its customers.

## Innovating Environmentally Friendly Products

Yokogawa develops environmentally friendly products that are long lasting, save energy, and are compact.

## Offering Environmental Solutions

Some case studies of the environmental solutions offered by Yokogawa are highlighted.

- (1) **Environmental Assessment Standards for Product Design**

We have established assessment standards in eight areas: ease of recycling and treatment, resource conservation, energy conservation, long-term usability, ease of collection and transport, safety and environmental protectiveness, information disclosure, and packaging. These standards are used in conducting assessments during each inspection (initial design, intermediate design, and final design).
- (2) **Lifecycle Assessment (LCA) Standards**

The LCA standards are used for preliminary assessments of energy use, CO<sub>2</sub> emissions, NO<sub>x</sub> emissions, SO<sub>x</sub> emissions, and the like throughout the lifecycle of a product. These standards are used in conducting assessments during each inspection (initial design, intermediary design, and final design).
- (3) **Environmentally Friendly Product Design Guidelines**

These guidelines establish design and machining and assembly methods that incorporate long-life design, energy conservation design, resource conservation design, and materials and parts selection guidelines, as well as standards for the recycling and disposal of products.
- (4) **Standards on Toxic Substances in Products**

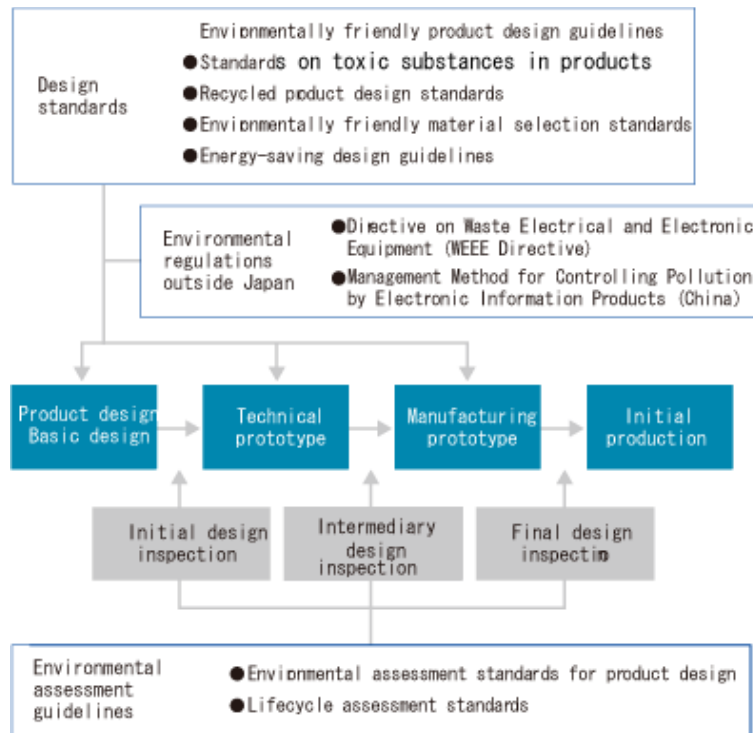
These standards guide the selection of environmentally friendly parts and materials in the design stage. The standards stipulate the elimination or reduction of substances a total of 44 substance groups: 15 prohibited substance groups and 14 voluntarily controlled substance groups specified in the Green Procurement Study Standardization Guidelines, and substances in 15 voluntarily controlled substance groups nominated by the Group.
- (5) **Recycled Product Design Standards**

These standards encourage the three Rs: the reduction of waste and the reuse and recycling of used products.
- (6) **Environmentally Friendly Material Selection Standards**

These standards state that the use of halogen-based flame retardants is to be avoided. The standardized specifications of materials also state that the use of structural steel plates containing hexavalent chromium is to be avoided and assign chrome-free steel plates as a substitute.
- (7) **Energy-saving Design Guidelines**

These guidelines state that energy is to be conserved in the manufacturing and product use stages. They introduce energy conservation design technologies for products and manufacturing.

## Environmentally Friendly Design and Assessment Standards



## Environmental Assessment Standards for Product Design

(1) When	Initial design inspection/intermediate design inspection/ final design inspection
(2) Assessment items	Twenty-nine items in eight fields; ease of recycling and treatment, resource conservation, energy conservation, long-term usability, ease of collection and transport, safety and environmental protectiveness, information disclosure, and packaging.
(3) Evaluation criteria	Score is zero points if legal regulations are not satisfied, four points if legal regulations are satisfied and an improvement of 30% or more is achieved, three points for an improvement of 15% or more, two points for an improvement of 5% or more, and one point for an improvement of less than 5%.
(4) Pass/fail judgment criteria	In order to pass, there must be no assessment items with a score of zero points, and the total score must be greater than that of the old model. A "failed" judgment is given if any of the assessment items has a score of zero points or if the total score is the same as or lower than that of the old model. The improvement guidelines target an improvement of 25% or more, and more than anything seek to incorporate environmental-burden reduction into design.



# Environmentally Friendly Products

Yokogawa has developed products, by setting design and assessment standards concerning aspects such as long-term usability, energy conservation, etc. of the product, in order to promote production of environmentally friendly products.

## Example Product: DC voltage/current source "GS200"

Yokogawa sets design and assessment standards with regards to aspects such as long-term usability and energy conservation, etc. to promote environmentally friendly product making.

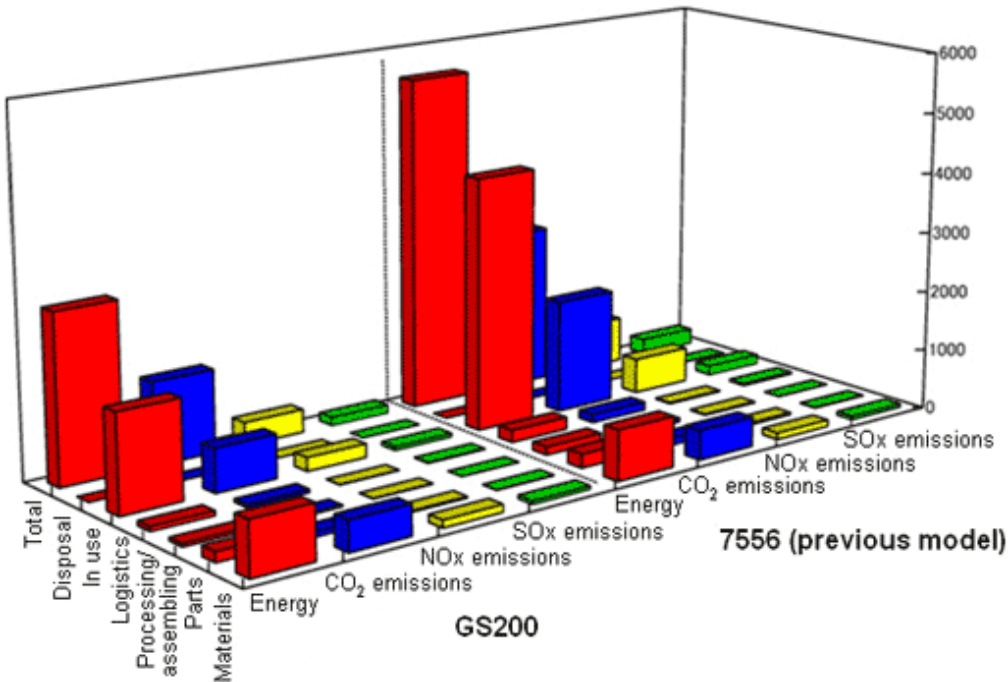


GS200

In developing a product, the following are evaluated by using lifecycle assessment (LCA) standards: energy use, carbon dioxide (CO<sub>2</sub>) emission, nitrogen oxide (NO<sub>x</sub>) emission, and sulfur oxide (SO<sub>x</sub>) emission.

The results, based on the LCA standards for "GS200," a DC voltage/current source released in 2009, achieves a 47.8% reduction in the CO<sub>2</sub>, a 48.7% reduction in NO<sub>x</sub>, and a 46.3% reduction in SO<sub>x</sub>, compared to previous model.

## Lifecycle Assessment (LCA) Reference Comparison Chart



Reducing energy consumption and protecting the environment are issues that concern everyone in the oil, petrochemical, iron and steel, pulp and paper, electric power, and gas industries. Corporations must reduce energy consumption not only by complying with regulations, but also by boosting operational efficiency. For this reason, expectations are rising for the plant energy saving solutions that Yokogawa provides.

By combining our measurement, control, and information technologies with the vast array of knowledge that we have acquired providing such solutions to customers in Japan—a leading country in reducing energy consumption—we will offer energy saving and environmental conservation solutions to customers in the global market. Through these efforts, we will contribute to the realization of a low-carbon society.

## Kofu Factory Receives METI Minister Award

The Kofu Factory, one of Yokogawa's principal manufacturing facilities, has received the METI Minister Award (one of the 2009 Green IT Awards) from the Green IT Promotion Council for its success in using IT to eliminate energy waste on its production lines.

The IT solutions introduced by the Kofu Factory include Yokogawa's InfoEnergy and Enerize energy management systems. By linking production and energy information, these have made it possible to analyze energy consumption for production processes on a production phase and lot basis. This factory has also introduced Econo-Pilot, a Yokogawa product that reduces the amount of energy consumed by water pumps and compressors by making precise adjustments based on load. Furthermore, the factory was able to reduce its energy consumption by installing invertors in lighting and fans, and through the integration of equipment. This initiative was very well received because of the innovativeness and persistent effort of all those involved, and due to the accumulated results that were achieved in improving production operations at this factory.



