





















# Let's continue to pay careful attention to our planet. We are a team of engineers contributing to a sustainable future.

continued our efforts to understand the Earth, calculate the passage of time, and thus build highly durable structures.

Having experienced construction projects in challenging environments all over the world, we have cultivated the diverse capabilities needed to address the contemporary global issues.

Charting new courses, through unknown waters.

As an engineering team, we will continue to pay careful attention to our planet and contribute to creating a sustainable future by combining resources in the three fields of Environment & Energy, Marine Logistics & Transportation, and Social & Industrial Infrastructure.

The Mitsui E&S Group has begun to take on the challenges that will write its history for the next 100 years.

# The wind power generation business of Mitsui E&S, which has been involved in the construction and manufacture of 234 wind turbines, has now begun on a full-scale basis – with the trend of the times as a tail wind.

While the shift to renewable energy has been accelerated, wind power is attracting a lot of attention.

In Japan, the Ministry of the Environment has set a 26% cut in greenhouse gas emissions by FY 2030 compared to FY2013 as the target,

under which it is powerfully promoting the spread of wind power generation.

The Ministry of Economy, Trade and Industry forecasts a significant increase

in the amount of power generated from wind power.

Mitsui E&S has been involved in the construction of a total of 98 wind turbines\* in 14 projects and the manufacture of a total of 171 wind turbine towers. We have consolidated our technologies and expertise, which we have accumulated internally, into a single department.

We will make further moves toward a sustainable society where renewable energy will be utilized more effectively.

## The steps we have taken to create wind power facilities by changing our approach and accumulating expertise

## 2003-

Began the assembly of wind power facilities ahead of other companies

Began to work on the design and production of wind turbine towers as well

In 2005, in a project in Tottori

a tower supporting the wind

Prefecture, we internally designed

turbine for the first time. This tower

is approximately 80 meters tall

and has a diameter of about 4

completed the extremely difficult

process of tapering the tower

while keeping its cross-section

perfectly round. Thereafter, we

worked on tower construction in

meters. We successfully

### 2006-

Also began to design and manufacture gearboxes

## 2012-

Focusing on the EPC\* business and experimenting with offshore wind power generation



In 2005, we manufactured a gearbox (speed-up gear), which is mounted in nacelle, with a group company. While working on towers, main frames and gearboxes, we carried out the installation of the overall facilities. By taking advantage of both our strength in manufacturing and our strength in EPC in this way, we continued to explore market needs and study the business



for wind power generation within the group, including electric power, machinery and civil engineering resources. Taking advantage of this, we have been focusing our efforts on the EPC business, in entire process of multiple projects from upstream to downstream. We will also make a foray into offshore wind power generation, which is expected to increase in the future.

In 2003, we built a wind power generation facility on the premises of the Chiba Works in anticipation of the growth of renewable energy. We assembled the facility by taking advantage of our technologies cultivated through the construction of steel bridges and iron frameworks of buildings. Based on this experience, we worked on the manufacture and assembly of 171 towers, thereby

Action

Creation of a Sustainable Society

<sup>\*</sup>The total number for onshore and offshore EPC, including those to be completed in 2019 and 2020

# Wind turbines that Mitsui E&S has worked on are operating on the plains, in the mountains and offshore as important energy resources of Japan.

# A Tainai wind power plant,



2014/ 10 turbines (2MW each)

This is a full turn-key project, in which we worked on the entire process from design to procurement and onsite installation work. The total output of 20,000kW is equivalent to the electric power consumed by around 14,000 households.

## **Wind Farm Hamada**



2016/29 turbines (1.67MW each)

We installed 29 wind turbines with an output of 1,670kW each in Kanagi-cho and Yasaka-cho in Hamada City, Shimane Prefecture. The total output of this wind power plant will be 48.430kW (approx. 48MW). It is expected to generate 85,000MWh per year.

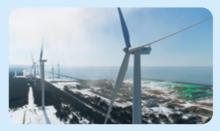
# Hizen Minami wind power plant



2007/ 12 turbines (1.5MW each)

This wind power plant was constructed in a location with a beautiful view of Genkainada, which is located in a coastal area of Hizen-machi in Karatsu City, Saga Prefecture. The Hizen Minami wind power plant (1,500kW x 12 turbines) began operating about three years after the Hizen wind power plant (1,500kW x 8 turbines).

# **B** Mukaihama wind power plant



2018/3 turbines (2.5MW each)

This is a wind power plant with three turbines with a maximum output of 2.495kW each (7.49MW in total). It was constructed on land adjacent to the Akita Mill of Nippon Paper Industries Co., Ltd. We undertook the entire process from the design and procurement of wind turbines/substation equipment and other items to construction and test runs.

# Nakadomari wind power plant

To be completed in 2019/2 turbines (3.4MW each)

Adjacent to Lake Jusan, a brackish water lake located on the Tsugaru Peninsula in Aomori Prefecture, Nakadomari is subject to strong winds from the Tsugaru Channel. This makes it the ideal location for wind power generation, and wind power plants have been constructed in various parts of this town. We are implementing this project by taking the harsh ground conditions

# Wakami wind power plant

To be completed in 2019/7 turbines (3.4MW each)

We are working on this project in part of a piece of land with a range of wind power plants, which is located in a scenic location adjacent to Hachirogata, the largest intertidal flat in Japan. We are aiming to complete it in February 2019



## Yura wind power plant



2011/5 turbines (2MW each)

We installed five wind turbines on the western side of Ameshi-yama (Mt. Ameshi) at an altitude of approximately 400 meters and achieved a generation capacity of 9,950kW (1,990kW x 5 turbines). We adopted downwind wind turbines, which are optimal for rough terrain such as mountains and hills.

# Inami wind power plant



2018/13 turbines (2MW each)

We installed 13 wind turbines with an output of 2,000kW each in an area of approximately 27.2 hectares. During the installation work, we gave consideration to the natural environment of the mountainous area. In designing and constructing this wind power plant, we considered disaster control and aimed for its harmonious co-existence with the local community.





## MJ Ichihara wind power plant



2004/1 turbine (1.5MW)

This wind turbine was installed on the premises of the Chiba Works of Mitsui E&S as Japan's first large-scale wind power generation facility constructed in a shipyard. Taking full advantage of the location, we significantly reduced the problems related to the transportation of large wind turbine parts.

## Submersible floating wind turbine off the coast



### 2013/1 turbine (2.0MW)

We undertook the design, production and installation of one downwind floating offshore wind turbine with an output of 2MW in the Fukushima Floating Offshore Wind Farm Demonstration Project Phase 1 by the Ministry of Economy, Trade and Industry. We assembled the turbine at the Chiba Works and then towed it offshore to Onahama Port in Fukushima Prefecture, where it was tested and adjusted before being moored in the area as the demonstration site

# Kamogawa wind power plant

aiming to make the power plant look elegant.

To be completed in 2020/4 turbines (2MW each)

Nyuzen Town offshore wind power plant

Planned to be constructed on the eastern side of the beautiful

Toyama Bay, this wind power plant is expected to play a role as

a new tourism resource. The turbines are designed to be robust

in consideration of the recent natural disasters. We are also



2007/ 1 turbine (1.5MW)

This project is rare in the country overall in that the site of a quarry is used for wind power generation for infrastructure improvement. We are striving to ensure the economic efficiency of the work. For example, we designed the plant to take advantage of the current ground conditions.

# Atsumi wind power plant



2006/7 turbines (1.5MW each)

The maiestic view of the wind turbines, which stand in a line at Cape Irago, attracts large numbers of tourists. They are widely covered by the media. For example, they were used in a TV commercial of a local automobile company.

# N Tahara S&W



2014/3 turbines (2MW each)

Combining a solar power plant (mega solar farm) and a wind power plant, Tahara S&W is one of the largest hybrid power plants in Japan. It is also used as a location for environmental education by local educational institutions (elementary, junior high and high schools) of Tahara City.

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In Japan, we have seas. Wind turbines are being built in the sea of Toyama. A bottom-mounted offshore wind power project that we are seeking to implement with a new construction method.

Bottom-mounted offshore wind power generation project off the coast of Nyuzen Town





### Nyuzen Town offshore wind power generation project (Toyama Prefecture)

■ Number of wind turbines to be installed: 2MW-class wind turbine x 4 ■Output: Around 7.5MW Installation site: Eastern side of the marine area off the coast of Nyuzen Town, Toya Prefecture Interconnection point: Nyuzen Substation Hokuriku Flectric Power Compa



## "Let's develop a Japanese way on our own." And we got to the small-scale bottom-mounting method.

In Japan, the potential of onshore wind power is limited. Accordingly, the promotion of offshore wind power is essential for ensuring that wind power generation spreads in this country. However, the construction of large-scale offshore wind farms such as those in Europe did not make any progress because there is no large specialized ship for installing wind turbines offshore in Japan. In this country, there are no offshore wind power plants that are fully privately funded. The introduction of offshore wind power generation would have only been delayed unless we found a new method.

"We needed to develop a method that could be put into practice immediately, instead of planning a large-scale facility and spending a long time on negotiations, environmental assessments and experiments." (Yamaguchi)

Accordingly, Yamaguchi and other staff members invented the small-scale bottom-mounting method, with which wind turbines are installed close to a fishing port or harbor where the water is not as deep. With this method, the foundation can be small, and the barrier of the installation cost is lowered if the waves are relatively gentle. Meanwhile, the salespeople began to prepare to realize the project and look for a potential site together with a wind power generation business operator.

## "We have a salvage barge for port cranes." Development of a new construction method that uses a salvage barge with a fork

How could we install a wind turbine in a shallow water? Keiji Fukazawa, the head of the Wind Power Generation Group at the Project Department I, began to develop an installation work method in August 2015. As a result of comparing various methods, Fukazawa found that installation using a salvage barge with a fork was the optimal method. This salvage barge is used for installing port cranes. With the new method, an assembled wind turbine is transported on the fork, while the wind turbine remains standing and is unloaded accurately on the foundation. It is excellent in

terms of both workability and economic efficiency. This idea was created because Fukazawa used to work at the Oita Works, where port cranes are manufactured. Fukazawa created a 1/30-size model and conducted various shock analyses and tank tests at Akishima Laboratories. He confirmed that a little remodeling enables the salvage barge for transporting cranes to be used for wind turbine transportation

"Having the experience of constructing offshore structures, including the caisson foundations of the Great Seto Bridge and the Rainbow Bridge, we can do many things with our internal technologies. In addition, we hold regular information exchange meetings called the Offshore Wind Turbine Meetings with engineers from Mitsui E&S Shipbuilding Co., Ltd. and MODEC, Inc., which was also advantageous." (Fukazawa)

## **Nyuzen Town in Toyama Prefecture was** selected as the site. We are aiming to start operating the plant in 2021.

An operating company was established though joint investment by Mitsui E&S and the wind power generation business operator. It was decided that the facilities will be installed at Nyuzen Town in Toyama Prefecture, which faces the Sea of Japan. Boring exploration of the sea bed and negotiations with the municipal government and local fishermen's union made steady progress. As a result, it was finally determined that Japan's first privately funded offshore wind firm will be born in 2021.

## "The municipal government expects that the wind turbines standing in the Sea of Japan will also be a tourism resource. We believe that it is sure to be an instagrammable spot." (A related person)

Tenyu, a 148.3-meter-long salvage barge built by Mitsui E&S Shipbuilding Co., Ltd., was selected as the salvage barge with a fork to be used for installing the turbines. The wind turbines will travel about 40 kilometers along the coast on Tenyu, from a port near the factory where they will be assembled. The wind turbines that are being transported will also attract attention. Members of Mitsui E&S continue to take on challenges with the aim of succeeding in this project, which will significantly advance wind power generation in Japan.

## Point 01

## Small-scale, bottom-mounted facilities

For the project in Nyuzen Town, steel structure foundations, in which we have strength, and small-scale, bottom-mounted facilities, which can be installed at a relatively low cost for the work barge, have been selected. The installation work will be carried out in a water area managed by the municipal government, which minimizes the number of negotiation partners. Further, environmental assessment by the national government, which would be necessary if the output were 7.5MW or more, is not required, which significantly shortens the period prior to commercialization. We aim to begin operating the wind farm in January 2021.

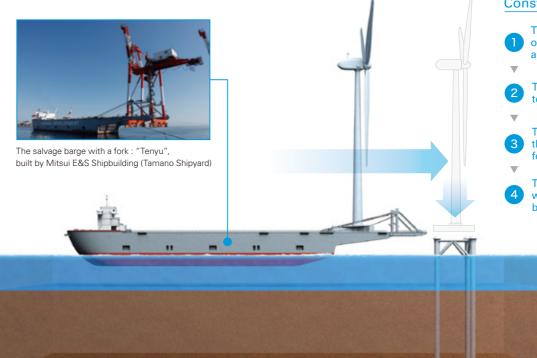


## Point 02

## **Establishment of an original construction method** that uses a salvage barge with a fork

In the project, Mitsui E&S Engineering will apply a construction method with which the wind turbine will be transported on a barge with a fork while the wind turbine remains standing. The work barge to be used in the project has been used for installing cranes that load and unload containers in ports. We will remodel it for

use in the project, which will enable us to keep the cost significantly low. This method will also enable us to complete offshore work, which is easily affected by weather and offshore conditions, within far fewer days, which will also reduce the cost.



## Construction procedure

- The wind turbine assembled onshore is loaded on a salvage barge with fork.
- The wind turbine is towed to the offshore foundation.
- The wind turbine is moved to the position directly above the ndation and installed there.
- The wind turbine is integrated with the offshore foundation by means of onsite welding.

## Point 03

## Together with the local community Participating in the business

In this project, the Mitsui E&S Group will also participate in the business by investing in the company that will operate the power plant. In addition to constructing the wind power generation facilities, we are responsible for creating a mechanism that can create value sustainably, such as establishing a system for collaborating with local companies and the municipal government and building a consensus with the local fishery people. We are also committed to PR activities with people from the town office, with the aim of making the four seaside wind turbines a tourism resource of the town.



General Manager Shigeru Tokumaru of the Environment and Energy Department, Mitsui E&S Engineering Co., Ltd., shaking hands with Mayor Haruhito Sasaiima of Nyuzen Town, Toyama Prefecture,

Corporate Action Report 2018 Corporate Action Report 2018

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## **Editing Policy**

Under our Company Philosophy of "To continue our role as a trusted company, and as a trusted member of society" we at Mitsui E&S Holdings Co., Ltd. uphold our corporate philosophy as we strive to be a company that uses manufacturing to contribute to social development and preserve the global environment. We view all actions related to achieving this goal as collective approach towards the creation of

The Corporate Action Report is a comprehensive summary of all the activities that we carried out in the fiscal year, covering management strategies, vital strategies, and the business status, as well as environment conservation activities and our social contribution initiatives. It is designed to provide stakeholders with greater insight into company operations

Website pages

- Overall corporate activities https://www.mes.co.jp/
- Financial information https://www.mes.co.jp/investor/
- Non-financial information https://www.mes.co.jp/company,

## Corporate Planning Division

## Coverage of the report

- ▶ This report covers the period from April 2017 to March 2018.
- (However, some sections include information for April 2018 and thereafter.)
- Issued in: October 2018

## Guidelines used as reference

OMinistry of the Environment, Environmental Reporting Guidelines OGRI, Sustainability Reporting Guidelines Version 4 OISO 26000

## Disclaimers

This report contains plans and forecasts that were current as of the date of publication as well as descriptions about our future business activities based on our management plans. Please note that this information is based on the currently available information. and the actual contents of our business activities may differ from the contents of this report due to future circumstances or the environment, or due to unanticipated events that may occur after the publication of this report

### Please use contact form via website www.mes.co.jp

## Message



## **Review of FY2018 (the year ended March 2018)**

The fiscal year ended March 2018 was a year of significant change for the group. The MES Group, which was established in 1917, took the milestone of the 100th anniversary as an opportunity to shift to a holding company structure and took a new step as Mitsui E&S Holdings Co., Ltd.

