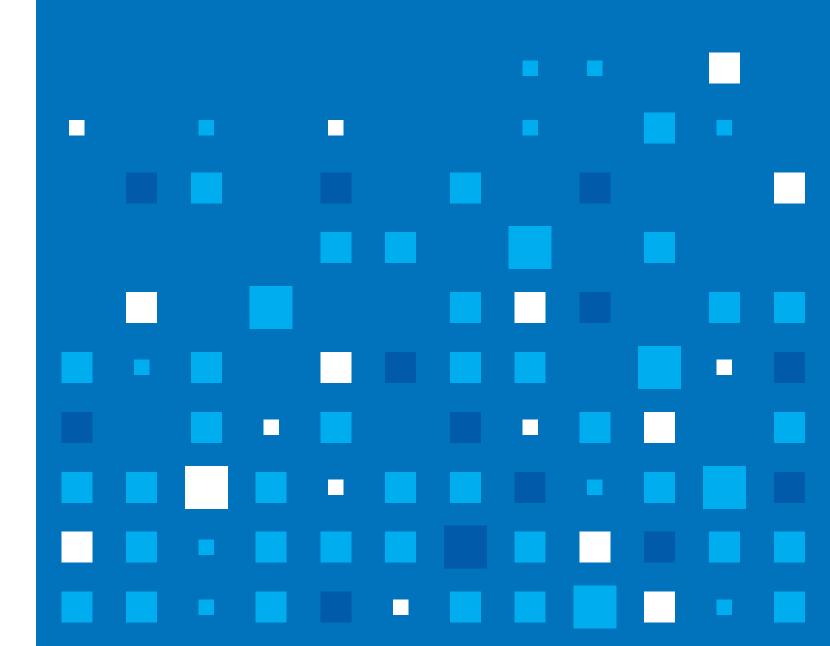




2019
MEIDENSHA REPORT





ThinkPark Tower, 2-1-1, Osaki, Shinagawa-ku, Tokyo 141-6029 Japan

www.meidensha.com



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Meiden Group Corporate Philosophy

Corporate Mission

It defines the raison d'être and corporate mission

Illuminating a more affluent tomorrow

We continue to create value and technologies for the realization of a more affluent and environmentally conscious society.

Value Provision

t defines the unique value provision and core competence

For customer peace of mind and satisfaction

We offer complete environmental consideration and appropriate support for our customers. From product design to commissioning, our highly skilled staff help customers solve various issues and realize their dreams by providing high-quality, socially responsible products and services.

Quality connecting the next

Corporate Slogan

Expressing the corporate philosophy in a single phrase

The Meiden Group Corporate Philosophy is as follows: "We seek to delight customers by offering high quality products and services to help solve their problems. Through these business activities, we aim to fulfill our corporate social responsibility (CSR) by proactively solving global environmental problems and other social issues and helping achieve a more affluent future. We must continually tackle these challenges."

This is our legacy from Hosui Shigemune, who founded our company as a local factory to manufacture and repair electrical machinery. His will remains our common sense of values, even as these have evolved with the times, and remains at the core of all our business activities. Staying true to this Corporate Philosophy, the Meiden Group aims to grow with society and be indispensable to it. With that as our goal, we continually take the challenge of creating new technologies and value.

MEIDEN CYCLE



CSR Definition

Under the Meiden Group's definition of CSR, "Each and every employee shall work to realize the Group's

Corporate Code of Conduct

This code defines our CSR programs and

President's CSR Policy

This policy sets forth the policy of our CSR programs and activities in the medium term. The Policy asks each Group employee to implement CSR programs and activities in their daily work. We will draw up specifications that reflect the given business climate and CSR challenges under the current stage of the Medium-term Management Plan.

MEIDEN CYCLE

MEIDEN CYCLE shows the guiding spirits shared by all members of the Group in realizing the Group's corporate philosophy.

In order to realize our Group Corporate Philosophy, we must identify the direction for each individual employee to aim towards and provide signposts to help them proceed without losing their way. To enable us to do so, we have made these five actions our watchwords. The actions are mutually linked, with one action calling forth the next, creating a cycle of action and growth. Based on this image, we call this the MEIDEN CYCLE.

By sharing and practicing the MEIDEN CYCLE as the ethos underlying our actions, we seek to maximize the growth cycle for each of our employees.

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Foundation for Creating Value

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Editorial Policy

The Meiden Group informs its stakeholders of its attitude and initiatives relating to social responsibility through the two media of the Meidensha Report (print edition and web edition) and the Meiden Group CSR (web edition).

With regard to the content of the reports, we work to collect and analyze information that meets our stakeholders' expectations and is of interest to our stakeholders through regular notices, IR activities, and interviews with each department, and distribute it.

Furthermore, the Meiden Group is conducting internal communication activities as part of the process of drafting reports in order to understand changes in the external environment and share future issues and trends. In addition, we work to strategically promote future CSR initiatives by exchanging opinions based on the reports that have been created, and having each department reflect on its own activities, taking into account outside perspectives.

Report Media

Meidensha Report print edition and web edition (this document)

A comprehensive collection of financial information concerning the Meiden

Group and non-financial information such as initiatives that contribute to improving corporate value and management

Meiden Group CSR web

A simple introduction focusing on specific initiatives to tackle CSR issues that the Meiden Group considers important.

Subject Organizations

The report mainly covers initiatives of MEIDENSHA CORPORATION and its affiliated companies. Human resources data applies to affiliated companies in Japan, while environmental reporting data applies to Meidensha and its 37 major affiliated companies (19 in Japan and 18 overseas).

Publication

- Publication of this report: September 2019
- Next scheduled publication: September 2020

Guidelines Used as References

- IIRC (International Integrated Reporting Council) "International Integrated Reporting Framework"
- Ministry of Economy, Trade and Industry "Guidance for Integrated Corporate Disclosure and Company-Investor Dialogues for Collaborative Value Creation"
- GRI "Sustainability Reporting Standards"
- Ministry of the Environment "Environmental Reporting Guidelines (Fiscal Year 2018 Version)"

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Disclaimer

In addition to past and current facts about the Meiden Group, this report contains forecasts for the future based on plans, outlooks and business policies and strategies in effect at the time of publication. These forecasts are our assumptions and judgments as based on information available at the time they were stated, and may differ from actual business activity results and events in future owing to changes in conditions.

Reporting Period

This report mainly covers initiatives taken in FY2018 (April 1, 2018 -

It also includes some information from prior to FY2018 and until July 2019.

Meiden Group History

Supporting social infrastructure for 120 years.

The Meiden Group's quality will lead to a more affluent future.



1897

Founding and Birth of "Meiden a Motor Company"

In 1897, our founder Hosu Shigemune started a factory in the belief that one day Japan would build its own electric machinery Meanwhile, Japan depended or imported products for much of its industrial machinery. His business at that time was mainly repair or electrical equipment and manufacture of switches. However, his efforts to build made-in-Japan motors gave him several new ideas for development of own products.

In 1901, Shigemune successfully developed a three-phase induction

motor and sold 18 motors between 1903 and 1904. He continued with research and made prototypes in the desire to develop more products of his own. His efforts led him to devise an induction motor design method in 1905. In the following year, he started production of motors to his own design method

Meidensha's motor production nelped to modernize Japanese industry and became the cornerstone of value-building at Meidensha that still persists today.



Evolving into "Meiden a Power Electronics Company"

During Japan's postwar economic boom, Meidensha actively expanded into the industrial systems business and contributed to the development of industry in Japan. In about 1970, society was beginning to prize quality over quantity. Likewise, Meidensha switched its management strategy from quantity base to quality base. On the technical side, our aim was to develop new products that made full use of our employees' creativity. At this time, we began to cement our status as a manufacturer of heavy electrical equipment, having developed new products that combined heavy electrical technology (power) with the latest electronics technology.



The 1980_{s} -

Evolving into "Meiden a System Engineering Company"

In the latter half of the 1980s, economic expansion led Meidensha to boost it production capacity at factories an upgrade its production system. We added to our family of Group companies and developed a variety of businesses to make us a stronger enterprise.

We grew to have three conbusiness areas, adding mechatronic and electronics to our existing power electronics field. The integration of technologies from each of these fields to create management, monitoring, and control systems, evolves our Group into a company known as "Meiden a System Engineering Company."



The 1990s - \mid

Approaching Our Centenary

Meidensha celebrated its 100th anniversary in 1997. Japan's business environment changed drastically after the collapse of the bubble economy, and management had to deal with a time of crisis. However, the legacy we had inherited from our predecessors technologies and well-developed human resources, became the base for a new era of expansion as we hit the 100-year milestone.

Upon our 110th anniversary in 2007 we christened ThinkPark Tower, a facility combining our head office building with pleasant greenery in Osaki, Shinagawa City, Tokyo, where our company was founded.



The **2010**s -

Aiming to Be "Meiden a Global Company"

Today, the Meiden Group is expanding its presence in markets outside Japan, especially in the ASEAN region. As part of this, we transferred to our overseas subsidiaries a stronger regional supervisory role; e.g. building partnerships with enterprises outside Japan, and opening training centers for local staff.

We are using IoT and AI to increase our product competitiveness and system technology. We also enhanced one-stop service business ranging from equipment manufacture to maintenance, inspection and operations and management.

The world is undergoing vast change, but Meidensha will never stop endeavoring to contribute to the formation of an "affluent future society."







Meiden Group History

1897 Company founded as a privately operated factory for electrical machinery

1913 Osaki Factory established

1917 Change of corporate structure from a private company to a listed company

1935 Nagoya Works established

1937 Shinagawa Works established

1939 Nishio Works established

1950 KOFU MEIDENSHA ELECTRIC MFG. CO., LTD. established

1955 Technical transfer agreement with AEG for air circuit-breakers and transformers

1958 Head Office moved to Otemachi, Chiyoda-ku, Tokyo

1961 Numazu Works established

Technical transfer agreement with ASEA for turbine generators

1967 Electronics Device Factory opened in Numazu

1968 Technical transfer agreement with General Electric for vacuum interrupters

1969 Technical transfer agreement with SEVCON for electrical equipment for forklift trucks

Technical transfer agreement with AEG for thyristor rectifiers and processing lines

1973 Technical transfer agreement with General Electric for high-frequency thyrister inverters

1976 Gotanda Office opened

1977 Ota Works established

1979 MEIDEN SINGAPORE PTE. LTD. established

1987 Technological exhibition held to celebrate the company's 90th anniversary

1993 R&D Center completed

1995 Head Office moved to Chuo-ku, Tokyo

1997 Celebrated 100th anniversary

2001 Japan AE Power Systems Corporation established

2003 Merger with MEIDEN ENGINEERING CORPORATION

2005 Work started on a development project near the West Exit of Osaki Station

2006 Motor development and manufacturing business merged into KOFU MEIDENSHA ELECTRIC MFG. CO., LTD.

 2007 ThinkPark Tower completed and the head office moved to Shinagawa-ku, Tokyo O 2009 Capital and business alliance with Ono Sokki Co., Ltd., for the automotive testing systems business

2012 Japan AE Power Systems Corporation joint venture dissolved

2013 Spin off of maintenance and service business into four companies including Meiden Engineering Corporation

2014 Stake acquired in the Indian company, Prime Electric (now PRIME MEIDEN LIMITED)

Added to the IEEE Milestone List (zinc oxide gapless surge arrestor)

2015 Maintenance and after-sales service businesses reorganized into MEIDEN 0&M CORPORATION and MEIDEN ENGINEERING CORPORATION

Tridelta (now TRIDELTA MEIDENSHA GmbH) acquired from Tridelta GmbH

2017 Celebrated our 120th anniversary by holding events such as the Meiden Expo

2018 Formulation of Medium-term Management Plan 2020

For the peace of mind and satisfaction of our customers, and the precious lives of people beyond them, Meiden Group quality will connect with a more prosperous tomorrow.



For us, our "quality" is not only about the quality of our products and services. There are two things that make our quality: "people" and "technology". People at Meiden Group strengthen ties with customers around the world by being truthful and flexible. Meiden Group technology contributes to society with truly original products and reliable services created with expertise. These two attributes make Meiden Group's unique quality, and create new connections with the future. Making connections with our customers, society, and people living in it. These connections will expand, and the power we have built will become the energy for the next generation.

For the peace of mind and joy of our customers, and the precious lives of people beyond them, Meiden Group quality will connect with a more prosperous tomorrow. This is our never-changing mission.

VEIDENQuality connecting the next

The quality that is the driving force behind our activities

Quality

We have long-lasting relationships with our customers, and "quality," in all senses of the word, is extremely important for maintaining these relationships, not only in terms of product quality, but also quality of services and people. We will work with a range of stakeholders to expand our business activities, and the driving force behind this is the "quality" of people and technology.





Quality of the Meiden
Group as seen in a range
of situations

Quality

Heavy machinery should be viewed as the infrastructure that supports infrastructure. We see it as our duty to support infrastructure in a range of situations, including working to achieve stable power supply, transmitting electricity to railway infrastructure, and delivering motors and inverters, which are considered the heart of electric vehicles, and this is the foundation upon which we improve quality.

Quality around which the Group unites based on our corporate slogan

Quality

Quality is the basis of all of our business activities, from sales, development, and production, etc., to work performed by management business units. We believe that all employees will unite under our corporate slogan, which will be a great force behind our business activities.



The Meiden Group Value Creation Process

Aiming for sustainable development of the Meiden Group and society

and we are conducting corporate activities according to the corporate philosophy of "for customer peace of mind and satisfaction." By continuing to improve the quality of people and technology, which is the driving force behind all of our business activities, we will provide unique products and reliable services, and contribute to society as appropriate for the age and the market.

implementing a business strategy that integrates development, production, sale, and maintenance while strengthening our foundations, and achieve sustainable development for both the Meiden Group and society.

Strategy

Medium-term Management Plan 2020 (FY2018 to FY2020)

- Growth Businesses: Overseas Business and Automobile-related Business • Expanding the scale of businesses in line with market growth
- Earnings-base Businesses: Public Infrastructure Business and Maintenance and Servicing Business
- Strengthening earnings power through generation of new values
- Strengthening Business Foundations
- Manufacturing, development and business promotion capabilities, human assets fostering and financial strategies

The Business Environment in which the Group Operates (anticipated)

- Increasing population in developing countries
- Increased infrastructure demand

Domestic Market

- Declining population Slumping economic growth rate
- Difficulty in implementing national and local government fiscal policies

Business Key Words

 Environmental regulations

INPUT

Optimal capital allocation and

strengthening management

Over 120 years, the Meiden Group has ceaselessly continued to

adapt, and optimally allocated the various capital that supports business activities, which has been accumulated throughout its

history. Medium-term Management Plan 2020 aims to

efficiently inject capital to support businesses and achieve

- Automobile electrification and digitalization
- Development of the IoT and Al

Customers





















Areas in which we will contribute to the solution of social issues through our business strategy











Investments for growth and steady expansion in business performance

The Meiden Group will establish competitive superiority and secure business opportunities by proactively engaging with social issues. Under Medium-term Management Plan 2020, we are actively investing and strategizing with regard to equipment HR, research and development, and strengthening partnerships. etc., for a further leap forward.

OUTCOME

Solving social issues by providing value to customers

The Meiden Group will contribute to the solution of social issues, including Sustainable Development Goals (SDGs) by providing value to customers. Furthermore, we provide value to society, such as stable power supply, energy efficiency, access to safe water resources, creation of employment, and shareholder



Illuminating a



Meiden Group quality will connect with a more prosperous tomorrow.





OUTPUT

Improving the corporate value and gaining the trust of customers

Consideration for the environment, a comprehensive customer support system, and high-quality services are forms of value that increase a company's value for its customers, and they are also the Meiden Group's strengths. These forms of value also win trust from customers and generate robust financial underpinnings, creating a virtuous cycle that further strengthens





Challenge to create new technologies and value / **Further honing of quality**

For the peace of mind and satisfaction of our customers, and the precious lives of the people beyond them, the Meiden Group will continue to refine products and services to increase the

vill continue to refine products and services to increase the quality of people and technologies, and embrace the challenge of constantly creating new technologies and value.

Vill Continue to refine products and services to increase the quality of people and technologies, and embrace the challenge of constantly creating new technologies and value.

