Hitachi Zosen Corporation 2016 **Annual Report** 

# TECHNOLOGY for PEOPLE, the EARTH, and the FUTURE

At the Hitachi Zosen Group, our goal is to leverage the expertise in manufacturing and engineering we have built up during more than 130 years to develop our Environmental Systems and Industrial Plants Business, Machinery Business, Process Equipment Business, Infrastructure Business, and Precision Machinery Business.

Under the Hitz Vision II medium-term management plan that we started in fiscal 2014, we aim to achieve our long-term Hitz 2016 Vision. Accordingly, we aim to firmly reap the benefits of the business platforms that we created during the first half of our three-year Hitz Vision medium-term management plan.

Hitachi Zosen has positioned its business domains in line with Hitz Vision II. In our two core businesses of Environment/Green Energy, and Social Infrastructure and Disaster Prevention, areas of greatly increasing public concern, we will provide products and services that satisfy our customers. To do this, we have adopted the concept of a "technology-oriented company" and we will build an optimal business strategy and concentrate our business resources in these two core businesses.

# What is a "technology-oriented company"?

The Hitachi Zosen concept of "technology-oriented company" involves a return to the corporate philosophy to strengthen fundamental technologies as well as proprietary technologies (in a broad sense, including work processes). The aim is to deliver customer satisfaction and high added value toward sustainable growth.

# Contents

- 1 Hitz Value
- 3 Seven-Year Summary
- 5 To Our Stakeholders
- 7 President's Message
- 13 Seeking to Be a Highly Profitable Company with Public Recognition
- 15 Business Segments

- 17 Review of Operations
  - 17 Environment Systems and Industrial Plants Business
  - 19 Machinery Business
  - 22 Infrastructure Business
- 23 Research & Development
- 24 Intellectual Property Management
- 25 Management's Discussion and Analysis
- 28 Corporate Governance and Compliance
- 29 Board of Directors and Corporate Auditors
- 31 Tackling Environmental Issues

# **Hitz Value**

(corporate philosophy, management stance, and standards of business behavior)

Hitachi Zosen will continue to adhere to the basis of its activities,
the Hitz Value—comprising corporate philosophy, management stance, and standards of
business behavior—in efforts to acquire the technologies and problem-solving abilities
needed to contribute to society and to seek further growth as a group.

# Corporate philosophy

We create value useful to society with technology and sincerity to contribute to a prosperous future.

# Our management stance

[Satisfaction of our stakeholders]

- 1) Improvement of customer satisfaction
- 2) Emphasis on the job satisfaction of employees
- 3) Enhancement of shareholder value

[Attitude to work]

- Sensing change and moving in advance, emphasis on creative technology
- 5) Thorough implementation of compliance
- 6) Pursuit of no casualties in accidents or disasters on the job

# Standards of business behavior

- 1) Communicating with sincerity
- 2) Learn widely, think deeply
- 3) Continually taking on challenges

32 Financial Section

65 Hitachi Zosen and Group Companies

67 Company History

68 Investor Information

# Forward-looking statements:

This Annual Report contains forward-looking statements that reflect judgments based on information available at the time of writing. Consequently, such statements are subject to a number of risks reflecting the uncertainties involved in the Company's business environment, and investors are warned that these statements may differ significantly from actual results.

# Seven-Year Summary

Millions of yen

							Willion to Or you
	2009	2010	2011	2012	2013	2014	2015
Operating results							
Order intake	337,271	246,067	289,715	382,848	328,433	452,758	435,435
Net sales	273,526	287,196	303,036	296,792	333,433	359,332	387,044
Operating income	13,557	13,359	11,367	11,363	7,879	12,819	15,113
Profit attributable to shareholders of Hitachi Zosen	7,906	9,675	9,319	7,411	3,720	5,100	5,849
Cash flows							
Cash flows from operating activities	5,508	17,136	14,650	9,649	300	9,086	8,148
Cash flows from investing activities	(12,659)	(3,217)	(4,628)	(13,488)	(8,697)	(14,680)	(3,666)
Cash flows from financing activities	8,755	(9,630)	1,083	(7,818)	(514)	12,178	(15,948)
Cash and cash equivalents at end of year	51,690	55,915	66,609	56,413	49,961	60,770	49,672
Financial position							
Net assets	93,200	101,969	111,047	115,126	117,565	117,531	120,666
Total assets	349,331	380,249	375,788	366,347	379,414	408,803	401,649
Interest-bearing debt	112,794	104,598	107,650	102,643	104,327	119,189	105,133
Per share data* (Yen)							
Net income — Basic	9.95	12.19	11.74	*46.78	23.77	30.52	34.96
Net income — Diluted	8.38	10.74	10.67	*44.78	_	_	_
Net assets	99.15	109.75	120.07	*627.85	641.16	651.24	677.24
Cash dividends	2.00	2.00	2.00	2.00	10.00	10.00	12.00
Financial indicators							
Shareholders' equity ratio (%)	22.5	22.9	25.4	26.9	26.4	26.6	28.4

<sup>\*</sup> Per share data (net income and net assets) was calculated based the five-to-one consolidation of common stocks that was effective October 1, 2013 and occurred at the beginning of the fiscal year ended March 31, 2013.

Management plan

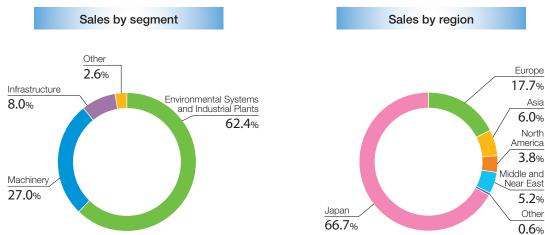
Hitz Innovation II
FY2008–FY2010

Hitz Vision
FY2011–FY2013

Hitz Vision II
FY2014–FY2016

# Forward-looking statements:

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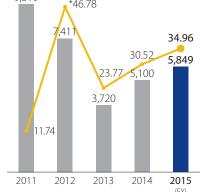




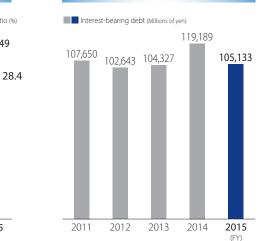
2012

2013

2014



<sup>\*</sup> Per share data (net income and net assets) was calculated based the five-to-one consolidation of common stocks that was effective October 1, 2013 and occurred at the beginning of the fiscal year ended March 31, 2013.



# To Our Stakeholders



First of all, I would like to thank all of our stakeholders for your support over the years.

As a corporate group engaged in implementing and constructing social infrastructure, the Hitachi Zosen Group has been contributing to developing industries and economies, and to creating prosperous societies, ever since it was founded in Osaka in 1881 by E. H. Hunter of Britain as the Osaka Iron Works. Although started as a shipbuilder, since Japan's period of high economic growth the Hitachi Zosen Group has been aggressive in introducing technology from overseas as a way of adapting to changing business conditions, and has grown by strengthening its land-based businesses, including marine diesel engines and Energy from Waste (EfW) plants. In 2002, Hitachi Zosen spun off its original shipbuilding operations, and in 2011, marked its 130th anniversary by re-categorizing its businesses into the two domains of Environment/Green Energy, and Social Infrastructure and Disaster Prevention. Today, its mainstay operations are in engineering, including EfW and other areas.

Under the Hitz 2016 Vision, outlining the future profile of the Group in fiscal 2016, the Group has aimed to evolve into a highly profitable company based on the pillars of building the enterprise with leading earnings potential in each of its business segments and products, expanding the scale of its businesses into a ¥500 billion enterprise, strengthening its financial position by seeking to be a highly profitable company that is publicly recognized, and by building up a stable position with an equity ratio of at least 30%. Hitachi Zosen is now implementing a variety of policies under the Hitz Vision II, its medium-term management plan that started in fiscal 2014. In fiscal 2015, our order intake reached ¥435,435 million, and consolidated sales amounted to ¥387,044 million. As the scale of our business continues to steadily expand, we believe we have reached a stage where our ¥500 billion goal is now well within reach. Under these circumstances, in April Takashi Tanisho was delegated additional authority as CEO (Chief Executive Officer). As we begin formulating our next medium-term management plan, which starts in fiscal 2017, under the concept of having all of our employees participate in the process, I am convinced that as president and CEO, Mr. Tanisho will bring strong leadership to the pursuit of new possibilities for the Hitachi Zosen Group.

The corporate philosophy of the Hitachi Zosen Group is to "create value useful to society with technology and sincerity, to contribute to a prosperous future." At COP21, the United Nations Conference on Climate Change held in Paris in 2015, a new international framework for efforts by all countries to reduce CO<sub>2</sub> and other greenhouse gases in 2020 and beyond was adopted in the form of the Paris Agreement. This further increases the importance of renewable energy as a means of reducing CO<sub>2</sub> emissions. EfW, one type of renewable energy, is the foundation of the Hitachi Zosen Group's business, and the Group recognizes this as a major opportunity to contribute to solving a significant social issue. The Group will work to develop technology and put in place an operational infrastructure that will enable it to offer solutions for the environmental and energy problems that are issues for the entire world, tailored to the circumstances of each country.

With the introduction of the Corporate Governance Code in fiscal 2015, Hitachi Zosen is working to further enhance its governance structure. In June 2016, we appointed Richard R. Lury as a new outside director. Having Mr. Lury, who is active as an attorney in the U.S. with his background in a culture different from Japan's, involved in management as an outside director is a step toward promoting greater diversity at the corporate level, something we believe is extremely important as the Hitachi Zosen Group furthers its efforts to expand globally.

For the Hitachi Zosen Group to achieve sustainable growth and create corporate value, it is essential that we have the support of all of our stakeholders, including shareholders and investors, customers, business partners, members of local communities, and Group personnel. I am grateful for and respectfully ask for your continued support.

August 2016

M Juruhana

Minoru Furukawa, Chairman

# President's Message



# Fiscal 2015 Results and Analysis

We increased sales and profits, and are making steady progress in expanding the scale of our operations and strengthening profitability.

With regard to business conditions, we recognize that there is not so much growth in capital spending by manufacturers. Overseas, the economic slowdown in China and the deferral of capital projects in the oil sector due to the fall in oil prices are having an impact on our order book. Energy-from-Waste (EfW) plants, one of our core businesses, have been less affected since the principal customers are local government entities, and they are less vulnerable to economic slowdowns in Japan or globally. However, in the EfW business we are seeing an economic

impact in the private sector, due to the engineering and construction costs for the projects, which require 4–5 years to complete. We are also seeing significant inflation in local building costs ahead of the 2020 Tokyo Olympic Games and Paralympic Games.

In fiscal 2015, we achieved growth in sales and profits and made steady progress on our management targets of expanding the scale of operations and strengthening profitability. The next section reviews the progress made in each business segment.

# [Environmental Systems and Industrial Plants Business | See p.17 for details

We have enjoyed considerable success in this business segment in the Middle East in recent years. In particular, in fiscal 2015 we completed a major desalination plant construction project that was underway in Qatar and secured an order for an even larger project. In Japan, the market for the environmental systems business over the next few years also appears to be remaining robust. Demand is rising to rebuild or renovate the many waste incinerators that were modified over a decade ago in response to concerns over dioxins as they are now facing obsolescence. In addition, we expect to receive orders for disaster recovery and reconstruction projects.

Delivery of EfW Plants 843 Plants

Delivery of Desalination Plants 92 Plants

Overseas, we made steady progress in fiscal 2015 in this segment, securing our first project order in Malaysia and receiving notification on a project in Thailand. Projects in Vietnam and India are also in the construction phase. In each of these cases, we made an initial investment to make one operating EfW plant that will help convince local governments and citizens of the advantages of EfW. We expect the business to develop once the benefits of treating waste hygienically to generate power without emission of noxious gases are widely appreciated. We think that the main growth of this business is yet to come.

# [Machinery Business] See p.19 for details

In this segment, we are midway through the implementation of measures aimed at restoring the profitability of marine diesel engines and system machinery. In marine diesel engines, we are focusing on reducing the costs of increased prices with our customers, and upgrading our after-sales service. In contrast, press machines continue to deliver a strong performance.

In pressure vessels, our business development in India is progressing well. In the nuclear equipment sector, our U.S. subsidiary NAC International is also making progress, including having received orders in China for four casks that will be built by Hitachi Zosen.

# [Infrastructure] See p.22 for details

After struggling for a few years, our operations in bridges, shield tunneling machines, and other related equipment are profitable again, and we expect to see profits expand going forward. In Japan, demand is growing for major coastal engineering projects, including construction of port infrastructure and offshore wind farms. We have positioned this as a key sector for achieving further growth in the future.

# Progress with Medium-Term Management Plan "Hitz Vision II"

# We are steadily advancing towards achieving the three plan targets.

We are focusing efforts on the achievement of the three plan targets. The first is to strengthen profitability, and we have certainly made some progress on this front during fiscal 2015. Our operating margin improved from 3.6% to 3.9% and we increased ROE from 4.9% to 5.2%. While these improvements are encouraging, there is still scope for us to do better. Fortifying our financial structure is another important aim, and in by the end of fiscal 2015 we managed to achieve a shareholders' equity ratio of 28.4%, only slightly below the plan target for fiscal 2016 of 30%. We achieved these gains while also expanding the scale of our operations. Consolidated net sales in fiscal 2015 of ¥387,044 million surpassed the plan target of ¥350,000 million, leaving us well on the way to achieving the fiscal 2016 target for sales of ¥400,000 million.

# President's Message

# **New Product Development**

# The ratio of sales from new products remains below target, but we are accelerating efforts to develop products to support future growth.

Our target in fiscal 2016 for the ratio of sales from new products is 10%. This figure sits at just 3% at present, which indicates that we need to make a significant effort in this area. In the disaster prevention sector, sales of Movable Flap-Gate Type Seawall systems are growing steadily, but sales of electron beam sterilization systems and SCR (selective catalytic reduction) systems for marine engines have been sluggish. However, we are working to develop a number of other new products in promising fields.

For example, in offshore construction, which I mentioned before, offshore wind farms are one area of particular focus. There are only a limited number of companies in Japan with expertise in building large offshore structures such as wind farms. Hitachi Zosen has moved quickly to gain access to European technology and know-how in this sector, and we aim to be the domestic market leader in onshore wind farms. This is an area that requires alliances with multiple business partners, rather than a single company acting alone, and we are continuing to cultivate our network to support a sustainable business.



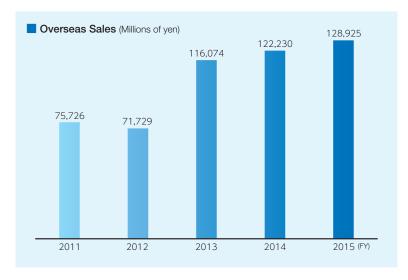
Another example is the functional materials sector, where we have initiated full-scale operations in all-solid-state lithium-ion secondary batteries, Eucommia Elastomer®, and vertically aligned carbon nano-tubes (CNTs). In batteries, we are looking to take advantage of the greater ease of handling of allsolid-state lithium-ion batteries compared with liquid varieties in automotive and aerospace applications. Right now, we are locked in a race to improve functionality through R&D, and we aim to achieve a structure capable of mass producing the batteries at an appropriate price. Eucommia Elastomer® is a type of polymeric rubber derived from the seed of the tree Eucommia ulmoides. We are currently field-testing various applications for this material. Finally, we are also developing vertically aligned CNTs in sheet form for potential applications making use of their heat dissipation and electromagnetic shielding, properties.

Another area where we are concentrating development resources is on-site hydrogen generators that yield high-purity hydrogen gas from the electrolysis of water. Commercial sales are underway, but one of our main aims with this product is methanation, which involves turning CO2 into methane using hydrogen. By storing renewable energy in the form of methane, methanation offers a way of facilitating the shift to the so-called hydrogen society, which is expected to be a reality by the 2030s. It is a good area for us to develop because we already possess technical expertise in hydrogen and methane. These various projects to develop new products to support the future of Hitachi Zosen continue to report directly to the CEO as we try to accelerate efforts to commercialize the technology.

# **Overseas Business Development**

# We are developing business frameworks in overseas markets in collaboration with partners from Japan and Southeast Asia.

The ratio of sales from overseas operations has risen from 17% in fiscal 2010 to 33% in fiscal 2015. This represents excellent progress compared with our target of 30% by fiscal 2016. A significant part of this is due to our acquisition of Hitachi Zosen Inova AG (Inova) and its subsequent growth, but we have also seen pleasing growth in scale in addition to the ratio increase. The continued growth of our overseas operations is an essential part of the future development of the Hitachi Zosen Group. Over the long term, we aim to raise the overseas sales ratio to 50%.



One of the markets where we are focusing our efforts is India, where there is high demand for EfW plants due to persistent power shortages. However, there are a number of issues involved in building an EfW plant and operating it as a viable business in India, due to low power prices and relatively low

costs for labor and garbage collection. There is therefore considerable interest in the Group's first EfW plant in India at Jabalpur. Most of the equipment for this project has been sourced in India, and the construction work is also being done in partnership with local firms. Looking ahead, we believe that commercializing EfW technology will require not just EPC (engineering, procurement and construction), but also operation and management of plants and business investment, just as it did in Japan. In our collaboration with Inova, we are looking to develop business in regions peripheral to Central Europe, which is now a mature market in this sector. Meanwhile. Hitachi Zosen is expanding into Southeast Asia, and we are working with Inova on the flagship EfW project in India mentioned above. We will continue to move forward by developing these and other projects to solidify our presence in the global market.

In Malaysia, we are not only advancing EPC projects, but also aiming to build the first plant outside Japan to incorporate our proprietary remote monitoring support systems. Our projects in Malaysia are international projects, and we have developed a system where the basic engineering design is created in Japan, the detailed engineering specifications are developed in Vietnam, and the procurement and construction steps are undertaken locally. We intend to continue utilizing this system for all projects in Southeast Asia, and we believe that developing our network of corporate partners will help us to cultivate this business in the future.

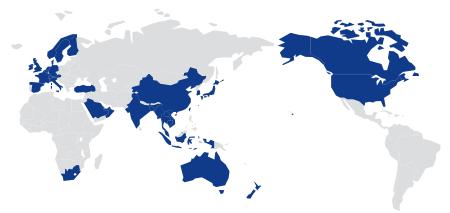
# President's Message

# Long-Term Strategy

# Our growth strategy is to develop our presence in new areas to supplement our operations in the two existing business domains.

Until a few years ago, Hitachi Zosen's sales had been around ¥300,000 million for the best part of a decade, but we are now targeting net sales of ¥400,000 million in fiscal 2016. The figure of ¥500,000 million is now in sight as well. We have begun work on formulating our next medium-term management plan, which will start in fiscal 2017. As with the Hitz 2016 Vision, formulation will involve all employees and be consistent with our long-term business vision to 2030.

Regional Presence



We operate in the two business domains of (1) the Environment/Green Energy, and (2) Social Infrastructure and Disaster Prevention. In addition to Southeast Asia, we aim to reinforce our presence in these business domains in the Middle East. In the EfW sector, we think there is untapped demand in regions such as the United States and South America, which provides promising markets for us to target in the future. However, we are limited if we focus only on these two business domains. We need to establish two or three other businesses to support future profits. That is why we are accelerating R&D efforts focused on new products and looking to launch new functional materials in Japan. The success of Hitachi Zosen Inova also points to M&As as a viable strategy for future growth. We will continue to look for suitable possibilities in a range of domestic sectors, which are currently undergoing reorganization, as well as in overseas markets.

# **Enhancing Corporate Value**

# We aim to grow with society by reaffirming our social contribution as an enterprise.

In fiscal 2015, after considering the Corporate Governance Code and consulting with the outside directors on the Group's corporate governance, we made a few changes related to the Board of Directors, including a new requirement for the Management Strategy Committee to report to the Board on operational status twice a month. We also started evaluating the effectiveness the of the Board of Directors, and we are looking at the status of their agenda. We seek the opinions and advice of outside directors with different experience

and careers, and our view is that these opinions and advice can provide valuable support for the growth of the Company or its employees. See p.28 for details

We are also promoting a range of HR initiatives to support the Company's development. With our roots as a shipbuilding company, traditionally we have not attracted many female employees. There is also much we could do to make our workplace more diverse and acceptable to women, not to mention non-Japanese, seniors, and people with disabilities. In terms of the composition of our

outside directors, we appointed our first female director in fiscal 2015; an American lawyer joined the Board as an outside director in fiscal 2016. In addition, we have set up the Diversity Promotion Office in the General Affairs & Human Resources Department to oversee further progress in this area.

We also regard CSR as an extremely important part of ongoing efforts to increase our corporate value. I would like to report one thing here that happened in the past year. After an earthquake struck the Kumamoto area in April 2016, we quickly sent emergency food and water supplies from our offices and sites in the regions of Kansai and Chugoku to the Ariake Works in the Kumamoto area for direct distribution to the local government entities in the region. We were assisted in this endeavor by a Group transport company. We also worked to restore the waste incineration plant that we had built for the city of Kumamoto to help process all of the waste left behind in the disaster. We sent engineers to conduct safety checks on the more than 100 bridges that we had built in the prefecture. These activities helped to confirm that our business performs a valuable social role. As our business grows in future, we hope to continue constantly reaffirming our social contribution as an enterprise.





# Message to Stakeholders

# Hitachi Zosen continues to take on various new challenges.

Our company has a history as a manufacturer with its origins in shipbuilding (as our name suggests). We have transformed ourselves into an engineering-led enterprise, and continue to pursue new possibilities with advanced expertise in emerging sectors such as wind farms, methanation, and functional materials. I am constantly encouraging employees to take on the challenge of developing new business. I would like all our stakeholders to view Hitachi Zosen in this light. I ask for your continued support and understanding as we focus on developing our overseas business and creating new markets.



# Seeking to Be a Highly Profitable Company with Public Recognition

# Progress on Our Medium-Term Management Plan Hitz Vision II

In May 2011, the Hitachi Zosen Group unveiled the long-term Hitz 2016 Vision that outlines the future profile of the Group for fiscal 2016. Since fiscal 2014, the Group has been pushing ahead with Hitz Vision II, a three-year medium-term management plan to address the challenges presented by changes in the business environment as well as by Hitz Vision, and to achieve targets toward the goals of the Hitz 2016 Vision. This section introduces one of the plan's key policies: strengthen potential for business growth.

# Key Policies of Hitz Vision II

1. Key policies to strengthen profitability and growth potential (innovate businesses)

Ke	ey policies		
Growth areas and "Technology-oriented company"			
Strengthen profitabili	ity		
Strengthen potential for business growth	Promote operations at overseas bases		
	Reform development processes to accelerate profitability of new businesses and products		
	Facilitate synergies by fortifying group strengths		
	Promote M&A		

Main points
• In growth areas, implement strategies under the concept of "technology-oriented company"
<ul> <li>Build a mechanism for driving change in unprofitable businesses</li> <li>Promote balanced management</li> <li>Expand use of ICT and robotics</li> </ul>
Strengthen control functions, promote policies by area     Continue to expand overseas bases, strengthen governance
<ul> <li>For key projects, assemble project teams to accelerate marketing of products and businesses</li> <li>Strengthen assessment of business feasibility</li> <li>Build a strong, globally competitive research structure</li> </ul>
<ul> <li>Facilitate synergies with Hitachi Zosen Inova, NAC International and Cumberland group companies</li> <li>Expand operations, strengthen profitability, and utilize human resources through further reorganization and integration of the group as a whole</li> </ul>
<ul><li>Pursue synergies with existing businesses and technologies</li><li>Accelerate operations at overseas bases</li></ul>

# 2. Key policies to strengthen management foundation (innovate management)

	- 1
Key policies	
Promote flat-matrix management structure	
Fortify financial structure	
Reform human resources development and culture	

- Fortify use of ICT, group strengths, quality control, environment and safety
- Secure funds for growth strategies, improve financial structure
- Strengthen IR to improve debt rating, stock prices
- Global cash management and effective use of funds
- Develop young personnel and transfer technologies and skills
- Recruit and utilize diverse human resources

In fiscal 2015, the Group's priorities were to strengthen profitability and expand the scale of operations. The Group made steady progress on expanding the scale of operations, but strengthening profitability remains a crucial priority. In fiscal 2016, the Group will continue working to strengthen its earnings base by devising optimal strategies for each business.

# Measures to strengthen potential for business growth

The Hitachi Zosen Group will strengthen its current core businesses, growth businesses and future core businesses, with the aim of attaining sustainable growth.

# **Current core businesses**

# **Expand the Energy-from-Waste business**

### Track record of orders

As a top manufacturer of waste incineration plants, the Hitachi Zosen Group has established local subsidiaries for business expansion overseas in India and other countries and is constructing Energy-from-Waste (EfW) plants with an eye on the global market. At present, the Group as a whole has received orders for 843 EfW plants around the world.



### Key markets ahead

The Hitachi Zosen Group is working to cultivate new markets, focusing on key emerging markets primarily in Southeast Asia. These markets were chosen mainly because EfW plants are expected to address burgeoning waste volumes and power shortages in line with population growth in the region. Currently, the Group is building EfW plants in India and Vietnam, and has received its first order in fiscal 2015 for an EfW plant in Malaysia.