While initiatives for innovation that we have continued from the previous mid-term business plan (MBP14) made steady progress, our overall business performance for the fiscal year under review (the year ended March 2018) was weak, and we faced extremely unfavorable results. Consequently, we had no choice but to decide to refrain from making dividend payouts, which we view seriously. I hereby extend my deepest apologies to our stakeholders for the significant inconvenience.

The greatest factor for the decline in our operating income is the posting of losses, which is associated in part with additional expenses generated in the construction of a chemical plant in North America. Reflecting on this, we have reviewed our strategy for receiving orders and have decided to refrain from accepting orders for local construction work in overseas countries. Moving forward, we will establish a system under which we identify the quality (difficulty level) and quantity (order size) of each project and prevent unforeseen problems under the control of Mitsui E&S Holdings Co., Ltd.





Group Management Committee

## Shift to a holding company structure

The Mitsui E&S Group is working on a range of reforms for achieving the Mitsui E&S Group 2025 Vision, a long-term vision towards 2025 as the target year. We have positioned the Mid-Term Business Plan 2017 (MBP17) as the first step toward achieving the long-term vision and are working on fundamental structural reforms with the aim of ensuring that we achieve our ideal vision, that is, "Maximize MES Group strengths collectively to improve profitability and stabilize earnings." One of these reforms is the shift to a holding company structure.

"How should we continue growing and secure stable profits?" The shift to a holding company structure is one of my answers to this question.

Effective April 1, 2018, the Ship & Ocean Project business, the Machinery & Systems business and the Engineering business were succeeded to Mitsui E&S Shipbuilding Co., Ltd., Mitsui E&S Machinery Co., Ltd. and Mitsui E&S Engineering Co., Ltd., respectively, in the form of an absorption-type company split. At the same time, we changed our trade name from Mitsui Engineering & Shipbuilding Co., Ltd. to Mitsui E&S Holdings Co., Ltd. Mitsui E&S Holdings formulates and implements group-wide strategies, such as the selection and consolidation of businesses, while each operating company understands the direction of the overall group and then formulates its own strategies and takes prompt measures for improving its competitiveness with collaborations in sight, with the aim of achieving the evolution needed to adapt to the new environment ahead of others.

We are still at the stage where we have just finished drawing the framework. However, we can already see some signs of changes. In April 2018, we established the Group Management Committee as a forum for deliberating on the management strategy of the overall group on a quarterly basis to determine the policy. MODEC, Inc. and Burmeister & Wain Scandinavian Contractor A/S of Denmark, group companies that account for a large proportion of the group's business results, have also joined this committee, where members discuss group management strategies in the true sense of the word. How should group companies share their business plans, deepen their knowledge, and produce synergy of their respective products, technologies and services? I feel that we have set the stage for achieving "Maximize MES Group strengths collectively," which constitutes an essential task for achieving MBP17 together with "Reinforced business foundation."

I am also seeing a good response to the employee awareness reform. At the Management Committee, operating companies have begun to make proposals that clearly reflect their intentions, and to have heated discussions. I feel that this reflects the fact that their sense of ownership, with which they feel obliged to do things on their own, has grown stronger. Further, many executive employees have an awareness of cash flow, which I hope will lead to the formulation and implementation of solid management strategies.

### Mitsui E&S Group 2025 Vision

Our long-term vision is introduced on pages 20 and 21 of this report.

Mid-Term Business Plan 2017 (MRP17)

MBP17 is introduced on pages 22 and 23.

## New Operating Companies

New Operating Companies are introduced on pages 16 and 17, 29, 33, and 35 respectively.

### Mitsui E&S Holdings Co., Ltd.

The Group structure is shown on pages 16 and 17.

Moving forward, we will continue to promote structural reforms to establish a structure that will enable us to make maximum use of the internal resources of the group, one that will permit us to make concentrated investment in growth fields, and one that will allow us to improve the mobility and competitiveness of each business.

## For sustainable growth

All the businesses of the Mitsui E&S Group, including marine logistics that use ships, the development of ocean resources and the renewable energy business, have a significant influence on the global environment. Many of the UN Sustainable Development Goals (SDGs) are related to our businesses. We must think about how to contribute to creating a sustainable future through businesses.

I believe that the creation of a sustainable future starts from human resources development. We will develop human resources who are healthy both physically and mentally, receive training while working, and thereby improve themselves as humans. These human resources will create products that are valuable for society, and this will be the beginning of a sustainable society.

In FY2018, I had numerous opportunities to learn our history, including the 100th anniversary event and the creation of our 100-year history book. Our history shows that we have been taking on challenges and implementing reforms ever since our foundation. I was made aware that it is thanks to our predecessors, who began to design and build a system that would survive 100 years at the time of our foundation, that we have been able to survive after 100 years of challenges and reforms. In the early days following its foundation, our company created a company town by establishing a school and a hospital, and thereby built a system for securing and developing human resources in a sustainable manner.

We position FY2018, when we celebrated our 100th anniversary, as the year for making a fresh start for the next 100 years. Learning from the wisdom of our predecessors, we have begun to take new initiatives for developing human resources. In April 2018, for example, we established a department of machinery at a commercial high school in Tamano City, Okayama Prefecture, where we are working on the development of engineering human resources. We have also established a crane production base in Indonesia, where we will contribute to developing local human resources.

We aim to be a corporate group that creates social value in the next 100 years, just as we continued working as a company trusted by society and individuals in the past 100 years. To achieve this goal, we will keep taking on challenges while continuing to advance reforms without compromise. I would like to ask our stakeholders to continue supporting us with a medium- and long-term perspective and provide us with further assistance and encouragement.

Initiatives for developing human resources

Our initiatives for human resources development is introduced on page 45.

The Mitsui E&S Group has begun to walk the path of evolution towards the future.



## **Our Foundation**

**Businesses of Mitsui E&S are supported by** our philosophy, people, technologies, and the network that we have cultivated.

Company Philosophy

To continue our role as a trusted company, and as a trusted member of society

Business scale



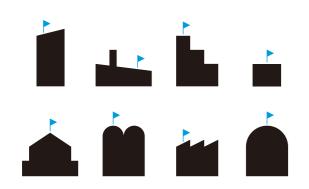
Net sales (FY2018)

Ordinary income

703.2 billion 3.1 billion



Number of employees (As of March 31, 2018)



Number of Group companies



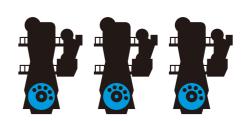
Established in

実績



Ship

Total number of ships



Marine diesel engines

Domestic market

No.1

**6,500** engines

Accumlated production

million horse power



Container cranes for ports

Domestic market



Petrochemical plants

The total number of plants we have handed over in

**1,300**<sub>#</sub>



After-sales services

 $35_{\text{service bases}}$ 



Repair shipyard

MES-KHI YURA DOCK

One of the largest dry dock in Japan



Wind power generation

Construction/manufacture

**234** units



FPSO\* business

MODEC, Inc.

One of the top two companies in the world



Power generation plants

Burmeister & Wain Scandinavian Contractor A/S We have handed over

> 184 plants in 54 countries



Small-sized gas carriers

TGE Marine Gas Engineering GmbH

**World-class** engineering company

\*Floating production storage and offloading system

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## **History**

Origin

**Established as** 

the Shipbuilding

**Division of former** 

Mitsui & Co., Ltd.

"Because Japan is

it is natural that

a seafaring nation.

the nation should be

founded on shipping."

who was the General

Division of former Mitsui

acutely aware of the need

to have a shipyard and a

submitted a petition to the

president. The Mitsui E&S

Group commenced from

repair factory and

his passion

& Co. at the time, was

Manager of the Ship

Our 100-year history, throughout which we have continued changing in response to the needs of the times. We are now moving on to the next stage.

1917-

With the mission for modernizing. Leading Japan's shipbuilding industry since our founding

# Taking on challenges for the modernization of Japan

This was the beginning of our history as one of Japan's leading shipbuilding companies.



In 1924, we built Akagisan Maru, Japan's first ship with a diesel engine.

# Introduction of technologies on marine diesel engines

In 1926, we concluded a technical licensing agreement with Burmeister & Wain A/S (B&W) of Denmark to manufacture and sell marine diesel engines. In 1928, we completed the first Mitsui-B&W diesel engine.

## **Entry into the onshore sector**

In the 1930s, we built rayon plants and manufactured various devices and steel pipes. This became the foundation for our subse-quent entry into the fields of chemical industrial equipment and steel structures.

# Spin-off as an independent company and change of the name to Mitsui Engineering & Shipbuilding

In 1937, the Shipbuilding Division was spun off from Mitsui & Co., Ltd. to become Tama Shipyard Co., Ltd., taking its first step as an independent company consisting of five organizations: the Headquarters, Kobe Sales Office, hospital, General Affairs Department, and Engineering Department.



Tama Shipyard (1952)

## 1950-

Expand business domains.

Evolving into a comprehensive heavy manufacturer

# Entry to the field of plant construction

We were involved in the plant construction for Mitsui Petrochemical Industries Ltd., which was established in 1955. This was our first step toward the business of petrochemical plant construction, which we subsequently launched.



No.1 ethylene plant for Iwakuni Works of Mitsui

## **Launch of steel structure business**

We established the production system in the steel structure sector. Having started with the construction of road bridges from small and midsize bridges, we became a company that was able to receive orders for large bridges from Japan Highway Public Corporation and other clients.



Izumiotsu Bridge (1976)

## **Entry into the crane industry**

In 1961, we concluded a technical licensing agreement with PACECO., Inc. of the United States. We thus began to promote the spread of containerization and delivered many port cranes at home and abroad.

## **Expansion of rotating machine business**

In the 1960s, we entered the centrifugal compressor and reciprocating compressor sector by introducing advanced technologies from Europe. We continued to produce technological innovations and worked on axial compressors, steam turbines, and similar equipment.

# 2000-

# Aiming to respond to globalization and achieve sustainable growth

# Strengthening energy-saving, environmentally friendly technologies

In response to the rising demand for environmentally friendly ships and energy-saving ships, we developed next-generation environmentally friendly ships with low fuel consumption. We also began to develop other eco-friendly products, such as marine diesel engines that conform to international emission regulations.



A "neo series" eco-friendly bulk carrier with low power consumption

## **Listing of MODEC, Inc.**

In July 2003, MODEC Inc. was listed on the Tokyo Stock Exchange for the first time as a subsidiary of Mitsui E&S Group. On June 1, 2004, the company's stock listing was upgraded to the First Section of the Tokyo Stock Exchange, and the company has continued to make rapid progress today.



MODEC, Inc.'s stock listing was upgraded to the First Section in 2004

# Formulation of the Mitsui E&S Group 2025 Vision

In 2016, we developed a long-term vision that shows our future vision, direction, and ideal situation. We have defined our ideal situation as "The Mitsui E&S Group will evolve into an engineering team that creates social value," describing a company that provides value in response to social issues and market needs in a way that transcends the existing framework of ideas.



# 2017-

# The Mitsui E&S Group gets started toward the next 100 years.

### 100th anniversary

As we marked our 100th Anniversary on November 2017, we take this opportunity to promote further structural reform.



# Shift into holding company structure and changed its name to "Mitsui E&S Holdings"

In April 2018, we took a new step by reorganizing into a holding company structure and changing our name from the Mitsui Engineering & Shipbuilding Group to the Mitsui E&S Holdings.

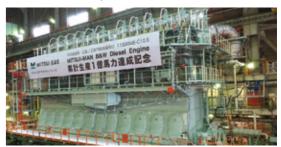
Reorganizing the Ship & Ocean Project segment, the Machinery & Systems segment and the Engineering segment, into operating companies under the holding company structure to make a fresh start.



Established Mitsui E&S group logo mark

# Accumulated production of diesel engines reaches 100 million horsepower

In June 2018, Mitsui E&S Machinery has achieved accumulated Mitsui-MAN B&W diesel engines production of 100 million horsepower with a single engine model. The production record achieved 50 million horsepower in October 2005 (77 years and 4 months since the first engine). And another 50 million horsepower has been added on it with only 12 years and 8 months. In the total 90 years since the first engine manufactured in 1928, accumulated production of 100 million horsepower has been achieved.



100 million horse power achieved by Mitsui-MAN B&W diesel engine "11S90ME-C10.5"

# While improving the flexibility of each group company, building a structure for maximizing the group's strength collectively

MITSUI E&S

Mitsui E&S Holdings Co., Ltd.

Mitsui E&S Holdings will strive to strengthen collaboration among individual operating companies and with other companies in the Group. Mitsui E&S Holdings will also work to develop management plans and strategies for the overall Group to concentrate its management resources on the three business domains defined as growth areas in the Group's long-term vision, with a view to increasing its corporate value and growth potential and securing stable profitability.

- Mitsui E&S Shipbuilding Co., Ltd.
- Mitsui E&S Machinery Co., Ltd.
- Mitsui E&S Engineering Co., Ltd.
- Mitsui E&S Business Service Co., Ltd.
- Mitsui E&S Systems Research Inc.
- MES Facilities Co., Ltd.

- MODEC, Inc.
- Burmeister & Wain Scandinavian Contractor A/S
- Showa Aircraft Industry Co., Ltd.
- Kaji Technology Corporation
- Mitsui E&S Asia Pte. Ltd.
- Mitsui E&S (China) Co., Ltd.

## Mitsui E&S Shipbuilding Co., Ltd.

We are building state-of-the-art vessels such as bulk carriers, oil tankers, LNG carriers, naval vessels for the Ministry of Defense and patrol vessels for the Japan Coast Guard. We are actively working on ocean resources development through development of the next generation Hull Platform for FPSO and marine equipment such as underwater vehicles.

### Main group companies

- MES-KHI Yura Dock Co., Ltd.
- Akishima Laboratories (Mitsui Zosen) Inc.
- M.E.S Tokki Co., Ltd.
- MES Shipping Co., Ltd.
- Shikoku Dockyard Co., Ltd.
- Niigata Shipbuilding & Repair, Inc.
- TGE Marine Gas Engineering GmbH

## Main products

### Commercial Ships









## Mitsui E&S Machinery Co., Ltd.

We design and manufacture products that will become the heart of industries and logistics, such as container cranes for yards, from various industrial machines including marine diesel engines and reciprocating compressors. In the social infrastructure field, we contribute to the development of social infrastructure and creation of comfortable cities by technologies such as bridges and marine structures.

