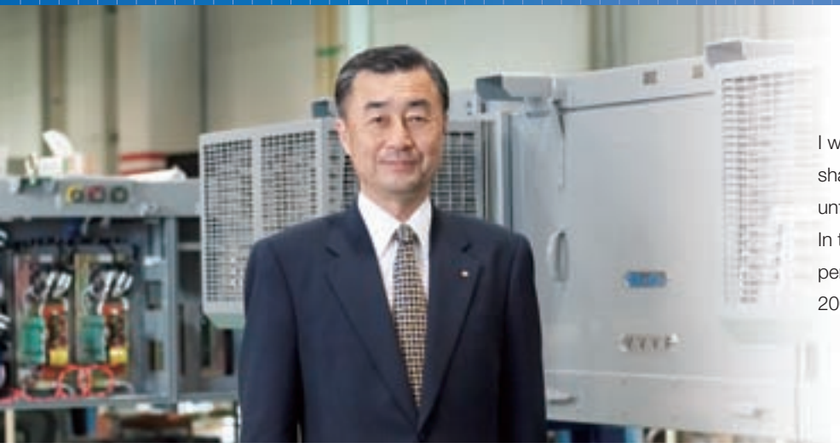


I would like to warmly thank all of our shareholders and other supporters for their unfailing loyalty over the past year. In the following interview, I discuss our performance in the fiscal year from June 1, 2007 to May 31, 2008, our 147th term.

President
Teruyuki Oosawa

The 21st century is an age of increasing globalization and environmental concern. The time is right for us to make the world a better place using the core technologies we have developed over the last 90 years.

Q Please give us an overview of Toyo Denki's performance for the fiscal year ended May 31, 2008.

In the fiscal year under review, the second year of our medium-term management plan—the "Innovation 90 Plan"—the economy faced a series of challenges, including an intensification of the subprime loan problem in the United States, further rises in the prices of oil and other raw materials, and volatile exchange rates. Despite the difficult business environment that ensued, the Toyo Denki Group worked hard to grow its business while improving corporate value to meet the goals of the Innovation 90 Plan.

Despite a decline in orders received for the Industrial Systems segment in the period, orders received in the Transportation Business segment were firm, climbing 3.3% over the previous fiscal year to reach 38,873 million yen.

While net sales in the Information Systems segment declined, net sales in the Transportation Business segment grew by a steady 4.3% to 38,130 million yen.

Now let me say a few words about profit. First, efforts to promote TSS manufacturing reform and improve productivity were insufficient to overcome several adverse factors. These included a large number of projects in the Transportation Business segment requiring a large amount of new design and development, and a leap in manufacturing costs caused by the spike in raw materials prices. As a result, operating income fell 27.9% to 1,391 million yen, and ordinary income declined 39.1% to 1,197 million yen. Further, the allocation of a reserve for directors' retirement benefits resulted in an extraordinary loss of 125 million yen, the sum required to make up for previous fiscal years.

A breakdown of performance by division reveals that the adverse business environment had a particular impact on the Industrial Systems segment.

Orders received by the Transportation Business segment were up 16.0%, to 21,932 million yen, buoyed domestically by an increase in private sector railway demand, and overseas by China's Chengdu subway system project. Underpinned by firm domestic demand, net sales for the segment climbed steadily to 19,781 million yen, a 14.8% increase.

In the Industrial Systems segment, corporate skittishness about capital investment from early in the year and other factors resulted in a 12.4% decrease in orders received to 14,623 million yen. Net sales, however, grew 1.3% over the previous fiscal year, to 15,901 million yen, assisted by such factors as growing demand for testing equipment for automotive development and processing equipment.

In the Information Systems segment, steady demand for IC-compatible equipment for train station operation systems lifted orders received 12.4% to 2,318 million yen. Net sales for the segment, however, declined 33.0% to 2,447 million yen, as deliveries of IC card-compatible equipment for the Tokyo metropolitan area were completed in the first half of the period.

Q Please tell us about your outlook for the current fiscal year (ending May 31, 2009) and your company's plans.

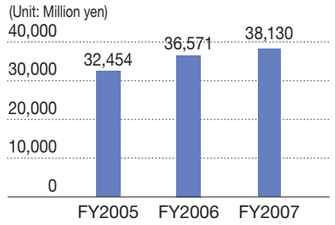
A number of uncertain factors could potentially impact the business environment ahead. These include a widening of pressures that would see fluctuations in the US economy and steep increases in the cost of oil and other raw materials being passed onto the price of products.

