

#### YASKAWA ELECTRIC CORPORATION

### ANNUAL REPORT 2010

[Year Ended March 20, 2010]



# PROFILE

Taking up the challenge to the new business domains of Environmental Energy and Robotics Human Assist



Since its founding in 1915, and based on its management principles of contributing to the development of society and the welfare of mankind through its business performance, Yaskawa Electric has provided continuing support for the key industries of the times from motors and factory automation to the mechatronics\* of today. As we approach 2015, the year in which we will celebrate 100 years of operation, we dedicate ourselves to the efficient use of green energy as well as to the establishment of a society wherein human beings and robots coexist through the use of technologies backed up with our mechatronic products boasting the world's top market share.

\* : Yaskawa Electric led the world in putting forward the term "mechatronics" in the late 1960s. This concept evolved when we combined our customers' machinery with Yaskawa's electronic products to create superior guality and function.



#### About the cover

The QMET DRIVE is a high-efficiency motor drive system developed by Yaskawa Electric to drive hybrid electric vehicles (HEV) and electric vehicles (EV). As a technological innovator, Yaskawa Electric has continued to prioritize technological development over the course of its more than 90-year history, and has produced a large number of world-first technologies and products. We are working to create a business with QMET DRIVE, looking towards its installation in HEV and EV, that are expected to generate more widespread use in the future.

QMET DRIVE simulator

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This section introduces the QMET DRIVE technology, developed to achieve high-efficiency driving in EV and HEV.

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e 1: As for the descriptions in this annual report, the figures under one r	nillion

Note 1: As for the descriptions in this annual report, the figures under one million are rounded down.

Note 2: Forward-looking statements in this report are based on information available to management at the time this report was prepared and assumptions that management believes are reasonable. Actual results may differ significantly from these statements for a number of reasons.



#### Yaskawa Electric Corporation and Consolidated Subsidiaries

#### Year ended 20th March or as of 20th March

(Millions of yen)	2006	2007	2008	2009	2010	
Net sales	322,916	368,971	382,327	350,249	224,710	1
Gross profit	90,864	104,886	110,601	91,708	50,903	
Selling, general and administrative expenses	66,377	71,322	74,113	70,901	57,880	
Operating income (loss)	24,486	33,564	36,487	20,806	(6,977)	2
Net income (loss)	10,157	18,982	20,242	6,892	(5,699)	

Per share (Yen)	2006	2007	2008	2009	2010
Earning (basic)	43.18	81.12	81.46	27.38	(22.64)
Earning (diluted)	39.72	75.29	80.50	-	
Dividend	6.0	6.0	10.0	13.0	3.0

	2006	2007	2008	2009	2010	
Shareholders' equity (Millions of yen)	52,750	80,787	100,862	97,068	88,459	
Shareholders' equity ratio	20.7%	29.6%	34.9%	39.0%	36.6%	
ROE: Return (loss) on equity	22.3%	28.4%	22.3%	7.0%	(6.1%)	
Interest-bearing debt (Millions of yen)	62,556	46,750	33,829	32,894	42,236	
Debt-to-equity ratio (Times)	1.2	0.6	0.3	0.3	0.5	
Capital expenditure (Millions of yen)	9,154	8,452	9,121	8,611	4,119	3
R&D (Millions of yen)	8,073	8,417	9,738	9,705	8,494	4
Amortization (Millions of yen)	6,699	6,962	7,676	8,028	7,840	
Number of employees	7,754	8,056	8,347	8,463	8,176	

#### ▶1 Net sales

Net sales were ¥224,710 million, down 35.8% from the previous fiscal year. In terms of orders, there was some recovery centered on the Chinese and Asian markets in the second half of the fiscal year. However, the impact of the simultaneous global recession has been large, forcing a substantial cut in net sales.

#### 2 Operating income (loss)

Although efforts were made to thoroughly implement and intensify cost reduction measures, and significantly cut back on expenses, losses were incurred due to the large impact caused by the reduction in net sales. Thus, operating losses of ¥6,977 million were recorded, making it the first time since the fiscal year ended March 2002 that an operating loss has been incurred.

#### ▶ 3 Capital expenditure

Repair, maintenance, and renewal of aging equipment and safety measures, etc., were kept to a bare minimum. As a result, total capital expenditures were ¥4,119 million.

#### 4 R&D

R&D expenses related to the future competitiveness of the Group were kept at ¥8,494 million.

Development was conducted to expand our core-product lineup, which includes AC servo drives, AC drives, and robots. In addition, technologies were developed for motor drive systems for hybrid electric vehicles and to pursue the realization of robots that coexist with humans.



Net Sales and Operating Income (Loss) Ratio by Business Segment (Year ended 20th March)





Overseas Net Sales and Ratio of Overseas Net Sales in Consolidated Net Sales







#### Highlights of FY2009 Performance

The worldwide economic downturn resulting from the financial crisis since the latter half of 2008 led to a sharp drop in orders and sales for Yaskawa, which began FY2009 under a business environment of unprecedented severity. The world economy subsequently bottomed out in the first half of FY2009 and then began its recovery with strong growth in Asia, especially China. While orders have started to make a steady recovery in the second half, sales still contracted sharply and profits could not overcome the drop in the first half.

By segment, the core business areas of Motion Control and Robotics saw a large drop in revenues for the year, although



for the second half the Motion Control business returned to profitability on the strength of recovering orders, especially from China and Asia. In the area of Robotics, the automotive industry is one of our major clients, but the industry scaled back capital expenditure and the recovery in orders was mild. Revenues dipped slightly in the System Engineering area, but business was strong with the steel industry, leading to record profitability.

FY2009 was also the first year of our Challenge 100 mid-term business plan. Focusing on taking emergency measures to deal with the extremely harsh business environment, we worked to strengthen the health of our existing businesses. Specifically, we began reducing expenses by ¥20 billion and advanced the R1000 project in our manufacturing. We endeavored to shorten lead time and raise productivity by putting our robots to work in our production facilities. On the sales side, we also stepped up our effort to actively offer solutions with our products by working across division boundaries. As part of our initiative to create new business domains and value, we invested in ELIIY Power Co., Ltd., a manufacturer of lithium ion batteries.

## FY2010 Begins Asia Shift and Full-Scale Startup of Environmental Energy Business

The world economy appears to be on a recovery track spurred by China, Asia and other emerging nations. While a number of risk factors do exist, including fluctuating exchange rates, we intend to turn our performance around by going on the offensive while remaining aware of the risks.

Our policy for this fiscal year is to step up marketing to highgrowth areas in Asia, especially China. The value of all machine tools produced in China in 2009 surpassed that of Japan and Germany to become number one. In June, we started up our new servo motor factory in Shenyang primarily to target this market. Moreover, because of the forecast for strong demand for AC drives in China, which is actively investing in infrastructure, we are doubling AC drive production capacity at our Shanghai factory to realize annual production of 300,000 units. China is also seeing active investment by the automotive industry to build more capacity. We responded by establishing a new robotics business division at our subsidiary in Shanghai in FY2010, in addition to the robotic systems company in Beijing, to expand our robot sales and service in the country. We will also establish a local business in Bangalore to set up a presence in India, second only to China in projected pace of growth. AC drive production will begin there in January 2011. We will manufacture and sell AC drives in India and import servos for local sale thereby we will significantly improve our response to local companies.

As part of stepping up global business development, in June 2010 in Europe and North America, where separate companies oversaw our Motion Control and Robotics businesses, we integrated our local affiliates and unified them under the Yaskawa corporate brand. This will allow us to offer a wide range of solutions that transcend division boundaries as well as strengthen sales in peripheral regions like South America and Eastern Europe.



A unified corporate logo is adopted globally.

In the current fiscal year, as the core of another policy, we are accelerating our initiative to expand business in the field of environmental energy. In FY2010, we set up the new EV Powertrain Business Promotion Department as an organization to achieve this. As interest grows in reducing CO2 emissions, hybrid and electric vehicles are gaining attention. Yaskawa aims to use the motor drive technology we have fostered over many years to quickly develop a business with our original high-efficiency electric vehicle motor drive system. Within our Drives Division, moreover, we have established an Environmental Energy Business Division to handle devices like power conditioners, which help to make efficient use of wind and solar power. Meanwhile, we have established an Environmental Energy System Business Division within the System Engineering Division to handle electrical equipments for large-scale wind power generation and hybrid power generation systems, which combine solar and wind power. We will continue to create new value by using Yaskawa technology to provide solutions meeting the steadily growing demand for energy conservation and renewable energy.

We will strengthen initiatives in new markets and fields like these while actively seeking cost reductions through overseas procurement and other means and managing expenses efficiently.

In FY2010, we plan to use initiatives like these to enhance revenue and return to profitability.

### Brushing up the "Challenge 100" Mid-term Business Plan Having Exited the Low Point in the World Economy

"Challenge 100," the mid-term business plan in effect since FY2009, began in the midst of a rapid drop in orders

and sales. In the first year of the plan, we focused on taking emergency measures while no one could predict when recovery might happen. Heading into the second half of the year, the world economy was steadily recovering, and the markets of emerging nations, especially China, and markets concerned with environmental energy is now considered the major drivers of Yaskawa Group business. We revised "Challenge 100" after determining that business opportunities could be expected to grow in the mid-term.

