

# PROJECT **MEET** NEWS

Mitsubishi Marine Energy & Environment Technical Solution-System

# 25

Vol. 25, April 2024

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# Special Feature

## The Path to Decarbonization of the Maritime Industries

- Season 7 -

### Efforts of the Maritime Industry to Achieve GHG Emissions Reduction Targets

#### 1) GHG emissions reduction targets of the International Maritime Organization (IMO)

Revision to the IMO's GHG emissions reduction targets were adopted at the MEPC 80(\*1) meeting held in London in July 2023. The chart shown below, prepared by MMMCZCS(\*2), shows plots actual GHG emissions in recent years and the IMO's GHG emissions reduction targets. This indicates that GHG emissions were reduced by only about 5% over the approximately 15 year period from the base year of 2008.

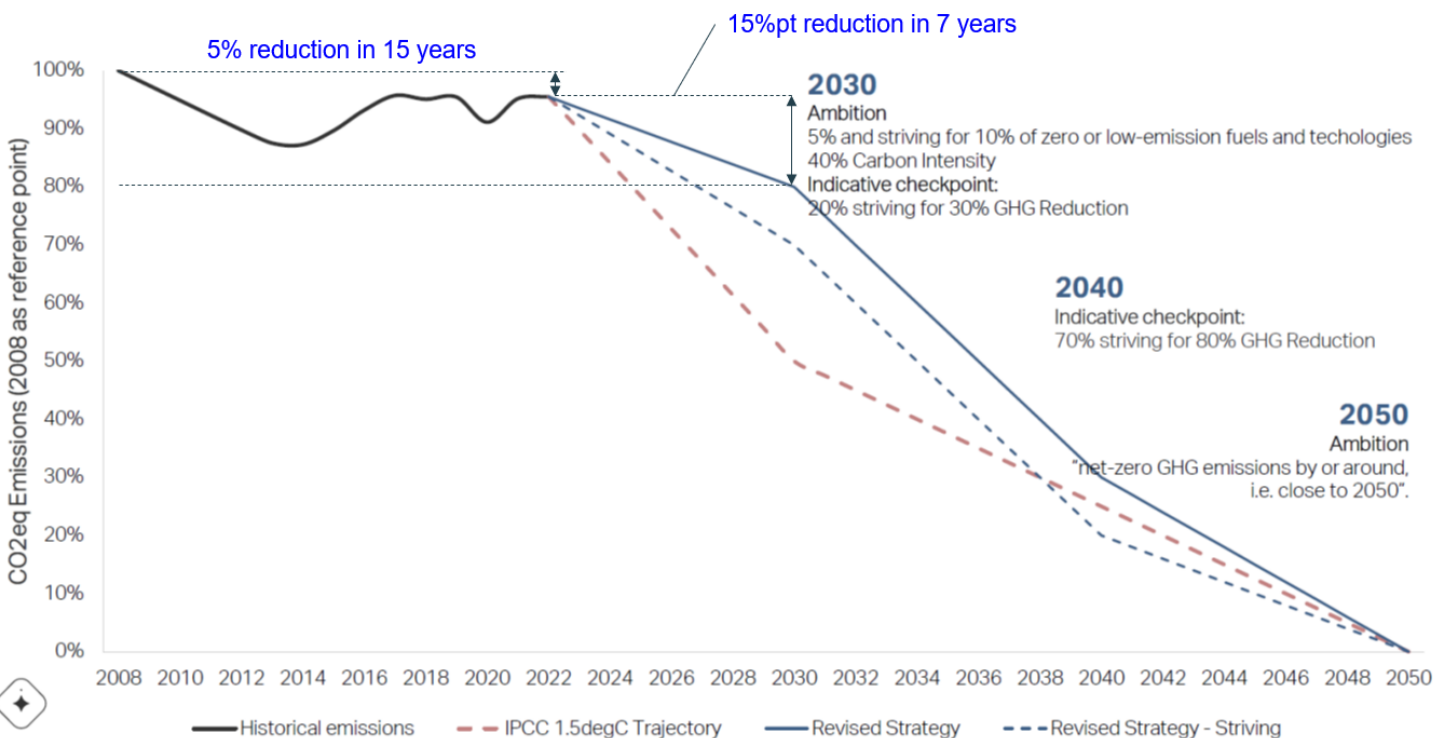
To achieve the target of a 20% reduction by 2030, GHG emissions must be reduced by an additional 15%pt in the remaining 7 years including 2024.

This is challenging task due to the obstacles overcome in the widespread adoption of zero-emission fuels. It is urgent to ensure an adequate supply of zero-emission fuels, establish the viability of the business, strengthen various regulations, and apply energy-saving technologies that immediately reduce greenhouse gas emissions.