The present of the Meiden Group, which has been involved with the manufacture of heavy electrical equipment and developed businesses in the field of social infrastructure for over 120 years

Seven Meiden **Electrical Technologies** that Support Our Society

Meidensha Behind Every Electricity Scene

Create - creating electricity -

Meidensha manufactures equipment for the creation of electricity, or in other words, electricity generation. We have a wide-ranging product lineup, from high-capacity items that are used in power stations, such as large turbine generators, generator equipment that utilizes renewable energy, such as photovoltaic power generation and hydroelectric generation,

and emergency generators for use in the event of a disaster, through to portable power equipment.



Transmit - transmitting electricit

Electricity generated at power stations passes through electrical equipment such as transmission lines, substations, and feeder lines, where the voltage is incrementally lowered, before being delivered to factories, buildings, and homes. We provide

products that are essential to the safe and stable transmission of electricity, such as transformers that change the voltage of electricity and circuit breakers to shut off excess current in the event of an accident.



Transform - transforming electricit

Transforming, or power electronics, refers to converting and controlling electricity. Meidensha's power electronics initiatives,

which began with mercury-arc valves, are now proving useful in a range of fields, including power supplies, railway facilities, production facilities, EVs, renewable energy, and battery storage systems, while responding to demands such as energy efficiency and increased reliability.



Moving - moving with electricity -

Meidensha's environmentally friendly transport technology such as motors and automated guided vehicle (AGV) systems that are valuable to increase efficiency at manufacturing plants, environmentally friendly EV/PHEV drive systems, automobile

testing systems that contribute to the development process. and elevator systems that enable a powerful yet smooth ride, supports more fulfilling lifestyles.



Protecting - protecting socie

We continue to protect the peace of mind and satisfaction of our customers and the valuable lifestyles of the people that they serve through comprehensive services to protect equipment, from stable

supply of electricity and systems that enable energy-efficient transportation through to installation. preventative maintenance. maintenance, and replacement of equipment



Supporting - supporting socie

We provide components that support various production equipment and services that support the safety of workplaces. Our mission is to stand alongside our customers and support them to resolve their issues through distinctive products and



By connecting our experience and knowhow developed at customers' actual worksites with ICT, we will create efficiency and optimize social infrastructure, leading to stable



Overseas Network

The Meiden Group has developed its social infrastructure, industrial systems, and maintenance and servicing businesses in 13 countries and regions.

Production Sites
 Sales and Servicing Sites





 Head Office
 Branch Offices, Branches, and Sales offices
 Maintenance Bases General Research Laboratories
 Domestic Production Bases



MFG. CO., LTD.

(Kofu, Yamanashi Prefecture



A Number of Employees (consolidated) /

78.2% 7,270

A Number of Employee Breakdown

Other Regions 1.7%

by Region*

(Ota, Gumma Prefecture

(Nagoya, Aichi Prefecture

Connecting - connecting with society

maintenance.

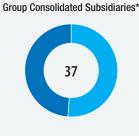
We will create a more connected and vibrant future through the latest IoT and Al technology.





Consolidated Net Sales (FY2018)





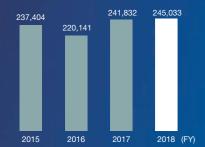
)	173.3	In Japan
)	44.2	Outside Ja
	27.4	

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Overview by Business Segment in FY2018

Net Sales (consolidated)

245,033 millions of yen



Social Infrastructure Business We manufacture and sell equipment for emergency and non-emergency power generation, hydroelectric power generation, and power transmission and distribution facilities, to power companies, government agencies, railways, and buildings and factories in Japan and abroad. The product offerings include power quality stabilization systems and power generation systems such as solar power and small and medium-sized hydro power, as well as energy solution services such as smart grid systems. We are also involved in the fields of drinking water and sewerage treatment for local governments in Japan. Our activities include manufacturing and sales of electrical facilities for water processing systems and process control systems and information networks. We also offer solutions services such as contract facility management services for drinking water treatment plants.

Net sales in the segment decreased 6.5% year on year to ¥137,532 million, while operating income decreased by ¥4,187 million, amounting to a ¥107 million loss.

In the Electricity and Social Infrastructure Systems business, we recorded decreased revenue and profit year on year due to factors such as the delivery dates of sales being delayed, deterioration of costs in overseas projects, and impact of unprofitable projects.

In the Railway Systems business, we recorded decreased revenue and profit year on year due to the impact of a lull in major overseas projects.

In the Water Infrastructure Systems business, we recorded decreased revenue and profit year on year due to factors such as lower demand arising from reduced budgets due to difficulties in implementing regional fiscal policies and the declining population, etc., as well as the impact of delays in construction work.

Net Sales
(Millions of yen)

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Operating Income (consolidated)

10,336 millions of yen

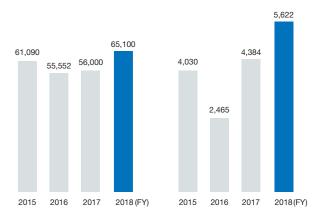
Industrial Systems Business We manufacture and sell motors and inverters for elevators, textile machinery, industrial vehicles, and electric vehicles. Other products include vacuum capacitors and industrial computers for makers of semiconductor manufacturing equipment. We also manufacture and sell dynamometers and other testing systems for automobile manufacturers, and logistics support systems for factories and warehouses.

Net sales in the segment increased 16.2% year on year to ¥65,100 million, while operating income increased 28.2% year on year to ¥5,622 million

In the Motor and Drive business, we recorded increased revenue and profit year on year, particularly due to positive sales of motors and inverters for PHEVs/EVs.

In the Electronics business, we recorded increased revenue but decreased profit year on year, with components for semiconductor manufacturing equipment being stagnant due to the semiconductor market being in an adjustment phase.

In the Dynamometer Systems business, operating income increased, with steady investment in testing equipment by automobile manufacturers and a rebound in orders, in spite of a slight decline in net sales year on year.



Segmental Sales Breakdown (FY2018)



fractructure 55.0%

Social Infrastructure	55.0%
Industrial Systems	25.0%
Maintenance and Servicing	14.6%
Real Estate	1.3%
Other	4.1%

Maintenance and Servicing

Business

We provide services relating to the remote management and monitoring of facilities and the proposal of measures for extending the life of facilities, energy conservation, and other services related primarily to the maintenance of products we supply.

We offer property rentals, including office spaces at ThinkPark

Tower (Osaki, Shinagawa City, Tokyo).

We actively promoted our one-stop service initiative that covers from maintenance and inspection of electrical equipment to maintenance and operation management, and also aggressively conducting activities to diagnose and make proposals for electrical equipment using private plant and facility walkthrough activities. This resulted in an 8.9% increase in net sales year on year to ¥36,974 million and a 21.1% increase in operating income year on year to ¥4,343 million.

31,007 33,044 33,962 36,974 3,781 3,587 2,921 2015 2016 2017 2018(FY) 2015 2016 2017 2018(FY)

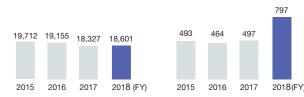
Real Estate
Business

We are engaged in the real estate leasing business, centering on the office and commercial building ThinkPark Tower (Osaki, Shinagawa City, Tokyo). Net sales in the segment remained steady from the previous fiscal year at ¥3,481 million, while operating income rose 6.2% year on year to ¥ 1,419 million.



Other Business

This sector includes marketing companies that handle a wide range of products, welfare services for employees, and others. This segment includes categories not included in any of the above segments, such as manufacturing and marketing of electrochemical measuring equipment and electric insulation materials, welfare services for employees, and goods merchandising. Net sales in the segment increased 1.5% year on year to ¥18,601 million and operating income increased 60.4% to ¥797 million.



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Message from Management



Determination Inherited from the Foundation and Purpose of MEIDENSHA CORPORATION

Since its founding in 1897, Meidensha has single-mindedly pursued manufacturing excellence while contributing to the sustainable growth of society by creating a variety of technologies, products, and services, with a focus on electrical equipment relating to social infrastructure. At times, we are asked to repair equipment that has been in service for more than 50 or even 80 years, and we believe that this is evidence of the trust and confidence placed in Meidensha by our customers as a company that has continued to deliver a range of systems and maintenance services all over Japan.

Meidensha's commitment to excellence, exploration, and spirit of challenge in our manufacturing originate from the determination of our founder, Hosui Shigemune, to "enrich the world through the power of electricity." He was a firm believer in envisioning prosperous lives for people beyond the product and refining the technology to enrich the world through his enterprise. This is Meidensha's very mission and reason for our existence as a heavy electrical equipment manufacturer.

The environment surrounding Meidensha's management has changed over the years, and complex social issues such as climate change are becoming apparent. In the face of these issues, the Sustainable Development Goals (SDGs)

and the Paris Agreement, which were positioned as agendas for the whole world to address, were adopted in 2015. The targets of the SDGs are exceedingly compatible with the President's CSR Policy Statement and the business activities of the Meiden Group. They include many areas where we can contribute to a solution with the technologies and expertise we have cultivated over the years, and we view the challenges that they pose as great business opportunities.

During the previous fiscal year, we arranged the initiatives our businesses were involved in according to the individual SDGs in this report. This fiscal year, we have gone one step further, and having considered the relationship with the Meiden Group's business activities, we have identified five SDGs as areas that we can contribute to solving social issues through our business strategy: Goal 6: Ensure availability and sustainable management of water and sanitation for all; Goal 7: Ensure access to affordable, reliable, sustainable and modern energy for all; Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation; Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable; and Goal 13; Take urgent action to combat climate change and its impacts. This allows us to identify priority issues from the SDGs. Going forward, we will incorporate these issues into our business strategy for the next Medium-term Management Plan.

FY2018 Performance and the Plan for FY2019

Looking back on the previous fiscal year, the Japanese economy was on a moderate recovery trend due to steady domestic demand and increased capital investment, although the momentum of external demand weakened. In contrast, although there has been trade friction between China and the US, the economic slowdown increased and the outlook is unclear in China and Europe, the US economic recovery is steadily continuing, and the overall recovery seems to be moderate.

In this environment, the Meiden Group has continued to promote the measures of the Medium-term Management Plan 2020 that began last year. This has further strengthened the ESG initiatives that are the foundation of the Group's sustainable growth, aimed at increasing corporate value.

As a result, the Meiden Group's FY2018 result were net sales of 245,033 million yen, an increase of 1.3% from the previous fiscal year, and the operating income decreased by 9.2%, to 10,336 million. Ordinary income increased by 1.4% to 10,128 million yen, and net income attributable to owners of the parent company increased by 8.5% to 7,653 million yen. Net sales and net income were at record highs, and investments were made as planned. The business results of each segment will follow below.

Social Infrastructure Business Section

Operating income for the Social Infrastructure Business deteriorated by 4.1 billion yen from the previous year, amounting to a loss of 100 million yen. Unfortunately, in FY2018, the increase in the cost of overseas projects and the delay in sales of some projects in electric power and water infrastructure projects in Japan caused a decline in income and profit year on year. However, for FY2019, we established safeguards to limit worsening of costs by strengthening overseas project management and ensuring expected net sales with the addition of the delayed portion from the previous fiscal year.

In order to achieve our FY2020 targets, we will promote cost structure reforms throughout the Group, such as further strengthening delivery control to ensure that sales are recorded, and reforming the earnings structure for overseas subsidiaries such as Singapore. By accelerating these foundation reinforcement measures, we will achieve our FY2020 targets.

Industrial Systems Business Section

Operating income in the Industrial Systems Business Section increased 1.2 billion yen to 5.6 billion yen. FY2018 saw reduced income and profit in the Electronic Equipment Business due to the adjustment period in the semiconductor manufacturing equipment market, while the Industrial Motor and Drive Business - which includes the Electric Vehicle (EV) Business - saw increased income and profit due to positive sales of motors and inverters for electric vehicles. This was able to make up for the loss in the Electrical Equipment Business. In FY2019, in spite of increased sales in the EV Business, we expect a temporary decline in profits due to start-up and development costs that will precede the mass production projects for the following fiscal year and a decline in sales due to the effect of the adjustment period in the semiconductor manufacturing equipment market. However, even though we must keep a close eye on recovery in the semiconductor market in order to meet our FY2020 targets, we still consider it possible to meet our targets through growth in other areas. such as EV Business.

Maintenance and Servicing Business Section

Operating income in the Maintenance and Servicing Business increased 700 million yen to 43.0 billion yen. For the last several years, we have seen steady results from initiatives including praise from customers about our proposals, including initiatives such as one-stop service. In FY2019, we expect to improve the results of initiatives under the Mediumterm Management Plan 2020 such as one-stop service and customer facility walk-throughs, with secure net sales and profits at a similar level to the previous fiscal year. Similarly, we expect to be able to achieve our targets for FY2020.

(In billion yen)

		FY2017 (results)	FY2018 (results)	Difference from the Previous Year	FY2019 (forecast)	FY2020 (forecast)
Social Infrastructure	Net sales	147.0	137.5	-9.5	154.0	157.0
Business	Operating income	4.0	-0.1	-4.1	3.5	4.8
Industrial Systems Business	Net sales	56.0	65.1	9.0	65.0	77.0
	Operating income	4.3	5.6	1.2	3.0	5.5
Maintenance and Servicing Business	Net sales	33.9	36.9	3.0	37.0	39.0
	Operating income	3.5	4.3	0.7	4.3	4.4

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Basic Policies of the Medium-Term Management Plan 2020

I would take this opportunity to once more explain the Mediumterm Management Plan 2020, which commenced in April last year.

Meidensha has begun implementing the Medium-term Management Plan 2020, which covers a three-year period from FY2018 to FY2020. In the Medium-term Management Plan 2020, as part of the "powerful step forward" phase, we will actively invest and implement equipment, personnel resources, research and development, and strengthen business partnerships. Positioning the next medium-term management plan and beyond as a "jump" period, we aim to achieve "high quality" growth by improving business profitability and creating a balanced business structure.

As a fundamental policy under the current Mediumterm Management Plan, business areas are divided into the following three areas to distribute of company resources, with each area implementing its own strategies.

The first area is "Growth Businesses." This group is defined as businesses whose markets are expected to expand further, such as Overseas and Automobile-related Business. The group aims to expand business scale by actively investing resources in this group.

The second area is "Earnings-base Businesses." This group is defined as businesses that serve as a base to generate earnings in a stable manner. This includes the Water Treatment/Public Infrastructure, Electric Power/Renewable Energy, and Maintenance/Servicing Businesses. The group

aims to strengthen profitability by reforming business models and improving productivity.

The final area is "New Growth Businesses." Going forward, this Group will make investments to expand the business scale associated with semiconductor manufacturing equipment. These markets are expected to grow further, and create new business.

Based on these policies, we will actively invest and work to strengthen earning potential with the goal of further increasing corporate value.

(1) Status of Research and Development

In the research and development sector, during the first year of the Medium-term Management Plan 2020, we have dedicated ourselves to producing new products and systems in response to stricter environmental regulations, electrification and digitalization of automobiles, and the progress of IoT and AI technologies. Separate explanations will follow for each sector.

Response to Environmental Regulations

To address environmental regulations, we dedicated ourselves to developing new products that meet the specifications of electricity companies in countries around the world, particularly North America and the ASEAN region against a global backdrop of stricter environmental policies. An example of this is the development of the 145 kV Ecotank Type Vacuum Circuit Breaker, which uses high-pressure dry air as a replacement for SF₆ gas, previously used as an insulation gas. In the renewable energy field, we have developed and

completed the first delivery of solar power generation PCS (SP1000-500) with the highest conversion efficiency in Japan.

Response to Electrification of Automobiles

Regarding electrification of automobiles, in the EV Business, we have developed integrated electric drive units that combine motors and inverters in order to achieve smaller, lighter EV drive systems. Furthermore, we are currently developing three-in-one units that include reducers as well as aiming to develop even smaller, lighter units. With regard to inverters, we are working to develop the use of silicon carbide (SiC) in semiconductors to improve cooling technologies for power devices and peripheral components, with the aim of further increasing efficiency and miniaturization.

In the Dynamometer Systems Business, we developed an electric torque amplifier transmission testing equipment. This equipment was awarded the FY2018 Agency for Natural Resources and Energy Commissioner's Prize for achieving 60% energy conservation at testing and world-class functionality, by using an ultra-low-inertia dynamometer (PMDY).

