# Social & Environmental Report

YAZAKI



### **Overview of Business Activities**

The Yazaki Group comprises six domestic companies and ninety-five overseas affiliates with Yazaki Corporation at the center. The Group also encompasses seventy-six domestic affiliated companies. Two major pillars of the Group's business are the Automotive Sector and the Environmental Systems Sector. The Yazaki Group's integrated business management covers development, production, and sales of automotive parts such as wiring harnesses, meters, and other equipment, as well as household and energyrelated products like electrical wires and gas and air-conditioning equipment. Of these products, the Group has established production sites for wiring harnesses in various regions around the world.

> Automotive parts 85.8%

> > Figures are as of June 2003



## **Contents**

Executive Message ······ 0	)3
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### Management

Understanding and Working to Reduce
Corporate Policy / Environmental Policy and07 Guide of Conduct
Organization and Promotion Structures ······ 08
Environmental Action Plan and FY2003 Results ······ 09
ISO 14001 Certification and Environmental Audits / · · · · · · · · 11 Environmental Risk Management
Compliance with Laws / Environmental Education /····· 12 Awareness / Green Procurement and Purchasing
Environmental Accounting ····· 13
LCA (Life Cvcle Assessment) ·····

### **Environmental Communication**

Development and Design ·····	15
Production ·····	18
Logistics ·····	21
Recycling ·····	22
Factory Initiatives – Susono Factory / Numazu Factory	23

### **Global Communication**

Global Environmental Management	27
Overseas Initiatives — Americas / Europe / Asia and Oceania $\cdots\cdots$	29
Example of Overseas Initiatives – Australia Arrow Ptv. Ltd	30

### **Human Communication**

Human Resources / Labor Relations ·····	31
Adventure School / Global Training System / Summer Camp ······	32
Summer Camp in Japan ·····	33
Creating Employment — New Business Development by Affiliated Companies	34

### **Social Communication**

Social Communication ·	 3

### Data

Environmental Chronology ·····	37
Yazaki Group / Production Site Data ·····	38
Independent Review ·····	41
Editor's Postscript ·····	42

### Foreword

This report provides a description of the environmental initiatives undertaken by the Yazaki Group during FY2003 (July 2002 to June 2003). In preparing this report, the editorial staff made reference to the Environmental Reporting Guidelines of the Ministry of the Environment and the 2002 Sustainability Reporting Guidelines of the Global Reporting Initiative (GRI).

The 2003 report attempts to give a broad perspective of environmental issues based on the corporate philosophy of the entire Group and has been renamed the Social & Environmental Report. In the report, we attempted to disclose information concerning our initiatives, including global and regional environmental preservation activities, and to introduce Group activities overseas and measures relating to "people" and "society."

In order to enhance the objectivity of the information contained in this report, we asked the ChuoAoyama Sustainability Certification Organization to prepare a third-party evaluation. In addition to the original Japanese-language report, this English-language version has been prepared in order to make the information available to as broad a range of stakeholders as possible.

Period covered

FY2003 (July 2002 to June 2003) • Scope of data

The information presented in this report covers environmental activities of all six domestic group companies as well as selected overseas group companies and domestic affiliated companies. Environmental Data

Management

Environmental Communication

**Global Communication** 

## Putting into Practice Environmental Management that Embodies the Corporate Policy

### **Coexistence with Nature: Construction of Y-CITY**

In the 1990s, considerable attention was paid to global environmental issues such as global warming, the destruction of the ozone layer and acid rain, and at the 1992 Earth Summit, the Rio Declaration seeking the creation of a society capable of sustainable development was adopted. In conjunction with worldwide developments concerning the global environment, Yazaki has also worked to reduce even further its impact on the environment through acquisition of ISO 14001 certification and continued development and improvement of environmental management systems.

In 1998, Y-CITY was built in Susono City, Shizuoka Prefecture, to consolidate all functions of the headquarters with an eye towards the increasing globalization of business. Based on the concept of coexistence with nature, natural resources within the grounds were left untouched during construction to create a biotope directly adjacent to our World Headquarters to reflect our feelings and concern for the environment. Much to our enjoyment, the biotope has become increasingly alive with a wide variety of plants and animals, such as the families of spot-billed ducks who showed up this year. It has truly raised our awareness of the importance of the environment.

### Corporate Policy Gives Rise to "Environmental Genes"

Upon entering the 21st century, we have developed a greater awareness of the importance of environmental initiatives as priority management issues. Yazaki, which has a substantial number of factories and offices around the world, believes that addressing environmental issues is one of our greatest missions of social responsibility and directly affects our continued existence. As a result, in 2002, we revised the Yazaki Global Environment Charter, adopted a five-year Environmental Action Plan, and decided to establish the Group Environmental Management System.

We are proud that since its foundation, Yazaki has had "environmental genes." More than thirty years ago, before the word "recycling" was in common use, we introduced a smelter for the reuse of old copper, and we have a history of recycling and reusing waste electrical spools, used electrical wire drums, gas meters, and other products. These are just a few examples of how our corporate policies "a corporation in step with the world" and "a corporation needed by society" are practiced in all our activities.

### Founded on our Raison d'Etre and Responsibilities to Society

The primary objective of our corporate activities is the pursuit of profit. That profit in turn supports the lives of employees and is returned to society and stakeholders. We do not believe, however, that generating profit is everything. The process we go through in our corporate activities is also important, and if we are unable to engage in activities that contribute positively to society, then we are unable to fulfill our social responsibilities. Our activities, including the proposal and promotion of businesses that are useful to society, the development of new businesses that create jobs, and overseas expansion that leads to the reduction and elimination of poverty, are already a part of our corporate philosophy. Today, addressing environmental concerns is a crucial corporate issue if we are to remain a company needed by society and one that develops together with the world. This is a time for our "environmental genes" evolved through the years to express themselves in all our activities by all employees in unison.

# Our Contribution to a Society Capable of Sustainable Development

When considering environmental issues, we reach the conclusion that over and above the importance of coexisting with nature, the environment is vital to us in all spheres of our lives: the workplace and the home, our communities, and our education.

As we work to further develop and improve the Group's environmental management and minimize the environmental impact of our business activities, we believe that the true meaning of a "society capable of sustainable development," and the relationships between the natural environment, people and society, will become apparent. Accordingly, this report discusses our initiatives concerning environmental management as well as our relationship with employees and society and hopefully will serve to promote a deeper understanding of our environmental initiatives and the Yazaki corporate culture. We will continue to strive for even better Social & Environmental Reports that all Yazaki employees and stakeholders can be proud of.



Shinji Yacaki

Shinji Yazaki President, Present Yazaki Environmental Committee Chairman, Yazaki Corporation

Yasuhiko Yazaki Chairman, Former Yazaki Environmental Committee Chairman, Yazaki Corporation

# Management

# **Comprehensive Initiatives Considering the Entire Product Lifecycle**

Yazaki environmental improvement activities can be seen in our efforts to understand the environmental impact of products throughout their entire lifecycles, develop environmentally sound products, create clean factories, streamline logistics, and promote recycling.



OTotal volume of wastewater: 4.83 million tons



Product Lifecycle and Major Environmental Initiatives

# Management

## Development of the Environmental Management System for the Entire Yazaki Group

In the past, each office and production site independently promoted environmental management, but in FY2003, the Group shifted to a comprehensive system that facilitates increasingly efficient environmental management.



### **Corporate Policy**

Since the company's establishment, our policy has always been based on the Yazaki principles, and serves as the starting point for all corporate activities including those related to the environment. Yazaki has been responding to ever-changing social conditions since the Environmental Affairs Division was created in 1971. In keeping with this history, environmental issues of the 21st century provide significant motivation to encourage changes in society from a variety of perspectives. In 2002, Yazaki began the construction of an environmental management system that covers the entire Group. We view global and local environmental issues as important management issues, and are working to reduce environmental impact from a global perspective. Our corporate principles and policies provide the foundation on which we create worksites to facilitate efficiency, smooth human relationships, satisfaction with our lives, and a healthier society - just a part of our fresh but broad approach to environmental issues in the 21st century.

### **Environmental Policy and Guide of Conduct**

With environmental issues such as global warming, waste management and control of chemical substances becoming more prominent, the Yazaki Global Environment Charter was revised in May of 2002. A new Environmental Policy and Guide of Conduct were adopted for the entire Yazaki Group to address environmental issues comprehensively. In addition, a specific five-year Environmental Action Plan (covering the period from July 2002 to June 2007) was adopted, setting common goals for the Group that will be achieved through the concerted efforts of all employees.

### Yazaki Global Environment Charter

**Environmental Policy** 

The Yazaki Corporation Group recognizes that preservation of the global environment and its resources is a serious concern common to all mankind. We will strive to make the world a better place and work to enrich our societies through environmentally-sound business activities, environmental awareness and individual contributions which are in line with our fundamental business policy.

### **Guide of Conduct**

- 1 Observance of environmental laws and regulations
- To proactively establish independent goals to reduce the burden placed on the environment through strict observance of domestic and international laws and regulations, and to promote activities to achieve these goals.
- 2 Establishment of the environmental management system
- To maintain and enhance the environmental management system for all areas of our business activities in accordance with ISO 14001 guidelines.
- 3 Development of environmentally friendly products

To design and develop environmentally friendly products by keeping in mind the lifecycle of our products during stages of product planning. 4 Reducing the burden placed on the environment

- To promote activities which reduce the burden placed on the environment, reduce waste and conserve energy and resources for all stages of development, production, sales, logistics and service.
- 5 Promotion of "green" purchasing To promote "green" activities for purchasing/procurement of resources, materials, machinery, equipment and supplies.
- 6 Raising of environmental awareness
- To raise the environmental awareness of our employees and to foster proactive participation in activities which preserve the environment through training and instruction. 7 Contributions to society
- To establish ties and actively promote the exchange and disclosure of information related to environmental preservation with governmental and municipal organizations
- 8 Transferring environmental technologies overseas To make global contributions to environmental preservation by transferring environmental technologies developed in Japan to overseas expansions and operations.

(Adopted June 1997; Revised May 2002)

### **Organization and Promotion Structures**

The organizations primarily responsible for promoting environmental activities are the Yazaki Environmental Committee (which is chaired by the President and meets twice annually), the Environment Product Design Assessment Committee (meeting four times annually), and the Production Environment Committee (meeting four times annually).

The Yazaki Environmental Committee determines environmental guidelines for each fiscal year, considers proposals and reports from other committees, and coordinates the development and direction of responses to major environmental issues. The Environment Product Design Assessment Committee oversees development and design divisions, while the Production Environment Committee oversees production divisions. In conjunction with the Administrative Division, each factory and office has established an Environmental Committee and consistently seeks improved environmental performance by setting goals and implementing guidelines. As the Secretariat for each Environmental Committee, the Environmental Affairs Division manages progress towards achieving the goals set out in the Environmental Action Plan. Every three months, each division summarizes and reports the results of its environmental activities to the Environmental Affairs Division, which in turn reports to the respective committees.

### Organization and Structure



Hodosawa Factory Environmental Committee

8

# Management

## Achieving Goals: Division Success Built on Individual Effort

During the first fiscal year of environmental management for the entire Group based on the Yazaki Environmental Action Plan, all divisions —Research and Development, Production and Logistics— worked on reducing environmental impact under a set of company-wide goals.

Yazaki Environmental Action Plan (July 2002 – June 2007)

Action Guideline		Action Details	Area	FY2007 (June 2007) Goals	
1	Adherence to laws and regulations	Responses to laws and regulations as well as voluntary	Discontinue use of banned substances outlined in EU ELV Directive	Development, Design	•Discontinue use of four banned substances
		standards	Implementation of voluntary control in	Management	•Enhancement of a voluntary control system to comply with laws and regulations
			response to anti- pollution laws	Production	•Enhancement of a voluntary control system to comply with laws and regulations related to air, water, noise, vibration, etc.
2	Establishment of the Environmental Management System (EMS)	Full-scale implementation of EMS	Establishment of organizational structure	Management Development, Design	<ul> <li>Establishment of EMS</li> <li>Establishment of an organization to carry out environmental accounting</li> <li>Establishment of organizations to propagate environmental action plans from the Headquarters and Environmental Affairs Division</li> <li>Establishment of a control system for chemical substances contained in products</li> <li>Establishment of the Environment Product Design Assessment Committee</li> </ul>
3	Development of environmentally friendly products	Implementation of a prior assessment system starting at development and design stages Design for recycling (reduce, reuse, and recycle)	Introduction of LCA (lifecycle assessment), etc. Designing products with recyclable designs Designing easy-to- dismantle products Designing products with the aim of reducing the	Management Development, Design Development, Design Development, Design Development, Design	<ul> <li>Establishment of a system to implement LCA</li> <li>Establishment of an environmentally considerate system as part of DR (Design Review)</li> <li>Establishment of a system to develop environmentally friendly designs</li> <li>Establishment of a system to evaluate environmental issues and impact during the product lifecycle</li> <li>Implementation of environmentally friendly designs</li> <li>Initiatives to design wiring harnesses that will help achieve an automobile recycling rate of 95% by the end of 2015</li> <li>Development of gas equipment and air-conditioning systems with recyclable designs</li> <li>Switch to easy-to-dismantle automotive meters</li> <li>Extending the service life of electrical wires</li> </ul>
	Paduction of	Provention of global	use of resources	Management	Establishment of a system to assess anarry consumption
4	Reduction of environmentally hazardous substances	Prevention of global warming Reduction of waste Reduction of environmentally hazardous substances	Reduction of CO2 emissions Lighter-weight designs Energy-conserving designs Promotion of logistics streamlining Reduction of waste Reduction of chemicals used Development of products that use fewer environmentally hazardous substances	Management Production Development, Design Development, Design Sales, After Sales Management Production Management Development, Design Production	<ul> <li>Establishment of a system to assess energy consumption</li> <li>Reduction of total CO<sub>2</sub> emissions (4.4% reduction from the 1990 level by June 2007)</li> <li>Reduction of CO<sub>2</sub> emissions per unit of production (5.0% reduction from the 2001 level by June 2007)</li> <li>Development of technology to produce lighter-weight wiring harnesses using new electrical wires</li> <li>Design and development of thinner and lighter-weight automotive meters</li> <li>Design of more compact and lighter-weight gas equipment</li> <li>Development of higher-efficiency Aroace</li> <li>Conversion of pallets and parts boxes to plastic (100% conversion by the end of 2007)</li> <li>Reduction of both transportation distance and number of delivery runs (30% reduction from the 1999 level by June 2007)</li> <li>Modal shift (to be implemented for gas equipment products in Hokkaido and Kyushu areas)</li> <li>Creation of a system to assess the amount of waste generated</li> <li>Promotion of zero emission at all production sites (achievement by June 2007)</li> <li>Establishment of a system to control chemical substances contained in principal materials and secondary materials used in production</li> <li>Development of wiring harnesses to support the use of higher voltages in automobiles</li> <li>Creation and implementation of a plan to reduce substances subject to PRTR at production sites</li> <li>Elimination of harmful atmospheric pollutants (dichloromethane and tetrachloroethylene) (complete elimination by December 2003)</li> <li>Promotion of halogen-free wiring harnesses</li> <li>Development of <i>Ecological Cables</i> (PVC-free, environmentally friendly wires and cables)</li> <li>Elimination of lead from gas equipment</li> </ul>
5	Promotion of green purchasing	Promotion of green procurement	Creation of procurement guidelines Purchasing of green products	Management Management	<ul> <li>Establishment of a green procurement system for materials used in products</li> <li>Establishment of a green purchasing system for office supplies</li> </ul>
6	Raising environmental awareness	Employee education	Increasing employees' environmental knowledge and awareness through better education	Management	<ul> <li>Establishment of a system to implement position-specific environmental education</li> <li>Establishment of a system to implement specialized environmental education</li> </ul>
7	Social contribution	Information disclosure	Creation of environmental reports	Management Production	• Establishment of a system to issue the Yazaki Group Social & Environmental Report annually • Preparation of reports by individual production sites (starting with the FY2003 version)
8	Overseas transfer of environmental technologies	Environmental responses at overseas affiliates	Promotion of environmental measures that are in line with the needs of overseas affiliates	Development, Design	•Establishment of a system for environmental initiatives in the Automotive Sector