Green IT AWARD 2009

## Yokogawa Receives 2009 Energy Conservation Grand Prize for Okinawa Hokubu Hospital ESCO Project

In 2009, Yokogawa received the Energy Conservation Center Chairman Award (Support Service Section, Organization Category) for the work that it did on the Okinawa Hokubu Hospital ESCO Project through a seven-company consortium\*.

The Okinawa Hokubu Hospital needed a low-cost energy saving system with a low environmental burden. Yokogawa installed a high-efficiency inverter-driven turbo refrigerator for the cooling system that adjusts flexibly to load fluctuations. In addition, the Company made some changes in how the hospital's power generator was used and introduced energy-efficient lighting. Through such steps, the hospital's energy consumption was greatly reduced.

Furthermore, the introduction of a highly reliable central monitoring system improved the stability of these facilities' operations and enabled a more sophisticated approach to energy management. The results of these measures were incredible. In fiscal year 2008, the hospital's heat usage was down approximately 40% from the average for the previous three years, and CO2 emissions were 50% lower compared to the same average.

\*Yokogawa Electric Corporation (Representative),  
Fuyo General Lease Co.,Ltd., ASAHI KOGYOSHA CO.,LTD.,  
SHODENSYA Co.,Ltd., Setsubi Kenkyujyo KK, Teruya Denki Kouji  
KK, and Kyuken Kogyo Company Limited



Green IT AWARD 2009

Here we highlight some of Yokogawa's efforts to promote its own environmental management.

## Goals and Achievements in Fiscal Year 2009

Lists Yokogawa's goals and achievements.

## Environmental Auditing

Provides an summary of the ISO 14001 internal audit as well as audits done by external auditors.

## Compliance with Environmental Laws

Summarizes Yokogawa's standing under the environmental laws.

## Environmental Impact

Explains the annual volume of the energy and material inputs for its business activities (including manufacturing, sales, and service) as well as the annual output of waste and other matter into the air and water.

## Environmental Accounting

Yokogawa calculates the costs of its environmental activities and quantifies their economic impact.

## Environmental Education

Introduces Yokogawa's educational structure.

## Improvement of Production Line



Highlights some examples of improvements made on the production floors.

## Global Warming Prevention



Highlights Yokogawa's involvement in dealing with CO2 emissions and global warming.

## Chemical Substances Control and Reduction



Highlights some of Yokogawa's efforts to reduce chemical substances.

## Green Procurement and Green Purchasing

Explains Yokogawa's efforts related to procurement.

## Waste Reduction and Resource Saving



Highlights Yokogawa's efforts to reduce waste, such as its promoting of zero emissions.

## Environmental Events



Highlights some of Yokogawa's environmental events, such as activities to raise awareness about the environment.

# Goals and Achievements

In fiscal year 2009, the Yokogawa Group reviewed its global environment protection activities from the environmental and business perspectives and strove to achieve targets that were closely integrated with its business operations.

The Yokogawa Group also strove to reduce our environmental burden and conserve energy and resources in production activities by carrying out measures such as a review of the handling of toxic chemical substances in products.

## Goals and Achievements in Fiscal Year 2009

Environmental Policy of the Yokogawa Group	Fiscal Year 2009 (main sites)		Self Evaluation
	Target/Goal	Results	
EMS establishment, maintenance, and improvement	Confirm and achieve environmental conservation action targets that are closely integrated with our business practices.※3	<ul style="list-style-type: none"> <li>• 140 themes closely integrated with business operations</li> <li>• Attained Seual internal audits conducted and effective environmental system confirmed</li> </ul>	○
	Promote useful activities in line with existing business.※2	36 useful environmental activities promoted	
Implementation of environmental education	<ul style="list-style-type: none"> <li>• Provide all employees with basic environmental education that can be applied to activities undertaken on their own initiative.※3</li> <li>• Provide specialized environmental education to those who are engaged in business activities that have a particularly significant impact on the environment.※3</li> </ul>	100% achieved	○
Legal compliance	Strictly comply with the improved voluntary control limits.※2	All items confirmed to be below the voluntary control limits	○
	Collect information on the revised Energy Conservation Law.※2	Collected information by attending briefing sessions, etc.	
	Establish preventive maintenance management of wastewater treatment facilities.※2	Management established	

Environmental Policy of the Yokogawa Group	Fiscal Year 2009 (main sites)		Self Evaluation
	Target/Goal	Results	
Legal compliance	<ul style="list-style-type: none"> <li>Review and improve management of bad odors.※2</li> <li>Implement remediation measures against noise.※2</li> </ul>	Confirmed improvements in self-monitoring, etc.	○
	Take measures to reduce environmental risks in 3 areas for environmental facilities and equipment.※2	Measures taken to reduce risks in 3 areas for environmental facilities and equipment	
Promotion of resource recycling-based management	<b>Reduce CO2 emissions</b> <ul style="list-style-type: none"> <li>by 32.4 % per unit floor space, compared to fiscal year 1990 (to 97.7 kg-CO2/m2 in emissions) ※1</li> <li>Reduced to 16,353 t-CO2/year※2</li> </ul>	<b>Reduce CO2 emissions</b> <ul style="list-style-type: none"> <li>39.7 % reduction (to 87.2 kg-CO2/m2 in emissions)</li> <li>Reduced to 15,555 t-CO2/year</li> </ul>	○
	<b>Reduce total waste</b> <ul style="list-style-type: none"> <li>by 11 % compared to fiscal year 2003 (676 t/year in total generation)※1</li> <li>Reduced to 2,787 t/year※2</li> </ul>	<b>Reduce total waste</b> <ul style="list-style-type: none"> <li>49% reduction (389 t/year in total generation)</li> <li>Reduced to 2,694 t/year</li> </ul>	○
	<b>Resource saving</b> Deploy green production lines and make improvements at 12 lines※2	<b>Resource saving</b> Achieved resource-saving improvements, including on manufacturing lines and for equipment, at 12 lines (reduced use of cutting oil, reduced volume of paper use, etc.)	○
Minimization of environmental pollutants	Collect information from the industry and other companies through external committee meetings, etc.※1	Information collected by attending external committee meetings	○
	Reduce toluene and xylene by 1,850 kg.※2	2,738 kg reduction	
	Promote lead-free soldering and achieve 100% application in planned products.※2	Application to all planned products achieved	



Environmental Policy of the Yokogawa Group	Fiscal Year 2009 (main sites)		Self Evaluation
	Target/Goal	Results	
Development of environmentally friendly products	Reduce CO2 emissions of developed products by more than 25%. ※1	Five models shipped	○
	Reduce cost of products	One model shipped	
	<b>Promote green procurement</b> <ul style="list-style-type: none"> <li>Introduce returnable tote boxes and pallets to five more client companies. ※2</li> <li>Provide suppliers with guidance and support on legal compliance. ※2</li> </ul>	<b>Promote green procurement</b> <ul style="list-style-type: none"> <li>Returnable tote boxes introduced to seven more client companies</li> <li>Ongoing preparation to provide suppliers with guidance and support on legal compliance</li> </ul>	
Provision of environmental solutions	<ul style="list-style-type: none"> <li>Increase sales of environmentally friendly products ※1</li> <li>Show visitors energy-saving efforts at the Kofu Factory ※1</li> </ul>	Achieved	○
Contribution to society through environmental conservation	Promote contributions to society through participation in nature conservation and social and community activities. ※1	Participated in community clean-up activities and Black Illumination, etc.	○
	Carry out nature conservation and social and community activities at least once a year at each site. ※2	A total of 23 social contribution activities carried out	
Disclosure of environmental conservation information	Promote information disclosure and enhance efforts to communicate with communities. ※1	Published Environmental Report, Web edition	○
	Improve website. ※2	to add more items regarding contribution to society	

Main sites: Yokogawa Electric Corporation Headquarters & Main Factory and Yokogawa Manufacturing Corporation

※1: Goals of Yokogawa Electric Corporation Headquarters & Main Factory

※2: Yokogawa Manufacturing Corporation

※3: Common goals

## Internal Audits

The environmental internal audits for ISO14001 of the Yokogawa Electric Corporation Headquarters & Main Factory consist of systems, legal compliance, and performance audits. Internal audits were conducted at all departments at least once during the year. Although some inconsistencies and items to be watched were identified, these were quickly addressed and corrected.

### Internal Audit Inspection Items

Systems audit	Audit of organizations/systems, target management, education, operations management/corrections, and other data to check whether the system is functioning effectively
Legal compliance audit	Audit of 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	Audit of targets and actual results, regulated values, and other data to check whether the self-determined operation items are being implemented properly

## Annual Surveillance

At the Yokogawa Electric Corporation Headquarters & Main Factory as well as at Yokogawa Manufacturing, the second annual surveillance were conducted by a certifying organization. Yokogawa's continuing efforts were praised regarding the following aspects: and the certification was maintained by the surveillance team.

- Yokogawa Electric Corporation Headquarters and Main Factory were recognized for the social contribution activities, the improved transportation methods by developing and running dedicated returnable tote boxes and for their strengthening of the internal audit system.
- Yokogawa Manufacturing was recognized for various measures, such as daily monitoring of power consumption, reduction of waste by in-house treatment of alkali waste liquid, and for their promotion and strengthening measures such as qualified persons for energy management at each site.