On the next page, we will present energy-saving technologies that have an immediate effect on reducing GHG emissions.

(\*1) MEPC: Marine Environment Protect Committee (Marine Environment Protection Commission of IMO)

(\*2) MMMCZCS: The Mærsk Mc-Kinney Møller Center for Zero Carbon Shipping (Denmark-based global research institution)



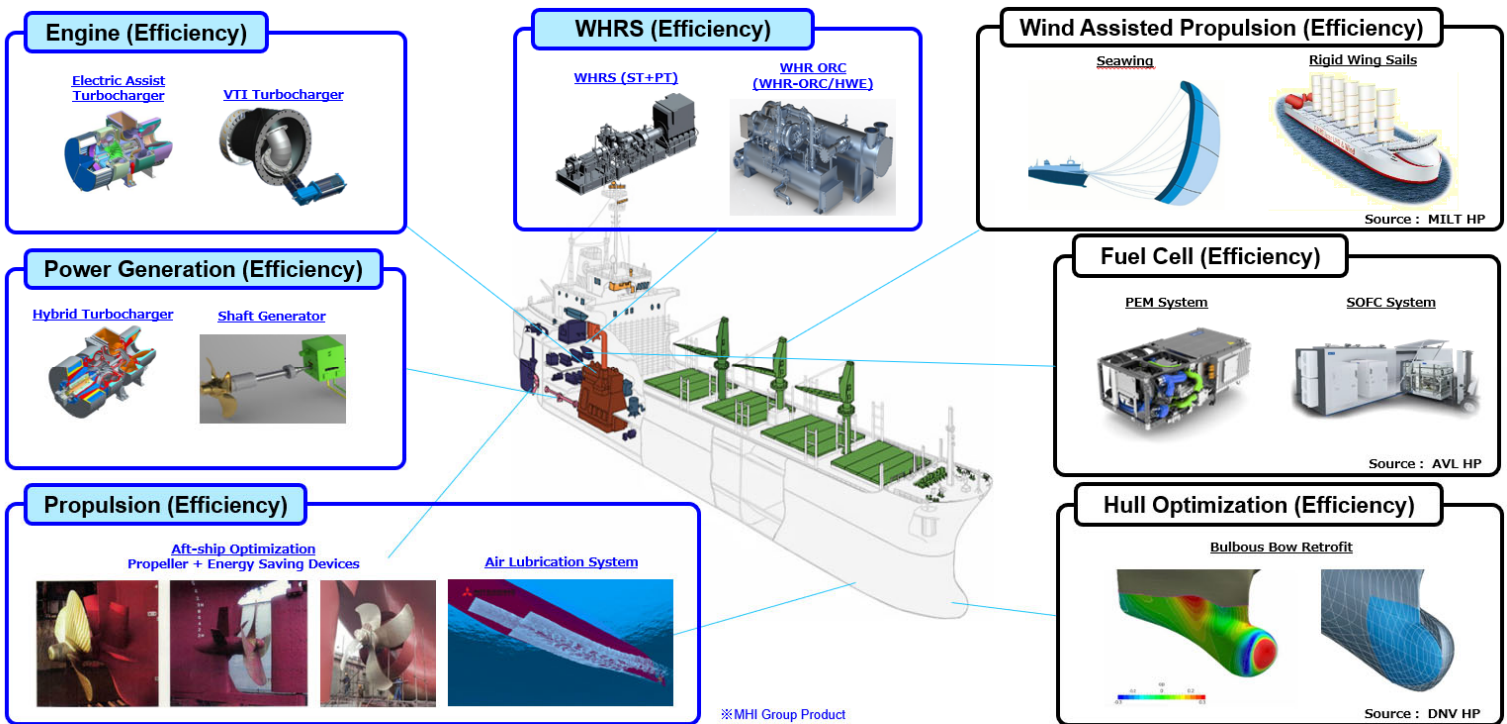
Source: MMMCZCS

The IMO's GHG emissions reduction targets

## 2) The Mitsubishi Heavy Industries Group's efforts

To achieve the 20% GHG emissions reduction target mentioned on the previous page by 2030, it is crucial to implement energy-saving technologies that have an immediate effect. This is because converting to new fuels takes time, as it entails supply chain and infrastructure development.

The chart shown below illustrates popular energy-saving technologies used in ships. Our major energy-saving technologies include retrofit propellers and waste heat recovery systems, which can contribute to reducing GHG emissions.