	FY2009 results	FY2012 targets	FY2007 (for reference)
Net sales	¥224.7 billion	¥380.0 billion	¥382.3 billion
Ordinary income	-¥6.0 billion	¥38.0 billion	¥35.2 billion
Ordinary income ratio	_	10%	9.2%
Assumed exchange rates	\$1 = ¥92 €1 = ¥131	\$1 = ¥90 €1 = ¥120	\$1 = ¥115 €1 = ¥161

Although there is a possibility that existing markets, especially in Japan, may not return to their FY2007 peak, we have set a sales target of ¥380 billion to be achieved mainly by global expansion. We also plan to boost the overseas revenues within total revenues from 48% in FY2009 to 57% in FY2012, driven by China. On the profit side, we aim to break FY2007's record with a 10% ordinary income ratio.

As we look forward to our centenary in FY2015, we put up Yaskawa's vision of "using the group's core technologies to solve emerging global problems." Under "Challenge 100," we will proactively create new value and new markets by expanding our business globally, especially with our shift to Asia, building markets for robots that coexist with people, and creating value in the field of green energy with our energy conversion technology.

June 2010

ysuda

Junji Tsuda, President

Bringing Together Yaskawa Electric's Unique Mechatronic Technologies! Motor Drive System for EV and HEV



Under our mid-term business plan Challenge 100, commenced in fiscal 2009, Yaskawa Electric is working to create new value in our environmental & energy business domain, which encompasses areas such as the use of renewable energy, energy conservation, and the development of drive systems for electric vehicles.

As awareness of environmental issues increases, more attention is being focused on electrically powered vehicles such as hybrid electric vehicles (HEV) and pure electric vehicles (EV). We are, therefore, currently employing the technologies that we have developed over many years as a pioneer in the field of motor drives for industrial use in the development of QMET DRIVE, a motor drive system for EV and HEV.

At the first EV JAPAN – EV & HEV Drive System Technology Expo held at Tokyo Big Sight in January 2010, we exhibited a simulator enabling visitors to experience the acceleration and deceleration performance of QMET DRIVE for the first time, and attracted an overwhelming amount of attention. In the future, we will continue to apply our original technologies in this area, increasing the pace of our efforts to create a business.

This special chapter will introduce the features of QMET DRIVE.



#### QMET DRIVE: Smooth acceleration and deceleration and high efficiency across a wide range of speeds

Torque

The QMET DRIVE is an electromagnetic transmission optimized for automotive use. The achievement of instantaneous switching in a winding-changeover motor with a wide fixed output range by

Evolution of winding changeover technology: From mechanical to electronic



Current waveform during electronic winding changeover



means of unique electronic winding changeover circuits and motor control technology has realized both high efficiency and the torque necessary for smooth operation from low to high speeds.

A single unit combines the characteristics of low- and high-speed motors. offering high-efficiency drive across a broad range of speeds



#### Optimized IPM structure reduced the loss in a motor dramatically

The motor was designed with a focus on the efficiency of forward rotation for automotive use (when the vehicle is moving forwards). The layout of the magnets was therefore optimized, dramatically reducing internal loss.

Realizes high efficiency through the use of a magnet arrangement suited to automotive use featuring a high frequency of forward rotation.



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The business of the Yaskawa Group is broadly divided into Motion Control, Robotics, System Engineering, and Information Technologies. We conduct manufacturing, sales, installation, maintenance, engineering, and other business activities in each of these segments.

#### **Motion Control**

#### **P.10**

This area consists of products such as AC servomotors, controllers and AC Drives. Servomotors are widely used in semiconductor/FPD manufacturing machines, chip mounters, machine tools, food and packaging machines, textile machines, robots, etc. Demand is growing for AC drives as energy-saving devices; these products are used not only in industrial machinery but also in consumer goods like air conditioners, refrigerators and washing machines, as well as in transport equipment like elevators and cranes.



AC Servo Drive "Σ-V"



#### Robotics

**P.12** 

Robots help to automate various production processes, including welding, painting, handling and assembly, especially in the automobile and electrical equipment industries. Also, substrate-handling robots are used in semiconductor and FPD production processes.

Additionally, because Yaskawa Electric seeks to achieve a society where humans and robots coexist, we are taking initiatives with robots used in the service and other non-manufacturing fields.



7-axis Robot Optimized for Arc Welding "MOTOMAN-VA1400"



Dedicated proxy device

"NetSHAKER ProxyBox"

High-power laser

with MIRAMOTION

**P.16** 

scanner head

Dual-arm Robot "MOTOMAN-SDA10"

Medium-voltage Matrix Converter "FSDrive-MX1"



System Controller "CP-F3000"

#### System Engineering



#### **P.14**

The System Engineering business supports the stable operation of large-scale plant system facilities critical to modern life, such as steel manufacturing and water treatment plants. Demand is also increasing for medium-voltage AC drives as a way to conserve energy with pumps, blowers and other wind and hydropower machinery and facilities.

Using our drive technology, we have also marketed the Enewin Series of electrical products for large-scale wind power generation to promote the use of natural energy.



Information Technologies

Among our group companies, all business activities of Yaskawa Information Systems Corporation and YE Data Inc., which are engaged in the information business, together with information-related technological developments of Yaskawa Electric, constitute the Information Technologies segment. The two group companies above head up our business pursuits in this area, while Yaskawa Electric develops new technologies and new business in the information field.

#### YASKAWA ELECTRIC CORPORATION

#### **Business Overview**

The Motion Control segment consists of the business for motion and control (M&C) and the drive business.

The M&C business offers solutions to innovate customers' machinery and systems by providing motion control products and application know-how, including AC servo drives, controllers, and linear motors. Servo drives are widely used in semiconductor/FPD manufacturing machines, chip mounters, machine tools, robots, food and packaging machines, printing machines, and textile machines.

An AC drive is a device that can freely change the source power frequency of a motor to control revolution speed of the motor. AC drive uses and applications are not only expanding in the industrial machinery, but also in the consumerproducts such as air conditioners, refrigerators, and washing machines, and devices used in the health care and amusement industries. In recent years, more focus is being placed on energy conservation as a way to counter the effects of global warming. Large commercial facilities such as office buildings and department stores are now required to implement effective energy-saving measures. This trend has thrust the AC drive into the limelight as an energy-saving device. For the drive business, we are applying our core power electronics technology to spur initiatives in small-scale decentralized power supply projects including solar and small-scale wind power generation.

These M&C and AC drive products have earned the top share of the world market for their advanced technology and high quality. Trends in this segment are closely related to trends in



Example of installation of linear motors and AC drives in a motor assembling line

investments in social infrastructure and in capital expenditures across a broad range of markets, and have been contributing to the enhancement of production efficiency and energy conservation in both the industrial machinery and consumerproducts markets.

#### **Review of FY2009 Operations**

In this segment in FY2009, although the global economic recession since the second half of FY2008 continued to hold sales down, resulting in an operating loss for the full fiscal year, starting the first half of FY2009, orders were gradually climbing and the company regained profitability in the second half.

The M&C business saw recovering demand for semiconductors for smartphones, netbooks and other applications, leading to rapidly increasing orders for semiconductor manufacturing machines, while in Taiwan, Korea and China the market for FPD and LED devices came to life, helping Yaskawa Electric to win peak-level orders in the last quarter. New products included new models in our core AC servo drives  $\Sigma$ -V (Sigma-Five) series and machine controller MP2000 series, as well as multi-axis drivers for controlling multiple servos for the machine tool market in Asia. For applications such as injection molding machines and press machines that require considerable force and which have conventionally been driven by hydraulic systems, we developed and launched super-high-capacity servos that boost quality and actually benefit the environment. On the production side, we have put our own robots to work on our production lines and otherwise advanced automation to reduce lead time.



A robot recognizes work that has accumulated out of order by means of 3D camera. (Example of robot installation in motor production process)

The global recession starting in the second half of FY2008 also caused sales in the drive business to fall significantly, however a quick recovery in demand in Asia, especially China, boosted orders in the fourth quarter of FY2009 to record levels. The Japanese and European markets have not been as strong as in some other regions, but our efforts to propose energy-saving solutions, such as combining drives with high-efficiency motors, to end-users has begun to show results. We also released power conditioners for solar and wind power generation, going beyond proposing AC drive-based energy-saving solutions to seizing initiatives in the business of energy creation.

#### **Future Outlook**

For the M&C business in FY2010, we anticipate recovery in Japan and abroad, especially in such important markets as semiconductor/FPD manufacturing machines and chip mounters. Because demand is expected to grow significantly in China and Asia, we are strengthening global operations that bring together development, production and sales. In June, our new factory in Shenyang, China began producing servo motors to better meet the needs of the Chinese market with its astounding growth.



Manufacturing and sales company in Shenyang, China

We are also speeding up development in the three regional centers of Japan, North America and Europe so that we can meet the needs of overseas markets and provide the specs each region requires in a timely manner. At the same time, we are expanding our service network and giving strong support to our customers' global expansion. In addition, we are stepping up our actuator product lineup and system solution proposal function and expanding the range of our servo drive business into markets where growth is foreseen, including solar cells, LEDs, secondary batteries and other promising applications.