The Yokogawa Group ensures compliance with laws, regulations, agreements, etc., to prevent environmental pollution. At the same time, the Group adopts alternative technologies wherever possible to reduce environmental impact substances.

## Conserving Water and Soil

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The Yokogawa Group has conducted soil and water studies at former production sites in accordance with its proprietary control standards, starting before the enactment of Japan's Soil Contamination Countermeasures Law. The Group will continue to comply with the revised Soil Contamination Countermeasures Law put in effect in April 2010.

## Compliance with Environmental Laws

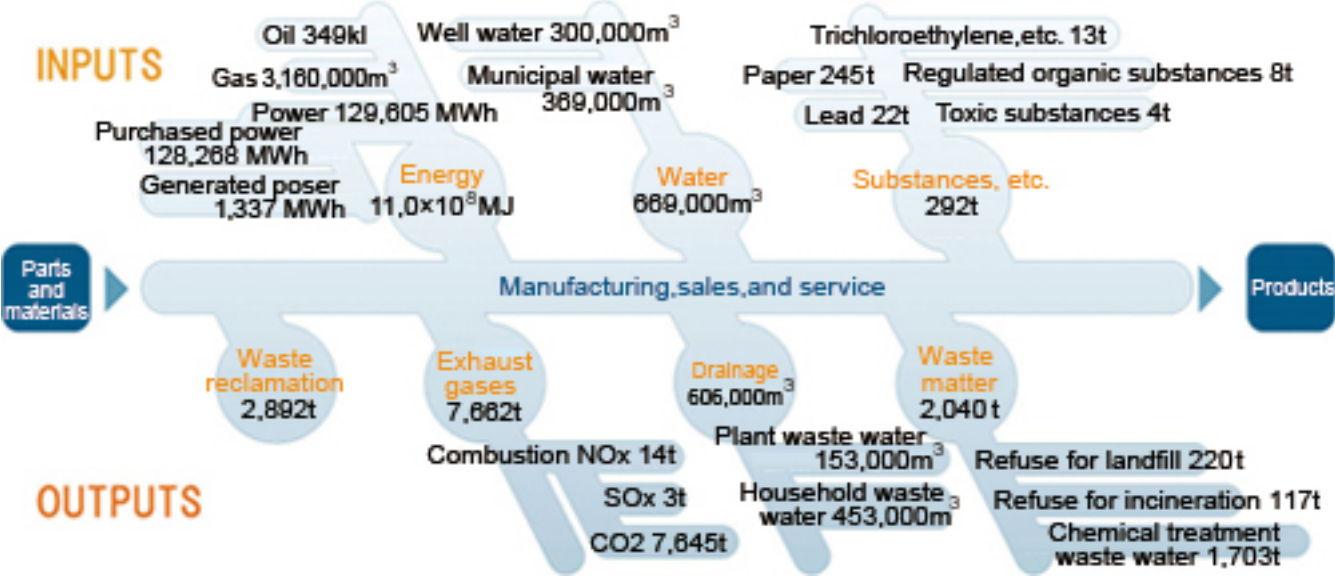
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No severe violations were committed as a result of extensive efforts made by the Group to ensure compliance with environmental laws, regulations, and agreements.

# Environmental Impact

The Yokogawa Group calculates the annual volume of the energy and material inputs for its business activities (including manufacturing, sales, and service) as well as their annual output of waste and other matter into the air and water. This analysis helps the Group effectively use resources, improve energy efficiency, and improve the waste recycling rate.

## Overview of Environmental Impact



In accordance with the Ministry of the Environment's **Environmental Accounting Guidelines** (2005 edition), Yokogawa calculates the costs of its environmental activities and quantifies their economic impact.

## Environmental Conservation Costs

(Millions of yen)

Category	Item	Main Initiatives	Capital Investment	Related Costs
Costs for reducing environmental impact of factories (areas of operation)	Pollution prevention costs	Monitoring and measurement	2.8	488.1
	Global environmental conservation costs	Energy savings	154.8	170.1
	Resource recycling costs	Minimize generation of waste matter	15.1	127.2
Costs for reducing environmental impact of procurement and logistics		Green procurement	0	9.4
Environmental conservation costs in EMS activities		EMS updates, education	0	208.2
Environmental conservation costs in R&D activities		Development of environmentally friendly products	0	0.8
Environmental conservation costs in community activities		Environmental events	0	32.0
Costs for correcting damage to the environment		Soil recovery	0	0
Total			172.6	1,035.9

## Environmental Conservation Effects

Category	Description of Effect (unit)	FY2008	FY2009	Effect
Resource expenditure	Total amount of energy consumed (108 MJ)	13	11	+2
Global warming prevention	Total amount of water resources consumed (km <sup>3</sup> )	903	669	+234
	CO2 emissions (t)	9,669	7,645	+2,024
	CO2 emissions on unit sales (t-CO2/100 million yen)	3.5	3.3	+0.2
Air pollution	NOx emissions (t)	18	14	+4
	SOx emissions (t)	3	3	0

## Economic Effects of Environmental Conservation Measures — Intrinsic Effect

(Millions of yen)

Description of Effect	Amount
Reduction in expenditure due to recycling(sale of valuable resources, etc.)	14.3
Reduction in expenditures due to energy savings(power, etc.)	109.1
Reduction in expenditures due to resource savings (reduced use of paper and water, etc.)	11.7
Total	135.1

\* Data was taken from ISO14001-certified manufacturing sites.

# Environmental Education

Yokogawa Electric places an emphasis on the environmental education program as part of employee training in order to raise environmental awareness of each employee. The program consists of basic education, specialized environmental education, environment-related qualification education and special education.

The environment basic education is reviewed every year. For 2010, the environment basic education is offered through E-learning.

To raise environmental awareness and facilitate acknowledgement of each employee in the Yokogawa Electric regarding the environmental conservation activities and daily updated environmental information, environmental education will be further expanded.

## Structure of Environmental Education in Yokogawa Electric Corporation Headquarters & Main Factory

	Environmental Management Manager	All Employees And Group Companies	Contractors
Basic Education	Basic Environmental Education		
	Education to Raise Environmental Awareness		
	Education for Facilitators		
Specialized Environmental Education		Specialized Environmental Education	Contractors Education
Qualification Education		Legal Practitioners Education	
	Internal Auditors Education	Engineering Staff Qualification System	
Special Education	Special Education		



Since setting the Green Production Line Improvement Guidelines in 2002, Yokogawa has continued make improvements to each production line to reduce the environmental load. Yokogawa is also making efforts to conserve the environment by reducing contaminants in the air, water, and soil as well reducing CO2 emissions generated by the use of electricity while lowering manufacturing cost at the same time.

## Reduction of Power Consumption through Compressor Operation Control

Yokogawa Manufacturing Komine Factory is working on reducing power consumption by lowering the pressure of the compressor. For the year 2009, Yokogawa Manufacturing worked on lowering the pressure of the compressors those are operated 24 hours a day.

After evaluating the pressure levels in equipment, we installed amplifiers on ultrasonic welders that had recorded large pressure fluctuations. This has enabled the compressors throughout the factory to run at a lower pressure of 0.59 MPa (originally 0.64MPa), reducing the annual power consumption 40%, from 9.9MWh to 6 MWh.



Compressor

## Effects of Power Reduction by Day-to-Day Monitoring

Yokogawa Manufacturing Kofu Factory has been actively realizing energy savings through day-to-day monitoring. This is led by an energy conservation team consisting of Kofu Factory's qualified person for energy management, the department in charge of the facility, and environmental facilitators from each department. Through this team, a company-wide effort is being made to visualize energy data and to eliminate waste in production lines, using YOKOGAWA's own products InfoEnergy and Enerize. Because energy consumption can be grasped by the facility operator in real time for each line or product, suggestions for improvements from the production floors are being made proactively.

Since the year 2000, the Kofu Factory has been proactively rolling out energy saving initiatives such as the use of inverters in lighting and large pumps, or the deployment of energy efficient equipment at various places within the factory. In order to continually foster these practices, they have required each department to set target power consumption values, and to monitor its energy consumption daily, posting them on the "action board" in their work area.



Yuuji Kuwata  
Energy Conservation Team Leader  
Yokogawa Manufacturing Kofu Factory

By clarifying each department's environmental goals such as target power consumption and the department in charge of each goal, there is a heightened sense of awareness among the members of the energy conservation team and members of each department. This in turn, makes this a fully participated energy conservation effort.