# Overseas expansion of operation technology

The Hitachi Zosen Group is working to expand business overseas using its differentiated technologies on the operations front, which the Group has supplied in Japan under design-build-operate (DBO) contracts.\* The Group is engaged in the stabilization of combustion using Big Data, and incorporating it in offsite incinerators.

\* A contractual arrangement under which the design, construction, operation, maintenance and management of a facility is undertaken by the private sector on a full turnkey basis, while the public sector procures financing for and retains ownership of the facility.

# **Growth businesses**

# Spent nuclear fuel related business

In the U.S., in fiscal 2015 the Hitachi Zosen Group successfully transported and stored high-level radioactive waste at an outdoor dry intermediate storage facility for the first time in the U.S. Looking ahead, the Group will work to enhance its presence in the U.S., which has a well-developed market for nuclear decommissioning activities.

In China, demand for spent nuclear fuel transport casks has been increasing in line with dramatic growth in spent nuclear fuel. In fiscal 2015, the Group received orders for four transport casks. Going forward, the Group will remain committed to being able to continuously win these projects.

In fiscal 2015, the Group entered into an agreement with Doosan Heavy Industries & Construction Co., Ltd. of South Korea on the joint development of spent nuclear fuel storage casks. This joint development project will target anticipated future demand for spent fuel storage systems in South Korea.

# Movable Flap-Gate type seawall systems business

Since fiscal 2013, the Group has steadily won increasing orders for Movable Flap-Gate type seawall systems, and continues to drive growth in this market.



Gate type seawall Tokushima Prefecture (Tovomasu Region)

# **Future core businesses**

# Wind power generation business

In Japan, wind power generation offers prospects for business expansion, driven by continued growth in the installation volume of wind power facilities. The Group currently operates a wind power business with two 2,000 kW turbines in Akita City, Akita Prefecture, and is engaged in land-mounted and offshore wind power projects for the future.



Offshore wind farms

# Functional materials business

The Hitachi Zosen Group is working to develop new materials and substances that leverage the Group's technologies.

### Eucommia Elastomer®



Applications)

Resins for 3D printers

Sports goods
Composite materials

### Vertically aligned carbon nano-tubes



- [Applications]
- Heat dissipation materials
- Conductor materials Special sensor materials
- Structural materials

# All-solid-state lithium-ion secondary batteries



[Applications]

- Power supplies for medical devices
- that require heat sterilization Devices used in extreme

environments, such as outer space

# Global environmental business

Bringing together its technological capabilities, the Hitachi Zosen Group is working to build environmentally friendly businesses on a global scale. The Group is also focusing on businesses that help to reduce CO<sub>2</sub> emissions by taking full

advantage of wind power and other forms of renewable energy, along with methanation technology.



# **Business Segments**

\* Business segments changed in fiscal 2015.

# Environmental Systems and Industrial Plants Business



# >>> Environmental protection systems

- Energy-from-Waste plants
- Material recycling systems



- AOM business (after-sales service, operation and maintenance)
- Long-term operations and management (PFI and PPP)
- Remote monitoring (remon) support systems
- Technologies for the long-term use of and to extend the lives of facilities

# >>> Plants

- Desalination plants
- Chemical plants
- Sulfuric acid plants
- Hitz Dehydration system HDS® by zeolite membrane
- Non-destructive inspections
- Rupture disk



# >>> Power generator systems

- Gas turbine power generation facilities
- Gas engine power generation facilities
- Co-generation systems
- O&M and after-sales service
- Vegetable oil-fired biomass facilities
- Wind farms

# >>> Electricity power business

# >>> Water treatment systems

 Sludge recovery, recycling and final processing plant exudative water treatment system



- Water, sewage, and industrial effluent treatment systems
- Slurry ice plants

# >>> Biomass utilization system

- Methane fermentation system
- Eco-agriculture business

# **Machinery Business**

# >>> Marine diesel engines

- Marine diesel engines
- SCR system for marine engines
- Denitration systems and NOx removal catalysts



# >>> Press machines



# >>> Deck machinery for ships



# >>> Industrial equipment

- Electrolyzing systems and rubber lining
- Filter press

In the machinery business, we supply many types of marine diesel engines to shipyards in Japan and abroad, and have developed selective catalytic reduction (SCR) nitrogen oxide removal systems for marine engines to achieve compliance with the International Maritime Organization (IMO) regulations on NOx emissions. We also deliver a wide range of press machinery and FA systems for automakers.

Our Energy-from-Waste plants are environmental conservation energy systems designed to produce power from the large amounts of energy generated during waste incineration.

We also have expertise and a strong track record in biomass utilization and water treatment systems and, in addition, we have been delivering a wide range of plants in Japan and overseas in fields such as chemicals and petrochemicals and seawater desalination.

Moreover, we supply gas turbine power generation facilities using natural gas and biogas, as well as wind power generation systems using natural energy.



# Infrastructure Business

# 0

# >>> Process equipment

• Reactor vessels



Heat exchangers



# » Nuclear fuel cycling-related equipment

- Spent nuclear fuel transport casks and storage casks
- Canisters for nuclear spent fuels storage



# >>> Precision machinery

- OLED production systems
- Vacuum equipment and vacuum valves



- Laser patterning equipment
- Precision polishing technologies and polishing machines
- Castings for semiconductor and liquid crystal production equipment (lapping plates)
- Conveyance and handling systems
- General industrial casting products



# >>> System machinery

- Plastic extrusion molding equipment
- Food filling and packaging systems
- Foreign substance separation equipment for food

# >>> Electronic control systems

- Image and image processing and storage systems
- Electronic boards and units
- High-precision GPS system
- GPS remote monitoring system

# >>> Infrastructure

- Bridges
- Infrastructure maintenance technology and earthquake technology
- Hydraulic gates
- Marine civil engineering (caissons, steel-plate cells)
- Steel stacks
- Shield tunneling machines



# >>> Disaster prevention

- GPS Comprehensive Oceanographic Monitoring System
- GPS Remote Monitoring System
- Movable Flap-Gate type Seawall system
- Movable Flap-Gate type Breakwater system
- Electric Discharge Impulse Crushing System



In the process equipment business, we supply many types of process equipment, such as pressure vessels, in Japan and abroad. In the nuclear power sector, we have established a strong track record in the supply of a wide range of equipment for nuclear power stations, including spent nuclear fuel transport casks and storage casks, and radioactive waste incineration and reduction facilities.

In the precision machinery business, we handle all aspects (from manufacturing to engineering) of the production of organic electroluminescent (EL) displays and other flat panel displays and semiconductor manufacturing equipment. We supply filling systems for foods, beverages, and in electronic control systems, we provide the Food Recorder and other products.

For a century, our bridge-building division has delivered long structures, and shield tunnelling machines for road and subway construction equipment for infrastructure projects in newly emerging countries. We also supply disaster prevention systems, including our GPS buoy wave-tsunami tide observation systems and Movable Flap-Gate type Seawall system.

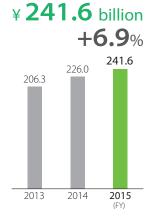
# Environmental Systems and Industrial Plants Business

Net sales











# Business Overview and Outlook for Fiscal Year 2016

In fiscal 2015, we recorded net sales of ¥241.6 billion (an increase of ¥15.6 billion year on year) and operating income of ¥14.8 billion (an increase of ¥1.2 billion).

# Environmental systems

In Japan, Hitachi Zosen received orders for operating and maintaining energy-from-waste plants for the Nagano Regional Association (Nagano Prefecture) and Mito City (Ibaraki Prefecture). As they are design, build, operate (DBO) contracts, the Hitachi Zosen Group is responsible for all aspects of the projects, from facility design and construction to operations after handover. Hitachi Zosen has agreed with the Nagano Regional Association to purchase electricity generated from the waste incineration facility and supply it to local companies, creating a local production, local consumption energy model.

In addition, Hitachi Zosen received and carried out orders from local government entities for basic upgrades, maintenance inspections, maintenance work, repairs, and operation and control work of waste incineration facilities, including an order received from Chigasaki City, Kanagawa Prefecture for basic upgrade work on its waste incinerator facilities at the Chigasaki Environment Project Center.

Overseas, we aggressively promoted business activities

in Southeast Asia. Hitachi Zosen received its first order from Malaysia to construct and operate an Energy from Waste (EfW) plant, and also received an order from Changsha City in China for a EfW plant. Hitachi Zosen Inova AG, a wholly owned subsidiary that designs, constructs and maintains waste-to-energy plants, finished construction and upgrade work on waste-to-energy plants in the U.K. and Switzerland.

In fiscal 2016, we are again aiming to receive orders from domestic customers to construct EfW plants and for upgrade and life-extension projects. We will also continue to strive to expand our AOM and long-term operations businesses, based on our abundant track record in delivering projects in these fields.

Overseas, we are collaborating with Hitachi Zosen Inova (HZI) and accelerating the deployment of our strategy to become the world leader in Energy from Waste (EfW). Along with Europe and the Middle East markets, which are where HZI has traditionally operated, we are working to open up new markets in the various regions, including China, South East Asia and India. We also aim to develop the stock-type business model overseas.

Hitachi Zosen is advancing the development of biogas, bioethanol, and gasification power generation technologies in order to expand its EfW business.



### Plants

In the desalination business, in fiscal 2015 we won a second order for a desalination plant in Qatar. The contract is for a hybrid-type desalination plant with two types of seawater desalination equipment, comprising a multi-stage flash (MSF) process, which is an evaporation process, and an RO process, which is a membrane process. The desalination plant will be the largest we have ever built with a water processing capacity of around 590,000 tons per day. In addition, we have completed the construction and handover of the large-scale desalination plant for which we had the first such order from Qatar in January 2013.

From fiscal 2016 onward, Hitachi Zosen aims to become a world leader in the seawater desalination business by promoting hybrid plants that combine multi-effect desalination (MED) and reverse osmosis (RO) membrane technologies. The Company is building a platform for entering into the RO market by combining its high-speed seabed infiltration system "HiSIS" and seawater fabric filtration system "SuRFF" ("HiSIS" system that uses fabric for filters).

In the energy business, Hitachi Zosen began generating electricity at its woody biomass plant in Hitachiota City, Ibaraki Prefecture in November 2015, and sold this electricity under the feed-in tariff (FIT) system. This biomass plant helps reduce greenhouse gas emissions while supplying enough electricity for about 12,000 households annually. Wood chips made from unused wood materials and timber from forest thinning, issues that had engaged the local forest industry, are now used as fuel to generate electricity, thereby solving the problem of unused wood material disposal. Hitachi Zosen established Natural Energy Japan Co., Ltd. as a subsidiary for the purpose of generating electricity from biogas created from food waste in Akita City, marking its entry into the methane fermentation biomass-to-gas power-generation business.

# Water treatment

In the water treatment business, major projects in Japan included the receipt of an order from Yokohama City (Kanagawa Prefecture) for the construction of a wastewater treatment facility at a waste disposal site, and an order from the Sanitation Facilities Union of the townships of Hino, Kofu and Nichinan (Tottori Prefecture) for the construction of a sludge recycling center. The latter construction project entails a new sludge recycling center with facilities for recovering phosphorous and using it as a sludge combustion improver. It will replace the aging night soil processing facility, which has been in operation for over 30 years since its completion in 1983. This will be the third sludge recycling center built in Japan with facilities for recovering phosphorous and using it as a sludge combustion improver. Hitachi Zosen has created all three facilities.

These orders reflect Hitachi Zosen's best-in-class and highly acclaimed track record in installations of human waste treatment and sludge recovery and treatment plants in Japan.

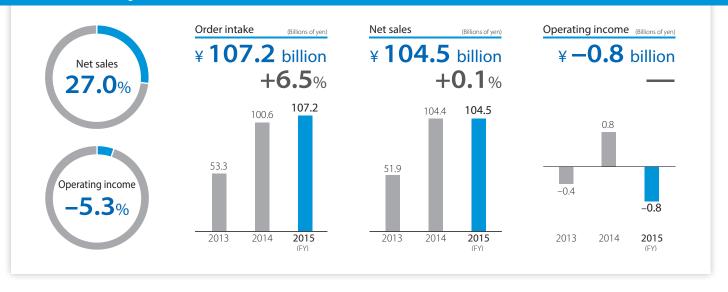
In addition to the above, we received and carried out a number of orders from various local governments for maintenance inspections, maintenance work, and repairs, and also for operations and control work, at water treatment facilities.

Overseas, Hitachi Zosen is conducting joint research into combined sewer overflow (CSO) technologies with Tsinghua University in China, and is also working with Shenyang Jianzhu University in China on a demonstration test for the Marimo® rapid fiber filtration system at the Sanbaotun Sewage Disposal Plant. The Company also conducted feasibility studies (FS) in Myanmar and other Southeast Asian countries.

In fiscal 2016, Hitachi Zosen is working to enter overseas markets in the water treatment field, and establish new businesses and products at an early stage. In the sludge recovery and treatment business, we are focusing on new construction projects that lead to highly profitable solutions business. In the water and sewage business, we aim to develop new products and improve existing products in line with customer needs, while reducing costs and expanding sales.



# **Machinery Business**



# Business Overview and Outlook for Fiscal Year 2016

In fiscal 2015, the machinery business recorded an operating loss of ¥0.8 billion on net sales of ¥104.5 billion. Although net sales were largely unchanged from the previous fiscal year, operating income worsened by ¥1.6 billion.

Losses narrowed somewhat in marine diesel engines, but in system machinery, order receipts for major projects were sluggish and margins deteriorated for some projects, resulting in the overall loss.

# Industrial equipment

In electro chlorination systems, the domestic market has matured for seawater electrolysis systems. Nonetheless, Hitachi Zosen has established a track record for delivering solid polymer hydrogen generation systems based on its electrolysis technologies. We aim to expand business in the renewable energy field by developing large-scale hydrogen generation systems based on water electrolysis in order to realize a hydrogen society in the future

At the same time, we aim to expand the overseas seawater electro chlorination systems business by collaborating with Cumberland group companies, which have bases in the Middle East and the U.K., and were added to the scope of consolidation in 2014.

Moreover, Hitachi Zosen aims to improve overall profitability

in the O&M business by focusing more on after-sales services, including rehabilitation work on electrode exchangers for installed electro chlorination systems, equipment modification and diagnosis, and technological proposals.

Hitachi Zosen is a leading manufacturer of filter presses with an installed base of more than 4,000 units. Hitachi Zosen aims to expand the O&M business by developing filter cloth as a differentiating factor from rivals, while collaborating with filter cloth manufacturers.

# Marine diesel engines and deck machinery for ships

The business environment for the marine transportation and shipbuilding industry remains challenging in terms of excess tonnage and shipbuilding capacity. Ship prices have not fully recovered amid poor conditions for marine transportation and the relative depreciation of the yen. Marine diesel engine prices have also been flat, arresting their slide, relative to requirements for high-performance specifications such as fuel economy. Despite ongoing efforts to reduce costs, losses have persisted in the business over the past few years. In fiscal 2015, losses narrowed somewhat compared with the previous fiscal year as a result of cost reductions and price negotiations with shipyards. In fiscal 2016, Hitachi Zosen aims to improve profitability through



cost reductions and more stringent project selection.

In selective catalytic reduction (SCR) systems for marine engines, we believe more time is needed for a market to form, given the lack of demand and stronger-than-anticipated moves by ship owners and shipyards to sidestep environmental regulations. In addition to winning the Marine Engineering of the Year 2014 award, Hitachi Zosen's marine engine SCR systems have been recognized with other awards as well, such as the Japan Institute of Marine Engineering Technology Award in fiscal 2015. While waiting for a market to emerge, we aim to secure and sharpen our competitive advantages in technologies and products by continuing to develop and improve them.

Meanwhile, Hitachi Zosen has begun to expand facilities at the Ariake Works in order to enable the development, production and assembly of LNG gas engines (dual-fuel engines) during fiscal 2016. At the same time, Hitachi Zosen has turned existing test equipment into gas engines for the purpose of honing assembly and operation skills. We are also considering the development of marine SCR systems for gas engines for market entry. With after-sales services for marine engines a priority growth business, we aim to increase sales overseas by hiring key personnel and updating and expanding overseas business bases.

In this way, Hitachi Zosen is building and developing a marine component business, including peripheral equipment and after-sales services, centered on marine engines.

# Process equipment

In process equipment for plants, demand has been growing for equipment used in fertilizer plants, mainly in Southeast Asia, on the back of a need to increase the production of food alongside population growth in emerging countries. In recent years, despite numerous plans to construct new plants for GTL extracted from shale gas, primarily in the U.S., crude oil prices have languished at low levels, casting uncertainties over whether these construction plans will move forward or be abandoned. Under these circumstances, order receipts for process equipment have been on the decline for the past few years, owing also in part to overseas companies catching up technologically. In fiscal 2016, we will manage operations as a Group in pursuit of greater synergies, leveraging the technological strengths of Hitachi Zosen and the cost advantages at ISGEC Hitachi Zosen Limited and Nagaoka Hitachi Zosen Equipment (Dalian) Co., Ltd.

In a bid to unearth demand and grow the after-sales services business, we are moving forward with initiatives in maintenance supervisor dispatch operations for maintaining aging plant equipment.

In nuclear power plant equipment, Hitachi Zosen received orders for, and delivered casks and canisters for storing radioactive waste from nuclear power stations in the U.S. in fiscal 2015. In Japan, Hitachi Zosen delivered 15 factory-finished storage tanks for radioactive water to Tokyo Electric Power's Fukushima Daiichi Nuclear Power Station. In addition, Hitachi Zosen received orders for diesel fuel tanks for emergency power generators at Tokyo Electric Power's Kashiwazaki-Kariwa Nuclear Power Station as a part of ongoing projects to enhance disaster readiness. In Japan, decisions have been made to decommission a number of aging nuclear power plants. Over the long term, demand is likely to strengthen for casks and canisters used for the transportation and storage of spent nuclear fuel and radioactive waste.

The U.S. company NAC International Inc. (NAC), which became a subsidiary in fiscal 2013, aims to expand in the spent nuclear fuel transportation and storage business in not only the U.S., but also in China, South Korea, Eastern Europe and other emerging countries.

With the addition of NAC to the Hitachi Zosen Group complementing our extensive track record in fabricating and delivering casks and canisters, we have put the finishing touches on a structure for providing integrated solutions extending from consulting to design, production and transportation. In fiscal 2015, Hitachi Zosen won a major order for four transportation casks in China as a result of collaborative efforts with NAC.

# System machinery

In fiscal 2015, Hitachi Zosen completed one major megasolar system. In addition, Hitachi Zosen received orders for and delivered a variety of vacuum systems, including vacuum vapor deposition equipment for solar panels and OLED lighting, as well as bottle filling systems for the food industry, and transfusion bag filling systems for the pharmaceutical industry. We also won orders for, and delivered film and sheet forming equipment for optical and food packaging applications, as well as plastic extrusion molding equipment.

In electron beam sterilization systems, a new technology, our products have not penetrated the market sufficiently yet. To remedy this situation, in fiscal 2016, we are aggressively marketing our electron beam sterilization systems alongside sales of production line equipment that incorporate these systems,



centered on our filling systems for the food and pharmaceutical industries. We are also marketing these systems in the aftersales services business alongside proposals for modifying and repairing already installed equipment.

# ◆ Electronic control equipment

In the food industry, demand has increased for recording and managing data for the entire production process, in addition to security monitoring, amid growing interest in food safety and security. Responding to this demand, Hitachi Zosen has won orders for, and delivered its food defense & management recording system for production lines. Moreover, we have received orders for, and delivered radiation measurement instruments for agricultural products (partially-dried Japanese persimmons, wood for cultivating shitake mushrooms, shirasu (whitebait), etc.) grown in the Tohoku region as a part of support for the region's revitalization, as well as food separation systems that detect and remove foreign objects from food production lines.

In the pharmaceuticals industry, we delivered orders received for our newly developed GS1 code printer system that complies with the mandatory integration of GS1 codes\* from July 2015.

In the railway industry, we delivered orders received for front and train-carriage video surveillance systems that facilitate safe and secure railway operations.

In fiscal 2016, Hitachi Zosen will continue to concentrate on these business fields, combining its technologies together while collaborating with other companies. We aim to advance product features, strengthen our engineering capabilities, and expand the range of applications for our products, including for overseas projects, while winning orders that include food defense & management recording systems for production lines. In satellite positioning technology, Hitachi Zosen is examining the commercialization of systems that rely on quasi-zenith satellites, such as work vehicles with automated driving systems used for Tohoku region recovery activities necessitated by the Great East Japan earthquake and tsunami of 2011. We are also participating in IoT field testing (transportation between remote islands using unmanned aircraft) for the Ministry of Economy, Trade and Industry.

\* GS1 codes are barcodes based on international standards for identifying codes set by GS1, an international commerce standard-setting organization. GS1 codes are used as barcodes on a variety of products.

# Press machines

Automobile manufacturers, main customers of Press Machines Business, has been getting stable sales mainly in the United States. However, optimism is mitigated by the risks of downturn prompted by uncertainty in the global economy especially in emerging countries.

In fiscal 2015, Hitachi Zosen Fukui Corporation continued to secure high sales and incomes owing to steady demand from automobile manufacturers. Net sales totaled ¥23.6 billion, down 1.8% from the previous fiscal 2014. Operating income is ¥2.8 billion, increase 1.7% as compared to fiscal 2014. For fiscal 2016, Hitachi Zosen Fukui Corporation forecasts net sales of ¥23 billion, a minor decline of 2.6% from fiscal 2015, owing to uncertainty of investment in plant and equipment by automobile manufacturers. Operating income is to decrease 11.0% from the previous fiscal year, to ¥2.5 billion, due to decrease of large-scale after service sales. Hitachi Zosen Fukui Corporation will make every endeavor to increase earning strength.

# Topic in the Machinery Business

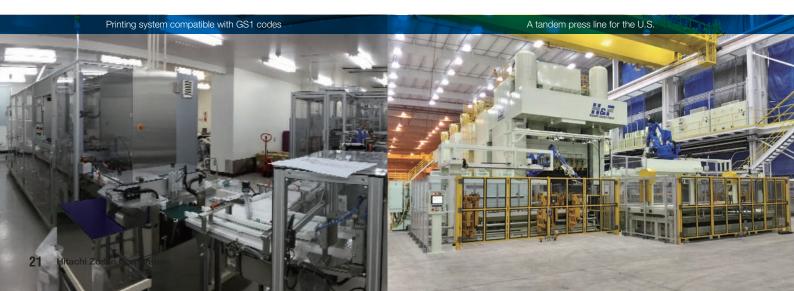
# Order for Ten Marine Diesel Engines Received from CSBC of Taiwan

Hitachi Zosen received an order from Taiwan-based CSBC Corporation (CSBC) for ten electronically controlled marine diesel engines (Hitz-MAN B&W 8S70ME-C8.5, maximum output: 26,160 kW x 91 rpm). CSBC received an order for ten 2,800 TEU container vessels from global container carrier Evergreen Marine Corporation Ltd., and Hitachi Zosen has been selected to supply the electronically controlled marine diesel engines for these container vessels.

Orders for multiple marine engines for use as the main engines in container vessels to be delivered within short periods of time are fairly common. Hitachi Zosen plans to manufacture these ten marine engines in rapid succession at its Ariake Works and deliver them over a short timeframe, from December 2016 to September 2017.



At the signing ceremony



# Infrastructure Business



# Business Overview and Outlook for Fiscal Year 2016

In fiscal 2015, the infrastructure business generated net sales of \$30.8 billion, a year-on-year increase of \$11.4 billion, and operating income of \$0.4 billion, a year-on-year improvement of \$2.5 billion.

In fiscal 2015, in the steel structure business, Hitachi Zosen received orders and delivered projects for new bridges, hydraulic gates, stacks, and marine structures for customers such as the Ministry of Land, Infrastructure, Transport and Tourism (MLIT); various local governments; expressway companies; electric power companies; and marine constructors. These orders included a project for the superstructure of the Yogegawa Elevated Bridge of the Tokai-Kanjo Expressway for the MLIT Chubu Regional Development Bureau for fiscal 2015. We also received orders from the Tokyo Metropolitan Government for upgrading the Sea Forest Waterway in fiscal 2015; from marine constructors for large-scale offshore structures; from Tohoku Electric Power Co., Inc. for the construction of water intake and discharge pipes as well as smokestacks for its Noshiro No. 3 Thermal Power Station; and from the MLIT Shikoku Regional Development Bureau for the Satoura District Land Lock Gate (a Land-Mounted Movable Flap-Gate type Seawall) in fiscal 2015-2016. In the construction machinery business, the domestic market has been brisk with large-scale projects. Hitachi Zosen received an order from Yokohama for a shield tunneling machine, and delivered on other orders for shield tunneling

machines received from construction companies around the world.

In the wind power generation field, we received orders from Iwaki Wind Power Co., Ltd. for the construction of the Iwaki Katte Wind Power Station and the Matsugasaki Wind Power Station. Hitachi Zosen is responsible for the design, procurement, construction management, operation and maintenance of these land-based wind power stations.