In the drive business, we are working to boost sales volume

in Japan and abroad with the lineup of our flagship AC drive products "1000 series," consisting of both general-purpose AC drives and others for specific applications like elevators, air conditioning and so on. Moreover, the use of product platforms based on the 1000 series lets us set up systems that can rapidly develop and supply AC drives customized to individual customers, as well as enabling us to develop and supply AC drives of consistent quality throughout the world.





AC Drives "1000 series"

Compact, High-efficiency Variable Speed Drives "ECOiPM Drive"

In addition, through partnerships with municipalities like the city of Kitakyushu, selected by the Ministry of Economy, Trade and Industry as a "Next-Generation Energy and Social System Proving Zone," we are conducting proving tests and marketing of power conditioners for solar and wind power generation and thereby exploring the market needs for creating renewable energy.

Furthermore, to solidify our top position in the global AC drive market, we will work to cultivate sales in BRIC countries (Brazil, Russia, India and China), for which formation of alliances is a possibility, to achieve 20% of the world market share in a longterm perspective.



### Robotics

#### **Business Overview**

The Robotics segment contributes to the automation of manufacturing processes through the use of robots in various industries, including automobile- and electrical machineryrelated markets. The processes typically automated by robots include arc welding, spot welding, painting, assembly, and handling. We supply the robots used in clean rooms and vacuum environments as well as handling system products for the constantly evolving semiconductor and flat panel display (FPD) manufacturing industries. The timely supply of these products supports the technological advancement in their fields.

Yaskawa Electric develops its own mechanical components and controllers for robots using its unique servo technology, which holds the largest share in the global market. The high rate of in-house procurement lets us develop products flexibly, so that our robots are optimized for the applications in which they are used, and enabling us to precisely meet our customers' demanding requirements. Cumulative shipments surpassed 210,000 robots in May 2009, making Yaskawa Electric the world's top manufacturer.

In recent years, moreover, we are making use of the industrial robot technology we have fostered to bring robots to such nonmanufacturing areas as the service industry.

#### Review of FY2009 Operations

In FY2009, this segment experienced significant year-onyear declines in revenue and profit as our major customers restrained overall capital expenditures. Although in China and Asia we did see a trend to capacity-building investment, such as new production lines using welding and handling robots and other equipment for the automotive industry - one of our major markets - in Japan capital expenditures were lackluster and remained low overall. Business in the FPD and semiconductor industries is also on a recovery trend, especially in Asia, but that recovery is still weak.

One major market for this segment, the automotive industry, is currently building production lines that will help to achieve lighter car bodies and enhanced fuel efficiency to meet increasingly diverse needs, save energy and comply with environmental regulations. We have launched thin-sheet welding robots, assembly robots and related products to help innovate automobiles and the way they are made. In our initiatives for expanding robot markets, moreover, we have upgraded our lineup of industrial handling robots, especially for food products and pharmaceuticals.



MOTOMAN-MPK50 packing goods

For the FPD industry, we have created a series of large glass substrate transferring robots using our original double-link mechanism.

On the production front, we launched the R1000 project throughout the company, with the aims of introducing automated facilities that makes use of robots and developing new production technologies. "R" stands for "robot," and "1000" refers to "1000 units." Our intention in this project is to introduce 1000 units of robotic facilities company-wide. By automating our production facilities using our own robots, we seek to turn our plants into showrooms, enabling us to demonstrate the potential of automation using robots to our customers at the same time as providing them with solutions. (The following image shows an example of the introduction of Yaskawa robot technology into a robot factory.)



A dual-arm robot unit can transfer heavy items using a crane, apply sealants, and tighten screws by itself.

In November, at International Robot Exhibition 2009, the largest trade show of the robotics industry, our display filled the largest booth size and attracted a record number of visitors. Yaskawa Electric's MOTOMAN robot brand was thus promoted, increasing opportunities for securing new orders.



The Yaskawa Electric booth attracts a lot of attention.

#### **Future Outlook**

Although we expect mild market recovery in FY2010, its strength will vary by region and industry. Customers remain highly cost-conscious, so we will need to watch the trends very closely.

During this fiscal year in the segment, we will respond flexibly to changing market needs and business volume, while developing automobile-related markets in emerging economies where strong capacity-boosting expenditures are predicted, such as Korea, China, India and Thailand. At the same time, through a partnership with a business that is strong in assembly and handling applications, two promising areas for new markets, we will make every effort to develop new products for these applications and thus build share.

Furthermore, in our initiatives to promote the use of robots, we intend to step up globalization of system integrators (SI), which have been especially marked in Europe and North America for application development, and to expand markets by offering robots easily adaptable to these SI.

Also, to expand orders in emerging Asian nations like China, where growth has been remarkable, we are locating a new robotics business site in the Shanghai area, establishing our own sales channels and providing backup to Japanese as well as European and North American manufacturers coming to China. We are moreover working to enhance competitiveness and profitability by developing and launching new products suited to the needs of emerging markets.

Yaskawa Electric will sustain its growth over the medium to long term by pursuing product development that is mindful of overseas markets where robots are taking an increasingly active role, and strengthening our global sales.



### Review of Operations

### System Engineering

#### **Business Overview**

The major fields for which System Engineering provides solutions are varieties of large-scale plant facilities used in steel plants and water treatment plants where stable operation is an absolute requirement, as well as large-scale crane facilities. Yaskawa Electric is involved in projects from the facility planning stage and provides support throughout the facility's life cycle by offering everything from technical proposals to aftersales services. This has earned us a solid reputation for reliability among our customers.

The steel industry, one of this segment's major markets, experienced a period of great capital expenditures until 2008 as several years of strong economic conditions coincided with the replacement timing for aging equipment. The global recession that followed the bankruptcy of Lehman Brothers, however, forced the industry to cut production in 2009. Even under such difficult conditions, customers continued to replace aging equipment, but they also demanded shorter replacement times and high added value from any replacements, such as enhanced productivity and maintainability. There has also been intense interest in environmental measures such as reducing CO<sub>2</sub> emissions and it is predicted that capital expenditure will be allocated to protect the environment and save energy.

In the public water and sewage treatment plant system business, a "water works vision" and "sewage works vision 2100" have been set as national policies. In response to these policies, and with safety and reliability as the keywords, we anticipate demand for improving energy saving of pumps, blowers and wind or water force machinery and facilities, and establishing systems to efficiently use natural energy, web monitoring systems for preventing disasters and reducing staff as well as rainwater inflow prediction systems.

As a new business area, we are also beginning initiatives with clean energy such as solar and wind power generation based on technologies we have fostered heretofore.

#### Review of FY2009 Operations

In FY2009, orders decreased in our steel plant system business, but sales rose, in part because of the delivery of one of the world's largest blast furnace systems, which uses our electrical equipment. Yaskawa Electric's technical and developmental expertise has been received positively thanks to integrated sales and technological initiatives in the water treatment plant system business, leading to rising orders and sales, including a large order in the Tokyo area. Other than this, the global recession made itself felt in the industrial electrical equipment business, which endured sharp declines in orders and sales. With the high level of environmental awareness worldwide, orders for energy-saving products remained steady in the medium-voltage AC drive business and industrial motor business, but overall orders and sales declined in this area.

Based on these results, the increase in sales, improved profitability in the steel plant system, and water treatment plant system businesses helped to boost profits greatly. Operating income set a new record for the third consecutive year.

We launched a new product, the CP-F3000 Dual CPU System, to the market. This system controller has high reliability and performance of earlier products along with stronger functionality using an IEC61131-3-compliant programming language. By doubling the CPU, power source and communication modules, the system provides enhanced reliability overall. If a CPU module fails, control bumpless switching keeps operations going, and modules can be switched out while online.



System controller Control Pack CP-F3000 (Dual CPU system)

Yaskawa Electric also released the large-capacity FSDrive-LV1HS (slim type) as a low-voltage system AC drive in addition to the FSDrive-LV1HM (drawer type) and FSDrive-LV1HF (fixed type). We also achieved large-capacity drive modules for 690V of input voltage in addition to 400V; up to five drive modules can be connected in a series, making capacities of 200 to 1,000 kW possible in the 400V class and 350 to 1,750 kW in the 690V class.

Large-capacity FSDrive-LV1HS (Slim type)



The steel industry has been impacted by poor economic conditions, and capital expenditure plans are likely to be restrained again in FY2010. At the same time, such companies are expected to invest actively in energy saving and environmental measures.

Under such market circumstances, our steel plant system business is aiming to build share and expand orders by looking closely at capital expenditure trends at steel manufacturers and using medium-voltage drive technology and new products to propose systems for new areas we have not entered before. We are additionally watching investment by Japanese blast furnace manufacturers in emerging nations like Vietnam, accelerating the development of our global business, and putting great energy into sales initiatives that integrate sales and technological expertise.

### Wind and solar hybrid power generation system

We propose eco-systems using clean energy for public water and sewage facilities, parks, and schools, etc.



The water treatment plant system business is likely to continue benefiting from capital expenditures, especially replacements and renovations. At the same time, investment in sophisticated treatment, flood damage prevention, resource recovery, and solving energy issues are on a rising trend. Our response is to strengthen initiatives for technical development and technical solution proposals for customers and to achieve greater work improvements and efficiencies to help us face the changes in the market.