While some of our customers show signs of a pullback from capital investment in some areas, we will continue to push ahead with technology development and respond to market needs.

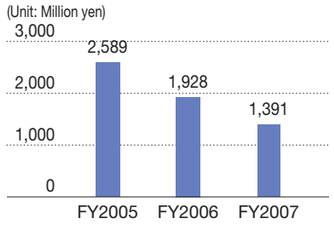
Our consolidated performance plan, which contains our performance forecasts, calls for orders received in the amount of 44,000 million yen, a 13.2% year-on-year increase, and net

Consolidated Performance

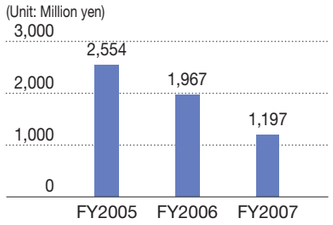
Net sales



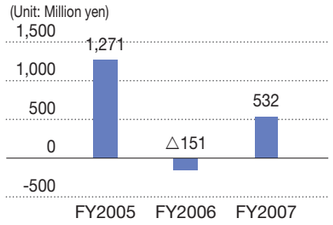
Operating income



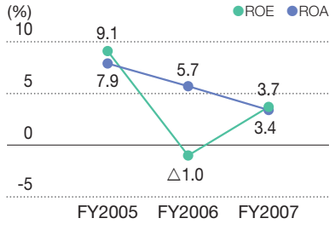
Ordinary income



Net income

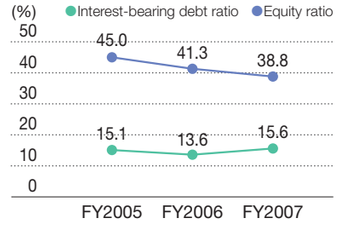


ROE and ROA



ROE: Return on Equity ROA: Return on Assets

Interest-bearing debt ratio and equity ratio



sales of 40,000 million yen, a 4.9% increase. We forecast operating income to climb 43.8% year-on-year to 2,000 million yen, driven by sales gains, improvements in productivity, and fewer projects requiring a high proportion of new design and development work.

The current fiscal year is the final year of our “Innovation 90 Plan.” While we do not expect to reach the initial targets of the plan due to the unforeseen changes in the business environment, there is no change in the commitment to corporate growth of the plan. Accordingly, we will work steadily to solidify our business fundamentals based on our long-term vision and aim to achieve our initial targets as soon as possible after the fiscal year ending May 31, 2010.

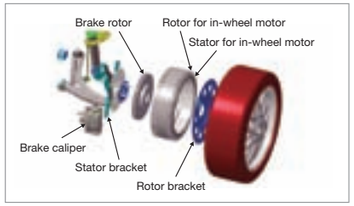
Q What will the company focus on in the future?

We will keep our sights set on growing our business and enhancing corporate value. Our main themes in this will be “contributing to the environment,” an area capturing growing attention worldwide, and “overseas development” focused on markets with high growth expectations.

The Transportation Business segment will focus, domestically, on developing products that meet the environmental needs of customers in such areas as energy savings and better environmental performance, in an effort to expand our market share. Overseas, in recent years, demand in China has swiftly expanded because of the demand generated by the Beijing Olympics and Shanghai World Expo, and we have already received numerous orders for electrical equipment for the Beijing and Chengdu subway systems. In addition to China, where robust demand is expected to continue, and the United States, where we have a strong track record, in coming years we will step up activities in markets like India and Southeast Asia.

The Industrial Systems segment will strengthen its selective focus on areas where the market is expected to expand. For automakers, who need to adapt to environmental realities, we are developing direct drive in-wheel motors for electric cars and aggressively promoting next-generation technologies for automobile testing equipment, one of our flagship product lines. In addition, the electric motor and inverter technologies developed over the years by the Transportation Business and Industrial Systems segments will be applied to the development of products for electric propulsion ships, an area attracting considerable interest, as we focus on developing new markets. Overseas, with the need to alleviate pressure on the environment becoming an urgent global problem, we are helping to improve the environment in countries around the world by supplying highly efficient power generation facilities and systems for a diverse range of generation systems operating in different regional conditions.

The Information Systems segment will develop new businesses in fields such as remote monitoring systems, leveraging its achievements in train station equipment development.



Parts of an in-wheel motor

Q How has rising environmental awareness influenced your business?

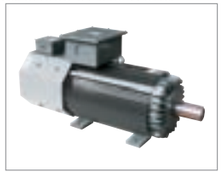
Our technologies, which have supported the safe, comfortable, and efficient operation of public transportation, are now being applied in all of our business segments, making major contributions to alleviating environmental impact.