In the infrastructure business, Hitachi Zosen aims to generate operating income of ¥0.7 billion, an increase of ¥0.3 billion year on year, on net sales of ¥30 billion (unchanged) in fiscal

In fiscal 2016, Hitachi Zosen intends to expand the steel structure business, including bridges, by focusing its strengths in the growth fields of marine structures and disaster prevention, while maintaining existing models as its technological base. In the construction machinery business, we aim to remain profitable by continuing to screen orders and tapping into demand for peripheral segment products.

In the wind power generation business, Hitachi Zosen reorganized the Wind Power Business Promotion Department into a department under the direct control of the president in a bid to accelerate the development of the offshore and onshore wind power generation business.



# Research & Development

# Basic research and development policies and systems

In line with our development strategy based on Hitz Vision II, our current medium-term management plan, the Hitachi Zosen Group is advancing research centered on the fields of the environment, water treatment, plants, machinery, process equipment, infrastructure and disaster prevention, precision machinery, and advanced technologies. Our research and development activities are centered on those carried out in the Product Development Planning Division and Technical Research Institute, which are within the Technology Development Headquarters, and in each development center in the three headquarters (the environment, machinery, and infrastructure). They work in collaboration with the sales and design divisions to realize the early commercialization of newly developed products and the development of new products and technologies.

# Our fiscal 2015 technology development achievements and fiscal 2016 technology development plans

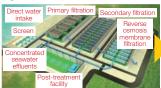
Our development staff handled 109 development themes in fiscal 2015 and achievements broadly met targets.

In the environmental field, Hitachi Zosen has developed highefficiency power generation equipment and a high-performance NOx gas treatment system for stoker-type furnaces for EfW plants as a part of efforts to address global warming. With the aim of extending the lifespan of core parts and materials, we continue to conduct long-term verification testing on corrosion prevention measures for high-pressure, high-temperature boiler superheater tubes. Moreover, we are advancing and conducting verification testing of operation management systems that use remote monitoring and other technologies to ensure the reliable long-term operation of waste incineration plants.

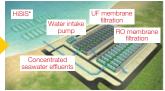
In water treatment, we have developed an improved version of aeration and agitation biotreatment systems for improving the sewage treatment process, and are currently field testing the system.

In plants, we worked on improving the performance the development of mass production technologies for gas separation membranes (mainly for CO<sub>2</sub> separation), which hold promise as a technology for reducing the volume of CO<sub>2</sub> emissions as a step toward a low-carbon society. As a part of initiatives to secure water resources, we made advances in research and development for experimental sand filtration and membrane filtration equipment to be deployed in a new reverse osmosis (RO) seawater desalination plant that uses our high-speed seabed infiltration system. In Abu Dhabi, we completed the verification testing for a pilot plant (Figure 1) and have moved on to the business development stage.

Figure 1



Conventional reverse osmosis seawater desalination process



New reverse osmosis seawater desalination process \*HiSIS(High-speed Seabed Infiltration System)

With an eye on the hydrogen energy society of the future, we are advancing research and development in solid oxide fuel cell (SOFC) systems.

In machinery, we expanded the range of SCR systems for marine engines that are compatible with the Tier III NOx emission standards (in effect from 2016) of the International Maritime Organization (IMO).

In process equipment, with demand likely to strengthen for high-temperature, high-pressure vessels, we conducted verification testing for gas-to-liquid (GTL)-related equipment, as well as the optimization of welding and heat treatment conditions for high-strength steel plates used in high-pressure vessels for desulfurization reactors. We also advanced the design and evaluation testing of basket materials for nuclear casks used in the transportation and storage of spent nuclear fuel.

In the infrastructure and disaster prevention field, we developed for

an actual project a Movable Flap-Gate Type Figure 2 Seawall system (an ultra-long span of "neo Rise®") as a countermeasure for tsunamis and storm surges, and we also developed bridge repair technologies and better technologies for monitoring the operating conditions of shield tunneling machines. In offshore structures and movable structures, we advanced R&D in production technologies for multiaxial truss struc-

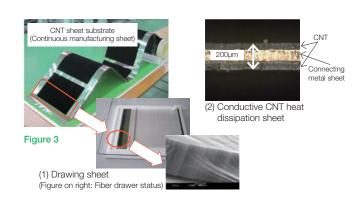
fabrication technologies for parts and materials

used in large-scale structures.



In precision machinery, we worked on the development of all-solid state lithium-ion secondary batteries, a market that is forecast to be over ¥2 trillion in size, and narrowed down mass production technology issues through performance and function evaluations of sample products made at our small-scale plant. While developing more advanced roll-to-roll film deposition equipment, we accumulated technologies for the production processes of various projects. In food machinery-related work equipment, we developed an improved version of electron beam sterilization equipment for PET bottles. Moreover, we developed improved versions of food inspection apparatus based on image-processing technologies, as well as operation data recording devices mounted on transportation vehicles. In response to the Fukushima nuclear power plant accident, we developed a radiation detection device that is able to detect both low and high concentrations of radiation for a more diverse range of applications.

In other advanced technological fields, we developed functional materials including vertically aligned carbon nano-tubes (CNTs) for applications in tune with customer needs (Figure 3). We developed the mass production technology for Eucommia Elastomer®, and started its commercialization for materials used in sporting goods. The raw material of Eucommia is ulmoides bark. In the fields of welding, biotech and laser processing, we promoted open innovation with universities in a bid to constantly improve our technological capabilities.



# Intellectual Property Management

# Basic policy of the Hitachi Zosen Group

The intellectual property strategy of the Hitachi Zosen Group supports our management and business strategies, which were drawn up in line with our business philosophy. Intellectual property rights are accumulated and maintained in accordance with a research and development strategy with the goal of strengthening our market competitiveness. This means that all directors, executives and employees recognize the importance of intellectual property, and intellectual property rights are managed to protect the technologies we have developed while enhancing our earnings and corporate value.

For Group companies, we apply a strategic approach to supporting their management of intellectual property, aimed at capturing synergies. Moreover, to keep up with the globalization of our business, we work in close collaboration with patent offices abroad to acquire the international rights for our intellectual property.

# Acquiring intellectual property rights

Intellectual property rights provide the support that is vital for us to realize the vision of being a "technology-oriented company." We strive to identify and generate inventions and use technology maps and patent maps to assess and analyze our patent portfolio, as well as those of other companies. Using the results, we make optimal patent applications for our portfolio, strengthening the protection of our patent rights in dominant fields and shoring up our patent rights where we lag to support stable business activities.

The Hitachi Zosen Group's basic policy is to apply the rights for the intellectual property we have acquired over an appropriate scope of business operations and manage intellectual property ethically to facilitate fair competition through mutual respect for property rights.

# Management of intellectual property

The management of our intellectual property is carried out by specialist units dedicated to that task. Our Legal & Intellectual Property Department serves as the governance center for the management of intellectual property by the entire Group, conducting a wide range of intellectual property activities, working to maintain rights with respect

to patents held by the Group in conformity with our operational and development strategies, promoting the effective employment of such patents, and drawing up policies to be followed in applying for patents overseas, in response to the growth of the Group's overseas operations. As of the end of fiscal year 2015, neither Hitachi Zosen Corporation nor any member of the Group was involved in litigation relating to the violation of intellectual property rights.

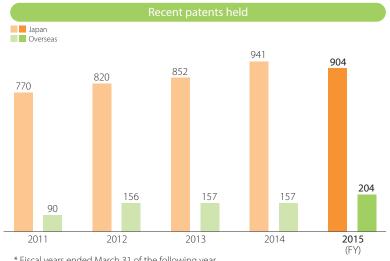
Each of our R&D units and business headquarters have a person appointed to be in charge of promoting the management of intellectual property. These people work in cooperation with the Technology Development Headquarters to precisely coordinate activities for discovering patent possibilities and taking them to the patent application stage.

In addition, we strive to nurture an intellectual property-oriented corporate culture by holding seminars on intellectual property for each employee level, from new hires to middle-management engineers, conducting e-learning programs tailored to different job responsibilities, and providing information on intellectual property in our internal newsletters.

To encourage staff to do the work required to discover valuable new technologies and processes, and to reward them when they are successful, we have laid down regulations governing the patent application process and have stipulated criteria for judging the originality and value of inventions. Monetary rewards and commendations are given to inventors when patent application, registration and practical application occurs. Rewards for practical application are based on a fair and impartial evaluation process, and payments to the inventors continue after they have retired from the Company.

We also proactively enter the patents we develop to compete in various external invention awards. In fiscal 2016, our Patent No. 5455409 on "Method and Facility for Sorting Out Foreign Particles" and Patent No. 5111033 on "Fire Grate Block in Waste Incinerator" received invention incentive awards in the Kinki Region Invention Awards sponsored by the Japan Institute of Invention and Innovation.

As of the end of fiscal year 2015 (ended March 31, 2016), Hitachi Zosen Corporation held 904 patents in Japan and 204 overseas (as shown in the chart below). It also held 69 design rights in Japan and 33 overseas, as well as 143 trademark/service mark rights in Japan and 41 overseas.



# Management's Discussion and Analysis

# Overview of business environment and operating results

In fiscal year 2015, overseas, despite a modest economic recovery, the outlook for business conditions remained globally uncertain, particularly due to downturns in China and other resource-rich countries. In Japan, despite a decline in stock prices since the beginning of the year, and the exchange rate movement of the yen's appreciation, and the impact of the fall in crude oil prices, the effects of various economic and monetary easing policies by the government and the Bank of Japan spread to the "real" economy, sparking a pickup in capital expenditure. As a result of this and other improvements, the Japanese economy showed signs of a modest recovery momentum.

Under this environment, the Hitachi Zosen Group aimed to evolve into a highly profitable enterprise that enjoys public recognition under the Hitz Vision II medium-term management plan, which started from fiscal year 2014. From the perspective of innovation in businesses operation and management, we are constructing optimal business strategies, as well as concentrating management resources to achieve results in our priority fields of Environment/Green Energy, and Social Infrastructure and Disaster Prevention. In particular, with the aims of strengthening profitability and expanding the scale of operations, we have made efforts for key measures such as promoting overseas local businesses, expanding stable businesses, making new products and businesses profitable at an early stage, using ICT, facilitating synergies by fortifying group strengths, increasing factory productivity through an improved product mix, strengthening our financial structure, securing diversified human resources, and training personnel.

### 2. Business results

### (1) Order intake

In the fiscal year ended March 31, 2016, our order intake decreased year on year to ¥435,435 million, mainly reflecting a decrease in orders booked by the Environmental Systems and Industrial Plants segment.

### (2) Net sales

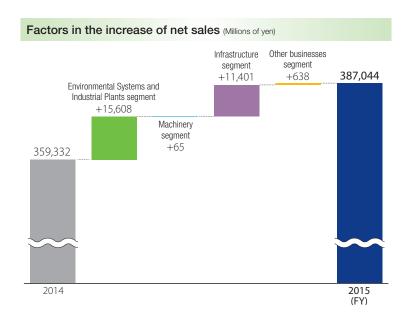
Net sales increased year on year to ¥387,044 million due mainly to increases in the Environmental Systems and Industrial Plants segment and in the Infrastructure segment.

### (3) Operating income

Operating income increased year on year to ¥15,113 million due to increases in the Environmental Systems and Industrial Plants segment and in the Infrastructure segment.

# (4) Profit attributable to shareholders of Hitachi Zosen

Profit attributable to shareholders of Hitachi Zosen rose year on year to ¥5,848 million despite the recording of an impairment loss and a provision for loss on guarantees in an extraordinary loss.



# 3. Earning forecast of the next fiscal year

Concerning the forecast of consolidated sales and earnings for the next fiscal year, although economic prospects remain unclear, our order intake is again projected at ¥450,000 million. Net sales are expected to grow to ¥400,000 million.

As to profitability, operating income is projected at ¥16,000 million, which exceeds this fiscal year, mainly due to a improvement of profitability in the machinery segment. Profit attributable to shareholders of Hitachi Zosen are estimated at ¥6,000 million.

# 4. Analysis of consolidated financial position

### (1) Assets, liabilities and net assets

Total assets decreased by ¥7,154 million from the previous fiscal year to ¥401,649 million due to the decrease of cash and time deposits.

Total liabilities decreased by ¥10,289 million from the previous fiscal year to ¥280,983 million reflecting the decline of interest-bearing debt.

The Net assets increased by \$3,135 million to \$120,666 million with Profit attributable to shareholders of Hitachi Zosen in this fiscal year.

### (2) Cash flows

Cash flows from operating activities were cash inflow of ¥8,148 million after booking Net profit.

Due to capital investments, Cash flows from investing activities were cash outflow of ¥3,666 million.

Cash flows from financing activities were cash outflow of ¥15,948 million due repayment of long-term debt.

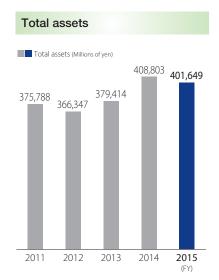
On an overall basis, Cash and cash equivalents at the end of year decreased by ¥11,098 million to ¥49,672 million.

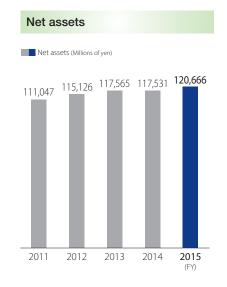
# Basic policy for profit distribution, dividend, and proposed dividend

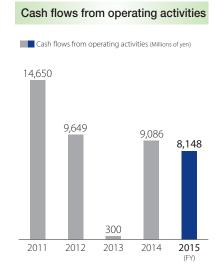
Our basic policy for profit distribution is to implement the appropriate level of stable dividend payment in light of underlying business results consecutively, while trying to enhance retained earnings required for future business development. Retained earnings should be employed for capital investment and R&D to strengthen our business base and expansion of business fields.

As regards the end-of-year dividend, profit attributable to shareholders of Hitachi Zosen rose year on year, reaching the level at which it is possible to increase the dividend, and also after comprehensively taking into consideration such factors as the internal reserves needed to develop future businesses, we have decided on an increase of ¥2 to ¥12.00 per share year-end dividends.

In addition, we are planning to maintain next year-end dividends at ¥12.00 per share, the same as for the fiscal year under review.







# Management's Discussion and Analysis

### 6. Business risks

### (1) Business environment

A large proportion of the sales of the Hitachi Zosen Group comprise public works projects. In order to secure stable profits, the Group is executing various business restructuring initiatives, including working to create a more balanced portfolio of businesses meeting official-sector demand and businesses meeting private-sector demand, and to expand our solutions businesses centered on our after-sales service, operation and maintenance businesses. However, if these business restructuring initiatives are not successful, the manifestation of the related risks has the potential to adversely affect the Group's operating results and/or financial position.

### (2) Price competitiveness

The markets for the products of the Hitachi Zosen Group have experienced an extended and intense price competitiveness, with a downward trend for order prices. The Group is working zealously to reduce fixed costs such as personnel and business expenses, and to reform the structure of fixed overheads. However, if the downward trend for order prices extends even longer into the future, the manifestation of the related risks has the potential to adversely affect the Group's operating results and/or financial position.

# (3) Soaring raw material prices

The Hitachi Zosen Group possesses many products and projects that use steel materials, nonferrous metal products such as stainless steel, and petroleum products, and works zealously to reduce the costs of materials by concentrating materials procurement functions and by strengthening Group procurement and Group joint purchasing. However, if the prices rise for materials such as steel materials, nonferrous metal and crude oil, or for their secondary products, the manifestation of the related risks has the potential to adversely affect the Group's operating results and/or financial position.

# (4) Order intake risk

The Hitachi Zosen Group established the Risk Management Group in the Corporate Planning Department as regards large order intake projects, and executes risk management as regards order intake projects related to technology, business conditions and other factors. The Group strives to rigorously eliminate these risks at the time of order intake through the Risk Examination Committee. However, if risks materialize that were unforeseen at the time of order intake, the manifestation of the related risks has the potential to adversely affect the Group's operating results and/or financial position.

# (5) Rises in interest rates and fluctuations in foreign exchange rates

The Hitachi Zosen Group works to strengthen its financial position centered on the reduction of interest-bearing liabilities, and also hedges against the risks of changes in interest rates and of fluctuations in foreign exchange rates. However, if there are rises in interest rates or fluctuations in foreign exchange rates, the manifestation of the related risks has the potential to adversely affect the Group's operating results and/or financial position.

# (6) Overseas business risks and country risks

The Hitachi Zosen Group is expanding its overseas business, and strives to concentrate information related to country risks and to educate Group employees. However, if risks materialize as a result of an unstable political situation in a region, of trade sanctions, of cultural or legal differences, or of special labor-management relations, the manifestation of the related risks may obstruct smooth business operations and has the potential to adversely affect the Group's operating results and/or financial position.

### (7) Disasters

To minimize the damage that would be inflicted by such disasters as earthquakes, typhoons and pandemics, the Hitachi Zosen Group has formulated a business continuity plan, conducts inspections and training, and has put in place the framework for employees to keep in contact with each other if an emergency occurs. However, if damage is inflicted on human beings or physical objects as a result of such a disaster, the manifestation of the related risks has the potential to adversely affect the Group's operating results and/or financial position.

# Corporate Governance and Compliance

Recognizing that enhancement of corporate governance is one of our top-priority management issues to ensure corporate soundness, transparency and efficiency, increase corporate value, and fulfill the Company's responsibilities as a good corporate citizen, we are working to establish a framework that enables effective corporate governance. In addition, we are working proactively to strengthen our compliance management in order to manage the Company in conformity with laws and regulations and corporate ethics, and fulfill our social responsibilities.

# Corporate governance system

Our principal management decision-making bodies consist of the Board of Directors and the Management Strategy Committee. In addition to dealing with issues stipulated by the law, the Board of Directors decides upon important matters such as basic management policies, and oversees the execution of operations. The Management Strategy Committee, which comprises top management personnel, conducts thorough discussion of basic strategies and important matters. This system facilitates appropriate management decisions.

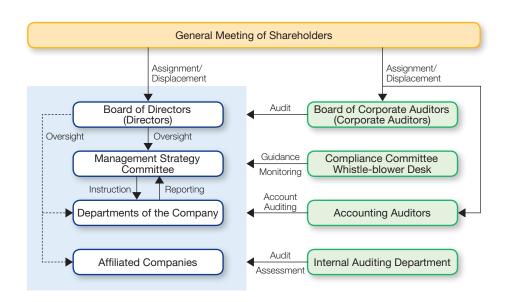
Hitachi Zosen ensures transparency and appropriateness in its decision-making by bringing in external points of view to management. One outside director was appointed in 2013 with the goal of further strengthening supervisory functions pertaining to the execution of business. In 2015 and 2016, we added another outside director each year to make a three outside-director framework (including one foreign citizen), in order to increase corporate value by further enhancing our corporate governance. The Company has also adopted an executive officer system, which is aimed at striking a balance between strengthening the supervision function performed by the directors and facilitating the swift and appropriate execution of business. To achieve this objective, some of the business execution functions performed by directors are delegated to executive officers. As of July 2016, there are 10 directors (of which three are outside directors) and 20

executive officers.

Auditing functions are performed by the Board of Corporate Auditors, comprising two full-time corporate auditors and two outside corporate auditors as of July 2016. Corporate auditors attend meetings of the Board of Directors regularly and other meetings as needed, and implement audits of management from a neutral, objective standpoint under a system in which they can fully audit the execution of operations of directors and other high-ranking executives. In addition to the corporate auditors (the Board of Corporate Auditors), we have set up an Internal Auditing Department as a division responsible for internal audits. The Internal Auditing Group within the department implements ongoing internal audits related to matters such as finance and accounting, internal controls and procedures, business risks, and compliance across all management activities. At the same time, the Internal Control Group within the department makes assessments of internal controls on financial reporting in line with the stipulations of the Financial Instruments and Exchange Act, aiming to improve internal control functions through the exchange of information with the corporate auditors at appropriate times.

# Compliance system

We have established a Compliance Committee, with the representative director serving as chairman. Under this committee, surveys and verifications of all corporate activities are conducted regularly from the legal and corporate ethical standpoints. Furthermore, the Hitachi Zosen Group has established the "Hitz Group Charter of Ethical Behavior" as ethical behavior guidelines to be observed by all the directors and employees of the Group. By educating all directors and employees, the Group is aiming to improve awareness of compliance and promote the maintenance of a high standard of corporate ethics. At the same time we have established a whistle-blowing system to enable employees to consult with/report to an external consultant so that we can promptly and effectively prevent, detect, and address any violations of laws, regulations and corporate ethics.



# Board of Directors and Corporate Auditors

(As of June 23, 2016)

### **Directors**



Representative Director, Chairman

# Minoru Furukawa

April 1966 Joined the Company

June 1998 Director, the Company

June 1999 Executive Officer, the Company

June 2001 Representative Director, Senior Managing Director, the Company

April 2005 Representative Director, President, the Company

June 2010 Representative Director, Chairman and President, the Company

2013 Representative Director, Chairman and Chief Executive Officer, the Company

2016 Representative Director, Chairman, the Company (current position)



Representative Director, President and Chief Executive Officer

### Takashi Tanisho

April 1973 Joined the Company

April 2009 Executive Officer, the Company

April 2010 General Manager of Precision Machinery Headquarters and General Manager of Chikkou Works, the Company

June 2010 Director, the Company

June 2010 Responsible for Precision Machinery Headquarters, and General Manager of Precision Machinery Headquarters, and General Manager of Chikkou Works, the Company

April 2011 Responsible for Precision Machinery Headquarters, and General Manager of Precision Machinery Headquarters, and General Manager of Business & Product Development Division, Precision Machinery Headquarters, the Company

April 2012 Managing Director, the Company

April 2012 Responsible for Business & Product Development Headquarters and Precision Machinery Headquarters, and General Manager of Business & Product Development Headquarters, the Company

April 2013 Representative Director, President and Chief Operating Officer, the Company

April 2016 Representative Director, President and Chief Executive Officer. the Company (current position)

Vice-Chairman

# Masaki Hashikawa

1971 Joined The Sanwa Bank, Limited

1998 Director, The Sanwa Bank, Limited

June 1999 Executive Officer, The Sanwa Bank, Limited

March 2001 Managing Executive Officer, The Sanwa Bank, Limited

January 2002 Managing Executive Officer, UFJ Bank Limited 2002 Senior Managing Executive Officer, UFJ Bank Limited May

2003 Director, Executive Vice President, Nissho Iwai - Nichimen Holdings Corporation

2003 Executive Vice President, Nissho Iwai Corporation

April 2004 Representative Director, Chairman, Sojitz Corporation

2004 Director, Executive Vice President, Sojitz Holdings Corporation

October 2004 Director, Executive Vice President, Sojitz Corporation

October 2005 Representative Director, Executive Vice President, Sojitz Corporation 2008 Representative Director and Vice Chairman, Sojitz Corporation April

2012 Corporate Advisor, Sojitz Corporation June

2013 Vice-Chairman, the Company (current position)



Managing Director

# Masayuki Morikata

April 1974 Joined the Company

June 2006 General Manager of Accounting & Finance Dept., the Company

April 2009 Executive Officer, the Company

June 2010 Director, the Company

June 2010 Responsible for Corporate Planning Dept., Accounting & Finance Dept. and Overseas Business Administration Dept., and General Manager of Corporate Planning Dept., the Company

April 2012 Managing Director, the Company (current position)
April 2012 Responsible for Corporate Planning Dept., Accounting & Finance Dept. and Overseas Business Administration Dept., the Company

April 2014 Responsible for Corporate Planning Dept., Accounting & Finance Dept., Subsidiary Administration Dept. and Overseas Business

Administration Dept., the Company April 2015 General Manager of Corporate Planning Headquarters, the Company

June 2015 General Manager of General Administration Headquarters & General Manager of Corporate Planning Headquarters, the Company

April 2016 Responsible for Procurement Headquarters, General Manager of General Administration Headquarters, and General Manager of Corporate Planning Headquarters, the Company (current position)



Managing Director

# Wataru Kobashi

April 1974 Joined the Company

April 2010 Executive Officer, the Company

April 2012 General Manager of Business Planning Headquarters,

the Company

June 2012 Director, the Company

April 2013 Responsible for Business Planning Headquarters, and General Manager of Business Planning Headquarters, the Company

April 2014 Managing Director, the Company (current position)

April 2015 General Manager of Machinery Business Headquarters,

the Company (current position)



Managing Director

# Sadao Mino

April 1982 Joined the Company

April 2010 General Manager of Environmental Solutions EPC Business Unit, Environmental Systems & Solutions Division, Engineering Headquarters, the Company

April 2011 Executive Officer, the Company

April 2011 General Manager of Environmental Solutions EPC Business Unit. Engineering Headquarters, the Company

General Manager of Environmental Solutions EPC Business Unit, Environmental Systems & Solutions Division, Engineering Headquarters, the Company

January 2013 General Manager of Engineering Business Division, Environment, Energy & Plant Headquarters, the Company

2013 Managing Executive Officer, the Company

2015 General Manager of Environment Business Headquarters, responsible for Architect Supervision Dept. and Quality Assurance Dept., the Company (current position)

2015 Managing Director, the Company (current position)



Managing Director

# Toshiyuki Shiraki

1984 Joined the Company

April 2012 General Manager of Overseas Project Execution Dept. Environmental Systems EPC Business Unit, Environmental Systems & Solutions Division, Engineering Headquarters

January 2013 General Manager of EPC Business Unit, Engineering Business Division, Environment, Energy & Plant Headquarters

the Company 2013 Executive Officer, the Company

the Company

General Manager of Business Planning Headquarters,

the Company

2016 Managing Executive Officer, the Company April April

General Manager of Technology Development Headquarters, and General Manager of Business Planning Headquarters, the Company (current position)

2016 Managing Director, the Company (current position)



Outside Director

# Chiaki Ito

April 1970 Joined Fujitsu Limited

June 2004 Corporate Executive Vice President and Director, Fujitsu Limited

June 2006 Corporate Senior Executive Vice President and Representative

Director, Fujitsu Limited

June 2008 Vice Chairman and Director, Fujitsu Limited

April 2010 Chairman and Representative Director, FUJITSU RESEARCH INSTITUTE

June 2012 Senior Executive Advisor, FUJITSU RESEARCH INSTITUTE

(retired in May 2014)

June 2013 Outside Director, the Company (current position)
June 2014 Corporate Advisor, FUJITU RESEARCH INSTITUTE

June 2015 Outside Director, ZENSHO HOLDINGS Co., Ltd. (current position)

June 2015 Outside Director, OBIC Business Consultants Co., Ltd.