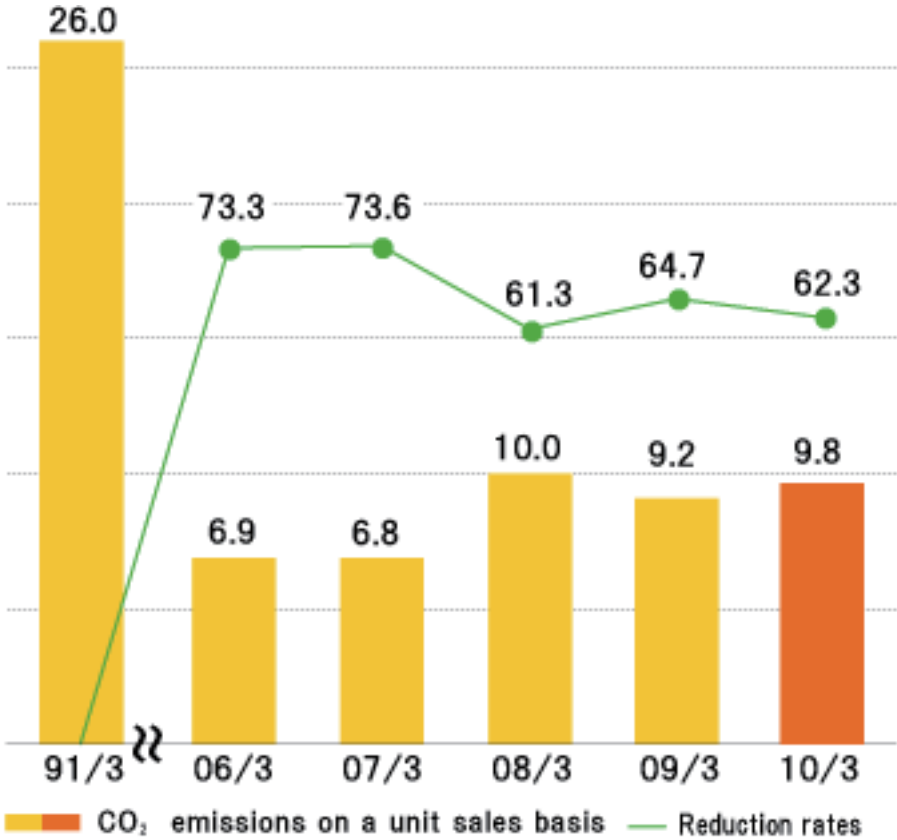
In addition to such low-profile activities, in 2009, the factory made efforts to reduce power consumption by controlling the air conditioning of the clean room. There is a need to maintain the air at a certain humidity and cleanliness in the clean room, so by making fine adjustments and shutting down some of the indoor and outdoor air conditioning machines afterhours for the night, an annual energy saving of approximately 360 Mwh is projected.

To reduce the amount of CO2 emission, Yokogawa is actively improving production lines and installing high-efficiency equipment. Specifically, Yokogawa is making efforts to reducing its electric usage by continuously conducting "Cool Biz" and "Warm Biz" campaigns. This campaign promotes turning off the lights at lunchtime and setting the air conditioner thermostat to an appropriate temperature. In addition, Yokogawa's factories and sites have continuously participated in "Black Illumination," in which the lights are turned down in the facilities

## Unit Sales, CO2 Emissions and Reduction Rates (compared to fiscal year 1990)

In fiscal year 2009, Yokogawa group companies' CO2 emissions in Japan, based on unit sales, amounted to 9.8 t-CO2 per 100 million yen. This is a 62.3% decrease compared to fiscal year in 1990. Factors such as energy conservation activities, improved energy efficiency in the new factories, and weather conditions reduced CO2 emissions. However, the reduction of CO2 emissions was counterbalanced by the decrease in total unit sales. Thus, compared to the previous year, it roughly leveled off.

## Unit-sales-basis CO2 Emissions and Reduction Rates(compared to fiscal year 1990)



\*CO<sub>2</sub> emissions on a unit sales basis:  $CO_2 \text{ emissions on a unit sales basis (t-CO}_2 \text{ per 100 million yen)} = CO_2 \text{ emissions (t-CO}_2) \div \text{sales (100 million yen)} \div \text{Japan's domestic corporate goods price index (electrical equipment) published by the Bank of Japan}$

## Reusable Packing Boxes for Transportation

Yokogawa has developed packing boxes that can be reused up to 200 times (100 round trips) for transporting products and parts between factories. These boxes, developed jointly with JP Sankyu of Japan Post Group, are mainly used for transportation between factories in Japan and China. Traditionally, cardboard and wooden boxes were used, however, by replacing them with these reusable packing boxes, the amount of CO2 emitted from the manufacturing and disposal of the boxes were reduced by 70%. In addition, the box height can be adjusted to three different levels to fit the amount and the size of contents. If nothing needs to be put in, the box can be folded flat and use of cushion can be successfully reduced, which also improves the load efficiency. The plan is to use the boxes for transporting between other sites.



Packing box

## 600 Workers Participate in "Eco-Commute Challenge"

In Yokogawa Manufacturing Kofu factory, which is a production plant, there were more people commuting by cars and motorcycles, than by public transportation. When Yokogawa invited approximately 1000 workers to take on the "Eco-Commute Challenge" (a campaign to commute in an eco-friendly way), over 600 joined the movement. These employees actively made changes such as turning off idling engine and using a motorcycle or a bicycle instead of a car. Invitations were made in hopes that many people will do everything they can do to help. As a result, each individual person has become more aware of the choices that are made on a daily basis. Yokogawa will continue to invite others to this "Eco-Commute Challenge." This movement has caught the interest of the Yamanashi prefecture, with which Yokogawa has been exchanging information. In addition, Yokogawa & Co. is raising awareness of eco-commuting by doing workshops using a DVD, and posting flyers.

Changes made in commuting methods through "Eco-Commute Challenge," by commute distance

Commute Distance	Change in Primary Commuting Methods
Under 2 km	Car⇒Bicycle or Foot
2 km to 5 km	Car⇒Motorcycle or Bicycle
5 km to 10 km	Car⇒Kei car, compact car, or motorcycle
Over 10 km	Normal car⇒Kei car Large car⇒Compact car Switched to a hybrid

## Implementation of "Green Power Certification" System

A portion of the power used at Yokogawa Electric Headquarters building comes from "green power" (300,000 kWh/year) from "biomass power generation."



biomass power generation

Yokogawa strictly manages chemicals that are harmful to the global environment and the human body. In addition, the reduction of using such chemicals by developing and introducing alternative processes is promoted.

## Reduction of Lead Solder

Yokogawa Manufacturing Kofu Factory has been actively at work to "minimize environmental pollution," which is one of the requirements in the Yokogawa Group's Environmental Policy, by setting target each year. Products that support lead-free manufacturing were gradually expanded starting from 2003. Now, about two-thirds of the 300 models manufactured at the Kofu factory have been switched to products that support lead-free manufacturing. Since the use of lead-free cream solder for surface mounting was accelerated in fiscal year 2008, the amount of lead solder used at the Kofu factory in fiscal year 2009 was reduced by approximately 200 kg.

Additionally, there has been a movement towards using lead-free surface mount technology at production sites in China and South Korea. The lead-free surface mount process has also started at the Komine factory (production site in Japan) since fiscal year 2010. For 2010, the product chemical management promotion project will launch across the Yokogawa Group, and the REACH regulation and the RoHS Directive will be addressed.

## PRTR Substances

The amount of substances reported under PRTR※ requirements (1,000 kg/year or more handled) is shown in the table.

※PRTR System:

PRTR SYSTEM...The PRTR, or Pollutant Release and Transfer Register, was established to enable society as a whole to manage chemical substances through the disclosure of toxic chemical emissions data and other information.

## Fiscal Year 2009 Yokogawa Manufacturing PRTR Data

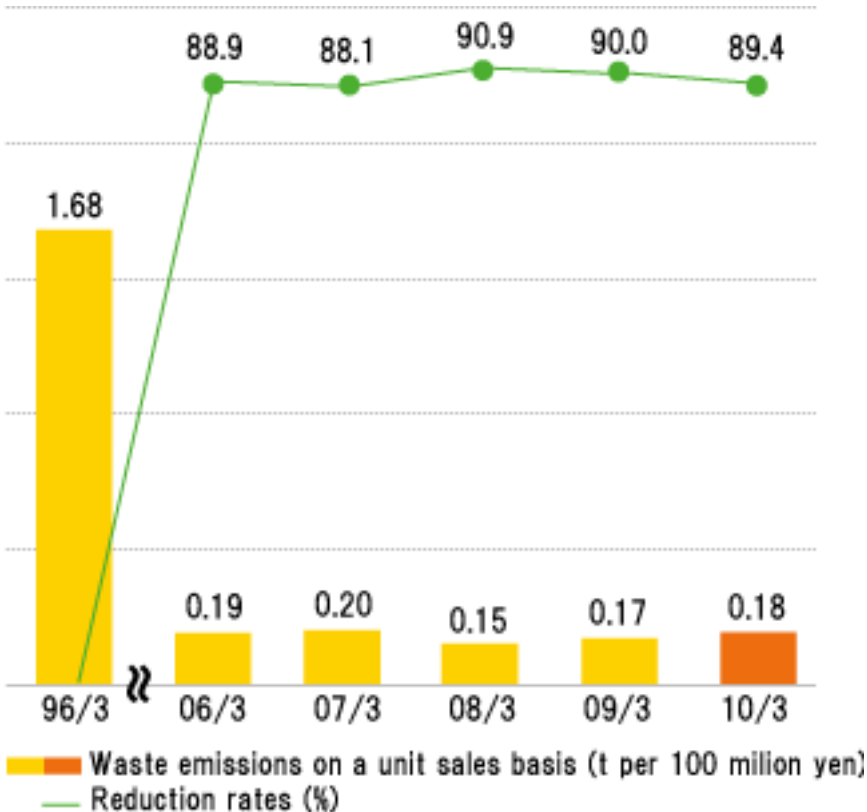
Factory	Factory Substance	Amount used (kg)	Amount emitted (kg)				Amount transferred (kg)	
			Air	Public water area	Soil	Land fill	Sewage system	Outside site
Komine Factory	Xylene	1,950	1,200	0	0	0	0	750
	Toluene	2,070	1,300	0	0	0	0	770
Kofu Factory	Lead	2,430	0	0	0	0	0	0
Ome Factory	Water-soluble copper salts	12,220	0	0	0	0	10	3,800
	Formalin	2,120	360	0	0	0	10	1,400

The "3R" concept (Reduction, Reuse, and Recycling) promoted by the Yokogawa Group is indispensable to global environmental conservation. The Yokogawa Group defines zero emissions as recycling and reusing 99% or more of the total amount of waste generated. Up to now, the Yokogawa Electric Headquarter and six main factories have met the goals of zero emissions.