FY2003 (July 2002 - June 2003) Goals	FY2003 Performance
•Switch to products that do not contain the banned substances by July 2003	•Switched to products that do not contain the banned substances, and obtained certificates proving that the products to be purchased do not contain the banned substances
Review of Production Division policies	•Promoted initiatives through a voluntary control system
•Review of voluntary control policies	•Assessed the current status of voluntary control systems at production sites
<ul> <li>Review of the method of building environmental management systems at affiliated companies</li> <li>Establishment of a system to assess environmental costs and effectiveness at production divisions</li> <li>Expansion of environmental management systems as part of policy management</li> <li>Creation of a database of chemical substances contained in products in the Automotive Sector and the building of a system for operation and management</li> <li>Holding Environment Product Design Assessment Committee meetings (four times/year) to establish protocols and follow-up for activities at individual development subcommittees</li> </ul>	<ul> <li>Decided on the method of building environmental management systems at affiliated companies, and created an implementation plan</li> <li>Assessed environmental costs at production sites and the development divisions</li> <li>Implemented policy management in production and development divisions</li> <li>Established a management system by creating a database of chemical substances contained in products</li> <li>Held committee meetings four times a year, followed up on the actions taken in FY2003, and developed an action plan for FY2004</li> </ul>
●Hold LCA study group meetings in the R&D and Design Division	•Held LCA study group meetings and continued product-training seminars for individual subcommittees
<ul> <li>Expansion of actions implemented in the R&amp;D and Design Division</li> <li>Creation of a draft version of Environmentally Friendly Gas Equipment Guidelines</li> </ul>	<ul> <li>Added environment-related items to DR checksheet in Electric Wires Subcommittee and Gas Subcommittee</li> <li>Drafted development flow of assessment guide</li> </ul>
•Hold LCA study group meetings and result review meetings	•Held LCA study group meetings and continued product-training seminars for individual
•Evaluation of initial ease of product dismantling and resin recycling	• Finished evaluating the ease of assembly and pin performance of products with initial ease of
•Assessment of recycling possibilities through surveys of the current status	<ul> <li>Finished determination of the current status of materials being used, and began implementar specific actions for each product.</li> </ul>
•Switching of nine products out of the twenty-seven target products	Switched nine products
•Development of tracking-resistant PDC (bridged polyethylene-insulated wire for high voltage reduction)	Promoted mass production
<ul> <li>Establishment of a system to keep track of monthly emissions from production divisions</li> <li>Reduction of total CO<sub>2</sub> emissions from the actual level of 30,996 tons (for all production</li> </ul>	<ul> <li>Established a system to collect environmental impact data</li> <li>Total CO<sub>2</sub> emissions were 31,734 tons (2.4% increase from the actual 2001 level)</li> </ul>
sites) in 2001 to 30,289 tons (reduction of approximately 2.3%) • Reduction of CO <sub>2</sub> emissions per unit of production by 1% • Development of new wires and connection technologies (verify feasibility of manufacture	<ul> <li>Achieved a 1% reduction in CO<sub>2</sub> emissions per unit of production</li> <li>Evaluation in progress</li> </ul>
<ul> <li>Switching of nine products out of the twenty-seven target products</li> <li>Designing of compact, light-weight adjusters</li> <li>Start of sales of a new-type Aroace</li> <li>Reuse of pallets and parts boxes by converting (wooden) pallets and (paper) parts boxes to</li> </ul>	<ul> <li>Switched nine products</li> <li>Created prototypes and carried out evaluation; achieved a 20% reduction</li> <li>Introduced double-effect absorption chiller-heaters</li> <li>Achieved a 41% conversion rate</li> </ul>
plastic (41% conversion rate) • Reduction in both transportation distance and number of delivery runs (5% reduction from	●Achieved a 5% reduction from the 1999 level
<ul> <li>Modal shift (achievement of 80% of the June 2007 goal)</li> <li>Modal shift (achievement of 80% of the June 2007 goal)</li> <li>Establishment of a system to keep track of monthly waste generation at production divisions</li> <li>Implementation of measures to reduce the volume of waste that must be disposed of at all production sites from the 1999 level of 4,248 tons to 846 tons</li> <li>Creation of a database of materials contained in products and building a system to control their use</li> </ul>	<ul> <li>Achieved the modal shift goal</li> <li>Established a system to collect environmental impact data</li> <li>Volume of waste materials that had to be disposed of was 266 tons (94% reduction from the 1999 level)</li> <li>The D/B Subcommittee of Chemical Substances Contained in Products is currently building a unified system for three regions</li> </ul>
• Reevaluation of the system for control of chemical substances used at production sites	<ul> <li>Investigated the status of chemical substance control at individual production sites</li> </ul>
<ul> <li>Promotion of advanced development for high-voltage system vehicles</li> <li>Creation of a plan to reduce substances subject to PRTR at production sites</li> <li>Complete elimination of harmful atmospheric pollutants at two out of the five production sites that currently use them</li> </ul>	<ul> <li>Evaluation in progress</li> <li>Evaluation in progress</li> <li>Completely eliminated at four production sites</li> </ul>
<ul> <li>Evaluation of usability of halogen-free automotive wiring harnesses</li> <li>Development of <i>Ecological Cables</i> for tires and reduced emission cables</li> <li>Study of technologies to eliminate lead from solder</li> </ul>	<ul> <li>Began mass production</li> <li>Began mass production of reduced emissions <i>Ecological Cables</i></li> <li>Evaluation in progress</li> </ul>
•Creation of green procurement guidelines and expansion to suppliers	•Created procurement guidelines for materials
•Establishment of a system for production divisions and preparation of green purchasing guidelines	•Expanded the guidelines to some production sites
•Study the creation of an implementation structure •Study the creation of an implementation structure	<ul> <li>Held a training seminar for directors</li> <li>Toured factories that have implemented advanced environmental measures</li> </ul>
<ul> <li>Issuance of Environmental Report 2002</li> <li>Creation of guidelines for creating environmental reports at individual production sites</li> </ul>	<ul> <li>Issued the Environmental Report 2002 (which addressed the FY2002 initiatives) and posted it on the company website</li> <li>Created guidelines and disseminated it to individual production sites</li> </ul>
•Building of a framework to support the International Material Data System (IMDS) in the U.S., Europe, and Japan	• Built a unified system for the three regions

# Management

## Precise Application of Environmental Management System Based on ISO 14001 Guidelines

Yazaki has actively promoted the acquisition of ISO 14001 certification at companies within the Group and has been engaged in establishing and strengthening its Environmental Management System, leading to continuous improvement in environmental performance.

### ISO 14001 Certification and Environmental Audits

Yazaki promotes the acquisition of ISO 14001 certification at its Group-wide production divisions, and to further strengthen environmental management within the Group, is also promoting the acquisition of ISO 14001 certification by thirty-six companies affiliated with these production divisions. Seven of these affiliated companies had acquired certification by June 2002, and the goal is to have all of the remaining companies acquire certification by December 2005. To build ISO 14001 structures at the affiliated companies, Yazaki mainly uses a multi-site method, which includes affiliated companies as part of a parent factory. In this method, the parent factory builds a system and its Environmental Affairs Division provides complete support for training, etc.

The environmental audits performed in FY2003 did not find any serious problems at any of the production sites, confirming proper maintenance and application.

ISO 14001 Certification Acquisition Statu	ıs
at Japanese Production Sites and Affilia	ted
Companies	

Year	Production site	Affiliated companies		
1996	Tenryu Factory			
4007	Numazu Factory	Numazu Physical		
1997	Susono Factory	Distribution Co., Ltd. <sup>1</sup>		
	Fuji Factory			
1009	Ohama Factory	Gifu Industrial		
1990	Haibara Factory	Equipment Co., Ltd.		
	Daitou Factory			
	Shimada Factory	Kumamoto Industrial		
1999	Rokugo Factory <sup>2</sup>	Equipment Co., Ltd.		
2000	Niimi Factory	Oita Parts Co., Ltd.		
	Tochigi Factory			
2001	Y-CITY	Kawana Parts Co. 1td		
2001	Washizu Factory	Rawane Faits CO., Ltu.		
	Hamamatsu Factory			
2002		Japan Chain Terminal Co., Ltd. <sup>3</sup>		
2003		Anan Parts Co., Ltd.		

\*1: Numazu Physical Distribution Co., Ltd. obtained certification as one of the sites of the Numazu Factory.

\*2: Rokugo Factory obtained certification as part of the Shimada Factory.

\*3: Japan Chain Terminal Co., Ltd. changed the certification and registration organization in 2002.

### **Environmental Risk Management**

In order to prevent accidents and to contain possible environmental pollution on company premises should an accident occur, Yazaki is committed to strengthening its accidentprevention measures through environmental risk management. In addition to daily inspections, monitoring, measurements, emergency drills, and ensuring that any supplies needed in an emergency are in place, each production site works hard to keep residents in the surrounding neighborhood informed through community meetings and plant tours.

In FY2003, as part of its efforts to manage soil and underground water pollution risks, Yazaki began soil contamination tests at all of its production sites. Although the results will not be available until the next fiscal year, Yazaki is already putting together plans to take immediate purification actions should any soil contamination exceeding regulation levels be discovered. Furthermore, because the Fuji Factory is a material supply plant and uses a large volume of oil-based materials, a dual purpose removable dike was installed to prevent possible water pollution and to fight fires.



Removable dike to prevent water pollution and fight fires





ISO 14001 acquistion training for affiliated companies

### **Compliance with Laws and Regulations**

In its business activities, Yazaki complies with all types of environment-related laws and regulations such as those concerning air, water quality, soil, waste, noise, vibration, and odors, etc. as well as municipal ordinances and unique regional environmental agreements. In order to proactively address environmental concerns, Yazaki has set voluntary targets and is working towards achieving them. Furthermore, Yazaki plans to take swift measures to comply with new laws such as the Automobile Recycling Law in Japan and international laws such as the EU ELV Directive, and to contribute to building a sustainable society. Again in FY2003, Yazaki did not violate any environment-related laws.

### **Environmental Training / Education / Awareness**

While the Yazaki Group as a whole worked on strengthening its environmental education system and curriculum, each factory and office also worked to further enhance its own environmental education. The preparation of bysite environmental reports helped improve employees' environmental knowledge and awareness at each of the fourteen production sites within Japan. At the Susono Factory, audiovisual environmental education was provided to general employees and environmental study group meetings were held, targeting personnel responsible for EMS in various departments.

Emergency response training was carried out at all factories and offices in line with ISO 14001 auidelines.

In terms of motivational activities designed



Audio-visual environmental education at the Susono Factory

to increase employees' sense of participation, the Hodosawa Factory began publishing the Environment News to help all factory employees better understand the environmental initiatives being taken within the factory. The Factory also established a Recycling Day and made progress toward the goal of complete elimination of landfill waste by focusing employee attention on reducing waste in manufacturing processes. The Haibara Factory asked employees to submit environment related posters and slogans for Environment Month, and recognized the best entries. To help increase energy conservation awareness among employees, the Tenryu Factory started a program called "My Energy Conservation" in which each employee is assigned a light switch and a sticker bearing the name of that person is placed on the switch.



Sticker with the name of the employee responsible for a light switch

### Green Procurement and Purchasing

Yazaki plans to establish green procurement guidelines for primary materials and secondary materials used by its factories and offices, and introduce them to all facilities in the next fiscal year. Yazaki is also making preparations to implement green purchasing for office automation systems and office supplies. At the Haibara Factory, all departments formed study groups to raise employee awareness of the importance of green purchasing, environment labels, complying products, ordering procedures, etc. In the next fiscal year, Yazaki plans to create and disseminate green purchasing guidelines applicable to the entire Group.

As part of its efforts to make offices greener, Yazaki is promoting the reuse of printer/toner cartridges. So far we have introduced 569 printers that accept reusable cartridges (out of a total of 1,050 printers owned by the entire Group), and plan to gradually phase out the remaining printers as they reach the end of their usage stage, and replace them with reusable cartridge types.



[Haibara Factory] Green purchasing study group



[Haibara Factory] Display of green product samples



# Management

## **Environmental Accounting by Production Divisions** at All (Fourteen) Main Production Sites

We are working to establish group-wide environmental accounting as an environmental management initiative and to facilitate disclosure of financial information. In FY2003, production divisions incurred environmental costs of approximately 1.01 billion yen, with actual economic effects (benefits) of approximately 130 million yen.

### **Environmental Accounting**

Environmental accounting is a management tool that expresses, determines and analyzes investment and expenditures related to environmental preservation with the objective of reducing environmentally hazardous substances and the effects of such measures. Yazaki discloses its environmental accounting information and is promoting the establishment of group-wide environmental accounting that determines and analyzes investment and expenditures related to environmental preservation and their effects based on the Environmental Accounting Guidelines issued by the Ministry of the Environment.

In FY2003, investment and expenditures at all production sites were determined and totaled. Investment in environmental preservation

activities, such as the installation of emissions processing equipment, was 19.23 million yen, and expenditures including expenses for waste processing and personnel costs were 989.01 million yen, for total environmental costs of 1.0824 billion yen. The economic effects resulting from environmental preservation activities are divided into actual effects calculated on the basis of solid data and projected costs based on estimated effects. Actual economic effects resulting from the reuse of materials and reductions in energy consumption were 128.53 million yen. Deemed effects include reductions in consignment costs resulting from the installation of wastewater treatment facilities for plating equipment and analysis expenses reduced by performing plating processing fluid analysis inhouse.

Compensation relating to environmental preservation

Emergency equipment, membership fees for various organizations

(Thousand yen)

#### Environmental Accounting of Production Divisions at All (Fourteen) Main Production Sites during FY2003

**Environmental Preservation Cost** Investment Expenditures Total Details 19,116 407,169 426,285 Emissions processing equipment, purification tank maintenance and management (13,289) (153,088) (166,377) Global environmental preservation (3, 527)(21,895) (25, 422)Prevention of global warming and energy conservation (2,300)(232, 186)(234,486) Costs for recycling industrial waste Upstream/downstream costs 0 7,200 7.200 Costs resulting from green purchasing 110 189,325 189,435 Costs for EMS development and operation Research & development costs 0 384,491 384.491 Costs for developing new products Environmental improvements such as local beautification

464

116

244

1,008,235

All R&D costs are recorded as expenditures

#### Practical Evaluation

Other costs

Total

Business area costs

Pollution prevention

Resource circulation

Management activity costs

Social contribution costs

Environmental damage remediation costs

Economic effects (benefits) from reuse of materials	72.526 million yen	tal	120 E2E million you	
Economic effects (benefits) from reduced energy consumption	55.999 million yen	To	128.929 million yen	

464

116

244

989,009

\* Since FY2003 data for reduced processing costs resulting from the reduction in the volume of waste generated was not available at some of the factories and offices for comparison purposes, no calculation was performed

#### Economic Effects Resulting from Environmental Preservation Initiatives

0

0

0

19,226

	Indicator	Details
Income	Income from recycling waste generated by business activities and from recycling old/used products	Increase in income from the sale of valuable metals and materials in waste generated by factories and offices
	Savings in energy costs from energy conservation	Savings in electricity costs, fuel costs, water and sewage, product packaging materials, and distribution (logistics) fuel costs
Cost reductions	Savings from the reduced use of raw materials used in products	Savings in costs resulting from smaller volumes of materials used by making products smaller and lighter
	Savings in waste processing costs resulting from the conservation of resources and recycling	Savings in processing costs resulting from smaller volumes of waste processed

## Actively Introducing LCA — Reducing Environmental Impact Throughout the Entire Lifecycle of Our Products

To reduce environmental impact, it is important to assess and evaluate each product's impact on the environment throughout its lifecycle, from resource extraction, manufacturing, and usage to final disposal. For this reason, Yazaki is actively introducing LCA (Lifecycle Assessment) as a prior assessment tool.

### LCA (Lifecycle Assessment)

### LCA of Low-Voltage Cables (Electric Wire)

FY2003 served as a preparatory stage for fullscale implementation, from the design stage, of LCA for low-voltage cables, which are the Electric Wire Division's main products.