## Main group companies

- Mitsui E&S Power Systems Inc.
- Mitsui Meehanite Metal Co., Ltd.
- Mitsui E&S Technical Research Co., Ltd.
- DPS Bridge Works Co., Ltd.
- Azuma Machinery Co., Ltd.
- Paceco Corp. PT.MES Machinery Indonesia
- MES Ferrotec China Co., Ltd. Sanzo Manufacturing & Construction Co., Ltd.
   Mitsuizosen Technoservice Hongkong Ltd.
- Mitsui E&S Steel Structures Engineering Co., Ltd.
   Mitsuizosen Technoservice Taiwan Co., Ltd.
  - MES Technoservice Middle East W.L.L.
  - MES Technoservice Machinery Construction Logistics, Industry and

CSSC-MES Diesel Co., Ltd.

### Main products

### Marine diesel engine



### Transfer crane in container yard



Industrial machine



## Mitsui E&S Engineering Co., Ltd.

We conduct EPC business for various types of plant facilities in Japan and overseas. We emphasize four global megatrends <climate change, environmental protection, energy and resource struggle, demographic change> and operate compositely EPC business, power generation business, investment business and its peripheral service business in a wide range of related fields.

## Main group companies

- Mitsui E&S Plant Engineering Inc.
- Mitsui E&S Environment Engineering Corporation
- Sanzo Yuki Recycle K.K.
- Hamamatsu Green Wave Co., Ltd.
- Green Power Ichihara Co., Ltd.
- Betsukai Biogas Power Co., Ltd.
- DASH Engineering Philippines, Inc. Engineers and Constructors International, Inc.

## Chemical plant

Main products







Biomass power plant



## **Business Field**

## **Providing solutions with our technologies for** global issues that need our strength



In this domain, we will contribute to a sustainable future for the Earth by creating renewable energy and participating in the development of ocean resources.

Examples of comprehensive solutions provided by maximizing the group's strength collectively

## Supplying electrical power generated by floating offshore power stations that can travel anywhere in the world

Provision of floating gas power generation systems

At Mitsui E&S, we have developed and manufacture floating mobile power plants (power generation barges), which are equipped with diesel engines and power generators, together with Burmeister & Wain Scandinavian Contractor A/S (BWSC) our subsidiary in Denmark. We thus contribute to stable power supply in regions where it is difficult to procure materials or secure labor locally, or where a power grid has yet to be developed.



Power generation barge



As a professional with expertise in every aspect of the supply chain, we will achieve even greater innovation in the field of marine logistics and transportation.

As a marine logistics professional with expertise in every aspect of the global supply chain, from shipbuilding to the provision of products such as container cranes and services such as engine control by IT and container terminal management, we will achieve even greater innovation.

Main products

- O Transfer crane in container yard
- O Marine diesel engine
- O Ships

## Providing one-stop solutions for natural gas transportation needs

Provision of consistent solutions from the upstream to the downstream processes of natural gas transportation projects

Working together with our subsidiary TGE Marine Gas Engineering GmbH (TGE), a German gas carrier engineering company, we are aiding the development of the small and midsize gas carrier market We will enter the upstream processes of gas carrier construction by acquiring expertise from TGE, which has worked on a large number of Engineering, Procurement, and Construction Supervision (EPCS) projects, including the development of small and midsize gas carriers, demand for which is expected to increase in the



Small and midsize LNG carriers



We will contribute to creating a safe and comfortable living environment by providing plant facilities and public transportation infrastructure vital to the development of developing countries, as well as maintenance services required for infrastructure in Japan and other advanced economies.

We construct social infrastructure such as bridges and power plants and chemical plants in developing countries and provide our maintenance technologies as a measure against aging infrastructure in Japan. We will provide new solutions by fusing multiple product technologies of the Group and pursuing active collaboration with external partners.

products

- O Infrastructure maintenance O Bridges
- O Chemical plants
- O National defense

## Evolving into a general hospital that protects the social infrastructure

Provision of one-stop services from investigation and diagnosis to repairs, replacement, and renewal

In 2015, we established the Infrastructure Business Department (present Infrastructure Business Div. of Mitsui E&S Machinery) to consolidate our resources that are dispersed across the Group. We will provide one-stop services ranging from investigation and diagnosis of social infrastructure to their repair, replacement, and renewal by integrating resources and cooperating with both internal and external parties. We provide services by taking advantage of the fact that we have technologies and experience in both iron and concrete within the Group, which is our strength.



Hybrid inspection vehicle

Corporate Action Report 2018 Corporate Action Report 2018

## Mitsui E&S Group 2025 Vision

# We are an engineering team that creates social value to realize a better society.

The Mitsui E&S Group 2025 Vision outlines the Mitsui E&S Group's long-term direction for the period between fiscal 2017 and fiscal 2026. To achieve the Mitsui E&S Group company philosophy of "To continue working as a company trusted by society and individuals through our products and services," we outlined the direction of our future initiatives based on an evaluation of our rapidly changing external environment.

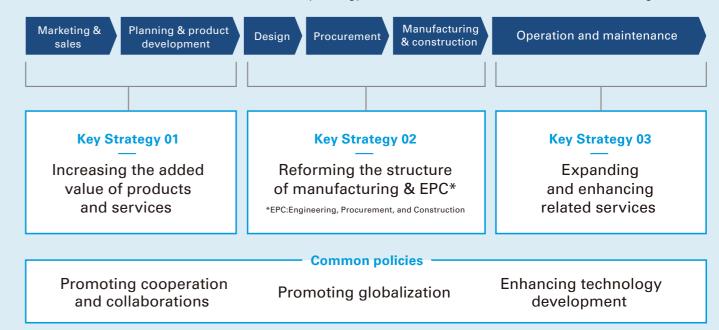
## **Ideal Situation of the Mitsui E&S Group**

## An engineering team that creates social value

## Realizing a better society Focusing Our Strengths **Environment & Energy** Marine Social & Industrial **Logistics &** Infrastructure **Transportation** Solution Mitsui E&S Group Engineering team that creates social value Connections with Commitment to Diverse products Engineering customers and manufacturing and services prowess partner corporations and engineering Social problems and needs

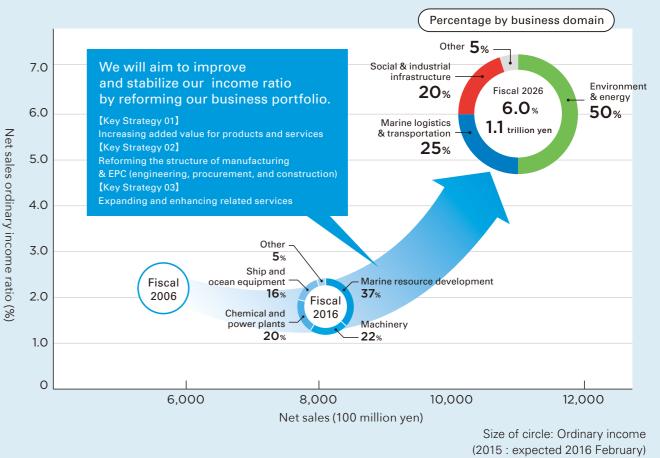
## **Key Strategy and Common Policies**

To achieve our Ideal Situation, we established a Key Strategy that divides our administrative workflow into three stages.



## **Quantitative Target**

## Achieving net sales of ¥1.1 trillion and ordinary income rate of 6% in FY2026 (Year ending March 31, 2026)



## Mid-term Business Plan 2017

# Our key strategy is to improve profitability. We are working on various innovations to achieve our goal.

The Mid-Term Business Plan 2017 will be followed by the Mid-Term Business Plan 2020 and the Mid-Term Business Plan 2023. This series of our medium-term business plans constitute a long-term strategy for achieving our 2025 Vision. Under the vision of "Maximize Mitsui E&S Group strengths collectively to improve profitability and stabilize earnings," we will make best use of the Mitsui E&S Group's network and resources, in our efforts to achieve stable earnings and improve our corporate value.

## Our Ideal Future by 2020 (Year ending March 31, 2020)

## Maximize Mitsui E&S Group strengths collectively to improve profitability and stabilize earnings

Numerical targets

Net sales	¥920 billion	ROIC	6.5%
Ordinary income	¥37 billion	Interest-bearing debt	¥270 billion or less
Ordinary income rate			

Improving added

value of products & services

02 Reforming structure of manufacturing & EPC\*

03Expanding & enhancing ancillary services

Robust group management

> Reinforced business foundation

## Improving our planning ability and capability of making proposals

O Formulating a strategy for creating value for society based on the three domains O Increasing our competitiveness in the service domain by strengthening intra-group cooperation and alliances with other companies

## Improving our product development capability

- O Enhancing technology and product development in view of the future market (energy-saving/ labor-saving/ environmental performance)
- O Strengthening technologies for increasing the competitiveness of our core products

## Building a dynamic, flexible production system

O Enhancing the system for production in optimal overseas locations/building a global production base O Improving the productivity of domestic bases by applying IoT and robotics

### Establishing a system for flexible EPC

- O Promoting collaboration within the Group in the field of ocean business
- O Strengthening cooperation within the Group in the field of renewable energy/gas power generation

### Enhancing domains and areas of services we provide

- O Enhancing after-sales services
- © Expanding FPSO charter business, power generation business, and other businesses that result in constant profits based on medium- or long-term contracts

## Evolving services by applying IoT

- O Enhancing maintenance and services based on remote monitoring
- O Provision of preventive maintenance services
- (remaining life assessment and suggestion of optimal maintenance)

## Organization and human resources

O Strategic use of Group companies (clarifying the positions of operating companies and subsidiaries) O Effective utilization of human resources in the Group (increasing the mobility of human resources)

O Maximizing consolidated earnings of the Group

## Common strategies

- $\bigcirc$  Improving the risk management capability (elimination of excessive loss)
- $\bigcirc$  Selection and concentration of businesses based on growth potential and investment effect

## Organization and human resources

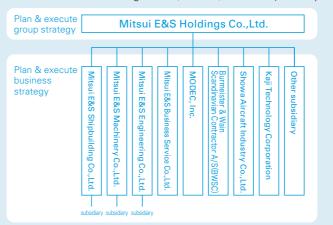
O Building and implementing a human resources rotation program (other departments/ subsidiaries)

## Our Action Initiatives of FY 2018

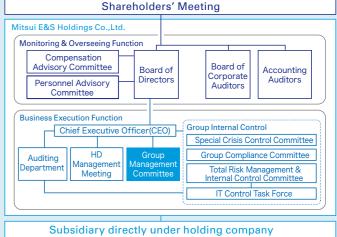
Reinforced business foundation

## Our Action Shifting to a holding company system

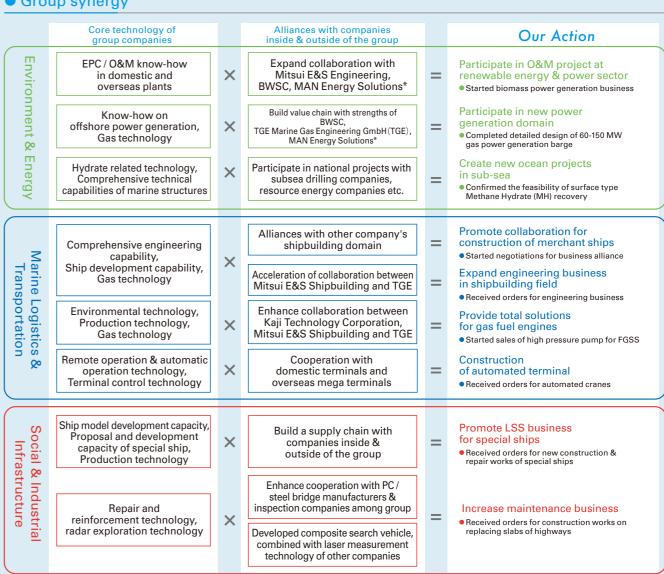
To separate group management and business management with the clear definition of each organization, function, role and responsibility



To establish "Group Management Committee" to discuss and make decisions on the management strategy of the entire group



Group synergy



\*EPC:Engineering, Procurement, and Construction

## **Highlights**

(JPY million)

Financial Results	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
New Orders Received	1,107,750	959,784	609,621	516,577	1,160,662
Net Sales	670,067	816,520	805,413	731,464	703,216
Operating Income	19,969	13,298	11,813	8,304	△5,224
Ordinary Income	26,179	14,899	15,078	14,859	3,061
Net Income*1	42,854	9,463	7,599	12,194	△10,137

Cash Flow	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Operating Cash Flow	14,499	15,167	29,802	△7,843	△3,555
Investing Cash Flow (Loss)	△37,312	△32,385	△34,599	△28,753	△9,046
Free Cash Flow	△22,813	△17,218	△4,797	△36,596	△12,601
Financing Cash Flow (Loss)	15,531	△4,374	48,216	19,401	△14,813
Cash and Cash Equivalents	111,926	94,664	135,747	115,620	86,311

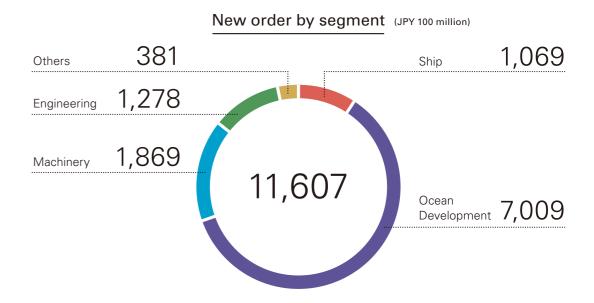
Financial Position	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Net Assets	323,608	347,305	343,853	367,608	356,837
Total Assets	932,896	1,074,563	1,094,042	1,096,735	1,029,222
Interest-bearing Debt*2	187,831	188,313	239,871	265,175	255,276

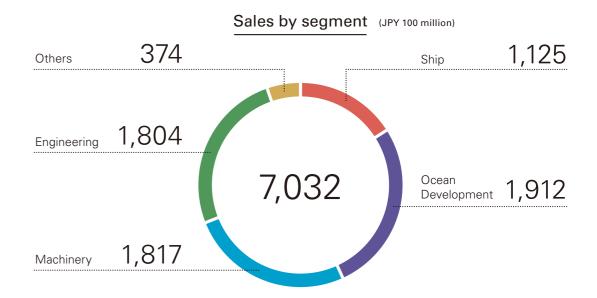
Per Share Information	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018*3
EPS (Net Income per Share)	51.80	11.63	9.40	15.09	△125.4
BPS (Net Assets per Share)	266.64	292.86	290.48	309.78	2,958.83
Dividends per Share	2.0	2.0	4.0	3.0	-
Share Price at the year end	218	205	168	172	1,730

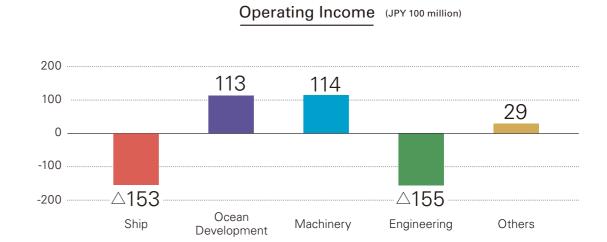
Key Financial Indicator	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Shareholders' Equity to Total Assets (%)	23.6	22.0	21.5	22.8	23.2
ROE (Return of Equity) (%)	21.6	4.1	3.2	5.0	△4.1
D/E Ratio	0.9	0.8	1.0	1.1	1.1

Non financial Information	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Employees (Consolidated)	12,055	12,291	12,705	13,171	13,421
Total Energy Consumption	1,175	1,265	1,300	1,305	1,395
CO <sub>2</sub> Emission	6.90	8.14	8.13	8.20	8.60

## FY 2018 (For year ended March 31, 2018)







<sup>\*1</sup> Profit(losses) attributable to owners of parent

\*2 Excluding lease liabilities

\*3 The Company consolidated shares on the basis of one new common share for every 10 common shares with an effective date of October 1, 2017. Share price shown in 2018 is of after the consolidation.