## Unit-sales-basis Waste Emissions and Reduction Rates (Compared to Fiscal year 1995)

The waste emissions in fiscal year 2009 amounted to 0.18 t per 100 million yen on a unit sales basis (564 tons in total), and its reduction rate was 89.4%(compared to Fiscal year 1995)

## Unit-sales-basis Waste Emissions and Reduction Rates (Compared to Fiscal year 1995)





## Reusable Packing Boxes for Transportation

At Yokogawa Manufacturing Kofu factory, the waste material team is leading the charge to promote strategies for waste material reduction. During 2009, efforts have been made to reduce the amount of waste liquids such as oil, improving collection methods, and collecting valuable resources such as stainless steel.



Nobuo Tasaka  
Waste Materials Team Leader,  
Yokogawa Manufacturing Kofu Factory

## Controlling the Density of Water Soluble Cutting Fluid

The density of the oil used for cutting products has been strictly controlled. This has continued since 2008, but in 2009, the number of density controlling equipment has been increased further. Fine adjustments are made so that the density of the oil can be kept constant at all times, according to the capability of each equipment. As a result, the amount of oil purchased per year has been reduced from 21 tons to 10 tons (nearly one-half).

## Improved Collection Method for Waste Liquids

In the past, waste liquids from cleaning fluids and such were collected and kept in drums (approx. 200kg capacity). By changing to vacuum collection, in which just the waste liquids are collected, the drums that were purchased (60 drums per month) for storage and disposal are now reused. In addition, collecting only the waste liquid has reduced the weight of the transported waste, which has led to a reduction in CO<sub>2</sub> from transportation methods.

## Recycling Metals

Metal chips generated from cutting metal materials such as stainless steels and kovar have been recycled as a valuable resource. By using compressing equipment to compress the chips and returning it to the metal material manufacturer, we have been able to recycle the metals as a better quality valuable resource. The collected stainless steels and kovar are recycled to be used for metal materials for products. A total of 62 tons of stainless steel and kovar were collected and recycled in 2009.

## Recycling PC board Materials

In the past, used PC boards were collected for thermal recycling. However, by building a system for material recycle, the Kofu factory is now collecting PC boards as a valuable resource, because of their high copper content. With 30 tons of used PC boards disposed every year, efforts are being made to reduce cost and improve recycling.

## White Rags Lease

Yokogawa Manufacturing Komine factory has worked on leasing white rags as part of their strategies to reduce waste. On production floors, white rags are frequently used to wipe off any oil that gets on the product or the workers' hands. In the past, the used rags were discarded as industrial wastes. By leasing the rags, the used rags are collect to be reused. In some cases that are not applicable, disposable rags are used, however, what used to be 340 kg of rags purchased every year has been reduced nearly half, contributing to reduction of industrial wastes.



Collection Boxes for Leased Rags

Various laws and regulations have been put in place, such as the Home Appliance Recycling Law and Law for Promotion of Effective Utilization of Resources in Japan, as well as the Waste Electrical and Electronic Equipment (WEEE) and Restriction of Hazardous Substances in EEE (RoHS) Directives outside Japan. With this background, Yokogawa aims at building a sustainable society in various areas of its business activities.

Based on the principle "Resource procurement with less environmental load = Offering environmentally friendly products", Yokogawa proactively promotes green procurement activities that are environmentally friendly.

## Green Procurement Guidelines

Under the philosophy to contribute to building a sustainable society in various areas of business activities, Yokogawa has created the "Green Procurement Guidelines" to promote green procurement activities.

## Green Purchasing

Yokogawa joined the "Green Purchasing Mass Campaign" hosted by the Green Purchasing Network, using posters, etc., to invite employees to participate.



Green Purchasing Mass Campaign poster

## Holding Environmental Events

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To raise each individual's interest in global environmental protection, Yokogawa actively puts on awareness campaigns within the company. Yokogawa do this by holding a yearly event dealing with environmental conservation that includes activities such as showing movies about the environment.

## Holding an Environment Week

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In November 2009, Yokogawa held various events in a weeklong environment awareness campaign, inviting employees to join in. Many employees came out to see "HOME," a film about the environment, take part in "Environmental Household Bookkeeping," or to answer an environment quiz. In a questionnaire survey after the film, some expressed the film prompted them to rethink what they themselves can do to conserve this beautiful earth.



A showing of the film "HOME"

Through presentations and exhibitions that highlight its environmental activities, Yokogawa has been striving to improve their communication to disseminate information to more people.

## (Award) Green IT Award Received

Yokogawa Manufacturing Kofu Factory was awarded the "Green IT Award 2009 Minister of Economy, Trade and Industry Award" for its energy-saving activities, presented by the Green IT Promotion Council.

## (Award) The ESCO Business Receives the 2009 Energy Conservation Grand Prize

The ESCO business at Okinawa Hokubu Hospital, for which Yokogawa Electric served as head, received the "Energy Conservation Center Chairman Award" in the 2009 Energy Conservation Grand Prize (organization with outstanding support service).

## (Presentation) Spreading the Word to the Community

Yokogawa Manufacturing Kofu Factory participated in the "Kofu Anti-Global Warming Regional Council" and gave a presentation on "Green Curtain" and "Eco-Commute Challenge," which the factory has been actively working on, to raise awareness of the environment among the residents of the city. In addition, the Kofu Factory has also participated in the "Third National Green Curtain Forum" which took place in the city of Kofu.

## (Exhibition) Participation in "Musashino Environment Festival" Hosted by Musashino, Tokyo

Yokogawa participated in "Musashino Environment Festival" in which the people in the community were introduced to different topics regarding energy conservation, waste, plants, and food. Yokogawa gave a exhibition on its energy-saving endeavors at the Kofu Factory, and introduced its own energy-saving system for water pumps, "ECONO-PILOT."



## (Advertisement) Ad Placed in Nikkei Ecology

An Ad was placed in Nikkei Ecology.



## Disclosure of Environmental Information

◆Web address for Yokogawa Electric's environmental activities (Japanese)

<http://www.yokogawa.co.jp/cp/csr2/env/index.htm>

◆Web address for Yokogawa Electric's environmental activities (English)

<http://www.yokogawa.com/csr/env/index.htm>

◆Web address for Yokogawa Manufacturing's environmental activities (Japanese)

<http://www.yokogawa.com/jp-yimg/corp/eco/eco-info.htm>

Yokogawa is actively making environmental contributions to the community, in such areas as environmental protection and biodiversity

## Green Curtain Planting Event

The Yokogawa Manufacturing Kofu factory has continually put on Green Curtain, which is one of the promotion activities of the "Kofu Anti-Global Warming Regional Council." In 2009, in the smoking area facing south, "Green Tunnel" was built using bitter melon. Furthermore, a wider variety of plants, such as pumpkin, calabash, and luffa, has also been planted.



## CO2 Absorption Certificate Received

Yokogawa Electric's Kanazawa factory participated in "Forestry at the Techno-Park" hosted by the city of Kanazawa. The program was aimed at global warming prevention and global environmental conservation, and the Kanazawa factory received the Kanazawa Collaborative Forestry CO2 Absorption Certificate. The certification certifies the amount of CO2 absorbed, in one year, by the forest, which is kept well maintained through various works such as weeding and brushing, felling, and planting. In calculating the amount of CO2 absorbed by the forest, a reduction of CO2 by 10.06 tons was certified. The award was presented to the Kanazawa liaison group (a group of five companies, including Yokogawa Electric).



## "Parent-Child Water Survey" at the Komagane Factory

The employees of Yokogawa Manufacturing Komagane factory and their families participated in "Parent-Child Water Survey," put on by Nagano Techno Foundation in an effort to restore "the clear Lake Suwa," and "the swimmable Tenryu River." In the event, the families tested and observed the water in the Tenryu River, and created a report.





## Cardboard Donated to Elementary Schools

Yokogawa Manufacturing Ome factory donates unused cardboard in the factory to the elementary schools in the community to be used effectively in various school events.



## Participation in "City Clean-up" Hosted by Musashino, Tokyo

The employees of Yokogawa Group and their families participated in the cleaning of areas covering three train stations (Mitaka, Kichijoji, and Musashisakai), which is held twice a year. This event, put on to prevent littering and to popularize community beautification, draws many participants each year.



## Participation in "Tenryu River Environmental Picnic"

The employees of the Komagane Factory and their families participated in the cleaning of the dry riverbed of the Tenryu River, hosted by the Nagano Techno Foundation.



Yokogawa is actively contributing to the environment in the community, in such areas as environmental protection and biodiversity.