■ Enhancing Digital Technology of IoT and AI

We are dedicated to enhancing digital technology such as IoT and AI in order to provide new services. In the Water Infrastructure Business, we are developing AI automation and labor-saving technology to ensure the transmission of skills for engineers placed in wastewater treatment facilities. The use of AI will allow situational judgement equivalent to that of a skilled engineer. This technology was applied in the Ministry of Land, Infrastructure, Transport and Tourism's FY2018 Demonstration Study of Breakthrough by Dynamic Approach in Sewage High Technology (B-DASH Project) conducted in conjunction with Hiroshima City and NJS Co., Ltd. We are now investigating future commercial uses. Beyond these examples, regarding electromotive applications, we increased the functionality of wire breakage analysis with our Visual Rope Tester, which applies Meidensha's image measurement technology.

Initiatives for New Business

To turn to initiatives for New Business, we established technology that creates oxide films at room temperature using ozone-ethylene radical (OER) generation technology reliant on Meidensha's pure ozone generators. We expect this technology to contribute to a wide range of film deposition applications such as semiconductors and displays. Going forward, we plan to develop and increase sales of OER deposition process equipment that incorporates pure ozone generators. In addition, we are promoting open innovation such as collaboration with startup companies using the Silicon Valley office in the United States. Internally, we are soliciting new business ideas and conducting activities to nurture future business.

Company-Wide Core Technology

With our core technologies, we are promoting the introduction of model-based development techniques in order to increase product quality and speed up development. Particularly regarding motors, we incorporated new technologies such as sonic analysis and shape optimization technology and promoted the sophistication of analysis and design. Furthermore, we developed evaluation technology for semiconductor components and materials (metals and carbon fiber reinforced plastics (CRFP), etc.) used in products, and began initiatives aimed at increasing product reliability.

(2) Status of Capital Investment

With regards to capital investment, we are actively driving capital investment focusing on manufacturing equipment for expanding growth and data processing equipment for operational efficiency.

Regarding the Overseas Power Business, MEIDEN SIGAPORE PTE. LTD. has been conducting capital investment for processing of transformer components and rationalization of assembly processes.

With respect to data processing, we increased sophistication of production management systems in order to optimize production processes and introduced RPA (work automation system) in order to increase work efficiency.

In the EV Business, we commenced augmentation of EV component mass production equipment with a total value of 7.0 billion yen at three sites in Numazu, Nagoya, and Kofu.

Furthermore, in May 2019, we established a subsidiary for the manufacture and sale of EV motors and inverters, etc., in China, the world's largest automobile market. This is the first overseas manufacturing site for the EV Business. Going forward, we will consider further capital investment as the EV market expands.

In the Medium-term Management Plan 2020, we plan to spend the largest amount we have ever spent on capital investment. Depreciation expenses and capital requirements will increase; however, we aim to increase the scale of our business and improve financial indicators such as return on invested capital (ROIC) through a steady return on investment.

Looking Towards the Completion of Medium-Term Management Plan 2020

The following is an explanation of the progress of the growth strategy in each of the three business areas looking towards the completion of Medium-term Management Plan 2020.

i) Growth Business

The Overseas Transformer Business, which is expected to expand mainly in emerging Asian countries and the Automobile-related Business, has made significant progress in the electrification and digitization of cars, placing it as a growth



Message from Management

business. We are actively investing resources into these businesses to expand our business scale.

Within the Overseas T&D Business, we have further invested personnel resources into the overseas electrical power sector to achieve participation in local markets as quickly as possible. This has been accomplished through the promotion of partnerships with local companies in Southeast Asia. We are accelerating our strategy by entering the Indian market with a focus on the Indian transformer manufacturer PRIME MEIDEN LIMITED (PML), introducing PML products to the Japanese market.

In the Overseas Railway Sector, we are increasing personnel resources and strengthening project management with a goal to complete large-scale projects including the project to update the North-South and East-West lines in Singapore.

Within Automobile-related Businesses, we began enhancement of mass production equipment in the EV Business with a goal of receiving orders for new mass production projects. Furthermore, we focused on enhancements to our competitiveness such as improving development efficiency through EV motor design support programs using AI, and increasing the number of development personnel.

In the Dynamometer Systems Business, we collaborated with FEV Japan, which is part of the German automotive engineering company, the FEV Group. By enhancing simulation and analysis technology, we aim to increase product sales and roll out engineering services. This will result in a synergistic effect for the EV motor and inverter businesses.

ii) Earnings-Base Business

We have placed the Water Treatment and Public Infrastructure Business, the Electricity and Renewable Energy Business, and the Maintenance and Servicing Business in Japan, etc., in the Earnings-base Business group. We are striving to strengthen profitability by reforming business models and improving productivity as the lifespan of facilities, energy conservation, widespread infrastructure services, and public-private partnerships are increasing due to the population decline and local government financial difficulties.

In both the Water Treatment and Public Infrastructure Business and the Electricity and Renewable Energy Business, we launched the inter-departmental Infrastructure Solutions Project and we are promoting proposals of inter-departmental solutions for power companies and local governments. In addition, we are engaging in public private partnerships (PPP) such as the comprehensive water supply project in the eastern Gunma region, and working to create new business models that utilize these partnerships going forward.

In the Japanese Manufacturing Business, we created new systems to merge product sales and maintenance and servicing in order to enhance lifecycle engineering. Taking advantage of the mobility of the maintenance and servicing business, which has many sites in Japan, we will aim to improve profitability by expanding orders for maintenance and service and replacement of aging equipment.

iii) New Growth Business

We are promoting new market development and new product development in New Growth Businesses such as the Ceramic Flat-sheet Membrane and the Semiconductor-related Businesses.

In the Ceramic Flat-sheet Membrane Business, we received our first order from Siemens for new water treatment systems (for treatment of wastewater from petrochemical manufacturers). Going forward, we will continue to develop product applications to expand orders.

In the Semiconductor-related Business, we aim to increase the voltage and increase the capacitance of vacuum capacitors that support semiconductor miniaturization, multi-layered memory, and introduce new products such as variable vacuum capacitors that support next-generation communication standards. Furthermore, we are working to create business that will lead to new growth such as commercializing carbon nano-type cold cathode x-ray tubes, which enable smaller, lighter weight x-ray inspection devices.

ESG initiatives

Finally, an explanation of Meidensha's ESG initiatives.

In addition to ongoing improvement of products, systems, and services, we are actively working to increase the quality of our core business activities such as eliminating workplace accidents, strengthening corporate governance, reducing greenhouse gas emissions, and conducting employee work style reforms.

[Quality]

With regards to mass-produced products, we will increase productivity and improve quality by automating inspection processes using image processing technology, introducing smart factories using the IoT and AI, and automating design. Furthermore, regarding overseas EPC projects, our focus is on enhancing management systems by creating an advance risk identification system.

[Safety]

We are also focusing on safety experience education to eliminate occupational accidents. We are working to increase safety awareness through devices that allow people to experience accidents such as electrocution, and VR content that allows people to experience the danger of working in high places.

[Corporate Governance]

We will work to further improve the effectiveness of the Board of Directors and conduct appropriate, transparent information disclosure through activities that effectively utilize outside directors and outside audit & supervisory board members. Some examples include establishing a voluntary Nomination and Remuneration Committee and conducting meetings to exchange opinions with the themes of management issues and strategy.

[Environment]

The Meiden Group has drafted First Meiden Environmental Vision and aims to reduce greenhouse gas emissions from business activities by 30% (compared to FY2017) by FY2030. In addition, we are a member of the Ministry of the Environment's "Corporate 2°C Target Network" working not only on business activities but also on reducing greenhouse gas emissions through products and services. We will focus on expanding sales of environmentally friendly products such as EV motors, inverters and vacuum products, and creating solutions for improving energy efficiency.

[Personnel Development]

To develop personnel that are capable of supporting our business in the future, we are working to systematically expand technology training, training for selected next-generation management candidates, and develop personnel who can think and act with a broad and independent perspective beyond the bounds of their own area of expertise and role. In addition, we invite local staff working at overseas subsidiaries to Japan and foster executive candidates in overseas businesses through exchanges with Meidensha management, tours of domestic bases and product delivery sites, and practical training at each workplace.

[Work Style Reform]

Based on the execution plan "Smart Work 2020", we are focusing on business reforms by utilizing RPA, and working to reduce overtime hours and promote paid vacations in response to stricter regulations. Furthermore, we are rolling out various measures including childcare and nursing care support to create an environment that is conducive to work, with an eye to achieving diversity. In addition, we have the shared belief that "nothing is more valuable than good health" within the Company, and so have drafted the President's Health and Wellness Management Policy Statement. We will promote positive support for employees' voluntary health and wellness activities.

Our growth strategies and key measures under the current Medium-term Management Plan aim to achieve growth and the creation of new businesses in new business fields by (1) "As a good opportunity" to boost business expansion in growth businesses such as the overseas transformer and automobilerelated businesses, (2) "Reform" to strengthen profitability of revenue-based businesses such as public infrastructure business and maintenance service business, and (3) "Evolving" to expand growth and create new businesses in new business areas by strengthening manufacturing, sales and development capabilities, and developing personnel resources and financial strategies. Furthermore, we feel that we will be able to complete the Medium-term Management Plan 2020 by ensuring that these measures are implemented and actively promoting ESG initiatives based on business activities conducted along themes such as "quality," "safety," "corporate governance," "environment," and "work style reform."



Becoming a Company Indispensable to Society

The "quality" referred to in our corporate slogan "quality connecting the next" is not only about the quality of our products and services. There are two parts that make our quality: "people" and "technology". I believe that the passion and exceptional skill of employees is what will drive the Company going forward.

The "\undersander sha" in our company's name, Meidensha, is a Chinese character meaning "house." It refers to our founder's wish to create a place that brings people who share a determination to "enrich society through the power of electricity." This philosophy remains the same even today as the business continues to diversify and spread its wings throughout the world.

The Meiden Group will keep our founding spirit and determination close to our hearts as we continue to pursue manufacturing excellence looking fifty and even 100 years into the future. In doing so, we aim to be a company that plays a role in creating a sustainable society and is truly indispensable to society.

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Approach to SDGs

Earnestly responding to the expectations of society, including SDGs, and providing value to society through business

Relevance of Meiden Group Business Activities to the SDGs

At the UN Sustainable Development Summit in 2015, the world adopted common goals known as the Sustainable Development Goals (SDGs). The SDGs are challenges the international community is addressing over the 15 years from 2016 to 2030.

The targets of the SDGs are very compatible with the President's CSR Policy Statement and business activities of the Meiden Group. They include many areas where we can contribute to a solution with technologies and expertise we have cultivated over the years. Thus, to really learn and take advantage of the

opportunities and challenges presented by the SDGs, we laid out the effects that our business activities have on the environment and society. This process considered the entire value chain and issues specific to the countries where we do business. It even included any negative impacts of our business activities.

The Meiden Group will continue to pursue manufacturing excellence that benefits society, create value, and help solve social issues that include those addressed by the SDGs.

Status of SDGs Initiatives

Understanding of SDGs

- Organize impact areas in countries where we conduct business and business activities
- · Arrange related initiatives in accordance with each
- Conduct training for management

Identifying priority issues

· Consideration of the connections between business activities and SDGs; establishing areas that contribute to the solution of social issues through our business

Topics

Conducting SDGs Training for Management

In FY2018, we invited outside instructors to give seminars about SDGs (Sustainable Development Goals) for management.

At the seminars, we received instruction on topics such as "Why are SDGs attracting attention?" "The need for companies to work toward SDGs," and "Challenges the Meiden Group is facing to achieve SDGs." These seminars provided an opportunity to share ideas linking SDGs and management through active question and answer sessions.



The Meiden Group's Approach to SDGs

As a heavy electric equipment manufacturer supporting the future of social infrastructure, the evolution of industry, and achieving sustainable growth and development, the Meiden Group contributes to the seventeen goals of the SDGs through all business activities. Furthermore, in order to continue contributing to the SDGs in the future, it is necessary to seriously address the expectations of society and accurately grasp key social

issues as important issues for the company. To do this, we have established areas that contribute to solving social issues through business strategies.

The Meiden Group will continue to actively challenge itself to create new technologies and new value, in order to contribute to the realization of a vibrant and comfortable future society.

Corporate Mission

Illuminating a more affluent tomorrow

We continue to create value and technologies for the realization of a more affluent and environmentally conscious society.

Areas in which we will contribute to the solution of social issues through our business strategy

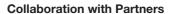














Areas that we will engage in through all business activities

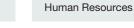
Environment



ESG Issues

















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Special Feature 1: Growth Businesses

Automobile-related Business 1

Aiming to build production systems suited to the market and achieve strong growth in the EV business







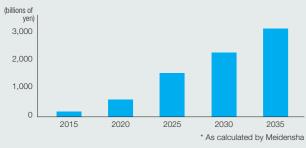


Changes in Environment Facing Automobile Industry and Expanding Electric Vehicle Market

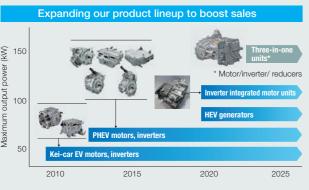
The world's climate change problem and increasingly rigorous environmental regulations are behind the projected growth in demand for EV motors, inverters, and other products. At Meidensha, we see EVs as a growth business.

The electrification and digitalization of automobiles can be thought of as a once-in-a-century revolution. We foresee massive growth for the electric vehicle market and greater demand for smaller, high-efficiency EV motors and inverters. Under Medium-term Management Plan 2020, Meidensha is actively committing resources to this field, aiming to build production systems suited to the market and expand our Automobile-related Business.

Market Forecast for EV Drive System Motors and Inverters (EVs + PHEVs)



Expanding Product Lineup



Raising Production Capacity

EV inverters

Before

After investment

13 **25**

Inverter integrated motor units

Nagoya Works

Numazu Works

Operations beginning in November 2019 (planned)

0 → T

EV motors

KOFU MEIDENSHA ELECTRIC MFG. CO., LTD.

Operations beginning in November 2019 (planned

20 - **37**

EV motors

MEIDEN HANGZHOU DRIVE TECHNOLOGY CO., LTD.

Operations beginning in March 2021 (planned)

0 → 1 10 thousand units/yea

Buildup of EV Component Mass Production Equipment in Japan

Since its founding in 1897, Meidensha has overcome a large number of challenges. In the process, it became known as "Meiden a Motor Company," a reference in part to the industrial motors we made for spinning and threshing machines. Later, Meidensha's motors and the inverters that control them found a wide range of applications and usage environments, including elevators and forklifts. In the process, we developed wide-ranging technologies. Then in 1990, we started developing EV motors and inverters based on those technologies. In 1991, our motors and inverters were used in the IZA EV, which we had jointly developed with Tokyo Electric Power Company, Inc. (now Tokyo Electric Power Company Holdings, Inc.). They were further adopted for use in Mitsubishi Motors Corporation's i-MiEV, the first mass-produced EV. We currently provide motors and inverters for Mitsubishi Motors' OUTLANDER PHEV as well. We have an extensive track record, having produced for over 230,000 vehicles in total.

Presently, our 100% subsidiary KOFU MEIDENSHA ELECTRIC MFG. CO., LTD. manufactures EV motors and our Numazu Works makes EV inverters. However, in July 2018, we decided to pursue an approximately ¥7 billion buildup of EV component production equipment. The buildup, which is spread across three domestic works (Numazu, Nagoya, and Kofu), will help us win new mass production orders.

Through this investment, we plan to add a new EV component production base at Nagoya Works, build mass

production lines, and establish a production system capable of putting out 170,000 inverter integrated motor units yearly. KOFU MEIDENSHA ELECTRIC MFG. CO., LTD., meanwhile, is constructing a new building and adding to its mass production equipment. This will bring its EV motor production capacity to 370,000 units yearly when combined with its existing production lines. Mass production from the equipment implemented at the Nagoya and Kofu Works is scheduled to start in FY2019. The buildup of the EV inverter production equipment at Numazu Works is complete, raising that workplace's production capacity to 250,000 units annually. Mass production began in April 2019.



An inverter integrated motor unit of the kind to be produced at Nagoya Works

Expansion of EV Business Production Base in China

Meidensha founded MEIDEN HANGZHOU DRIVE TECHNOLOGY CO., LTD. as our first EV business production

base outside Japan in May 2019. It is located in China, the world's largest automobile market.

New EV inverter production line at Numazu Works

Construction of its factory will begin in November 2019, with operations scheduled to start in March 2021. EV motors produced here will be delivered to automobile manufacturers in China.