In the medium-voltage AC drive business, government mandates and support in different countries are expected to give a worldwide boost to investment in environmental protection and energy saving to lower CO<sub>2</sub> levels. We will work aggressively to capture demand created by stronger motor efficiency regulations in Europe, "green new deal" policies in the U.S., and other developments.

As for our industrial motor business, we are promoting sales of compact, highly efficient variable speed drives and direct drives using the ECOiPM series of synchronous motors with permanent magnets and the ECOhiM series of high-efficiency induction motors, developed and launched to meet global needs for high efficiency.

In FY2010, we established the new Environmental Energy System Business Division to accelerate the development of our system business in the field of environmental energy. This department will promote our business in environmental energy systems and large-scale wind power generation electrical equipment.

In the environmental energy systems business, we will begin selling hybrid power generation systems that use both wind and solar energy. Also, we are beginning global sales of a large-scale wind power generation converter using our patented medium-voltage matrix converter technology. Customers of large-scale wind power generation facilities require particular functionality, construction, environmental durability and so on, and this product provides the enhanced electric power quality, compactness and minimal maintenance to meet these needs. Yaskawa Electric is speeding up the development of the market, especially in the U.S. and China.

In this segment, we are using energy-saving products grounded in our system drive technology as well as system engineering technology and know-how, built up over many years, to generate steady profitability in the existing fields of steel and water treatment industries, and to develop new business domains in the area of the environment and clean energy. We are undertaking these initiatives to make a shift from stable to growing business.



#### **Review of Operations**

### Information Technologies

#### **Business Overview**

The entire business of Yaskawa Information Systems and YE Data, which are two of the listed companies of the Yaskawa Group, together with information-related technological developments of Yaskawa Electric, constitute the Information Technologies segment.

The IT segment, in which the two listed subsidiaries play the central part, pursues group synergy through close coordination in all activities, with each individual player bringing out their own unique qualities in an effort to broaden the scope of business based on information technology.

#### YASKAWA INFORMATION SYSTEMS Corporation

As information and digitalization enter every aspect of society, information and communication technology (ICT) has become an essential part of our social infrastructure. Working as our customers' IT partner to create value for them and support their business growth, the Yaskawa Information Systems Group uses the software development and control technologies we have fostered in the field of manufacturing since our founding and offers advanced, highquality IT solutions.

#### Review of FY2009 Operations and Future Outlook

In FY2009, although we remained in the difficult business environment being affected by the economic downturn continuing from the previous year, this was also the year we put the finishing touches on three structural reforms that we have tackled: reform of our business structure, production structure and financial structure. Working together as a company, we have made profitability improvements by marketing aggressively, raising profitability and quality, reducing costs and increasing work efficiency. Moreover, we have shored up our fiscal health by holding down inventories and accounts receivable.

Our efforts in marketing and profitability improvements, however, were not enough to overcome the steep decline in demand that followed the economic downturn, and as a result revenue decreased and profits were negative in FY2009.

For FY2010, slightly negative growth is expected in the IT service market, along with expanded competition from businesses moving production internally or offshore. We also expect new business to be created, such as cloud computing and environmental enterprises.

Amidst a radically changed environment, the Yaskawa Group aims to transform its business model and establish its position as an IT partner creating customer value, and to expand in new business areas. We approach FY2010 with an appropriate sense of concern as we monitor market and customer changes, and we seek to earn profit reliably in existing business domains while working actively to expand into and firmly establish new business domains with the Group technologies.



#### Y-E Data Inc.

Since developing the first Japanese-produced FDD in 1974, the YE Data Group has continued to develop products that meet users' requirements through the pursuit of original technology and high reliability. In FY2009, that tradition was maintained without interruption in individual business areas in our new framework of operations (a three-business structure integrating the new areas of encoders, a galvano-scanner system, and photo kiosk terminals with existing business) as we work toward further development.

#### Review of FY2009 Operations and Future Outlook

Under "Challenge YD," our mid-term business plan in effect since FY2009, we seek to turn optomechatronic solutions into a core business area as quickly as possible. To do this, we are reorganizing into a new framework of operations integrating new and existing businesses and expanding business domains, as shown in the establishment of YD Mechatro Solutions Inc. (Mechasol) and M&A activities such as a capital partnership with RayResearch Corporation. However, information multimedia, one of our key businesses hitherto, continues to face harsh circumstances: FDDs are coming to the end of their cycle, and card readers face price-cutting competition. Mechasol sales have been sluggish, and the poor economy has locked up capital expenditure, leading to a loss of revenue in our optomechatronics business. As a result, revenues were down for the year and profit was negative.

Fully aware of the need to return to profitability in FY2010, we have started the new fiscal year by trimming our organization and work force to rein in fixed costs; however, turning our performance around urgently requires expanding sales and improving our profit structure, and we are therefore taking our next set of measures for structural reform.

- We will endeavor to maximize work efficiency with a slim and flexible organization while growing sales, thoroughly reducing costs and controlling expenses.
- By developing new markets, we will firmly establish the new business areas of galvano-scanner systems and photo kiosk terminals and accelerate their development into profit contributors.
- · We will be quick to launch new businesses.

#### **Research & Development**

#### Overview and Policy

Yaskawa Electric is working to enhance core technologies like motion control and robotics in our existing businesses and build the results of these efforts into products to strengthen responsiveness to the market. We are additionally pursuing research and development (R&D) that will contribute to society well into the future, including development of technologies and products in the "Environmental & Energy" business domain, which are renewable energy systems, electric products for cars, etc., and technologies and products helping humans and robots to coexist in the "Robotics Human Assist" business domain.

#### FY2009 Results and Topics

In the motion control field, using the AC drive technology we have fostered heretofore, we developed a power conditioner for solar energy, which efficiently converts energy into high-quality AC voltage synchronized to commercial power sources. In the robotics field, we developed and verified high function manipulation technology that is easily teachable, even in jobs that include hard-to-handle flexible materials. Moreover, we developed a motor drive system for hybrid electric vehicles (HEV) consisting of a motor, generator and power control unit, and that is small and lightweight while offering high output and efficiency.



#### Intellectual Property Strategy

Yaskawa Electric respects third-party intellectual property while using our own intellectual property to actively protect our products and give them a market edge.

#### Intellectual Property Strategies in Management

Within the framework of the Strategic Corporate Management Trinity consisting of business, R&D, and intellectual property strategies, the focus of our activities regarding intellectual property rights has shifted from quantity to quality, and we have been implementing a pro-patent cycle of creating, protecting and using our intellectual property.

#### Activities for Intellectual Property

We pursue pro-patent activities closely tied in with R&D through collaboration between the intellectual property division, which provides company-wide supervision, and the pro-patent promoters assigned to the R&D division and the business divisions.

As an example of these achievements, we received many awards at the

JIII Kyushu Block Commendation for Invention in 2009, one of them being the Minister of Education, Culture, Sports, Science and Technology Commendation for Invention (for Patent No. 3959902, an induction motor constant identification system and control system).



JIII Kyushu Block Commendation for Invention awards ceremony, 2009

#### Status of Intellectual Property Rights

Yaskawa Electric uses its intellectual property rights to protect its products around the world.



#### YASKAWA ELECTRIC CORPORATION

Yaskawa Electric will celebrate its 100th anniversary of its foundation in 2015. We are all grateful to those who provided support over the years, including customers, suppliers, employees, shareholders, the local community, and many others. The present-day idea of CSR (Corporate Social Responsibility) is inherent in our corporate DNA, as our management philosophy advocates our company's mission is to contribute to the progress of society and the welfare of mankind through business performance. We aspire to become a company with global competitiveness and a brand that meets the expectations of various stakeholders on a long-term perspective by providing solutions suited to the changes of society and the industrial structure.

#### **Management Principles**

Our company's mission is to contribute to the evolution of society and the welfare of mankind through the performance of its business. In order to achieve this mission, we particularly affirm the following three principles and will endeavor to realize them.

- 1. To emphasize the importance of quality of products and constantly develop and improve technologies in which we can take pride throughout the world.
- 2. To improve the efficiency of operation and secure profits necessary for the survival and continued growth of the company.
- 3. To endeavor to keep a market-oriented attitude, to meet the needs of the market and do our utmost to serve our customers in the best way possible.

#### Yaskawa Group Corporate Activity Standards (established March 21, 2010)

Because our Management Principles require that we contribute to the development of society and the welfare of mankind through our business performance, as well as seek to build a solid and trustful relationship with society by fully recognizing corporate citizenship and operating a conscientious and fair business, we, the members of the Yaskawa Group, respect human rights and conduct ourselves in a socially responsible manner as we work to build a sustainable society, observing both the spirit and the letter of all laws and international rules applying to our activities in Japan and abroad in accordance with the following ten principles.