## Artificial Hill Built in the Headquarters in the Image of the Woods in Musashino

In an empty lot, which was left after part of the building was torn down at the headquarters campus, an artificial hill was made by planting a green lawn and plants. The artificial hill has 37 types of plants such as serrata oak, sawtooth oak, and storax, which are designed in the image of the woods in Musashino. In addition, the azaleas planted along the walkway bloom in the spring, welcoming visitors.



## Protecting Large Trees in the City of Musashino

In the city of Musashino, where Yokogawa Electric's headquarters is located, there are approximately 2,000 large trees in the city designated as "environmentally protected." It is under a program called "2000 Large Trees/Symbolic Trees Plan", which has been in place since 1994. Fifty large trees within the premise of Yokogawa Electric's headquarters have been designated under this program and are protected as such.



## "Tokyo Greenship Action": A Collaborative Effort Between Local NPO and Residents to Protect the Woodlands

Since 2009, Yokogawa has been a participant in "Tokyo Greenship Action," a collaborative effort among the city of Tokyo, local NPOs, and businesses to conserve and revive the woodlands in the hills of Tokyo, and contribute to their biodiversity.

Yokogawa's corporate citizenship is rooted in the company's philosophy of being pioneers and good citizens. Yokogawa sees its fundamental duties as going above and beyond benefiting society through its normal business activities and complying with the law—it is actively engaged in addressing serious social issues, regional revitalization efforts, etc.

## Cultivating Future Human Resources



Yokogawa Science Classes addressing the fundamental technologies that are the basis for Yokogawa's business—optics, electrics, radio, etc.

## Interacting With Local Communities



The Yokogawa Group's various locations each work to benefit their local communities in ways to address their own specific needs.

## Dealing With Social Issues



Providing assistance towards humanitarian concerns and natural disasters through our employee volunteers and collaboration with non-profit organizations and NGOs

Yokogawa's business is built on its technical strengths in measurement, control, and information, and thereby supports science education in primary schools. The company's hope is that this will develop an interest in science and technology among the next generation. Yokogawa employees also volunteer to serve as instructors at colleges and research institutions. The company also provides materials (such as instruments and research funds) as part of its wide range of support.

## Yokogawa Science Classes (Japan)

Concerned that children were not being sufficiently educated in science, Yokogawa started offering the Yokogawa Science Classes in 2006 for primary-school children. The classes are currently offered on several weekends each year in Tokyo. These classes address the fundamental technologies that are the basis for Yokogawa's business—optics, electrics, radio, etc. Instructors are generally employee volunteers, who often find that their contact with children helps them grow as well. Programs like this are a way to deepen the company's ties with its surrounding communities, as well as a way to encourage an interest in science and technology in the next generation.



## Donations to Educational Institutions (Australia)

Yokogawa Australia donated more than AUD \$45,000 worth of process control instrumentation to universities and training institutes in Australia and New Zealand in 2009.

University of Sydney, Royal Melbourne Institute of Technology, Christchurch Polytechnic Institute of Technology in New Zealand, and other five educational institutions received Yokogawa's instruments, including digital controllers, magnetic flowmeters and transmitters.

“We see donations of this kind as an essential part of our corporate citizenship,” said Yokogawa Australia's Sales and Marketing Director, Russell Palmer. “It's important that apprentices and engineering students have access to current technology so that they are abreast of the latest advancements in instrumentation.”



Building a rig using a Yokogawa flowmeter to teach advanced technologies in Christchurch Polytechnic Institute of Technology

With market economies becoming global, companies have a broader impact on societies through their actions. Yokogawa is connected to people throughout the world, directly or indirectly, through its dealings with customers and suppliers.

Yokogawa is taking responsibility as a player in the global marketplace to combat worsening global environmental problems, food shortages, poverty, and education. Healthy economic activity can serve as a starting point for healthy regional communities.

Yokogawa has taken an active part in addressing regional social issues by providing assistance towards humanitarian concerns and natural disasters through its employee volunteers at their respective regional branches. Yokogawa also deals with global issues such as poverty and human rights issues through its collaboration with non-profit organizations and NGOs.

# Educational Support for Developing Countries through Recycling of Secondhand Books

Since November 2009, Yokogawa has been participating in "Book Magic" a charity program that collects used books, CDs, and DVDs to help support education in Afghanistan and Sudan. In 2009, collection boxes were placed at 50 places between the offices in the Musashino, Tokyo and Kofu, Yamanashi. Approximately 2,500 items were collected by the end of March 2010, and 54,000 yen was donated.



	Total number of Books, CDs, DVDs	Amount Donated(Yen)
Musashino	1,351	41,176
Kofu	1,164	12,911
Total	2,515	54,087

Here are some feedbacks from the employees who contributed. "I participated hoping to bless someone living on this same Earth." "I often hesitate to sell my old books or throw them away. With Book Magic, I was able to clean out my room without the guilt of discarding my old books, and even contribute to society. "

At NPO JEN, donations were use in the following ways to support the local schools.

- Afghanistan: Installation of windows, doors, and rest rooms
- Iraq: Painting walls and installing a water storage tank
- Sudan: Installation of wash-basin and hygiene education
- Book Magic official web site (NPO JEN)



Since 2003, a group of Yokogawa retirees has played a central role in supporting an elementary school in Cambodia. Below is a small part of their work:

## A note from Mr. Ogiso (Rokumaru Ikasu Club Elementary School tour group leader), a Yokogawa retiree:

We started a club called "Rokumaru Ikasu Club" with those of us who joined Yokogawa Electric Corporation in 1960, after high school. In reaching the mandatory retirement age, we, the Rokumaru Ikasu Club, rallied together to build an elementary school in Cambodia, in honor of our colleagues and the many who paved the way before us, and to mark the beginning of an enjoyable latter half of our lives. With donations from 46 voluntary contributors and the help of World Bank, the elementary school building was complete in October, 2003. It is located 140 km southeast of Siem Reap, known for the remains of Angkor Wat, in a remote village that has no electricity or running water.

In January 2004, 16 members from the Rokumaru Ikasu Club were warmly welcomed by students and their guardians at the school's opening ceremony. After we returned to Japan, we set up a fund to continue our support. With contributions from various people, we have been able to continue our support and visit the elementary school every year. So far, our contributions have given this school bookcases, along with 100 folk tale books, swings, slides, and other play equipments. In addition, our contributions also gave the school its front gate, which is an important symbol for any school, a kitchen shack and a well for students who are not able to eat breakfast before coming to school.

In 2009 and 2010, we held an athletic event where we joined the students in exercising and other games and activities.

Since the Cambodians speak Khmer, communication with the students was initially challenging; however, after spending some time interacting with them, the students have become more outgoing, often running to us with big smiles. We taught them simple Japanese phrases like "ohayou (good morning)", "konnichiwa (hello)", and "arigato (thank you)", and helped them establish a regular cleaning routine after school. I am hoping to continue in my involvement as long as I physically can. It has been quite energizing just to look at the children's beautiful smiles and sparkling eyes. (March 2010)

## Classroom Interactions

The members of the Rokumaru Ikasu Club performed on the harmonica in front of the students. They also taught them greetings in Japanese, performed songs and dances, and showed them how to make a kite, origami, and paper airplanes. The students also shared their culture by performing Cambodian songs.



## Making Curry Rice

Mothers from the neighborhood brought pots to make curry together. When the meals are served, the students swarmed around the food (they must not be accustomed to lining up to get served), but this has never led to any accidents or quarreling.



## Athletic Event

The sight of the students playing tug of war and basketball was exactly like watching kids in Japan. All students seemed eager for their turns, and there were always more players on the field than initially planned.





# “Book Bags Across the Sea” Campaign

Carrying on the tradition from 2008, Yokogawa participated in the 2009 “Book Bags Across the Sea” campaign, sponsored by Kuraray Co., Ltd. Used book bags and other school supplies were collected from Yokogawa employees and were sent for supporting the education of the children in Afghanistan and Mongolia.



# Donations from “heartfelt healthy menu” at Yokogawa's company cafeteria

Since 2009, the cafeteria at Yokogawa Electric Corporation Headquarters has been offering a special menu called the "Heartfelt Healthy Menu" every Monday of the week. For every purchase of a meal from this menu, a donation of 20 yen is made to developing countries such as Afghanistan through JOICFP (Japanese Organization for International Cooperation in Family Planning). These funds are then used to purchase seedlings for crops.

Not only does the menu promote good health for the employees by offering healthy meals with calorie considerations and nutritional balance, it also helps developing countries become self-sustaining by providing the funds to purchase seedlings.

From April 2009 to March 2010, approximately 1,400 Heartfelt Healthy meals have been sold, and donations equivalent to 232 orange seedlings have been made.



heartfelt healthy menu



Planting a young orange tree

# Vending Machines for the Common Good

In September 2008, Yokogawa installed a vending machine on behalf of SELP (Support of Employment, Living, and Participation) at its head office and one in the surrounding neighborhood. In addition, in 2009, the SELP vending machines were installed within the Group's company premises in the cities of Akiruno, Ome, and Tachikawa in Tokyo; and in the cities of Kofu and Uenohara in Yamanashi prefecture. Part of the proceeds from these vending machines go to the Japan SELP Center, which uses them to assist people with disabilities find employment.

The SELP vending machine is placed alongside ordinary vending machines at the Yokogawa head office, and it generates 30% more sales than the ordinary one that preceded it, showing the desire that many employees have to do something for the common good.

