## **Business Segment Topics**

## Ship

- Promoted improvement of autonomous ship operation technologies and development of new types of vessels such as new gas fueled ships to awaken demand from shipowners
- Proactively pursued orders for vessels such as naval and governmental ships, and fishery patrol vessels that are expected to be ordered on an ongoing basis
- Started business operations of our shipbuilding joint venture in China (Jiangsu Yangzi-Mitsui Shipbuilding Co., Ltd.)
- Decided to close the shipbuilding business at Chiba Shipyard (scheduled for end of March 2021) and reallocate resources to improve profitability



# Christening and ceremonial launching of the ocean surveillance ship "Aki"

On January 15, 2020, a naming ceremony and ceremonial launching of an ocean surveillance ship for Japan's Ministry of Defense were held at Mitsui E&S Shipbuilding Tamano Shipyard. The vessel was christened "Aki" and its guy rope was cut by Commandant, Kure District of the Japan Maritime Self-Defense Force. The Aki is the third Hibiki-class ocean surveillance ship built by Mitsui E&S, following the Hibiki and the Harima.

The ship is equipped with a full SURTASS (Surveillance Towed-Array Sensor System) and adopts the SWATH (Small Waterplane Area Twin Hull) type, which is well suited to its mission of ocean-based intelligence gathering.

The ship is scheduled to be delivered in March 2021 after we complete outfitting work and sea trials at the wharf.



Christening and ceremonial launching of the ocean surveillance ship "Aki"

Mitsui E&S Shipbuilding Co., Ltd.

## **Ocean Development**

- 'MODEC NOAH', the next generation new built hulls for FPSOs, has been developed by MODEC, Inc. (MODEC) in collaboration with Mitsui E&S Shipbuilding Co., Ltd., and sales promotion activities have started to receive new orders of FPSOs with this concept
- Three FPSO projects for offshore Brazil and Australia have been awarded by clients
- Losses were incurred on a construction project of an FPSO for Mexico and a decommissioning work for an FPSO offshore Brazil, and loss minimization steps were taken



#### Orders received for five FPSOs\*

Backed by the trust and expectations of its clients, oil companies around the world, MODEC has established its position as a leader in the industry by winning orders for five FPSOs.

The FPSO project, for the Barossa gas field offshore Australia, amounts to one of the largest gas FPSO projects in the entire FPSO industry. In addition, the company selected to provide the memorable FPSO by Woodside Energy, a major Australian energy company, for the first offshore oil development project off the coast of Senegal, West Africa. The other three FPSO projects, for offshore development in Brazil, reflected MODEC's presence as the leader in the Brazilian market.

\*Includes some orders received in FYE Dec. 2020 ('20/1 - '20/12) of MODEC.



Rendering of MODEC's FPSO for Sangomar field offshore Senegal

MODEC, Inc.

## **Machinery**

- Produced 200 large marine diesel engines (3.67 million horsepower), including engines that comply with Tier III NOx regulations
- Continued capital investment in gas-fueled marine diesel engines that comply with SOx regulations and greenhouse gas reductions
- Expansion of business through aggressive sales of the LSS business (Life-cycle Solution Service and Customer Oriented Service)
- In addition to Southeast Asia, multiple orders were received for large container cranes for Africa and Europe



#### Order for ship-to-shore cranes in Sweden

Mitsui E&S Machinery Co., Ltd. received an order from Yilport Holding Inc. of Turkey to supply three Mitsui-Paceco cranes (ship-to-shore gantry cranes) to their Gavle Terminal in Sweden.

Port of Gavle in central Sweden is a thriving port for the export of high-quality steel. This capital investment will enable the terminal to increase its container handling capacity. The Portainer gantry cranes to be delivered to Gavle Terminal support 22 rows of containers and are large enough to accommodate 14,000-container ships. The state-of-the-art cranes are equipped with a truck position detection function and a semi-automatic cargo handling function.

This represents the first Portainer order in Europe. Moving forward, Mitsui E&S will aim at business expansion in Europe taking advantage of this achievement.



Gavle Terminal in Sweden

Mitsui E&S Machinery Co., Ltd.

### **Engineering**

- After incurring additional losses on a civil engineering construction project for a thermal power plant in the Republic of Indonesia, we carried out a cost review with external experts and are now focused on construction progress
- To consolidate the environment business in one company, all environment-related business was transferred to Mitsui E&S Environmental Engineering Company, Limited.
- We completed delivery of a low-density polyethylene plant to the U.S. (Lake Charles, Louisiana)
- We made progress on business restructuring and disposal of subsidiaries and businesses and decided to withdraw from new biomass power generation and wind power construction projects



#### Completion of construction of Hiuchi Clean Center in Saijo, Ehime Prefecture, Japan

Mitsui E&S Environmental Engineering Company, Limited (a wholly owned subsidiary of Mitsui E&S Engineering) announced the completion of construction of the Hiuchi Clean Center, which was commissioned by Saijo City in Ehime Prefecture, in March 2020.

This new, city-operated facility was established to address the aging of the existing sewage treatment facilities and fluctuations in capacity and quality of treatment. It is an environmentally friendly facility that treats waste safely and hygienically, for example by converting sludge into an auxiliary fuel for recycling. Mitsui E&S Engineering is committed to using its advanced technologies and solutions to contribute to a sustainable society and the preservation of the environment in harmony with local communities.



Hiuchi Clean Center in Saijo

Mitsui E&S Environment Engineering Company, Limited

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