Future Expansion

The EV components produced as a result of the recent capital investments in Japan and abroad will include some inverters that will sell by themselves, but basically the plan is to deliver to finished automobile manufacturers. We are building production systems in Japan and China, and our product lineup will grow to include inverter integrated motor units along with the existing stand-alone motors and inverters. We are currently jointly developing EV components with a number of finished automobile manufacturers and plan to expand the range of our customers.

In doing so, we are taking full advantage of the technological strengths we have earned as a pioneer of EV motor and inverter production. We intend to leverage these strengths to speed up development of new products like three-in-one units, which include speed reducers along with EV motors and inverters. We will also consider additional investments as markets continue to expand. We foresee demand growing for EV components, so we will be bolstering our production systems for those as we aim to expand our EV business.

^{*} Here, "EV" refers to electric vehicles, which includes fully electric vehicles (FEV), plug-in hybrid electric vehicles (PHEV), and hybrid electric vehicles (HEV).

Special Feature 1: Growth Businesses

Automobile-related Business 2

Stepping up our partnership strategy, creating new automobile electrification and digitalization technologies and new value









Building Partnerships That Further Strengthen Products and Systems

Meidensha has greatly contributed to the development of automobile technology, such as by delivering Japan's first electric dynamometer in 1920 and Japan's first chassis dynamometer*1 in 1927. Currently the automobile market is in a time of great transformation, as evidenced by the shift to electric vehicles and autonomous driving. These trends are leading in turn to new events in the development of autos using dynamometer systems, such as the introduction of model-based development.*2 To maintain our position as a pioneer in testing systems during this age of electrification and digitalization, we are collaborating more with outside partners and using our accumulated technologies and experience to create new technologies and value.

Our Medium-term Management Plan 2020 likewise calls for strengthening partnerships, and accordingly we have adopted various measures as described below.

- *1 A vehicle testing system used indoors to simulate a variety of on-road operating conditions for automobiles
- *2 A development technique that runs a virtual simulation of preliminary automobile development and performance evaluation processe

Strengthening Model-Based Development in Partnership with FEV

In March 2019, we formed a business partnership with FEV Japan Co., Ltd., a 100% subsidiary of the German firm FEV Group Holding GmbH (below, FEV). Under this partnership, Meidensha dynamometer systems will be sold that incorporate FEV software. This solution will support the digitalization of design and development through the model-based development of automobiles. As a high-function open program, FEV's software will help make design and development work faster and more efficient. It will allow users to build testing environments that incorporate user models and thereby speed up model-based development of automobile-related products.







In August 2019, we installed this product at our Ota Works, calling it our "Demonstration Bench for Electric Vehicles." We will also use it to provide testing services for our customers and a facility for Meidensha R&D.

Meidensha aims to leverage the synergy of our EV motor and inverter product business and automobile testing equipment systems business to become an engineering manufacturer for the age of electrification and digitalization. By increasing the performance of testing equipment and strengthening simulation and analysis going forward, we will enhance our technological strengths, expand the scale of our business, and create new technologies and new value together with our customers and partners.

The FEV Group, based in Germany, is an engineering firm that develops vehicles as well as engines and power trains for automobiles and the

EV Motor Design Assistance Program Developed with Hokkaido University with Al-based Topology Optimization Method

Using a topology optimization method*3 that taps the power of Al, Meidensha has jointly developed a design assistance program for EV motor with Hokkaido University. Conventionally, the shapes of the magnets and air gaps within a rotor have had to be determined using a combination of designer experience, simulation, and experimental data. With Al, the optimal shapes can be explored and designed automatically. Using the recently developed design program, a designer need only set target motor characteristics and conditions to find the optimal shape. This enables us to provide EV motors that increase riding comfort, lower noise, conserve energy, and otherwise meet customer requirements.

*3 A method that searches for the optimal allocation of a material in a given space to



Designing a motor using the new program







Strengthening the Overseas T&D Business for emerging Asian economies and other markets primed for growth

As populations grow and become urbanized in emerging economies, especially in Asia, these countries are seeing growing infrastructure demand. In the industrialized nations, environmental regulations are growing stricter. Both of these trends present business opportunities for Meidensha. As such, we are bolstering our Social Infrastructure Business with a particular emphasis on the Overseas T&D Business.

Expanding Business in New Markets

Expanding VI Sales in North America

Vacuum interrupters (VI) are made with Meidensha's outstanding vacuum technology. VIs are incorporated into vacuum circuit breakers (VCB) and cubicle-type gas insulated switchgear (C-GIS) that we make, and are also sold as stand-alone products to transmission/distribution equipment manufacturers.

There is growing demand in North America for power distribution equipment incorporating VIs. This is because of demand to replace aging power equipment, to regulate SF₆ gas having powerful greenhouse effect for the sake of the environment, and to reorganize the power system to incorporate decentralized power sources such as renewable energy. As part of this reorganization, microgrids (small-scale power systems) are becoming more pervasive. Microgrids have a function (island mode) to operate independently of the main power grid when there is an outage. This lets them provide electric power to limited local areas. Also, power distribution networks are being established that allow cities and towns to supply electricity to each other during outages. This is boosting demand for distribution equipment for 38 kV and below. In response, the Meiden Group is promoting VI sales more actively in North America, which is a new market to us. Orders taken from this market have risen sharply in the last

Demand in the North American market is expected to grow even further. To promote VI sales, we aim to expand our share from the existing customers and approach new ones in search of orders.

Expanding Business in Emerging Economies of ASEAN

GIS Order from Singapore PowerGrid Ltd

MEIDEN SINGAPORE PTE. LTD., a Singapore subsidiary of Meidensha, won a major order in January 2019 for about 4,000 panels of cubicle-type gas insulated switchgear (C-GIS) for their substations. The order came from SP PowerGrid Ltd. (SPPG), a Singapore power company. The products supplied are being manufactured by MEIDEN SINGAPORE PTE. LTD. and Meidensha's Numazu Works. MEIDEN SINGAPORE PTE. LTD. is also overseeing equipment delivery and installation. SPPG has continued to order substation equipment from MEIDEN SINGAPORE PTE. LTD. since 2005. As our customer, SPPG trusts our quality backed by a long track record and appreciates the advantages that a local manufacturer can provide, such as courteous local support and a stable supply.

The Meiden Group's involvement in the Singapore infrastructure business goes back to 1964, predating the Republic of Singapore's independence. From then until today, the Meiden Group has endeavored to help maintain Singapore's power grid by working for local production of infrastructure equipment for local use. The effort has included setting up a production base in Singapore and maintaining a production system there. We will contribute to the further development of countries and regions around Singapore by using the trust, track record, and expertise we have accumulated from our hub in Singapore to meet the vigorous demand for electric power infrastructure, especially in ASEAN, and provide safe and trusted equipment.



Vacuum interrupters (VI)



High-voltage cubicle-type gas insulated switchgear (C-GIS)

Special Feature 2: Earnings-Base Businesses











Changing our business model with public-private partnerships and boosting earning capacity by increasing productivity

We have placed the Water Treatment and Public Infrastructure Business, the Electricity and Renewable Energy Business, and the Maintenance and Servicing Business in Japan, etc., in the Earnings-base Business group. We are striving to strengthen profitability by reforming business models and improving productivity as the lifespan of facilities, energy conservation, widespread infrastructure services, and public-private partnerships are increasing due to the population decline and local government financial difficulties.

Development of Algorithm to Optimize Power Distribution Networks and Minimize Their Loss, with Tohoku University

In July 2019, Meidensha, in collaboration with Tohoku University, developed a new algorithm that simultaneously calculates the optimal network configuration and a procedure for switching to the configuration. In the Electricity Systems Reform, Japan will start separating power generation from distribution and transmission in 2020. Some of the challenges that have surfaced are the need to lower wheeling costs and deal with the increasing complexity of the power distribution network as more distributed generators, like photovoltaic generation systems, come online. The recently developed algorithm enables the user of a commercially available desktop computer to choose the optimal network configuration from an astronomical number of choices and calculate more than 100 switching procedure steps in 1 to 15 seconds, and often much faster. Our estimates indicate that when applied to a standard model of Japanese power distribution networks, the algorithm could yield an approximately 0.79% reduction in power distribution loss (based on electricity demand data at 10 p.m.). For Japan as a whole, that corresponds to about 13.7 GWh less loss annually (enough to power 3,800 typical households) while reducing CO₂ emissions by 6,800 tons each year.

Going forward, we will propose the algorithm as a tool to support the operation and management of power distribution systems for power transmission and distribution services and aim to make a commercial version available in future.

Meidensha, Hiroshima City Study Technology Using AI to Automate, Save **Labor in Sewage Treatment Plant Operation**

Technology proposed by Meidensha, Hiroshima City, and NJS Co., Ltd. has been adopted as part of the FY2018 Breakthrough by Dynamic Approach in Sewage High Technology (B-DASH) Project, which is sponsored by the Ministry of Land, Infrastructure, Transport and Tourism. Now it is part of a feasibility study on practical application to automate operations and save labor at sewage treatment plants with Al. The project accumulates and analyzes such input data as operation records, water quality analysis, images of sewage treatment, and anomalies when breakdowns happen. It uses Al to present output estimating set variables for how best to respond as it aims to make operations automatic and more efficient. By visualizing how experienced engineers behave and think during the course of operations, the technology could make it easier to hand down their expertise. It also has the potential to detect anomalies that go unnoticed when humans

operate systems and to realize new operating methods that could, for example, discover phenomena related to the cause of the anomalies



Monitoring/control room at a sewage treatment plant

ISO 55001 certification earned

Anticipating outsourcing of water supply and sewerage infrastructure to private sector

In September 2018, MEIDEN FACILITY SERVICE CORPORATION obtained the ISO 55001 certification, an international asset management system standard. Its certification covers comprehensive consignment of business operations and maintenance and technological proposals in the sewerage sector. In November 2018, Meidensha and MEIDEN AQUA BUSINESS CORPORATION jointly obtained the ISO 55001 certification covering comprehensive consignment of business operations and technological proposals in the water supply and sewage sector. Social infrastructure built during and after Japan's high economic growth is rapidly aging. With that in mind, more operators are turning to asset management to appropriately maintain, manage, and update their water supply and sewerage

The ISO 55001 certification could become a prerequisite for submitting a bid for projects in future. Meidensha and MEIDEN AQUA BUSINESS CORPORATION expect the certification will boost opportunities for them to win more









Using years of accumulated technologies and experience to create business for new growth

We are leveraging the technologies and experience cultivated by the Meiden Group over our long history as a foundation for nurturing "New Growth Businesses." Such businesses include the Ceramic Flat-sheet Membrane and Semiconductor-related Businesses. In these areas, we are breaking into new markets and developing new products.

Establishing Deposition Technology with Pure Ozone

In April 2018, jointly with the National Institute of Advanced Industrial Science and Technology (AIST), we established the world's first room-temperature deposition technology using a source gas (one used as a material for oxide film) along with OER processing technology* that uses 100% pure ozone from Meidensha's pure ozone generator (AIST and Meidensha have jointly applied for the patent). This makes it possible to put deposits on films that are vulnerable to heat damage.



Additionally, in May 2019, we established atomic layer deposition technology with extremely low vapor permeability

(patent jointly applied for). It can potentially be applied in a wide range of fields going forward, including sealing of semiconductors and displays and modification of automobile windshields.



*OER processing technology:

Meidensha's proprietary technology that causes a reaction between ethylene gas and high purity ozone gas from Meidensha's pure ozone generator to generate highly active hydroxyl (OH) radicals at room temperature (Meidensha has applied for patent). This technology makes it possible to reform, deposit films on, and cleanse organic materials (non-metals) at room temperature

Development of Cold-Cathode X-ray Tube Using Carbon Nanostructures Completed

Meidensha has successfully commercialized a cold-cathode X-ray tube using carbon nanostructures by combining Meidensha's vacuum technology with cold-cathode X-ray technology from the National Institute of Advanced Industrial Science and Technology (AIST). This tube is the component of X-ray inspection devices that generates the X-ray. Compared to conventional hot-cathode X-ray tubes, the new technology can be more energy-efficient and made smaller and lighter. Thus, inspection system in turn can be smaller and lighter. A more compact system could lead to the expansion of

applications to the non-destructive inspection market in the field of infrastructure, such as plant piping inspections, and is likely to be used for applications like baggage inspection at stations and event venues.



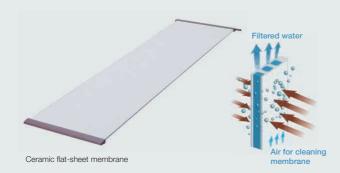


Cold-cathode X-ray Tubes with Carbon Nanostructures

First Order Received for Ceramic Flat-Sheet Membranes for Siemens PACT® MBR* **System**

In October 2018, we received an order from Siemens for ceramic flat-sheet membranes for wastewater treatment. The ceramic filter product, used for cleaning soiled water and wastewater, is being supplied to a petrochemical complex in China. This is the first order Meidensha has received from Siemens since that company agreed in December 2016 to use Meidensha's ceramic flat-sheet membranes in its new PACT® MBR system technology. The PACT® MBR system is a new wastewater treatment system. It combines activated carbon, bioremediation, and membrane filtration into a very compact form. Ceramic flat-sheet membranes have been selected for use in the PACT® MBR system because of their highly durable. abrasion resistant, and long service life characteristics compared to conventional polymeric membranes typically used in membrane bioreactors.

(Powered Activated Carbon Treatment Membrane Bioreactor)



Foundation for Creating **Value**





ESG at the Meiden Group

ESG initiatives are the foundation of sustained growth at the Meiden Group and the very embodiment of the Meiden Group Corporate Philosophy.

The Meiden Group's Approach to **Strengthening ESG**

The Meiden Group Corporate Philosophy is as follows: "We seek to delight customers by offering high quality products and services to help solve their problems. Through these business activities, we aim to fulfill our corporate social responsibility (CSR) by proactively solving global environmental problems and other social issues and helping achieve a more affluent future. We must continually tackle these challenges."

The President's CSR Policy Statement sets out three key issues for the Meiden Group to address: environment, society, and human assets (resources). By taking on these three key issues, with initiatives built on the fundamental management elements of "compliance," "corporate governance," and "risk management," we ensure our sustained growth and offer value to society through our business.

Reasons Why ESG Initiatives Increase Corporate Value

Increased corporate value leads to sustained growth and is a positive thing for all stakeholders. Employees are treated better and thus more satisfied, while other outcomes are good relations with business partners, greater customer satisfaction, and returns to our shareholders and investors.

Increase in sales and prots / Reduction in costs

Creation of business opportunities

Business risk avoidance and reduction

Strengthening trust in stakeholder relationships / brand image improvement

Increase employee loyalty / Build up technology, experience and expertise

Society

Provide values needed by society

We accept our responsibilities as good corporate citizens through many initiatives, including: resolution of customer issues; promotion of community involvement and proactive communication; proper information disclosure at the correct time, etc.

Social G **Environment** Governance

Human Resources

Produce work that gives pride to our employees and creates positive working

We will tackle these issues: create a positive working environment that brings out the best potential and unique talents of each employee; promote better work-life balance; and develop abundant and diverse talent, as human resources are precious to the Group.

Environment

Promote strategic environmental management

We contribute to society through the offering of products and services for the environment and energy. At the same time, we will work to reduce the environmental impact of our business activities.

Compliance, Corporate Governance, **Risk Management**

Management foundation of our business activities

By strengthening these building blocks of management foundation, we hope to further cultivate the corporate culture necessary for CSR management.

ENVIRONMENT

Environment

Environmental Vision

As a medium-term guideline to assist us in advancing environmental management, the Meiden Group has formulated an Environmental Vision that indicates the stance that we should adopt and the appropriate direction for our environmental activities. We seek to contribute to the realization of a sustainable society by means of the reduction of the environmental impact resulting from our business activities and the deployment of the business activities, products, technologies, and services that we have developed to date in the fields of energy and water treatment to support social infrastructure.

Our Environmental Vision identifies the mitigation of climate change, the building of a recycling society, and the conservation of biodiversity as the missions of a 21st century company, and establishes targets for how we should perform in our business activities and what we should aim for in our products. We work to implement environmental management with a corporate culture that highly values the environment as the foundation that helps us to achieve these targets.