Yazaki carried out LCA by evaluating both PVC cables and *Ecological Cables* (PVC-free, environmentally friendly wire and cables) and focusing on collecting detailed data from cablemanufacturing processes. Assessment results confirmed that *Ecological Cables* have less environmental impact than PVC cables. The table below compares CO<sub>2</sub> emissions.

### LCA of Low-Voltage Cables Comparison between CVV (PVC cables) and EM CEE/F (*Ecological Cables*)

Assessment condition	Comparison based on 1,000 m of cable
Assessment scope	From raw material manufacturing to disposal (excludes the usage stage; recycling is included in raw material manufacturing)
Assessment target	CO <sub>2</sub> emissions
Assessment result	The overall CO <sub>2</sub> emissions for EM CEE/F is reduced by approximately 20% compared to CVV



Furthermore, Yazaki has created an LCA database to support each engineer in charge of product design who carries out LCA at the product design stage; many of the processes have been simplified as a result. The time required for investigation, including data collection, has been significantly shortened and the number of steps leading to final assessment reduced by more than 95%, making it possible for any employee to easily carry out LCA.



### LPG Automatic Switchover Regulator (Gas Equipment)

An automatic switchover regulator is used to reduce the pressure of high-pressure LPG to a level usable in cooking stoves. In order to compare the environmental effects (CO<sub>2</sub> emissions) of old and new models of this mainstay product, Yazaki carried out LCA. Assessment results confirmed that the new model reduces total lifetime CO<sub>2</sub> emissions by approximately 22% compared to the older model. Note that since an automatic switchover regulator does not consume any energy during usage, this stage is not included in the evaluation scope.

# LCA of Old and New Models of Automatic Switchover Regulator

Assessment condition	Unit comparison of automatic switchover regulator
Assessment scope	From raw materials manufacturing to disposal/recycling (excludes the usage stage)
Assessment target	CO <sub>2</sub> emissions
Assessment result	Total lifetime $CO_2$ emissions of the new model are 22% less than the older model



Older model of LPG automatic switchover regulator



Newer model of LPG automatic switchover regulator resulting in a 22% reduction in CO<sub>2</sub> emissions

Management

Environmental Communication

Global Communication

Human Communication

# **Environmental Communication**

### Developing Environmentally Friendly Products that Increase Customer Satisfaction

In order to supply environmentally friendly products, Yazaki focused on three key areas in development and design: energy-conserving designs, design for recycling and the reduction of environmentally hazardous substances.

### **Development & Design**

Yazaki has two roles as a manufacturer: that of a parts manufacturer in the Automotive Sector and that of a product manufacturer in the Environmental Systems Sector. In FY2003, Yazaki focused on developing parts that comply with the Automobile Recycling Law in Japan and the EU ELV Directive in the Automotive Sector; in the Environmental Systems Sector, Yazaki focused on developing highly recyclable and energy conserving products.



#### Team Members Look Back

Designing easy-to-dismantle automobile wiring harnesses



Automotive Toyota Business Unit EEDS R&D Unit, Component Development Department

Since Yazaki was trying to create an entirely new product, an extremely wide range of evaluations on a huge number of samples were conducted and prior assessments and simulations were repeated before deciding on a shape. Opinions and ideas were extensively collected from each member of the team in order to find the structure that would be the easiest to dismantle. Although improving recyclability was the primary objective, the product also had to fully satisfy both quality and cost requirements as well. It was a difficult challenge.

### Automotive Sector

### Wiring Harnesses

### Development of Easy-to-Dismantle Junction Block and Body-Grounding Terminal

In order to achieve ahead of schedule the 95% recycling rate (the goal of the Automobile Recycling Law for 2015), the Wiring Harness Division has been working on developing easy-to-recycle structures and configurations. In FY2003 Yazaki developed a new easy-todismantle junction block and body-grounding terminal that can be easily removed from endof-life vehicles.

Conventional junction block installation areas and body-grounding terminals are secured with bolts, and thus cannot be removed from a vehicle even after the wiring harnesses have been pulled off. Since junction blocks and body-grounding terminals are made of different metals, they complicate the recycling of the steel body plates if they are not removed.

Yazaki designed a new type of junction block and body-grounding terminal that break off at the point of attachment and can be easily removed along with the wiring harness. This design not only improves the recyclability of the vehicle body, but also of the wiring harness. These new products were incorporated into new vehicle models introduced in the spring of 2003.





New body-grounding terminal installed in a vehicle

New body-grounding terminal when removed



Checking the ease of dismantling of the wire harness using an actual vehicle

### **Components (Non-Automotive)**

### Reduction of Regulated Substances from Electronic Equipment and Electrical Wiring Harnesses

Yazaki investigated whether its products contained the six substances whose use is banned by the EU/WEEE and RoHS Directives and the substances that are voluntarily being regulated by manufacturers, and worked on eliminating them. Yazaki successfully eliminated all regulated substances, except for hexavalent chromium, from parts used in wiring harnesses supplied to copier makers. As for hexavalent chromium (used mainly in screws), Yazaki is planning to complete the switch to trivalent chromium by the end of 2003. Also, starting in June 2002, Yazaki began using halogen-free products for wires and tubes.

In order to quickly and flexibly cope with changing requirements in each industry, Yazaki will set its own voluntary standards for regulated substances subject to RoHS and the Automobile Recycling Law as well as substances that are voluntarily being regulated by manufacturers, and will proceed with the creation of a database. Yazaki is also working on improving the efficiency of DRs (Design Reviews) related to regulated substances and preventing the accidental selection of products containing banned substances. To accomplish this, Yazaki is developing application programs for automatically extracting products containing banned substances and computing substance content, and is working on improving its CAE system.



Electrical wiring harnesses containing fewer regulated substances

### Meters

### Elimination of Mercury and Lead from Light Sources Used in Automobile Meters

Conventional illumination sources in automobile meters use CCTs (cold cathode tubes) containing mercury and incandescent lamps containing lead. In conjunction with vehicle redesigns, Yazaki reevaluated the structures of CCTs and lamps, and switched to LEDs (light-emitting diodes), thus eliminating the use of mercury and lead.



Automobile meters whose illumination sources have been switched to LEDs

### Instrumentation

### New Digital Tachograph that Uses Fewer Environmentally Hazardous Substances

In September 2002, Yazaki introduced a new digital tachograph that contains less lead and hexavalent chromium. To reduce lead usage, Yazaki integrated a system expansion board with the digital tachograph, thus reducing solder usage by approximately 10% compared to older models. To reduce hexavalent chromium, Yazaki switched from a galvanized heat-dissipation steel plate to an aluminum plate, and also abolished surface treatment. As a result, hexavalent-chromium usage was reduced by 90% compared to the older model, leaving screws as the only remaining parts containing this chemical.



New digital tachograph

### **Environmental Systems Sector**

### **Electric Wire**

### **Lead-Free Cables**

Yazaki has completed development of "*Ecological Cables*" – a product line of PVCfree, environmentally friendly wires and cables. Meanwhile, the demand for low-cost, easyto-handle PVC cables has not weakened. Therefore, in order to reduce environmentally hazardous substances from PVC cables, Yazaki began eliminating lead compounds used in the insulation and jacket. In April 2003, Yazaki became the first company in the industry to begin the gradual elimination of lead from all of its products, and plans to accomplish complete elimination by the end of 2003.



Comparison of Lead Content







Lineup of lead-free cables

Environmental Communication

Global Communication

# **Environmental Communication**

### **Gas Equipment**

### Development of Products that Utilize Fewer Resources and Conserve Energy

During redesign of its LPG automatic switchover regulator, Yazaki designed a smaller, lighter-weight model to reduce utilization of resources. As a result, the new model is 17% (130g) lighter than the older model. Also, for the LPG bulk storage tanks used for housing complexes and factories, Yazaki developed Powerbulk, a bulk storage unit with a newly designed heat-retaining function. Yazaki reduced the size and weight by integrating the heatretaining function, reduced energy consumption by eliminating unnecessary heating using temperature and pressure control, and eliminated the external vaporizer. As a result, the new model is 105kg lighter than the older model, and achieves significant energy savings by reducing power consumption from 7,000W to 85W.

### **Air-Conditioning Equipment**

### Development of Absorption Chiller-Heater with Significant Reduction in Energy Consumption

Yazaki developed an exhaust gas-fired absorption chiller-heater that generates chilled/ hot water by directly using exhaust gas generated by a micro gas turbine. After the exhaust gas heat is utilized by an exhaust gasfired regenerator, its heat is again recovered by an exhaust gas heat exchanger, thus conserving energy thanks to its highly efficient utilization of waste heat.

This new product is compatible with micro gas turbines with a power generation capability of 100kW or less, and uses exhaust gas first. If the volume of exhaust gas is insufficient, it can be operated by adding an auxiliary burner. This double-effect chiller-heater can meet a wide range of air-conditioning demands and furthermore, because of the compact design of the exhaust gas-fired regenerator and the exhaust gas heat exchanger, this product is the smallest and lightest in its capacity class in the world.



 $\label{eq:SuperAroace-a} \begin{array}{l} \text{Super Aroace-a new absorption chiller-heater that is} \\ \text{the smallest and lightest in its capacity class in the world} \end{array}$ 

# Comparison of the Older-Model Bulk Storage Tank and the New *Powerbulk* with Heat-Retaining Function



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Kazuhiro Ooki Yutaka Takahashi Gas Equipment Development Center

### Team Members Look Back

### Difficulty in legal classification of the new Powerbulk

While trying to reduce both energy and space requirements, we also made sure that the thermal medium used in the heat exchanger to keep the bulk storage tank warm could be rendered harmless through dilution during its final disposal. Using aluminum plates to protect the exterior paint also improved corrosion resistance, resulting in longer product life. One of the main difficulties we faced was the legal classification of our new product. Since our product was the first of its kind in the industry, its legal classification was unclear during the initial stage of its development, and it took a long time before a final legal classification could be determined.

### **Initiatives to Create Zero-Emission Factories**

In the area of production technology, Yazaki promoted initiatives toward creating clean factories with little environmental impact, with the main focus on the prevention of global warming, the reduction of waste, and the reduction of environmentally hazardous substances.

### Production

Using an environmental management system based on the acquisition of ISO 14001 certification, Yazaki's production sites are continually improving their environmental performance through initiatives that are tailored to meet the characteristics of each production mode. In FY2003, Yazaki's fourteen production sites achieved almost all their goals related to reductions in CO<sub>2</sub> emissions, volume of waste generated and usage of environmentally hazardous substances.

### Breakdown of Energy Consumption in FY2003



Total CO<sub>2</sub> Emissions and CO<sub>2</sub> Emissions per Unit of Net Sales at All Fourteen Production Sites



### Prevention of Global Warming

Yazaki is working towards the goal of reducing total  $CO_2$  emissions at all of the fourteen production sites by 4.4% from the 1990 level by June 2007. In FY2003, total  $CO_2$  emissions were 31,734 tons, a 9.6% reduction from 35,085 tons in 1990. In terms of a year-on-year comparison, the level in FY2003, was 2.4% higher than that in FY2002, failing to meet the goal of a 2.3% reduction. However, beginning in FY2003, when total  $CO_2$  emissions were computed together with the emissions per unit of net sales, the figure was 6.2 tons per 100 million yen, which is 2.8% lower than in FY2002.

### Major Energy Conservation Activities • Susono Factory

Because a large volume of air is consumed by the nineteen copper-pipe nozzles used for removing moisture in the wire-insulating process, the Susono Factory switched to energy-conserving nozzles with improved airflow dynamics at their tips. As a result, annual CO<sub>2</sub> emissions were reduced from 41 tons to 12 tons.

### Haibara Factory

The Haibara Factory reevaluated the materialdrying method and the molding machine driving method used in the molding lines, and introduced hopper dryers and air cutters. As a result,  $CO_2$ emissions were reduced by approximately 50 tons per year.

#### Numazu Factory

Voltage distribution inside the factory was modified by switching the taps in the distribution transformer inside the factory. The voltage to be supplied to the illumination equipment was set at an appropriate level and power consumption was reduced by more than 50%, which is equivalent to reducing CO<sub>2</sub> emissions by approximately 80 tons per year.



[Susono Factory] Energy-saving nozzles with improved airflow dynamics at their tips



[Haibara Factory] Use of an air-cutter method instead of a motor drive method



Achieving appropriate voltage levels by switching the taps in the transformer



Masayasu Harano First Molding Team First Component Production Dept Haibara Factory

#### We want to prevent global warming while also improving our work environment

At the Haibara Factory, the entire molding team is working towards the goal of completely eliminating the drying process used for molding resin materials by December 2005. Materials added during the molding process must be constantly heated to temperatures of 100 degrees centigrade or higher and also kept dry; consequently, the electric power consumed and the exhaust heat generated add up to massive amounts when combined with those from the molding machines themselves. In the summer, the temperature in a molding site rises to almost 40 degrees centigrade, creating a miserable work environment. Therefore, we have been trying to create a comfortable work environment for our operators while also contributing to the prevention of global warming. As of June 2003, we were saving energy at a rate of 480,000 kWh per year and reducing CO<sub>2</sub> emissions at a rate of 50 tons per year.

Human Communication

Social Communication

Data

Environmental

# **Environmental Communication**

## **Five More Production Sites Achieve Zero Landfill Waste**

Yazaki established the goal of reducing the volume of waste requiring final disposal by 95% from the FY2000 level by June 2007 and all its production sites are working toward achieving this goal.

### Waste Reduction

The total volume of waste generated in FY2003 was 5,510 tons, a 57% reduction from the level in FY2002. Of this volume, 95.2% was recycled and the remaining 266 tons were disposed of as final waste: a 94% reduction from the FY2000 level. The goal of zero landfill waste (5% or less requiring final disposal) was achieved by the Susono Factory (Electric Wire Division) last year, and by five more production sites (Haibara, Ohama, Fuji, Numazu and Shimada factories) by the end of June 2003.



Tadashi Sakata General Affairs Team General Affairs Dept. Numazu Factory

#### Team Members Look Back

### We are aiming to go beyond zero landfill waste to help create a recycling-oriented society

At the Numazu Factory, we achieved the goal of zero landfill waste by taking actions under the slogan "Mixed Together, They are Trash; Sorted, They are Resources." However, the road to achieving this goal was not easy. First, we established specific time slots during which waste could be brought to the waste stations, patrolled these stations and reported our findings to the Production Environment Committee. We

also implemented various measures to help employees increase their awareness about resources and ensured that they were fully aware of and complied with rules. Furthermore, as a result of an earnest search for companies that would recycle our sorted waste into resources, we were able to increase the number of contracted waste processing companies from four to twenty-four. In the future, we want to focus on reducing the volume of waste generated and on promoting the shift from thermal recycling to material recycling, so that we can help create a recycling-oriented society.







#### Major Steps Being Taken toward Zero Landfill Waste

Waste	Measures taken	Effects (per year)	Production site
Ash from scrap wood/ paper incineration	Discontinued incineration of discarded wooden pallets and paper packaging of parts, and began reuse and recycling.	1.7 tons→0	Hamamatsu Factory
Inorganic sludge from plating processes	Found recycling companies that carry out intermediate processing and turn the sludge into raw materials for pavements.	36 tons→0	Ohama Factory
Waste silicone rubber	Ensured complete sorting and researched oil-processing companies that recycle waste silicone rubber by converting it into silicone oil.	174 tons→0	Fuji Factory
General waste oil	Implemented oil-water separation, and reused the oil as fuel and water for cooling.	34 tons→0	Tenryu Factory
Wire insulation chips	Had subcontractors completely sort out impurities from the material and recycle it as raw material for pallets.	13 tons→0	Niimi Factory
Waste PE plastic	Could not be reused because it contained other materials. Turned into solid fuel.	108 tons→0	Numazu Factory
Waste PVC-based plastic	Thermally recycled insulation scraps. The incinerated ash can be used as a raw material for concrete.	5 tons→0	Daitou Factory
PP belts and vinyl	Sorted waste plastic containing many types of materials, converted them into oils, and recycled them as fuel.	3.9 tons→0	Haibara Factory
Waste nonflammable PVC	Discharged as sorted waste from wire-extrusion processes; crushed and recycled as materials.	2.0 tons→0	Hodosawa Factory
Scrap paper	Collected the interterminal-layer paper used in crimping processes from each facility; switched from incineration to reuse.	3.8 tons→0	Washizu Factory

### Working to Reduce Environmentally Hazardous Substances

Yazaki is conducting a review of its chemical substances control system in order to strengthen control towards achieving the goal of completely eliminating dichloromethane and tetrachloroethylene.