FY 2018(Year ended March 31, 2018) (JPY 100 million) Net Sales Operating Main Products Composition Income Bulk carrier Oil tanker Ship LNG carrier Research vessel / Training vessel 1,125 △153 Fishery patrol vessel High-speed vessel Naval ship / Patrol ship Submersible Ocean Development 1,912 113 Floating production storage and offloading system (FPSO) Marine diesel engine Transtainer (Transfer Crane in Container Yard) Machinery • Gas turbine and gas engine Container Terminal co-generation system Management System (CTMS) Process compressor 1,817 Industrial Crane 114 25.8% Top pressure recovery turbine (TRT) generating system Bridge Reactor / Heat exchanger Floating piers and pontoon Rotary dryer / Coal moisture controller
 Radar scanner Portainer (Quayside Container Crane) Manipulator Petro-chemical plant Inorganic chemical plant Engineering Biomass power plant Biogas power plant 1,804 △155 Wind power facility Overseas power plant engineering & construction Environmental facility Diesel engine generating plant Others 5.2% 374 29 Real Estate Development System Development

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# Ship



## **Business environment and performance**

The global shipping industry has continued to experience a state of excess capacity attributed to the completion of numerous new shipbuilding construction projects, which continued until the year before last. In particular, business negotiations over new shipbuilding construction projects remained in a slump in the dry bulk division because of the low levels of charter freight, which caused us to struggle during the year. On the other hand, however, it has begun to be felt that the market has hit the bottom, and charter freight has begun to show a slight recovery trend. The number of inquiries for new shipbuilding construction projects began to increase in the latter half of the fiscal year.

In the field of gas carriers, while the progress of the LNG export project has been delayed and business negotiations over the new construction of large LNG carriers have been in a slump, we are seeing multiple projects on medium- and small-sized LNG carriers, mainly for regional transportation.

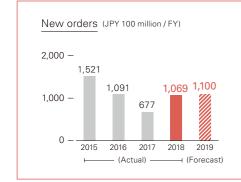
In the field of ocean development, development projects in Brazil, which had been postponed due in part to political reasons, have begun to be implemented, and the establishment of floating production storage and offloading systems (FPSO/ FSO), which are to be devoted to the projects, has been activated. We therefore expect the business environment to remain steady. In the midst of these conditions, the Mitsui E&S Group will continue

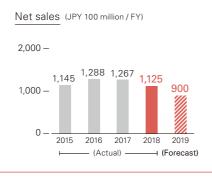
to undertake activities for receiving orders for bulk carriers that

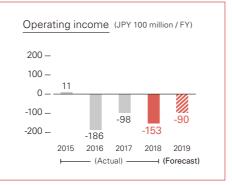
incorporate energy-saving and environment-friendly technologies

medium- and small-sized gas carriers. In addition, for FPSO, the majority of which are remodeled used tankers, we will strive to achieve the "noah" concept for newly-built FPSO hulls, under which we will promptly supply highly-durable new ship hulls that we have developed, in our efforts to establish an ocean brand. In the field of national defense and security, the increase in naval ships and ships intended for public offices and the growth of replacement demand for these ships are expected due to the security environment, which has been growing tougher. We will strive to win orders by taking advantage of the high level of shipbuilding technologies of the Mitsui E&S Group. Orders received increased by 39.235 billion yen (+57.9%) compared to the previous fiscal year, to 106.947 billion yen, reflecting additional orders for eight medium- and small-sized bulk carriers, which we received despite the sluggish market, and orders received for ships intended for public offices including naval ships for the Ministry of Defense. Net sales were almost as planned, down 14.217 billion yen (-11.2%) from the previous fiscal year, to 112.472 billion yen. Operating loss increased 5.57 billion yen from the previous fiscal year, to 15.260 billion yen, partly reflecting an increase in provision for losses on construction contracts over general commercial ships in addition to an increase in costs for building some ships, which offset the completion of all ocean support vessel projects that had been the major cause of losses.

and other products with the aim of establishing a position on







## Our Action Initiatives for innovation

## Our Action

Improving design and development capabilities and cost competitiveness through a system for collaborations

# Conclusion of a business cooperation agreement with TSUNEISHI Shipbuilding in the commercial ship business area

On May 7, 2018, we signed a business cooperation agreement with TSUNEISHI Shipbuilding Co., Ltd. in the commercial ship business area. The purpose of the partnership agreement is to attain the continuous growth of the shipbuilding business through collaboration between the two companies in improving the design and development capabilities and cost competitiveness, and thereby receiving more orders, while maintaining their respective management independence.



Left: Vice President Yasunori Kobatake of TSUNEISHI Shipbuilding Co., Ltd. Right: President Tetsuro Koga of Mitsui E&S Shipbuilding Co., Ltd.

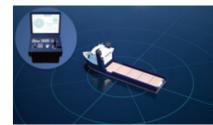
### Our Action

## Development of a safe, efficient transportation system with information technologies

# Development of Technological Concept of Autonomous Marine Transportation System

Development of Technological Concept of Autonomous Marine Transportation System, a project that Mitsui E&S Shipbuilding proposes as the leader of the research consortium, has been selected as one of the research projects under the 2017 Transportation Technology Development Promotion Program of the Ministry of Land, Infrastructure, Transport and Tourism.

In the project, the consortium will develop a technological concept of highly autonomous ships and create a roadmap for the development of technologies that will be needed to realize these ships. The consortium will therefore aim to achieve a safe, efficient marine transport system by utilizing technologies for the automatic and autonomous operation of ships.



Autonomous marine transportation syste

### Our Action

### Reinforcing the system for building special ships

## Orders received consecutively for multiple ships intended for public offices, including a fisheries inspection vessel for Japan Fisheries Agency

In March 2018, we consecutively delivered Chiyoda, a submarine rescue vessel intended for the Ministry of Defense, and Nagasaki-maru, a fishery training ship for Nagasaki University. Moving forward, we will further reinforce our system for building special ships (naval ships and ships intended for public offices) to increase the number of such ships we build.



Chiyoda, a submarine rescue vessel

# Message from the president of a new operating company

Our predecessor, Mitsui Engineering & Shipbuilding Co., Ltd., celebrated its 100th anniversary in November 2017. As the name implies, shipbuilding is our founding business, and the 100th anniversary of Mitsui Engineering & Shipbuilding is also the 100th anniversary of its shipbuilding business. While the global situation continues changing rapidly, we are facing a wider range of maritime issues, including those related to logistics, resources, the environment, and safety and security. We will survive through this era of changes by applying our shipbuilding technologies, which we have accumulated over 100 years, with capacity to execute strategy quickly that we have achieved through structural reforms. The Mitsui E&S Group has a number of affiliated companies that operate in a wide range of categories, including technology research, ship repair and gas engineering. We will harness our overall strengths to build the Mitsui brand, to provide core technologies and services that are always a step ahead, to meet the expectations of our customers, to enhance value, and to contribute to people and society.



Tetsuro Koga, President Mitsui E&S Shipbuilding Co., Ltd.



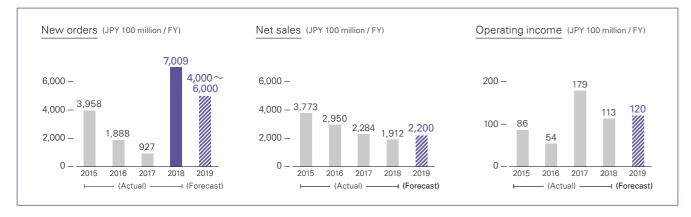
## **Business environment and performance**

Concerning crude oil prices, the concern over excess supply eased, due in part to the continuation of the reduction of joint production by major oil producing countries. West Texas Intermediate (WTI) continued to recover until the end of 2017, and remained at more than 60 US dollars per barrel. Oil companies are expected to continue the development of offshore oil fields and gas fields from the viewpoint of a sustainable supply of energy resources. Accordingly, the FPSO business is expected to grow stably in the medium and long term.

In the midst of these conditions, the Mitsui E&S Group is making concerted efforts to strengthen collaborations, including entry by the engineering department to Engineering, Procurement and

Construction (EPC) as the topside of FPSO, in accordance with the policy of "Maximize Mitsui E&S Group strengths collectively to improve profitability and stabilize earnings" that was set under the Mid-Term Business Plan 2017.

Orders received increased 608.220 billion yen (+656.1%) year on year, to 700.924 billion yen, partly reflecting two new orders received for large-scale charter projects and orders for specification changes and operation services for existing projects. Net sales declined 37.237 billion yen (-16.3%) year on year, to 191.182 billion yen, due in part to a decrease in the progress of FPSO construction. Operating income declined 6.574 billion yen (-36.7%) from the previous fiscal year, to 11.321 billion yen.



## Our Action Initiatives for innovation

## Our Action

## Expanding the revenue base by receiving orders for large-scale projects consecutively

## Orders received from Petrobras for supply of two FPSOs for development of pre-salt oil fields offshore Brazil, Sépia and Mero fields

MODEC, Inc. (MODEC) received two consecutive orders for supply and time charter (lease and operations) of the Floating Production, Storage and Offloading system (FPSO) from Petróleo Brasileiro S.A. (Petrobras), the national oil company of the Federative Republic of Brazil. These two FPSOs are among the largest in Brazil, each with an oil production capacity of 180,000 barrels per day. Brazil is one of the most important markets for MODEC. At present, around 30% of crude oil production in this country is produced via ten FPSOs and one FSO that are operated by MODEC. We expect that the orders for large-scale projects that were received consecutively from Petrobras in 2017 will enable us to expand our revenue base further from the next fiscal year onward.



hegan time charter service at Tartaruga Verde/Mestica field offshore Brazil in June 2018

### Our Action

## Promoting the FLNG projects that attract attention in the offshore oil and gas industry

## SOFEC, Inc., a MODEC Group company, receives an order for a large mooring system for Africa's first FLNG

SOFEC, Inc., a U.S.-based subsidiary of MODEC, received an order for a project to supply a large mooring system for Africa's first Floating LNG Production Unit (FLNG). The FLNG is an offshore plant that will be deployed in the Coral gas field offshore the Republic of Mozambique, which is being developed by Coral FLNG SA, in which the Eni group and other entities have stakes. It will be the world's first FLNG project for a deep water gas field at water depth 2,000 m or more. FLNG projects attract attention in the offshore oil and gas industry. Currently, there are four such FLNG projects for which final investment decisions have been made, and SOFEC has received orders for large mooring systems for FLNG in three of the projects.



Large Internal Turret (a single-point mooring system) that will be mounted inside hull of the FI NG. for which an order was received

## Our Action

## Contributing to the further reinforcement of the Japan-Ghana relationship and the development of medical research

## Supporting infection research in the Republic of Ghana

In May 2018, T.E.N. Ghana MV25 B.V. (MV25), an affiliate of MODEC that provides a time charter service of FPSO in the Republic of Ghana, donated 250,000 US dollars to Tokyo Medical and Dental University (TMDU) for infection research being conducted by TMDU at the Noguchi Memorial Institute for Medical Research (NMIMR), University of Ghana. Not only by providing charter service of FPSOs, also by providing monetary donations via MV25 to research conducted at NMIMR, which serves as a bridge between Japan and Ghana in terms of medical research, MODEC will contribute to the further reinforcement of the relationship between the two countries and the development of medical research.



FPSO Prof. John Evans Atta Mills, which was supplied by MODEC, and by which MV25 provides the time charter service

# Message

With core businesses of engineering, procurement, construction, installation, leasing, and operations service of floating offshore oil and gas production systems, including FPSOs, FSOs and TLPs, MODEC, Inc. (MODEC) provides comprehensive and competitive solutions related to offshore oil and gas development projects for oil companies all over the world. The offshore energy business, the focus of MODEC, is one of the most significant advantages in the Mitsui E&S Group that is extremely unique among major heavy industry groups. The Mitsui E&S Group possesses extensive experience and excellent technologies accumulated through its engineering and construction of ships and machinery, and its overseas Group companies have attractive business models for power generation and the engineering of LNG tanks. MODEC seeks to enhance its corporate value by integrating these strengths with its offshore energy business. In 2018, MODEC marked the 50th anniversary of its founding. We will continue to meet the expectations of society with confidence and pride in the fact that we have been specializing in the offshore business since 1968, when the offshore oil and gas industry itself was still emerging, and we have had a broad range of experiences and have now evolved into an industry-leading entity.



Toshiro Miyazaki President & Chief Executive Officer MODEC, Inc.



## **Business environment and performance**

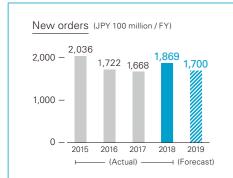
With regard to marine diesel engines, we secured sufficient work volume, although the environment for receiving new orders has been tough because the demand-supply gap of shipping fleet's tonnage has yet to be eliminated. The production volume was 146 engines/3,770,000 horsepower, reflecting an increase in the production ratio of large engines. It is expected to be around 3,880,000 horsepower in the next fiscal year. In addition, it was decided that a commercial machine of the large, low-speed marine diesel engine, which is equipped with an Exhaust Gas Recirculation (EGR) system to conform to the IMO NOx (Nitrogen Oxides) Tire III regulation and which will be adopted as well as last year. Regarding industrial machinery, the environment for receiving new orders has remained tough, although crude oil prices have been rising gradually and inquiries for reciprocating compressors, which are petroleum refinery equipment, have been increasing. On the other hand, we have received orders for axial compressors and top pressure recovery turbines from steel plants in Japan, and we are currently focusing our efforts on projects for India, where demand is strong.

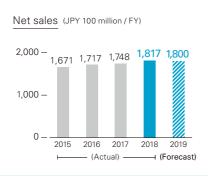
Orders received for cranes increased significantly from the previous fiscal year, especially reflecting the strong demand in Southeast Asia and large projects for Vietnam. Because the demand is expected to remain strong, we have established a subsidiary that manufactures container cranes in Indonesia, which is close to the areas where the products are in demand. We have thus reduced not only the manufacturing costs but also the transportation costs in our efforts to improve our competitiveness.

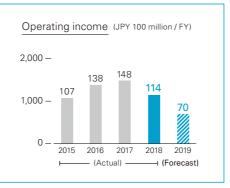
In social infrastructure, both orders received and net sales increased significantly from the previous fiscal year, due in part to an order received for an elevated bridge for Sri Lanka and orders received for projects in Japan, including ones regarding large steel structures (immersed tunnel elements) and the restoration of bridges that were damaged in the 2016 Kumamoto Earthquake. We will continue to focus our efforts on this field because the ratio of maintenance projects, such as the renewal work of expressways (replacement of the floor slabs), is increasing among projects in Japan at present.

Concerning the LSS Service which has mainly after-sales services (Life-cycle Solution Service and Customer Oriented Service), orders received and net sales increased from the previous fiscal year. The reasons are as follows. (1) The shipping market is moderate recovery trend. (2) After-sales services (relocation, dismantlement and demolition work) have increased, associated with an increase in new crane installations (3) Various renovation works have increased for stable operation.