Deployment of Action Plans



Medium-term Management Plan 2020, an Action Plan for FY2018-FY2020

Strategic Targets	Actions	Corresponding "Environmental Vision"
	Expand businesses that contribute to the environment	
Contribute to environment through products and services	2) Promote environmentally conscious design	
producte and correct	3) Manage chemicals in products	
	1) Reduce greenhouse gas emissions	A ANTICOLIC CITY OF COLUMN
	2) Manage chemicals properly	A. Mitigating Climate Change
Reduce the environmental impact of business operations	3) Promote the 3Rs (reduce, reuse, recycle)	B. Realize a recycling society
240	4) Maintain water resources	b. Healize a recycling society
	5) Maintain biodiversity	C. Conserve biodiversity
Promote environmental communication	1) Disclose information, conduct PR	
3. Promote environmental communication	2) Contribute to sustainable society	
4. Improve employees' environmental	Strengthen management of Meiden Group companies	
awareness	2) Strengthen value chain management	
5. B. (Develop environmental management personnel	D. Foster a corporate culture that
5. Reform environmental awareness	2) Conduct environmental training and awareness raising	highly values the environment

Targets that Express Our Environmental Vision

A. Mitigating Climate Change

- Ontribute to the reduction of CO₂ emissions through the sale of energy-related products and systems (i.e., products for renewable energy resources, etc.)
- $\ensuremath{\mathbf{2}}$ Promote environmentally conscious product design and reduce CO_2 emissions in the product life cycle.

B. Conserving Resources (Building a Recycling Society)

- Promote the 3Rs (Reduce, Reuse and Recycle) of waste materials in the various stages of the product life cycle.
- 2 Promote zero emissions of waste products from our production activities.

C. Conserving biodiversity

- Contribute to securing water resources through our water processing systems husiness
- 2 Conduct risk management on chemical materials and promote the reduction of very risky hazardous chemical materials, as well as initiatives to find alternative materials on a basis to reduce or replace harmful chemicals.

D. Foster a corporate culture that highly values the environment

- Promote environmental communication: Actively disclose our environmental activities and results and promote two-way communication with our stakeholders.
- ② Foster environmental awareness: For mitigating Climate Change, increase environmental literacy to promote environmentally conscious R&D and product development and cultivate the Group's individuals who actively perform local community and social contribution programs by acting on their own initiative.

Strategic Environmental Management

FY2019 Environmental Targets (Japan)

Strategic Targets	Actions	FY2019 Environmental Targets (Japan)	
Contribute to environment through products and services	Promote environmentally conscious	Contribute a 800,000 t/year reduction in CO ₂ emissions by ECBs	
	design	Reduction in emissions over the life cycle of new products (specific areas)	
	Reduce greenhouse gas emissions	Total emissions (Scope 1+2): -2% (compared to FY2017)	
	Manage chemicals properly	VOC emissions: 80 tons or less	
Reduce the environmental impact of business operations	B	Total wastes: -1% (compared to FY2017)	
	Promote the 3Rs	Zero emissions*1 at 9 sites*2	
	Conserve water resources	Measure and analyze water data: 4 main manufacturing sites*3	
	Conserve biodiversity	Conservation of ecosystems: 4 main manufacturing sites*3	
Promote environmental management	Strengthen value chain management	Green procurement rate (as measured by Meidensha's standards): 85% or greater	

^{*1} Meiden Group definition of zero emissions: To achieve a non-recycling rate of less than 1.0% of the total volume of waste (including industrial waste, general waste, and saleable waste, but excluding construction sludge, etc.).

Risk Management

The Meiden Group has appointed a Enterprise Crisis Management Committee (CMC) to respond cross-organizationally to risks to the survival of our businesses. Working through the CMC, the Meiden Group Environmental Committee collaborates with various other committees concerned with compliance, security trade control, information security, quality, product technology, safety and health, pandemics, and more.

The Meiden Group identifies environment-related risks and opportunities and implements a variety of initiatives.

Responding to Environmental Risks and Opportunities

Phenome	na (issues) Related to Environment	Risks	Opportunities	Carrying Out Initiatives
Government (political) Laws and Regulations	Revision of Feed-in Tariff Scheme for Renewable Energy Deregulation of electric power industry, revision of power supply structure Flow of processes to implement carbon pricing Energy conservation regulations & standards (business operations, products) Stronger regulations on hazardous chemical substances	Short-term cost increases Rising cost of energy increases our costs (procurement, shipping, manufacturing, scrapping, etc.) directly and indirectly. Decline of product competitiveness It will get harder to sell products that do not meet environmental regulations and standards. We will lose share if we cannot	Growth of new markets Markets for products and services related to renewable energy and energy conservation are growing. Differentiation with environmentally conscious products Being among the first to bring products that meet regulations, etc., to market and offering low-	Expand products' contribution to the environment Expand sales of products related to renewable energy and energy conservation (wind, hydroelectric, and solar power equipment, EV/PHEV electric equipment, transformers, motors, inverters, etc.) Develop environmentally conscious products, implement new technologies (which are more compact, lightweight,
Economy	Expanded ESG investment Price competition (low cost, premium pricing)	meet the needs of a market looking for environmentally conscious products.	environmental impact products and services make us more competitive.	efficient, energy-conserving, etc.) Diversify financial assets Issue green bonds, etc.
Society	Spread of responsibility to entire value chain (upstream and downstream) Improvement of employment / labor conditions	Decline of corporate value Our image, evaluations (credit ratings, etc.), and share prices will decline if our business is	Better business performance through environmental management By running businesses that help advanced to the performance of th	Reduce the environmental impact of business operations Promote energy conservation (capital investment, visualization, etc.)
Technology	Enhanced efficiency of electric power conversion Advancement of ICT, IoT technology Development of new energy / alternative energy technology	will decline if our business is not seen as environmentally conscious. Increase of local disasters Flooding and other disasters can stop operations and cut the supply chain.	solve environmental issues, we can enhance our corporate value and business performance. Responding to natural disasters Demand for flood control and	Promote the 3Rs, eliminate harmful chemicals Maintain water resources, consider biodiversity Improve business efficiency Promote Smart Work, etc.
Reputation / Needs	Demand for information disclosure (accountability) Lifestyle changes (ecology-oriented)	supply chain.	disaster prevention and response (e.g., securing the power supply) is rising.	Promote Smart work, etc. Promote environmental management Promote business risk management Strengthen value chain management
Natural Environment	Changes of temperature and precipitation volume Increase of local disasters (sudden downpours, tornadoes, etc.) Ecosystem irregularities (increase of organisms that carry infectious disease)			Practice environmental communication (information disclosure, etc.) Deploy infrastructure-support product during disaster (emergency power supply equipment, mobile power supply cars, UPSs, remomonitoring systems, etc.)

^{*2} Scope of zero emissions initiatives: manufacturing sites in Japan (Numazu Works, Ota Works, Nagoya Works, KOFU MEIDENSHA ELECTRIC MFG. CO., LTD., MEIDEN CHEMICAL CO., LTD. (Sagami Works), HOKUTO DENKO CORPORATION (Atsugi Works)), Engineering Service Business Units and two Construction Service Business Units

^{*3} Main four manufacturing sites: Numazu Works, Ota Works, Nagoya Works, and KOFU MEIDENSHA ELECTRIC MFG. CO., LTD.

FY2018 Environmental Targets and Results

Following is a summary of how well we achieved our targets for FY2018. We are examining further measures based on our target achievement status and will incorporate this information into future plans.

FY2018 Environmental Target Achievement Status (Japan	1)

(
Targets	Actions	FY2018 Targets (Japan)	FY2018 Results	Achievement	
)	design	Contribute a 800,000 t/year reduction in CO ₂ emissions by ECBs	841,000 t/year	0	
through d services		Increase percentage of Green Products (as measured by Meidensha's standards)	21 Green Products	×	

contribute to environment through products and services	Promote environmentally conscious design	Contribute a 800,000 typear reduction in CO ₂ emissions by ECBs	841,000 t/year	O
		Increase percentage of Green Products (as measured by Meidensha's standards)	21 Green Products	×
	Reduce greenhouse gas emissions	Total emissions (Scope 1+2): -1% (compared to FY2017)	-18% (compared to FY2017)	0
	Manage chemicals properly	VOC emissions: 80 tons or less	96 tons	×
Reduce the environmental impact of business operations		Total wastes: -1% (compared to FY2017)	+4% (compared to FY2017)	×
	Promote the 3Rs	Zero emissions*1 at 9 sites*2	Achieved at all 9 sites	0
	Conserve water resources	Measure and analyze water data: 4 main manufacturing sites*3	Extension of flowmeters, etc.	0
	Conserve biodiversity	Survey of ecosystems (plants, etc.): 4 main manufacturing sites*3	Conducted at each site	0
Promote environmental management	Strengthen value chain management	Green procurement rate (as measured by Meidensha's standards): 80% or greater	85%	0

- *1 Meiden Group definition of zero emissions: To achieve a non-recycling rate of less than 1.0% of the total volume of waste (including industrial waste, general waste, and saleable waste, but excluding construction sludge, etc.).
- *2 Scope of zero emissions initiatives: manufacturing sites in Japan (Numazu Works, Ota Works, Nagoya Works, KOFU MEIDENSHA ELECTRIC MFG. CO., LTD., MEIDEN CHEMICAL CO., LTD. (Sagami Works), HOKUTO DENKO CORPORATION (Atsugi Works)), Engineering Service Business Units and two Construction Service Business Units
- *3 Main four manufacturing sites: Numazu Works, Ota Works, Nagoya Works, and KOFU MEIDENSHA ELECTRIC MFG. CO., LTD.

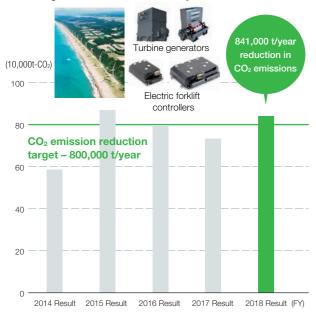
Promoting Business that Contributes to the Environment ("Eco-contributing **Businesses**" (ECBs))

The Meiden Group aims to benefit the environment by using renewable energy like solar, wind and hydroelectric power and by supplying products and services that are more efficient and thus energy saving.

In FY2018, we aimed to provide environmental contribution (the expected curbing effect of CO₂ emissions from products sold) of about 800,000 t/vear. We increased shipment of electric vehicles and transformers and high-voltage inverters for the overseas market, enabling us to achieve our target for the fiscal year, reaching emissions reductions totaling 841,000

Reducing CO₂ Emissions Caused by Products

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Development of Environmentally Conscious Products

Any time we develop a new product, we evaluate it for energy and resource conservation, recyclability, environmental safety, and more, based on our Product Environmental Assessment Standard. If a product meets those standards, we certify it as a Meiden Green Product.

Legend: Achieved And Achieved (better than previous year) × Not achieved

For the evaluation item "consideration of lifecycle," we calculate CO₂ emissions according to a life cycle assessment (LCA), and we encourage environmentally conscious design in order to reduce CO₂ emissions.

A Meiden Green Product registered in FY2018

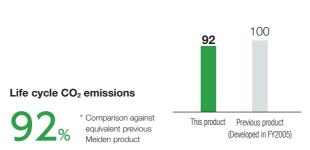
[Product] MEIDACS II Measurement Control System

MEIDACS II is a measurement control system that is used when testing automotive parts. It improves functionality through human centered design, improves operability by using the docking window method, and enables efficient work.

Compliant with the WLTP*1 standard.

This product has the following advantages over its predecessor (MEIDACS DY 6000P).

- •13% saving in power consumption through a highperformance multi-core CPU
- Improved maintainability through front-access maintenance
- *1 WLTP: Worldwide harmonized Light vehicles Test Procedure



Climate Change Countermeasures

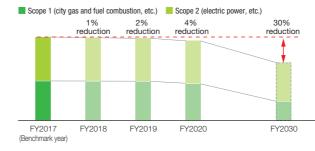
The Meiden Group aims to reduce greenhouse gas emissions from business activities by 30% by FY2030 (compared to FY2017 levels).

This target was determined using Science Based Targets (SBT) in conformity with the Paris Agreement*2. We work for with stakeholders in the Meiden Group's supply chain, including customers and business partners, to set common objectives for the challenges we share.

Under the Medium-term Management Plan 2020, our targets for FY2018, FY2019, and FY2020 are reductions of 1%, 2%, and 4%, respectively (compared to emissions in Japan in FY2017). These steps were decided to help us achieve our aims for 2030. We will periodically revise those

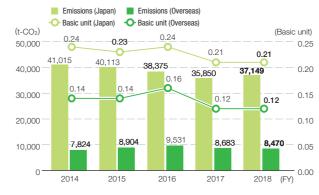
*2 Paris Agreement: A new framework for tackling global warming from 2020, adopted by the 21st Conference of the parties (COP21) to the UN Framework Convention on Climate Change.

Amount of Greenhouse Gas Emissions from Business Activities



To address emissions stemming from energy consumption, we are working thoroughly to conserve energy through production streamlining, capital investments, etc., and converting to renewable energy. In addition, we are practicing strict control and making technological innovations to address direct emissions of GHGs like SF₆ gas.

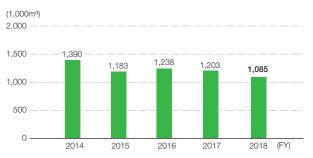
Amount of CO₂ Emissions from Energy Sources



- * The electric power CO₂ coefficient used was the CO₂ emissions coefficient proposed by the Flectric Power Council for a Low Carbon Society. For figures through FY2017. we used the adjusted factor for each fiscal year; for FY2018, we used the adjusted
- * For the factor for electricity usage in each overseas country, we used the average values from 2010 to 2012 as stated in CO2 Emissions from Fuel Combustion (2014 Edition) issued by the International Energy Agency (IEA). For fuel oil and fuel gas, we used the emissions factors for each country published in the Greenhouse Gas Protocol Initiative (GHG Protocol).
- Basic units are emissions (t-CO₂) divided by net sales (million yen).

Reducing Water Consumption

We are concerned about the possibility of water leaks from buried water supply pipes on factory grounds as our facilities age. We are systematically updating pipes and placing more pipes above ground for easy maintenance and inspections.



* Water usage volume includes tap water, water for industrial use, and ground water

Topics

Issue of Green Bonds

In July 2019, we issued green bonds through public offering for the purpose of funding mass-production equipment for Motors and Inverters for Electric Vehicles.

In June 2018, Meidensha pledged to reduce greenhouse gas emissions by 30% by FY2030 (compared to FY2017 levels) and as part of the the First Meiden Environmental Vision and we are promoting reduction of environmental impact. Furthermore, we understand that contributing to the achievement of sustainable development goals (SDGs) is a major management issue facing the Company and we are promoting the environmental contribution business by rolling out environmentally conscious products and services.

By issuing green bonds, we plan to expand our capital procurement resources and deepen the understanding of a wide range of stakeholders regarding our active environmental initiatives.

	[Meidensha Green Bonds] Outline
Name of bonds	Meidensha Corporation 2 nd Series Unsecured Straight Bond (with pari passu agreement limited to corporate bonds) (Green Bonds)
Also known as	Meidensha Corporation Green Bonds
Maturity	5 years
Total amount of issue	6.0 billion yen
Coupon rate	0.26%
Issue price	100 yen for each 100 of corporate bonds
Date of issue/date of maturity	July 23, 2019 to July 23, 2024
Redemption method	Bullet payment at maturity
Subscription method	Open invitation
Security/guarantee	Unsecured and non-guaranteed
Rating	BBB+ (Japan Credit Rating Agency, Ltd./Rating and Investment Information, Inc.)
Use of proceeds	To provide partial funding of enhancement of mass- production facilities for electric vehicle components
Lead managing underwriter	SMBC Nikko Securities Inc.
Green Bond Structuring Agent	SMBC Nikko Securities Inc.
Principles with which to confirm compliance	Climate bond standard version 2.1 Low Carbon Transport (Land) Standard Version 1.0 (CBI) Green Bond Principles 2018 (ICMA) Green Bond Guidelines 2017 Edition (MOE)
Please refer to the w	ebsite for specific details about Meidensha Green Bonds.

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SOCIAL



Human Resources

Basic Approach

As issues facing our customers and society as a whole become increasingly complicated and unclear, it is important to have personnel with the abilities to think flexibly and act courageously, creating the value necessary to solve these issues in order to enhance corporate competitiveness. For this reason, we are determined to achieve sustainable growth by focusing on employing and developing competent personnel and creating an environment where each person can derive pride and fulfillment from their work.