From August 2007, we began delivery of our E^3 Solution System (see p.7), a train power storage system that not only ensures a stable supply of power but also saves energy. We have also substantially reduced noise and vibration through the development of a single-arm-type pantograph and enclosed-type motor.

In addition, we contribute to the development of new environmentally friendly forms of urban transportation, supplying key electrical equipment for products such as a super-low floor light rail vehicles (LRV) developed to provide barrier-free mobility, and Japan’s first normal-conducting maglev linear motor car high-speed surface transport system (HSST), which was rolled out in time for the 2005 Aichi World Expo.

Since it was developed in 1999, our permanent magnet-type synchronous motor (ED motor), which achieves both high efficiency and compactness, has been used in industrial equipment across a variety of fields, including newspaper rotary presses and automotive testing equipment. In January 2008, we launched the VF66 series of next-generation inverters which feature a control mode switching function between ED motor with inverter motor mode, and general-purpose motor mode (see p.8).

For a company that develops environmental products such as these, the growing environmental awareness in the world today is highly advantageous. We will always be driven to pursue technological innovation, high energy efficiency, and resource-conserving products.



ED Motor

Q Where do you see the company in ten years?

The Group has created a long-term vision of where it wants to be in ten years time and uses it to guide its management.

In response to markets, we are enhancing our global competitiveness and expanding the proportion of our overseas sales to 30%. On the structural side, we are expanding business and promoting innovation to ensure continuous growth.

As a leading company in electrical equipment for railroad rolling stock, our Transportation Business helps realize next-generation high-speed railroads in response to customers’ increasingly sophisticated needs. Using the technology and know-how accumulated in the Japanese market, one of the world’s most advanced rail operating environments, we are promoting business globally and helping to develop railroad networks in emerging nations and in markets all over world.

Drawing on the core electric motor drive technology we have amassed since we first began, we are now working to create new businesses in the Industrial Systems and Information Systems segments in an effort to double our sales in these areas. We are aggressively going after growing markets to establish a steady stream of revenue that exceeds earnings in our current Transportation Business.

Q Please tell us about your policy on shareholder returns.

Our basic policy is to maintain stable dividends for our shareholders. The total dividend for the fiscal year under review was 6 yen per share, unchanged from the previous year, and we also aim to keep dividends at 6 yen or higher in the current fiscal year, ending in May 2009, and beyond.

We strategically allocate a portion of some revenues, as retained earnings, to such purposes as R&D, capital investment, and overseas development, and we set aside another portion to improve our financial position. Going forward, we are committed to growing our business and strengthening our business foundation in order to maintain stable dividends for our shareholders.

During the fiscal year under review, we purchased 900,000 of our own shares. As a result, the company now owns about 4.4% of its total outstanding shares.

As we go forward, our aim is to achieve balanced growth and to prove worthy of the hopes placed in us. We ask for your continuing support and cooperation in the future.

90th Anniversary Toyo Denki Milestone

Thanks to the faithful support of our shareholders and other stakeholders, on June 20, 2008, we celebrated our 90th anniversary. These pages present the major milestones we have achieved from the beginning through today.

Historical background

Although the domestic production of rolling stock, rails, and other items was quite advanced, based on the importation of steam locomotives, Japan lacked the technology for producing the main electrical equipment such as traction motors and controllers that were at the heart of electric trains and locomotives. Up until the start of the Taisho Period (1912), almost all these items had to be imported. Prior to the outbreak of World War I in 1914, Japan had imported most of its electrical equipment and similar items from Germany, and with the interruption of these imports, momentum gathered to produce them locally.

80-ton electric locomotive (1934)

Papermaking machine using static Leonard system (1965)

Toyo Denki established

Our first president, Kaichi Watanabe (at that time, president of Ishikawajima Shipbuilding & Engineering Co., Ltd., and a director of Keihan Electric Railway Co., Ltd.), planned the domestic production of electrical equipment for rolling stock. He negotiated with the British company Dick Kerr & Co., Ltd., a famous name all over the world at the time (which became "The English Electric Co." in 1919), and signed a production and sales contract with the company. Based on this, Watanabe drafted a charter and obtained the backing of a number of influential figures such as Eiichi Shibusawa, a leading light in financial circles. On June 20, 1917, an inaugural general meeting was held and the company was launched. (Capital stood at 3 million yen.)