Orders received increased by 20.041 billion yen (+12.0%) year on year, to 186.870 billion yen. This was due in part to the increase in orders received for marine diesel engines, container cranes, bridges, port structures, various industrial machinery, and aftersales services. Thanks to these products and businesses, net sales increased by 6.886 billion yen (+3.9%) year on year, to 181.733 billion yen. Operating income declined by 3.377 billion yen (-22.9%) year on year, to 11.394 billion yen.







## Our Action Initiatives for innovation

### Our Action

## Providing a new product portfolio with comprehensive cooperation agreements

## Expansion of cooperation with MAN Energy Solutions SE

In May 2017, Mitsui E&S concluded a comprehensive cooperation agreement with MAN Energy Solutions SE (MAN-ES; formerly known as MAN Diesel & Turbo SE) to strengthen our cooperative relationship further. The two companies can look back at almost a century of successful cooperation in low-speed marine diesel engines, which is our core business. Further, we have also built a good cooperative relationship with them in recent years in fields such as medium- and low-speed diesel engines for onshore power plants. With this agreement, we will not only consolidate these cooperative efforts but also extend to other business fields such as the steam turbines and compressors.



## Our Action

## Further strengthening and expansion of our crane business by establishing overseas production base

# Establishment of a production base for container handling cranes

In October 2017, we established PT. MES Machinery Indonesia (=MMI), a subsidiary in Indonesia that produces container handling cranes, to strengthen and expand our crane business further. In 2015, we increased the production capacity of the Portainer by our Oita Works, from 22 units to 36 units annually. However, we decided to establish the subsidiary in Indonesia after determining that the further expansion of the production capacity is required to respond to strong demand, and to hedge exchange risks. The production capacity of MMI is planned to be 4 Portainer cranes and 30 Transtainer cranes annually.



## Our Action

## **Providing advanced after-sales service**

## Conclusion of the group's first long-term, 20-year maintenance contract for marine main engines

In September 2017, MES Technoservice Co., Ltd., which is merged into Mitsui E&S Machinery in April, 2018, concluded a 20-year contract with MOL LNG Transport (Europe) Ltd. (MOL LNG) for the long-term maintenance of Mitsui MAN B&W marine diesel engines managed by MOL LNG, and began to provide services under the contract. CMAXS e-GICSX is also planned to be installed on the four target vessels. This will permit real-time abnormality diagnosis on the vessel as well as main engine performance status diagnosis on land, which is undertaken automatically by utilizing big data, allowing for the early detection of main engine abnormalities and the prevention of serious accidents.



LNG carrie

# Message from the president of a new operating company

Mitsui E&S Machinery Co., Ltd. is developing marine diesel engines, various types of industrial machinery, social infrastructure facilities such as container cranes and bridges, and after-sales servicing of products. We seek to propose and provide services so that customers can use its products throughout their life cycle more economically and with a sense of security.

We are also responding actively to globalization and technical innovations, which are currently proceeding at a rapid pace. We are moving forward with many actions, including the start of overseas production of cranes, an early approach with eco-friendly duel fuel marine diesel engines including the world's first methanol- and ethane-operated two-stroke diesel engine, preventive maintenance systems for diesel engines, compressors for hydrogen refueling stations, automated container cranes and terminals, and the maintenance business of bridges and roads. With our motto, "Think from the customer's perspective and take actions with a sense of speed," we will provide more reliable, more economical and eco-friendly products and services.



Mitsui E&S Machinery Co., Ltd.

Corporate Action Report 2018



## **Business environment and performance**

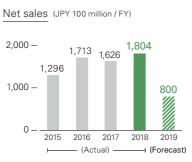
In the environmental energy field, we began to construct the Ichihara Biomass Power Plant (Ichihara City, Chiba Prefecture) in September 2017 in the biomass power generation business of the Mitsui E&S Group. While the purchase price under the Feed-in-Tariff (FIT) Scheme for electricity generated from renewable energy sources has been declining, we will continue to expand our biomass power generation business by collaborating with Burmeister & Wain Scandinavian Contractor A/S, which is a group company. In the wind power generation business, we will launch bottom-mounted offshore wind power generation onto the market, in addition to the onshore wind power generation as our mainstay, in our efforts to win more orders

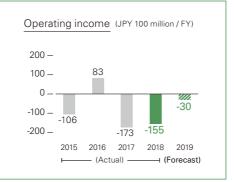
In the field of overseas infrastructure, new investment plans tend to be delayed, although the chronic shortage of the electric power is an urgent issue in Southeast Asia. In the midst of these conditions, we are proceeding with civil and architectural works for coal fired power plants in two projects in Indonesia and one

project in Vietnam, for which we have already received orders. In the petrochemical plant field, the Mitsui E&S Group refrained from receiving orders for large-scale overseas EPC projects, reflecting the revision of our sales strategy, although both the overseas and domestic markets are on a recovery trend due to the recovery of crude oil prices.

Orders received declined 22.053 billion yen (-14.7%) year on year, to 127.840 billion ven, despite orders received for a biomass power plant and other projects. Net sales increased by 17.783 billion yen (+10.9%) from the previous fiscal year, to 180.381 billion yen, due in part to progress made in the construction of a petrochemical plant and civil engineering work for a power plant. Operating loss decreased 1.787 billion yen year on year, to 15.545 billion yen, partly reflecting the completion of plant construction projects implemented by consolidated subsidiaries, which had been matters of concern.

# New orders (JPY 100 million / FY) 2,000 - 1.8241,000 -1,000 -





## Our Action Initiatives for innovation

## Being proactive in promoting businesses operated by using renewable energy

## Completion of Mukaihama wind power plant

In January 2018, we completed and delivered the Mukaihama wind power plant, which is operated at the Mukaihama district in Akita City, Akita Prefecture by Nippon Paper Venti Wind Power Co. Ltd., a joint venture between Venti Japan Inc. and Nippon Paper Industries Co., Ltd. We undertook the process from design, procurement of wind turbines, substation equipment and other items, and construction, to test run and adjustment. Starting with this project, we will aim to win even more orders in Akita Prefecture, which is a leading prefecture in Japan in wind power generation.



# Launch of a biomass power plant project in Ichihara City, Chiba

In September 2017, ITOCHU Corporation, Osaka Gas Co., Ltd., and Mitsui Engineering & Shipbuilding Co., Ltd. (MES) decided to construct a biomass power plant on the premises of the Chiba Works of MES and established Ichihara Biomass Power Co., Ltd., a company operating the project, through joint investment. Each of the companies brings its strengths to this project. MES (now known as Mitsui E&S Engineering Co., Ltd.) will provide its construction and its operation and maintenance capabilities. ITOCHU will procure the biomass fuel supply, and Osaka Gas will operate the power plant.



Planned construction site on the premises of Chiba Works

### Our Action

### Providing industrial infrastructure that is essential for the development of society

## Completion of a cracker for an ethylene plant of Exxon Mobil Corporation of the United States

In March 2018, we completed the construction of a cracker for an ethylene plant of Exxon Mobil Corporation in Texas, the United States. We had received the order for the construction from the company in October 2013. For this project, we formed a consortium with Heurtey Petrochem S.A. of France, and the project was implemented by using the U.S. subsidiaries of both companies. It was the second joint delivery of a cracker to Exxon Mobil Corporation following the delivery of a cracker in 2012 for the company's ethylene plant in Singapore, which is one of the largest in the world.



The completed cracker for the ethylene plant

## Message from the president of a new operating company

Mitsui E&S Engineering Co., Ltd. has been pursuing engineering operations in a range of fields within the scope of EPC (engineering, procurement and construction) in Japan and overseas for the past 80 years, since the days of the former Mitsui Engineering & Shipbuilding Co., Ltd. Social needs in the future will be increasingly diverse and complex globally, given an increase in energy consumption, the diversification of energy sources, the practical use of non-conventional energy, growing demands for infrastructure and industrial facilities, and expanding demand for the environmental protection.

Under such circumstance, the Company will meet the expectations of its customers in the three areas of business which the Company is now operating (the environmental energy business centered on renewal energy such as biomass, wind power and solar power, the infrastructure business centered on the civil and architectural works of overseas power generation facilities, and the plant business centered on petrochemical and inorganic chemical plants) and new businesses by utilizing the technologies and expertise which the Company has been cultivating for many years together with its comprehensive engineering strengths, including that of its subsidiaries in Japan and overseas.



Takuya Aramaki, President Mitsui E&S Engineering Co., Ltd.

## Research & Development

We will contribute to enhancing the competitiveness of the Mitsui E&S Group's core products with technologies for design and manufacturing innovations.

### Akira Nishihata

Director, CTO\* and in charge of Technical Co-ordination Dept. and Auditing Dept.

\*CTO:Chief Technology Officer



## Research and development

To achieve the Mitsui E&S Group 2025 Vision, we make development efforts aimed at enhancing product competitiveness and expanding our businesses in the domains of Environment & Energy, Marine Logistics & Transportation, and Social & Industrial Infrastructure.

### Our Action

## **Initiatives in the Environment & Energy domain**

In the field of ocean development and submersibles, we are developing a newly constructed floating production storage and offloading system (noah-FPSO) vessel for marine oil and gas, which will make it possible to respond to requests for delivery in a short turnaround period, and autonomous ship operation technologies. We are deepening the development efforts with the aim of putting them into practical use. We are implementing a joint research project in Team KUROSHIO, a team of eight organizations including the University of Tokyo, for the development concerning ultra-wide area high-speed seabed mapping. This project is now in its second year. Team KUROSHIO is the only team from Japan that has passed Round 1 and advanced to the final round in the international competition of mapping technologies (XPRIZE). We are also working on the development of a methane hydrate production system under the seabed. In the field of renewable energy, we are developing facilities including bottom-mounted offshore wind power generation facilities. In environmental plants, we are developing fermentation technologies environmental plants, we are developing fermentation technologies which are compatible with diverse materials, for the purpose of expanding the scope of application of biogas power generation technologies. We have also developed a facility that generates power by using unused waste heat from medium- and small-sized waste incinerators.



Joint research project advanced to the final round in the international competition of ultra-wide area high-speed seabed mapping (XPRIZE).

## Our Action

## Initiatives in the Marine Logistics & Transportation domain

In the field of port cranes, developments of quay cranes and container yard cranes with remote and automatic control are being made. In addition, container terminal automation systems are also being developed.

In merchant ships, we are developing new neo-series merchant ships, we are developing new neo-series ships, or next-generation, environmentally friendly ships that reduce CO<sub>2</sub> emissions. We are also developing a route recommendation system that considers weather and sea conditions and services including those of analyzing the propulsive performance of ships on commercial voyages, using ship-land communication technology. In addition, we are proceeding with joint R&D activities for developing the technological concept of an autonomous ship with six organizations including the National Institute of



Container terminal automation system

Maritime, Port and Aviation Technology. These activities are aimed at achieving a safe, secure, efficient marine transportation system by introducing technologies for automatic and autonomous ship operations.

In the field of two-stroke marine diesel engines, we developed the high-pressure EGR that meets the current IMO Tire III emission regulation for NOx (Nitrogen Oxides). We also launched dual fuel engines (ME-GI) with liquefied natural gas (LNG) and the same types of engines with ethane (ME-GIE) and methanol (ME-LGIM). A dual fuel engine with liquefied petroleum gas (ME-LGIP) is now under development. Those engines can comply with SOx (sulfur oxides) emission regulations. The high-pressure LNG pump for fuel gas supply to ME-GI engines is introduced for LNG fueled ships.



An engine for large ships equipped with high-pressure

### Our Action

### Initiatives in the Social & Industrial Infrastructure domain

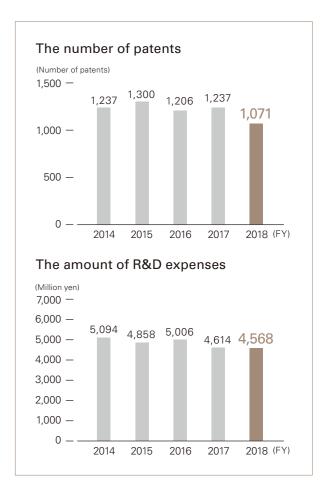
We are developing a radar inspection system for the maintenance of transportation infrastructure such as tunnels and roads, and also technologies for large-scale repair of bridges. In the field of industrial machinery, we are working on development of a new co-generation system with natural gas, which improves the energy efficiency of power generation and can spread distributed power supplies. The technologies of IoT are being introduced to increase the productivity in our factories and to operate machine tools efficiently.



Tunnel Lining Scanning Car "Tunnel Catcher 3"

## Intellectual properties

The basics of initiatives for intellectual property lie in securing competitive advantages for our businesses through the acquisition of intellectual property rights and the use of them. The R&D and IP Sect. and operational companies work together to promote the creation of intellectual property rights, such as inventions achieved through the development of products and technologies and trademarks affixed to our products, and the acquisition of rights over the properties and the use of them. The Legal Department, R&D and IP Sect., and related departments also work together to handle contracts and disputes with other companies regarding intellectual properties. The intellectual property strategy cannot exist on its own, but must be implemented in an integrated manner with the business strategy and technological development strategy, forming a trinity of strategies. While we are apt to feel that the rights are acquired as a result of achievements in technological development, we must fully consider how to acquire, protect, and apply technologies when we start developing a business or product. At Mitsui E&S, we always try to formulate and implement intellectual property strategy in this way. In addition, in Japanese corporate society, where there is a tendency to avoid patent disputes, we have started to see a trend towards actively exercising intellectual property rights. This is believed to be the result of the great impact made by the progress of globalization. At the same time, however, it also reflects the fact that people are starting to have a greater awareness of how to use these rights to gain profits. The importance of patent search and analysis, which aim to avoid infringing upon other companies' rights and exercise the intellectual property rights owned by Mitsui E&S, have been increasing, and we are taking measures to improve our capacity to conduct searches



Corporate Action Report 2018

## **Corporate Governance**

## **Directors / Corporate Auditors**



President and Representative Director **Takao Tanaka** 



Vice President and Representative Director **Takaki Yamamoto** 



Director
Shinsuke Minoda



Director

Akira Nishihata



Director Yuichi Shiomi



Director **Yuji Kozai** 



Director (Outside)
Toru Tokuhisa



Director (Outside)

Toshikazu Tanaka



Corporate Auditor (Full-time) **Takahiro Hiraiwa** 



Corporate Auditor (Full-time)
Hiroki Higuchi



Corporate Auditor (Outside)
Osamu Endo



Corporate Auditor (Outside)
Koichi Tanaka

## **Directors**

President and Representative Director	Takao Tanaka	CEO
Vice President and Representative Director	Takaki Yamamoto	Assistant to President, CCO*1, and in charge of Legal Dept.
Director	Shinsuke Minoda	In charge of Human Resources & General Affairs Dept.
Director	Akira Nishihata	CTO* <sup>2</sup> and in charge of Technical Co-ordination Dept. and Auditing Dept.
Director	Yuichi Shiomi	CFO*3 and in charge of IR Dept.
Director	Yuji Kozai	CISO*4 and General Manger, Corporate Planning Dept.
Director*5	Toru Tokuhisa	
Director*5	Toshikazu Tanaka	

- \*1 CCO stands for Chief Compliance Officer.
- \*2 CTO stands for Chief Technology Officer.
- \*3 CFO stands for Chief Financial Officer.