In order for the employees to maximize their abilities, it is important to promote diversity management and create a workplace in which a diverse range of employees can participate with a healthy mind and body. Specifically, by engaging as a group in initiatives such as achieving a work-life balance, and improving occupational health and safety, we will enhance the corporate value for the entire group.

Plan and Targets

We implement many training programs to encourage employee growth in different aspects as employees, members of society, and professionals. As the business environment under Medium-term Management Plan 2020 becomes increasingly unclear, we are focusing on creating the value necessary to solve these issues in order to enhance corporate competitiveness and training personnel to think flexibly and act courageously.

Furthermore, as development of global operations accelerates, there are increasing opportunities for technical collaboration, etc., with foreign companies, as well as working with people with different viewpoints or abilities.

Promotion of Respect for Human Rights

Human Rights Education for Officers and Employees

The entire Meiden Group understands international norms (Universal Declaration of Human Rights and International Bill of Human Rights) and is working to conduct education activities focused on human rights, with the aim of ensuring "respect for human rights," which is listed in the Meidensha Corporate Code of Conduct.

We conduct periodic group training and video educational activities, relating to compliance and harassment for all Group employees and improve understanding and awareness by providing opportunities for individuals to reexamine their workplace and views.

With regard to mental health, we conduct education as part of our level-dependent education in the second year after joining the company, and we are reinforcing our efforts in relation to younger employees.

Promoting Diversity Management

Even though we are in an age of changing business models and technical innovation, personnel remain an essential part of business growth. We believe that creating an environment where diverse personnel can participate and providing opportunities for that participation is the key function of businesses. We value each individual employee and actively promote diversity to enable diverse working styles without concern for the age, gender, nationality, or culture of workers, in order to maximize the abilities of each individual and be a company that is fulfilling and conducive to work.

Promotion of Opportunities for and Participation by Female Personnel

Meidensha is renowned for promoting female participation in the workplace, and in November 2017, we received the grade 3 Eruboshi mark, which is the highest level.

Going forward, we will formulate an action plan in accordance with the intent of the Act on the Promotion of Women's Participation, and promote policies such as the promotion of accessing childcare leave for men and actively hiring and training female technology-related staff.



Promotion of Participation by Foreign Employees

As an aspect of promoting diversity, the Meiden Group hires employees irrespective of nationality, and these workers participate in various fields, including sales, development and design after joining the Company. Also we provide various kinds of support to help foreign employees quickly adjust to the work and lifestyle in Japan, as well as tailored support to improve work skills with a personal development manager assigned to each individual, etc.

Work Style Reform

Rolling Out "Smart Work 2020"

—Working towards a reduction in annual total hours worked—

Under the previous medium-term management plan, the Meiden Group started an initiative to reduce total actual working hours per year as part of Smart Work V120. Under Medium-term Management Plan 2020, we will enhance initiatives aimed at production efficiency to promote productivity reform activities, increase business efficiency through Robotic Process Automation (RPA), etc., and utilize telework, etc., to achieve flexible work styles, based on the reflection on the results of V120, under the banner of Smart Work 2020.

Smart Work 2020 Vision and Targets

We will achieve work styles based on legal compliance by reviewing and reforming work styles, themselves, and eliminating working on holidays and excessive overtime on business days.

People that worked 80 hours of overtime per month	People that worked 720 hours of overtime per year	Average days of paid leave taken	Average hours of overtime	Annual total hours worked
Zero	Zero	20 days per person per year	24 hours per person per month	1,950 hours per person

Support for Flexible Work Styles

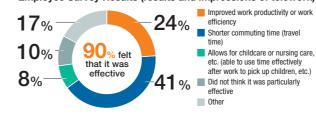
Meidensha instituted work from home and satellite office systems in FY2015 as options to achieve a balance between work and childcare, etc., and increase productivity. In FY2018, we participated in Telework Days, which is promoted by the Ministry of Internal Affairs and Communications and

other relevant ministries and agencies in order to ensure further uptake and expand the user base. A total of 369 Meidensha employees took part over the three-day period of July 23 to 25.



The renovated Numazu satellite office

Employee Survey Results (results and impressions of telework)



HR Development

Development of Personnel that are able to Implement and Promote Our Business Strategy

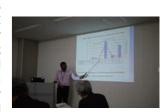
In FY2018, we established the Meiden Youth Academy in order to enhance technical education for young employees. In the past, we conducted technical education for technical employees; however at Meiden Youth Academy, we provide opportunities to gain fundamental knowledge about electricity, which is essential to understand Meidensha's products and technologies, for all workers in their first three years at the company, irrespective of whether they are in a technical or administrative role.

Furthermore, in FY2019, Meidensha newly established the Career Development Management Program for the purpose of systematically and strategically developing the next generation of personnel. We aim to conduct initiatives such as sending young and mid-level personnel to attend business school and conducting professional exchange for people in different business units and develop personnel that can think and act with a broad perspective and outlook that exceed the bounds of their areas of specialty and roles.

Occupational Safety and Health

Since FY2017, the Meiden Group has provided opportunities to share information and exchange opinions about occupational safety and health management, and we hold conferences for the Meiden Group's safety and health and health management managers for the purpose of raising the management level and fostering unity throughout the entire Group. The second conference, which was held in November 2018, was held at the Numazu Works, and participants exchanged opinions about safety and health, participated in factory observations, and experienced safety experience education. On this occasion, we

also invited safety managers from MEIDEN SINGAPORE PTE. LTD., which is our Singapore subsidiary, to talk about overseas health and safety, which provided an opportunity for us to broadly learn about worksites and safety and health initiatives at an overseas subsidiary.



Conferences for the Meiden Group's safety and health and health management

Promoting Health Management

Health Promotion: Aiming to Maintain and Improve the Health of Employees

The President's Safety and Health Management Policy states that "nothing is more valuable than good health," and the Meiden Group is conducting measures and implementing a system to improve the health of employees. We have followed up employees that receive comments in their periodic health examination results and conducted initiatives such as mental health measures, health management of workers that work long hours, and various forms of health education on an ongoing basis. In order to further enhance these initiatives, we drafted the President's Health and Wellness Management Policy Statement and commenced its implementation in FY2019.

Furthermore, in order to realize the Meiden Group's corporate philosophy of "illuminating a more affluent tomorrow," it is important for employees to maintain their physical and mental health and work with vigor and purpose. We are promoting activities as an organization to support the health of each individual such as sharing the belief that "nothing is more valuable than good health" with all employees and actively supporting employees' own health activities. Through these activities, we are working to become a company that enables employees and their families to live a vigorous and healthy lifestyle.

Quality Management

Supply Chain Management

Basic Approach

The Meiden Group must continue contributing to the solutions of customers' problems by providing high-quality products and services at all times, in order to continue to be relied on and chosen by customers and society. To do this, it is important that we implement the following three things: "initiatives to improve quality," "promoting initiatives to collect customers' needs," and "developing human resources to support the supply of high-quality products." As our customers' partner, the Meiden Group aims for all employees to listen to customers, act quickly, and improve quality, in order to increase customer satisfaction.

Plan and Targets

Under Medium-term Management Plan 2020, we will promote initiatives to improve quality with the quantitative target of reducing the number of defects and the cost of rectifying defects by half in comparison with 2017 results and contribute to increased profits by increasing customer satisfaction and reducing unnecessary costs.

Initiatives to Improve Quality

The Meiden Group has determined items that need to be managed from the perspectives of "no defective unit accepted" "no defective unit made here" and "no defective unit shall leave here" in order to improve quality in each internal process, such as development, design, manufacture, testing, and inspection, including purchasing parts and materials, etc., from affiliates, and we conduct activities accordingly.

Promoting Initiatives to Collect Customers' Needs

In order to provide products and services that satisfy our customers, we are gathering and analyzing the needs of our customers on a daily basis, including information and requests provided by customers, complaints, and market trends, and implementing activities that lead to concrete actions such as proposing solutions, developing new products, and engaging in servicing and various improvement activities.

In development, sales, engineering, manufacturing, and local construction departments that have contact with customers, we work to improve our activities through the PDCA cycle, by reviewing and evaluating tasks being conducted at each department, creating a plan for the next fiscal year in each fiscal year, and conducting self-evaluation of the results of activities.

Furthermore, we will revitalize CS activities through increasing the efficiency of information transmission by rebuilding our system to collect information on customers' needs and through the activities of the Company-wide Committee.

Developing Human Resources to Support the Supply of High-quality Products

In order to increase all employees' awareness of quality and impart basic knowledge of quality management, we conduct education relating to quality management technology for all employees that are involved with manufacturing, even if they are not directly connected to the Production Business Unit. We conduct training that includes drills relating to the role of quality management, how to promote reform, seven tools for quality control, analysis based on the five whys, preventing human error, and preventing defects and recurrence, etc., for each level of employee such as new employees and group leaders. We are in the process of rolling out the curriculum for Japanese and overseas subsidiaries.



Training scene

Technical Skills Maintenance Training for Safety and Security

At the technology center adjacent to Numazu Works, we conduct training programs for workmanship and technical skills maintenance engineers. We raise engineers who contribute to the stable, safe, and efficient operation of customers' equipment through practical training using real equipment.

Instructors are veteran engineers with extensive real-world experience and the curriculum is formulated to allow participants to touch and experience actual equipment, such as extra high-voltage and high-voltage receiving substation equipment, computers, power converter equipment, generators, and rotating machinery. Maintenance training is conducted each year for customers to whom Meidensha's products have been supplied. Participants deepen their understanding of the internal composition of machinery through cross-sectional models of products, and gain experience of actually operating disconnecting switches and circuit breakers, testing protective relays, and using generating equipment and inverters, etc.



Technical training (high voltage inverter)

Basic Approach

It is important to build equal and fair relationships that allow for mutual growth with suppliers, in order to provide better products and services to customers consistently. On the other hand, while procurement risks in the supply chain become greater as globalization of businesses and business activities continues, it is necessary to identify potential risks in advance and to minimize them.

The Meiden Group is working to build good partnerships with suppliers and a sound and strong supply chain, by promoting "CSR activities involving the entire supply chain and risk evaluation," "communication with business partners," and "enhancing group procurement systems."

Plan and Targets

The Meiden Group promotes enhanced supply chain management based on the basic policy of Medium-term Management Plan 2020.

We are working to conduct fair and impartial transactions, and to improve CSR further while strengthening partnerships to help business partners understand the importance of promoting CSR in the supply chain.

We are continuing activities to support the acquisition of EMS certification by our business partners and supporting CSR promotions such as through follow-up education after EMS certification has been acquired and education concerning information security measures.

Promotion of CSR that Involve the Entire Supply Chain and Risk Evaluation

Evaluation of Suppliers

We convey the importance of CSR and our philosophy to our business partners, including legal compliance, environmental protection, and community contribution, which are the basic policies of the procurement section. In addition to quality, delivery date, price, technological development proficiency, and environmental certification, etc. we evaluate our business partners' social responsibility for the risks of environment and social issues such as human rights and labor, fair trade principles, social contribution, environmental conservation, and management of chemical substances. Through this evaluation, we work to gain an understanding of business conditions relating to social issues such as climate change, biodiversity, environmental management, human rights, and working environments, and then to identify suppliers which have a high-risk.

We conduct appropriate, fair, and impartial procedures for all business partners through surveys relating to CSR promotion and environmental conservation activities at the time of the first transaction. Furthermore, we evaluate suppliers through our business partners evaluation system and issue a score card each year based on the results.

Promoting Communication with Business Partners and Activities to Reduce Environmental Impact in the Supply Chain

Holding Meidensha Partners Meetings

We recommenced Meidensha Partners Meetings in FY2019 in order to enhance two-way communication with Business Partners and strengthen relationships. The President gives messages to business partners concerning future Meidensha policies, and awards to praise the assistance and contribution towards business activities and production activities. We appreciate them face-to-face, and reward exceptional activities and results.





President's message

Companies that received awards in FY201

Promoting and Supporting Eco-Action 21 Certification and Registration

In FY2018, we held a study group for the Eco-Action 21 environmental management system (greening program) for small and medium-sized enterprises without environmental management systems, which is endorsed by the Ministry of the Environment, in the Meiden Group's four regions, for the fourth consecutive year, and we promoted and supported certification and registration. As a result, 16 participating business partners received certification, and a ceremony to confer certification and registration certificates was held at each production location. (A total of 90 suppliers have an EMS and hold Eco-Action 21 certification.)

Also, we conducted follow-up education and individual visits for the 74 companies that had received certification up to 2017, and created opportunities for discussing and sharing information with educators.

We will continue providing support for our business partners in relation to Eco-Action 21 certification and registration activities, and aim to spread environmental management systems and environmental improvements throughout the entire value chain.



Follow-up education in the Numazu district

GOVERNANCE



Message from the Chairman of the Board of Directors

We aim to continually increase our corporate value by strengthening governance both offensively and defensively.

My Duty as the Chairman of the Board of Directors

The chief duty of the Board of Directors is to make important management decisions and oversee the execution of business operations. As Chairman of the Board of Directors, I aim to realize the corporate philosophy of "illuminating a more affluent tomorrow" and "for customer peace of mind and satisfaction" and to continuously improve corporate value by enhancing the effectiveness of the Board of Directors. To this end, we are working to strengthen the supervisory function of the Board of Directors, revitalize the act of deliberation, and put a governance system in place that strikes the right balance of offensive and defensive elements.

Continually Strengthening the Governance System

Meidensha has long worked to make governance more effective. For example, we introduced our executive officer system in 2003. Our objective in introducing this system was not only to speed up decision-making, but to separate the execution of operations from supervision of those same operations, strengthening the supervisory function of the Board of Directors. Since Japan's Corporate Governance Code came into effect in 2015, we have placed particular focus on three points.

First, the further promotion of separation of supervision and execution. Previously, the President had served as Chairman for both the Board of Directors and the Executive Committee, the

decision-making body for specific business operations. However, when the new Chairman and new President took office in June 2018, we took the opportunity to assign the Chairman the task of heading the Board of Directors and the President that of leading the Executive Committee. As Chairman, I have begun to turn more toward supervision, while continuing my involvement in business operations. What I am most focused on as Chairman of the Board of Directors is not only the agendas set forth in the regulations, but also proper development of the board agenda, thorough discussion, and the realization of appropriate decisions. Under our governance system, it is the Chairman who develops an agenda consisting of management issues deemed important for the medium- to long-term, and taking account of changes in the business environment. Doing this requires having an adequate understanding of the Meiden Group's wide range of products, its systems, service, and other businesses, and topics such as risk management and compliance. Rather than outside directors, who are not involved with day-to-day business operations, or the President, whose job mostly consists of business operations, I believe this role is best filled by the Chairman, whose job has shifted to the realm of supervision.

Second, the establishment of a voluntary Nominating and Remuneration Committee,*1 chaired by an independent outside director as an advisory body for the Board of Directors. Where previously these decisions were made within set rules, establishing a formal committee enables an independent outside director to appropriately participate and offer advice concerning nominations and remuneration. Thus promoting the independence and objectivity of the Board of Directors' nominating and remuneration functions, and building stronger accountability.

Third, evaluating the effectiveness of the Board of Directors. We began these evaluations in FY2016. We conducted questionnaire surveying all directors and audit & supervisory board members, including those outside the company, and used the survey results to begin a dialogue exchange. However, we recognize that we can continue to further improve the effectiveness of the Board of Directors, such as reviewing the content and methods to be discussed by the Board of Directors.

Revitalizing Deliberation at Board of Directors Meetings

Japan's Corporate Governance Code lists "establishing an environment where appropriate risk-taking by the senior management is supported" as one of the major roles and duties of the Board of Directors. The key phrase is "revitalize deliberation" at the Board of Directors meetings. Specifically, the following innovations and reforms have been implemented.

First, we invite outside directors and outside audit & supervisory board members with extensive knowledge and experience. Their knowledge and experience encourage muchneeded, active discussion at Board of Directors meetings. However, outside officers need to give their opinions after having a thorough understanding of the company's business and background, including issues unique to the company and matters to focus on, in addition to the broad perspectives they bring. For that reason, we hold introductory sessions explaining the nature of Meidensha's business, and advanced briefings on individual

situations. In addition to those, we are increasing opportunities for outside officers to learn more, such as dialogue sessions after Board of Directors Meetings and topical reports from various departments. When outside officers develop a deep level of understanding, they share opinions, questions, and observations from a perspective internal officers do not usually see, and that makes Board of Directors meetings even more effective.