### **Reduction of Environmentally Hazardous Substances**

In FY2003, a total of 5,154 tons of nine types of chemical substances, whose use must be reported to the government in accordance with the PRTR law, were used at Yazaki's production sites. Of the six production sites that had been using dichloromethane, five of them completely eliminated its use. The two production sites that had been using tetrachloroethylene also completely eliminated its use. In terms of control of chemical substances, Yazaki is investigating a review of the control system and the creation of a common framework for all production sites.

### Major Activities to Reduce Environmentally Hazardous Substances • Shimada Factory

With the goal of completely eliminating dichloromethane, the Shimada Factory worked on developing a new cleaning process. Dichloromethane has been mainly used for cleaning cutting equipment/mechanical parts. By introducing vibration cleaning machines and vacuum drying machines, Shimada Factory was able to reduce usage by 17% (63 tons) from the previous year. The Shimada Factory, has set as a technological goal the complete elimination of dichloromethane and is planning to achieve this goal by the end of 2003 by further introducing new equipment.

#### Numazu Factory

The Numazu Factory had been using 135 liters of dichloromethane per month for cleaning epoxy injection machines. However, it successfully eliminated the use of this chemical by switching to cartridge type injection machines.



Simplified cleaning process introduced in order to completely eliminate dichloromethane use

#### ■ Volume of Substances Subject to PRTR Released and Transferred at All Production Sites (FY2003)

Production Sites (FY2003)					(Unit: tons)
	Volume handled	Volume released into the atmosphere	Volume used	Volume transferred	Volume recycled
Bis(2-ethylhexyl) phthalate	4,442	0	4,436	7	0
Lead and its compounds	366	0	366	1	0
Antimony and its compounds	108	0	107	2	0
Copper salts (Copper chloride)	63	0	0	0	63
Toluene	64	56	0	8	0
Xylene	26	25	0	2	0
Dichloromethane	15	13	0	2	0
Decabromodiphenyl ether	6	0	14	1	0
Bisphenol A type epoxy resin	55	0	54	1	0
Total	5,154	94	4,977	24	63

\*The volume used indicates amounts that were transformed into other substances through chemical reactions and amounts that are shipped from the production site, either in products or attached to products.







Team Members Look Bac

Hiroaki Otobe Production Technology Team Production Technology Dept. Hamamatsu Factory

### Although dichloromethane has been eliminated, there is still room for improvement

The Hamamatsu Factory used to use dichloromethane for the rough cleaning of certain components inside assembly lines. We selected a petroleum-based solvent as an alternative. However, this did not satisfy the drying requirement for internal assembly line cleaning. Consequently, we had to modify the method of supplying components to assembly lines and install a drying system, making the switchover fairly large-scale. Although we have been able to eliminate dichloromethane, we hope to make further improvements to develop an even cleaner and more productive cleaning method.

# **Environmental Communication**

## Streamlining Logistics: Reducing Environmental Impact Generated by 1.12 Million Kilometers Driven Per Month

In the area of logistics, Yazaki has set the goal of reducing both CO<sub>2</sub> emissions and usage of packing material by streamlining and increasing efficiency in order to reduce environmental impact.



### Logistics

Yazaki's Logistics Division relies exclusively on Syo Transportation Co., Ltd., an affiliate that acquired ISO 14001 certification in February 2002, for transport and delivery by truck of products, parts and semi-finished products. In the future, Yazaki plans to expand its cooperative relationship with other transportation companies to further reduce the environmental impact caused by logistics operations of the entire Group.

#### Overview of Syo Transportation

Number of trucks owned	140 vehicles owned, 800 vehicles at subcontractors			
Operating distance traveled 1.12 million km/month				
Number of sales offices	Key shipping hubs: 5; Key delivery hubs: 10			
Volume of cargo handled	237,000 tons/month			
Number of employees	390 employees			

### **Reduction of CO<sub>2</sub> Emissions**

### Modal Shift and Improved Shipping Efficiency

Yazaki is focusing on a modal shift in the transport of goods to most effectively reduce CO<sub>2</sub> emissions. So far we have switched 3,120 runs of truck services per year to sea and rail transport, mainly in Hokkaido and Kyushu.

### Comparison of Transportation Routes Before and After Improvements



As a result, we have reduced CO<sub>2</sub> emissions by 193 tons per year. Previously, each Yazaki production site arranged for its own truck services, resulting in poor loading efficiency and higher transportation costs. Therefore, we are trying to improve loading efficiency by creating a centralized collection center and relay stations, and to reduce the number of service runs and transportation routes. Delivery Routes Before and After Improvements

Component production sites Factory 1 Factory 2 Factory 3 Factory 4 Cogistics office A Logistics office A Logistics office C Logistics office C Logistics office D Logistics office D Logistics



### Introduction of Thirty Low-Platform Trucks

Yazaki introduced low-platform trucks that improved loading efficiency by 10% and reduced the number of service runs in a year by 970, which is equivalent to a  $CO_2$  emissions reduction of 18 tons per year.



## Entire Company is Taking Action to Conserve Resources

Since it started reusing copper resources in 1957, Yazaki has been promoting recycling activities in many areas of its business activities in order to effectively utilize resources.

### Implementation of Environmentally Sound Driving Practices

In order to establish environmentally sound driving practices, Yazaki installed digital tachographs in its entire sales vehicle fleet. By evaluating driving records, we look for ways to improve fuel efficiency and establish environmentally sound driving practices, such as "idling stop" (turning off the engine when the vehicle is stationary). We also use these records to help establish safe driving practices such as smooth take-offs and braking, and driving within the speed limit.

### Driving Record Data from a Digital Tachograph

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### **Reduced Use of Packaging Materials**

### **Change of Packing Material**

Most of the products and parts shipped from overseas factories were previously packed in corrugated cardboard. In order to reduce paper consumption, Yazaki in cooperation with overseas affiliates began using plastic containers that can be used for round-trip transportation between transportation hubs and overseas factories. This reduced the volume of waste corrugated cardboard by 40% (2,074 tons). Yazaki plans to ultimately phase out the use of corrugated cardboard packaging.

### Corrugated Cardboard Packing and Plastic Containers



### Recycling

### **Recycling of Plastic Containers**

Approximately 1.4 million plastic containers are currently being used by Yazaki in Japan and overseas. However, since their service life is around five years, 20,000 to 30,000 containers must be discarded every year. Therefore, Yazaki has started a system in which these end-of-life containers are collected by a company, Ryuyo Logistics Center, where they are crushed and recycled into plastic pallets. Yazaki is expanding the use of these recycled plastic pallets for the distribution of goods within the Group.

# Collection and Recycling at the Disposal Phase

Yazaki's Sales Division acts as the collection site for the reuse and recycling of products in the Environmental Systems Sector such as discarded wire, used wooden spools, end-of-life gas meters, and absorption solution from absorption chiller-heaters. In FY2003, the recycling rate was approximately 90% for both discarded wire and used wooden spools. Approximately 105,000 end-of-life gas meters were collected, and 100% of their aluminum content was recycled. We also collected and recycled 68.7 tons of absorption solution, of which 67.9 tons (approximately 99%) were reused in products.



End-of-life plastic containers



Recycled plastic pallets







Tadayuki Ohashi Syo Transportation Co., Ltd.

### We will continue to seek a balance between environmental initiatives and economic benefits

We have for a long time been working with Yazaki Corporation on achieving environmentally friendly logistics by reevaluating transportation routes, making modal shifts and increasing loading efficiency. We have been using digital tachographs to encourage ecologically sound driving practices that are also economical. We also established a packing container management system for the entire Group, and began recycling end-of-life plastic containers into pallets. In the future, we will continue to look for additional materials that can be recycled out of the waste generated by the Group, and aim to become a logistics company that helps the Group's business grow while also being kind to the environment. Human Communication

# **Environmental Communication**

## Elevating Awareness that Caring for the Environment is Our First Priority

At the heart of the Yazaki Group, the Susono Factory has assumed a leading role in our environmental initiatives. Its energy and vitality are grounded in full employee participation and a solid sense that caring for the environment is part of our work.

### **Factory Initiatives 1**



Factory outline						
Name:	Yazaki Parts Co., Ltd., Susono Factory					
Location:	1500 Mishuku, Susono-shi, Shizuoka Prefecture					
Factory Manage	r: Yutaka Nakahara					
Established:	1960					
Site area:	58,676 m <sup>2</sup>					
Building area	a: 31,163 m <sup>2</sup>					
Employees:	886					

Susono Factory

Gutaka Nakahana

Yutaka Nakahara Factory Manager Susono Factory



Since obtaining ISO 14001 certification in 1997, we at the Susono Factory have been been working hard to implement the following environmental policy:

### Susono Factory Environmental Policy:

We will work to effectively utilize the earth's resources, pursue production techniques and systems that support the coexistence of the environment and manufacturing process, and benefit society.

To carry out our initiatives, we ensure that all of our employees are aware of our environmental policy and do the following:

- In coordination with NYS (New Yazaki System) activities, establish an
- appropriate system and implement optimal measures to prevent pollution.
- Comply with all environment-related laws, regulations and agreements.
- Evaluate our environmental management system on a regular basis and make continual improvements.
- Establish goals for the following items and proceed systematically:
   Promotion of products free of hazardous substances
- Improve manufacturing yield and reduce resource requirements
- Reduce waste requiring disposal
- Promote measures to prevent global warming
- Improve the surrounding environment

### Two different factories under one roof

The Susono Factory is the key manufacturing site for low-voltage wires for automobiles. In 2000, the Gotemba Factory, a wiring harness assembly factory, was merged into Susono Factory. As a result, the environmental activities at the factory entered a new phase. "Wire manufacturing is a machine-dependent operation while wiring harness assembly relies heavily on manual labor. To allow two factories with totally different production modes to operate inside a single building, we had to significantly modify our approach," says Yutaka Nakahara, Susono Factory Manager. Before the merger the most important environmental issue used to be preservation of the local environment in terms of noise and prevention of water pollution. However, with the addition of the wiring harness assembly line, establishing a better working environment became even more important. In other words, the factory now had to deal with internal and external environmental issues simultaneously.



### Speedy decisions to quickly solve problems

Following the merger, the structure of the Production Environment Committee was immediately modified. We ensured well-balanced representation from both parts of the factory and firmly established a structure to quickly and effectively solve any new problems that might arise from merging the two factories. To support the need for quick and flexible decision-making, monthly joint managers' meeting ware held, which effectively functioned as the executive forum for the Production Environment Committee. The first issue that was taken up was air conditioning. Because wire manufacturing produces significant quantities of heat, forced cooling is carried out using spot air-conditioners. On the other hand,

Management

though manual operations in the assembly line require a much cooler environment, remodeling the entire air-conditioning system was out of the question. One of the employees came up with the idea of applying an insulating paint to the roof and walls of the building. Paint applied to an area of 3,915m<sup>2</sup> had the effect of lowering the inside temperature by as much as 4.5 degrees centigrade. This idea received the company president's Energy Conservation Award and served as a good example of energyconservation know-how achieving great results.



Roof with insulating paint applied

 $\label{eq:constraint} \begin{array}{l} \mbox{Trial calculation of the insulating paint's effects on lowering internal temperature and retaining heat in the winter:} \\ \mbox{4.5 x {6.17 x 5.6 x 2 (116.4 + 37.3) + 4.31 x 10.9 x 79.1}} \\ \mbox{4000 x 1.5kw x 10H x 21 days x 6 months} \\ \mbox{=30485 [kwh]} \\ \mbox{Note: Represents the amount of electricity needed to} \\ \mbox{lower or raise the room temperature by 4.5 degrees centigrade for three months each in summer and winter.} \end{array}$ 

# Continuous improvements through the collective power of all employees

The Susono Factory was also the first facility within the Yazaki Group to achieve zero landfill waste, based on the motto "Sort, Sort, and Sort Even More." Waste is currently sorted into as many as fifty-four categories and the recycling rate has reached 97%. The driving force behind this group-leading environmental activity is the concerted effort of all employees. Gleaning and One-Point Lessons, which have been well established since the time when the plant was working to obtain ISO 14001 certification, are good examples of this people power. These programs arose out of voluntary suggestions from employees in an effort to link even the smallest of issues to an improvement and share such examples of best practices. Today, these programs have spread to overseas factories to the point that joint contests are held.



Employee suggestion: Wrapped compressor to reduce waste



Employee suggestion: Reduced solvent evaporation by decreasing the surface area

### Becoming a clean factory in harmony with the local community

To peacefully coexist with the surrounding communities, we are also actively involved in communication and volunteer activities. Proceeds from an aluminum can collection program jointly started with Y-CITY have allowed us to donate equipment and money to welfare organizations. Some employees are said to bring in as many as twenty cans

every day. Additionally, the annual local community clean-up (now in its fourth year) and the Kanogawa River System clean-up (third year) have already become regular events. Many employees also participate in volunteer clean-ups on Mt. Fuji. Furthermore, we hold community meetings to provide information about the factory to our neighbors living in the area. The Susono Factory believes that setting new records every day for accident- free man-hours of operation (24.55 million hours as of August 4th) is the best way to meet the expectations of the community.





Eijirou Hoshino

Environmental Management Chairman Susono Factory

## We began with efforts to raise the level of awareness

Because there is a tendency to think of the environment as something separate from work, we have been taking measures to fully establish the awareness that caring for the environment is part of our job. Therefore, we first focused on environmental education for managers and group leaders and are now trying to offer as many environmental education opportunities as possible to all employees to increase their level of awareness. Although the merger of the two factories posed some initial difficulties, I'm beginning to think that it ended up having great benefits in stimulating the two sides into producing excellent results.

# **Environmental Communication**

# "Back to Basics" — Efforts Leading to the Creation of a "University" within the Factory

The Numazu Factory's aim is to become a cutting-edge factory, and this includes environmental initiatives. While trying to implement reforms by returning to the basics, we came to the painful realization that education is the key to raising awareness. Thus, the Wire College was born.

### Factory Initiatives 2





Factory outline							
Name:	Yazaki Electrical Wire Co., Ltd., Numazu Factory						
Location:	Ohoka 2771, Numazu-shi, Shizuoka Prefecture						
Factory Manager:	Koji Yoshikawa						
Established:	1963						
Site area:	125,010 m <sup>2</sup>						
Building area:	83,758 m <sup>2</sup>						
Employees:	441						

17 yonhikamin

Koji Yoshikawa Factory Manager, Numazu Factory



Since obtaining ISO 14001 certification in 1997, we at the Numazu Factory have been building our environmental initiatives based on the following environmental policy:

### Numazu Factory Environmental Policy:

We will respect the Yazaki Group's management philosophy, the Yazaki Global Environment Charter, care for the environment as the key producer of many types of electrical wires, and contribute to society through our products.

Fully recognizing the fact that we benefit greatly from the Kakitagawa spring, a true gift of Mt. Fuji, and that we operate large-scale manufacturing equipment including an aluminum-melting facility, all employees will work to embrace the following policy:

- Comply with environment-related laws and regulations and other agreements and requirements.
- Make continual improvements and strive to prevent any and all environmental pollution in every aspect of our products, activities and services.
- Establish objectives and goals based on the environmental aspects defined at Numazu Factory, develop execution plans, and make improvements. In establishing the objectives and goals, include activities that are beneficial to the environment.
- Increase employee awareness about environmental management through environmental education and internal communication. Request understanding and cooperation from affiliated companies.
- Disclose the Numazu Factory Environmental Policy to the surrounding communities and aim for peaceful coexistence.

# New start with the "Right Things in the Right Places" program

The Numazu Factory currently produces approximately 20,000 types of electrical wires and cables. "I think we were behind other production sites in terms of environmental awareness and measures until three years ago," recalls Koji Yoshikawa, Numazu Factory Manager. "Now, I think we are neck and neck with other facilities within the Group, if not ahead."