  \*4 CISO stands for Chief Information Security Officer.
- \*5 Director (Outside)
- \*6 Corporate Auditor (Outside)

## Corporate Auditors

Corporate Auditor (Full-time)	Takahiro Hiraiwa
Corporate Auditor (Full-time)	Hiroki Higuchi
Corporate Auditor*6	Osamu Endo
Corporate Auditor*6	Koichi Tanaka

### (As of June 27, 2018)

## Corporate governance

## 1. Basic philosophy

Based on its Company Philosophy, Business Policy, and Management Policy, Mitsui E&S aims to ensure its sustainable growth and further improve its medium- and long-term corporate value. It recognizes the importance of the social nature of a company and takes into account the global environment, working to ensure that all of its stakeholders find the company beneficial to society. To this end, we have established a system for making fair and transparent decisions promptly and boldly, under which we continuously strive to enhance our corporate governance.

- <Company Philosophy>
- To continue our role as a trusted company, and as a trusted member of society
- <Business Policy>
- To fulfill expectations and foster trust in people and society as a manufacturing company that offers products and services representing the culmination of our global business experience and years of advanced technology development in a wide range of fields
- <Management policy>
- Build further satisfaction for our customers

Provide safe and effective workplace environment for employees Contribute to the development of society

Pursue profit for the longevity of the company
In accordance with the preceding basic philosophy concerning
corporate governance, we will try to enhance our corporate
governance based on the following basic policies.

- (1) We ensure the substantive rights and equality of our shareholders
- (2) We collaborate appropriately with our shareholders and other stakeholders.
- (3) We ensure the appropriate, voluntary disclosure of our corporate information and transparency.
- (4) We clarify the roles and responsibilities of our Board of Directors, Corporate Auditors, and Board of Corporate Auditors.(5) We hold dialogue with our shareholders to help support our sustainable growth and improve medium- and long-term corporate value.

## 2. Structure

Mitsui E&S is required by law to establish a Board of Corporate Auditors. The function fulfilled by the Board of Corporate Auditors together with the voluntarily established Personnel Advisory Committee and Compensation Advisory Committee form the structure for corporate governance at Mitsui E&S, and we have appointed accounting auditors. As of June 28, 2018, the Mitsui E&S Board of Directors consists of eight members. Two of these members are part-time outside directors. Moreover, our Board of Corporate Auditors consists of four members, two of which are part-time outside corporate auditors.

The Personnel Advisory Committee is chaired by the president

and consists of four directors, including two outside directors. It improves the transparency of the procedure for nominating candidates for directors and ensures the fairness of the procedure. The Compensation Advisory Committee is chaired by an outside director, and consists of four directors including the two outside directors. It improves the transparency of the procedure for determining the compensation for directors and ensures the appropriateness of the compensation standards and fairness of evaluations.

## Internal control system

## Basic philosophy

We view the objectives of our internal control system as "Assuring efficiency and work performance (achieving objectives)," "Assuring the reliability of financial reports," and "Complying with the law (compliance)." We are making efforts to reinforce and improve our internal control more than ever.

In our internal control system, the Total Risk Management and Internal Control Committee deliberates the basic policy regarding internal control required by the Companies Act, the Financial Instruments and Exchange Act, and other matters. It also undertakes the company-wide promotion of measures based on the policy decided by management committees and other bodies.

To achieve our internal control objectives, we have established a

business execution system, compliance system, a risk management system, and an internal control promotion system for financial reports. The internal auditing section (Auditing Department) confirms the efficacy of these systems.

# Systems of corporate governance and internal control

## 1. Business execution system

To execute business operations in accordance with the basic policy decided by the Board of Directors, we have established two managing committees: the Management Committee and the Group Management Committee. Deliberations are held based on the functions of each organization to promote rapid, flexible decision-making.

## 2. Compliance systems

We operate our businesses by keeping legal compliance in mind, and continually review and reinforce our compliance systems. Specifically, we deliver the Corporate Code of Conduct to all officers and employees of the corporate group made up of Mitsui E&S and its domestic subsidiaries. We have also established a system in which guidebooks and collections of cases, which are materials used as references for daily operations, are available for review at all times. We distribute an English version of the Corporate Code of Conduct to our overseas subsidiaries and work with the presidents of those subsidiaries in a timely manner based on the situation of each area to confirm compliance systems and the status of their implementation. Likewise, we have established the Compliance Committee as an entity for promoting awareness of compliance policy and reporting results of surveys.

The Committee also observes and promotes awareness for antimonopoly act. In addition, we have set up a "Help-line" to detect compliance problems in their early stages. Employees can directly consult or submit reports to either the Secretary General of the Compliance Committee or a lawyer.

# Flow Chart of Corporate Governance and Internal Control Shareholders' Meeting Flection/Dismissal lection/Dismissal Audit Audit President & CEO Permanent Committee Instruction/Report T Control Task Force Divisions/Departments of MES Consultation/Reporting Employees of the Company Group onsisting of MES and Subsidiaries, and Clients

## 3. Risk management system

Mitsui E&S is promoting Total Risk Management System that systematically identifies and evaluates risks related to all aspects of business activities. This system is designed to ensure that we conduct business activities within the proper limit in which we can take risks. Under the Total Risk Management and Internal Control Committee, we promote group-wide risk management in line with the total risk management policy determined at the Management Committee

In regards to risks related to business operations, each relevant division conducts risk analysis on their own. As for the affiliated companies key members of relevant divisions and departments self examine the risk management status before they are analyzed

by relevant divisions and departments of Mitsui E&S Holdings. To address information security risks, we have established the IT Control Task Force, a group-wide organization and subordinate body of the Total Risk Management and Internal Control Committee. This organization formulates basic policies on security measures. Following these basic policies, we promote specific measures such as formulating security policies, obtaining the latest information by cooperating with external organizations, monitoring network and IT equipment, taking countermeasures against attacks from the outside, and providing related education and training. In cases of contingency, the Special Crisis Control Committee stands ready to quickly cope with the problem.

## 4. Internal control promotion system for financial reports

To assure the credibility of financial reports, basic policy concerning evaluation of internal control for financial reports is established at annual management committees and the Total Risk Management and Internal Control Committee evaluates the preparation and

operation status of said internal control, and make corrections if necessary.

## Communication

## Together with customers

We work under our company philosophy of "To continue our role as a trusted company, and as a trusted member of society" In our management policy that supports the company philosophy, we have set "Build further satisfaction for our customers" as one of our most important objectives. In our specific standards of conduct for employees, we give top priority to "customer orientation" and "Diligently attend to our customer needs for creating value-added products" and strive to develop and provide differentiated products and services based on new findings from customers' voices.

## Together with shareholders and investors

We position IR activities as a part of the long-term business and financial strategies of senior management. We disclose our corporate information in a fair and proactive manner in our effort to deepen shareholders' and investors' understanding of the business activities of Mitsui E&S and the Mitsui E&S Group.

### Information disclosure and IR activities

To build better relationships with shareholders and investors, we strive to ensure timely, appropriate information disclosure and have our senior management explain our business policies and specific visions in our IR activities, so as to ensure highly transparent management.

### Provision of IR information

We publish information about our company on our website in a timely, appropriate manner. In addition to providing materials including those for results briefing sessions and those on mid-term business plans, we also provide video and other content aimed at providing shareholders and other investors with greater insight into MES. We will continue striving to provide easy-to-understand information promptly.



IR information in Corporate website

## Together with business partners

As a manufacturing and engineering company, we aim to provide cost-competitive, high-quality products. In the procurement of materials and equipment for our products, we strive to ensure co-existence and co-prosperity with our business partners through fair trade with them, so as to fulfill our social responsibility.

### Basic policy on the selection of business partners

We established the Mitsui Administration Manual (MAM) in 1994. Concerning the selection of business partners by the procurement department, MAM stipulates that "As a basic principle, we shall select business partners in a fair and square manner by providing all companies that desire to be our business partners with equal, fair opportunities for participation." We engage in procurement activities based on this principle.

### For fair and equitable dealings

We established the Rules and Ethics for Material Procurement in November 2002. It shows the ethics and behavior and activity standards for all staff engaged in procurement activities. On the basis of the utmost integrity, we strive to build equal and fair relationships of trust with business partners.

## Together with local communities

We attach importance to communications with local communities. Employees in each of our business locations engage in environmental and social contribution activities locally, aiming to create a sustainable society. Information about initiatives taken at each business location is provided in this report and on our website.

# Ceremonial ship launching shown to the public at Tamano Shipyard (about five times a year)

Featuring the spectacle of a huge ship launching into the sea, ceremonial ship launches at Tamano Shipyard is received well by all those who observe it. Tamano City Tourist Association and other parties organize a popular industrial tour around Tamano City, the highlight of which is the chance to observe a ceremonial ship launch (which is held irregularly). Information about the observation of ceremonial ship launches is posted to the official website of Tamano City as it becomes available.



## **Environmental Preservation**

# Our actions aimed at realizing a sustainable global environment

Initiatives for reducing our environmental impact through business activities

### Our Action

## Development of neo-series ships - next-generation environmentally friendly ships

 Delivery of KIRISHIMA, a VLCC with a capacity of 310,000 DWT, which is among the largest in the world

The reduction of greenhouse gas (GHG) emissions from ships is an urgent task because regulations on CO<sub>2</sub> emissions from international shipping have now been introduced. In this situation, the Mitsui E&S Group has developed the neo-series environmentally friendly bulk carriers with low fuel consumption and has been promoting the launch of the ships onto the market. Further, we have developed the neo VLCC, the fifth ship in the neo series, by applying our bulk carrier technologies to large tankers. We have completed the first ship named the KIRISHIMA, a VLCC with a capacity of 310,000 DWT, which is among the largest in the world. We designed this ship to comply with the regulations on emissions of harmful substances such as nitrogen oxides (NOx) and sulfur oxides (SOx), as well as CO<sub>2</sub>, in our efforts to comprehensively improve the environmental and fuel performance.



KIRISHIMA, a VLCC with a capacity of 310,000 DWT

## Our Action

# Development of propulsion systems that are both environmentally friendly and have excellent economic efficiency

- Development of a new high-pressure SCR for low-speed marine diesel engines (MAN SCR-HP)
- Development of a next-generation hydraulic waste heat recovery system (THS2)

In April 2017, we conducted a verification test of a new selective catalytic reduction (SCR) system (high-pressure SCR), which can be mounted on low-speed marine diesel engines and which meets the IMO NOx (Nitrogen Oxides) Tire III regulations, jointly with MAN Diesel & Turbo, which is the licenser, thereby contributing to the development of the system

In May 2017, we developed the Turbo Hydraulic System type2 (THS2), a next-generation hydraulic waste heat recovery system dedicated to electronically controlled low-speed marine diesel engines. This will contribute to reducing greenhouse gas (GHG) emissions from ships and will serve as an effective measure for improving the Energy Efficiency Design Index (EEDI), which will be more strictly regulated in the future.

As a leading manufacturer of large, low-speed marine diesel engines in Japan, we will promote the development of technologies for complying with SOx regulations, as well as NOx regulations, and reducing CO<sub>2</sub> emissions (energy-saving technologies).



New high-pressure SCR for low-speed marine diesel engines (MAN SCR-HP)



Actual SCR equipment

### Our Action

## Being proactive in promoting businesses operated using renewable energy

## • Order received for a diesel power plant for the Faroe Islands

In March 2017, Burmeister & Wain Scandinavian Contractor A/S, which is our subsidiary, received an order for the 37-MW highly efficient diesel power plant for Elfelagid SEV, an electric power provider on the Faroe Islands. This diesel power plant runs on heavy fuel oil with a low environmental impact. This is enabled by the use of a selective catalytic reduction (SCR) denitrification system, which significantly reduces NOx.



Diesel power plant for the Faroe Islan

## Environmental management data (non-consolidated)

### Energy consumption and CO<sub>2</sub> emissions

MES continues its efforts to reduce CO² emissions through activities such as switching the fuel for in-house power generation from heavy oil to natural gas. The graphs on the right show our total energy consumption, CO² emissions, and purchased electricity over the past five years. Corresponding with an increase in the manufacturing of ships and diesel engines, our mainstay products, total energy consumption for fiscal 2018 increased slightly year on year. As a result, CO² emissions rose approximately 5% from the fiscal 2017 level.

### Water consumption

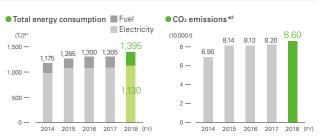
The graph on the right shows the use of water by MES over the last five years. MES uses both service water (clean water) and industrial water (intermediate water). We strived to save water once again during fiscal 2018, but the amount of service and industrial water used was up approximately 14% from the previous year.

## Waste disposal and recycle rate

The unlawful dumping of industrial waste has become a major social problem. As a producer of industrial waste, MES makes every effort to fulfill its responsibilities in this area. One of these efforts is our strict management of manifest. This is accomplished through periodic on-site inspections of disposal companies. Even more important is our effort to reduce the amount of waste itself. To achieve this objective, we work hard to recycle and thoroughly classify our waste. The graphs on the right show the waste amount and recycle rates over the past five years, and a breakdown of waste for fiscal 2018. We worked to limit waste, but fiscal 2018 saw an approximately 5% increase in waste from the previous fiscal year. In addition, the recycle rate decreased by approximately 0.2% to 86.6% because of the increased amount of waste oil and waste plastic that we generated. We will continue our efforts to reduce waste and improve our recycle rate. In addition, we will continue to properly dispose of our waste through strict management.

## Proper management of specific chemical substances (PRTR substances)

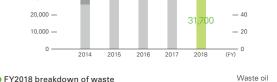
The majority of chemical substances used by MES are the solvents and pigments contained in paint. The changes in the output and travel amount of specific chemical substances over the past five years are shown in the graph on the right. The other chart describes the breakdown of chemical substances used by MES for fiscal 2018. In May 2004, a partial revision to the Air Pollution Control Act was officially announced. By maintaining strict control of usage levels and by using low-emission airtight containers, MES continues its efforts to conform to the objectives of this law.

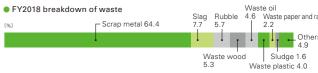


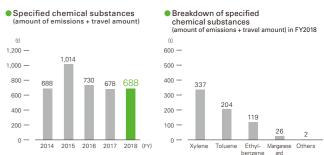


\*1 TJ: Tera Joule (=10<sup>12</sup>) \*2 CO<sub>2</sub> emissions were calculated by following the Guidelines for Calculating Corporate Greenhouse Gases Emissions issued by the Ministry of the Environment. CO<sub>2</sub> emissions from electric power were calculated by using the adjusted CO<sub>2</sub> emission coefficient for designated electric enterprises that was also published by the Ministry of the Environment.









## Environmental accounting (non-consolidated)

MES spent a total of 3,820 million yen on investments and costs related to environmental preservation efforts. A detailed breakdown of these expenditures is shown on the right. The categories for environmental preservation costs are based on the Environmental Conservation Cost Categories shown in the Environmental Accounting Guidelines 2005. These expenditures included a total of 800 million yen spent on investment, consisting of 500 million yen spent on research and development, 290 million yen spent on pollution prevention cost such as exhaust gas measures, and 10 million yen spent on energy conservation of global environment conservation. Total non-investment costs came to 3,020 million yen, which included 1,860 million yen spent on the research and development of environmentally friendly energy-saving products, 470 million yen as the cost for preservation of the global environment, including energy conservation, 370 million yen allocated to resource circulation costs such as waste treatment, and 230 million yen for pollution prevention costs.