- 1. We, by the development and provision of socially beneficial products and services in a safe and environmentally friendly manner, shall contribute to the improvement of people's lives and to economic and social development, taking all necessary measures to protect personal data and customer information.
- 2. We shall work to protect the environment proactively with a broad perspective in our overall business activities.
- 3. We shall engage in communication not only with shareholders, but also with members of society at large, including active and fair disclosure of corporate information, making every effort to prevent insider trading.
- 4. As "a good corporate citizen," we shall actively engage in philanthropic activities, and other activities of social benefit.
- 5. We shall respect diversity, individuality and differences of the employees, to secure safe and comfortable workplaces, and to ensure the mental and physical well-being of the employees.
- 6. We shall observe laws and regulations applying to our overseas activities, respect the local culture and customs, and strive to manage our overseas activities in such a way as to promote and contribute to the development of local communities.
- 7. We shall operate businesses based on fair, transparent, and free competition and sound trade, which strictly observe all laws and never violate social norms.
- 8. We shall reject all contacts with organizations involved in activities in violation of the law or accepted standards of responsible social behavior.
- Top management shall assume the responsibility for realizing the spirit of these standards and for taking the initiative in all necessary actions to raise awareness in the group, inform its business partners of this responsibility, establish effective internal systems and ensure thoroughgoing corporate ethics.
- 10. In the case of incidents contrary to the principles of these standards, top management must work to solve the problems caused by these incidents, investigate the cause for the incident, and develop reforms to prevent recurrence. After the prompt public disclosure of information regarding the incident, responsibility for the event and its effects should be clarified and disciplinary action should be taken, including the highest levels of management where necessary.
- Note: On the establishment of the Yaskawa Group Corporate Activity Standards
  - In 1997, Yaskawa Electric composed the Yaskawa Electric Corporate Activity Standards, which declared our intention to manage our business based on legal and ethical compliance as a member of society. Subsequently, as we realized the need for establishing a compliance program, we made a number of revisions to the standards in order to increase awareness and furthermore took initiatives to improve compliance.
  - The community and the outside world in recent years increasingly view and judge enterprises in terms of their entire corporate groups, and for its part, Yaskawa Electric has espoused consolidated group management and global expansion.
  - To meet the needs of these new times, we have redesigned the Corporate Activity Standards. Since March 21, 2010, these standards no longer apply just to the parent company Yaskawa Electric, but to our entire group, including subsidiaries in Japan and abroad.

#### **Basic Premise on Corporate Governance**

Yaskawa Electric gives high priority to corporate ethics based on legal compliance. While the social and economic conditions surrounding our businesses are ever changing, we aim to respond to these changes with quick decision-making. We also work for sound business operations and consider these activities to be important to increase shareholder value.

At the same time, we commit ourselves to establishing better relationships with all of our stakeholders or supporters, including our shareholders, customers, suppliers, local community, and employees. We will enrich the Company's corporate governance in accordance with the law as we strengthen, improve and further develop the internal control system and also the system of how our current shareholders' meetings, board of directors and auditors, and accounting audits operate.

Furthermore, we will ensure swift and accurate disclosure of a wide range of information to our shareholders and other capital providers, and will thereby increase the transparency of the Company's management.

#### Status of Corporate Governance

The Board of Directors meets in regular and special sessions as needed to make decisions on important managerial and legal issues and to oversee business operations.

During the past fiscal year, the Board of Directors met a total of 10 times to make decisions on important managerial and legal issues, and to oversee the business operations. Yaskawa Electric adopts an external director in order to assure compliance.

Corporate auditors regularly meet with accounting auditors and internal auditors to exchange information that each of them has learned according to their position. Corporate auditors also meet periodically



with the President to exchange general information and share audit information.

Also, in order to ensure transparency and enable multidimensional auditing, two external auditors are appointed.

Ernst & Young ShinNihon LLC is the auditing firm for Yaskawa Electric. As part of the contract for auditing services, we are required to provide accurate management information. The auditors are provided with an environment in which an open and impartial point of view can be attained. In any situation where the accounting auditors' judgment is necessary, we will consult with them to receive the necessary support.

#### Status of Internal Control System

As to establishing and strengthening internal control systems, the Internal Control Group, a part of the Auditing Office, responds to the need for financial reporting internal control systems as governed by the Financial Instruments and Exchange Law.

In accordance with the Board of Directors' resolution on a structure for the establishment of an internal control system required under the Corporation Law, the Company continues to work to further enrich and upgrade the system. In March 2009, the Board of Directors revised the internal control system to enhance compliance.

#### Compliance

For ensured compliance with laws and social norms, we as a group have formulated the Corporate Charter and the Yaskawa Group Corporate Activity Standards to ensure that employees are carrying out the corporate-wide education and observance related to such compliance. The Compliance Guidelines are updated annually according to recent changes in legislation, and then distributed at regular intervals to all employees. Those who have issues to report may contact the in-house section or an outside third party who acts an advisor as of November 2008. A Corporate Social Responsibility Promotion Committee was established, and its subordinate committees are working to strengthen the Company's activities related to corporate social responsibility, such as compliance, risk management, environmental protection, appropriate corporate communications, and announcements.

Protection of personal information is a very large corporate responsibility. We formulated the Privacy Policy, the Rules for Dealing with Personal Information, and the Information Security Policy to protect personal information, and have been educating employees of these policies.

To ensure international security export control, moreover, we have set up a compliance program (CP) conforming to export-control-related laws, and the entire Yaskawa Group works to comply with these laws.

#### Energy saving and CO<sub>2</sub> reduction

Yaskawa Electric recognizes that the protection of the global environment is an important issue for all of humanity, and we are proceeding with initiatives that consider environmental protection in all aspects of our business activities. In fiscal 2009, we were forced to significantly reduce the level of capital expenditure due to the global recession. Against this background, we worked to reduce  $CO_2$  emissions through initiatives including energy management optimized for a reduced production volume and a comprehensive reduction of waste in our production processes.

#### An initiative in production

We modified the production process in our casting division and reduced the time from melting to pouring, resulting in significant saving of the power used to maintain the temperature of the melting furnace.

As a result, we succeeded in reducing the annual electricity consumption by 24MWh and the annual CO<sub>2</sub> emissions by 10 tons.





Melting furnace

Pouring

#### Changes in CO<sub>2</sub> Emissions and Units of Production

We set a target for FY2009 to reduce CO<sub>2</sub> emission per unit of production by 41% compared to the FY1990 level. Our result was slightly less at 40%.

Regarding the amount of CO<sub>2</sub> emission, we have achieved reduction by 34%, whereas the target set by the Japanese government is 6% reduction compared to the level in 1990.



Note: Percentages shown are rates of CO\_2 emissions and the volume per unit of production with the volume of FY1990 as 100%.

#### Environmental consideration in products

We have introduced Life Cycle Assessment (LCA) at the product planning and design stage, and we are pursuing and promoting the ways of manufacturing and doing business that reduce the burden on the environment at each stage of the product life-cycle, from procurement of materials to disposal.

#### One of our initiatives (Products)

In FY2009, multi-axis drivers with a common power regeneration system were added to the products subject to life cycle assessment (LCA). This clarified the environmental impact of such products in terms of global warming and resource consumption.

 $\Sigma$ -V-SD provides multi-axis control of a variety of motors, from synchronous motors to induction motors, with a single unit. All the

modules included in the configuration are installed in close proximity to each other. The products also come with power regeneration converters as standard equipment. This makes regeneration resistors unnecessary and realizes compactness, reduced wiring, and energy conservation.



Multi-axis drivers with common power regeneration system,  $\pounds\text{-V-SD}$ 

We have calculated our volume of use of different mineral resources in the  $\Sigma$ -V-SD that was subject to LCA this year and weighted the results for scarcity value to assess our environmental impact in this area.

While iron resources represent our largest input, in the scarcity value-weighted environmental impact assessment that position was taken by silver resources, indicating the importance of reducing our use of solder containing silver.

The data obtained in our LCA will continue to be of use in future in product planning and development, the improvement of production technologies, the selection of items for procurement, and user support and communication.





#### Social Activities

As a corporate citizen living together with local communities and society, the Yaskawa Group places great importance on relationships with its various stakeholders as well as customers.

#### Customers

Through customer satisfaction (CS) surveys, meetings with our agencies to exchange information, and CS-Kaizen activities, we aim to improve allround CS.



CS-Kaizen activities

#### Shareholders and Investors

In FY2009, we presented information 785 times to approximately 1,500 institutional investors in Japan and abroad. We work to make information continuously available by a variety

of means, and in addition to visits to overseas investors, we actively participate in conferences organized by securities companies and hold teleconferences.



Performance results briefing

#### **Employees**

Our personnel system draws a clear picture of the type of employees we are looking for: people who can assist in the

development of society and work for the welfare of people. We also hosted events that brought employees' families together, seeking to promote work-life balance and assist in fostering the next generation.



Family visit at Iruma Plant (Saitama Prefecture)

#### Suppliers

As exemplified by the EU's REACH regulations, countries throughout the world have begun to revise their regulations concerning chemical substances. At Yaskawa Electric, we are continuing our efforts to increase our level of green procurement as our business expands, both domestically and overseas. In FY2009, we focused seriously on supporting green procurement initiatives at group companies.

#### Local Communities

We hold exchanges with the community by participating in local events and hosting factory tours. We further contribute to society by conducting local clean-up activities, environmental protection initiatives, and the promotion of sports through our track and field team.