A "new" Numazu Factory began by going back to the basics of getting things in good order. Haphazard operational practices had become commonplace at the factory with electrical wire spools temporarily stored in many places around the factory site. When Yoshikawa became the Factory Manager, the first thing he did was to start a "Right Things in the Right Places" program and required all employees to strictly adhere to it. After patrolling the site over three months, he identified as many as 2,500 items that had to be corrected. This was the starting point for a new environmental initiative.



Flowerbeds were installed as part of the "Right Things in the Right Places" program

### General Manager himself actively engages in employee education and raising awareness

In order to improve employee attitude, Yoshikawa held over fifty two-hour lunch meetings targeting all employees to explain to them that "each employee is responsible for environmental improvement." He has selected younger employees to lead environmental programs because he felt that fundamental improvements must begin with a different mindset. Furthermore, in order to clearly define each employee's responsibility and make real progress, he had every single employee carry a "Personal Goal Card" which quantitatively documents each employee's goals. Supervisors follow up on employees progress towards these goals and encourage their achievement with bi-annual meetings held to showcase results. Awards are given to those employees producing excellent results; this has gradually increased the sense of competition, and the number of employee suggestions for improvement has been growing rapidly. The ranking table shown below was also an employee idea. Ranking individual lines according to the time saved thanks to process changes has had the effect of promoting energy conservation and reducing material loss. This was the result of combining competition with fun.



"Personal Goal Card" carried by all employees

# Opening an on-site university targeting all employees

Efforts to raise employee awareness led to the promotion of a more thorough education. We created a curriculum that was based on the educational and training requirements of ISO 14001, and opened the Wire College to all employees, with different time schedules for different disciplines. Classes include liberal arts, specialized education, and required and elective courses; company directors, managers and environment leaders are the professors and lecturers. Each class consists of approximately thirty students and examinations are also held. Coordinating the participants' schedules was the most difficult task. Yoshikawa says, "It certainly is an arduous undertaking. However, I think that lack of education is the primary cause for anybody not being able to perform the basics. We want to increase the skill levels of all participants, as employees as well as members of society."



Wire College classroom

Environmental education textbooks for classes in the Wire College

## Zero landfill waste achieved by focusing on basics

The Numazu Factory has long been active in promoting the effective utilization of resources by recycling copper wire and reusing wooden spools. In FY2003, zero landfill waste was achieved ahead of schedule, thanks to our focus on getting things in good order. We clearly specified the locations of waste stations and types of waste, created a disposal/collection schedule, and increased sorting categories from nine to thirty-three. Employees on patrol ensured that waste was being properly sorted, and checked the contents of the waste to identify recyclable items. In the final stage, even

trash from cleaning operations was sorted. Behind the scenes, those responsible for the recycling program worked hard to keep the program going by voluntarily coming in on Saturdays and making sure that there was no impoper sorting. The united efforts of all employees came to fruition in October 2002 when we achieved the goal of zero landfill waste.



Volume of Waste Generated and Decrease in Landfill Waste





Sorting of trash from cleaning operations

Ai Kawaguchi



Waste station

### Winning the first prize in the "Personal Goal" contest

I work in a department that designs wiring for homes. Since the wiring design for each home is different, we must manage a large number of design drawings. Therefore, as a personal goal, I worked on computerized management of these design drawings. My project was awarded the first prize in the "Personal Goal" Contest. I am grateful for the cooperation I received from customers and the guidance from my supervisor. I am happy that I could make a contribution to the environment through the new paper-less system and also to have been awarded a prize.

# **Global** Communication

## Global Yazaki is Proceeding on Four Fronts: the Americas, Europe, Asia and Oceania, and Japan

Yazaki is strengthening collaboration and cooperation with its overseas affiliates with an eye towards the overseas expansion of group environmental management in the future. We have entered the conceptual phase of network building based on four fronts to create a solid system.

### Global Efforts through the Yazaki Group International Automotive Conference

In October of 2002, seventy-three individuals from twenty-eight factories and offices around the world (including personnel from related domestic operations and divisions) gathered at the Y-CITY World Headquarters (Yazaki's headquarters in Shizuoka, Japan) for the Yazaki Group International Automotive Conference. During the conference an explanation was provided of the Yazaki Group Environmental Management System, which had gone into effect that July and a request was made that overseas affiliates also work to reduce environmental impact through environmental preservation initiatives in future Global Yazaki activities.

Three specific requests were made: (1) to promote the prevention of global warming; (2) to promote reductions in waste; and (3) to promote the control and reduction of chemical substances used. With respect to control of chemical substances in particular, EU directives concerning automobiles and household electronics are having a global impact, and the objective of seeking rapid responses through closer collaboration between domestic and overseas affiliates was confirmed.

There was also a report on the progress of a request made during the 1999 conference that all participating factories and offices acquire ISO 14001 certification by the end of 2003. Of twenty-five production divisions, twenty-one have already acquired certification, and the rest are scheduled to acquire certification by the end of 2003.

### Our Perspective: Establishing Overseas Bases to Create Jobs will Change the Global Environment

Yazaki establishes overseas bases with the primary focus on the creation of jobs. When considering global environmental concerns, the issue of poverty is always confronting developing countries. Achieving fundamental solutions to issues first requires the eradication of poverty around the world and it is based on this idea that Yazaki is establishing bases world wide.

Today, Yazaki has ninety-five overseas affiliates where approximately 130,000 persons are employed. The societies, economies and cultures of each country and region differ, so the management of each factory and office is under local direction based on understanding and cooperation. Environmental responses are also independently undertaken in accordance with local conditions, and Yazaki's stance has been to provide the necessary support through transfer of technology and guidance.

### Overseas Business Sites that Acquired ISO 14001 Certification

FY	Overseas Corporation, Factory or Office	Country	FY	Overseas Corporation, Factory or Office	Country
	EDS Manufacturing, Inc. Headquarters / Imus Factory (EMIF)	The Philippines		Yazaki-Torres Manufacturing, Inc. (YTMI)	The Philippines
1000	Yazaki Saltano de Portugal Componentes Electricos Automoveis, Lda. (YSP), Gaia Factory (YSPG)		2001	YTM Component Inc. (YTMC)	The Thilppines
1990	Ovar Factory (YSPO)	Portugal	2001	P.T. Autocomp System Indonesia (PASI)	Indonesia
	Yazaki Saltano de Ovar-Productos Electricos, Lda. (YSE)			Thai Arrow Products Co., Ltd., Chachoengsao factory (TAPC)	Thailand
	Taiwan Yazaki Corporation (TYC), Headquarters/Pingtung Factory			Shantou Special Economic Zone Yazaki Auto Parts Co., Ltd. (SYA)	China
1999	Taipei Office (TYCT)	Taiwan		Elcom, Inc. (ELCOM)	U.S.
	Tungkang Sub-Factory			Thai Yazaki Electric Wire Co., Ltd., Phra Pradaeng Factory (TYEP)	Thailand
	Yazaki North America, Inc. (YNA)	U.S.		Wat Khae Factory (TYEW)	Thanana
	Yazaki do Brasil Ltda. (YBL), Headquarters / Factory	Brazil	2002	P.T. EDS Manufacturing Indonesia (PEMI)	Indonesia
	Australian Arrow Pty. Ltd. (AAPL)	Australia		Yazaki Slovakia a, spol. sr. o (YSK)	Slovakia
2000	EWD Limited Liability Company (EWD)			Yazaki EDS Samoa Ltd. (YES)	Samoa
2000	Auto Circuitos De Obregon, S.A. DE C.V. (ACOSA)			SY WIRING TECHNOLOGIES, India Pvt Ltd.	India
	AUTO Electronica De Juarez S.A. DE C.V. (AEJ)	Mexico		Huanan Yazaki (Shantou) Auto Parts Co., Ltd. (HNY)	China
	Productos Electricos Diversificaoos S.A. DE C.V. (PEDSA)			Arnecom, S.A. de C.V., Nicaragua (ARCLE)	Nicaragua
	Sistemas Electricos Y Conductores S.A. DE C.V. (SECOSA)			Arnecom, S.A. de C.V., Monterrey Factory (Wire) (ARCCB)	Mexico
	Thai Arrow Products Co., Ltd. (TAPO), Head office	Thailand		Yazaki EDS Vietnam, Ltd. (YEV)	Vietnam
	Tata Yazaki Autocomp Limited (TYA)	India	2003	Arnecom, S.A. de C.V., Monterrey Factory (Meters) (ARCIN)	Mexico
	Tianjin Yazaki Automotive Parts Co., Ltd. (TJY)	China	2003	Shantou Special Economic Zone Yazaki Auto Parts Co., Ltd., Chenghai Factory (SYACH)	China
2001	Thai Arrow Products Co., Ltd., Bang Phli factory (TAPB)	Thailand		Arnecom, S.A. de C.V., Monterrey Factory (W/H) (ARCN)	Mexico
	Circuit Controls Corporation (CCC)	U.S.		Autopartes Y Arneses de Mexico, S.A. de C.V., Ciudad Juarez Factory Group (AMSJ)	Mexico
	NACOM Corporation (NACOM)	U.S.		Shantou Special Economic Zone Yazaki Auto Parts Co., Ltd., Wanji Factory (SYAWJ)	China
	Thai Arrow Products Co., Ltd., Phitsanulok factory (TAPP)	Thailand		Yazaki-Ciemel S.A. (YCSA)	Colombia

## Global Environmental Concerns and the Global Yazaki Response

Today, solving global environmental issues that cross national borders such as global warming, acid rain and destruction of the ozone layer is of utmost urgency. Yazaki has begun construction of a Group Environmental Management System that covers domestic operations. After the system is developed domestically, we plan to expand the scope to include increasing numbers of overseas factories and offices. During this time, we will reinforce the transfer of environmental technologies suited to specific countries and regions and will build a global environmental management system that includes overseas affiliates. In order to use the combined strengths of Yazaki operations around the world to respond to global environmental issues, all members of the worldwide Yazaki Group will be in ever-closer communication.

In addition, in order to create a global management system, we are contemplating four fronts: the Americas, Europe, Asia and Oceania, and Japan. We will create bases that will oversee the environmental management of each location within the four territories, and by networking them, we will achieve prompt and appropriate global environmental management.

#### Yazaki Overseas Affiliates

			As of September 2003				
	Americas	Europe	Asia and Oceania	Total			
Number of countries	7	18	12	37			
Number of companies	39	18	38	95			



Yazaki Overseas Bases





# **Global Communication**



New AAMSA factory that utilizes natural light

### Americas

### **Energy Conservation Initiatives**

AAMSA and BAPSA (both located in Mexico), wiring harness production factories that do not use large scale machinery, have changed the intensity of lighting in the factory from 600 lux to 240 lux, a level that does not affect work performance. In addition, by reducing the number of fluorescent tubes per location from four to two, 1,200 tubes in approximately 600 locations have been eliminated, saving 74 kWh in electricity consumption. Also, measures to conserve energy were incorporated into construction of the new factory, such as the effective use of natural lighting.

### **Environmental Education / Awareness**

Many overseas business sites are voluntarily acquiring ISO 14001 certification, and ARNECOM (located in Mexico) is putting considerable effort into the education necessary to train internal environmental auditors and develop an environmental management system. AAMSA and BAPSA also hold a five-minute "environment time" before the start of each work day using slides and other media addressing environmental issues. PEDSA (also in Mexico) issues a weekly internal environmental report to promote environmental education and raise awareness of environmental issues.



at ARNECOM



Five-minute "environment time" before the start of work at BAPSA

### Europe

### **Responses to EU Directives**

In Europe environmental regulations that focus on waste such as the ELV Directive (regulation concerning end-of-life vehicles that prohibits the use of lead, mercury, cadmium and hexavalent chromium), the WEEE Directive (Directive on Waste Electrical and Electronic Equipment), and the RoHS Directive (Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment) are becoming stricter. YSP and YSE (both located in Portugal) have established green purchasing rules for all purchased items and are creating systems to respond to prohibitions and restrictions on the use of certain substances.

### Asia and Oceania

### **Reductions in Waste**

EDS Manufacturing, Inc., EMI, (located in the Philippines) is investigating methods of reusing the oil content of sludge. Oil used in production process accumulates in grease traps to form oil sludge and has in the past been treated as waste. EMI now mixes this with sawdust and provides it free of charge to nearby villages for use as fuel during the preparation of swine fodder.

### **Social Contribution Activities**

TAP, one of Thailand's environmentally progressive companies, collaborated with the Chachoengsao Provincial government in August of 2002 to hold a seminar entitled "Methods of Processing Industrial Waste at TAP." In September, TAP held a five-day environmental school for children called "Bangpakong River and Environmental Preservation Program" in cooperation with the provincial government to raise awareness of environmental preservation and ecosystems.



The Bangpakong River and Environmental Preservation Program environmental school for children

### Example of Overseas Initiatives Australian Arrow Pty. Ltd. (AAPL)

### Monthly Environmental Meetings are the Driving Force Behind Environmental Activities of the Entire Company

Australian Arrow Pty. Ltd. has its headquarters in the suburbs of Melbourne, Australia. Currently its 600 employees develop, produce, and sell wire harnesses, body control modules, instrument clusters, keyless entry systems, telematics equipment, and many other products.

### **Environmental Management**

AAPL acquired ISO 14001 certification in 2000 and is making efforts to continually reduce the burden on the environment through the appropriate implementation of an environmental management system. We hold Monthly Environmental Representatives Meetings as our own independent system of promotion. Thirteen members from all areas of the company attend these meetings, and all environmental initiatives and activities, especially recycling compliance, are discussed and other environmental information is shared amongst the group. These meetings are the driving force behind environmental initiatives within the company. Plans also call for an Annual Environmental Report to be issued in 2003 and preparations are currently underway.

#### **Reduction of Waste**

One major theme of environmental activities is the reduction of waste. "MUDA" (No Waste) posters have been put up on bulletin boards throughout the company and every month a company newsletter is issued to encourage employees throughout the company to reduce waste. Already, a company-wide initiative is being promoted for the recycling of packaging materials, paper, cardboard, plastics, metals, pallets, PCBs, fluorescent tubes, solder waste, batteries, etc., and steady reductions in waste are being seen. We have also begun efforts to collect mobile phone batteries and empty printer cartridges. At the same time, previous initiatives are being reviewed, and the possibility of further reducing or reusing packaging is being explored, while investigation into recycling methods for sponge foam and expanded polystyrene is also underway.

### **Promoting Recycling and Reuse**

An initiative is underway to encourage suppliers to use cardboard pallets. These can be recycled after use, are lightweight and bring down logistics costs. Furthermore, AAPL and YES (EDS Samoa) worked together to develop unique reusable containers called "covepaks." Wooden inserts are placed in the outside four corners of the boxes to provide additional strength for stacking. After use, the wood inserts are taken out and the boxes are stacked and returned to YES for reuse. Covepaks can be used a number of times, and are sent back and forth between YES and AAPL, thereby contributing to the streamlining of packaging material used in logistics.

### **Environmental Education and Awareness**

Every October we hold a children's environmental art competition for associates' children and the environmental posters and environment-related paintings created by them are put on display. In 2002 there were over 50 entries and winners were selected from two categories, an under-six and a six to thirteen-year old age group. The works were displayed in the factory for a month and prize-winning

works were recognized in the company newsletter. This event has proved to be a total success in increasing the environmental awareness not only of the children, but also of all AAPL associates and their families.



Paintings on display at the environmental art competition

Volume of the Main Categories of Waste Generated in FY2003 and Disposal Method

Categories	Volume (tons)	Disposal Method
General waste	300	Landfill
Waste from compactor	500	Landfill
Plastic packaging	230	Recycled
Scrap cardboard	260	Recycled
Cardboard boxes	440	Reused
Paper	500	Recycled
Odd-sized wooden pallets	240	Reused & recycled
Scrap steel	20	Recycled
Fluorescent lights	2	Recycled
Batteries	2	Recycled
Total	2,494	



Zoran Dimovski People & Services Group

### Team Members Look Back

## We are pooling everyone's energy together to take environmental action

The driving force of our environmental initiatives has been our cross-functional environmental team. We meet monthly with excellent attendance rates because we all have fun in reviewing our progress. It is exciting for our team members as we have many environmental initiatives in progress at any point in time. We have achieved many great things over the past twelve months and look forward to bigger and more innovative environmental projects, educational publications and environment-related events in the coming year.