Categories corresponding to business activities	Investment	Cost	Major initiatives and effects
1. Business Area Cost			
(1) Pollution prevention cost	294.7	471.8	Exhaust gas measures, wastewater treatment, dust control and other pollution control
(2) Global environmental conservation cost	6.3	372.5	Energy saving
(3) Resource circulation cost	0.0	229.4	Waste treatment
2. Upstream / downstream cost			
3. Administration cost		83.0	Environmental management system implementation, integrated reports, and environmental education
4. Research & development cost	496.0	1,861.0	Development of various environmentally friendly products
5. Social activity cost	_	2.5	Road cleaning, seminar sponsorship
6. Environmental remediation cost			
Total	797.0	3,020.2	

## **Human Assets**

## Initiatives for creating workplaces where every single employee is respected

## • Initiatives for reducing our environmental impact through business activities

Mitsui E&S Holdings Co., Ltd., Mitsui E&S Shipbuilding Co., Ltd., Mitsui E&S Machinery Co., Ltd., Mitsui E&S Engineering Co., Ltd. and Mitsui E&S Business Service Co., Ltd. (hereinafter, the "Mitsui E&S Group") aim to create a corporate culture that is truly free of discrimination, together with the affiliated companies, as a corporate entity that demonstrates social responsibility. For this purpose, the Mitsui E&S Group positions the solution of human rights problems, including problems related to discriminated communities, gender discrimination and racial discrimination, as an important task, and strives to solve these problems through daily business activities under the principle of respect for

## Organizational structure (organizations and systems for promoting training)

We have appointed the director in charge of the Human Resources & General Affairs Department of Mitsui E&S Holdings Co., Ltd. as the head of the Mitsui E&S Group Committee for Promoting Human Rights Awareness. Under the head of the committee, we have established the Committee for Promoting Human Rights Awareness in each Mitsui E&S Group company. To coordinate between group companies, we have also established the Mitsui E&S Group Meeting of People in Charge of Promoting Human Rights Awareness as the advisory body.



## Initiatives for promoting work-life balance

## Our Action

## Acquisition of Kurumin Logo certification, which is granted to companies supporting the development of the next generation

On August 22, 2017, Mitsui E&S Holdings Co., Ltd. (formerly known as Mitsui Engineering & Shipbuilding Co., Ltd.) was certified as a company supporting childcare pursuant to the Act on Advancement of Measures to Support Raising Next-Generation Children by the Ministry of Health, Labour and Welfare and acquired the Kurumin Logo, which is granted to companies supporting the development of the next generation. We promote initiatives including the improvement of labor conditions for helping employees to balance work and family life and review their workstyles. These initiatives are aimed at creating a workplace that enables employees to balance work and family and show their abilities to the fullest in manners that are appropriate for various life events.



## Our Action

## **Introduction of Telecommuting System**

In March 2018, we introduced a Telecommuting System in addition to the existing Flexible Working Hours System without core time and hourly annual leave. Under this system, employees raising children or providing nursing care to their families and those who have difficulty commuting due to pregnancy, injury or a similar reason are allowed to work from home for up to two days a week if they fulfill certain conditions. This aims to permit individuals to demonstrate their capabilities to the full during a limited time by enabling them to save time spent on commuting and reducing the physical burden on them.



Mitsui E&S Shipbuilding

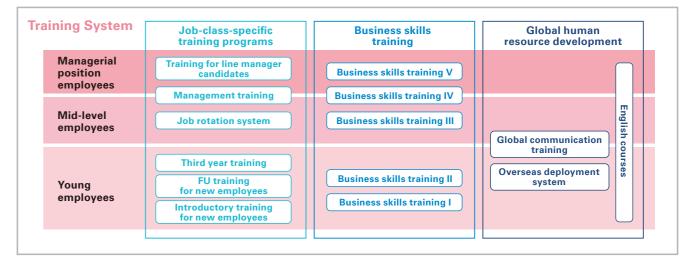
### Feedback from a user of the Telecommuting System

When I returned to work after the childcare leave that I took for my first child, my baby of less than one year old, whom I had just begun to leave at a day-care center, had a fever about 15 days every month. I began to use this system to balance childcare and work, with a strong supportive push

I appreciate this system because it allows me to balance childcare and work when my child is sick and needs my care and attention but I don't want to be absent from work. Because I don't have to give up either of things, the system allows me to balance work and childcare more easily, enjoy both areas, and find my life fulfilling. I work shorter hours by using the Flexible Working Hours System to take my child to and from the day-care center or the pediatric clinic. Lalso find the Telecommuting System helpful because it allows me to take my child to the pediatric clinic from the day-care center, even after I have worked until the end of the business day.

## Initiatives for developing human resources

We have set "making them full-fledged in five years" as the goal for training young employees. We provide them with group training in their first and third years at the company, training on basic skills for specific types of job, and other training programs. We also provide job-classspecific training programs, including one for mid-level employees and one for those in managerial positions. In addition, from the viewpoint of fostering global human resources, we offer English courses and training programs related to cross-cultural communications and deploy young employees to overseas business locations.



## Overseas deployment system

### Overview of the system

We established this system in 2015 in accordance with the following objectives and began operating it.

## **Objectives**

- ☐ Developing the international sensibility of trainees by having them experience working and living overseas as the groundwork for developing human resources who will manage overseas bases (including local subsidiaries) and projects in the future.
- ☐ The opportunities are provided to young employees (in their third to fifth year at the company) whose current jobs do not give them many opportunities to gain overseas experience.

### Required achievement/goal

The achievement as the target of this system is to develop a comprehensive mindset and skills for fulfilling duties overseas by experiencing operations (including legal affairs, accounting, tax affairs, general affairs, and personnel affairs) and daily life in an overseas country, broadly and shallowly. It is not aimed at developing specialists in the destination countries or in the businesses of the companies to which they are deployed.



Average length of period of deployment: 6 months to 1 year

## First half of 2017: 3 employees were deployed

Destinations	Period
Philippines/Group company	5 months
Indonesia/Project Site	5 months
Singapore/Group company	10 months



Planning & Administration Div

Mitsui E&S Shipbuilding

the overseas deployment system I was deployed to DASH Engineering Philippines Inc., a subsidiary in the Philippines, for around

Feedback from an employee who has experienced

five months from May 2018. At this company, I was in charge of accepting Japanese employees on business trips to the Philippines and other personnel and general affairs, including procedures for deploying local employees to other countries. I was initially bewildered by the environment. where things that are normal in Japan are not normal, and I sometimes found myself useless because I was unable to proceed smoothly with work. However, based on the behaviors and ways of thinking of my local senior colleagues, I learned to look at the cultural differences behind the local employees' behaviors. I reminded myself that what is normal in Japan may be abnormal in the Philippines, and this gradually enabled me to proceed with the work. I feel that this experience allowed me to learn values that are important when working with people overseas.

Corporate Action Report 2018 Corporate Action Report 2018

## **Work Environment**

## Our actions aimed at creating safe, comfortable, healthy workplaces

## Initiatives for creating healthy workplaces

Under our basic policy on the safety and health management plan, we create comfortable workplaces by managing the physical and mental health of our employees in a proactive manner. We compile a database of the results of periodical health examinations, with which our occupational safety and health staff and health insurance association manage the health of individual employees thoroughly. To provide specific examples, they hold various seminars for preventing lifestyle-related diseases and provide individual employees with specific health guidance and instructions for preventing any increase in the severity of diseases. In addition, we operate the Health Attack program, which is aimed at helping all employees and their families, including those from Mitsui E&S Group companies, to improve their lifestyles. In this program, we have them select health challenges that are appropriate for each of them from among a wide variety of courses, and employees work on their assignment for two months. As a mental health policy, we conduct systematic workshops stress checks, mental health news publications, counselor interviews, etc, in a systematic manner.

Further, the Mitsui E&S Holdings has concluded a blanket contract so that employees of the Mitsui E&S Group companies (approx. 10,000 employees) and their families can utilize an employee assistance program (EAP) service provided by an external resource (outsourcing service provider). In this service, consultations on physical/mental health and legal consultations are provided via telephone, website, facsimile, or in one-on-one meetings, 24 hours a day, with the privacy of the employees completely protected. We have provided this EAP service continuously for more than ten years.









EAP service website

## Being recognized under the 2018 Certified Health and Productivity **Management Organization Recognition Program (White 500)**

Under this program, the national government recognizes outstanding companies that undertake efforts for health and productivity management. It aims to establish an environment in which such companies are able to gain enhanced public recognition, e.g. from employees, employment seekers, related enterprises and financial institutions, as organizations engaging in strategic health and productivity management program efforts for maintaining their employees' health from a management perspective. In recent years, we have been committed to promoting measures for preventing lifestyle-related diseases and any increase in the severity of diseases based on the data health plan, in a collaborative health promotion project with the health insurance union. As the Mitsui E&S Holdings Group, we will work on health and productivity management proactively from a management perspective, aiming to create workplaces that enable employees to enjoy working energetically.



## • Aiming to create workplaces that enable employees to enjoy working energetically - A message from the director in charge of the Environmental & Safety Control Department



Shinsuke Minoda Director, In charge of Human Resources & General Affairs Dept.

Mitsui Engineering & Shipbuilding, which celebrated its 100th anniversary in 2017, became a holding company in April this year, and we were reborn as the Mitsui E&S Group. We have retained the company philosophy of "To continue our role as a trusted company and as a trusted member of society." The group's code of conduct has also remained unchanged. being "to provide a safe, comfortable and healthy workplace for its employees."

Operating companies that have been spun off firmly maintain the basic policy of giving top priority to safety in human resources development and proactively working on physical and mental health management.

Activities for preventing labor accidents by Mitsui E&S Holdings Co., Ltd. (Mitsui E&S HD), which heads the group, include its president's safety patrol of each works of group companies, the participation of people from the Environment & Safety Department of Mitsui E&S HD in labor safety meetings at each works of group companies, and the promotion of patient activities for informing employees of 2S3tei ("seiri" for orderly, "seiton" for tidy, "teiichi" for designated position, "teihin" for designated tools, and "teiryo" for designated amount), transmission of the philosophy for safety, and self-checking with finger pointing. In the field of occupational health, we are proactive in implementing measures such as the promotion of the data health plan and specific health guidance and the prevention of any increase in the severity of diseases, which are aimed at preventing lifestyle-related diseases, in a collaborative health promotion project with the health insurance union. Since our days as Mitsui Engineering & Shipbuilding, a PDCA cycle of taking a high level of measures for health and productivity management, evaluating the measures and making improvements has been implemented under the initiative of each works. As a result, the Mitsui E&S Group was recognized under the 2018 Certified Health and Productivity Management Organization Recognition Program (White 500). We are extremely honored to be recognized in this way, and at the same time, we are determined to promote health and productivity management further from a management perspective as the new Mitsui

## Efforts to prevent labor accidents

Based on the MES Occupational Safety and Health Management System Manual, we maintain our basic policy on occupational safety and health for the overall company declared by the employer (president). Based on this basic policy, we have developed and introduced the Company-Wide Occupational Safety and Health Management Plan.

We have so far (until FY2018) held labor and management safety and health councils and conferences to discuss measures and to promote the plan. We have also informed employees of the plan and collected their opinions through the safety and health committee of each works, workplace, etc. We have provided training relating to programs in a company-wide manner or at each work or workplace, and have also provided special training to young employees as necessary. We have also received flash reports of labor accidents from subsidiaries and shared the information to improve the safety level of the overall group. Depending on the results of the labor accidents, the safety and health inspection patrol was conducted by the Company-Wide General Safety and Health Manager and the director in charge of the Environmental & Safety Control Department.

When we became a holding company on April 1, 2018, we retained the previous basic policy on occupational safety and health as the policy of the overall group. We will evolve this basic policy so that each operating company will take more meticulous, advanced measures for preventing labor accidents under the new structure

### **Company-Wide Occupational Safety** and Health Management Plan

### Basic policy

Regarding corporate behaviors relating to safety and health, we will achieve the followings by instilling a safety culture in each workplace

- (1) Safety first principle, for manufacturing and engineering practices
  - as top priority to safety
- (2) Creating a comfortable workplace by proactively working on physical and mental health management

- 1) 2S3tei ("seiri" for orderly, "seiton" for tidy, "teiichi" for designated position, "teihin" for designated tools, and "teiryo" for designated amount), discipline, and habit
- 2) Transmission of the philosophy for safety
- 3) Mutual warning and 3-nai management (3-nai literally means "3 don'ts," that is, "Don't allow unsafe behaviors," "Don't compromise by making excuses," and "Don't leave unsafe conditions unimproved."
- 4) With self checking with finger pointing
- Particular emphasis shall be placed on the following:
- i. Enhancing facilities for, and contents of, experiential safety
- ii. Assigning supervisors to positions exclusively for ensuring safety for a certain period
- iii. Enhancing risk notice meetings before the starting of work
- 1) Reinforcing the mental health care system
- 2) Strengthening measures against overwork
- (3) Each line manager shall set an example by declaring safety and health and implementing the workplace safety and health management plan and promoting the PDCA of the activities.

## **Specific measures in FY2018**

- Concerning the Team Safety II activity, the president's prize were awarded two times during the year.
- Safety and health inspections are conducted by the central labor-management council every year at each work.
- Depending on the result of injuries of the previous year, intensive inspections were conducted at works with poor result Safety and health inspection patrol of works were conducted by the president during the Safety and Health Promotion Months (July to August).
- Proposals for improvements were solicited during the period, and remarkable proposals were awarded by the president.
- The safety and health slogan for the year was solicited from the employees.

## Our Action

## Transmitting the philosophy for safety to young employees through patrols by the general manager

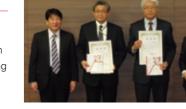
At the Chiba Works, young workers who have been with the company for less than five years join the safety patrol that is conducted by the general manager every Friday to receive one-on-one safety training. Activities in these patrols are aimed at raising the safety awareness of young workers and managing the safety of each work floor comprehensively. They include the general manager's explanations about the specific situations of accidents that have occurred in the past.



## Our Action

## Safety award granted to works

The Chiba Works achieved zero lost-worktime accidents in 2017. In recognition of this, the Chiba Works was awarded the Award of Excellence in Safety at the 21st Safety and Health Meeting that was hosted by the Shipbuilders' Association of Japan. In addition, the Engineering Headquarters (Mitsui E&S Engineering Co., Ltd.) achieved all targeted accident frequency rates among the annual labor safety and health management targets for 2017.



## Our Action

## Commending the best team in the Team Safety II activity

In the Team Safety II activity, which is implemented in a company-wide manner as a special measure in our labor safety and health activities, the team whose activities are recognized as the most excellent is granted the highest award (the president's prize).



## **Social Contributions**

## Our actions for remaining a group that is trusted by society

Initiatives for creating open factories

## Our Action

Factory tour given at the Tamano Works, hosted by the J-Crew Project - Yappari Umi-ga Suki

The Tamano Works participates in a factory tour program that is implemented by tying up with shipyards all over Japan and is hosted by the J-Crew Project - Yappari Umi-ga Suki (I love the ocean after all) of the All Japan Seamen's Union. The works accepted the first tour in December 2016 and gave a total of three tours by FY2018. In January 2018, the Tamano Works accepted around 120 local fifth-grade elementary school children for an Extracurricular Lesson for Experiencing a Shipyard. The children observed the marine diesel engine assembly factory and other facilities. The tour was well received by the children because they were able to get a close look at a large engine, which they do not usually have the opportunity to see. It is planned to be a regular event that will continue to be held once or twice a year.