(current position)



Outside Director

# Kazuko Takamatsu

April 1974 Joined Sony Corporation

2000 Director, Sony Digital Network Applications, Inc. August

April 2003 Representative Director,

Sony Digital Network Applications, Inc. October 2008 VP in charge of Environment, Sony Corporation

April 2012 Advisor, YAMAGATA INTECH Corporation April

2013 Executive Director and Secretariat, Japan Institute for Women's Empowerment & Diversity Management

(current position)

2015 Outside Director, Dexerials Corporation (current position) May

June 2015 Outside Director, the Company (current position)



Outside Director

# Richard R. Lury

September 1974 Admitted to the bar of the State of New York

September 1989 Partner, Kelley Drye & Warren LLP

2003 Admitted to the bar of the State of New Jersey .lune

2013 Outside Director, Sanken North America, Inc. (current position) March

2014 Outside Director, Sanken Electric Co., Ltd. (current position) June 2016 Outside Director, the Company (current position)

[Reasons for appointment as Outside Director]

Mr. Lury served as a partner of a major law firm in the United States for many years, and has extensive experience and expertise in international corporate legal matters, including how to respond to legal problems. The Company, which is now promoting the strengthening of corporate governance, globalization of business, etc., anticipates that as Outside Director Mr. Lury will fulfill his role in strengthening the supervisory functions regarding business execution. Thus, the Company has designated Mr. Lury as a candidate for Outside Director.

# Corporate Auditors



Full-time Corporate Adviser Masamichi Tokuhira

April 1973 Joined the Company

June 2001 General Manager of Accounting & Finance Dept., the Company

April 2005 Executive Officer, the Company

June 2006 Executive Officer, Universal Shipbuilding Corporation

April 2009 Full-time Corporate Auditor, Universal Shipbuilding Corporation April 2010 President, Universal System & Machinery Co., Ltd.

April 2012 Corporate Adviser, the Company

June 2012 Full-time Corporate Auditor, the Company (current position)



Full-time Corporate Auditor

# Koji Abo

June

1973 Joined the Company April

General Manager of Legal & Intellectual Property Dept., December 2005

the Company

April 2009 Executive Officer, the Company

April 2011 Managing Executive Officer, the Company

2012 Managing Director, the Company June Responsible for Legal & Intellectual Property Dept., General 2012 June

Affairs & Human Resources Dept. and Environmental Management & Safety Dept., the Company

2015 Full-time Corporate Auditor, the Company (current position)

April General Manager of General Administration Headquarters, the Company



Outside Corporate Auditor

### Makoto Yagi

April 1972 Joined The Kansai Electric Power Co., Inc.

June 2005 Director, The Kansai Electric Power Co., Inc.

June 2006 Managing Director, The Kansai Electric Power Co., Inc.

June 2009 Executive Vice President and Representative Director, The Kansai Electric Power Co., Inc.

June 2010 President and Representative Director, The Kansai Electric Power Co., Inc.

June 2013 Outside Corporate Auditor, the Company (current position)

June 2015 Outside Director, H2O Retailing Corporation (current position) June 2016 Chairman, The Kansai Electric Power Co., Inc. (current position)



Outside Corporate Auditor

### Kenichi Takashima

1971 Joined Japan Management Association April

September 1976 Joined Honda Motor Co., Ltd.

General Manager of Finance Division, Honda Motor Co., Ltd. June

1998 Director and General Manager of Accounting Division, Honda Motor Co., Ltd. June

2000 Corporate Auditor (full time), Honda Motor Co., Ltd. June

2003 Advisor, Honda Motor Co., Ltd. (retired in June 2007) June

2010 Auditor, Government Pension Investment Fund, Japan (retired in March 2014) April

2014 Outside Corporate Auditor, the Company (current position) June 2015 Outside Director, MAXVALU CHUBU CO.,LTD. (current position)

# Tackling Environmental Issues

Hitachi Zosen positions the achievement of harmony between its activities and the global natural environment as a linchpin of its business across all operational segments. In 1992, we formulated a number of basic environmental protection policies to embody our efforts on environmental issues. These policies include the statement that: "The Company recognizes its responsibilities as a good corporate citizen and proactively solves environmental issues on a global basis. It endeavors to promote environmental protection based on the understanding that the protection of nature and the living environments of local communities are corporate social responsibilities."

In line with this basic policy, in 1993 our Environmental Protection Committee drew up the Environmental Protection Promotion Plan, which, in addition to the global environmental activities we had already been carrying out, called for the strengthening of environmental management systems, the promotion of global environmental protection, energy conservation, and conservation of natural resources, as well as increased efforts toward communication in the field of global environmental protection. The staff at all our business premises drew up targets under this promotion plan and commenced activities aimed at protecting and preserving the natural environment.

# Promoting environmental management systems

In March 1998, the Company's Maizuru Works became Japan's first shipyard to obtain ISO 14001 certification. Since then, seven of the Company's plants in Japan and two business divisions have acquired this certification. We plan to continue improving our environmental management systems to ensure appropriate countermeasures against environmental risks.

# Promoting global environmental protection and the conservation of energy and natural resources

The Company's energy conservation measures include shifting fuel from heavy oil to LNG, adopting improved operational methods as well as energy-saving equipment such as transformers and compressors, and setting stricter temperature standards for heating and air-conditioning so as to help reduce atmospheric CO<sub>2</sub> levels. At the end of fiscal 2011,

we replaced all lighting fixtures in existing office buildings with LED lights. We installed a 100kW-class solar power generation system at Ariake Works in fiscal 2010, and in fiscal 2011 we installed a 133kW system at Chikko Works, a 70kW system at Maizuru Works, and in fiscal 2012 a 88kW system at the Nanko Headquarters, for a total of 391kW. In fiscal 2013, we contributed to the reduction of carbon dioxide by selling 1,500kW of solar power generated at Innoshima Works and 5,000kW from the biomass power generation system that uses waste timber materials now under construction at Ibaraki Works.

We are working to ensure that 100% of scrap metal is recycled, and are also promoting a higher recycling rate for waste paper and the conversion of waste oil into fuel. We also recycle waste wood materials, turning them into chips and recycling them for use in other products, flux is turned into roadbed materials, and shotblast waste sand into raw material for cement.

# Promoting communication on environmental protection

We have published an Environmental and Social Report every year since 2002, in which we actively disclose the contents of our efforts on global environmental protection and local environmental preservation. We also cooperate with local governments and communities on various activities for promoting environmental protection (such as local recycling and tree-planting campaigns) and participate in such activities. Furthermore, we join hands with organizations involved in environmental protection, and exchange activities and information with them.

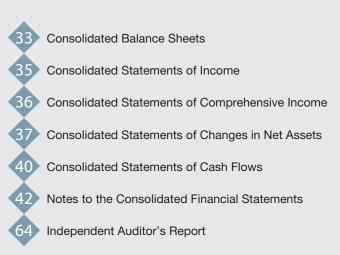
Regarding the management of chemical substances, we employ PRTRs to maintain an accurate grasp of the volumes of all chemical substances emitted, generated, or transported. We have drawn up the "Voluntary Management Plan for Chemical Substances," under which we manage such substances appropriately while taking steps to reduce their amount.

In order to contribute to biodiversity through our products and services, in March 2012, we established action guidelines that are in line with the Declaration of Biodiversity by Keidanren and we are pursuing biodiversity-related activities.

In April 2012, we participated in Osaka's adopt-a-forest activities and began forest creation activities including tree trimming and planting.

Achievemen	ts under the Hitach	i Zosen Environmental Protection P	<b>Promotion Plan</b> $\bigcirc$ Fully on target $\bigcirc$ Partially on target $\triangle$ Short	of target	
1	Measures	Medium-term target	Results in fiscal year 2015	Evaluation	
Environmental management	Adoption of environ- mental management systems	Acquisition of ISO 14001 for all places of business     Implementation of environmental audits	Implemented environmental audits on Company factories via dedicated local community environment protection committee     Internal audits of factories and offices conducted by Internal Auditing Officer     External environment audit conducted by third-party institution		
3	Promote "Green Purchasing"	-	Promote purchasing of products with as little environmental burden as possible     Promoted central purchasing of eco-friendly products via the Internet	0	
	Restrictions on use of ozone-depleting substances	Proper disposal of chlorofluorocarbon equipment according to Law on Collection of Chlorofluorocarbon of Special Products and Their Destruction	Upgraded chlorofluorocarbon equipment	0	
Reducing environmental burden of business activities	Reducing CO <sub>2</sub> emissions	FY2005 as the base year Medium-term target: 2.8% decrease in FY2016 Long-term target: 3.8% decrease in FY2020	7.2% decrease over FY2005 FY2005: 46,594 tons CO <sub>2</sub> FY2015: 43,259 tons CO <sub>2</sub>	0	
	Reducing waste generated (excluding valuable materials)	Reduction of FY2015 amount to 90% of FY2000 level	Decreased by 18.2% of FY2000 level FY2000: 4,159 tons FY2015: 3,403 tons	0	
	Reducing landfill waste	Reduction of FY2015 amount to 35% of FY2000 level	Decreased by 65.0% of FY2000 level FY2000: 994 tons FY2015: 348 tons	0	
Contribution to local environmental protection	Achieve full environ- mental protection at workplaces	-	Complied with stipulations of environmental protection legislation     Carried out environmental measures in line with agreements with local communities, or independently by our factories/offices	0	
	Contribute to local communities	-	Participated in environmental protection campaigns by government bodies, local communities, etc.	0	

# Financial Section



**Consolidated Balance Sheets**Hitachi Zosen Corporation and Consolidated Subsidiaries
At March 31, 2015 and 2016

	Millions of yen		Thousands of U.S. dollars (Note 1)
	<b>2015 2016</b>		2016
ASSETS			
Current assets:			
Cash and time deposits (Note 15)	¥ 62,384	¥ 51,585	\$ 457,801
Receivables:			
Trade notes and accounts:			
Nonconsolidated subsidiaries and affiliates	918	832	7,384
Other	135,603	138,445	1,228,656
Other	3,545	5,071	45,004
Allowance for doubtful receivables	(1,718)	(3,411)	(30,272)
	138,348	140,937	1,250,772
Marketable securities (Notes 3 and 5)	1	10	89
Inventories (Note 4)	26,118	30,978	274,920
Deferred tax assets (Note 19)	5,658	5,873	52,121
Prepaid expenses and other current assets (Note 5)	6,880	12,476	110,721
Total current assets	239,389	241,859	2,146,424
Property, plant and equipment, at cost (Note 5): Land (Notes 7 and 23)	66,505	61,315	544,152
Buildings and structures (Note 23)	79,350	80,370	713,259
Machinery and equipment	100,354	105,434	935,694
Lease assets (Note 16)	1,442	1,627	14,439
Construction in progress	3,010	1,429	12,682
	250,661	250,175	2,220,225
Less accumulated depreciation	(125,324)	(130,368)	(1,156,975)
Property, plant and equipment, net	125,337	119,807	1,063,250
Intangible assets:			
Goodwill	5,701	3,073	27,272
Other intangible assets	4,896	4,643	41,205
Total intangible assets	10,597	7,716	68,477
Investments and other noncurrent assets:			
Investments in nonconsolidated subsidiaries and affiliates (Notes 3 and 5)	8,276	8,449	74,982
Investments in securities (Notes 3 and 5)	16,213	15,677	139,129
Long-term loans receivable (Note 5)	47	37	328
Net defined benefit assets (Note 19)	542	759	6,736
Deferred tax assets (Note 20)	2,161	3,095	27,467
Other investments and noncurrent assets	7,209	5,217	46,299
Allowance for doubtful receivables	(1,015)	(990)	(8,786)
Total investments and other noncurrent assets	33,433	32,244	286,155
Deferred assets	47	23	204
Total assets	¥ 408,803	¥ 401,649	\$ 3,564,510

See the accompanying Notes to the Consolidated Financial Statements.

Thousands of Millions of yen U.S. dollars (Note 1) 2015 2016 2016 LIABILITIES **Current liabilities:** Notes and accounts payable: Nonconsolidated subsidiaries and affiliates 155 543 4,819 58,714 62,006 550,284 Short-term borrowings (Note 5) 5,205 6,150 54,579 33,780 Current portion of long-term debt (Note 5) 22,506 199,734 Accrued expenses 57,783 51,960 461,129 Accrued income taxes 1,661 2,849 25,284 14,927 18,728 166,205 Advances received on work in progress Reserve for directors' and corporate auditors' bonuses 13 4,329 4,902 43,504 Reserve for product warranties Reserve for losses on construction contracts (Note 4) 5,569 5,498 48,793 Other current liabilities 10,324 8,912 79,091 Total current liabilities 192,460 184,054 1,633,422 Long-term liabilities: Long-term debt, less current portion (Note 5) 75,406 669,205 79,242 Asset retirement obligations (Note 22) 918 967 8,582 Deferred tax liabilities (Note 20) 1,236 790 7,011 Net defined benefit liability (Note 19) 17,700 157,082 15,490 Directors' and corporate auditors' severance and retirement benefits 385 401 3,559 Other noncurrent liabilities (Note 5) 1,541 1,665 14,776 Total long-term liabilities 98,812 96,929 860,215 Total liabilities 291,272 280,983 2,493,637 **CONTINGENT LIABILITIES (Note 6) NET ASSETS (Note 8):** Common stock Authorized — 400,000,000 shares - 167,843,845 shares at March 31, 2015 45,442 45,442 403,284 Issued - 170,214,843 shares at March 31, 2016 Capital surplus 9,576 12,231 108,546 508,777 Retained earnings 53,089 57,329 Treasury stock, at cost — 829,840 shares in 2015 - 1,650,068 shares in 2016 (411)(1,008)(8,946)Net unrealized holding gains (losses) on securities 853 489 4,340 Net unrealized holding gains (losses) on hedging derivatives (844)(96)(852)Land revaluation difference (Note 7) (50)(444)(4)Foreign currency translation adjustments 4,266 3,136 27,831 Remeasurements of defined benefit plans (3,201)(3,315)(29,420)Subscription rights to shares Non-controlling interests in consolidated subsidiaries 8,765 6,508 57,757 Total net assets 117,531 120,666 1,070,873 Total liabilities and net assets ¥408,803 ¥401,649 \$3,564,510

See the accompanying Notes to the Consolidated Financial Statements.  $\label{eq:Consolidated}$ 

Consolidated Statements of Income
Hitachi Zosen Corporation and Consolidated Subsidiaries
For the Years Ended March 31, 2015 and 2016

	Millions	s of yen	Thousands of U.S. dollars (Note 1)
	2015	2016	2016
Net sales	¥359,332	¥387,044	\$3,434,895
Cost of sales (Note 9)	302,495	322,766	2,864,448
Gross profit	56,837	64,278	570,447
Selling, general and administrative expenses	44,018	49,165	436,324
Operating income	12,819	15,113	134,123
Other income (expenses):			
Interest and dividend income	352	393	3,488
Interest expense	(1,056)	(992)	(8,804)
Foreign exchange loss	(2,983)	(532)	(4,721)
Equity in net loss of nonconsolidated subsidiaries and affiliates	(910)	(1,269)	(11,262)
Gain on bargain purchases (Note 10)	3,146	_	_
Impairment loss (Note 11)	(1,336)	(1,786)	(15,850)
Provision for loss on guarantees (Note 12)	_	(1,406)	(12,478)
Other, net	(653)	(440)	(3,905)
Total other expenses	(3,440)	(6,032)	(53,532)
Profit before income taxes and non-controlling interests	9,379	9,081	80,591
Income taxes (Note 20)			
Current	2,765	3,478	30,866
Deferred	465	(1,298)	(11,519)
Profit	6,149	6,901	61,244
Profit attributable to non-controlling interests	1,049	1,052	9,336
Profit attributable to shareholders of Hitachi Zosen	¥ 5,100	¥ 5,849	\$ 51,908

	Yen		U.S. dollars (Note 1)
	2015	2016	2016
Amounts per share (Note 2)			
Net income	¥30.52	¥34.96	\$0.31
Cash dividends	10.00	12.00	0.11

See the accompanying Notes to the Consolidated Financial Statements.

# Consolidated Statements of Comprehensive Income Hitachi Zosen Corporation and Consolidated Subsidiaries For the Years Ended March 31, 2015 and 2016

	Million	Thousands of U.S. dollars (Note 1)	
	2015	2016	2016
Profit before non-controlling interests	¥ 6,149	¥6,901	\$61,244
Other comprehensive income			
Net unrealized holding gains (losses) on securities	259	(255)	(2,263)
Net unrealized holding gains (losses) on hedging derivatives	(83)	763	6,771
Foreign currency translation adjustments	1,348	(538)	(4,774)
Remeasurements of defined benefit plans	(1,558)	(61)	(541)
Equity of nonconsolidated subsidiaries and affiliates accounted for using equity method	747	(703)	(6,239)
Total other comprehensive income (Note 13)	713	(794)	(7,046)
Total comprehensive income	¥ 6,862	¥6,107	\$54,198
Comprehensive income attributable to			
Shareholders of Hitachi Zosen	¥ 5,735	¥5,004	\$44,409
Non-controlling interests	1,127	1,103	9,789

# Consolidated Statements of Changes in Net Assets Hitachi Zosen Corporation and Consolidated Subsidiaries For the Years Ended March 31, 2015 and 2016

For the year ended March 31, 2015

(Millions of yen)

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			Shareholders' equity		
	Common stock	Capital surplus	Retained earnings	Treasury stock (Note 14)	Total shareholders' equity
Balance at beginning of year	¥45,442	¥5,974	¥50,467	¥(1,995)	¥ 99,888
Cumulative effects of changes in accounting policies			(691)		(691)
Restated balance	45,442	5,974	49,776	(1,995)	99,197
Changes of items during the period					
Cash dividends			(1,564)		(1,564)
Increase by merger		3,602		1,990	5,592
Profit attributable to shareholders of Hitachi Zosen			5,100		5,100
Treasury stock disposed, net		(O)		0	0
Treasury stock purchased, net				(406)	(406)
Decrease due to exclusion of affiliates			(205)		(205)
Reversal of land revaluation difference			(18)		(18)
Net changes of items other than shareholders' equity					
Total changes during the period	_	3,602	3,313	1,584	8,499
Balance at end of year	¥45,442	¥9,576	¥53,089	¥ (411)	¥107,696

		Other a	ccumulated c	omprehensive	e income				
	Net unrealized holding gains (losses) on securities	Net unrealized holding gains (losses) on hedging derivatives	Land revaluation difference (Note 7)	Foreign currency translation adjustments	Remeasure- ments of defined benefit plans	Total other accumulated comprehensive income	Subscription rights to shares	Non- controlling interests in consolidated subsidiaries	Total net assets
Balance at beginning of year	¥416	¥(775)	¥(22)	¥2,504	¥(1,688)	¥ 435	¥ 1	¥17,241	¥117,565
Cumulative effects of changes in accounting policies									(691)
Restated balance	416	(775)	(22)	2,504	(1,688)	435	1	17,241	116,874
Changes of items during the period									
Cash dividends									(1,564)
Increase by merger									5,592
Profit attributable to shareholders of Hitachi Zosen									5,100
Treasury stock disposed, net									0
Treasury stock purchased, net									(406)
Decrease due to exclusion of affiliates									(205)
Reversal of land revaluation difference			18			18			_
Net changes of items other than shareholders' equity	437	(69)	_	1,762	(1,513)	617	(1)	(8,476)	(7,860)
Total changes during the period	437	(69)	18	1,762	(1,513)	635	(1)	(8,476)	657
Balance at end of year	¥853	¥(844)	¥ (4)	¥4,266	¥(3,201)	¥1,070	¥—	¥ 8,765	¥117,531

### For the year ended March 31, 2016

(Millions of yen)

	Shareholders' equity						
	Common stock	Capital surplus	Retained earnings	Treasury stock (Note 14)	Total shareholders' equity		
Balance at beginning of year	¥45,442	¥ 9,576	¥53,089	¥ (411)	¥107,696		
Cumulative effects of changes in accounting policies					_		
Restated balance	45,442	9,576	53,089	(411)	107,696		
Changes of items during the period							
Cash dividends			(1,671)		(1,671)		
Increase by share exchanges		1,531		397	1,928		
Profit attributable to shareholders of Hitachi Zosen			5,849		5,849		
Treasury stock disposed, net		0		0	0		
Treasury stock purchased, net				(994)	(994)		
Change in treasury shares of parent arising from transactions with non-controlling shareholders		1,124			1,124		
Reversal of land revaluation difference			62		62		
Net changes of items other than shareholders' equity							
Total changes during the period	_	2,655	4,240	(597)	6,298		
Balance at end of year	¥45,442	¥12,231	¥57,329	¥(1,008)	¥113,994		

		Other a	ccumulated c	omprehensive	income				
	Net unrealized holding gains (losses) on securities	Net unrealized holding gains (losses) on hedging derivatives	Land revaluation difference (Note 7)	Foreign currency translation adjustments	Remeasure- ments of defined benefit plans	Total other accumulated comprehensive income	Subscription rights to shares	Non- controlling interests in consolidated subsidiaries	Total net assets
Balance at beginning of year	¥ 853	¥(844)	¥ (4)	¥ 4,266	¥(3,201)	¥1,070	¥—	¥ 8,765	¥117,531
Cumulative effects of changes in accounting policies									_
Restated balance	853	(844)	(4)	4,266	(3,201)	1,070	-	8,765	117,531
Changes of items during the period									
Cash dividends									(1,671)
Increase by share exchanges									1,928
Profit attributable to shareholders of Hitachi Zosen									5,849
Treasury stock disposed, net									0
Treasury stock purchased, net									(994)
Change in treasury shares of parent arising from transactions with non-controlling shareholders									1,124
Reversal of land revaluation difference			(46)			(46)			16
Net changes of items other than shareholders' equity	(364)	748	_	(1,130)	(114)	(860)	_	(2,257)	(3,117)
Total changes during the period	(364)	748	(46)	(1,130)	(114)	(906)	_	(2,257)	3,135
Balance at end of year	¥ 489	¥ (96)	¥(50)	¥ 3,136	¥(3,315)	¥ 164	¥-	¥ 6,508	¥120,666

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			Shareholders' equity		
	Common stock	Capital surplus	Retained earnings	Treasury stock (Note 14)	Total shareholders' equity
Balance at beginning of year	\$403,284	\$ 84,984	\$471,148	\$(3,647)	\$ 955,769
Cumulative effects of changes in accounting policies					_
Restated balance	403,284	84,984	471,148	(3,647)	955,769
Changes of items during the period					
Cash dividends			(14,829)		(14,829)
Increase by share exchanges		13,587		3,523	17,110
Profit attributable to shareholders of Hitachi Zosen			51,908		51,908
Treasury stock disposed, net		0		0	0
Treasury stock purchased, net				(8,822)	(8,822)
Change in treasury shares of parent arising from transactions with non-controlling shareholders		9,975			9,975
Reversal of land revaluation difference			550		550
Net changes of items other than shareholders' equity					
Total changes during the period	_	23,562	37,629	(5,299)	55,892
Balance at end of year	\$403,284	\$108,546	\$508,777	\$(8,946)	\$1,011,661