Energy-saving technologies used in ships

## Participation in a Global Conference

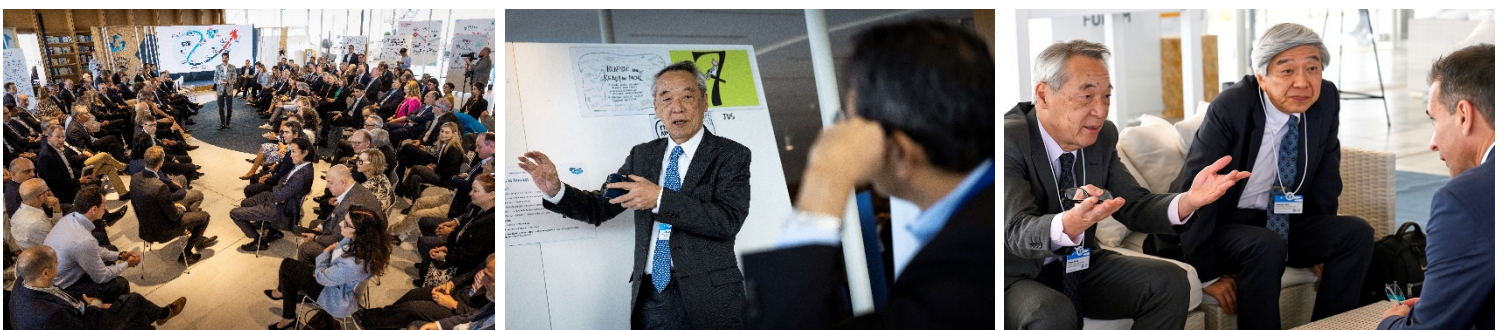
### Joined the Annual Summit of the Global Maritime Forum (GMF)

The Global Maritime Forum (GMF), a non-profit organization based in Copenhagen that aims to advance the decarbonization of the maritime industry, held its annual summit in Athens from October 18 (Wed), to October 19 (Thu), 2023. From the Mitsubishi Heavy Industries Group, Mitsubishi Heavy Industries Marine Machinery & Equipment's 2 persons participated in the conference.

200 executives, and representatives from GMF partner companies in the maritime value chain, including major energy and maritime companies, marine product manufacturers, classification societies, port transportation service providers, insurance companies, financial institutions, R&D institutions, and consulting firms, gathered to discuss the progress of decarbonization efforts and major issues in lecture, panel discussion and workshop sessions.

The maritime industry will continue to monitor Europe's initiatives, which lead the world's decarbonization efforts, and make use of their progress in its future operations.

The 2024 GMF Annual Summit is scheduled to be held in Tokyo in October 2024.



Photos of the GMF Annual Summit

# Commendation Program to Recognize Excellent Authorized Repair Agents for MET Turbochargers

In 2023, Mitsubishi Heavy Industries Marine Machinery & Equipment launched a commendation program to recognize authorized repair agents (ARAs) who have made significant contributions to after-sales services in the latest year.

The first recipients of this recognition are the following four companies.

For MET turbochargers, we have established a global network of ARAs, which allows us to provide speedy and effective service anywhere in the world. (65 ARAs as of April 1, 2024)

ARAs can be searched on our website (<https://www.mhi.com/group/mhimme/services/ara.html>).



## TURBOTECHNIKI LTD. (Greece)



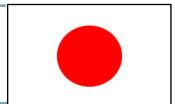
Mr. Kostas Paraskevopoulos, General Manager

URL

<http://www.turbotechniki.gr>

We are deeply grateful for the recent award of "MET Turbocharger recognition program 2023". Our valuable partnership with MET Turbocharger is crucial to our business and it is very important for us that our hard work to be the best Authorized Repair Agent for MET turbochargers is recognized.

## KOBE MARINE ENGINEERING CO., LTD. (Japan)



Hideki Tsuji, CEO

URL

<http://www.kobe-marine.co.jp/>

We highly appreciate being recognized as an Excellent Authorized Repair Agent for MET Turbochargers.

It is an honor made possible by our effective service system and the great effort everyone of our staff has put in. We will continue to strive for further improvement and growth, without resting on our laurels. We will also continue to work hard with gratitude to the many customers who support us.

## GULF TURBO SOLUTIONS PTE LTD. (Singapore)



Mr. KM Pillai, Managing Director

URL

<http://www.turbosolutions247.com>

First of all, our sincere thanks to MHI-MME for awarding this prestigious award.

This is the first time GULF TURBO SOLUTIONS has received this award since it has been implemented. This will encourage ARAs (Authorized Repair Agents) like us to improve the contributions to the principals as far as the sales are concerned.

## GULF TURBO SOLUTIONS FZC (U.A.E.)



Mr. Easwaran Iyer, Managing Director

URL

<https://www.gulfturbo.com>

ARA recognition award encourages each ARA to perform better in terms of achieving better revenue mutually for ARA as well as MHI, providing improvised customer service and prompt actions in terms of response to client as well as taking up the matter with MHI for sales as well as technical queries.