# Human Communication

# Caring About People — Creating Enthusiastic Staff and An Active Company

Yazaki believes that no matter what other operational resources it has, an enterprise cannot fulfill its mission without the right people. Moving forward with customer-focused operations and aspiring to create a corporate ethos that recognizes a diversity of values, Yazaki works to create a corporate environment where ambitions can grow.

### **Human Resources and Labor Affairs**

In order to help employees realize the corporate policies, Yazaki states in its Fundamental Management Policy that it will "care for people, by creating a corporate culture that maximizes the capacity for individual and team-work, while sustaining people's dreams." Guided by the basic principles of Freedom and Fairness, Yazaki's human resource operations rely on three pillars to put this idea into practice: (1) revitalizing the organization; (2) fair evaluation; and (3) fostering of human resources. In this way, the Human Resources Division is working to cultivate the corporate ethos and human resources necessary to proactively adapt and change in the 21st century.



### **Organizational Management**

In order to respond swiftly to diversifying customer needs in the current climate of globalization, employees must be able to act autonomously. By creating separate business units and uniting development, production, sales, and management functions directly under the responsibility of each organizational leader, Yazaki has undertaken a program of reforms designed to promote a customerfocused organization. Meanwhile, in order to allow individual employees to develop and reach their potential, Yazaki is expanding its system of open recruitment for new projects.

### **Fostering of Human Resources**

In order to foster employees who combine a shared commitment to corporate values with a global business sense, Yazaki reorganized its HR Department Program in 2003.

At the same time, Yazaki is successively developing a range of study programs in Japan and overseas, such as the MBA program in China introduced last year.

- (1) Basic course
- Higher education in corporate philosophy and basic interpersonal skills training by grade
- (2) Management course
- Strengthening of management skills and introduction of selective training for all supervisory grades
- (3) Professional skills course
- Promotion of the acquisition and transmission of more advanced specialist technology and technical skills

### **Global Response**

In a world where globalization is advancing rapidly, where staffing strategies take no account of nationality, and where frequent conflicts present dangers to operations overseas, Yazaki is pressing ahead with human resource development from a global perspective and optimal personnel deployment.

- (1) Utilization of human resources regardless of nationality
  - Education and training of global personnel
  - Breaking barriers of nationality to recruit talented people (international staff transfer)
- Rapid fostering of Japanese staff with ability to function effectively in a multicultural environment
- (2) Fair and transparent system for international transfers of staff

Standardization of rules for international transfers
 Fair contracts and evaluation conditions

- (3) Overseas crisis management system for high conflict areas
  - Strict implementation of Yazaki Group overseas crisis management system

### Labor Relations

The Yazaki Employee Labor Union, created in 1963, celebrates its landmark 40th anniversary this year. During this period, leaders of the Union and management have organized the Central Union and Management Conference, monthly labor committee meetings and regional union meetings, in an atmosphere of mutual trust. Acting as the two sets of wheels of a single vehicle, management and the Union work with a mutual understanding and exchange of information covering a broad range of topics including the full scope of management and working conditions with the rest of the company.

### **Adventure School**

Started in 1993 as one component of the new employee training program, the Adventure School aims to encourage emotional and mental strength and to foster creative people able to adapt to different cultures. In its early years, it consisted of a voluntary two-week homestay in Canada prior to company induction. Between 1996 and 2000, all new recruits took part in a sixweek homestay in Samoa, New Zealand, Australia, Canada, or the United States. Under the Yazaki Scholarship Program adopted in 2001, recruits have been able to participate in a sixmonth training program overseas. Yazaki grants participants an unpaid leave of absence to join the program, and covers the basic program costs such as roundtrip airfare and homestay accomodation. In most cases, the individual sets his or her Adventure School goals and develops a plan of action, decides which country to carry out the plan in, and takes responsibility for most aspects and outcomes of the program. The system is based on the idea that the recruits will work together and seek advice from a non-Japanese counselor but will draft their own training plan and implement it according to content and a timeframe chosen to suit their own needs. Between its inception in 1993 and 2002, 595 employees have participated in the Adventure School Program.



New recruits learn to sail during a 10-day training session (Australia)

### **Global Training System**

In 1996, Yazaki introduced the Global Training System with the aim of enabling potential candidates for local management positions at overseas affiliates to acquire skills in the Japanese language, corporate culture, and business practices. During their year in Japan, the trainees take part in homestays, visit kindergartens and elementary schools, and participate in local events as a way of absorbing Japanese life, language, customs and culture. Trainees also get to know and interact with participants from other countries. Upon returning to their own countries, Global Trainees are able to bring a new perspective, new skills, and valuable experience back to the workplace, and a sense of globalism to their activities worldwide. In FY2003, eighteen participants from fourteen factories and offices in eight countries were hosted, bringing the cumulative total to 108 participants so far.



Global Trainees on a visit to a Yazaki factory

#### Summer Camp

Yazaki has organized a Japan-based summer camp for domestic employees' children in their fifth and sixth years of elementary school every year since 1977, and an overseas summer camp for employees' children in their second year of junior high school annually since 1985. These camps were begun with the aim of giving children, with their whole lives ahead of them, the experience of new insights into a different culture, but it has also proved to be valuable training in human interaction and expanded the horizons of the spirited young employees who participate as camp leaders.

#### Nationality of Global Training System Participants (1996-2000)

Country	No. of participants
United States	12
Mexico	19
Brazil	1
Colombia	3
China	6
The Philippines	22
Thailand	14
Indonesia	5
Vietnam	1
Australia	3
Samoa	8
Slovakia	11
Portugal	1
Turkey	1
Belgium	1
Total	108

■ No. of Summer Camp Participants by Category and Type of Camp (2000)

Type of camp	Japan-based summer camp	Overseas summer camp
Participants	Children of Japan-based employees	Children of Japan-based employees
First year (no. of participants)	1977 (26)	1985 (18)
Cumulative total no. of participants	4,394	2,945



First overseas summer camp, Thailand

Management

Environmental Communication

Global Communication

# Human Communication

### Summer Camp in Japan

Yazaki has held Summer Camps in Japan every year since 1988 for the children of local staff of overseas affiliates and has hosted a cumulative total of 1,085 children free of charge. Children interested in participating apply and are selected by local staff. The camp began with a proposal from the present Yazaki Chairman, who said that the younger the participant, the greater the eventual benefits of international exchange and experiencing a different culture. Not only the children but also the young employees who volunteer to serve as camp leaders gain valuable experience that enhances their knowledge of the world.

The 16th Summer Camp in Japan was held from July 20-26, 2003. 111 participants from eighteen countries were hosted, and were supported by twenty-five local staff from overseas affiliates and forty-two members of Yazaki Japan staff including Global Trainees. Camp participants experienced Japan from one of two program locations, Tokyo or Kyoto, and on the last day gathered at Ikkyuso Guesthouse, a Yazaki hospitality facility in Gotemba.

At the end of the party, Chairman Yazaki left this message for the children about to return to their respective countries, "I want you to learn the importance of being able to get along with people of any nationality. To do that, what you need is an attitude of caring about people. That is the most fundamental thing."





Kyoto program group



Tokyo program group

Team Members Look Back



Thank you for a valuable experience that could not have been gained in everyday life Numazu Factory

Haruka Kawamoto

I had the opportunity to make contact with many different cultures in the

space of a week. As it was our first meeting and we were all of different nationalities, at first the language barrier meant we had a lot of trouble communicating, but little by little we got around the problem and started enjoying ourselves. But I think that if I knew more English, which is the language of world communication, we would not have had to spend so much time sorting out problems. This is the kind of experience you cannot imagine in everyday life. For children and adults alike, it was a very valuable experience. I think it shows a corporate culture of a kind that is not found in other companies.



One week that makes up for half a year of effort General Affairs and Personnel Division, International Human Resources Department

Joint statement from office staff

As the office responsible for building the event up from zero, at first we were not sure where to start. But we also realized that it presented an excellent opportunity to make simultaneous contact with all our Yazaki Group colleagues spread around the world and to meet them face to face. Interacting with the children who come to Japan from around the world provides a special stimulus not normally enjoyed in everyday working life, and every year we find ourselves moved at the sight of children making friends across the barrier of language. The week seems to pass in an instant, but when we see the children smile we feel that all the effort that goes into over six months of preparation has been worthwhile.

## As a Company that Cares about People, Yazaki's Greatest Mission is to Protect Employment

Yazaki works actively on new business development to safeguard jobs as part of its efforts to create a worry-free workplace environment in the spirit of Caring About People.

### **Creating Employment — New Business Development by Affiliated Companies**

To safeguard employment at affiliated companies in response to the erosion or hollowing out of the domestic manufacturing industry, Yazaki is working to develop new business opportunities. In the process of new business development, options are studied not only for whether they fulfill corporate social responsibilities, but also for the extent to which they allow us to act as a socially useful enterprise that avoids burdening the environment and benefits the local community. As of August 2003, twenty-five affiliated companies had established new businesses employing 234 people, mainly in the nursing care, recycling, and service sectors.



### **Nursing Care**

Labor-intensive operations and a high proportion of women in the workforce characterize Yazaki's manufacturing affiliates throughout Japan. With the aging of society nationwide, a preliminary survey showed that there was strong interest in nursing care and a positive attitude toward gaining relevant qualifications, and that more than half of Yazaki employees wished to be considered for employment in the new business. Given this background, Yazaki set about building the new business in 2000, by laying the internal groundwork system of obtaining qualifications in social welfare, home help, and related areas. As of August 2003, eight affiliated companies have begun operations in the nursing care field.

### Recycling

In 2001, Yazaki set up a business based on re-use of toner cartridges for laser printers at Fujinomiya Parts Co., Ltd. Toner cartridges are consumable items that need to be replaced three to four times a year. When the whole cartridge is replaced with a new one, it becomes a waste product. In the re-use business, empty toner cartridges are collected, dismantled, cleaned, and component parts replaced. They are then refilled with toner, inspected for quality, and returned to the customer. In this way, the cartridge unit can be reused three to five times, contributing to the recycling of resources. In

#### Content of New Businesses

Name of business	Description	No. of bases (Aug. 2003)
Nursing care business	Home-visit nursing, day-care center nursing, live-in nursing care, sale of nursing care appliances, other	8
	Re-use of toner cartridges	1
Recycling	Recycling of gas meter material	8
business	Recycling of food waste as fertilizer	1
	Recycling of used paper	1
	Gas heater safety inspection and maintenance	1
Service	Insurance agency	22
businesses	ETC device installation	6
	Installation and maintenance of gas and solar-powered water heating systems	8

April 2003, the cartridge reuse processing line was expanded.

### Service

A service business to install the vehiclemounted ETC (electronic toll-collection) devices manufactured by Yazaki was begun in 2002. Having obtained the license required to install and set up the devices, six affiliates are now engaged in the business. Meanwhile, a different business involved in installation, servicing, and safety maintenance of Yazaki gas appliances and air-conditioning equipment is also under development and as of August 2003, eight affiliates were actively involved in this area.





Management

Environmental Communication

Global Communication

# Social Communication

## **Step by Step from Community Activities to Social Contribution**

With the aim of establishing a harmonious and mutually beneficial relationship with local communities, Yazaki is active in environmental preservation, beautification and other voluntary activities within and around those communities. Yazaki also works to contribute to society in a wider context through other ways, such as the promotion of scientific research projects and support to non-governmental organizations.



The Grants for Research presentation ceremony

# The Yazaki Memorial Foundation for Science and Technology

As a social project to mark the 40th anniversary of the company's foundation, the Yazaki Memorial Foundation for Science and Technology was established in 1982. The foundation provides research assistance to promote progress in science and technology and supports international exchange. Promotion of science and technology has provided a powerful driving force for the development of the Japanese nation. However, Japan today finds itself in a very difficult international climate, and faces an accumulation of difficult issues such as a greater need for conservation of energy and resources and intensified international competition. To overcome these and other problems foreseeable in the future, and to continue contributing to international society while achieving development of industry and stabilization of its livelihood, Japan needs to promote research and development in new areas of science and technology and will also be required to broadly apply the fruits of that research.

The Yazaki Memorial Foundation for Science and Technology provides assistance for research and international exchange and supports research projects likely to make great contributions in fields relating to energy, new materials, and information. As of 2002, 386 recipients have been awarded Grants for Research (out of 1,880 applications) and 376, Grants for International Exchange (out of 1,163 applications). In 2002, the 20th year of the grant program, the Foundation awarded Grants for General Research to six people (three years each) and Grants for Research Encouragement to ten people (one year each). The projects selected include the development of a microcapsule-based highly-functional thermal storage material, and the production and use of a biomechanically modified electrode using nanospace technology as an environmentfriendly catalyst.

Applications were also solicited for Grants for Specific Research for 2003 on the theme "research into new environmentally-friendly materials with high recyclability" and research into increased capabilities of biosensors.

### Cooperation with NGOs and Other Organizations

Even organizations such as UNICEF and the Red Cross have difficulty providing aid to the villages of the inland desert areas of Africa. Yazaki provided cooperation and activity funding to the NGO Save the Africa which provides assistance to villagers in obtaining daily necessities and medical treatment mainly in such isolated villages. Yazaki also provided funding for Wildlife, a magazine published by the NPO Nature Film Network with the aim of saving flora and fauna threatened with extinction.



A four-wheel drive vehicle, vital for movement in the desert



NGO staff working with villagers on a farm

### Contributions to Society Tochigi Factory

With the participation of all factory staff, the Tochigi Factory began collecting aluminum cans to be donated to welfare organizations. To mark Zero Waste Day on May 30, a cleanup campaign was held in the area around the factory. Empty cans and other litter were picked up from

the streets and curve mirrors (large, beveled mirrors atop posts that allow drivers to see traffic approaching at a right angle) were cleaned.



Cleanup in the area around the factory

### **Daitou Factory**

Every April, during the spring Nationwide Traffic Safety Campaign, the Daitou Factory staff clean curve mirrors all over the municipality of Daitou and collect empty cans from the area surrounding the factory. This has been carried out as an exercise in volunteer activity education for new recruits since 1994.



Employees cleaning curve mirrors

#### **Ohama Factory**

The Ohama Factory cooperated in an educational scheme for children organized by the Shizuoka Industrial Waste Management Association. Sixteen fourth-graders and accompanying parents were invited from the neighboring municipality of Asaba on a factory tour during their summer vacation. This offered a great opportunity for members of the community to see for themselves what kind

of industrial waste is generated at the factory, how it is appropriately treated and disposed of, and what recycling efforts are being made.



Elementary school students on a factory tour with their parents

### Susono Factory

Numazu Factory

In June, August and October 2002, regular cleanup activities were conducted in the area surrounding the factory, in which a total of 203.9 kilograms of empty cans and bottles, combustible garbage, and other litter was collected. The Susono Factory staff also participated again this year in a river cleanup project planned by the Water Quality Control Council considering Kano River System and in a voluntary cleanup organized by the Gotemba City Water Quality Protection Council.

As in the previous year, the Numazu Factory participated in the Environment Fair organized by Numazu City in February. Waste

reduction measures and a wide range of

other aspects of environmental action of the

factory were presented to local residents and

questions from children were answered. In

June, following a request from the local Ooka

Elementary School for assistance in the study

of waste treatment, four elementary school

students were invited to tour the factory and

have their questions answered. Some days later, a letter was received in which students had made comments including: "we learned a lot of different things by going to Yazaki Electrical Wire," and "I was really impressed

to see how things are recycled and used again." The staff of the Numazu Factory is glad to have been of help to the children.



Rain continued all day for this year's river cleanup



Young reporters come to gather information at the Numazu Factory

#### **Haibara Factory**

In August every year, in order to encourage an even stronger relationship among those involved in the factory operation, employees, their families, business partners and local residents are invited to take part in a summer evening festival. In December, a Christmas concert was given for the first time. This grew out of a plan to show family members what kind of work their fathers and mothers did, and

ended in the holding of an after-work Christmas concert to which local residents were also invited.