Operations get underway

In the autumn of 1917, construction of a factory (about 26,400 m²) began in Kubocho, Yokohama. By March 1918, work was complete, and in September of the same year the plant began operating. (At this time, the company had a total of 265 employees, with 44 at the head office and 221 on the factory floor). In September 1919, the first traction motor and controller were delivered to Keihan Electric Railway.

The story of our company is told by the milestones below, which each represent a chapter in our history. Recently, on June 20, 2008, we turned a new page when we celebrated our 90th anniversary. Going forward, we will continue to put into practice our core commitments—"Maintaining an ethical stance and contributing to society and customers," "Developing a culture of enterprise and originality and embracing the challenges of the future," and "Insisting on quality and enhancing levels of trust." Based on these unchanging principles, we will continue to develop our business operations and work to meet the expectations of all those who have placed their trust in us.

Third-generation electric locomotive for towing ships through Panama Canal (2002)

Subway Line 10, Beijing (2005)

1918 Technical collaboration with Dick Kerr (UK) and establishment of company with capital of 3 million yen

1921 Developed Japan's first pantograph

1932 Developed Japan's first diesel-electric locomotive

1950 Developed ST-type three-phase AC commutator electric motor stock

1952 Developed Japan's first Cardan shaft driving device

1960 Orders received for second-generation electric locomotives for towing ships through Panama Canal
Developed Japan's first constant-speed controller for rolling

1965 Developed Japan's first thyristor static Leonard equipment series

1972 Developed 150-kVA 440-Hz static CVCF compound electric motor

1977 Developed Japan's first main circuit chopper controller using a control VVVF (variable voltage, variable frequency) inverter

1988 Completed world's first heat pipe cooling 8-electric motor batch mass-production-type reverse conductive GTO thyristor

1991 Developed Japan's first lightweight VVVF inverter using 1500-V automatic ticket gates

1997 Completed onboard ticket issuing machine compatible with trains

1998 Delivered electrical equipment for Beijing Subway Fuba xian Line

1999 Completed VF64 series of new-type inverters
Completed permanent-magnet synchronous motor (ED motor)

2002 Started delivery of third-generation electric locomotives for towing ships through Panama Canal

2004 Established Toyo Denki USA, Inc.
Established Hunan Xiang Yang Electric Co., Ltd. (China)
Jointly developed first domestic production full-flat-type super-low floor LRV
Developed world's first micro gas turbine hybrid railway rolling stock electrical equipment

2005 Delivered electrical equipment for Dallas LRVs (USA)
Developed E³ Solution System
Established Changzhou City Taiping Zhanyun Auto Door Co., Ltd. (China)
Established Changzhou Ruiyang Transmission Technology Co., Ltd. (China)
Orders received for electrical equipment for Beijing Subway Line 1 extra rolling stock
Orders received for train electrical equipment for Beijing Subway Line 10 (providing access to Olympic venues)

2006 Developed PASMO-compatible commuter ticket issuing machine
Established Tianjin Toyo Denki International Trade Co., Ltd.
Developed N700 series Shinkansen goes into operation (featuring Toyo Denki electrical equipment)
Developed μTOPcm/RX series remote monitoring system motor

2007 Developed fully enclosed type traction

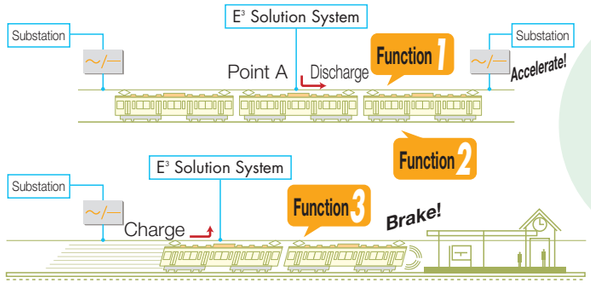
2008 90th anniversary
Introduced VF66 series of new-type general-purpose inverters

PASMO-compatible commuter ticket issuing machine (2006)

Feature 1 Transportation Business Segment Products

Railroad electricity storage system
E³ Solution System

Jointly developed by Toyo Denki and GS Yuasa Power Supply Ltd., the E³ (pronounced "e-three") Solution System is an electricity storage system for railroads. It consists of a new large-capacity lithium ion battery and a reversible DC/DC converter control circuit. This system, which offers a voltage drop compensation function, regenerative power absorption, and a power peak cut function, is an excellent substation assist system for trains, allowing railways to operate on less energy, thereby helping in the fight against global warming.



Energy
Energy-saving measures are applied in all areas to ensure effective use of energy resources. Our energy solutions contribute to energy saving measures by using power effectively.