		Other ac	ccumulated c	omprehensive	income				
	Net unrealized holding gains (losses) on securities	Net unrealized holding gains (losses) on hedging derivatives	Land revaluation difference (Note 7)	Foreign currency translation adjustments	Remeasure- ments of defined benefit plans	Total other accumulated comprehensive income	Subscription rights to shares	Non- controlling interests in consolidated subsidiaries	Total net assets
Balance at beginning of year	\$ 7,570	\$(7,490)	\$ (35)	\$ 37,859	\$(28,408)	\$ 9,496	\$-	\$ 77,786	\$1,043,051
Cumulative effects of changes in accounting policies									_
Restated balance	7,570	(7,490)	(35)	37,859	(28,408)	9,496	-	77,786	1,043,051
Changes of items during the period									
Cash dividends									(14,829)
Increase by share exchanges									17,110
Profit attributable to shareholders of Hitachi Zosen									51,908
Treasury stock disposed, net									0
Treasury stock purchased, net									(8,822)
Change in treasury shares of parent arising from transactions with non-controlling shareholders									9,975
Reversal of land revaluation difference			(409)			(409)			141
Net changes of items other than shareholders' equity	(3,230)	6,638	_	(10,028)	(1,012)	(7,632)	_	(20,029)	(27,661)
Total changes during the period	(3,230)	6,638	(409)	(10,028)	(1,012)	(8,041)	-	(20,029)	27,822
Balance at end of year	\$ 4,340	\$ (852)	\$(444)	\$ 27,831	\$(29,420)	\$ 1,455	\$-	\$ 57,757	\$1,070,873

See the accompanying Notes to the Consolidated Financial Statements.  $\label{eq:consolidated}$ 

**Consolidated Statements of Cash Flows** Hitachi Zosen Corporation and Consolidated Subsidiaries For the Years Ended March 31, 2015 and 2016

	Million	Thousands of U.S. dollars (Note 1)	
	2015	2016	2016
Cash flows from operating activities:			
Profit before income taxes and non-controlling interests	¥ 9,379	¥ 9,081	\$ 80,591
Adjustments to reconcile profit before income taxes and non-controlling interests to net cash provided by operating activities:			
Depreciation	8,196	8,429	74,805
Impairment loss	1,336	1,786	15,850
Amortization of goodwill	590	817	7,251
Gain on bargain purchase	(3,146)	_	_
Increase (decrease) in allowance for doubtful receivables	(67)	1,668	14,803
Increase of net defined benefit liability	1,562	1,596	14,164
Decrease in reserve for losses on construction contracts	(1,948)	(71)	(630)
Interest and dividend income	(352)	(393)	(3,488)
Interest expense	1,056	992	8,804
Foreign exchange loss	2,983	532	4,721
Equity in net loss of nonconsolidated subsidiaries and affiliates	910	1,269	11,262
Increase in trade receivables	(13,379)	(2,756)	(24,459)
Increase in inventories	(4,618)	(4,860)	(43,131)
Decrease (increase) in other current assets	2,542	(8,044)	(71,388)
Increase (decrease) in trade payables	(575)	3,679	32,650
Increase (decrease) in accrued expenses	15,644	(5,809)	(51,553)
Increase (decrease) in advances received	(1,724)	3,802	33,742
Increase (decrease) in other current liabilities	386	(1,063)	(9,434)
Other	(6,369)	(306)	(2,716)
Subtotal	12,406	10,349	91,844
Interest and dividends received	365	405	3,594
Interest paid	(1,181)	(951)	(8,440)
Income taxes paid	(2,504)	(1,655)	(14,687)
Net cash and cash equivalents provided by operating activities	9,086	8,148	72,311
Cash flows from investing activities:			
Increase in time deposits	(2,061)	(2,204)	(19,560)
Decrease in time deposits	3,103	1,847	16,391
Purchase of property, plant and equipment	(11,944)	(8,249)	(73,207)
Proceeds from sales of property, plant and equipment	125	5,671	50,328
Purchase of intangible assets	(1,594)	(771)	(6,842)
Purchase of investments in securities	(523)	(271)	(2,405)
Payments for investments in capital of affiliates	_	(495)	(4,393)
Purchase of shares of subsidiaries resulting in change in scope of consolidation (Note 15)	(1,803)	_	_
Other	17	806	7,153
Net cash and cash equivalents used in investing activities	(14,680)	(3,666)	(32,535)

Thousands of Millions of yen U.S. dollars (Note 1) 2015 2016 2016 Cash flows from financing activities: Increase (decrease) in short-term borrowings, net (5,246)946 8,395 19,713 174,947 Proceeds from long-term debt 33,254 Payment of long-term debt (24,786)(219,968)(23,457)Proceeds from issuance of bonds 10,000 Redemption of bonds (10,000)(88,747)Cash dividends paid (1,565)(1,671)(14,829)Payments from changes in ownership interests in subsidiaries that do not result in change in scope of consolidation (107)(950)(808)(382)(43)Net cash and cash equivalents provided by (used in) financing activities 12,178 (15,948)(141,534)Effect of exchange rate changes on cash and cash equivalents 196 1,740 4,225 (100,018)Net increase (decrease) in cash and cash equivalents 10,809 (11,270)539,315 Cash and cash equivalents at beginning of year 49,961 60,770 Cash and cash equivalents of newly consolidated subsidiaries, 172 1,527 at beginning of year Cash and cash equivalents at end of year (Note 15) ¥ 60,770 ¥ 49,672 \$ 440,824

#### **Notes to the Consolidated Financial Statements**

### 1. Basis of Presenting Consolidated Financial Statements

The accompanying consolidated financial statements of Hitachi Zosen Corporation ("the Company") and its consolidated subsidiaries (together, "the Companies") have been prepared in accordance with the provisions set forth in the Japanese Financial Instruments and Exchange Law and its related accounting regulations and in conformity with accounting principles generally accepted in Japan ("Japanese GAAP"), which are different in certain respects as to application and disclosure requirements from International Financial Reporting Standards.

The accounts of the Company's overseas subsidiaries are based on their accounting records maintained in conformity with generally accepted accounting principles prevailing in the respective countries of domicile. As discussed in Note 2, the accounts of consolidated overseas subsidiaries for the year ended March 31, 2016 were prepared in accordance with either International Financial Reporting Standards or U.S. generally accepted accounting principles. The accompanying consolidated financial statements have been reformatted and translated into English (with some expanded descriptions) from the consolidated financial statements of the Company prepared in accordance with Japanese GAAP and filed with the appropriate Local Finance Bureau of the Ministry of Finance as required by the Financial Instruments and Exchange Law. Certain supplementary information included in the statutory Japanese language consolidated financial statements is not presented in the accompanying consolidated financial statements.

The translations of the Japanese yen amounts into U.S. dollars are included solely for the convenience of readers outside Japan, using the prevailing exchange rate at March 31, 2016, which was ¥112.68 to U.S. \$1.00. The translations should not be construed as representations that the Japanese yen amounts have been, could have been or could in the future be converted into U.S. dollars at this or any other rate of exchange.

#### 2. Significant Accounting Policies

#### a) Consolidation

The accompanying consolidated financial statements include the accounts of the Company and significant companies over which the Company has power of control through majority voting rights or the existence of certain other conditions evidencing control by the Company. Investments in nonconsolidated subsidiaries and affiliates over which the Company has the ability to exercise significant influence over operating and financial policies are accounted for by the equity method.

The consolidated financial statements consist of the accounts of the Company and its ninety-two significant subsidiaries that meet the control requirements for consolidation. Intercompany transactions and accounts have been eliminated in the consolidation.

Investments in one nonconsolidated subsidiary and eleven affiliates are accounted for by the equity method.

The consolidated financial statements include the accounts of twenty consolidated subsidiaries the fiscal year-end of which is December 31. Appropriate adjustments were made for significant transactions during the period from December 31 to March 31, the date of the consolidated financial statements.

#### b) Cash Flow Statements

In preparing the consolidated statements of cash flows, cash on hand, readily-available deposits and highly liquid debt investments with maturities not exceeding three months at the time of purchase are considered to be cash and cash equivalents.

#### c) Translation of Foreign Currencies

Foreign currency monetary assets and liabilities are translated into Japanese yen at the year-end rates, and the resulting translation gains and losses are included in the current statement of income.

Assets and liabilities of the consolidated overseas subsidiaries are translated into Japanese yen using the exchange rates prevailing at the end of each fiscal year. Revenue and expenses are translated at the average rates of exchange for the respective years. The resulting foreign currency translation adjustments are shown as a separate component of net assets, net of non-controlling interests in consolidated subsidiaries, in the consolidated balance sheets.

#### d) Revenue Recognition

For construction for which the portion completed by the end of the fiscal year can be determined with certainty, the Companies record revenues by the percentage of completion method (the progress of work is measured by the percentage of cost method). For other construction, the Companies record revenues at the time of delivery using the completed contract method.

#### e) Allowance for Doubtful Receivables

For receivables from insolvent customers who are undergoing bankruptcy or other collection proceedings or who are in a similar financial condition, the allowance for doubtful accounts is provided based on an evaluation of each customer's financial condition and an estimation of recoverable amounts due to the existence of security interests or guarantees.

For other receivables, the allowance for doubtful receivables is provided based on the Companies' actual rate of bad debts in the past.

#### f) Securities

Held-to-maturity debt securities are stated at amortized cost. Equity securities issued by subsidiaries and affiliated companies which are not consolidated or accounted for by the equity method are stated at moving average cost. Available-for-sale securities with available fair market values are stated at fair market value. Unrealized holding gains and unrealized holding losses on these securities are reported, net of applicable income taxes, as a separate component of net assets. Realized gains and losses on the sale of such securities are computed using moving average cost. Securities with no available fair market value which are classified as available-for-sale securities are stated at moving average cost.

If the market value of held-to-maturity debt securities, equity securities issued by nonconsolidated subsidiaries and affiliated companies or available-for-sale securities declines significantly, such securities are stated at fair market value and the difference between fair market value and the carrying amount is recognized as loss in the period of the decline. If the fair market value of equity securities issued by nonconsolidated subsidiaries or affiliated companies not on the equity method is not readily available, the securities are written down to net asset value with a corresponding charge in the statement of income in the event net asset value declines significantly. In these cases, the fair market value or the net asset value will be the carrying amount of the securities at the beginning of the next year.

#### g) Derivatives and Hedge Accounting

Derivative financial instruments are stated at fair value and changes in the fair values are recognized as gains and losses unless the derivative financial instruments are used for hedging purposes.

#### (1) Hedge accounting

The Companies defer recognition of gains and losses resulting from changes in the fair value of derivative financial instruments until the related losses and gains on the hedged items are recognized.

However, if interest rate swap contracts are used as hedges and meet certain hedging criteria, the net amount to be paid or received under the interest rate swap contract is added to or deducted from the interest on the asset or liability for which the swap contract was executed.

#### (2) Hedging instruments and hedged items

Hedging instruments: Interest rate swap contracts

Hedged items: Interest on borrowings and bonds payable Hedging instruments: Forward foreign exchange contracts and

other derivatives

Hedged items: Trade receivables and expected trade

receivables denominated in foreign currencies from exports of products, trade payables and expected trade payables denominated in foreign currencies from

imports of materials

#### (3) Hedging policy

The Companies use derivative financial instruments to hedge future risks of interest rate fluctuations and future risks of foreign exchange fluctuations in accordance with their internal policies and procedures.

#### (4) Evaluation of hedge effectiveness

The Companies evaluate hedge effectiveness by comparing the cumulative changes in cash flows and foreign currency exchange or the changes in fair value of hedged items and the corresponding changes in the hedging derivative instruments.

#### (5) Control over use of derivatives

When the accounting sections of group companies use derivatives, they follow the group companies' basic policies approved at the management strategy conferences and the group companies' administration rules.

#### h) Inventories

Work in progress is composed of the accumulated production costs of contracts. The accumulated production costs include direct production costs, factory and engineering overhead and other costs incurred. And it is stated at the lower of the accumulated production costs of contracts or net realizable value at the end of the fiscal year.

Raw materials and supplies are stated at the lower of the costs, which are generally determined by the specific identification method or the moving average method, or net realizable value at the end of the fiscal year.

#### i) Depreciation and Amortization

Depreciation, except for that of leased assets, is computed, with minor exceptions, by the declining balance method. However, buildings acquired after March 31, 1998 are depreciated using the straight-line method.

Amortization of intangible assets, except for leased assets, is computed by the straight-line method based on the useful life of the

Depreciation for leased assets is computed by the straight-line method over the term of the lease to the residual value of zero. Finance leases commencing prior to April 1, 2008 which do not transfer ownership and do not have bargain purchase provisions are accounted for by the same method as operating leases under Japanese GAAP.

#### j) Software Costs

The Companies include internal use software in intangible assets and depreciate it using the straight-line method over the estimated useful life of five years.

#### k) Goodwill

Goodwill is amortized by the straight-line method over five or ten years.

#### I) Deferred Assets

Bond issue expenses are amortized by the straight-line method over the repayment period of the bond.

#### m) Reserve for Directors' and Corporate Auditors' Bonuses

To provide for payment of bonuses to directors and corporate auditors, the Companies record an estimated amount at the end of the fiscal year.

#### n) Reserve for Product Warranty

The reserve for product warranty, which is based on the experience of the past two years, is provided to cover possible warranty costs incurred after delivery or completion of construction.

#### o) Reserve for Losses on Construction Contracts

To provide for losses on construction contracts, the Companies record an estimated amount at the end of the fiscal year.

#### p) Employees' Severance and Retirement Benefits

In calculating projected benefit obligation, the benefit formula basis is used as a method of attributing expected benefit obligation to the period up to the end of this fiscal year.

Unrecognized past service costs are recognized by the straightline method over a certain term within the average remaining service period of the employees (from 5 to 12 years).

Unrecognized actuarial differences are recognized as income or expenses from the following fiscal year by the straight-line method over a certain term within the average remaining service period of the employees (from 5 to 12 years) of the respective fiscal years.

#### q) Directors' and Corporate Auditors' Severance and Retirement Benefits

To provide for payment of retirement benefits to directors and corporate auditors, the Companies record the required amount based on internal regulations for retirement benefits for directors and corporate auditors at the end of the fiscal year.

#### r) Research and Development Expenses

Research and development expenses are charged to selling, general and administrative expenses and manufacturing costs as incurred. Research and development expenses amounted to ¥6,182 million and ¥6,526 million (\$57,916 thousand) for the years ended March 31, 2015 and 2016, respectively.

#### s) Income Taxes

The provision for income taxes is based on income for financial statement purposes. Deferred income taxes are recognized for loss carryforwards and temporary differences between financial and tax reporting purposes. Income taxes comprise corporation tax, enterprise tax and prefectural and municipal inhabitants taxes.

The Company and some of the consolidated subsidiaries have adopted the Japanese tax regulations allowing the Company to file under a consolidated taxation system.

#### t) Amounts Per Share

Basic net income per share is computed based on the weighted average number of shares of common stock outstanding during each year.

Diluted net income per share is not shown because there were no dilutive securities.

#### u) Changing Accounting Policies

The company and its domestic subsidiaries adopted "Revised Accounting Standard for Business Combinations" (ASBJ Statement No. 21, September 13, 2013 (hereinafter, "Statement No. 21")), "Revised Accounting Standard for Consolidated Financial Statements" (ASBJ Statement No. 22, September 13, 2013 (hereinafter, "Statement No. 22")) and "Revised Accounting Standard for Business Divestitures" (ASBJ Statement No. 7, September 13, 2013 (hereinafter, "Statement No. 7")) (together, the "Business Combination Accounting Standards"), from this fiscal year.

As a result, the accounting policies the Company changed are as follows:

- · To recognize in capital surplus the differences arising from the changes in the Company's ownership interest of subsidiaries over which the Company continues to maintain control
- · To record acquisition related costs as expenses in the fiscal year in which the costs are incurred
- To reflect the reallocation of acquisition costs due to the completion following provisional accounting in the consolidated financial statements for the fiscal year in which the business combination took place

The company also changed the presentation of net income and the term "non-controlling interests" is used instead of "minority interests." Certain amounts in the prior year comparative information were reclassified to conform to such changed in this fiscal year presentation. In addition, in the consolidated statement of cash flows, cash flows from the acquisition or disposal of shares of subsidiaries with no changes in the scope of consolidation are included in "Cash flows from financing activities" and cash flows from acquisition related costs for shares of subsidiaries with changes in the scope of consolidation or costs related to acquisition or disposal of shares of subsidiaries with no changes in the scope of consolidation are included in "Cash flows from operating activities."

With regard to the application of the Business Combination Accounting Standards, the Company followed the provisional treatments in Article 58-2 (4) of Statement No. 21, Article 44-5 (4) of Statement No. 22 and Article 57-4 (4) of Statement No. 7 with application from the beginning of the current fiscal year prospectively.

According to the changing of these accounting policies, the effects of financial statement for this fiscal year are as follows:

- · In the consolidated statement of income, profit before income taxes and non-controlling interests and profit attributable to shareholders of Hitachi Zosen decreased by ¥1,125 million (\$9,984 thousand), respectively. Net income per share decreased by ¥6.73 (\$0.06).
- · In the consolidated balance sheets, capital surplus as of the end of this fiscal year increased by ¥1,124 million (\$9,975 thousand).
- · In the consolidated statement of changes in net assets, capital surplus as of the end of this fiscal year increased by ¥1,124 million (\$9,975 thousand).

#### v) Unadopted Accounting Standard and Guidance

"Revised Implementation Guidance on Recoverability of Deferred Tax Assets" (ASBJ Guidance No. 26, March 28, 2016 (hereinafter, "Guidance No. 26"))

#### (1) Overview

Following the framework in Auditing Committee Report No. 66 "Audit Treatment regarding the Judgement of Recoverability of Deferred Tax Assets," which prescribes estimation of deferred tax assets according to the classification of the entity by one of five types, the treatment of the estimation and classification were changed as necessary.

#### (2) Effective dates

Effective from the beginning of the fiscal year ending March 31, 2017

#### (3) The effect of adoption of the standard and guidance

The effect of adoption of the standards and guidance is currently being examined.

#### w) Reclassifications

Certain reclassifications were made to previously reported amounts for the fiscal year ended March 31, 2015 to conform to the fiscal year ended March 31, 2016 presentation. These reclassifications had no effect on previously reported net profit or total shareholders' equity.

#### 3. Securities

a) The following tables summarize acquisition costs, book values and fair values of securities with available fair values as of March 31, 2015 and 2016:

#### (1) Held-to-maturity debt securities:

At March 31, 2015

Securities with available fair values exceeding book values:

		Millions of yen	
	Book value	Fair value	Difference
Government bonds	¥ 1	¥ 1	¥0
Others	23	25	2

#### At March 31, 2016

Securities with available fair values exceeding book values:

		Millions of yen	
	Book value	Fair value	Difference
Others	¥23	¥24	¥1

	Thousands of U.S. dollars				
	Book value	Fair value	Difference		
Others	\$204	\$213	\$9		

#### (2) Available-for-sale securities:

At March 31, 2015

Securities with book values (fair values) exceeding acquisition costs:

	Millions of yen					
	Book value	Difference				
Equity securities	¥1,663	¥ 939	¥724			
Others	603	554	49			
Total	¥2,266	¥1,493	¥773			

Securities with book values (fair values) not exceeding acquisition costs:

		Millions of yen	
	Book value	Acquisition cost	Difference
Equity securities	¥230	¥238	¥(8)
Others	10	10	0
Total	¥240	¥248	¥(8)

At March 31, 2016

Securities with book values (fair values) exceeding acquisition costs:

	Millions of yen				
	Book value Acquisition cost Differe				
Equity securities	¥ 831	¥423	¥408		
Others	603	534	69		
Total	¥1,434	¥957	¥477		

Securities with book values (fair values) not exceeding acquisition costs:

	Millions of yen				
	Book value Acquisition cost Differe				
Equity securities	¥544	¥600	¥(56)		
Others	9	10	(1)		
Total	¥553	¥610	¥(57)		

Securities with book values (fair values) exceeding acquisition costs:

	Thousands of U.S. dollars				
	Book value Acquisition cost Difference				
Equity securities	\$ 7,375	\$3,754	\$3,621		
Others	5,351	4,739	612		
Total	\$12,726	\$8,493	\$4,233		

Securities with book values (fair values) not exceeding acquisition costs:

	Thousands of U.S. dollars					
	Book value Acquisition cost Difference					
Equity securities	\$4,828	\$5,325	\$(497)			
Others	80	89	(9)			
Total	\$4,908	\$5,414	\$(506)			

Note. As to non-listed equity securities, there was no available fair market price and it was considered extremely difficult to determine the fair value. As a result, these securities were not included in the table (2) Available-for-sale securities.

b) Sales of available-for-sale securities in the year ended March 31, 2015 and 2016 were as follows:

Year ended March 31, 2015

	Millions of yen			
	Sales	Gains on sales	Losses on sales	
Equity securities	¥10	¥3	¥—	
Others	1	0	_	
Total	¥11	¥3	¥—	

Year ended March 31, 2016

	Millions of yen			
	Sales	Gains on sales	Losses on sales	
Equity securities	¥742	¥326	¥—	
Others	19	_	2	
Total	¥761	¥326	¥ 2	

	Thousands of U.S. dollars				
	Sales Gains on sales Losses on				
Equity securities	\$6,585	\$2,893	\$-		
Others	169	_	18		
Total	\$6,754	\$2,893	\$18		

#### 4. Inventories

Inventories at March 31, 2015 and 2016 consisted of the following:

	Millions	Thousands of U.S. dollars	
	2015 <b>2016</b>		2016
Merchandise and finished goods	¥ 1,290	¥ 2,152	\$ 19,098
Work in progress	19,929	23,914	212,229
Raw material and supplies	4,899	4,912	43,593
Total	¥26,118	¥30,978	\$274,920

Inventories for construction contracts expecting losses and a reserve for losses on construction contracts were not offset but individually reported.

The corresponding amounts of inventories for the reserve for losses on construction contracts at March 31, 2015 and 2016 were  $\pm 2,044$  million and  $\pm 1,458$  million ( $\pm 12,939$  thousand), respectively, all of which represented work in progress.

#### 5. Short-term Borrowings and Long-term Debt

Short-term borrowings that represented bank borrowings bearing average interest rates of 1.03 percent and 0.59 percent as of March 31, 2015 and 2016, respectively, were as follows:

	Millions	Thousands of U.S. dollars	
	2015 <b>2016</b>		2016
Secured (or partly secured)	¥ 500	¥ 200	\$ 1,775
Unsecured	4,705	5,950	52,804
Total	¥5,205	¥6,150	\$54,579

As of March 31, 2015 and 2016, the Company had unused line-of-credit agreements for short-term borrowings with financial institutions totaling ¥10,000 million and ¥20,000 million (\$177,494 thousand), respectively.

Long-term debt at March 31, 2015 and 2016 consisted of the following:

	Millions of yen				usands of 3. dollars	
	2015	5	2	016		2016
0.10 percent to 1.20 percent borrowings from banks and other financial institutions, due through 2025:						
Secured (or partly secured)	¥ 4	32	¥	337	\$	2,991
Unsecured	92,591		8	7,575	7	77,201
0.91 percent straight bonds due 2015	10,0	00	_			_
0.47 percent straight bonds due 2017	10,0	00	10,000			88,747
Others	6	88		765		6,789
Less current portion included in current liabilities	(33,7	80)	(2	2,506)	(1	99,734)
Total	¥ 79,9	31	¥ 7	6,171	\$ 6	75,994

The following assets were pledged as collateral mainly for secured long-term debt of ¥432 million at March 31, 2015 and ¥337 million (\$2,991 thousand) at March 31, 2016:

	Millions	Thousands of U.S. dollars	
	2015	2016	2016
Marketable securities	¥ 2	¥ –	\$ <b>–</b>
Prepaid expenses and other current assets	932 <b>6</b>		53
Property, plant and equipment (at net book value)	20,163 <b>13,974</b>		124,015
Investments in nonconsolidated subsidiaries and affiliates	1,812 <b>25</b>		222
Investments in securities	13	57	506
Long-term loans receivable	47	37	328
Total	¥22,969	¥14,099	\$125,124

The aggregate annual maturities of long-term debt outstanding at March 31, 2016 were as follows:

Year ending March 31,	Millions of yen	Thousands of U.S. dollars
2018	¥24,946	\$221,388
2019	24,056	213,489
2020	20,070	178,115
2021	4,791	42,519
2022 and thereafter	2,308	20,483
Total	¥76,171	\$675,994

#### 6. Contingent Liabilities

Contingent liabilities at March 31, 2015 and 2016 consisted of the following:

	Millions	s of yen	Thousands of U.S. dollars
	2015	2016	2016
Notes receivable endorsed	¥ 233	¥259	\$2,299
Guarantees of bank borrowings and other indebtedness	1,720	135	1,198
Total	¥1,953	¥394	\$3,497

#### 7. Land Revaluation Difference

Land for operations was revalued by consolidated subsidiaries in accordance with the Land Revaluation Law in the year ended March 31, 2000. The revaluation amount is shown as a separate component of net assets.

At October 1, 2002, the Company merged with HEC Corporation, which was a consolidated subsidiary, and succeeded to the land revaluation difference.

The market value of the land was ¥115 million and ¥84 million (\$745 thousand) lower than the revalued book amount at March 31, 2015 and 2016, respectively.

#### 8. Net Assets

Under the Japanese Corporation Law ("the law") and regulations, the entire amount paid for new shares is required to be designated as common stock. However, a company may, by a resolution of the Board of Directors, designate an amount not exceeding one half of the price of the new shares as additional paid-in -capital, which is included in capital surplus.