Company open day for families



Christmas concert to which local residents were also invited

# Environmental Chronology

Yazaki Events	1	$\frown$			National & World Events
Recycling of conner materials begun with introduction of Thomas furnace in manufacture	_(.	1957			
of electric wires		1061			Equination of World Wildlife Fund
		1961		-	Publication of Silent Spring by Rachel Carson
<ul> <li>Collection begun of used copper, aluminum, and paper for use as raw materials for Yazaki products</li> </ul>	-	1964 1967		$\vdash$	■●The oil tanker Torrev Canvon runs aground
					Enactment of Basic Law for Environmental Pollution Control
		1968			Europe is the cause of acid rain in Scandinavia
Introduction of non-polluting DEP Din Forming Process (continuous casting) at Varaki		1060			Enactment of Air Pollution Control Law     Enactment of Noise Regulation Law
Electric Wire Co., Ltd.		1909			
•Sales release of "Dondo" waste incineration furnace featuring reduced smoke pollution		1970	0.		<ul> <li>Enactment of Law Relating to the Prevention of Marine Pollution and Maritime Disasters (repeal of Law for Prevention of Oil Spills at Sea)</li> </ul>
					Enactment of Water Pollution Control Law and Waste Management and Public
Establishment of used electric wire recycling company Iwao Industries Co., I td.		1971			Cleansing Law —•Establishment of the Environment Agency
Launch of CFC-free modular type absorption chiller-heater Aroace					
Environmental Affairs Committee (Production Division)					
		1972	•	-	Elimits to Growth published by the Club of Rome     Inited Nations Conference on the Human Environment held in Stockholm
					Announcement of Law on the Preservation of the Natural Environment
		1973			Japanese government publishes first White Paper on environment     MARPOL treaty     Amendment of Air Pollution Control Law
Completion of Solar House, containing world's first solar-powered heating, air-conditioning,	<b>-</b>	1974			······
and hot-water supply system		1975		_	•Washington agreement (CITES : the Convention on International Trade in
					Endangered Species of Wild Fauna and Flora)
					by Dumping of Wastes and Other Matter
Launch of solar-powered water heating system Yuwaita		1976	•	1	Ramsar Convention on Wetlands: protection of migratory birds     Enactment of Vibration Regulation Law
Launch of solar Blue Panel, heat insulation panels for heating, air-conditioning and hot-water	- <b> </b> •	1977	•	⊢	-•United Nations Conference on Desertification (UNCOD) held
supply systems; sales of hot-water powered chiller-heater Aroace Resource- and energy-saving office established (Sendai Branch Office)		1979	•	1	•Nuclear power electricity generator accident at Three Mile Island
Launch of Aroace gas fired double-effect chiller-heaters		1980			• Interduction of an endetion on total NOrmaliuma
system for use in snowbound areas	<b>_</b> .	1981	•		<ul> <li>Introduction of regulation on total NOx volume</li> </ul>
Establishment of Yawara Industries Co., Ltd. for recycling of end-of-life wooden electric wire spools		1007			
Foundation of Yazaki Memorial Foundation for Science and Technology	Т	1982			
Aroace modular controller awarded Outstanding Energy-saving Product Prize for its prize as		1983			
Sales release of Achichi solar-powered hot-water supply system for domestic use					
Formulation of pollution control measures completed; dissolution of Yazaki Group Environment Committee and Environment Department to accompany transfer to system of					
response based on individual factories and offices					
Sales release of Acemic, which protects against damage by static electricity and	<b>-</b>	1985			Heisinki Protocol: reduction of SOX emissions
electromagnetic waves		1097			Enactment of Law on the Protection of Endangered Animal and Plant Species
Development of electric wire using non-malogen me-retardant insulation	T.	1967			Montreal Protocol on Substances that Deplete the Ozone Layer
		1988	•	-	Enactment of Law Concerning the Protection of the Ozone Layer     Establishment of Intergovernmental Panel on Climate Change (IPCC)
Sales release of EE-Solar and Advance Solar slim-line solar-powered domestic hot-water	<b>-</b>	1989	•	-	Basel Convention on the Control of Transboundary Movements of Hazardous Wastes
supply systems LPG cogeneration facility installed at Yazaki guesthouse(s)					•Exxon valdez runs aground
Establishment of Yazaki Scholarship Foundation in Manila to mark opening of EMI in the Philippines     Establishment of Yazaki Scholarship Foundation in Manila to mark opening of EMI in the Philippines		1990	D:		Formulation of Guidelines for Measures to Prevent Global Warming     Forschenden of the Law for the Promotion of Litilization of Recycled Pascures
Aroace becomes the first device in the industry to be approved by Tokyo Metropolitan		1992		-	<ul> <li>Rio Earth Summit (Framework Convention on Climate Change, Forest Principles,</li> </ul>
Government Bureau of the Environment as a Tokyo Metropolitan Commercial Small Boiler or Other Combustion Device with Low NOx Emissions					Convention on Biodiversity, Agenda 21)
Establishment of Environment and Safety Department					
Establishment of Environmental Safety Committee	<b>-</b>	1993 1994			Enactment of the Basic Environment Law     Formulation of Basic Environment Plan
		1995	•	-	Framework Convention on Climate Change, first Conference of the Parties (COP1)     Elimination of designated CECs
Launch of lead-free battery cables	<b>-</b>	1996	•	-	●Amendment of Air Pollution Control Law and of Water Pollution Control Law
Launch of an improved and lightweight solar-powered water heater model Acquisition of ISO/DIS 14001 certification by Tenryu Factory					<ul> <li>International standardization of ISO 14001 regulations</li> </ul>
Formulation of Yazaki Global Environment Charter	- <b> </b> •	1997	•	+	Amendment of Waste Management and Public Cleansing Law
Acquisition of ISO 14001 certification at Numazu and Susono Factory Introduction of LCA in electric wire divisions	<b>_</b> .	1998	•	$\vdash$	<ul> <li>meeting of parties to the Framework Convention on Climate Change in Kyoto (COP3)</li> <li>Enactment of Law for Recycling of Specified Kinds of Home Appliances</li> </ul>
Launch of Aroace air conditioning systems					
Launch of Ecology Cables using polyethylene-based material					
Acquisition of ISO 14001 certification by Fuji Factory, Ohama Factory, Haibara Factory,					
Introduction of LCA in automotive wiring harnesses divisions	- <b> </b> •	1999	•	+	Enactment of Law Concerning Special Measures against Dioxins
Launch of environmentally friendly driving control system digital tachographs Launch of lead-free automotive electric wire and automotive vinvl tabe					<ul> <li>Enactment of Pollutant Release and Transfer Register (PRTR) Law</li> </ul>
Sales release of environmentally friendly adhesive tape made with polyethylene-based fire-retardant material					
Acquisition of ISO 14001 certification by Shimada Factory and three overseas bases		2000	0.	$\vdash$	Enactment of Basic Law for Establishing the Recycling-Oriented Society
					Enactment of Containers and Packaging Recycling Law     Masting of partice to the Eramework Convertion on Climate Change in The Harver (CORC)
Launch of high-efficiency Aroace (energy-saving model)	<b>-</b>	2001	•	$\vdash$	Meeting in Bonn of parties to the Framework Convention on Climate Change in the rague (COPB)
Reorganization of Environment and Safety Department as the Environmental Affairs Division Establishment of Yazaki Environmental Committee, Environment Product Design					of COP6)
Assessment Committee and Production Environment Committee					
<ul> <li>Acquisition of ISO 14001 certification by Tochigi Factory, Y-CITY, Washizu Factory, Ohama Factory and twelve overseas bases</li> </ul>					
Review of Yazaki Global Environment Charter, formulation of five-year Yazaki	- <b>!</b> ·	2002	•	$\vdash$	Introduction of the Automobile Recycling Law
Environmental Action Plan and start of implementation • Acquisition of ISO 14001 certification by seven overseas bases					<ul> <li>Meeting of World Business Council for Sustainable Development (Johannesburg Summit)</li> </ul>
Installation of halogen free components in vehicles Survey to check for coil collution at all monutacturing establishments	+	2003	•	$\vdash$	Enactment of Soil Pollution Law      Enactment of end-of-life (ELV) directive     Enactment of W/EE (ELL) Directive on Waster Electrical and Electrical Englished
Conversion to lead-free electric wires and cables					Enactment of RoHS (EU Directive on the Restriction of the Use of Certain Hazardous
<ul> <li>Installation of easy-to-dismantle wiring harnesses in automobiles</li> <li>Acquisition of ISO 14001 certification by ten overses base.</li> </ul>				/	Substances in Electrical and Electronic Equipment)
- requisition of 150 14001 certaincation by ten overseas bases		$\frown$	/		

### **Numazu Factory**

Location: Ooka 2771, Numazu-shi, Shizuoka-ken
 Main products: Electrical wires and cables

#### • Air Pollution Data (Conforming to the Air Pollution Control Law and Regional Agreements)

Substance	Equipment	Control value <sup>1</sup>	Actual measurement <sup>2</sup>
NOx	Aluminum melting furnace	111.6	50.0
PM	Aluminum melting furnace	0.07	0.01
SOx	Aluminum melting furnace	0.00	0.00

Control values are shown in ppm for NOx, g/m²N for PNA, and m²N/Hr for SOx.
 Actual measurements of NOx and PM refer to maximum values with respect to the control values for each particular picce of targeted equipment.

Water Pollution Data (Conforming to the Water Pollution Prevention Law and Prefectural Ordinances)

		Actual measurement					
Substance	Control value	Maximum	Average				
pH	6.0 - 8.5	7.8	7.6				
BOD	10 (3)	6.8	2.6				
SS	10 (3)	4	2.5				
N-hexane	3.0 or less	0.8	0.7				
Copper	0.3 or less	0.25	0.04				
Note 1. Control values show the highest value (daily average) Note 2. All figures are shown in mg/l, except for pH Abbreviations							

ADDREVIATIONS \*PH: Hydrogen ion concentration \*BOD: Biochemical oxygen demand \*SS: Concentration of suspended solids in water

#### • PRTR-Target Substances

	Volume	Volu	ıme relea	ased	Volume transferred	Volume recycled	Volume removed	Volume consumed	
Substance	handled	Air	Water	Interred on site	Waste				
Bisphenol A type epoxy resin	54,300	-	-	-	740	-	-	53,560	
Lead	92,400	-	-	-	-	-	-	92,400	
Antimony and its compounds	21,000	-	-	-	-	-	-	21,000	
Bis (2-ethylhexyl) phthalate	694,000	-	-	-	-	-	-	694,000	
*\//ithin the range that mu	Within the range that much be reported by law								

\*Within the range that must be reported up saw \*Unit: kg/year \*Volume recycled: Includes that recycled for a fee or for free and/or money back recycling \*Volume recycled: Includes that recycled for a fee or for free and/or money back recycling \*Volume recycled: Includes that recycled for a fee or for free and/or money back recycling \*Volume recycled: Includes that recycled for a fee or for free and/or money back recycling \*Volume recycled: Includes that recycled for a fee or for free and/or money back recycling \*Volume recycled: Includes that recycled for a fee or for free and/or money back recycling \*Volume recycled: Includes that recycled for a fee or for free and/or money back recycling \*Volume recycled: Includes that recycled for a fee or for free and/or money back recycling \*Volume recycled: Includes that recycled for a fee or for free and/or money back recycling \*Volume recycled: Includes that recycled for a fee or for free and/or money back recycling \*Volume recycled: Includes that recycled for a fee or for free and/or money back recycling \*Volume recycled: Includes that recycled for a fee or for free and/or money back recycling \*Volume recycled: Includes that recycled for a fee or for free and/or money back recycling \*Consumption volume: The volume of substances that are changed to other substances through chemical reactions, or are contained in or accompanied with products and transported outside the particular plant reactions.

Note: Control values indicate the values stipulated by law, prefectural ordinances or regional agreements — indicates not stipulated by law or not measured

### Ohama Factory

 Location: Kunikane 1360, Daitou-cho, Ogasa-gun, Main products: Junction blocks, relay blocks, terminals for wiring harnesses

### Water Pollution Data (Conforming to the Water Pollution Prevention Law and Prefectural Ordinances)

		Actual measurement					
Substance Control value		Maximum	Average				
pH	5.8 - 8.6	7.71	7.52				
BOD	20	7.2	3.08				
COD	(20)	11.1	3.35				
SS	30	3.6	1.85				
Inorganic oil	3	Less than 1.0	Less than 1.0				
Organic oil	30	Less than 1.0	Less than 1.0				
Copper	1	Less than 0.2	Less than 0.2				
Fluorine	15	Less than 0.2	Less than 0.2				
Zinc	1	0.36	Less than 0.05				
Soluble iron	10	Less than 0.3	Less than 0.3				
Soluble manganese	10	Less than 0.1	Less than 0.1				
Total nitrogen	10	2.5	2.5				
Total phosphorus	0.1	Less than 0.05	Less than 0.05				
Lead	0.01	Less than 0.01	Less than 0.01				
Note 1 Control values show the highest value (daily average)							

\*Note 2. All figures are shown in mg/l, except for pH Abbreviations

Abbreviations \* pH: Hydrogen ion concentration \* BOD: Biochemical oxygen demand \* COD: Chemical oxygen demand \* SS: Concentration of suspended solids in water

There are no designated facilities subject to the Air Pollution Control Law No substances subject to the PRTR Law are handled, or volumes handled are less than those that require reporting

Note: Control values indicate the values stipulated by law, prefectural ordinances or regional agreements — indicates not stipulated by law or not measured

### Shimada Factory

 Location: Yokoi 1-7-1, Shimada-shi, Shizuoka-ken
 Main products: Automotive instruments, tachographs, taximeters

### Water Pollution Data (Conforming to the Water Pollution Prevention Law and Prefectural Ordinances)

		Actual measurement			
Substance Control value		Maximum	Average		
pH	5.8 - 8.6	7.5	7.3		
BOD	25 (20)	11.0	4.67		
SS	60 (40)	7.6	3.62		
Inorganic oil	5	-	Less than 0.5		
Copper	1	0.2	Less than 0.1		
Zinc	3	0.1	Less than 0.05		
Soluble iron	10	Less than 0.1	Less than 0.1		
Total chromium	2	Less than 0.05	Less than 0.05		
Chromium(VI) compound	0.5	Less than 0.05	Less than 0.05		
Dichloromethane	0.2	Less than 0.002	Less than 0.002		

\*Note 1. Control values show the highest value (daily average) \*Note 2. All figures are shown in mg/l, except for pH

\*bbreviations \*pH: Hydrogen ion concentration \*BOD: Biochemical oxygen demand \*SS: Concentration of suspended solids in water

PRTR-Target Substances

	Volume	Volu	Volume released		Volume transferred	Volume	Volume	Volume
Substance	handled	Air	Water	Interred on site	Waste	recycled	cycled removed	
Xylene	7,220	6,500	-	-	720	-	-	-
Dichloromethane	14,400	13,000	-	-	1,400	-	-	-
Water-soluble copper salts	63,000	-	_	_	_	63,000	_	-
Toluene	7,780	7,000	-	-	780	-	-	-

 Toluene
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 7,000
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 \*Within the range that must be reported by law
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There are no designated facilities subject to the Water Pollution Prevention Law

Note: Control values indicate the values stipulated by law, prefectural ordinances or regional agreements — indicates not stipulated by law or not measured

### Susono Factory

- Location: 1500 Mishuku, Susono-shi, Shizuoka Prefecture Main products: Low-tension automotive wires, wiring harnesses, and other types of automotive wires

#### PRTR-Target Substances

	Volume	Volume released			Volume transferred	Volume	Volume	Volume
Substance	e handled Air		Water	Interred on site	Waste	recycled	removed	consumed
Antimony and its compounds	20,886	-	-	-	742	-	-	19,153
Bis (2-ethylhexyl) phthalate	8,188	-	-	-	8	467	_	7,713
bis (2-80/mexh) primate 8,168 – – – 8 467 – 7,713 "Within the range that must be reported by law "Unit: Kg/year "Volume rencycled: Includes that recycled for a fee or for free and/or money back recycling "Volume rencycled: Includes that recycled for a fee or for free and/or money back recycling "Volume rencycled: Includes that recycled for a fee or for free and/or money back recycling "Volume rencycled: Includes that recycled for a fee or for free and/or money back recycling "Volume rencycled: Includes that recycled and plant." "Consumption volume: The volume of substances that are changed to other substances through charmical activities or as a constitution of a more monastical with more ducts and transcorted outling the								

particular plant

There are no designated facilities subject to the Air Pollution Control Law and Water Pollution Prevention Law

### Hamamatsu Factory

Location: Higashi-machi 740 Hamamatsu-shi, Shizuoka-ken
 Main products: Absorption chillers, fan coil units and solar water heating equipment such as the *Aroace* line

• Air Pollution Data (Conforming to the Air Pollution Control Law and Regional Agreements)

Substance	Equipment	Control value <sup>1</sup>	Actual measurement <sup>2</sup>
NOv	3t Boiler	150	99
NUX	4t Boiler	150	78
DM	3t Boiler	0.10	0.01
FIVI	4t Boiler	0.10	Less than 0.01
Control values are show	in in many fear NIOus or (m3NI fear DAA	and m3N//Us fee COV	

Control values are snown in ppm for NOX, gm<sup>2</sup>N for PM, and m<sup>2</sup>N/H for SOX.
 Actual measurements of NOX and PM refer to maximum values with respect to the control values for each particular piece of targeted equipment.