Ecology
Use of energy-efficient lithium ion batteries avoids power being wasted as heat, etc.—a problem up to now—and contributes to effective use of power.

Advantages

Economy
Our energy solutions effectively reduce expenses by eliminating the construction costs involved in building the new substation facilities that would otherwise be needed to counter drop-off in voltage and power shortages, and by avoiding the need to expand contract power and increase capacity of power receiving facilities.

Function 1

Problem

The greater the distance from the substation, the greater the voltage drop. Voltage can go particularly low at peak times when many trains are operating.

Solution

Voltage drop compensation

Voltage drop can be controlled by splicing the E³ Solution System into locations where the voltage goes low.

Function 2

Problem

The morning and evening power peaks during rush hours can push up electricity costs. The ever-increasing carrying capacity of trains creates the need for more power and more substations.

Solution

Cutting power peaks

The E³ Solution System can control power expenses at peak times and reduce the need for contract power.

Function 3

Problem

On track employing regenerative trains, the voltage increases and regenerative power is lost if there are no other trains making power demands on the line. The more regenerative trains there are, the more pronounced this phenomenon becomes, meaning more power regenerated by the rolling stock is lost as heat, etc., is wasted.

Solution

Absorbing regenerative power

The E³ Solution System effectively stores regenerative power and supplies that power to other active trains.

Feature 2 Industrial Systems Segment Products

Next-generation inverters
VF66 series

Advantage 1 Versatility

Drawing on our variable speed drive technologies derived from inverters, we have developed a new series of products with broad application to variable speed systems based on AC electric motors. They are able to drive either an induction motor or an interior permanent magnet synchronous motor.

Advantage 2 Environmental friendliness

The VF66B series inverter is environmentally friendly and complies with the EU RoHS (Restriction on Hazardous Substances) Directive. All components used are lead-free, and no mercury or any other substance specified under the RoHS Directive is used.

Advantage 3 Focus on energy savings

By extending the VF66B inverter series, we focused on expanding sales of drive systems based on highly energy efficient interior permanent magnet synchronous motors, sought to increase the energy-savings offered by our production line system, and offered a product with a smaller environmental footprint able to counter global warming.

Intelligent invertor VF66

VF66 series market positioning

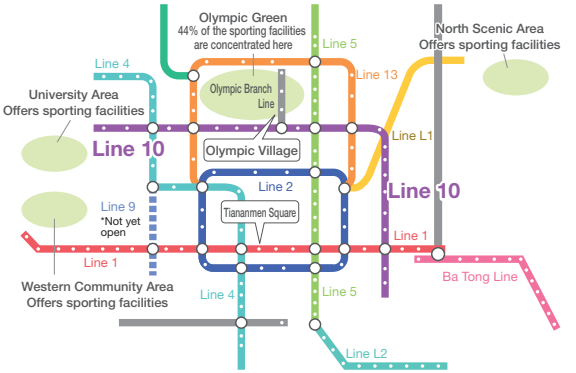
The VF66B inverter is the successor to the VF64/ED64sp series and was developed for applications where advanced functions are required. It is expected to attract new customers as well as retain existing ones. We plan to develop an upgraded version of the VF66B series that will become the industry's top performer. Research and development are underway to create an inverter that offers high speed, high precision, and advanced functions, targeting applications in dynamo systems like automotive testing equipment for hybrid automobiles.

Highlights

Beijing Subway Line 10 goes into operation

Beijing Subway Line 10, which provides access to the main venues for the Olympics that started on August 8, 2008, went into commercial operation on July 20. Toyo Denki delivered complete sets of controllers, traction motors, gear units, auxiliary power supply systems, and other equipment for 240 vehicles operating on the line. The photo at right offers a scene from the July 19 line opening ceremony attended by Toyo Denki president Teruyuki Oosawa.

Line Opening ceremony



Beijing Subway Lines

Website Upgraded

On June 20, 2008, the anniversary of the company's establishment, we unveiled a new version of our website featuring an improved design and even easier access and content search. We revamped the site's structure with potential customers in mind.

http://www.toyodenki.co.jp/en/

CSR at Toyo Denki

Environmental housekeeping book

To remind employees of the Toyo Denki Group and their families of the need to save energy at home and support their efforts, we handed out environmental housekeeping books. We also made it available on our website to the general public.

Plant tours given to railway societies

To help the young people who hold the future in their hands understand our products and technologies, we invited members of university railway societies to tour our Yokohama Plant. The participants were very interested in the locomotive electric motors, inverters, and other main products of our Transportation Business segment, and asked many questions.