In cases in which a dividend distribution of surplus is made, the smaller of an amount equal to 10% of the dividend or the excess, if any, of 25% of common stock over the total of additional paid-in capital and legal earnings reserve must be set aside as additional paid-in capital or legal earnings reserve. Legal earnings reserve is included in retained earnings in the accompanying consolidated balance sheets.

Additional paid-in capital and legal earnings reserve may not be distributed as dividends. However, all additional paid-in capital and all legal earnings reserve may be transferred to other capital surplus and retained earnings, respectively, which are potentially available for dividends.

The maximum amount that the Company can distribute as dividends is calculated based on the nonconsolidated financial statements of the Company in accordance with Japanese laws and regulations.

At the annual shareholders' meeting held on June 23, 2016, the shareholders approved cash dividends of ¥2,023 million (\$17,953 thousand). The appropriation has not been accrued in the consolidated financial statements as of March 31, 2016. This type of appropriation is recognized in the period in which it is approved by the shareholders.

#### Provision for Losses on Construction Contracts Included in Cost of Sales

Provision for losses on construction contracts included in cost of sales was ¥3,729 million and ¥4,047 million (\$35,916 thousand) for the years ended March 31, 2015 and 2016, respectively.

#### 10. Gain on Bargain Purchases

For the year ended March 31, 2015, gain on bargain purchases was recognized in the amount of ¥3,146 due to a merger with Daiki Ataka Engineering and making NICHIZO TECH a wholly owned subsidiary through a share exchange.

#### 11. Impairment Loss

The assets on which the Companies recognized impairment loss in the year ended March 31, 2015 were as follows:

Location	Use	Type of Assets	Million	s of yen
Mukaishima-Works	Steel	Buildings and structures	¥	163
(Onomichi-city, Hiroshima Prefecture)	structures Production equipment	Machinery, equipment, vehicles and transport equipment		80
		Tools and fixtures		4
		Land	1,	,089
		Total	¥1	,336

The Companies grouped their assets based mainly on divisions or works. The Companies also grouped their assets for sale individually. The Mukaishima-Works had been affected by the deteriorating steel structure market. As a result, the Companies reduced the book value of the asset to the recoverable amount and recognized impairment loss of ¥1,336 million. The recoverable amount was the present values of the expected cash flows from the on-going utilization and subsequent disposition of the assets using a discount rate of 5.5%.

The assets on which the Companies recognized impairment loss in the year ended March 31, 2016 were as follows:

Location	Use	Type of Assets	Millions of yen	Thousands of U.S. dollars
Cumberland International L.L.C. and its subsidiaries (Dubai, U.A.E)		Goodwill	¥1,786	\$15,850

At the time of the acquisition of Cumberland International L.L.C, Cumberland Electrochemical Ltd. and Cumberland Pte Ltd. ("Cumberland Group"), the Companies booked goodwill, which comprised mainly the prospective extra earning power. In the year ended March 31, 2016, the prospective extra earning power was lost due to deterioration of Cumberland Group's forecast of income. As a result, the Companies reduced the book value of the goodwill to the recoverable amount and recognized impairment loss of  $\pm 1,786$  million ( $\pm 15,850$  thousand). The recoverable amount was zero because the present values of the expected cash flows was lost.

#### 12. Provision for Loss on Guarantees

The Company guaranteed particular affiliates' indebtedness. For the year ended March 31, 2016, the companies recognized provision for loss on guarantees of ¥1,406 million (\$12,478 thousand) due to weakness of its financial positions.

#### 13. Comprehensive Income Information

Amounts reclassified to net income (loss) in the current period that were recognized in other comprehensive income in the current or previous periods and tax effects for each component of other comprehensive income were as follows:

comprehensive income were a	S IUIIUWS.		The
	Millions of yen		Thousands of U.S. dollars
	2015	2016	2016
Net unrealized holding gains (losses) on securities			
Increase (decrease) during the year	¥ 317	¥ (269)	\$ (2,387)
Reclassification adjustments	6	(97)	(861)
Subtotal before tax	323	(366)	(3,248)
Tax benefit (expenses)	(64)	111	985
Subtotal net of tax	259	(255)	(2,263)
Net unrealized holding gains (losses) on hedging derivatives			
Increase (decrease) during the year	(445)	466	4,136
Reclassification adjustments	305	476	4,224
Subtotal before tax	(140)	942	8,360
Tax benefit (expenses)	57	(179)	(1,589)
Subtotal net of tax	(83)	763	6,771
Foreign currency translation adjustments			
Increase (decrease) during the year	1,348	(538)	(4,775)
Remeasurements of defined benefit plans			
Increase (decrease) during the year	(2,470)	(1,132)	(10,046)
Reclassification adjustments	467	986	8,751
Subtotal before tax	(2,003)	(146)	(1,295)
Tax benefit (expenses)	445	85	754
Subtotal net of tax	(1,558)	(61)	(541)
Equity of nonconsolidated subsidiaries and affiliates accounted for using equity method			
Increase (decrease) during the year	747	(703)	(6,239)
Total other comprehensive income	¥ 713	¥ (794)	\$ (7,047)

#### 14. Treasury Stock

Treasury stock for the years ended March 31, 2015 and 2016 consisted of the following:

Year ended March 31, 2015

Number of shares of common stock	Thousands
At March 31, 2014	2,744
Increase	824
Decrease	(2,738)
At March 31, 2015	830

Decrease of 2,738 thousand shares was mainly due to allocation of the Company's treasury stock to the shareholders of Daiki Ataka Engineering Co., Ltd. and to NICHIZO TECH INC at the time of merger and share exchange, respectively.

Year ended March 31, 2016

Number of shares of common stock	Thousands
At March 31, 2015	830
Increase	1,620
Decrease	(800)
At March 31, 2016	1,650

Increase of 1,620 thousand shares was mainly due to purchase of the Company's treasury stock via Off-Auction Own Share Repurchase Trading (ToSTNeT-3) by the Tokyo Stock Exchange.

Decrease of 800 thousand shares was mainly due to allocation of the Company's treasury stock to the shareholders of OHNAMI CORORATION at the time of share exchange.

#### 15. Cash Flow Information

#### a) Cash and cash equivalents

Cash and cash equivalents in the consolidated statements of cash flows and cash and time deposits in the consolidated balance sheets at March 31, 2015 and 2016 were reconciled as follows:

	Millions of yen		Thousands of U.S. dollars
	2015	2016	2016
Cash and time deposits in the balance sheets	¥62,384	¥51,585	\$457,801
Time deposits with maturities over three months	(1,614)	(1,913)	(16,977)
Cash and cash equivalents in cash flow statements	¥60,770	¥49,672	\$440,824

#### b) Other

At March 31, 2015, The assets and liabilities of newly consolidated subsidiaries Cumberland Electrochemical Ltd., Cumberland International L.L.C and Cumberland Pte Ltd. and the reconciliation between the acquisition cost of shares and net cash outflow were as follows:

	Millions of yen
	2015
Current assets	¥1,226
Fixed assets	20
Goodwill	2,101
Current liabilities	(1,404)
Noncurrent liabilities	(372)
Acquisition cost	¥1,571
Cash and cash equivalents of acquired companies	(84)
Purchase of shares of subsidiaries resulting in change in scope of consolidation	¥1,487

#### 16. Lease Information

#### a) Finance leases as lessee

Finance leases which do not transfer ownership and do not have bargain purchase provisions at March 31, 2015 and 2016 consisted of leases for productive facilities for the Environmental systems and Industrial plants segment and Machinery segment (machinery, equipment and vehicles) and software. Depreciation was as described in Note 2(i), "Significant Accounting Policies – Depreciation and Amortization."

Finance leases commencing prior to April 1, 2008 which do not transfer ownership and do not have bargain purchase provisions are accounted for in the same method as operating leases under Japanese GAAP.

The original lease obligations, the payments to date, and the payments remaining for assets which were leased from other parties as of March 31, 2015 were as follows:

At March 31, 2015:

	Millions of yen		
	Original lease obligations	Payments to date	Payments remaining
Machinery, equipment and vehicles	¥32	¥32	¥—
Total	¥32	¥32	¥—

Lease payments for the above finance leases for the years ended March 31, 2015 were ¥4 million.

#### b) Operating leases as lessee

Future minimum payments for operating leases at March 31, 2015 and 2016 were as follows:

	Millions	s of yen	Thousands of U.S. dollars
	2015	2016	2016
Payments due within one year	¥ 679	¥ 668	\$ 5,928
Payments due after one year	2,373	1,825	16,197
Total	¥3,052	¥2,493	\$22,125

#### c) Finance leases as lessor

#### Lease investment assets

Current assets as of March 31, 2015 and 2016 were as follows:

	Millions of yen		Thousands of U.S. dollars
	2015	2016	2016
Lease payments receivable	¥35	¥19	\$169
Interest	(1)	(1)	(9)
Total	¥34	¥18	\$160

Lease investment assets receivable after March 31, 2015 and 2016 were as follows:

	Millions	Millions of yen				
	2015	2016	2016			
Within one year	¥16	¥10	\$89			
Over one year but within two years	10	8	71			
Over two years but within three years	8	1	9			
Over three years but within four years	1	0	0			
Over four years but within five years	0	_	_			

#### 17. Financial Instruments

#### a) Articles concerning status of financial instruments

#### (1) Policies for financial instruments

The Companies raise necessary funds for capital investment plans, R&D plans and operation of particular projects mainly through bank borrowings and the issuance of corporate bonds. The Companies invest temporary surplus funds in highly secure financial assets and obtain working capital mainly through bank borrowings. The Companies utilize derivative financial instruments not for speculation but for hedging purposes only.

#### (2) Substances and risks of financial instruments

Trade and other receivables are exposed to credit risks of customers. Since the Companies operate internationally, foreign currency net cash inflows are exposed to currency fluctuation risks. Forward foreign exchange contracts are used principally to hedge these risks.

Securities and investment securities, mainly held-to-maturity debt securities and the securities of companies with which the Companies have business relationships, are exposed to market fluctuation risks. The Companies have long-term loans with the companies with which the Companies have business relationships.

Almost all of the trade payables are due within six months. Foreign currency trade payables are exposed to currency fluctuation risks, but these trade payables are controlled not to exceed the cash inflows of the same foreign currencies.

Borrowings and corporate bonds are mainly for the purpose of raising funds for capital investment, R&D and operation of particular projects. The longest due date is 10 years after the fiscal year end. Some of the items are exposed to interest rate fluctuation risks.

Derivative transactions consist of forward foreign exchange contracts and currency option contracts made for the purpose of hedging currency fluctuation risks arising from foreign currency receivables and payables and interest rate swap contracts for the purpose of hedging interest rate fluctuation risks arising from long-term borrowings. As to the hedging derivative financial instruments used and items hedged, hedging policy and the method of evaluating hedge effectiveness are described in Note 2 (g), "Significant Accounting Policies-Derivatives and Hedge Accounting."

#### (3) Management of financial instruments

#### i) Management of credit risks (risk of customer default)

The financial department of the Company is subject to internal regulations for the management of trade receivables and long-term loans. To reduce the risk of default associated with these instruments, the Company endeavors to research credit standing, monitor due dates and balances by customer at regular intervals through each sales and business administration division of each department and recognize early signs of deterioration in the financial status of its customers. The consolidated subsidiaries are subject to internal regulations for similar management.

Held-to-maturity debt securities are limited to top-ranked securities so as to minimize credit risks.

As to derivative transactions, the Companies deal solely with financial institutions to raise funds and top-ranked financial institutions to reduce credit risks.

### ii) Management of market risks (risks of exchange rate or interest rate fluctuation)

The Company and some consolidated subsidiaries utilize mainly forward foreign exchange contracts and currency option contracts for the purpose of hedging currency fluctuation risks arising from foreign currency receivables and payables and prospective transactions that are highly expected to occur, which are categorized by the type of currency and the monthly due date. The Company utilizes interest rate swap contracts for the purpose of hedging interest rate fluctuation risks arising from long-term borrowings.

As to securities and investment securities, the Companies endeavor to regularly monitor fair market value and evaluate the financial status of issuing companies that are important customers. For other than held-to-maturity debt securities, the Companies regularly examine whether the holding position is proper or not while taking relationships with the issuing companies into consideration.

As to derivative transactions, the Company is subject to internal regulations to administer derivative transactions that provide for trading authority and limit maximum amounts and approves basic policies annually at its management strategy conference. The Company's financial department engages in transactions, records them and monitors the balances. The results of the transactions are reported regularly in its management strategy conference. The consolidated subsidiaries manage derivatives in a similar way.

#### iii) Management of liquidity risks of raising funds (risk of default)

The financial department of the Company makes finance plans and updates them based on finance reports from each department. The consolidated subsidiaries manage in a similar way.

### (4) Supplementary explanation about fair value of financial instruments

Fair values of financial instruments include not only fair market values based on market prices but also reasonably estimated values if market prices are not available. Reasonably estimated fair values may fluctuate because the values depend on estimations based on certain variable assumptions. The contract amounts of derivative transactions of the following Note 17, "Derivative Transactions," do not show the market risks of the derivatives themselves.

#### b) Articles concerning fair value of financial instruments

Consolidated balance sheet amounts and fair values of financial instruments and the difference between them, if any, for the years ended March 31, 2015 and 2016 are set forth in the tables below. Financial instruments in which the fair value was considered to be extremely difficult to determine were not included in the tables below.

At March 31, 2015:

(2) Trade notes and accounts       136,521         Allowance for doubtful receivables *1       (398)         136,123       136,123         136,123       136,123         -       (3) Securities and investment securities       5,197         (4) Long-term loans receivables       47       50         3       3         Total assets       \$\frac{2}{2}03,751       \$\frac{2}{2}02,440       \$\frac{4}{1,311}         (1) Notes and accounts payable       \$\frac{5}{2}05,205       \$\frac{5}{2}05       -         (2) Short-term borrowings       (5,205)       (5,205)       -         (3) Current portion of long-term debt       (33,780)       (33,864)       (84)		Millions of yen				
(2) Trade notes and accounts  Allowance for doubtful receivables *1  (398)  136,123  136,123  -  (3) Securities and investment securities  5,197  3,883  (1,314)  (4) Long-term loans receivables  47  50  3  Total assets  \$\frac{4}{2}\text{203,751}\text{\$\frac{4}{2}\text{202,440}\text{\$\frac{4}{1,311}}}} (1) Notes and accounts payable  (2) Short-term borrowings  (5,205)  (3) Current portion of long-term debt  (4) Accrued expenses  (57,783)  (5) Accrued income taxes  (1,661)  (1,661)  (6) Long-term debt, less current portion  (79,242)  (79,600)  (357)  Total liabilities  (79,242)  (79,600)  (357)  Total liabilities  (1,026)		Book value	Fair value	Difference		
Allowance for doubtful receivables *1	(1) Cash and time deposits	¥ 62,384	¥ 62,384	¥ –		
receivables *1	(2) Trade notes and accounts	136,521				
(3) Securities and investment securities		(398)	_			
investment securities 5,197 3,883 (1,314)  (4) Long-term loans receivables 47 50 3  Total assets ¥203,751 ¥202,440 ¥(1,311)  (1) Notes and accounts payable ¥ (58,869) ¥ (58,869) ¥ —  (2) Short-term borrowings (5,205) (5,205) —  (3) Current portion of long-term debt (33,780) (33,864) (84)  (4) Accrued expenses (57,783) (57,783) —  (5) Accrued income taxes (1,661) (1,661) —  (6) Long-term debt, less current portion (79,242) (79,600) (357)  Total liabilities ¥(236,540) ¥(236,982) ¥ (441)  Derivative transactions for which hedge accounting has not been applied ¥ (1,026) ¥ (1,026) —  Derivative transactions for which hedge accounting has not bedge accounting has not bedge accounting for which hedge accounting		136,123	136,123	_		
Total assets		5,197	3,883	(1,314)		
(1) Notes and accounts payable	(4) Long-term loans receivables	47	50	3		
(2) Short-term borrowings       (5,205)       (5,205)       —         (3) Current portion of long-term debt       (33,780)       (33,864)       (84)         (4) Accrued expenses       (57,783)       (57,783)       —         (5) Accrued income taxes       (1,661)       (1,661)       —         (6) Long-term debt, less current portion       (79,242)       (79,600)       (357)         Total liabilities       ¥(236,540)       ¥(236,982)       ¥(441)         Derivative transactions for which hedge accounting has not been applied       ¥(1,026)       ¥(1,026)       —         Derivative transactions for which hedge accounting         hedge accounting       For which hedge accounting       For which hedge accounting       —	Total assets	¥ 203,751	¥ 202,440	¥(1,311)		
(3) Current portion of long-term debt (33,780) (33,864) (84)  (4) Accrued expenses (57,783) (57,783) —  (5) Accrued income taxes (1,661) (1,661) —  (6) Long-term debt, less current portion (79,242) (79,600) (357)  Total liabilities ¥(236,540) ¥(236,982) ¥ (441)  Derivative transactions *2  Derivative transactions for which hedge accounting has not been applied ¥ (1,026) ¥ (1,026) —  Derivative transactions for which hedge accounting	(1) Notes and accounts payable	¥ (58,869)	¥ (58,869)	¥ –		
(4) Accrued expenses (57,783) (57,783) — (5) Accrued income taxes (1,661) (1,661) — (6) Long-term debt, less current portion (79,242) (79,600) (357)  Total liabilities ¥(236,540) ¥(236,982) ¥ (441)  Derivative transactions *2  Derivative transactions for which hedge accounting has not been applied ¥ (1,026) ¥ (1,026) —  Derivative transactions for which hedge accounting	(2) Short-term borrowings	(5,205)	(5,205)	_		
(5) Accrued income taxes (1,661) (1,661) —  (6) Long-term debt, less current portion (79,242) (79,600) (357)  Total liabilities ¥(236,540) ¥(236,982) ¥ (441)  Derivative transactions *2  Derivative transactions for which hedge accounting has not been applied ¥ (1,026) ¥ (1,026) —  Derivative transactions for which hedge accounting	(3) Current portion of long-term debt	(33,780)	(33,864)	(84)		
(6) Long-term debt, less current portion (79,242) (79,600) (357)  Total liabilities ¥(236,540) ¥(236,982) ¥ (441)  Derivative transactions *2  Derivative transactions for which hedge accounting has not been applied ¥ (1,026) ¥ (1,026) —  Derivative transactions for which hedge accounting	(4) Accrued expenses	(57,783)	(57,783)	_		
less current portion (79,242) (79,600) (357)  Total liabilities ¥(236,540) ¥(236,982) ¥ (441)  Derivative transactions *2  Derivative transactions for which hedge accounting has not been applied ¥ (1,026) ¥ (1,026) —  Derivative transactions for which hedge accounting	(5) Accrued income taxes	(1,661)	(1,661)	_		
Derivative transactions *2  Derivative transactions for which hedge accounting has not been applied  Derivative transactions for which hedge accounting  has not been applied  Y (1,026) Y (1,026) —  Derivative transactions for which hedge accounting		(79,242)	(79,600)	(357)		
Derivative transactions for which hedge accounting has not been applied  Derivative transactions for which hedge accounting	Total liabilities	¥(236,540)	¥(236,982)	¥ (441)		
for which hedge accounting has not been applied \$\fomale (1,026) \times (1,026) \	Derivative transactions *2					
for which hedge accounting	for which hedge accounting	¥ (1,026)	¥ (1,026)	_		
<u> </u>	for which hedge accounting	(738)	(738)	_		
Total derivative transactions ¥ (1,764) ¥ (1,764) ¥ —	Total derivative transactions	¥ (1,764)	¥ (1,764)	¥ –		

<sup>\*1</sup> Allowance for doubtful receivables was deducted from trade notes and accounts.

#### At March 31, 2016:

	Millions of yen				
	Book value	Fair value	Difference		
(1) Cash and time deposits	¥ 51,585	¥ 51,585	¥ –		
(2) Trade notes and accounts	139,277				
Allowance for doubtful receivables *1	(878)	-			
	138,399	138,504	105		
(3) Securities and investment securities	4,697	2,997	(1,700)		
(4) Long-term loans receivables	37	35	(2)		
Total assets	¥ 194,718	¥ 193,121	¥(1,597)		
(1) Notes and accounts payable	¥ (62,549)	¥ (62,549)	¥ –		
(2) Short-term borrowings	(6,150)	(6,150)	_		
(3) Current portion of long-term debt	(22,506)	(22,558)	(52)		
(4) Accrued expenses	(51,960)	(51,960)	_		
(5) Accrued income taxes	(2,849)	(2,849)	_		
(6) Long-term debt, less current portion	(75,406)	(75,739)	(333)		
Total liabilities	¥(221,420)	¥(221,805)	¥ (385)		
Derivative transactions *2					
Derivative transactions for which hedge accounting has not been applied	¥ 378	¥ 378	¥ –		
Derivative transactions for which hedge accounting has been applied	378	378	_		
Total derivative transactions	¥ 756	¥ 756	¥ –		

<sup>\*1</sup> Allowance for doubtful receivables was deducted from trade notes and accounts.

<sup>\*2</sup> Liabilities were indicated in parenthesis (). Assets and liabilities arising from derivative transactions were offset and indicated by parenthesis () when the offset amount was a liability.

<sup>\*2</sup> Liabilities were indicated in parenthesis (). Assets and liabilities arising from derivative transactions were offset and indicated by parenthesis () when the offset amount was a liability.

	Thousands of U.S. dollars					
	Е	Book value	ı	Fair value	D	ifference
(1) Cash and time deposits	\$	457,801	\$	457,801	\$	_
(2) Trade notes and accounts		1,236,040				
Allowance for doubtful receivables *1		(7,792)				
		1,228,248		1,229,180		932
(3) Securities and investment securities		41,684		26,597	(	(15,087)
(4) Long-term loans receivables		328		310	(18)	
Total assets	\$	1,728,061	\$	1,713,888	\$(	14,173)
(1) Notes and accounts payable	\$	(555,103)	\$	(555,103)	\$	-
(2) Short-term borrowings		(54,579)		(54,579)		-
(3) Current portion of long-term debt		(199,734)		(200,196)		(462)
(4) Accrued expenses		(461,129)		(461,129)		_
(5) Accrued income taxes		(25,284)		(25,284)		-
(6) Long-term debt, less current portion		(669,205)		(672,160)		(2,955)
Total liabilities	\$(	1,965,034)	\$(	1,968,451)	\$	(3,417)
Derivative transactions *2						
Derivative transactions for which hedge accounting has not been applied	\$	3,355	\$	3,355	\$	_
Derivative transactions for which hedge accounting has been applied		3,355		3,355		_
Total derivative transactions	\$	6,710	\$	6,710	\$	-

<sup>\*1</sup> Allowance for doubtful receivables was deducted from trade notes and accounts.

Note 1. Articles concerning the calculation method for fair value, marketable securities and derivative transactions

#### Assets

#### (1) Cash and time deposits

These instruments were settled within the short-term and fair value was roughly equal to book value. Therefore, the fair value was stated at book value.

#### (2) Trade notes and accounts

For the instruments settled within the short-term, fair value was roughly equal to book value. Therefore, the fair value was stated at book value. For the instruments settled over the long-term, fair value was stated at the present value using future cash flows discounted by the premium-added rate on the proper index, such as the yield on the government bonds.

#### (3) Securities and investment securities

Fair value was based on the market prices on the stock exchange for equity instruments and on the prices obtained from financial institutions for certain debt instruments. Securities classified by intent for which they were held were summarized in the table of Note 3, "Securities."

#### (4) Long-term loans receivable

The fair value of these accounts was stated at the present value using future cash flows discounted by the premium-added rate on the proper index such as the yield on the government bonds.

#### Liabilities

(1) Notes and accounts payable, (2) Short-term borrowings, (4) Accrued expenses and (5) Accrued income taxes

These instruments were settled within the short-term and fair value was roughly equal to book value. Therefore, the fair value was stated at book value.

(3) Current portion of long-term debt and (6) Long-term debt less current portion

The fair value of bonds consists of both fair value based on fair market value and the present value using the total amount of the principal and interest discounted by the interest rate that reflected the bond's remaining period and the credit risks.

The fair value of debt was stated at the present value using the total amount of the principal and interest discounted by the interest rate as if the borrowings would be newly executed.

#### Derivative transactions

See Note 18, "Derivative Transactions."

Note 2. Financial instruments in which the fair value was considered to be extremely difficult to determine were as follows:

	Millions	Thousands of U.S. dollars	
	2015	2016	2016
Stock of nonconsolidated subsidiaries and affiliates	¥ 5,610	¥ 5,762	\$ 51,136
Non-listed equity securities, etc.	13,683	13,676	121,370
Total	¥19,293	¥19,438	\$172,506

As to these financial instruments, there was no available fair market price and it was considered extremely difficult to determine the fair value. As a result, these financial instruments were not included in "(3) Securities and investment securities."

<sup>\*2</sup> Liabilities were indicated in parenthesis (). Assets and liabilities arising from derivative transactions were offset and indicated by parenthesis () when the offset amount was a liability.