Participation in Monozukuri Taikan Stadium, an educational event for children, organized by Nikkan Kogyo Shimbun Ltd.

Participation in Wasshoi Summer Festival of Kitakyushu city

#### Educational and Research Organizations

We work to foster the human resources of the next generation, supporting students, accepting foreign students, and conducting

joint research with educational institutions, among other activities.



Support for robot competition for students (Kosen Robocon)

For details of the environmental and social activities introduced in pages 20 and 21, please refer to our Social and Environmental Report which can be downloaded from our company website.

Social and Environmental Report URL: http://www.yaskawa.co.jp/en/company/csr02.html

#### **Directors and Corporate Auditors**



Koichi Takei Executive Vice President General Manager, Personnel, General Affairs, Finance & Accounting

Koji Toshima Chairman of the Board

Noboru Usami

Managing Director General Manager, Motion Control Div.

Junji Tsuda President General Manager, Corporate Sales & Marketing Div.



Koki Nakamura Managing Director General Manager, System Engineering Div.



Osamu Motomatsu Director General Manager, Tokyo Administration Div.



Koichi Takamiya Director Regional Manager Europe



Makoto Ishimaru Auditor (External) Managing Corporate Officer KROSAKI HARIMA CORPORATION



General Manager, Corporate Planning Div.



Auditors



Toshihiro Sawa

Managing Director General Manager, Technology & Development Div.

Yoshinori Fukahori Director (External) Executive Vice President KYUSHU ELECTRIC POWER CO., INC.



Yoshikatsu Minami Director General Manager, Robotics Div.



Sadahiro Iwata Standing Auditor



Hideki Gotoh

Regional Manager China

Director



Manabu Ichikawa Auditor

Yuji Nakayama Director General Manager, Finance & Accounting Div.

Hiroshi Ogasawara

Director

General Manager, Drives Div.



Yasunari Mitsui Auditor (External) President and Representative Director Mitsui High-tec Inc.



Executive Managing Director

Shuji Murakami Director





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The financial section hereafter was prepared based on "Consolidated Results for the Fiscal Year Ended March 20, 2010 (unaudited)" announced on April 20, 2010, and is provided for the convenience of investors.

### Business Environment and Measures Focused in Fiscal Year 2009

In fiscal year 2009, which ended on March 20, 2010, the global economic downturn hit bottom and a slow recovery started. One reason was stimulus programs enacted by countries in response to the worldwide recession sparked by the financial crisis in the third quarter of 2008. Strong economic growth in China and other Asian nations also supported the recovery. However, the operating environment remained difficult overall. To succeed in this challenging business climate, the Yaskawa Group has been taking the following actions.

- For AC servomotors and controllers, AC drives, industrial robots and other core products, target promising new market sectors and increase market share in existing markets.
- Capture orders by using marketing activities led by top management and creating proposals for customers where there is substantial potential demand.
- Create proposals for new products faster by speeding up the development of technologies and improving skills in using systems to meet customers' needs.
- Increase sales in China and emerging markets with excellent prospects for growth.
- Use rigorous cost-cutting measures to achieve an overwhelming competitive edge in terms of prices and make manufacturing operations highly efficient.

Due to the slow improvement in the economy and the above initiatives, there was an upturn in orders from China and other Asian countries in the second half of the fiscal year, primarily in the motion control segment. There was a slow recovery in orders received in Japan as well. However, sales were down sharply because of the severe impact of the global economic recession.

In addition, the drop in sales produced a large loss for the fiscal year despite extensive measures to cut costs and initiatives aimed at achieving a big reduction in expenses.

#### **Group Overview**

Yaskawa Group includes 79 subsidiaries and 20 affiliated companies. As of March 20, 2010, Yaskawa Group comprises 64 consolidated subsidiaries, of which Yaskawa Information Systems Corporation and YE Data Inc. are listed in the second section of Tokyo Stock Exchange. There are no non-consolidated subsidiaries and 14 affiliated companies to which equity method accounting is applied.

#### **Profit and Loss**

Consolidated net sales in FY2009 were ¥224,710 million, which was down by 35.8% from the previous fiscal year. Orders mainly from China and Asian markets recovered in the second half of the fiscal year. However sales were down sharply because of the severe impact of the global economic recession.



Year ended 20th March

Cost of sales in FY2009 amounted to ¥173,807 million, 32.8% less than the previous fiscal year. The ratio of cost of sales to net sales increased by 3.5 points to 77.3%. Selling, general and administrative (SG&A) expenses decreased by 18.4% to ¥57,880 million. The percentage of SG&A expenses against net sales increased by 5.5 points to 25.8%. As a result, there was operating loss of ¥6,977 million, which was ¥27,783 million less than the previous fiscal year.



Non-operating income increased by 39.1% to ¥2,268 million due to employment adjustment subsidy of ¥1,128 million. Non-operating expenses decreased by 44.4% to ¥1,341 million due to decrease in interest expense and foreign exchange losses. As a result, there was ordinary loss of ¥6,049 million, which was ¥26,073 million less than the previous fiscal year.

Extraordinary income was the gain on sales of fixed assets of ¥49 million. Extraordinary losses decreased by ¥870 million to ¥3,370 million.

As a result of the above, net loss before taxes and minority interests totaled ¥9,370 million, which was ¥25,198 million less than the previous fiscal year. Net loss after deducting income taxes and recording minority interests amounted to ¥5,699 million, which was ¥12,592 million less than the previous fiscal year. Net loss per share was ¥22.64, which was ¥27.38 in the black in the previous fiscal year. ROE (return on equity), one of our key management indicators, in FY2009 was -6.1%, down by 13.1 points from the previous fiscal year.



Year ended 20th March





#### **Balance Sheet Highlights**

Total assets were ¥241,649 million as of March 20, 2010, ¥7,461 million less than one year earlier. Current assets declined ¥7,036 million, mainly the result of decreases in inventories and trade notes and accounts receivable, and fixed assets declined ¥425 million.



Total liabilities increased ¥1,670 million to ¥148,359 million. There was a ¥2,695 million decrease in current liabilities, mainly the result of a decrease in trade notes and accounts payable, and an increase of ¥4,365 million in long-term liabilities that was attributable primarily to an increase in longterm debt.

Net assets decreased ¥9,131 million to ¥93,289 million mainly because of a ¥9,498 million decrease in shareholders' equity resulting mostly from a decline in retained earnings.

#### **Cash Flow**

Cash and cash equivalents totaled ¥16,296 million as of March 20, 2010, a net increase of ¥5,667 million compared with the end of the previous fiscal year.

Net cash provided by operating activities was ¥4,035 million. The major components were a loss before income taxes and minority interests of ¥9,370 million, depreciation and amortization of ¥7,840 million, and decreases of ¥3,369 million in trade receivables, ¥5,532 million in inventories and ¥2,780 in trade payables.

Net cash used in investing activities was ¥6,466 million. The primary use of cash was expenditures of ¥4,866 million for purchases of property, plant and equipment and intangible assets.

Free cash flows, the sum of cash flows from operating and investing activities, were a negative ¥2,430 million.



Year ended 20th March

Net cash provided by financing activities was ¥8,015 million. Major components were a ¥4,209 million increase in shortterm debt, proceeds of ¥10,310 million from long-term debt, repayments of long-term debt of ¥4,361 million and dividends paid of ¥2,015 million.

	As of March 20, 2009	As of March 20, 2010
Assets		
Current assets		
Cash and time deposits	10,794	16,430
Trade notes and accounts receivable	88,136	81,024
Inventories	54,705	
Merchandise and finished goods	-	30,747
Goods in process	-	5,935
Raw materials and supplies	-	9,517
Deferred tax assets	4,374	6,505
Other	12,104	13,426
Allowance for doubtful accounts	(1,041)	(1,550
Total current assets	169,073	162,036
Fixed assets		
Property, plant and equipment		
Buildings and structures, net	17,301	16,139
Machinery and transportation equipment, net	10,232	8,258
Land	7,884	8,130
Other, net	4,452	3,862
Total property, plant and equipment	39,871	36,390
Intangible assets		
Goodwill	1,401	
Software	4,360	4,147
Other	1,063	1,054
Total intangible assets	6,824	5,202
Investments and other assets		
Investments	15,403	16,428
Long-term loans	267	225
Deferred tax assets	13,235	16,146
Other	5,558	5,709
Allowance for doubtful accounts	(1,122)	(489)
Total investments and other assets	33,341	38,019
Total fixed assets	80,037	79,612
Total Assets	249,111	241,649

(Millions of yen)

		(Millions of ye
	As of March 20, 2009	As of March 20, 2010
Liabilities		
Current liabilities		
Trade notes and accounts payable	54,252	51,082
Short-term bank loans	27,609	31,830
Accrued expenses	16,473	15,796
Accrued directors' bonus	60	44
Other	9,552	6,498
Total current liabilities	107,948	105,252
Long-term liabilities		
Long-term debt	5,285	10,405
Provision for employees' retirement benefits	32,034	31,337
Provision for directors' retirement benefits	266	278
Other	1,155	1,085
Total long-term liabilities	38,741	43,107
Total liabilities	146,689	148,359
Net assets		
Shareholders' equity		
Common stock	23,062	23,062
Additional paid-in capital	18,681	18,682
Retained earnings	60,983	51,534
Treasury stock, at cost	(357)	(407)
Total shareholders' equity	102,369	92,871
Valuation and translation adjustments		
Net unrealized holding gain (loss) on securities	(113)	1,241
Deferred gains (losses) on hedges	(67)	(11)
Foreign currency translation adjustments	(5,119)	(5,641)
Total valuation and translation adjustments	(5,301)	(4,412)
Minority interests	5,353	4,830
Total net assets	102,421	93,289
Total liabilities and net assets	249,111	241,649