Not only does Yokogawa promote employment of people with disabilities within its own company, it looks to expand employment opportunities for people with disabilities in the surrounding communities. Placing the SELP vending machine is just one way of doing this.

\* About the Japan SELP Center

Provides training and facilities for people with disabilities for the purpose of helping them to live independently.



# Bottle Cap Vaccination Drive

The Yokogawa head office and factories undertook an “ecocap” drive beginning in 2008 to recover the caps for plastic bottles and sell them as recyclable materials; the resulting funds were donated to childhood vaccination programs. This was organized by the Ecocap Movement.

Yokogawa placed bottle cap recovery bins at its head office and factories and encouraged employee participation through posters and company newsletters. This resulted in some 905,000 bottle caps recovered during FY 2009, which were sent to the Ecocap Movement. This was enough to purchase roughly 1,500 polio vaccinations.

Recycling these bottle caps also limited CO2 emissions by 7,128 kg.



Bottle cap recovery bins at the head office and factories

Yokogawa is always looking for ways to provide assistance in the wake of severe natural disasters that affect its business activities.

## Past Disaster-relief Efforts

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February 1, 2010	Yokogawa Supports Haiti Earthquake Relief Efforts.
October 8, 2009	Sumatra Earthquake
August 5, 2008	Kanazawa Flood
May 15, 2008	Myanmar cyclone and Szechuan province Earthquake
July 24, 2007	Niigata prefecture Chuetsu-Oki Earthquake
June 21, 2006	Java Earthquake
September 9, 2005	Hurricane Katrina in the USA

This project, which provides solar powered lanterns to villages in India without access to electricity, is the work of Rajendra Pachauri, the chairman of the Nobel-prize-winning Intergovernmental Panel on Climate Change (IPCC) and director general of India’s TERI. In Japan, it seeks supporters through the Gaia Initiative, a non-profit organization.

Yokogawa, which has a subsidiary in India, contributed enough lanterns for one village during 2009. It has helped to both combat global warming through the use of renewable energy sources and support its local community.\*



Lighting a Billion Lives  
Supporter Certificate

## Details of Yokogawa’s contribution

Location: Pachpadi village, Thanagazi block, Alwar district, state of Rajasthan  
Households: 62  
Population: 600

Replacing the kerosene lamps previously in use with solar powered lanterns will reduce CO2 emissions by roughly 1.45 tons per lantern over ten years, or some 72.5 tons for the entire village.

## Lighting a Billion Lives Supporter Certificate

At a September 7, 2009 ceremony in Tokyo to present certificates to supporters, Yokogawa received a corporate supporter certificate from Dr. Pachauri.

### front row from left :

Tomoyo Nonaka,  
Representative Director of the Gaia Initiative  
Dr. Rajendra Pachauri,  
Director General of India’s TERI and Chairman of  
the IPCC  
Shigefumi Matsuzawa,  
Governor of Kanagawa Prefecture

### back row :

Yokogawa’s Director Yagi  
Corporate Citizenship Coordinator Shozugawa.



\* Yokogawa’s donation was made through Kanagawa prefecture, following a request from the prefecture to the company offices.



## Yokogawa Donates a Community Health Center in Indonesia

Working through PH-Japan, a certified non-profit organization, Yokogawa donated a community health center (Poskesdes) in the Serang district of Indonesia in April 2009. The Serang district is a poor area 80 km west of Jakarta, where most childbirths are handled traditionally and problems during childbirth are a frequent cause of death for both the mother and newborn. PH-Japan has been seeking to alleviate this problem by training midwives and providing health education to expectant mothers for safer deliveries. Until currently, this area has lacked any kind of proper childbirth facilities, making it difficult for midwives to assist in safe deliveries. The donated community health center will be staffed 24 hours a day by midwives to assist with deliveries. There are some 500 women of childbearing age in the area, and about 100 births per year.

The center will initially focus on services for pregnant women, including medical exams, assistance in delivery and family planning. It will also handle general-medical care including emergency care, general medical care, and preventative care. Over time, the center is expected to serve the community as a comprehensive health center that maintains the health of people in the community.



Community health center exterior



Staff



Delivery table

The Yokogawa Group's various locations each work to benefit their local communities in ways to address their own specific needs. In Japan, for example, the company makes an effort to encourage young people through sports, to protect the environment in the green areas surrounding its head office and factories, and to protect against earthquakes. In China, the company assists children by covering school expenses and donating warm winter clothing and shoes. These projects are a form of corporate citizenship that relies on an eagerness to volunteer from the employees. They make it possible for Yokogawa to live up to its philosophy of being a good citizen everywhere it does business.



# CSR Efforts by Yokogawa Group Companies

Various companies of the Yokogawa Group are using their unique strengths to engage in different CSR efforts to address the specific needs of their local areas. Here are some of the efforts from 2009:



From its headquarters in Amersfoort (Utrecht Province), the Netherlands, Yokogawa Europe oversees all Yokogawa business operations in Europe and Africa. Yokogawa was the first Japanese company to establish a presence in Utrecht Province, and today a total of approximately 40 companies from Japan have operations here.

## Yokogawa Promotes the Arts in Amersfoort

Yokogawa has a long history in Amersfoort and has been working together with the local government to promote art initiatives in the city. Through one such activity, “Amersfoort in C,” Yokogawa has contributed towards establishing the KaDE\* art gallery. In so doing, Yokogawa has helped to enrich the city’s cultural life.

\* This acronym stands for “Kunst aan de Eem,” which translates as “Art on the Eem” and refers to the Eem river that runs through Amersfoort.



KaDE art gallery



KaDE opening ceremony

## Building a Strong Relationship with the Dutch and Japanese Trade Federation

Yokogawa Europe’s new headquarters building opened in May 2009. Environmentally optimized, it has a floor area of 25,000 m<sup>2</sup> and houses a total of 500 employees. In November 2009, 40 people from the Dutch and Japanese Trade Federation (Dujat) came to inspect the new building and speak with the employees. This was a good opportunity for the Dujat representatives to learn about Yokogawa’s business philosophy and corporate culture as well as Japanese craftsmanship.



Yokogawa Electric China Co., Ltd. (YCS), a production site of the Yokogawa Group, primarily manufactures flow meters and data loggers. YCS has recently been putting more efforts into its contributions to local communities as well as society as a whole.

## Mount Tianping Cleanup Effort

In October 2009, YCS organized a cleanup activity on Mount Tianping, a famous tourist spot also known as the symbol of Suzhou, as a part of their environmental protection efforts. On the day of the cleanup, 170 YCS employees gathered to volunteer their time and efforts. Under the clear autumn sky, the volunteers picked up a variety of litter such as cigarette butts and scrap papers off the mountain trails, all the while enjoying the wonderful scenic views. After 2 1/2 hours of cleanup, eight bags of litter were collected, weighing a total of approximately 20 kg.

This was the first time YCS took part in a cleanup activity for a public area as part of its environmental protection efforts. One of the participants expressed that he hopes "to continue to actively take part in these activities and raise more awareness in the community." In addition, all the participants held a barbecue social afterwards. YCS plans to partake in this activity on a consistent basis at Mount Tianping every year during Environment Week. Starting in 2010, YCS will also implement new activities, such as planting trees and volunteering at an orphanage.



Mount Tianping Cleanup Effort

As the central base of the Yokogawa Group in South Korea, Yokogawa Electric Korea offers sales, engineering, maintenance services, and comprehensive industrial automation solutions for manufacturing.

## Supporting Elementary School Education

The economic downturn in Korea has increased the poor population. According to OECD, the number of households below poverty level has exceeded 3,000,000 in 2009. More children are struggling to get their education due to economic reasons.

Yokogawa Electric Korea has donated a total of 6,000,000 won to neighboring elementary schools in December 2009 and in March 2010. The donated money will be used to supply lunches to 12 students who are in need of financial aid. It is these types of small efforts by Yokogawa Electric Korea that is making a difference in the local area. In the mean time, Yokogawa Electric Korea is planning to hold 2 more events to support the handicapped children within this year.



Presenting the donation

## Efforts to Improve Customer Satisfaction

In 2009, Yokogawa Taiwan received three certificates of appreciation from their customers. These were presented in response to Yokogawa Taiwan's work in three projects: deployment of a new system, system upgrade, and maintenance service of an existing system. The appreciation indicates successful on-time delivery and customer satisfaction of the results.



Grand Pacific Petrochemical Corporation  
(System upgrade)



China Steel Chemical Corporation  
(Maintenance service)



Chang Chun Plastics Co., LTD  
(Deployment of a new control system)

In general, Yokogawa Group's products have a long life; the products can last for decades at the customer's plants. For this reason, Yokogawa Group has established service plans over the life of a plant, and has committed to building long-term trust relationships with customers around the world.

## Energy-saving Strategies at a Coal-fired Power Plant

Taiwan Power Company is a state-owned enterprise that is the country's only public power utility. It operates thermal, hydro, and nuclear power plants that produced a total of 144.1 billion kWh in 2009. The company's Taichung Thermal Power Plant is one of the largest thermal power plants in the world (total capacity: 5,500 MW). The boilers and turbines in units 9 and 10 (capacity: 2 x 550 MW) in Taichung are controlled by the CENTUM CS 3000 control system. In 2009, a project of soot-blower \* optimization was launched to increase boiler efficiency. Yokogawa's Exapilot operation support software package was selected for this project.