Note 3. The expected redemption amounts of monetary credit and securities with maturity dates after the consolidated fiscal year-end were as follows:

#### At March 31, 2015:

	Millions of yen					
	Within one year	Over one year but within five years	Over five years but within ten years	Over ten years		
Cash and time deposits	¥ 62,384	¥ —	¥ —	¥—		
Trade notes and accounts	136,123	_	_	_		
Securities and investment securities						
Held-to-maturity debt securities						
(1) Government bonds	1	_	_	_		
(2) Others	_	25	_	_		
Available-for-sale securities with maturities						
(1) Others	_	64	_	_		
Long-term loans receivables	_	24	15	8		
Total	¥198,508	¥113	¥15	¥ 8		

#### At March 31, 2016:

	Millions of yen					
	Within one year	Over one year but within five years	Over five years but within ten years	Over ten years		
Cash and time deposits	¥ 51,585	¥ —	¥ —	¥ —		
Trade notes and accounts	136,196	499	537	1,167		
Securities and investment securities						
Held-to-maturity debt securities						
(1) Government bonds	_	_	_	_		
(2) Others	_	24	_	-		
Available-for-sale securities with maturities						
(1) Others	10	39	_	-		
Long-term loans receivables	_	21	9	7		
Total	¥187,791	¥583	¥546	¥1,174		

	Thousands of U.S. dollars					
	Within one year	Over one year but within five years	Over five years but within ten years	Over ten years		
Cash and time deposits	\$ 457,801	\$ -	\$ -	\$ -		
Trade notes and accounts	1,208,697	4,428	4,766	10,357		
Securities and investment securities						
Held-to-maturity debt securities						
(1) Government bonds	_	-	-	_		
(2) Others	_	213	-	_		
Available-for-sale securities with maturities						
(1) Others	89	347	-	_		
Long-term loans receivables	-	186	80	62		
Total	\$1,666,587	\$5,174	\$4,846	\$10,419		

Note 4. The expected redemption amount of long-term debt after the consolidated fiscal year-end was as follows:

#### At March 31, 2015:

		Millions of yen					
	Within one year	Over one year but within two years	Over two years but within three years	Over three years but within four years	Over four years but within five years	Over five years	
Short-term borrowings	¥ 5,205	¥ —	¥ –	¥ —	¥ —	¥ –	
Long-term debt	33,780	19,264	21,430	19,635	17,296	1,617	
Others	274	237	124	89	77	161	
Total	¥39,259	¥19,501	¥21,554	¥19,724	¥17,373	¥1,778	

#### At March 31, 2016:

	Millions of yen					
	Within one year	Over one year but within two years	Over two years but within three years	Over three years but within four years	Over four years but within five years	Over five years
Short-term borrowings	¥ 6,150	¥ –	¥ –	¥ –	¥ —	¥ –
Long-term debt	22,506	24,722	23,900	19,936	4,704	2,144
Others	307	224	156	134	87	164
Total	¥28,963	¥24,946	¥24,056	¥20,070	¥4,791	¥2,308

#### Thousands of U.S. dollars

	Within one year	Over one year but within two years	Over two years but within three years	Over three years but within four years	Over four years but within five years	Over five years
Short-term borrowings	\$ 54,579	\$ -	\$ -	\$ -	\$ -	\$ -
Long-term debt	199,734	219,400	212,105	176,926	41,747	19,027
Others	2,725	1,988	1,384	1,189	772	1,456
Total	\$257,038	\$221,388	\$213,489	\$178,115	\$42,519	\$20,483

#### 18. Derivative Transactions

The Companies enter into forward foreign exchange and interest rate swap contracts. Forward foreign exchange contracts are used to reduce the risk of fluctuations in future foreign currency exchange rates with respect to the difference between the foreign trade order balances and the future payments for foreign procurement. Interest rate swap contracts are used to avoid the risk of rising interest rates.

The following tables summarize fair value information as of March 31, 2015 and 2016 for derivative transactions for which hedge accounting had not been applied.

#### a) Currency related derivatives

At March 31, 2015:

	Millions of yen					
	Notional amount	Over one year	Fair value	Unrealized gain (loss)		
Forward foreign exchange contracts:						
Type of contracts:						
Sell						
U.S. dollars	¥6,583	¥—	¥ (991)	¥ (991)		
Euro	997	_	(38)	(38)		
Norwegian krone	46	_	1	1		
Purchase						
U.S. dollars	453	_	23	23		
Euro	115	_	(6)	(6)		
Swiss franc	52	_	1	1		
GBP	391	_	(16)	(16)		
CNY	21	_	0	0		
Total	¥8,658	¥—	¥(1,026)	¥(1,026)		

Note. The fair value of forward foreign exchange contracts is calculated using the forward exchange rate.

#### At March 31, 2016:

	Millions of yen				
	Notional amount	Over one year	Fair value	Unrealized gain (loss)	
Forward foreign exchange contracts:					
Type of contracts:					
Sell					
U.S. dollars	¥6,233	¥—	¥461	¥461	
Euro	420	-	(9)	(9)	
Swedish krona	45	_	(0)	(0)	
Purchase					
U.S. dollars	842	-	(48)	(48)	
Euro	382	-	(21)	(21)	
Swiss franc	105	_	(5)	(5)	
Total	¥8,027	¥—	¥378	¥378	

Note. The fair value of forward foreign exchange contracts is calculated using the forward exchange rate.

#### At March 31, 2016:

	Thousands of U.S. dollars				
	Notional amount	Over one year	Fair value	Unrealized gain (loss)	
Forward foreign exchange contracts:					
Type of contracts:					
Sell					
U.S. dollars	\$55,316	<b>\$</b> —	\$4,091	\$4,091	
Euro	3,727	_	(80)	(80)	
Swedish krona	399	_	(0)	(0)	
Purchase					
U.S. dollars	7,473	_	(426)	(426)	
Euro	3,390	_	(186)	(186)	
Swiss franc	932	_	(44)	(44)	
Total	\$71,237	\$-	\$3,355	\$3,355	

Note. The fair value of forward foreign exchange contracts is calculated using the forward exchange rate.

The following tables summarize fair value information as of March 31, 2015 and 2016 for derivative transactions for which hedge accounting had been applied.

#### a) Currency related derivatives

At March 31, 2015:

		Millions of yen		
	Hedged items	Notional amount	Over one year	Fair value
Basic treatment:				
Forward foreign exchange contracts:				
Type of contracts:				
Sell				
U.S. dollars	Trade receivable	¥ 3,781	¥ —	¥ (468)
Euro	Trade receivable	1,598	_	177
GBP	Trade receivable	12,197	4,120	474
Thai baht	Trade receivable	77	_	(12)
Purchase				
U.S. dollars	Trade payable	669	181	98
Euro	Trade payable	9,178	3,219	(1,015)
Swiss franc	Trade payable	72	25	7
Alternative treatment *2:				
Forward foreign exchange contracts:				
Type of contracts:				
Sell				
U.S. dollars	Trade receivable	229	_	_
Thai baht	Trade receivable	31	_	_
Purchase				
U.S. dollars	Accounts payable	12	_	_
Total		¥27,844	¥7,545	¥ (739)

<sup>\*1</sup> The fair value of forward foreign exchange contracts is calculated based on the prices provided by the financial institutions.

At March 31, 2016:

7 tt (Vicil Off O 1, 2010	Millions of yen			
	Hedged items	Notional amount	Over one year	Fair value
Basic treatment:				
Forward foreign exchange contracts:				
Type of contracts:				
Sell				
U.S. dollars	Trade receivable	¥ 6,322	¥3,886	¥ 443
Euro	Trade receivable	278	_	(6)
GBP	Trade receivable and others	4,005	_	243
Thai baht	Trade receivable	44	_	1
CNY	Trade receivable	6	_	(0)
Purchase				
U.S. dollars	Trade payable	536	_	20
Euro	Trade payable	5,448	778	(326)
Swiss franc	Trade payable	89	75	3
CNY	Trade payable	45	_	(0)
Alternative treatment *2:				
Forward foreign exchange contracts:				
Type of contracts:				
Sell				
U.S. dollars	Trade receivable	88	_	_
GBP	Trade receivable	36	_	_
Thai baht	Trade receivable	98	_	_
Purchase				
U.S. dollars	Trade payable	57	_	_
Euro	Trade payable	6	_	_
Total		¥17,058	¥4,739	¥ 378

<sup>\*1</sup> The fair value of forward foreign exchange contracts is calculated based on the prices provided by the financial institutions.

<sup>\*2</sup> For certain trade receivables and trade payables denominated in foreign currencies for which forward foreign exchange contracts are used to hedge the foreign currency fluctuation risks, the fair value of the derivative financial instruments is included in the fair value of the trade receivables and trade payable as hedged items.

<sup>\*2</sup> For certain trade receivables and trade payables denominated in foreign currencies for which forward foreign exchange contracts are used to hedge the foreign currency fluctuation risks, the fair value of the derivative financial instruments is included in the fair value of the trade receivables and trade payable as hedged items.

		Thousands of U.S. dollars		
	Hedged items	Notional amount	Over one year	Fair value
Basic treatment:				
Forward foreign exchange contracts:				
Type of contracts:				
Sell				
U.S. dollars	Trade receivable	\$ 56,106	\$34,487	\$3,931
Euro	Trade receivable	2,467	_	(53)
GBP	Trade receivable and others	35,543	_	2,157
Thai baht	Trade receivable	391	-	9
CNY	Trade receivable	53	_	(0)
Purchase				
U.S. dollars	Trade payable	4,757	_	177
Euro	Trade payable	48,349	6,904	(2,893)
Swiss franc	Trade payable	790	666	27
CNY	Trade payable	399	_	(0)
Alternative treatment *2:				
Forward foreign exchange contracts:				
Type of contracts:				
Sell				
U.S. dollars	Trade receivable	780	_	_
GBP	Trade receivable	320	_	_
Thai baht	Trade receivable	870	_	_
Purchase				
U.S. dollars	Trade payable	506	-	-
Euro	Trade payable	53	_	_
Total		\$151,384	\$42,057	\$3,355

<sup>\*1</sup> The fair value of forward foreign exchange contracts is calculated based on the prices provided by the financial institutions.

#### b) Interest related derivatives

At March 31, 2015:

		Millions of yen		
Exceptional treatment:	Hedged items	Notional amount	Over one year	Fair value
Interest rate swap contracts:				
Receive float, pay fixed	Long-term borrowings	¥32,787	¥24,340	¥—
Interest rate and currency swap contracts:				
Receive float, pay fixed				
Receive in U.S. dollars, pay in JPY	Long-term borrowings	500	500	_

Note. As interest rate swap contracts subject to exceptional treatment for interest rate swap contracts and interest rate and currency swap contracts subject to exceptional treatment for interest rate and currency swap contracts are accounted for as a single item with the underlying long-term debt, which are hedged items, their fair value is included in that of the long-term debt.

#### At March 31, 2016:

		Millions of yen		
Exceptional treatment:	Hedged items	Notional amount	Over one year	Fair value
Interest rate swap contracts:				
Receive float, pay fixed	Long-term borrowings	¥27,900	¥19,190	¥—
Interest rate and currency swap contracts:				
Receive float, pay fixed				
Receive in U.S. dollars, pay in JPY	Long-term borrowings	500	500	_

		Thousands of U.S. dollars		
Exceptional treatment:	Hedged items	Notional amount	Over one year	Fair value
Interest rate swap contracts:				
Receive float, pay fixed	Long-term borrowings	\$247,604	\$170,305	\$-
Interest rate and currency swap contracts:				
Receive float, pay fixed				
Receive in U.S. dollars, pay in JPY	Long-term borrowings	4,437	4,437	_

Note. As interest rate swap contracts subject to exceptional treatment for interest rate swap contracts and interest rate and currency swap contracts subject to exceptional treatment for interest rate and currency swap contracts are accounted for as a single item with the underlying long-term debt, which are hedged items, their fair value is included in that of the long-term debt.

<sup>\*2</sup> For certain trade receivables and trade payables denominated in foreign currencies for which forward foreign exchange contracts are used to hedge the foreign currency fluctuation risks, the fair value of the derivative financial instruments is included in the fair value of the trade receivables and trade payables as hedged items.

#### 19. Severance and Retirement Benefits

The Companies provide post-employment benefit plans, including unfunded lump-sum payment plans, under which all eligible employees are entitled to benefits based on the level of wages and salaries at the time of retirement or termination, length of service and certain other factors. The Company and some consolidated subsidiaries provide defined contribution pension plans in addition to defined benefit pension plans.

The Companies occasionally make additional payments to employees for special retirement benefits.

The components of defined benefit plans for the year ended March 31, 2015 and 2016 were as follows:

### (a) Movements in projected benefit obligations for the years ended March 31, 2015 and 2016

	Millions	Thousands of U.S. dollars	
	2015	2016	2016
Balance at March 31, 2014 and 2015	¥37,000	¥42,673	\$378,710
Cumulative effects of changes in accounting policies	592	_	_
Balance at April 1, 2014 and 2015	37,592	42,673	378,710
Service cost	2,017	2,091	18,557
Interest cost	551	307	2,724
Actuarial differences	3,478	1,963	17,421
Benefits paid	(1,514)	(1,036)	(9,194)
Past service cost	_	(107)	(950)
Other	549	(1,824)	(16,187)
Balance at March 31, 2015 and 2016	¥42,673	¥44,067	\$391,081

Note. Some consolidated subsidiaries have adopted the alternative treatment.

## (b) Movements in fair value of pension assets for the year ended March 31, 2015 and 2016

	Millions	Thousands of U.S. dollars	
	2015	2016	2016
Balance at April 1, 2014 and 2015	¥25,676	¥27,725	\$246,051
Expected return on pension assets	449	189	1,677
Actuarial differences	1,123	61	541
Contributions paid by the employer	1,223	1,357	12,043
Benefits paid	(801)	(61)	(541)
Other	55	(2,145)	(19,036)
Balance at March 31, 2015 and 2016	¥27,725	¥27,126	\$240,735

Note. Some consolidated subsidiaries have adopted the alternative treatment.

### (c) Reconciliation of projected benefit obligations and fair value of pension assets to liability (asset) for retirement benefits

	Millions	Millions of yen	
	2015	2016	2016
Funded projected benefit obligations	¥ 30,389	¥ 28,201	\$ 250,275
Fair value of pension assets	(27,725)	(27,126)	(240,735)
	2,664	1,075	9,540
Unfunded projected benefit obligations	12,284	15,866	140,806
Total net liability (asset) for projected benefits at March 31, 2015 and 2016	¥ 14,948	¥ 16,941	\$ 150,346
Net defined benefit liability	¥ 15,490	¥ 17,700	\$ 157,082
Net defined benefit asset	(542)	(759)	(6,736)
Total net liability (asset) for projected benefits at March 31, 2015 and 2016	¥ 14,948	¥ 16,941	\$ 150,346

Note. Some consolidated subsidiaries have adopted the alternative treatment.

#### (d) Severance and pension costs of the Companies included the following components for the year ended March 31, 2015 and 2016

	Millions	s of yen	Thousands of U.S. dollars
	2015	2016	2016
Service cost	¥2,017	¥2,091	\$18,557
Interest cost	551	307	2,724
Expected return on pension assets	(449)	(189)	(1,677)
Amortization of actuarial differences	629	985	8,742
Amortization of past service cost	(16)	0	0
Severance and retirement benefit expenses based on the alternative treatment	198	259	2,298
Others	8	0	0
Severance and retirement benefit expenses	¥2,938	¥3,453	\$30,644

### (e) Remeasurements of defined benefit plans (before tax) for the years ended March 31, 2015 and 2016

	Millions	Thousands of U.S. dollars	
	2015	2016	2016
Past service cost	¥ (16)	¥ 107	\$ 950
Actuarial differences	(1,987)	(669)	(5,937)
Other	_	(92)	(817)
Total	¥(2,003)	¥(654)	\$(5,804)

### (f) Remeasurements of defined benefit plans (before tax) at the years ended March 31, 2015 and 2016

	Millions	s of yen	Thousands of U.S. dollars
	2015	2016	2016
Unrecognized past service cost	¥ 51	¥ 158	\$ 1,402
Unrecognized actuarial differences	(5,430)	(6,099)	(54,127)
Other	1,530	1,438	12,762
Total	¥(3,849)	¥(4,503)	\$(39,963)

#### (g) Pension assets

#### (1) Pension assets comprise:

	2015	2016
Stocks	27%	26%
Bonds	37%	33%
Cash and deposits	6%	1%
Real estate	26%	35%
Other	4%	5%
Total	100%	100%

#### (2) Long-term expected rate of return

Current and target asset allocations, historical and expected returns on various categories of pension assets have been considered in determining the long-term expected rate of return.

#### (h) Actuarial assumptions

The principal actuarial assumptions at March 31, 2015 and 2016 (expressed as weighted averages) were as follows:

	2015	2016
Discount rate	0.78%	0.36%
Long-term expected rate of return	0.04%	0.37%
Expected rate of increase in salary	2.20%	2.00%

#### (i) Contributions to the defined contributions pension plan

For the years ended March 31, 2015 and 2016, the Companies made contributions to the defined contributions pension plan in the amount of  $\pm 1,195$  million and  $\pm 1,198$  million ( $\pm 10,632$  thousand), respectively.

#### 20. Income Taxes

The Companies are subject to a number of income taxes which, in the aggregate, indicate a statutory rate in Japan of approximately 35.6% and 33.0% for the years ended March 31, 2015 and 2016, respectively.

The significant differences between the statutory tax rate and the Companies' effective tax rate for financial statement purposes for the years ended March 31, 2015 and 2016 were as follows:

	2015	2016
Statutory tax rate	35.6%	33.0%
Nondeductible expenses	3.6%	2.9%
Nontaxable dividend income	(7.1)%	(6.5)%
Fluctuation in deferred tax assets valuation allowance account	2.3%	(1.6)%
Elimination of dividend income	6.7%	6.2%
Effect of tax credit	(3.2)%	(6.3)%
Other	(3.5)%	(3.7)%
Effective tax rate	34.4%	24.0%

Significant components of the Companies' deferred tax assets and liabilities as of March 31, 2015 and 2016 were as follows:

	Millions	s of yen	Thousands of U.S. dollars
	2015	2016	2016
Deferred tax assets:			
Impairment loss	¥ 6,416	¥ 5,981	\$ 53,079
Employees' retirement benefits	5,019	4,849	43,033
Allowance for doubtful receivables	776	1,217	10,800
Tax loss carryforwards	1,557	893	7,925
Research and development expenses	625	554	4,917
Loss on devaluation of securities	533	505	4,482
Other reserves	4,517	4,440	39,404
Other	4,549	4,461	39,590
Total deferred tax assets	23,992	22,900	203,230
Valuation allowance	(12,627)	(10,748)	(95,385)
Deferred tax assets, net	11,365	12,152	107,845
Deferred tax liabilities:			
Land valuation difference	(1,391)	(1,321)	(11,723)
Investment securities	(738)	(701)	(6,221)
Reserve for compressed entry	(517)	(478)	(4,242)
Intangible assets	(530)	(448)	(3,976)
Net unrealized holding gains on securities	(274)	(139)	(1,234)
Reserve for replacement of property	(95)	(87)	(772)
Other	(1,240)	(810)	(7,189)
Total deferred tax liabilities	(4,785)	(3,984)	(35,357)
Net deferred tax assets	¥ 6,580	¥ 8,168	\$ 72,488

Net deferred tax assets were included in the consolidated balance sheets as follows:

	Millions	Thousands of U.S. dollars	
	2015	2016	2016
Current assets	¥ 5,658	¥5,873	\$52,121
Investments and other noncurrent assets	2,161	3,095	27,467
Current liabilities	(3)	(10)	(89)
Long-term liabilities	(1,236)	(790)	(7,011)
Net deferred tax assets	¥ 6,580	¥8,168	\$72,488

#### 21. Business Combinations

### Making OHNAMI CORPORATION a wholly owned subsidiary through share exchange

The Company resolved to make OHNAMI CORPORATION ("OHNAMI") a wholly owned subsidiary through a share exchange at a meeting of the Board of Directors held on October 30, 2015 and conducted the exchange on February 1, 2016.

#### a) Overview

#### (1) Purpose

OHNAMI was the main subsidiary of the Companies in the business area of logistic functions.

In order to fully utilize OHNAMI's business characteristics and the advantages of its operations and structure and strengthen cooperation between both companies, the Company decided to make OHNAMI a wholly owned subsidiary. Making OHNAMI a wholly owned subsidiary would enable the Company to promote measures to expand its global business as well as its plant construction and solution business.

#### (2) Legal method

Through the share exchange, the Company becomes the wholly owning parent company and OHNAMI is the wholly owned subsidiary.

#### b) Accounting method

The Company applied the following accounting treatments stipulated by "Accounting Standard for Business Combinations" (ASBJ Statement No. 21, September 13, 2013) and "Guidance on Accounting Standard for Business Combinations and Accounting Standard for Business Divestitures" (ASBJ Guidance No. 10, September 13, 2013) and accounted for the business combination as a transaction with non-controlling shareholders under common control.

#### c) Acquisition cost of share exchange

	Millions of yen	U.S. dollars
Common stock	¥1,928	\$17,110
Total	¥1,928	\$17,110

#### d) Contents of allotments related to share exchange

(1) Ratio of share allotments

The Company (wholly owning parent company in share exchange)

Content of allotments related to share exchange

1 0.52

Number of shares to be delivered through share exchange

The Company of Company in Share exchange in Share ex

0.52 shares of the Company's common stock was delivered for each share of OHNAMI's common stock. Common stock of OHNAMI held by the Company was not included in the share allotments.

#### (2) Calculation method for the ratio of share allotments

In order to support the respective efforts of the Company and OHNAMI and to ensure the fairness of the ratio of share allotments for this share exchange, the Company had requested Mitsubishi UFJ Morgan Stanley Securities Co., Ltd. to perform financial analysis, while, OHNAMI had requested Nomura Securities Co., Ltd. to perform similar analyses. Referring to the results of those financial analyses, the Company and OHMAMI conducted careful negotiations and discussions on the ratio of share allotments, comprehensively taking into consideration factors such as the financial position, stock price trend, and future prospects of each party. As a result, the Company and OHNAMI reached the conclusion that the above ratio of share allotments was appropriate.

#### (3) Number of shares to be delivered through share exchange

In the share exchange, the Company allotted and delivered to shareholders of OHNAMI (excluding the Company) immediately prior to its acquisition of all issued shares of OHNAMI (excluding common stock of OHNAMI by the Company) 3,170,998 shares of the Company's common stock. In the 3,170,998 shares, 800,000 shares were allotted for the Company's treasury stock and 2,370,998 shares were issued under the share exchange.

### e) Change in equity related to transaction with non-controlling shareholders

Increase in capital surplus by transaction with non-controlling shareholders is ¥1,126 million (\$9,993 thousand).

#### 22. Asset Retirement Obligations

#### a) General information about asset retirement obligations

The Company and some consolidated subsidiaries have recognized asset retirement obligations associated with the removal of asbestos and other harmful substances in the some works and the restoration under certain real estate rental agreements.

#### b) Basis of measurement for asset retirement obligations

Asset retirement obligations are calculated based on the estimated period of use, which is the remaining period of depreciation of the target assets, and discounted by the yield in circulation on government bonds according to the remaining number of years.

Year ended March 31, 2015 and 2016:

	Millions	Thousands of U.S. dollars	
	2015	2016	2016
Balance at the beginning of the fiscal year	¥879	¥918	\$8,147
Increase in purchase of property, plant and equipment	32	39	346
Adjustment with passing of time	9	10	89
Decrease in performance of asset retirement obligations	(2)	_	_
Balance at the end of the fiscal year	¥918	¥967	\$8,582

#### 23. Investment and Rental Property

The Company and some consolidated subsidiaries own rental property and idle land in Osaka and other areas. For the years ended March 31, 2015 and 2016, rental income was ¥509 million and ¥513 million (\$4,553 thousand), respectively. Rental income and rental expenses were counterbalanced and described mainly in other income and expenses.

Book value of investment and rental property stated in the consolidated balance sheet, the relative increase or decrease for this fiscal year and the corresponding fair value were as follows:

	Millions	Thousands of U.S. dollars	
	2015	2016	2016
Book value			
Balance at the beginning of the fiscal year	¥23,138	¥23,062	\$204,668
Decrease for this fiscal year, net	(76)	(5,590)	(49,609)
Balance at the end of the fiscal year	¥23,062	¥17,472	\$155,059
Fair value			
At the end of the fiscal year	¥19,043	¥16,052	\$142,457

Note. Book value stated in the consolidated balance sheet was net of accumulated depreciation.

For the fiscal year ended March 31, 2015, Net decrease by \$76 million stemmed from a depreciation of \$161 million. For the fiscal year ended March 31, 2016, net decrease by \$5,590 million (\$49,609 thousand) was due mainly to sale of rental land in the amount of \$5,383 million (\$47,772 thousand).

The fair value of major property at the end of the fiscal year was measured based on values in the appraisal reports prepared by external real estate appraisers. The fair value of other property was measured based on certain assessed values or indicators which could be considered to properly reflect the market price.