#### • Water Pollution Data (Conforming to the Water Pollution Prevention Law and Prefectural Ordinances)

		Actual measurement			
Substance	Control value	Maximum	Average		
pH	5.8 - 8.6	8.2	7.5		
BOD	25 (20)	6.2	2.8		
COD	160 (120)	23.0	14.0		
SS	200 (150)	17	5.8		
Inorganic oil	5	Less than 1	<i>←</i>		
Organic oil	30	Less than 1	←		
Copper	3	0.14	Less than 0.066		
Fluorine	8	1.8	Less than 0.7		
Zinc	5	0.47	Less than 0.154		
Soluble iron	10	0.2	Less than 0.131		
Soluble manganese	10	Less than 0.1	$\leftarrow$		
Total nitrogen	120 (60)	8.0	$\leftarrow$		
Total phosphorus	16 (8)	4.88	<i>~</i>		
Lead	0.1	Less than 0.02	Less than 0.02		

\*Note 1. Control values show the highest value (daily average) \*Note 2. All figures are shown in mg/l, except for pH

ADDFeviations \* PH: Hydrogen ion concentration \* BOD: Biochemical oxygen demand \* COD: Chemical oxygen demand \* SS: Concentration of suspended solids in water

No substances subject to the PRTR Law are handled, or volumes handled are less than those that require reporting

Note: Control values indicate the values stipulated by law, prefectural ordinances or regional agreements — indicates not stipulated by law or not measured

### Haibara Factory

Location: Nunokihara 206-1, Haibara-cho, Haibara-gun, Shizuoka-ken
 Main products: Metal dies, Jastics, rubber, sintered alloys and other molded products

#### • Air Pollution Data (Conforming to the Air Pollution Control Law and Regional Agreements)

Substance	Equipment	Control value <sup>1</sup>	Actual measurement <sup>2</sup>
NOv	Boiler (CH-1-1)	150	81
NUX	Boiler (CH-1-2)	150	72
PM	Boiler (CH-1-1)	0.1	Less than 0.01
РМ	Boiler (CH-1-2)	0.1	Less than 0.01

Control values are shown in ppm for NOx, g/m<sup>3</sup>N for PM, and m<sup>3</sup>N/Hr for SOx.
 Actual measurements of NOx and PM refer to maximum values with respect to the control values for each particular picce of targeted equipment.

#### • Water Pollution Data (Conforming to the Water Pollution Prevention Law and Prefectural Ordinances)

		Actual measurement			
Substance	Control value	Maximum	Average		
pH	5.8 - 8.6	6.7	6.7		
BOD	120	6	2.3		
COD	120	13	7.7		
SS	150	14	4.3		
Inorganic oil	5	Less than 1	←		
Organic oil	30	Less than 1	←		
Copper	3	Less than 0.05	←		
Fluorine	8	Less than 0.2	←		
Zinc	5	Less than 0.05	←		
Soluble iron	10	Less than 0.1	-		
Soluble manganese	10	Less than 0.1	←		
Total nitrogen	60	29.5	29.5		
Total phosphorus	8	3.45	3.45		
Lood	0.1	Loop then 0.01			

### \*Note 1. Control values show the highest value (daily average) \*Note 2. All figures are shown in mg/l, except for pH

Abbreviations \* pH: Hydrogen ion concentration \* BOD: Biochemical oxygen demand \* COD: Chemical oxygen demand \* SS: Concentration of suspended solids in water

#### PRTR-Target Substances

	Volume handled	Volume released			Volume transferred	Volume	Volume	Volume
Substance		Air	Water	Interred on site	Waste	recycled	removed	consumed
Toluene	17,700	15,940	-	-	1,760	-	-	-

Vithin the range that must be reported by law
Vithin the range that must be reported by law
Unit: kg/year
Volume recycled: Includes that recycled for a fee or for free and/or money back recycling
Volume recycled: The volume of substances that are incinerated, neutralized, broken down, or changed to
other substances in the particular plant
Consumption volume: The volume of substances that are changed to other substances through chemical
reactions, or are contained in or accompanied with products and transported outside the particular plant

Note: Control values indicate the values stipulated by law, prefectural ordinances or regional agreements — indicates not stipulated by law or not measured

### **Fuji Factory**

 Location: Hodosawa 652, Gotemba-shi, Shizuoka-ken 412-0046
 Main products: VVF cable, electric wires for automotive and mechanical use

#### • Air Pollution Data (Conforming to the Air Pollution Control Law and Regional Agreements)

Substance	Equipment	Control value <sup>1</sup>	Actual measurement <sup>2</sup>
NOv	Melting furnace	180	32
NOX	Boiler	150	58
DM	Melting furnace	0.2	0.04
PIVI	Boiler	0.1	Less than 0.01
50×	Melting furnace	11	Less than 0.6
30X	Boiler	1	Less than 0.02

Control values are shown in ppm for NOx, g/m<sup>3</sup>N for PM, and m<sup>3</sup>N/Hr for SOx.
 Actual measurements of NOx and PM refer to maximum values with respect to the control values for each particular picce of targeted equipment.

#### Water Pollution Data (Conforming to the Water Pollution Prevention Law and Prefectural Ordina

		Actual measurement			
Substance	Control value	Maximum	Average		
pН	5.8 - 8.6	8.3	7.91		
BOD	160	10	2.76		
COD	COD 160		1.38		
SS	SS 200		1.3		
Mineral oil	5	0.7	0.51		
Copper	3	0.086	0.0287		
Lead	0.1	0.044	0.0143		
Thiram	0.06	Less than 0.0006	Less than 0.0006		

\*Note 1. Control values show the highest value (daily average) \*Note 2. All figures are shown in mg/l, except for pH

Abbreviations \*PH: Hydrogen ion concentration \*BOD: Biochemical oxygen demand \*COD: Chemical oxygen demand \*SS: Concentration of suspended solids in water

#### PRTR-Target Substances

	Volume	Volume released			Volume transferred	Volume	Volume	Volume
Substance	handled	Air	Water	Interred on site	Waste	recycled	removed	consumed
Antimony and its compounds	61,500	-	-	-	960	-	-	60,540
Xylene	5,100	5,100	-	-	-	-	-	-
Decabromodiphenyl ether	6,200	-	-	-	450	-	-	5,750
Toluene	36,100	31,000	-	-	5,100	-	-	-
Lead and its compounds	270,000	_	_	_	810	_	_	269,190
Bus phthalate	3,700,000	-	-	-	6,200	-	-	3,693,800

\*Within the range that must be reported by law \*Unit kg/year Volume recycled: Includes that recycled for a fee or for free and/or money back recycling \*Volume removed: The volume of substances that are incinerated, neutralized, broken down, or changed to other substances in the particular plant \* Consumption volume: The volume of substances that are changed to other substances through chemical reactions, or are contained in or accompanied with products and transported outside the particular plant

Note: Control values indicate the values stipulated by law, prefectural ordinances or regional agreements — indicates not stipulated by law or not measured

### **Tenryu Factory**

Location: Minamikashiwa 23, Futamata-cho, Tenryu-shi, Shizuoka-ken
 Main products: Gas meters, LPG security systems, gas security systems

#### Air Pollution Data (Conforming to the Air Pollution Control Law and Regional Agreements)

Substance	Equipment	Control value <sup>1</sup>	Actual measurement <sup>2</sup>	
NOx	Aluminum melting furnace	180	24	
PM	Aluminum melting furnace	0.20	Less than 0.001 Less than 0.006 2.4 Less than 1.1	
SOx	Aluminum melting furnace	0.672		
Hydrogen chloride	Aluminum melting furnace	80		
Chlorine	Aluminum melting furnace	30		
Fluorine compounds Aluminum melting furnace		3	Less than 1.0	
1. Control values are show	n in ppm for NOx, g/m <sup>3</sup> N for PM,	m <sup>3</sup> N/Hr for SOx, g/m <sup>3</sup> N	for Hydrogen chloride,	

Control values are shown in plut of vOx, griff v for vox, in VV n for Sox, griff v for Hydrogen chorde, grim Vi for choine, and grim Vi for fluorine and its compounds.
 Actual measurements of NOx and PM refer to maximum values with respect to the control values for each particular piece of targeted equipment.

#### Water Pollution Data (Conforming to the Water Pollution Prevention Law and Prefectural Ordinances)

	-						
		Actual measurement					
Substance	Control value	Maximum	Average				
pH	5.8 - 8.6	8.2	7.9				
BOD	160 (120)	Less than 1.0	Less than 1.0				
COD	160 (120)	2.1	1.95				
SS	SS 200 (150) Less than						
Inorganic oil	5	Less than 2.5	Less than 2.5				
Organic oil	30	Less than 2.5	Less than 2.5				
Copper	Copper 3 Less than		Less than 0.01				
Fluorine	8	Less than 0.1	Less than 0.1				
Zinc	5 Less than 0.05		Less than 0.05				
Soluble iron	10	Less than 0.1	Less than 0.1				
Soluble manganese	10	Less than 0.1	Less than 0.1				
Total nitrogen	120 (60)	_	_				
Total phosphorus	16 (8)	_	_				
Lead	0.1	Less than 0.01	Less than 0.01				

\*Note 1. Control values show the highest value (daily average) \*Note 2. All figures are shown in mg/l, except for pH

Abb

\*DD: evaluations \*PH: Hydrogen ion concentration \*BOD: Biochemical oxygen demand \*COD: Chemical oxygen demand \*SS: Concentration of suspended solids in water

#### PRTR-Target Substances

		Volume	Volume released Volume transferred		Volume	Volume	Volume		
	Substance	handled	Air	Water	Interred on site	Waste	recycled	removed	consumed
	Xylene	13,590	12,700	-	-	890	-	-	-
	Toluene	6,330	6,000	-	_	330	-	-	-
*Within the range that must be reported by law									

\*Within the range that must be reported by Iaw \*Unit: kg/year \*Volume recycled: Includes that recycled for a fee or for free and/or money back recycling \*Volume recycled: The volume of substances that are incinerated, neutralized, broken down, or changed to other substances in the particular plant \*Consumption volume: The volume of substances that are changed to other substances through chemical reactions, or are contained in or accompanied with products and transported outside the particular plant

Note: Control values indicate the values stipulated by law, prefectural ordinances or regional agreements — indicates not stipulated by law or not measured

•At the following production sites, there are no designated facilities subject to the Air Pollution Control Law, Water Pollution Prevention Law and PRTR Law and no substances subject to these laws are handled.



Human Communication

Social Communication

Environmental Data

### **Independent Review**

To Mr. Yasuhiko Yazaki, Chairman Mr. Shinji Yazaki, President Yazaki Corporation

### October 17, 2003

Independent Review Comments on Yazaki Group's Social and Environmental Report

# Auo Aoyama Sustainability Certification Organization Co., Ltd.

### **Objective of Review**

The objective of this review is to express our independent view on the features, achievements, developments, and direction of the Group's approach towards social and environmental issues as well as the contents of the "Social and Environment Report 2003" (hereafter, the "Report"). Our comments are based on the following procedures.

- 1. Interview with the management (Chairman)
- 2. Inspection of the Y-CITY (Yazaki Corporation) and Numazu Factory
- 3. Review of the final Japanese draft of the Report

#### Our Comments

### 1. Efforts for Social Responsibility

The Group's mission statement includes the following vision statement; "One for all, all for one" and "To be a company needed by society." Based on these visions, the Group has continued its efforts, since its establishment, to develop and coexist with local communities and to respect local cultures at 95 overseas sites. For example, Yazaki EDS Vietnam, Ltd. established a part-time high school on the premises to offer classes for employees.

Japanese companies transferring their production sites to overseas have caused the hollowing-out of industry at home. However, the Yazaki Group intends to maintain employment by developing new businesses to avoid restructuring. It contributes to prevention of the hollowing-out issue.

The Group's has a management policy, which strives for achieving corporate social responsibilities by giving consideration for its employees and respect for the local communities. We hope to see further developments of efforts based on these policies.

#### 2. Efforts at the Numazu Factory

- (1) "My Target" Every employee sets quantitative targets for Q (product quality), C (cost), D (delivery due-date) and E (environment), and the achievements against the targets are evaluated on a monthly basis. This evaluation system on an individual basis, which includes the environmental aspect in addition to Q, C and D, can be regarded as a very progressive effort by a company.
- Wire College" "Wire College" was established to broadly educate employees on its operations. We hope that such education for employees is expanded to cover, wider a wider variety of subjects, including environmental issues, and proactively implemented throughout the Group.

### 3. Establishment of a Global System for Social and Environmental Information Collection

The Group has actively expanded business overseas and now has 95 overseas sites, which exceeds the number of domestic sites. Collection of social and environmental data at overseas sites has just started from 2003 and it is not comprehensive yet. We hope that a comprehensive data collection system covering environmental performance data may be established on a global basis.

Environmental information at domestic sites has been collected from 2002. Currently, environmental performance and environmental accounting data is collected from 14 production sites only. It is hoped that the scope of data collection will be expanded and a comprehensive information system using the Yazaki Intranet or other means will be established in the future.

Additionally, the Group has been conducting studies on soil contamination. We hope that disclosure of unfavorable information, such as information about cleanup of soil contamination at the Numazu Factory, may be done in the future.

These comments DO NOT express any of our views and/or opinions on the effectiveness and/or reliability of the collection and reporting process of the data included in the Report.

### **Editor's Postscript**

This is the second time the Yazaki Group Social & Environmental Report has been issued. As the significance of the report develops each year, this may be considered the first year of publication in the sense that substantive results from the Yazaki Group Environmental Management System have been reported. The entire editorial staff has made every effort to prepare a report that is easy to read and understand.

This year's report expresses the difficulties in establishing a group-wide environmental management system. We will strive to further consolidate our group structure, including domestic and overseas factories and offices and affiliated companies, and intend to improve our environmental performance as well as our Social & Environmental Report each year. We hope that this report meets your expectations.

There are still many challenges concerning the creation of the Yazaki Social & Environmental Report that need to be overcome, and it is our hope that you will direct us to points that we may have missed or that we have not addressed so that we can improve the report in the future. We look forward to receiving your opinions, comments and questions.

If you would like to share your thoughts about the Social & Environmental Report 2003, or have any related queries, please contact:

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Environmental Initiatives in Printing
 [Plate making] This report is compiled utilizing the Computer to Plate (CTP) method that eliminates the use of film for the plate-making process, thus reducing energy consumption, conserving resources and eliminating the use of alkaline developing solutions.
 [Paper] 100% recycled paper, with a whiteness level of 70% has been used. No chlorine is used for bleaching and no surface processing and special coating is applied.
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