At this writing, the soot-blower is operated once every eight-hour shift. It is expected that the incorporation of the know-how of highly experienced operators in the Exapilot package to optimize the operation of the soot-blower will maximize efficiency of the boilers. By improving power generating efficiency, this will also decrease fuel consumption and carbon dioxide emissions. In addition, the optimized operation of soot-blower will enable the plant to operate more efficiently. This project is presently underway and is expected to be completed in 2011.

\*A device that removes the soot deposited on a boiler's furnace tubes



Taiwan Power Company Taichung Thermal Power Plant Unit 9 and 10



Located in the bustling and beautiful city of Quezon, Yokogawa Philippines (YPI) provides everything from engineering and sales to maintenance of Yokogawa's control systems and instruments. In line with Yokogawa's corporate vision of "Working harmoniously to contribute to society", YPI has been involved in various CSR activities in the Philippines.

## Support for the recent typhoon victims

In September 2009, super typhoon Ondoy hit Metro Manila and nearby towns causing heavy flooding and severe damage to housing and public infrastructure. YPI wasted no time to launch a campaign to collect food, blankets, clothes and other relief goods that amounted to 67,796 Philippine pesos from its employees and management. All the items were donated to the victims through ABS-CBN Sagip Kapamilya (a local charitable organization) and LaSalle Greenhills (a school actively involved in charitable activities).

## Educational support for deserving students

YPI is also an active supporter of non-government organizations (NGOs) such as Gawad Kalinga and CFC Ancop Tekton that provide educational support to poor but deserving students across the Philippines. In 2009, four high achieving high school students recommended by CFC Ancop Tekton, were given scholarships totaling 20,900 Philippine pesos to continue their education.



Scholarship award ceremony



Thank you letter from the student

## Efforts to Reduce Waste Materials

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In metropolitan Manila, lack of public waste disposal facility has become a serious problem. To contribute to the protection of the environment, YPI is involved in ongoing efforts to reduce the consumption of polystyrene (Styropor), a widely used non-biodegradable food packaging material that usually end up as landfill waste. Between February 2009 and March 2010, the company launched a Styropor reduction campaign within the company. By switching the employees' food packaging to paper and other biodegradable materials, approximately 20 cubic meters of non-biodegradable Styropor were eliminated.



Styropor box

## Efforts to Improve Customer Satisfaction

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To enhance customer satisfaction, YPI began conducting surveys in 2009 covering a cross-section of its customer base. During that year, the surveys focused on the quality of service that the Customer Service Center provides. The survey questions addressed such issues as accuracy, timeliness and execution of the various services rendered. Fifty eight responses were received and were quickly passed on to the relevant personnel. The feedback proved to be very useful in developing plans and action to further improve the quality of their service. For 2010, a survey focusing on project engineering will be launched.



As a member of the Yokogawa Group, Yokogawa Electric Corporation provides products and services in the fields of environmental measurement, information transfer, kitchen instruments and aerospace technology. The following are some of the companies' CSR efforts:

## Environmental Considerations through Separation and Recycling of Discarded Materials

Since 2003, the Iruma branch office has been working with a neighboring support center for the disabled to reduce and reuse discarded cardboard. The amount of discarded cardboard in 2009 was approximately three tons. The discarded cardboard was collected by "Asunaro", a support center for the disabled in Iruma. Money collected from the disposal of the recyclable materials, combined with the funds from the city of Iruma to assist in the cardboard collection, are used as Asunaro's income to cover its operating expenses and salaries for its workers.

In addition, strict policies are enforced to separate metal chips (e.g., stainless steel) for efficient recycling. Specifically, the metals are separated into SUS300 and SUS400 series (SUS303, 304, SUS403, 410) stainless steels, aluminum, iron, and brass. This rigorous separating process increases the value of the metal chips and makes them easier to recycle. They also announced the separating manners to relevant departments, and improved signage at the disposal areas.



Disposal area for cardboards



Separating stainless steel chips

## "No-My-Car Day" to Promote Better Health and Reduce CO2

In different parts of the world, there has been a widespread movement towards use of public transportation and bicycles as a preferred method of commuting. This is to address various issues caused by car commuters: health issues among the commuters due to lack of exercise, and environmental pollution (CO2 emission, etc.) from car exhaust. In Hadano, Kanagawa prefecture, where Yokogawa Denshikiki's Hadano branch office is located, the city has been organizing a campaign since 2005 called "No-My-Car Week Hadano", as a part of "Hadano Traffic Calming Project". In this campaign, participating companies are asked to designate two or more days where their employees are encouraged to use public transportations. The Hadano branch office joined in on this effort, and designated "No-My-Car Days" in September and December of 2009, in which a total of 181 employees participated.

Some of the positive feedbacks from the participants were, "It was great to finally get some exercise"; "After I starting to commute on foot, my health improved"; "I'm hoping to personally pursue commuting without my car from now on".

As a complete distributor of Yokogawa Electric Corporation, Yokogawa & Co. offers solutions for measurement, control, and information. In addition, Yokogawa & Co. has abundant experience as a damage and life insurance agency.

## Yokogawa & Co. Fund to Support AIDS Education in Vietnam

In 2008, to commemorate the company's 70th anniversary, Yokogawa & Co. set up the "Yokogawa & Co. Fund" with an initial capital of 10 million yen. The fund was set up under PH-Japan, a certified NPO. This fund is being used for the "AIDS Prevention and Education Center" project in Vietnam. The goal of this project has been to establish and run a center for AIDS prevention and education for high school students, college students, and their families. The center was set up inside the Ho Chi Minh City University of Medicine and Pharmacy, with cooperation from the Vietnam Department of Insurance. The actual work is being done by PH-Japan, which has a proven record of accomplishment in this area. In the fiscal year 2008, educational documents were produced and program leaders were trained. A full-scale preventive education has been continuing since the fiscal year 2009.



AIDS Prevention and Education Center

Based on its corporate message, "Service of trust, connecting person to person, company to company", YDC provides solutions for management issues in business transactions and on production floors. Here are some of YDC's key efforts to improve customer satisfaction and to provide employee motivation.

## Improving Customer Satisfaction

Since 2005, YDC has implemented annual customer satisfaction surveys in order to grasp customer satisfaction objectively and to improve quality of service. The surveys address areas such as system development, engineering, system maintenance, and key products. The surveys are conducted either in an interview format, in which an employee visits the customer, or in a written format using a sealed document. In 2009, 122 survey responses were collected, evaluated and analyzed. The responses included constructive criticisms and other expectations addressing the need for "completeness of products and support" and "improvement of services and accuracy". Based on these results, YDC aims to strengthen its customer support, and to add greater value to its services.

## Communicating with Customers (SONAR Research Group)

In January 2008, YDC launched "SONAR Research Group", providing its members an interactive environment that crosses all boundaries between industries and businesses, to address QA issues in manufacturing. Its members represent a wide range of industries, such as semiconductors, liquid crystals, automotive, electronics, iron and steel, information service, and chemical industries. The SONAR Research Group holds two user conferences every year, in addition to lectures given by manufacturing experts.

The user conferences were held in July 2009 at Yoyogi TKP Business Center and in February 2010 at Shinagawa Prince Hotel. Many QA professionals gathered from different parts of Japan. The conference consisted of various presentations such as the latest case studies from the different companies, and an introduction to process management techniques by an expert in the field. The participants commented: "The case study on the most-advanced data analysis was very helpful"; "The discussion on the importance of traceability and building an environment was quite interesting".





2009 User Conference hosted by SONAR Research Group

## Promoting Employees' Physical and Mental Health

Many of YDC's employees are project managers and engineers in the information technology field, and staying physically and mentally healthy has become a challenge. For this reason, YDC launched a "Sports Day" in 2009 as a new incentive for all the employees. Held every Wednesday, YDC paid up to 1,000 yen to any employee who worked out by going to the gym, swimming, golfing, etc., to cover their expenses. A total of 324 employees took advantage of this provision in 2009.

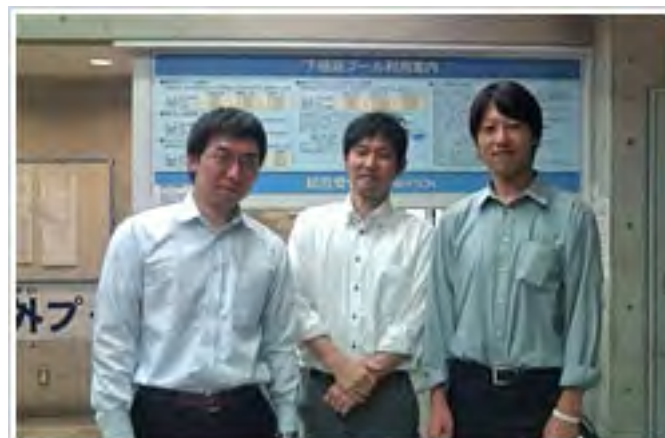
YDC also conducts mental wellness surveys on all employees on a regular basis. The surveys are analyzed with the help of an industrial physician and nurses to help find any early signs of mental illness, and maintain/promote good mental health among its employees.

Employees' Feedbacks on "Sports Day":

"I'm training for triathlon through the Sports Day program. It's good for my health, so I want to continue".

"It feels great to get away from daily grind and exercise my body".

"I enjoy working out, but the gym membership is so expensive, and I just don't feel like going after work. But the Sports Day program brought back the desire to get back into shape".



Participants of YDC Kansai branch office

## Yokogawa Electric Corporation

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