#### 24. Segment Information

#### a) Reportable segments

#### (1) General information about reportable segments

The Company's reportable segments are based on the organization into which the Company has classified the active conducting of business in order to evaluate performance by the Board of Directors.

The Company has set up the head offices according to products and services. Each head office has drafted strategies for handling products and services and has developed the active conducting of business.

The Companies' operations are classified into four reportable segments as follows:

Operations in the environmental systems and the industrial plants segment include the production of environmental protection systems, water treatment systems, desalination and potabilization plants and chemical plants.

Operations in the machinery segment include the production of marine diesel engines, boilers, SCR systems, process equipment, nuclear equipment, plastic machinery, food filling and packaging systems and material business. Operations in the infrastructure segment include bridge construction, water gates and shield tunneling machines.

Operations in the other businesses segment include the transportation business and warehousing business.

As per the reorganization effective April 1, 2015, machinery, process equipment and precision machinery were merged into one segment. In the following analysis, the figures of the previous fiscal year were also restated to reflect this organizational change.

## (2) Basis of measurement for reported segment income or loss, segment assets and other material items

There was no significant change in the account processing method for reported business segments in this fiscal year.

The amounts of reported segment income or loss are based on operating income.

Intersegment sales, operating revenue and transfers are made with reference to prevailing market prices.

#### (3) Information about reported segment income or loss, segment assets and other material items

Information by reported segment of the Companies was as follows:

				Millions of yen					
		2015							
	Environmental systems and industrial plants	Machinery	Infrastructure	Other businesses	Total	Eliminations and corporate	Consolidated		
Net sales									
Outside customers	¥226,021	¥104,417	¥19,434	¥ 9,460	¥359,332	¥ —	¥359,332		
Intersegment	971	1,205	1,609	2,778	6,563	(6,563)	_		
Total	226,992	105,622	21,043	12,238	365,895	(6,563)	359,332		
Segment income (loss)	13,593	842	(2,132)	500	12,803	16	12,819		
Segment assets	154,192	118,668	37,175	41,882	351,917	56,886	408,803		
Others									
Depreciation	2,761	3,270	866	1,299	8,196	_	8,196		
Increase in assets and intangible assets	8,600	1,570	1,170	2,198	13,538	_	13,538		

#### Millions of yen

		2016						
	Environmental systems and industrial plants	Machinery	Infrastructure	Other businesses	Total	Eliminations and corporate	Consolidated	
Net sales								
Outside customers	¥241,629	¥104,482	¥30,835	¥10,098	¥387,044	¥ –	¥387,044	
Intersegment	372	3,548	519	2,919	7,358	(7,358)	_	
Total	242,001	108,030	31,354	13,017	394,402	(7,358)	387,044	
Segment income (loss)	14,819	(864)	433	753	15,141	(28)	15,113	
Segment assets	136,768	119,353	47,852	56,597	360,570	41,079	401,649	
Others								
Depreciation	3,379	3,029	763	1,258	8,429	_	8,429	
Increase in assets and intangible assets	3,322	2,985	1,048	1,665	9,020	_	9,020	

#### Thousands of U.S. dollars

		2016							
	Environmental systems and industrial plants	Machinery	Infrastructure	Other businesses	Total	Eliminations and corporate	Consolidated		
Net sales									
Outside customers	\$2,144,382	\$ 927,245	\$273,651	\$ 89,617	\$3,434,895	\$ -	\$3,434,895		
Intersegment	3,301	31,488	4,606	25,905	65,300	(65,300)	_		
Total	2,147,683	958,733	278,257	115,522	3,500,195	(65,300)	3,434,895		
Segment income (loss)	131,514	(7,668)	3,843	6,683	134,372	(249)	134,123		
Segment assets	1,213,774	1,059,221	424,671	502,281	3,199,947	364,563	3,564,510		
Others									
Depreciation	29,988	26,882	6,771	11,164	74,805	_	74,805		
Increase in assets and intangible assets	29,482	26,491	9,300	14,776	80,049	_	80,049		

The amounts of segment income or loss are adjusted to operating income in the Consolidated Statements of Income.

Corporate amounts are mainly the common accounts of the head office, which cannot be allotted to each segment. Corporate assets, which include mainly cash, time deposits and securities at March 31, 2015 and 2016 were ¥56,928 million and ¥41,258 million (\$366,152 thousand), respectively.

#### b) Related information

#### (1) Information about products and services

Information about products and services is not shown because the classification of products and services is the same for the classification of reported segments.

#### (2) Information about geographic areas

Sales by region for the years ended March 31, 2015 and 2016 were as follows:

	Millions	Thousands of U.S. dollars	
	2015	2016	2016
Japan	¥237,098	¥258,116	\$2,290,699
Asia	24,046	23,083	204,855
North America	14,743	14,571	129,313
Middle East	10,794	20,246	179,677
Europe	67,948	68,579	608,617
Other	4,703	2,449	21,734
Total	¥359,332	¥387,044	\$3,434,895

Information about tangible fixed assets by region is not shown because tangible fixed assets in Japan were more than 90% of the amounts of tangible fixed assets in the Consolidated Balance Sheets.

#### (3) Information about major customers

Information about major customers is not shown because there were no sales from transactions with a single external customer that amounted to 10% or more of sales in the Consolidated Statements of Income.

#### 25. Related Party Information

Year ended March 31, 2015:

Attribute	Name	Domicile	Capitalization	Nature of operations	Equity ownership by the Company	Relationship	Nature of transaction	Trading amount	Account	Balance at year end
Affiliate	Naikai Zosen Corporation	Onomichi City, Hiroshima Prefecture	¥1,200 million	Manufacturing	39.5% direct 0.5% indirect	Materials purchase acceptance	Purchase of materials	¥5,024 million	Advances paid	¥1,362 million

This related party transaction took place on terms similar to those with third parties.

Year ended March 31, 2016:

Attribute	Name	Domicile	Capitalization	Nature of operations	ownership by the Company	Relationship	Nature of transaction	Trading amount	Account	Balance at year end
Affiliate	Naikai Zosen Corporation	Onomichi City, Hiroshima Prefecture	¥1,200 million (\$10,650 thousand)	Manufacturing	39.5% direct 0.5% indirect	Materials purchase acceptance	Purchase of materials	¥4,520 million (\$40,114 thousand)	Advances paid	¥1,429 million (\$12,682 thousand)

This related party transaction took place on terms similar to those with third parties.

The significant affiliated company was Zhongji Hitachi Zosen Diesel Engine Co., Ltd. for the year ended March 31, 2016.

A summary of the financial statements of the significant affiliates was as follows:

	Millions of yen	Thousands of U.S. dollars
Total current assets	¥ 1,648	\$ 14,625
Total fixed assets	8,847	78,514
Total current liabilities	12,885	114,350
Total long-term liabilities	1,671	14,829
Total net assets	(4,061)	(36,040)
Net sales	¥ 1,269	\$ 11,262
Loss before income taxes and non-controlling interests	(11,744)	(104,224)
Net loss	(11,744)	(104,224)



#### **Independent Auditor's Report**

To the Board of Directors of Hitachi Zosen Corporation:

We have audited the accompanying consolidated financial statements of Hitachi Zosen Corporation and its consolidated subsidiaries, which comprise the consolidated balance sheets as at March 31, 2016 and 2015, and the consolidated statements of income, statements of comprehensive income, statements of changes in net assets and statements of cash flows for the years then ended, and a summary of significant accounting policies and other explanatory information.

#### Management's Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with accounting principles generally accepted in Japan, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

#### Auditor's Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in Japan. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on our judgement, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, while the objective of the financial statement audit is not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

#### **Opinion**

In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of Hitachi Zosen Corporation and its consolidated subsidiaries as at March 31, 2016 and 2015, and their financial performance and cash flows for the years then ended in accordance with accounting principles generally accepted in Japan.

#### **Convenience Translation**

KPHY AZGA LLC

The U.S. dollar amounts in the accompanying consolidated financial statements with respect to the year ended March 31, 2016 are presented solely for convenience. Our audit also included the translation of yen amounts into U.S. dollar amounts and, in our opinion, such translation has been made on the basis described in Note 1 to the consolidated financial statements.

July 22, 2016 Osaka, Japan

KPMG AZSA LLC, a limited liability audit corporation incorporated under the Japanese Certified Public Accountants Law and a member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative ("KPMG International"), a Swiss entity.

### Hitachi Zosen and Group Companies

#### Offices

#### **Domestic offices**

#### Head Office

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Phone: +81-6-6569-0001

#### Tokyo Head Office

15th Floor, Omori Bellport D-Wing, 26-3, Minamioi 6-chome, Shinagawa-ku, Tokyo, 140-0013, Japan

Phone: +81-3-6404-0800 (Export business departments are situated in this office)

#### Technology Development Headquarters

2-11, Funamachi 2-chome, Taisho-ku, Osaka, 551-0022, Japan

Phone: +81-6-6551-9101

#### Sapporo Office

1-1, Kita 3jo, Nishi 4-chome, Chuo-ku, Sapporo, Hokkaido, 060-0003, Japan Phone: +81-11-231-2215

#### Sendai Office

6-35, Chuo 1-chome, Aoba-ku, Sendai, Miyagi, 980-0021, Japan Phone: +81-22-712-6066

#### Nagoya Office

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#### Hiroshima Office

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Phone: +81-92-441-1644

#### Kumamoto Office

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#### Okinawa Office

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#### Works

#### Ariake Works

1, Ariake, Nagasu-machi, Tamana-gun, Kumamoto, 869-0113, Japan Phone: +81-968-78-2155

#### Mukaishima Works

14755, Mukaihigashi-cho, Onomichi, Hiroshima, 722-0062, Japan

Phone: +81-848-44-1111

#### Innoshima Works

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Phone: +81-845-22-1200

#### Chikko Works

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#### Sakai Works

5-1, Chikko shinmachi 1-cho, Nishi-ku, Sakai, Osaka, 592-8331, Japan

Phone: +81-72-243-6801

#### Maizuru Works

1180, Amarube shimo, Maizuru, Kyoto, 625-8501, Japan Phone: +81-773-62-8925

#### Kashiwa Works

11, Shintoyofuta, Kashiwa, Chiba, 277-8515, Japan Phone: +81-4-7131-2271

#### Ibaraki Works

4, Kogyo danchi, Hitachi-omiya, Ibaraki, 319-2134, Japan Phone: +81-295-53-5730

#### Overseas offices

#### Abu Dhabi Branch

C/O Bin Hamoodah Trading & General Services Khalifa Street, Bin Hamoodah Tower, 9th floor, suite 904 P.O. Box 43199, Abu Dhabi, UAE Phone: +971-2-6276-180

### Taipei Branch

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#### Singapore Branch

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### HITACHI ZOSEN EUROPE

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#### Hitachi Zosen U.S.A. Ltd. Houston Branch

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#### Hitachi Zosen India Private Limited

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#### Hitachi Zosen India Private Limited Hyderabad Branch

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#### Hitachi Zosen Myanmar Co., Ltd.

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#### PT. HITZ INDONESIA

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Phone: +86-21-6887-2525

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Phone: +86-10-6590-8481

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#### Hitachi Zosen Trading (Shanghai) Co., LTD. Shenyang Branch

Room 1808, N-MEDIA International Center, No. 167 Youth Avenue, Shenyang, liaoning, 110014, The People's Republic of China Phone: +86-24-2318-2422

#### Major consolidated subsidiaries

#### **Environmental Systems, Industrial Plants Group**

#### Hitachi Zosen Inova AG

Hitachi Zosen KRB AG

HITACHI ZOSEN INOVA UK LTD

Hitachi Zosen Inova U.S.A. Holding Inc.

Hitachi Zosen Inova U.S.A. LLC

HZIU Kompogas SLO INC.

Hitachi Zosen Inova Deutschland GmbH

Hitachi Zosen Inova Kraftwerkstechnik GmbH

Hitachi Zosen Inova BioMethan GmbH

Hitachi Zosen Inova BioMethan France S.a.r.I.

Hitachi Zosen Inova Australia Pty Ltd

SN Environment Technology Co., LTD.

Hitz Environment Service Co., Ltd.

NICHIZO HOKKAIDO SERVICE CORP.

MICHINOKU SERVICE CO., LTD.

NICHIZO HOKURIKU SERVICE CORPORATION

HITACHI ZOSEN CHUGOKU CONSTRUCTION WORKS CO., LTD.

NICHIZO KYUSHU SERVICE CORPORATION

NICHIZO TECH INC.

KANSAI DESIGN CO., LTD.

HITACHI-ZOSEN PLANT TECHNO-SERVICE CORP.

HITACHI ZOSEN VIETNAM CO., LTD.

SERACHEM Co., Ltd.

ATAKA MAINTENANCE CO., LTD

**Ecomanage Corporation** 

Odate Ecomanage Corporation

Hitz Environment Takamatsu Co. Ltd.

Shikoku Environment Service Co. Ltd.

Kashiwa Environment Technology Co. Ltd. Kurashiki Environment Technology Co. Ltd.

Matsuyama Environment Technology Co. Ltd.

Toyonaka and Itami Recycle Forest Co. Ltd.

Bekkihayami Environment Technology Co. Ltd.

Ichinomiya Environment Technology Co. Ltd.

Gotenbaoyama Environment Technology Co. Ltd.

Murakami Environment Technology Co. Ltd.

ha-na-iro Co. Ltd.

Nakakitasorachi Environment Technology Co. Ltd.

Tsuyama Ken-iki Environment Technology Co. Ltd.

Alam Hzem Sdn. Bhd.

Natural Energy Japan Co. Ltd.

#### **Machinery Group**

#### Hitachi Zosen Fukui Corporation

H&F EUROPE LIMITED

HITACHI ZOSEN FUKUI U.S.A., Inc.

H&F Services (Thailand) Co., Ltd

IMEX CO., LTD.

ESCO SERVICE CO., LTD.

NAC International Inc.

NIPPON PUSNES CO., LTD.

SETOZAKI IRON WORKS CO., LTD.

#### V TEX CORPORATION

V TEX Korea Co., Ltd.

VTEX America Inc.

Ultra Finish Technology Co., Ltd.

Nippon GPS Data Service Corporation

Hitachi Zosen GPM Technology (Suzhou) Co., Ltd.

Daiki Rubber Industry Co., Ltd.

Tokaiseiki Co., Ltd.

Cumberland International L.L.C

Cumberland Electrochemical Limited

Cumberland Pte Limited

#### OCL CORPORATION

Zhenjiang Zhong Chuan Hitachi Zosen Machinery Co., Ltd.

Zhoushan Nippon Pusnes Ship Machinery Co., Ltd.

ISGEC Hitachi Zosen Limited

Nagaoka Hitachi Zosen Equipment (Dalian) Co., Ltd.

SHINKO SEIKI CO., LTD.

#### Infrastructure Group

Promotec Corporation

TOYO-TECHNICA CO., LTD

#### **Other Group**

Omonogawa Wind Power Co. Ltd.

Hitachi Zosen Yangling Co., Ltd.

OHNAMI CORPORATION

CASTING & FORGING CO., LTD.

SLURRY-21 Co., Ltd.

Accounting & Finance Corporation

HITACHI ZOSEN TOURIST CO., LTD.

HITZ HOLDINGS U.S.A. INC.

NAIKAI ZOSEN CORPORATION

JP Steel Plantech Co.

UniCarriers Handling Systems Corporation

### Company History

#### Osaka Iron Works (proprietorship, the predecessor of Hitachi Zosen) era

- 1881 • E. H. Hunter, of Britain, founds the Osaka Iron Works (proprietorship) on the Ajikawa riverbank, Osaka.
- 1882 • The Hatsu Maru (14GT wooden ship), the first new ship, is
- 1890 • Kumagawa Maru, Japan's first steel-hulled ship, is built for Osaka Shosen (now Mitsui O.S.K. Lines).
- Sakurajima Works starts operations (relocated to the Ariake Machinery 1900 Works in September 1997).
- 1907 Japan's first Western-style whaling ship, the No. 2 Hogei Maru, is constructed.
  - Tokyo liaison office is opened.
- 1908 Japan's first tanker, the Tora Maru is constructed.
- 1911 Innoshima Works starts operations

#### Old Osaka Iron Works Ltd. era

- 1914 Osaka Iron Works is reorganized as a joint-stock company.
- 1922 Chikko Works starts operations.
- Dojima Ohashi, an arch bridge, and other structures are completed in succession for the municipal government of Osaka
- 1930 The Heivo Maru and Heian Maru large-scale cargo and passenger ships for Nippon Yusen K.K. are constructed (these ships established a new record for river launches in Japan).

#### New Osaka Iron Works Ltd. era

- The Company makes a new start as Osaka Iron Works incorporated (marking the incorporation of the current Hitachi Zosen Corporation).
- 1937 Osaka Tekko, a technical journal, is inaugurated.

#### As Hitachi Zosen Corporation

- The name is changed to Hitachi Zosen Corporation.
  - Mukaishima Works starts operations.
- Kanagawa Works starts operations.
- Hitachi Zosen Technical Review is inaugurated.
- 1949 Technical Research Institute is opened.
  - $\bullet$  The first whaling ship is constructed for Norway following World War  ${\rm I\hspace{-.1em}I}$ as a result of government trade
- A technological tie-up for B&W-type diesel engines is concluded.
- An order is received for a tanker from a customer in the United States - the first order received under the private trade program to export a ship after the end of World War II.
  - The first B&W marine diesel engine is completed.
- 1956 Offices are opened in London and New York.
- A technological tie-up is concluded with Von Roll Environmental Technology Ltd. of Switzerland for a De Roll-type refuse incineration
- A De Roll-type refuse incineration plant is completed for the municipal government of Osaka (the first mechanical incineration plant with power generation facility manufactured in Japan).
  - Sakai Works starts operations.
- Sakurajima Works restarts as a specialized plant for land machinery.
- A number of orders are completed for De Roll-type refuse incineration plants for Tokyo Metropolis.
- 1971 Maizuru Works starts operations.
- Orders are received for two cargo ships for China.
- 1973 Ariake Works starts operations.
- Construction is completed for a 500,000-ton tanker for Esso.
- Ariake Land Machinery Works starts operations.
- The world's first multiple-face shield tunneling machine is completed.
- Construction of ultra-large steel mill plants is completed for Baoshan Iron and Steel of China and Sicartsa Steel Mill in Mexico
- Construction of Japan's first double-hull VLCC is completed.
  - Sakai Works starts operation as a specialized plant for steel structures.
  - Slurry-shield tunnel boring machine (with one of the world's largest diameters of 14.14m) is produced.
- The world's first triple-face shield tunneling machine is completed.

- A refuse incineration plant for the Clean Association of Eastern Saitama District receives MITI (now METI) Minister prize for excellent environmental equipment.
  - Electric power supply business is inaugurated.
  - Japan's first super refuse-fired power generation plant comes on

- An order is received for the world's first fifth-generation semisub rig.
  - Sakurajima Works is closed, and facilities are transferred to Ariake Works; Ariake Machinery Works starts operations.
  - The wolrd's largest B&W marine diesel engine (74,640 hp) at the time is completed.
- An order is received for the No. 1 gasification melting furnace.
  - Yumemai Ohashi, the world's first floating swing bridge is constructed.
  - 8,000 hours of continuous operations are achieved by refuse incineration plant delivered for Taiwan
- A large-scale desalination plant is constructed in Saudi Arabia.

#### • The Basic Agreement on Consolidation of Shipbuilding Operations is concluded with NKK Corp (now JFE Steel Corporation)

- The shipbuilding operation is transferred to Universal Shipbuilding Corporation on October 1.
- The Hitz brand name goes into use as of October 1.
- HEC Corporation is acquired.
- 2003 The world's most advanced electronic control marine engine for large vessels is produced.
  - A desalination plant is constructed for Oman.
- 2004 An order is received (as member of international consortium) for Stonecutters Bridge — the world's second-longest cable-stayed bridge - for Hong Kong.
  - Kyoto Municipal Waste Edible Oil Fuel Production Facility is completed with the greatest manufacturing capacity in Japan.
- Refuse incineration plant is constructed for Odate City (the first intermediate processing operation of municipal refuse in Japan under PFI legislation).
- 2006 A desalination plant is constructed in Abu Dhabi.
- One of Japan's largest gasification melting furnaces is completed for Tovoda Citv.
  - An order is received from South Africa for one of the world's largest coal-to-liquids (CTL) reactors.
- A new factory is constructed in Sakai Works for extension of industrial machinery and shield tunneling machinery production.
- Ten Group companies are absorbed.
  - Completed a new plant for manufacture of medium-sized diesel engines at Ariake Works.
  - Launched a joint venture in China for manufacture of marine diesel enaines.
- 2010 Launched a joint venture in China for manufacture of marine deck machinery
  - Acquired European refuse incineration plant maker (current name: Hitachi Zosen Inova AG).
- 2011 Hitachi Zosen celebrates its 130th anniversary.
  - Establishes local subsidiary in India.
  - Establishes a joint-venture precision machinery company in China.
  - Vessel put into service employing world's first selective catalytic reduction (SCR) NOx removal system for marine engines compliant with International Maritime Organization (IMO) Tier III NOx emission standards.
- 2012 Established a joint-venture manufacturer of process equipment in India.
  - Precision Machinery Center completed.
  - Earth pressure balance shield tunneling machine (with the world's largest diameter of 17.45 m) is completed.
- 2013 Acquired all shares of U.S.-based NAC International Inc.
- Established local subsidiary in Myanmar.
- Established local subsidiary in Indonesia.
  - Daiki Ataka Engineering Co., Ltd. is acquired.
  - Acquired shares of Cumberland group companies.
  - Received First Prize in the Ministry of Land, Infrastructure, Transport and Tourism's 16th Infrastructure Technology Development Awards for the world's first floating temporary coffering method.
  - SCR system for marine engines received world's first FTA approval.
- Won Agency for Natural Resources and Energy Director's Award at 35th Energy-Efficient Machinery Awards for the optimal response control high-efficiency selective non-catalytic reduction system NeoSNCR®.
  - Received order for world's largest EfW plant from Changsha city, China.
  - · Commenced sale of electricity generated at Miyanosato Woody Biomass Power Generation Plant.
  - Completed our largest-capacity desalination plant (for a single unit) for Qatar.

### Investor Information

(As of March 31, 2016)

#### Corporate data

Date of founding: April 1, 1881
Capital: 45,442,365,005 yen

Number of employees (consolidated): 9,825 Number of employees (non-consolidated): 3,887 Consolidated subsidiaries: 92

#### Stock data

Number of shares authorized: 400,000,000
Number of shares issued: 170,214,843
Number of shareholders: 85,238

#### Major shareholders

	Number of shareholder		
	shares held	Shareholding	
Name of shareholder	(Thousands of shares)	ratio (%)	
Japan Trustee Services Bank, Ltd.			
(Trust Account)	15,720	9.3	
The Master Trust Bank of Japan, Ltd.			
(Trust Account)	11,417	6.8	
The Bank of Tokyo-Mitsubishi UFJ, Ltd.	5,291	3.1	
CBNY-GOVERNMENT OF NORWAY	4,581	2.7	
GOLDMAN SACHS INTERNATIONAL	4,256	2.5	
Japan Trustee Services Bank, Ltd.			
(Trust Account 9)	3,129	1.9	
Sompo Japan Nipponkoa Insurance Inc.	2,358	1.4	
BNY GCM CLIENT ACCOUNT JPRD AC			
ISG (FE-AC)	2,292	1.4	
BNP Paribas Securities (Japan) Limited	2,266	1.3	
Trust & Custody Services Bank, Ltd.			
(Pension Trust Account)	1,723	1.0	

Note: The shareholding ratio does not include treasury stock (1,650,068 shares).

#### Shareholders information

Business year: April 1 to March 31

Annual General Meeting of Shareholders: Late June
Final date for voting right registration: March 31
Dividend record date (term-end): March 31
Dividend record date (interim): September 30

Public notices:

via Company's website http://www.hitachizosen.co.jp/

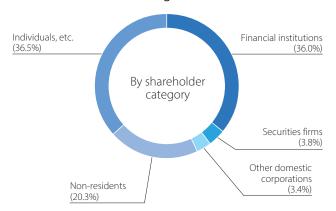
Share trading unit: 100 shares

Shareholder registry administrator and special account custodian:

Mitsubishi UFJ Trust and Banking Corporation 4-5, Marunouchi 1-chome, Chiyoda-ku, Tokyo

Stock listing: Tokyo Stock Exchange

#### Distribution of shareholdings



#### Share price and trading volume



□455

492

130

96

108

Low

At year-end

Note: On October 1, 2013, as Hitachi Zosen Corporation implemented a share consolidation with a ratio of five shares to one, the share price before the share consolidation and the share price after the consolidation, as indicated by □, have been recorded as our share price high and low during fiscal 2013.

85

154

For investor relations information, please visit our website. http://www.hitachizosen.co.jp/english/ir/index.html

477

534

455

620

<sup>\*</sup>Fiscal years ended March 31 of the following year.

## Hitachi Zosen Corporation

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