(Millions of yen)

	Year Ended March 20, 2009	Year Ended March 20, 2010
Net sales	350,249	224,710
Cost of sales	258,541	173,807
Gross profit	91,708	50,903
Selling, general and administrative expenses	70,901	57,880
Dperating income (loss)	20,806	(6,977)
Non-operating income		
Interest income	152	74
Dividends received	364	232
Government subsidies for employment adjustment	-	1,128
Equity in earnings of associated companies	485	-
Miscellaneous income	628	834
Total non-operating income	1,631	2,268
Non-operating expenses		
Interest expense	997	688
Equity in losses of associated companies	-	2
Foreign exchange loss	670	344
Miscellaneous expenses	745	305
Total non-operating expenses	2,413	1,341
Drdinary income (loss)	20,024	(6,049)
Extraordinary gains		
Gain on sales of fixed assets	36	49
Gain on sales of investment securities	3	-
Other	4	-
Total extraordinary gains	44	49
Extraordinary losses		
Loss on sales and disposal of fixed assets	212	159
Loss on devaluation of investment securities	2,221	31
Loss on valuation of inventories	-	2,138
Impairment loss	104	32
Other	1,702	1,008
Total extraordinary losses	4,240	3,370
ncome (Loss) before income taxes and minority interests	15,827	(9,370)
Provision for income taxes- current	5,020	1,228
ncome taxes for prior periods	-	348
Reversal of income taxes payable for previous periods	(214)	(139)
Provision for income taxes- deferred	4,160	(4,786)
Fotal income taxes	8,967	(3,349)
Ainority interests in income (loss)	(32)	(321)
Net income (loss)	6,892	(5,699)

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	Year Ended March 20, 2009	Year Ended March 20, 2010
Cash flows from operating activities		
Income (Loss) before income taxes and minority interests	15,827	(9,370)
Depreciation and amortization	8,028	7,840
Loss on valuation of inventories	0,020	2,138
Impairment loss	104	32
	104	52
Increase (decrease) in provision for employees' retirement benefits, net of payments	(1,448)	(680)
Loss (gain) on sales of investment securities	(3)	0
Loss (gain) on valuation of investment securities	2,221	31
Interest and dividend income	(517)	(306)
Interest expense	997	688
(Increase) decrease in trade receivables	21,990	3,369
(Increase) decrease in inventories	(630)	5,532
Increase (decrease) in trade payables	(15,096)	(2,780)
Increase (decrease) in accrued expenses	(714)	(514)
Other, net	(3,106)	(1,915)
Subtotal	27,654	4,065
Interest and dividends received	759	487
Interest paid	(1,016)	(689)
Income taxes paid	(14,912)	(2,726)
Income taxes refund	-	2,897
Net cash provided by (used in) operating activities	12,485	4,035
Cash flows from investing activities		
Purchase of property, plant and equipment and intangible assets	(8,472)	(4,866)
Proceeds from sales of property, plant and equipment and intangible assets	109	113
Purchases of investment securities	(2,033)	(1,497)
Proceeds from sales of investment securities	8	0
Other, net	(300)	(216)
Net cash provided by (used in) investing activities	(10,687)	(6,466)
Cash flows from financing activities	(10,001)	(0,100)
Increase (decrease) in short-term debt	4,820	4,209
Proceeds from long-term debt	944	10,310
Repayments of long-term debt	(4,760)	(4,361)
Dividends paid	(2,897)	(2,015)
Dividends paid to minority shareholders	(151)	(116)
Other, net	(16)	(110)
Net cash provided by (used in) financing activities	(2,061)	8,015
Effect of exchange rate changes on cash and cash equivalents	(971)	(5)
Net increase (decrease) in cash and cash equivalents	(1,236)	5,580
Cash and cash equivalents at beginning of year	11,864	10,629
Increase due to inclusion of subsidiaries in consolidation	1	87
Cash and cash equivalents at end of term	10,629	16,296
שמשה מהת שמשה פקתועמופותש מג כוות טו נכוווו	10,023	10,290

	Year Ended March 20, 2009	Year Ended March 20, 2010
Shareholders' equity		
Common stock		
Balance at the end of previous period	23,062	23,062
Changes of items during the period		
Total changes of items during the period	-	-
Balance at the end of current period	23,062	23,062
Additional paid-in capital		
Balance at the end of previous period	18,652	18,681
Changes of items during the period		
Disposition of treasury stock	28	0
Total changes of items during the period	28	0
Balance at the end of current period	18,681	18,682
Retained earnings		
Balance at the end of previous period	56,988	60,983
Increase (decrease) due to changes in accounting treatment at foreign subsidiaries	-	(1,330)
Changes of items during the period		
Cash dividends	(2,897)	(2,015)
Net income (loss)	6,892	(5,699)
Change of scope of consolidation	425	(422)
Change of scope of equity method	(425)	18
Total changes of items during the period	3,995	(8,119)
Balance at the end of current period	60,983	51,534
Treasury stock		
Balance at the end of previous period	(359)	(357)
Changes of items during the period		
Acquisition of treasury stock	(28)	(55)
Disposition of treasury stock	30	2
Change of scope of equity method	-	4
Total changes of items during the period	1	(49)
Balance at the end of current period	(357)	(407)
Total shareholders' equity		
Balance at the end of previous period	98,343	102,369
Increase (decrease) due to changes in accounting treatment at foreign subsidiaries	-	(1,330)
Changes of items during the period		
Cash dividends	(2,897)	(2,015)
Net income (loss)	6,892	(5,699)
Acquisition of treasury stock	(28)	(55)
Disposition of treasury stock	58	2
Change of scope of consolidation	425	(422)
Change of scope of equity method	(425)	22
Total changes of items during the period	4,025	(8,167)
Balance at the end of current period	102,369	92,871
		,

(Millions of yen)

	Year Ended March 20, 2009	Year Ended March 20, 2010
Valuation and translation adjustments		
Net unrealized holding gain (loss) on securities		
Balance at the end of previous period	1,607	(113)
Changes of items during the period		
Net changes of items other than shareholders' equity	(1,720)	1,355
Total changes of items during the period	(1,720)	1,355
Balance at the end of current period	(113)	1,241
Deferred gains (losses) on hedges		
Balance at the end of previous period	(10)	(67)
Changes of items during the period		
Net changes of items other than shareholders' equity	(56)	55
Total changes of items during the period	(56)	55
Balance at the end of current period	(67)	(11)
Foreign currency translation adjustments		
Balance at the end of previous period	921	(5,119)
Changes of items during the period		
Net changes of items other than shareholders' equity	(6,041)	(521)
Total changes of items during the period	(6,041)	(521)
Balance at the end of current period	(5,119)	(5,641)
Total valuation and translation adjustments		
Balance at the end of previous period	2,518	(5,301)
Changes of items during the period		
Net changes of items other than shareholders' equity	(7,819)	889
Total changes of items during the period	(7,819)	889
Balance at the end of current period	(5,301)	(4,412)
Minority interests		
Balance at the end of previous period	5,592	5,353
Changes of items during the period		
Net changes of items other than shareholders' equity	(239)	(522)
Total changes of items during the period	(239)	(522)
Balance at the end of current period	5,353	4,830
Total net assets		
Balance at the end of previous period	106,454	102,421
Increase (decrease) due to changes in accounting treatment at foreign subsidiaries	-	(1,330)
Changes of items during the period		
Cash dividends	(2,897)	(2,015)
Net income (loss)	6,892	(5,699)
Acquisition of treasury stock	(28)	(55)
Disposition of treasury stock	58	2
Change of scope of consolidation	425	(422)
Change of scope of equity method	(425)	22
Net changes of items other than shareholders' equity	(8,059)	366
Total changes of items during the period	(4,033)	(7,801)
Balance at the end of current period	102,421	93,289

(Millions of yen)

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#### 1. Basis of Presentation of Consolidated Financial Statements

#### Scope of Consolidation

(1) Scope of consolidation and application of equity method

- There are 64 consolidated subsidiaries and 14 companies accounted for using the equity method.
- (2) Changes in scope of consolidation and application of equity method

Consolidation New: 2 companies Eliminated: 1 company Equity method New: 2 companies Eliminated: 2 companies

#### 2. Changes in Basis of Presentation of Consolidated Financial Statements

#### Accounting standard for measurement of inventories

In previous fiscal years, for inventories held for sale in the ordinary course of business, the cost method for individual items was used for merchandise and finished goods that were order-made and for goods in process, and the cost method using the overall average for each six-month fiscal period was used for standardized merchandise and finished goods as well as semi-finished products and raw materials. Due to the adoption of "Accounting Standard for Measurement of Inventories" (ASBJ Statement No. 9, July 5, 2006) in the fiscal year that ended in March 2010, the cost method for individual items (in which book value is reduced in accordance with declines in profitability) was used for merchandise and finished goods that were order-made and for goods in process, and the cost method using the overall average (in which book value is reduced in accordance with declines in profitability) was used for standardized merchandise and finished products and raw materials. This change resulted in increases of ¥565 million yen each in the fiscal year's operating loss and ordinary loss and increases of ¥2,703 million in the loss before income taxes and minority interests.