Our next step is to act on the discussions and decisions made at Board of Directors meetings with a shared awareness of our medium- to long-term growth story, taking account of the unique characteristics and issues of our Social Infrastructure Business, Industrial Systems Business, and Maintenance and Servicing Business. This is how we practice governance "offensively," and Meidensha's business opportunities are growing. There is the electrification and digitalization of automobiles, an increasing number of railroad projects overseas, and a broadening of water and energy infrastructure services in Japan. During the development of the Medium-term Management Plan 2020, we took a long-term (10-year) perspective on how to capture these business opportunities. We decided to use the present as a powerful step toward our next medium-term management plan. We held detailed discussions on investments and measures to take, including strengthening facilities, workforce, research and development, and business partnerships.

In this way, decisions on important matters are deliberated based on a sufficient amount of information to ensure support for appropriate risk-taking. Moreover, when such discussions take place during meetings of the Board of Directors, it deepens the executive committee's own discussions. At the Board of Directors, questions are asked from a multifaceted perspective, and so in order for the executive side to answer it, it must be carefully considered by the Executive Committee. I would like to become a bridge between the two by providing feedback to the Board of Directors on the agenda formulation and discussions of the Board of Directors.

Governance with a Balance of Offense and Defense

The job of strengthening corporate governance is never finished, and offensive and defensive governance are two sides of the same coin. The external environment facing our business is ever changing, and management issues are growing increasingly complex. Furthermore, the public view of compliance and corporate misconduct has become stricter. Therefore, in terms of defensive governance, in addition to compliance, risk management, and QCD (quality, cost, delivery), we are actively working to improve the quality of our business activities through safety, environmental measures, and work style reforms. On the other hand, regarding offensive governance aimed at improving corporate value, I would like to further enhance discussions on medium- to long-term business strategies.

I will continue working to improve accountability and transparency for our shareholders and investors, improve our corporate value over the medium to long term, and meet the expectations of our shareholders, investors, and all other stakeholders.

Representative Director, Chairman

Yuji Hamasaki

^{*1} Meidensha established a voluntary Remuneration Committee in December 2017. In December 2018, the Committee took on the functions of a voluntary nomination committee to become the Nomination and Remuneration Committee.



Corporate Governance

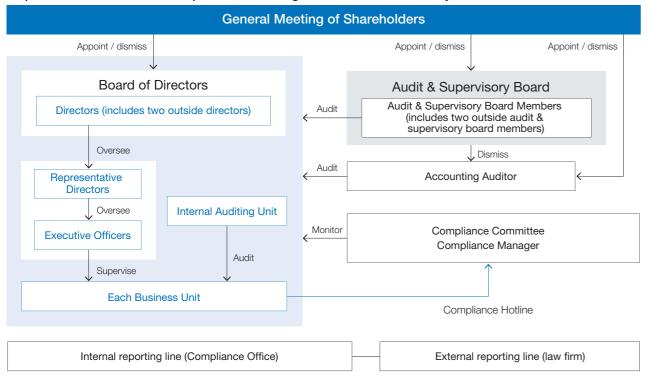
Basic Approach

Under our corporate mission of "illuminating a more affluent tomorrow" and our corporate philosophy of providing the value "for customer peace of mind and satisfaction," our group of companies takes the basic stance that we maintain fair and steady business activities with respect for people and the global environment, operate businesses focusing on profit while constantly pursuing new technology and high quality, and endeavor to contribute to prosperity of society. In order to implement this basic stance, we formulated the "Basic Policy"

to Improve the Governance to Secure Fair Business Practices" at the regular Board of Directors meeting held in May 2006 (this basic policy was later amended at the regular Board of Directors meeting held in May, 2015, to reflect the revision of the Companies Act).

The Company will work to further improve the efficiency and fairness of management by promoting initiatives to enhance corporate governance in accordance with the Corporate Governance Code.

Corporate Governance Structure: Supervision and Management and Internal Control System



Corporate Governance Structure and Initiatives

Meidensha clearly separates important management decision-making and operational decision-making in the rules of the Board of Directors and the rules of internal approval procedures, and ensures flexible executive functions.

The executive committee, which comprises executive directors and executive officers, has been created for executive decision-making, and decides matters based on the rules of internal approvals, as well as matters for which consultation from a whole company perspective is required.

Furthermore, we have established review meetings as an advisory body that operates separately from the decision-making structure in order to create a system for in-depth discussion and consideration of important management matters.

Outline of Corporate Governance Structure

Form of Organization	Company with audit & supervisory board members
Directors	Number of directors (outside directors): 9 (2)
Audit & Supervisory Board Members	Number of audit & supervisory board members (outside audit & supervisory board members): 4 (2)
Number of Independent Officers	4 (2 outside directors and 2 outside audit & supervisory board members)

1 Features of Institutional Design

1) Executive Officer System

Meidensha introduced an executive officer system in June 2003 in order to streamline the Board of Directors so as to "speed up corporate decision-making and enhance its supervisory function." At the same time, we strengthened the functions of the Board of Directors and separated the "decision-making and supervisory functions" and the "executive functions" that the Board of Directors used to have. The former functions were assigned to the Board of Directors and the latter to the executive directors and executive officers to whom the duties were delegated by the representative directors.

Executive functions for business operations are carried out according to resolutions and decisions of the executive committee, which is a decision-making body for executive functions, and the executive directors and executive officers, who have the authority to carry out executive functions, under the supervision of the Board of Directors. In this way, business operations are executed autonomously, flexibly, and swiftly.

Furthermore, with the Board of Directors having broadly assigned authority to conduct executive functions to the executive officers, directors and executive officers in charge of operations are required to submit status reports on the execution of operations to the Board of Directors at least once every three months in order to ensure that the supervisory function of the Board of Directors properly works.

2 Composition of Directors

There are currently nine directors, and we believe that this number is appropriate to ensure thorough consideration to make appropriate and swift decisions to address the drastically changing business environment.

Furthermore, two of the nine directors are outside directors who carry out a supervisory function for execution of operations in order to strengthen corporate governance.

Meidensha's outside directors satisfy the requirements of independent directors as stipulated in the rules of the Tokyo Stock Exchange.

③ Policy for Appointment of Candidates for Director and Appointment/Dismissal Process

When appointing Meidensha's directors, it is our basic policy to appoint appropriate personnel that will ensure diversity and balance of the Board of Directors and contribute to increasing Meidensha's corporate value based on individual directors' abilities, knowledge, and experience, etc.

The number of directors is a number that we deem appropriate to fully deliberate on the management issues of the Company, with an upper limit of fifteen members.

Based on the above, we conduct selection of candidates for director that will contribute to the enhancement of the Board of Directors decision-making function and oversight function, by resolution of the Board of Directors, with advice

from the Nomination and Remuneration Committee* (voluntary committee), which is chaired by an independent outside director. The candidates are then presented at the General Meeting of Shareholders.

Furthermore, with regard to dismissal of directors, if it is discovered that a director has breached the law or the Articles of Incorporation, or committed acts that flagrantly breach the director's selection policy, the Board of Directors will take the necessary steps to dismiss said director with the advice of the Nomination and Remuneration Committee.

* Meidensha established a voluntary Remuneration Committee in December 2017. In December 2018, the Committee took on the functions of a voluntary nomination committee to become the Nomination and Remuneration Committee. The Nomination and Remuneration Committee is chaired by an independent outside director and is comprised of two outside directors, the chairman of the Board of Directors and the president of the Board of Directors.

2 Effectiveness Evaluation of the Board of Directors

Meidensha has a mechanism in place to conduct an analysis and evaluation of the effectiveness of the Board of Directors in order to strengthen the supervisory function of the Board of Directors.

With regard to the activities of the Board of Directors in FY2018, all the directors and auditors, including the outside directors and outside audit & supervisory board members, conducted a self-evaluation of the effectiveness of the Board of Directors, and the following discussions took place at the meeting of the Board of Directors in May 2019.

i Items Evaluated

Composition and operation (resolution and deliberation methods, etc.) of the Board of Directors, self-evaluations concerning effectiveness of the Board of Directors, other opinions

ii Outline of Analysis and Evaluation Results

The results of the evaluation of each director and audit & supervisory board member were collected, and after deliberation by the Board of Directors, it was determined that the quality of operation and deliberation is sufficient, sufficient opinions and advice have been received from outside directors and outside audit & supervisory board members, and the effectiveness of the Board of Directors is currently secure.

Also, further revitalization of deliberations of the Board of Directors was confirmed through these evaluations. We will also increase understanding of Meidensha's business environment and strategy and provide ongoing opportunities for discussion such as through explanations in advance, meetings to exchange opinions, and explanatory programs outside of the initiatives of the Board of Directors referred to below.

Training of Directors and Audit & Supervisory Board Members

Legal training is conducted for officers on an annual basis, for the purpose of improving the effectiveness of the Board of Directors and internal control. In FY2018, we promoted risk management at each department and conducted training relating to governance, which was conducted by outside lawyers, for our officers, as part of internal control activities conducted at all companies. The Meiden Group conducted training on the Companies Act for new officers of Meidensha and affiliated companies.

3 Initiatives to Utilize Outside Directors

Meidensha seeks active participation in management by outside officers, in order to enhance the supervisory function of the Board of Directors. As such, we are conducting the following initiatives to ensure free and active debates.

1 Initiatives at the Board of Directors

i Advance Explanation of Agendas of the Board of Directors

We give explanations in advance so that directors are able to confirm the content of agenda items prior to participating in meetings of the board of directors. Our system allows us to accept questions, etc., relating to the content of agendas in advance and prepare an explanation to be given at the meeting of the Board of Directors, and this revitalizes and enriches deliberations.

ii Timely and Appropriate Sharing of Information

Besides the agenda for the meeting, Meidensha provides briefings on current topics relating to the company at meetings of the Board of Directors, with the aim of timely and appropriate sharing of information with outside directors, so that they can share the status of the Company in a timely fashion.

2 Initiatives Outside of the Board of Directors

i Introductory Sessions

Primarily for newly appointed outside directors and outside audit & supervisory board members, we provide opportunities for them to understand the Company's business.

The officers or general managers in charge of each business explain their business and Meidensha's governance system to the outside officers, answer their questions and exchange opinions with them.

ii Meeting for Exchange of Opinions

Besides legally-required board meetings, we organize monthly meetings for an exchange of opinions in order to best use the knowledge of the outside directors and outside audit & supervisory board members.

In these meetings, participants vigorously exchange opinions, mainly concerning matters relating to corporate governance and the Company's management issues and strategy. The meetings also serve as preliminaries to discuss matters prior to passing resolutions at the Board of Directors.

4 Audit & Supervisory Board Members and the Audit & Supervisory Board

Meidensha is a company with audit & supervisory board members. Each audit & supervisory board member (two of the four members are outside audit & supervisory board members) performs his assignment of duties in accordance with the auditing policies and the auditing rules for audit & supervisory board members stipulated by the Audit & Supervisory Board. They communicate with directors, the internal auditing department, and other relevant departments, attend meetings of the Board of Directors and other important meetings, and investigate the business and financial conditions, in order to audit the execution of directors' duties.

The Company also has Internal Auditors Office to assist the Audit & Supervisory Board under the direct control of the Board.

5 Internal Auditing System

We have an internal auditing division under the direct control of the President. The Internal Auditing Division conducts internal audits to check the effectiveness and efficiency of business operations, the reliability of financial reporting, the status of compliance with laws and regulations, and the maintenance of assets, covering the Company and all Group companies at home and abroad.

Since FY2016, we have conducted risk management using Control Self Assessment (CSA) at each Meidensha factory and each Japanese subsidiary in order to enhance internal control and increase the efficiency of risk audits at each business unit.

In FY2018, we conducted joint audits with other existing internal business units in the course of overseas internal audits and joint audits with third parties through outside consulting at three locations in China to enhance internal control functions.

Officers' Remuneration

Directors remuneration policy

i Level of Remuneration

The level of remuneration of Meidensha's directors is determined based on external objective remuneration market data, economic conditions, industry trends, and Meidensha's business circumstances, etc., and it is confirmed by the Nomination and Remuneration Committee referred to above.

ii Composition of Remuneration

Remuneration of directors is performance-linked annual remuneration, and comprises basic remuneration and incentive remuneration according to each role. Of these types of remuneration, incentive remuneration comprises remuneration that is linked to business performance as a short-term incentive and stock remuneration as a medium- to long-term incentive.

Target Proportion of Each Type of Remuneration (if 100% of targets were achieved)



iii Incentive Remuneration System

Performance-linked remuneration, which is a short-term incentive, varies from 0 to 140 depending on the degree of achievement of targets, with perfect achievement of targets counting as 100. We use operating income, which is also used for our financial targets in Medium-term Management Plan 2020, as a performance evaluation indicator, and also give consideration to revisions according to operating conditions and changes to the roles of each officer, etc.

Calculation Formula



Stock remuneration, which is a medium to long-term incentive, grants shares to the Officers' Shareholders Association for the purpose of further promoting sharing of profit and loss with shareholders.

iv Remuneration Determination Procedures

The Nomination and Remuneration Committee confirms and considers the content of the remuneration system and the amount of remuneration from an objective perspective prior to determination by the Board of Directors.

FY2018 Results

Classification	Total Amount of Remuneration, etc.	Total Amount of Remune (millions	Number	
	(millions of yen)	Basic remuneration	Incentive remuneration	of People
Directors (excluding outside directors)	393	343	50	11
Audit & Supervisory Board Members (excluding outside audit & supervisory board members)	44	44	-	3
Outside Officers	20	20	-	4

^{1.} The amount paid to directors includes performance-linked remuneration for FY2018.

Composition of the Nomination and Remuneration Committee

Name	Position	Chairman
Yuji Hamasaki	Representative Director, Chairman	
Takeshi Miida	Representative Director, President	
Hiroyuki Takenaka	Director (Outside/Independent Officer)	0
Junji Yasui	Board Director (Outside/Independent Officer)	

Dialogues with Shareholders and Investors

Basic Approach and IR System

When any shareholders wish a dialogue with the Company that will contribute to medium to long-term improvement of the Company's corporate value, it is Meidensha's policy that the Company's management conducts the dialogue to the extent reasonably possible.

A system is in place where an executive officer is placed in charge of IR matters and an IR-specialist department conducts activities to enhance constructive dialogue with shareholders, including institutional investors and strengthens external communication.

Results Briefings

We hold results briefings twice a year in May and November. We also commenced briefings for individual investors in FY2018.

We will continue to work to ensure an even fuller disclosure of information through results briefings, individual IR sessions, conferences, the website, and this report, etc., and continue to engage in dialogue with shareholders and investors.

Main IR Activities in FY2018

Individual Sessions	Number
Japanese Investors	78
Foreign Investors	64
Total	142

The materials for the results briefings are available for viewing. Please visit "Fact Sheet for Account Settlement Briefing Session" under "Investors" on the Corporate website.

 $https://www.meidensha.com/ir/ir_04/ir_04_03/index.html\\$

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The amount of remuneration paid to directors that concurrently serve as employees does not include the amount of remuneration paid to them as employees.

