

## 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

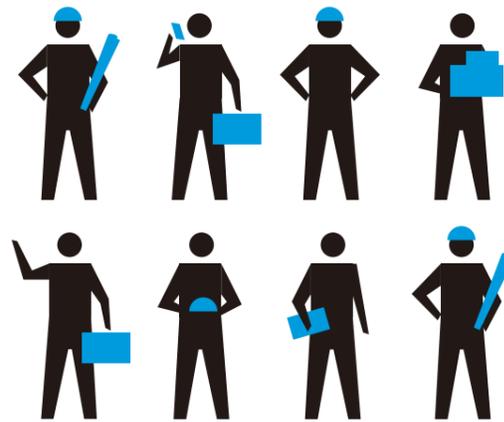


Net sales (FY2018)

**703.2** billion

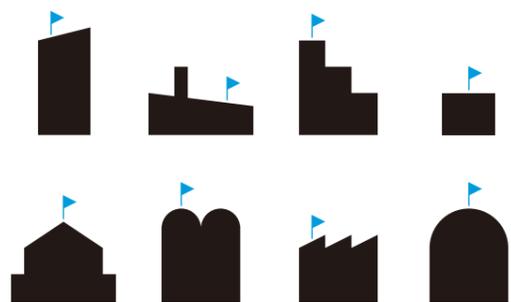
Ordinary income

**3.1** billion



Number of employees (As of March 31, 2018)

**13,421** people



Number of Group companies

More than **100**



Established in

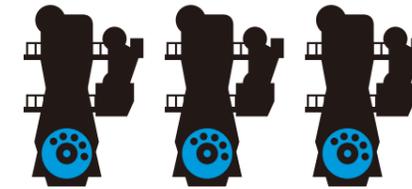
**1917**

### 実績



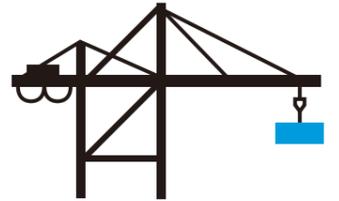
Ship

Total number of ships that we have built  
**2,000** ships



Marine diesel engines

Domestic market share  
**No.1**  
Accumulated production  
**6,500** engines  
**1 million** horse power



Container cranes for ports

Domestic market share  
**No.1**



Petrochemical plants

The total number of plants we have handed over in more than 40 countries  
**1,300** 件



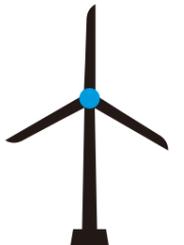
After-sales services

**35** service bases  
in **20** countries



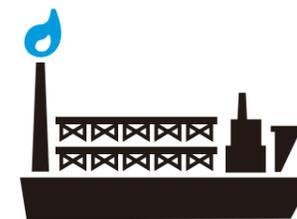
Repair shipyard

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

## History

**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.**

## Origin

**Established as the Shipbuilding Division of former Mitsui & Co., Ltd.**

*“Because Japan is a seafaring nation, it is natural that the nation should be founded on shipping.”*

In 1917, Teijiro Kawamura, who was the General Manager of the Ship Division of former Mitsui & Co. at the time, was acutely aware of the need to have a shipyard and a repair factory and submitted a petition to the president. The Mitsui E&S Group commenced from his passion.



Teijiro Kawamura

### 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 subsequent 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 Petrochemical Industries Ltd. (1958)

#### 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.



Izumitsu 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.

Mitsui E&S Group 2025 Vision

### 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.

**100<sup>th</sup>**  
Anniversary

#### 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.

**M**  
**MITSUI E&S**

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"

## Group Structure

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

Holding company



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.

Major group companies

- 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.

Major operating companies

### 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



##### Naval and Governmental Ships



##### Underwater equipment



### 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.
- Sanzo Manufacturing & Construction Co., Ltd.
- Mitsui E&S Steel Structures Engineering Co., Ltd.
- Mitsui E&S Technical Research Co., Ltd.
- DPS Bridge Works Co., Ltd.
- Azuma Machinery Co., Ltd.
- Paceco Corp.
- PT.MES Machinery Indonesia
- CSSC-MES Diesel Co., Ltd.
- MES Ferrotec China Co., Ltd.
- Mitsuzosen Technoservice Hongkong Ltd.
- Mitsuzosen Technoservice Taiwan Co., Ltd.
- MES Technoservice Middle East W.L.L.
- MES Technoservice Machinery Construction Logistics, Industry and Trade Corporation

#### 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.

#### Main products

##### Chemical plant



##### Wind Power Generation



##### Biomass power plant



## Business Field

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

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



## Environment & Energy

**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.**

We will further concentrate and strengthen our know-how and resources to enhance the development of diverse forms of energy by creating renewable energies such as wind power, biogas and biomass power plants, while participating in the ocean resource development sector by constructing floating production, storage, and offloading (FPSO) systems for offshore oil and gas production.

**Main products**

- Ocean development and submersible equipment
- Environmental plants
- Renewable energy
- Power generation plants

### 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



## Marine Logistics & Transportation

**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**

- Transfer crane in container yard
- Marine diesel engine
- 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 future.



Small and midsize LNG carriers



## Social & Industrial Infrastructure

**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.

**Main products**

- Infrastructure maintenance
- Chemical plants
- National defense
- Bridges
- Industrial machinery

### 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