In addition, for standardized merchandise and finished goods as well as semi-finished products and raw materials, the six-month overall average method was used in previous fiscal years but the overall average method for the entire fiscal year was used starting in the fiscal year that ended in March 2010. This change was made for the purpose of more appropriately presenting earnings in each fiscal year by eliminating the effect on inventory valuations of temporary fluctuations in manufacturing expenses. This change did not have a material effect on earnings.

#### Accounting standard for lease transactions

In previous fiscal years, transactions of finance leases under which the ownership of the leased assets is not transferred to the lessees were treated as ordinary rental transactions. Starting with the fiscal year that ended in March 2010, "Accounting Standard for Lease Transactions" (ASBJ Statement No. 13, originally issued on June 17, 1993 by the Business Accounting Deliberation Counsel and revised on March 30, 2007 by the ASBJ) and "Implementation Guidance on Accounting Standard for Lease Transactions (ASBJ Guidance No. 16, originally issued on January 18, 1994 by the Japanese Institute of Certified Public Accountants and revised on March 30, 2007 by the ASBJ) have been adopted. As a result of this change, the accounting method for leases is based instead on the method used for ordinary purchases and sales.

Finance leases where there are no transfers of ownership that started before the start of application of the revised standard will continue to use the accounting method for ordinary rental transactions. This change had no effect on earnings.

### Use of "Practical Solution of Unification of Accounting Policies Applied to Foreign Subsidiaries for Consolidated Financial Statements"

Starting with the fiscal year that ended in March 2010, "Practical Solution of Unification of Accounting Policies Applied to Foreign Subsidiaries for Consolidated Financial Statements" (ASBJ Practical Issues Task Force No. 18, May 17, 2006) has been applied and the necessary corrections to the consolidated financial statements have been made. As a result, retained earnings at the beginning of the fiscal year decreased by ¥1,330 million. This change did not have a material effect on earnings.

YASKAWA ELECTRIC CORPORATION

#### Corporate Information

Corporate Name: YASKAWA Electric Corporation

Founded: July 16, 1915

Employees: Consolidated 8,176 Non Consolidated 2,778

- Head Office: 2-1 Kurosakishiroishi, Yahatanishi-ku, Kitakyushu 806-0004 Japan Phone +81-93-645-8801 / Fax. +81-93-631-8837
- Tokyo Office: New Pier Takeshiba South Tower, 1-16-1 Kaigan, Minato-ku, Tokyo 105-6891, Japan Phone +81-3-5402-4502 / Fax. +81-3-5402-4580
- Sales Offices: Nagoya Office
   Phone +81-52-581-2761 / Fax. +81-52-581-2274

   Osaka Office
   Phone +81-6-6346-4500 / Fax. +81-6-6346-4555

   Kyushu Office
   Phone +81-92-714-5331 / Fax. +81-92-714-5799
- Plants: Yahata-nishi Plant, Yahata-higashi Plant, Yukuhashi Plant, Tokyo Plant

Laboratories: Corporate Research & Development Center (Kokura Plant), Tsukuba Research Laboratory

#### **Group Companies**

#### JAPAN

- Y-E DATA INC. Manufacturing and sales of computer peripheral and terminal equipment; Ontrack Data Recovery service
- YASKAWA INFORMATION SYSTEMS CORPORATION Information processing, software development, sales of system equipment
- YASKAWA CONTROLS CO., LTD.
   Manufacturing and sales of electric machines, and parts
- YASKAWA ELECTRIC ENGINEERING CORPORATION Maintenance, test operation and adjustment of electric machines and facilities and technical training
- YASKAWA LOGISTEC CORPORATION
   General product distribution
- YASKAWA MOTOR CORPORATION Design, manufacturing, sales and maintenance of motors, generators and motor applications

#### EUROPE

- YASKAWA ELECTRIC EUROPE GmbH (Germany) Manufacturing, sales, and after-sales service of AC drives, servomotors and controllers
- MOTOMAN ROBOTICS EUROPE AB (Sweden)
   Sales and after-sales service of robots
- MOTOMAN ROBOTEC GmbH (Germany) Sales and after-sales service of robots
- YASKAWA ELECTRIC UK LTD. (U.K.) Manufacturing, sales, and after-sales service of AC drives
- YASKAWA EUROPE TECHNOLOGY LTD. (Israel) Development, manufacturing, sales, and after-sales service of servomotors and controllers. Sales and after-sales service of robots

#### ASIA

- YASKAWA ELECTRIC (SINGAPORE) PTE LTD. (Singapore) Sales and after-sales service of AC drives, servomotors, controllers and robots
- YASKAWA ELECTRIC KOREA CORPORATION (Korea) Sales and after-sales service of AC drives, servomotors, controllers and robots
- YASKAWA ELECTRIC (SHANGHAI) CO., LTD. (China) Sales and after-sales service of AC drives, servomotors and controllers
- SHANGHAI YASKAWA DRIVE CO., Ltd. (China) Manufacturing and sales of AC drives, servomotors and controllers
- SHOUGANG MOTOMAN ROBOT CO., LTD. (China) Sales and after-sales service of robots
- YASKAWA ELECTRIC TAIWAN CORPORATION (Taiwan) Sales and after-sales service of AC drives, servomotors and controllers. After-sales service of robots
- MOTOMAN MOTHERSON ROBOTICS LTD. (India) Sales and after-sales service of robots

#### THE AMERICAS

- YASKAWA ELECTRIC AMERICA INC. (U.S.A.) Manufacturing, sales, and after-sales service of AC drives, servomotors and controllers
- MOTOMAN INC. (U.S.A.) Sales and after-sales service of robots
- YASKAWA MOTOMAN CANADA, LTD. (Canada) After-sales service of AC drives, servomotors and controllers. Sales and after-sales service of robots
- YASKAWA ELÉTRICO DO BRASIL LTDA. (Brazil) Sales and after-sales service of AC drives, servomotors and controllers

Note: As of June 1st, 2010, Yaskawa Electric combined its subsidiaries in the Americas and Europe, and changed their names.



Head Office

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#### As of March 20, 2010

Number of authorized shares 560,000 thousand
Number of shares outstanding 252,331 thousand
Common stock
Number of shareholders 23,173
Stock code

Major shareholders (top 10 shareholders)	Number of shares (1,000s)	Shareholding ratio
The Master Trust Bank of Japan, Ltd. (Trust Account)	19,285	7.65%
Japan Trustee Services Bank, Ltd. (Trust Account)	14,817	5.88%
Mizuho Corporate Bank, Ltd.	9,473	3.76%
Japan Trustee Services Bank, Ltd. (The Chuo Mitsui Trust and Banking Company, Limited (Employee Retirement Benefit Trust Account))	7,970	3.16%
Meiji Yasuda Life Insurance Company	7,967	3.16%
Japan Trustee Services Bank, Ltd. (The Sumitomo Trust & Banking Co., Ltd. Re-trust Account, The Bank of Fukuoka, Ltd. Employee Retirement Benefit Trust Account)	6,375	2.53%
The Chase Manhattan Bank NA, London SL, Omnibus Account	4,933	1.96%
The Nomura Trust and Banking Co., Ltd. (Trust Account)	4,426	1.76%
Nippon Life Insurance Company	4,247	1.69%
The Nishi-Nippon City Bank, Ltd.	3,432	1.36%

Note: Treasury stock is deducted in the calculation of the shareholding ratio.

#### **Investor Information**

Fiscal year: every year from March 21 to		
March 20 of the following year		
Ordinary General Meeting of Shareholders: June		
Shareholder record date for receipt of dividends:		
March 20 for year-end dividend		
September 20 for interim dividend		

#### Share Distribution by Shareholder Type



#### **Company Share Price**



Newspaper in which announcements will appear: The Nikkei Stock Listings: Tokyo and Fukuoka Shareholder registry administrator:

Mizuho Trust & Banking Co., Ltd.

2-1 Yaesu 1-chome, Chuo-ku, Tokyo, Japan

	For brokerage accounts	For special accounts
Postal address		2-8-4 Izumi, Suginami-ku, Tokyo, Japan 168-8507
Telephone number for inquiries		Toll-free +81-0120-288-324
Handling office	Brokerage that handles your shares	Mizuho Trust & Banking Co., Ltd. Head office and branches nationwide Mizuho Investors Securities Co., Ltd. Head office and branches nationwide
Reminder	Please contact the postal address and telephone number for inquiries in the special account column to the right for the payment of unpaid dividends or the issue of a payment statement.	Only transactions for the purchases or additional purchases of shares constituting less than one unit are handled. Please inquire as soon as possible if you neglected to change share certificate registration before the implementation of the electronic share certificate system and you have a share certificate not registered under your name.



#### YASKAWA ELECTRIC CORPORATION

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