Board of Directors & Executive Officers as of July, 2019

Representative Director, Chairman



Yuji Hamasaki [Record of Attendance] Board of Directors' Meetings: 100% (13 out of 13)

Representative Director, President



Takeshi Miida [Record of Attendance] Board of Directors' Meetings 100% (13 out of 13)

Representative Director, **Executive Vice President**



Masamichi Kuramoto [Record of Attendance] Board of Directors' Meetings: 100% (13 out of 13)

Director. **Executive Vice President**



Shosuke Mori (Newly appointed in June of

Outside Directors

Directors & Senior Managing Executive Officers



Nobutoshi Ohashi [Record of Attendance] Board of Directors' Meetings: 100% (10 out of 10)



[Record of Attendance] Board of Directors' Meetings: 100% (10 out of 10)

Norio Takekawa



Nobuaki Tamaki [Record of Attendance] Board of Directors' Meetings: 100% (10 out of 10)



[Record of Attendance] Board of Directors' Meetings: 100% (13 out of 13)

Outside Audit & Supervisory Board Members

Hiroyuki Takenaka



Junji Yasui [Record of Attendance] Board of Directors' Meetings: 100% (13 out of 13)

Audit & Supervisory Board Members



Taketora Ito [Record of Attendance] Board of Directors' Meetings: 100% (13 out of 13 Audit & Supervisory Board Meetings: 100% (6 out of 6)



Seiji Kato [Record of Attendance] Board of Directors' Meetings: 100% (10 out of 10) Audit & Supervisory Board Meetings: 100% (6 out of 6)



Yoshiaki Shin [Record of Attendance] Board of Directors' Meetings: 100% (13 out of 13) Audit & Supervisory Board Meetings: 100% (6 out of 6)



[Record of Attendance] Board of Directors' Meetings: 92.3% (12 out of 13) Audit & Supervisory Board Meetings: 83.3% (5 out of 6)

Managing Executive Officers

Kazumi Ikarashi Michihiko Kato Satoru Kamevama Masayuki Iwao

Tatsuki Mochizuki Kuniake Yasukawa Masahiko Suzuki

Executive Officers

Minoru Kaneda Kazuhiko Furukawa Noritaka Matsushita Hisahiro Murashima Satoshi Momenya Isamu Suto Norio Mizutani Akio Inoue Hideki Miyazawa Hiroshi Toke

Takashi Furuta Takeo Suzuki Katsunori Suzuki

Akio Ikemori

Risk Management / Compliance

Risk Management

Basic Approach

In order to understand risks that may arise in the future and to respond appropriately as the environment in which we operate becomes increasingly complex and uncertain, the Meiden Group established and operates the Enterprise Crisis Management Committee, and aims to establish a system to respond to all risks.

The Enterprise Crisis Management Committee



Consider response to individual major risks

Initiatives to Establish a Risk Management System

At the Meiden Group, comprehensive risk management has been conducted since FY2018 for each business unit using Control Self Assessment (CSA) at each domestic works and affiliate. Through this method, each business unit defines future uncertainties that may impede the fulfillment of business plans as risks from a wide range of factors such as external environment and business processes and devises and implements measures to respond to these risks according to an evaluation of the severity of each risk. In addition, each business unit re-evaluates the success of this series of control activities in their own business unit, which will lead to further ongoing control activities.

With regard to internal auditing of the business risks of each business unit, we ensure that risk management is conducted through top-down style local interviews with pre-prepared questions conducted by the internal auditing division and the aforementioned bottom-up style Control Self Assessment (CSA) conducted by each business unit.

Formulation of Business Continuity Plan (BCPs)

We conducted the following initiatives to promote formulation of BCPs as a Group-wide project in FY2018.

1. Conducting BCP introduction education: We conducted BCP introduction education for the heads of each business unit, disseminated information about the importance of BCPs and announced the commencement of formulation of a Group-wide BCP.

2. Establishing and operating the BCM Committee: We established the BCM Committee as the final decisionmaking body with regard to the Meiden Group's business continuity. It comprises members of managing executive officer level and above and it is independent from the Enterprise Crisis Management Committee.

In FY2018, the Committee convened for the second time, and adopted (a) the Meiden Group BCM Promotion System and (b) the Business Continuity Plan (BCP) Basic Policy. Furthermore, in order to promote implementation, the Corporate BCP Promotion Committee and BCP promotion committees of each business were created to enhance company-wide promotion.

Increasing Effectiveness of BCPs

Based on resolutions of the BCM committee, we conducted the following initiatives to enhance disaster response measures.

- 1. Distributing disaster response cards to all employees (including employees of Group companies) and formulating a natural disaster response manual (for the disaster response headquarters)
- 2. Improving functionality (renewal) of the safety confirmation system and ensuring implementation
- 3. Restructuring the corporate disaster response headquarters and conducting training (first)



Corporate disaster response headquarters

Compliance

Whistleblower System on Compliance

Meidensha has a whistleblower system for compliance. This is to prevent illegal actions and misconduct and to solve problems as early as possible. This whistleblower system includes the Compliance Hotline for discussing a broad range of compliance issues including breaches of laws such as the Antimonopoly Act and bribery regulations, breaches of internal or external rules, and labor problems, the Harassment Consultation Hotline, which is specifically designed to deal with harassment, and the Public Whistleblower Hotline for early detection and rectification of unlawful acts, etc. Furthermore, we established a supplier-specific whistleblower hotline in FY2018.

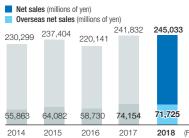
The Compliance Committee studies information that is brought to the above points of contact, and, if necessary, consults with a lawyer before resolving issues. We are working to increase the dependability of management of information, such as the names of whistleblowers, of and the whistleblower system as a whole, in accordance with national guidelines, to ensure that whistleblowers are not disadvantaged by using the system

Financial / Non-Financial Highlights

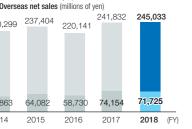
Consolidated basis

Financial indicators	FY2014	FY2015	FY2016	FY2017	FY2018
Net sales (millions of yen)	230,299	237,404	220,141	241,832	245,033
Operating income (millions of yen)	9,997	10,517	8,849	11,381	10,336
Ordinary income (millions of yen)	10,502	10,595	8,209	9,992	10,128
Net income attributable to owners of parent (millions of yen)	6,868	6,962	5,743	7,056	7,653
Overseas net sales (millions of yen)	55,863	64,082	58,730	74,154	71,725
Overseas sales ratio (%)	24.3	27.0	26.7	30.7	29.3
Net assets (millions of yen)	255,519	255,024	247,646	264,457	265,586
Total assets (millions of yen)	67,405	68,771	74,312	81,229	84,497
Net assets per share (yen)	1,456.77	1,488.21	1,614.00	1,768.27	1,845.21
Net income per share (yen)	151.34	153.42	126.56	155.52	168.68
Equity ratio (%)	25.9	26.5	29.6	30.3	31.5
Cash flows from operating activities (millions of yen)	11,165	22,597	11,840	17,975	14,365
Cash flows from investing activities (millions of yen)	(8,772)	(10,530)	(12,031)	(7,582)	(8,074)
Cash flows from financing activities (millions of yen)	(5,282)	(5,847)	3,767	(11,230)	(3,101)
ROE (%)	10.9	10.4	8.2	9.2	9.3
ROIC (Operating-income-based) (%)	_	_	_	6.6	5.9
Dividend payout ratio (%)	23.1	26.1	31.6	28.9	26.7

- Notes: 1. Operating income for FY2014 has been retroactively changed due to a change in how this number is calculated. (Starting in FY2015, consolidated Group expenses associated with employees on loan are included in as "operating expenses (sales costs and selling, general and administrative expenses)" instead of "non-operating expenses.") 2. Starting in FY2015, we show "net income attributable to owners of parent," instead of "net income."
 - 3. On October 1, 2018, we conducted a reverse stock split at a ratio of one share for every five shares of common stock. Thus, we calculated net assets per share and net income per share on the premise that said reverse stock split had been conducted in FY2014.
 - 4. ROIC has been calculated since FY2017.

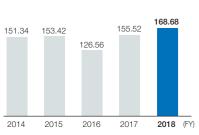


Net sales increased 1.3% year on year. Overseas sales

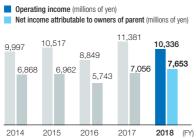


ratio was 29.3%.

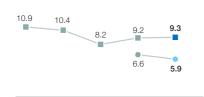
Net income per share (yen)



year to 168.68 yen.



Operating income decreased 9.2% year on year while ordinary income increased 1.4% year on year with net income attributable to owners of parent at a record



ROIC (Operating-income-based) (%)

Net income per share increased by 13.16 yen year on ROE rose by 0.1 point year on year, while operating income-based ROIC fell by 0.7 points year on year.



Net assets increased 0.4% year on year and equity ratio was up 1.2 points.

Dividend payout ratio (%)

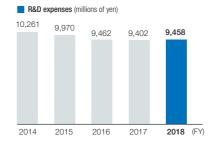


We aim to achieve a 30% consolidated payout ratio in the medium to long term, and paid an annual dividend of 45 yen, accounting for the reverse stock split for the year-end dividend.

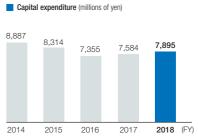
Non-financial indicators	FY2014	FY2015	FY2016	FY2017	FY2018
Number of consolidated subsidiaries	39	39	38	37	37
Japan	21	19	18	19	19
Outside Japan	18	20	20	18	18
R&D expenses (millions of yen)	10,261	9,970	9,462	9,402	9,458
Capital expenditure (millions of yen)	8,887	8,314	7,355	7,584	7,895
Number of employees	8,173	8,408	8,474	8,995	9,297
Of which, local staff	1,147	1,499	1,354	1,316	1,893
Total actual annual working hours (hours/year/employee)	2,078	2,083	2,016	2,002	2,019
Percentage of female employees in executive positions (%)	2.05	2.47	2.70	3.30	3.60
Lost time accidents rate	0.59	0.44	0.96	0.29	0.99
CO ₂ emissions (Japan) (kt-CO ₂)	41	41	39	36	38
Reduction of CO ₂ emissions caused by products (kt-CO ₂)	587	870	800	733	841
CSR spending (millions of yen)	22	19	32	28	38

Notes: 5. Figures for employee numbers exclude those employees on temporary contracts.

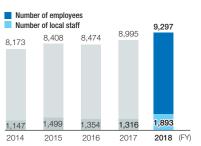
- 6. The number of local staff is the number of staff that have been directly employed by overseas consolidated subsidiaries.
- 7. Total actual annual working hours are the actual working hours calculated by subtracting leave hours from the sum of official working hours and overtime hours (averaged per employee).
- 8. The percentage of female employees in executive positions refers to the percentage calculated by dividing the number of female employees in executive positions by the total number of executive positions.
- 9. Lost time accidents rate is calculated per calendar year, "Rate" indicates the number of people that have been killed or injured as a result of industrial accidents per million hours of work. If the same person is hurt in more than one accident, the number of people that have been killed or injured reflects the number of accidents.
- 10. The CO₂ emission coefficients suggested by the Electric Power Council for a Low-Carbon Society (ELCS) were used as the CO₂ emission coefficient for electricity. The adjusted factor for FY2017 was used for FY2018, while that for the respective fiscal year was used for those fiscal years up to FY2017.
- 11. Reduction of CO₂ emissions caused by products is the expected reduction of such emissions caused by products sold.
- 12. CSR spending includes donations and sponsorship funding.



R&D expenses remained largely unchanged year on year. We have devoted ourselves to producing new products and systems that cater to tightening environmental regulations, electrification and digitalization of automobiles, and the progress of IoT and AI technologies.



Capital expenditure increased 4.1% year on year. We conducted investment relating to information processing, including improvement of factory production systems and RPA.



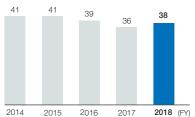
The number of employees and the number of overseas

-- Lost time accidents rate

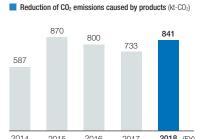


We are working to improve employees' sensitivity to danger, including conducting enhancement of management systems and following up danger predication; however, in spite of this, the rate of industrial accidents rose year on year.

CO₂ emissions (Japan) (kt-CO₂)



We pursued energy-efficiency measures such as work efficiency and improving the operation of air conditioners and compressors, however, our CO2 emissions in Japan increased due to increased production



We increased shipment of electric vehicles and transformers and high-voltage inverters for the overseas market, reaching emissions reductions totaling 841,000 t/year.

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Outline of the Meiden Group

Corporate Data as of March 31, 2019

Corporate Name MEIDENSHA CORPORATION

Capital ¥17,070 million

Established June 1, 1917 (Since December 22, 1897)

Consolidated Sales ¥245,033 million

Representative Director, President Takeshi Miida

Consolidated Number of Employees 9,297

Head Office ThinkPark Tower, 2-1-1, Osaki, Shinagawa-ku, Tokyo,

Consolidated Subsidiaries 37 (19 in Japan, 18 overseas)

141-6029 Japan

Main Consolidated Subsidiary Companies as of March 31, 2019

Area Code	Company Name	Capital	Business Entity	
Japan	KOFU MEIDENSHA ELECTRIC MFG. CO.,LTD.*1	¥400 million	Manufacturing and sales of motors	
Japan	MEIDEN PLANT SYSTEMS CORPORATION	¥400 million	Construction services	
Japan	MEIDEN ENGINEERING CORPORATION	¥400 million	Manufacture, sale, lease, installation, wiring and provision of maintenance services (maintenance and inspection, modification, repair, etc.) for electrical equipment, machinery and devices	
Japan	M WINDS CO., LTD.	¥330 million	Development, design, manufacturing, and testing of wind-turbine generator systems as well as related consulting	
Japan	MEIDEN SHOJI CO., LTD.	¥300 million	Sales of electric components	
Japan	MEIDEN KOHSAN CO., LTD.	¥100 million	Sales of products and materials, and agent services of insurance	
Japan	MEIDEN O&M CORPORATION	¥100 million	Strategic proposal and comprehensive management of manufacture, sale, lease, installation, wiring and provision of maintenance services (maintenance and inspection, modification, repair, etc.) for electrical equipment, machinery and devices and provision of related education	
Japan	MEIDEN CHEMICAL CO., LTD.	¥95 million	Insulating varnish and molded instrument transformer	
Japan	MEIDEN SYSTEM MANUFACTURING CORPORATION	¥90 million	Manufacture and sale of switchboards, control panels, and their components	
Japan	MEIDEN SYSTEM SOLUTION CORPORATION	¥50 million	Software development, design, production, sale, and rental, and maintenance and management of computer systems and networks	

Area Code	Company Name	Capital	Business Entity	
Singapore	MEIDEN ASIA PTE. LTD.*1	S\$35.0 million	Regional headquarter in ASEAN; formulation of business strategies for the ASEAN region; legal affairs; human affairs; IT; maintenance; technical engineering services; materials; R&D	
Singapore	MEIDEN SINGAPORE PTE. LTD.*1	S\$25.0 million	Manufacture and sale of transformers, switchboards, and circuit breakers, maintenance and after-sale service of electrical equipment, electrical engineering and import/export operations, and overseas procurement	
Thai	THAI MEIDENSHA CO., LTD.	TB30.0 million	Electrical engineering, technical consulting, after-sale service, and import/export operations	
U.S.A.	MEIDEN AMERICA, INC.*1	US\$21.0 million	System engineering, sales, technical consulting, and after-sale service of dynamo products	
China	MEIDEN HANGZHOU DRIVE SYSTEMS CO., LTD.*1	US\$19.0 million	Manufacture of PM motors and other specialist electrical devices, general purpose inverters, and assembly units for automatic guided vehicles	
Germany	TRIDELTA MEIDENSHA GmbH	€78 thousand	Manufacture and sale of electric power / electric railroad lightning arresters and lightning arrester accessories	
India	PRIME MEIDEN LIMITED*1	INR 1,161 million	Manufacture and sale of transformers, and engineering	
*1. Specified subs	1. Specified subsidiary Another 20 compar			

^{*1.} Specified subsidiary

Share data as of March 31, 2019

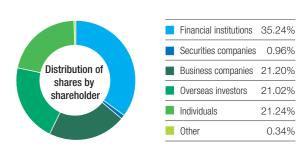
Stock Listing Tokyo Stock Exchange, Nagoya Stock Exchange

Total number of authorized shares 115,200,000

Total number of issued shares 45,527,540 (Including treasury

shares of 156,040)

Number of shareholders 14,844



21.24%

0.34%

Major Shareholders

Names of Shareholders	Number of Shares Held (1,000 shares)	Shareholding Ratio (%)
Japan Trustee Services Bank, Ltd. (account in trust)	2,704	5.96
Sumitomo Electric Industries, Ltd.	2,631	5.80
Sumitomo Mitsui Banking Corporation	2,241	4.94
The Master Trust Bank of Japan, Ltd. (account in trust)	2,222	4.90
NEC Corporation	1,746	3.85
Sumitomo Mitsui Trust Bank, Limited	1,500	3.31
Sumitomo Life Insurance Company	1,061	2.34
Meidensha Employees Stock Ownership Group	957	2.11
Japan Trustee Services Bank, Ltd. (account 5 in trust)	772	1.70
JP MORGAN CHASE BANK 385151	653	1.44

(Note) The shareholding ratio excludes treasury shares.