Human Resources & General Affairs Services Dept.

Mitsui F&S Business Service

### Feedback from a participant

We can say that the spread of sea-mindedness is an urgent task for Japan to undertake as an island nation. I am sure that participation in this activity helps to spread sea-mindedness. This was proven by the smiles of the children when they saw the ships and engines. It also serves as an opportunity to promote our products to external people, so we will continue to accept tours and make it a regular event.

### Our Action Accepting local elementary school children for a tour of the Chiba Works

In the summer every year, we invite local fifth and sixth graders to a tour of the Chiba Works as an event related to Marine Day. In this tour, the children watch a DVD video of shipbuilding processes and learn the roles of ships and other details from a PowerPoint presentation before they are divided into grade groups and go on a tour around the facilities and on board a ship. In 2017, the event was held for the third time, and many elementary school children participated in the tour, although they were on summer holidays. They were very surprised to see a large ship and huge crane under construction, which they do not see on a daily basis, but they said, "It was a lot of fun." We will continue to hold tours that will familiarize local children with the shipbuilding industry





## Feedback from a participant

We explained what we do to the local children in an easy-to-understand manner by using quizzes and showing photos to compare the size of a ship with that of the elementary school, for example. With the children reacting candidly, this event also served as a good opportunity for me to reconfirm the greatness and importance of ships



## **Our Action**

## Accepting a bus tour at the Oita Works

Every year, we accept a bus tour of local citizens at the Oita Works as part of the Oita Kogyo-ten (Oita City industries show), an annual autumn event in Oita City. Partly because the Oita Works is located at the edge of the coastal industrial zone, we have few opportunities to show the container cranes manufactured there to local citizens. This tour serves as a valuable opportunity to enable them to get to know our products, which are shipped from Oita to the world.



General Affairs Dept., Oita Works

Mitsui E&S Machinery

Feedback from a participant

Many participants think that we build ships because of the old company name. Mitsui Engineering and Shipbuilding. I provide them with explanations in the belief that it is my duty to let them know that container cranes are manufactured at the Oita Works. This is a valuable opportunity to let local citizens know about our products, which we proudly manufacture. I find this job rewarding when I receive positive comments, such as "It's huge and exciting!"





## Support for the activities of the Fureai Trio

We support the activities of the Fureai Trio, a musical unit consisting of Ms. Kyoko Yoshida, a violinist, Mr. Mitsutaka Shiraishi, a pianist, and Mr. Genichi Watanabe, a cellist. The activities of the Fureai Trio commenced in 2003 with a desire to expose children and people with disabilities, who have few opportunities to be exposed to classical music, to live classical music and enrich their lives spiritually. The trio performed in eight cities/towns/wards this year. It has given 462 public performances for approximately 106,000 people to date (as of March 31, 2018). Since the activities of the Fureai Trio started in 2003, we have not only co-sponsored its events, but have also provided volunteer services to support its concert activities



A public performance at Tokyo in January 2018

## Activities of the Mitsui Public Relations Committee

We have co-sponsored a range of social contribution activities as a member company of the Mitsui Public Relations Committee, which consists of 24 Mitsui Group companies. This committee carries out a variety of cultural and art activities aimed at "enriching society by cherishing people and respecting diverse personal characteristics," working in line with the characteristics of the Mitsui Group described as "Mitsui is People."

### MITSUI Golden Glove Award

We grant this award to professional baseball players who have exhibited outstanding fielding performance throughout the season.

### Mitsui Golden Glove Baseball Class

This is a baseball class specializing in fielding, which is aimed at baseball coaches for juniors. We invite ex-professional baseball players who won the MITSUI Golden Glove Award to be instructors.

## The MITSUI Golden Takumi Award

This program was established in 2015, reflecting our desire to create an opportunity to attract attention and admiration for people involved in "Tradition x Innovation."



Winners of the 46th MITSUI Golden Glove Award



Winners and juries of the 2nd MITSUI Golden Takum

## **Social Contributions**

## Initiatives of group companies

## Showa Aircraft Group

## Opening of Smile Kids Showa-no Mori, a company-sponsored nursery school

Showa-no-Mori Area Service Co., Ltd., a company that belongs to the Showa Aircraft Group, opened Smile Kids Showa-no Mori, a company-sponsored nursery school, in a building near the north exit of Akishima Station in April 2018. This nursery school accepts up to 30 babies and toddlers aged from seven months to two years. It has two admission quotas -- one for the company and one for the local community -- thereby contributing to reducing the number of local children on waiting lists for nursery schools, as well as supporting the work-life balance and childcare of the company's employees.





## DPS Bridge Works Co., Ltd.

## A letter of gratitude received from Noboribetsu City

DPS Bridge Works Co., Ltd. received a letter of gratitude from the school board of Noboribetsu City for the company's acceptance of social studies field trips of local third-grade children at its Horobetsu Factory. This initiative has been taken by the company for approximately 20 years. In FY2018, a total of 240 children from five elementary schools visited the factory. As a local company working close to them, DPS Bridge Works Co., Ltd. explains the manufacturing process and materials of concrete products and deepens exchanges with the children in Q&A sessions.



### Burmeister & Wain Scandinavian Contractor A/S

## **Co-sponsoring the Copenhagen Cherry Blossom Festival**

BWSC co-sponsors the Copenhagen Cherry Blossom Festival, which is held in late April every year at a park near the Little Mermaid statue. The festival was first held in 2008 in association with the donation of 200 cherry trees to the government of Copenhagen, which was made by the Andersen Group in Hiroshima in 2005 to commemorate the 200th anniversary of the birth of H. C. Andersen, a famous Danish fairy tale writer. At the event, participants can enjoy various elements of Japanese culture, including the Bon dance, tea ceremony, traditional Japanese martial arts, and even manga and music. It has grown into a major event that attracts around 30,000 visitors over the two-day period.



## Co-sponsoring A Musical Café, a charity concert

BWSC co-sponsored A Musical Café, a charity concert that was held in Denmark on June 11, 2017. This concert is held every year by Ms. Yuko Yasui, the principal second violinist of the Copenhagen Phil, to support the areas affected by the Great East Japan Earthquake. In 2017, Mr. Toshiyuki Kamioka, who is the Chief Conductor of the Copenhagen Phil, played the piano, and other members of the orchestra performed to support the event. The proceeds from the event, which amounted to 328,153 yen, were donated to the Fukushima Children's Fund.



Mr. Toshiyuki Kamioka (third from left), Ms. Yuko Yasui (second from left), and other members of the Copenhagen Phil who performed at the event

# Top

## Participation in concerted cleanup on Makuhari New City Clean Day

The concerted cleanup on Makuhari New City Clean Day is held in spring and autumn every year, hosted by the Makuhari New City Urban Development Council. We solicit volunteers for the cleanup from Mitsui E&S Group companies with bases in the Makuhari district. In FY2018, volunteers from Mitsui E&S Engineering Co., Ltd., Mitsui E&S Plant Engineering Inc. and MES Facilities Co., Ltd. participated in the cleanup. The amount of garbage has been decreasing every year, which makes us aware that our activities are bearing fruit.



## 100th anniversary initiatives

## **Our Action**

## Celebrating our 100th anniversary with local communities

On November 14, 2017, we ran an advertisement with a message of gratitude on our 100th anniversary, and we held a number of commemorative events in each area, such as a commemorative ceremony inviting local residents and an event co-hosted by employees and management. In addition, a video message introducing our 100-year history has been posted on our 100th anniversary website.







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100th anniversary advertisement for newspaper

## ·

## PR activities for our new company name

## **Our Action**

## We are proactive with PR to make our new company name known

Advertisement

Summer festival held at Tamano factory

 New company name signage held at Jingu Baseball Stadium





## Corporate website renewal



## Origin of the Company Name

E&S is created using the initial letters of Engineering & Shipbuilding, which is part of the former company name, Mitsui Engineering & Shipbuilding. However, its meaning goes beyond these two words. E implies Environment and Energy, part of the business areas we will be focusing on. S suggests Social Infrastructure, Solution, Systems and Service. Each of these are also part of the areas in which we will be working intensively. Thus, E&S has extensive significance. E&S symbolizes our corporate stance of providing a wider array of solutions more broadly with Engineering & Shipbuilding as the starting points, where we have cultivated our strengths and beyond.

Mitsui E&S Holdings

## Concept of logo mark

[ The new logo: M on the Earth ]

The blue under M represents the horizon of the Earth. It expresses the future expansion of the business fields of the Mitsui E&S Group. On this line, you see M in dynamic black, which gives an impression of solid potential for future growth and presence. Between the blue line and the M hide two arrows, facing each other, to express the Group's determination to create new value for the planet by bringing together diverse people and technologies.



## **Company Profile**

## Company Profile (As of March 31, 2018)

Company Name	Mitsui E&S Holdings Co., Ltd. (Since 1st April, 2018)	Number of shares	150,000,000 Shares	
Head Office Location	6-4, Tsukiji 5-Chome, Chuo-ku, Tokyo 104-8439, Japan	authorized to be issued	150,000,000 Shares	
Founded in	November 14, 1917	Number of outstanding shares	83,098,717 Shares	
Established in	July 31, 1937	Number of		
Capital	44,385 million Yen	shareholders	57,388	
		Employees	13,421 (Consolidated) 3,653 (MES Only)	

## Major Group Companies

OMitsui E&S Holdings Co., Ltd.

OMitsui E&S Shipbuilding Co., Ltd. OMitsui E&S Machinery Co., Ltd. MES-KHI Yura Dock Co., Ltd. Mitsui E&S Power Systems Inc. Mitsui Meehanite Metal Co., Ltd. Akishima Laboratories (Mitsui Zosen) Inc M.E.S Tokki Co., Ltd. Sanzo Manufacturing & Construction Co., Ltd. MES Shipping Co., Ltd. Mitsui E&S Technical Research Co., Ltd. Shikoku Dockyard Co., Ltd. Niigata Shipbuilding & Repair, Inc. DPS Bridge Works Co., Ltd. TGE Marine Gas Engineering GmbH Azuma Machinery Co., Ltd. Paceco Corp

PT.MES Machinery Indonesia CSSC-MES Diesel Co. Ltd. MES Ferrotec China Co., Ltd. Mitsui E&S Steel Structures Engineering Co., Ltd. Mitsuizosen Technoservice Hongkong Ltd. Mitsuizosen Technoservice Taiwan Co., Ltd. MES Technoservice Middle East W.L.L. MES Technoservice Machinery Construction Logistics, Industry and Trade Corporation

Mitsui E&S Plant Engineering Inc. Mitsui E&S Environment Engineering Corporation Sanzo Yuki Recycle K.K. Hamamatsu Green Wave Co., Ltd. Green Power Ichihara Co. Ltd. Betsukai Biogas Power Co., Ltd. DASH Engineering Philippines, Inc. Engineers and Constructors International, Inc.

O Mitsui E&S Engineering Co., Ltd.

O Mitsui E&S Business Service Co., Ltd. OMitsui E&S Systems Research Inc.

OMES Facilities Co., Ltd.

OMODEC, Inc.

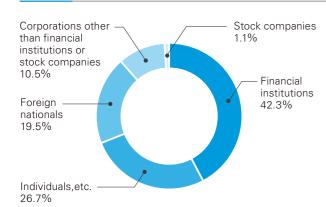
OBurmeister & Wain Scandinavian Contractor A/S

OShowa Aircraft Industry Co., Ltd.

O Kaji Technology Corporation OMitsui E&S ASIA PTE. LTD.

O Mitsui E&S (China) Co., Ltd.

## Shareholding situation by each category of shareholders (As of March 31, 2018)

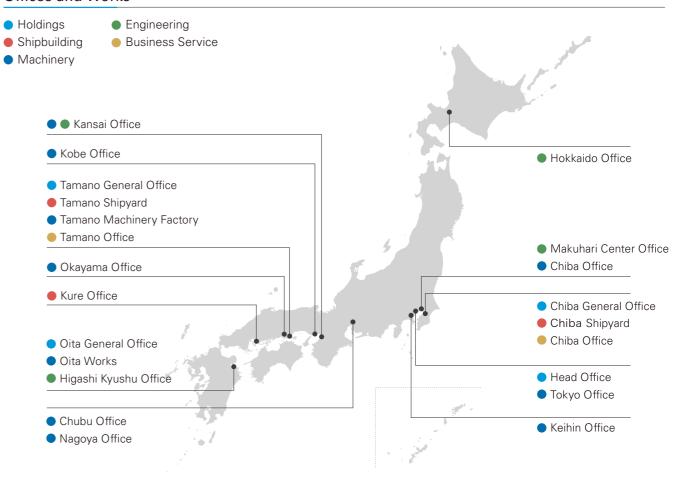


The total number of shareholders	57,388		
Category	Number of shareholders	Number of Shares Held	Shareholding Ratio (%)
Financial institutions	73	35,164,141	42.3
Individuals, etc.	56,527	22,161,882	26.7
Foreign nationals	302	16,192,220	19.5
Corporations other than financial institutions or stock companies	430	8,694,696	10.5
Stock companies	56	885,778	1.1

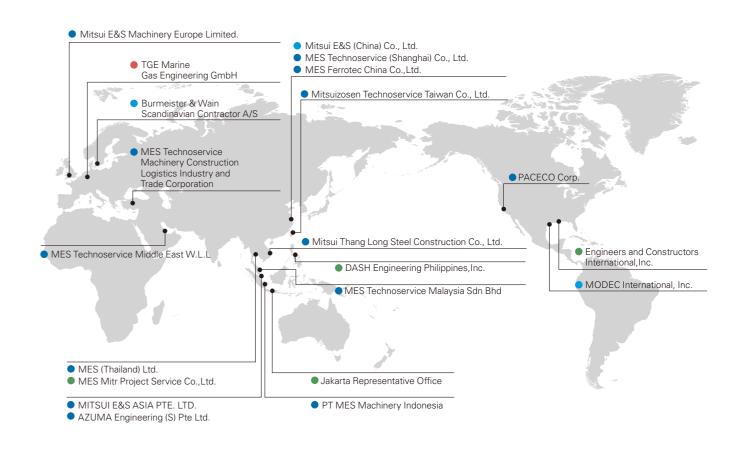
## Major 10 shareholders (As of March 31, 2018)

Name	Number of Shares Held (Thousand Shares)	Shareholding Ratio (%)
Japan Trustee Services Bank, Ltd. (Trust Account)	5,101	6.31%
The Master Trust Bank of Japan, Ltd. (Trust Account)	4,813	5.95%
Mitsui & Co., Ltd.	2,550	3.15%
The 114th Bank	2,546	3.14%
Japan Trustee Services Bank, Ltd. (Trust Account 9)	2,344	2.89%
Japan Trustee Services Bank, Ltd. (Trust Account for the retirement allowance for Sumitomo Mitsui Trust Bank, Limited)	2,331	2.88%
BNP PARIBAS SECURITIES SERVICES LUXEMBOURG/JASDEC/HENDERSON HHF SICAV	2,205	2.72%
Mitsui Life Insurance Company, Limited	1,600	1.97%
Japan Trustee Services Bank, Ltd. (Trust Account 4)	1,501	1.85%
Japan Trustee Services Bank, Ltd. (Trust Account 5)	1,380	1.70%

## Offices and Works



## Oversea Network







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