# Notice on Changes in Our After-Sales Service Work-Flow

Since April 2024, Mitsubishi Heavy Industries Marine Machinery & Equipment has transitioned to a new system where customer inquiries for after-sales services are handled in-house.

**Email address:**

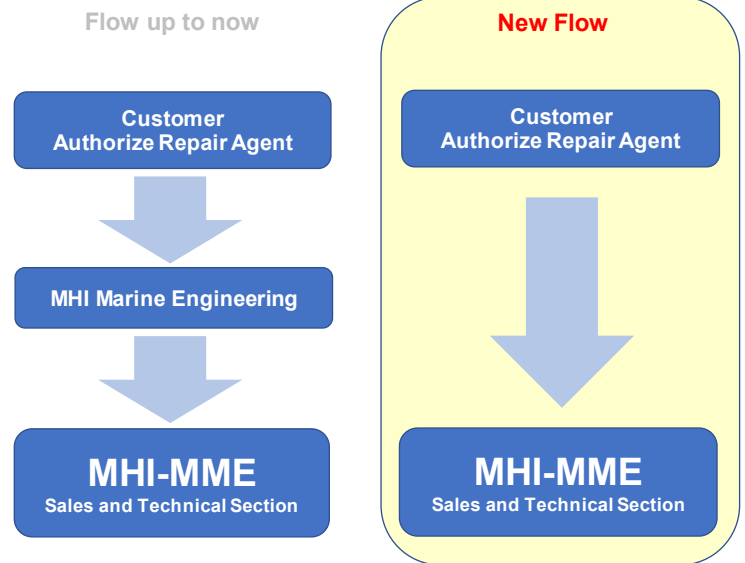
[marine.machinery.service@mhi.com](mailto:marine.machinery.service@mhi.com)



**Products for which after-sales services are available:**

- Boilers
- Turbines
- Steering gears
- Fin stabilizers
- Propellers
- MET turbochargers

(Parts Supply · Engineer Service · Technical Inquiry etc.)

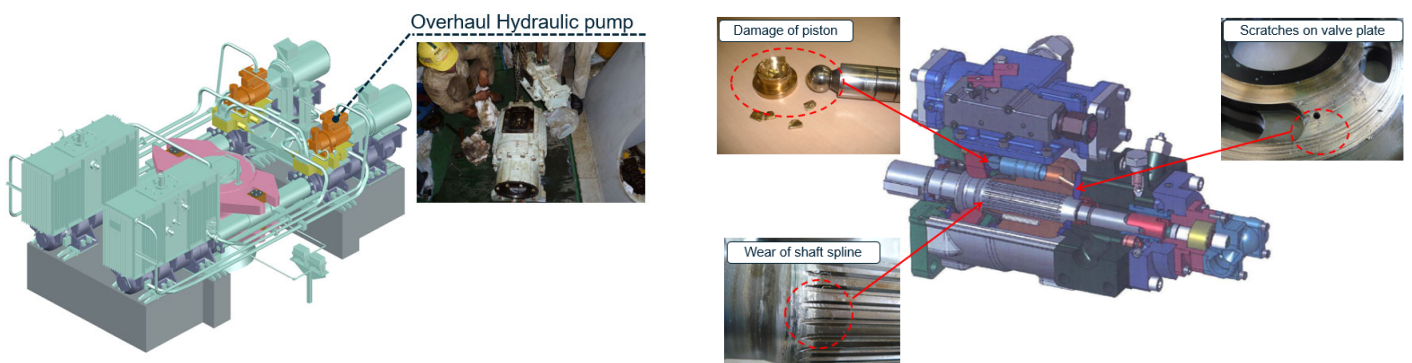


With this new system in place, we will strive to provide faster services. Your continued support would be appreciated.

## STEERING GEAR SAFETY OPERATION

### Recommendation on Overhaul of Steering Gear Pump

A steering gear is an important equipment that has the function of changing the course (direction) of a vessel. Mitsubishi Heavy Industries Marine Machinery & Equipment's steering gears boast a low failure rate and have been highly reputation by customers. Recently, the products have had some problems resulting from inadequate maintenance, and it would negatively affects on the function. We can estimate from oil analysis results whether there is any abnormal wear or hard contact of internal parts on steering gear. However, it is quite difficult to identify correct condition unless you overhaul steering gear pump and check the pump inside by your visual. We recommend to overhaul the pump every 5 years in accordance with our instruction manual. Please consider to do regularly as preventive maintenance measure.



## Participated in the Marintec China 2023

Mitsubishi Heavy Industries Marine Machinery participated in Marintec China 2023 held in Shanghai, China, from December 5 (Tue) to 8 (Fri), 2023. The exhibition took place for the first time in four years.

We exhibited the impeller of our MET90MB, the world's largest turbocharger, and an executive from our company was interviewed for the exhibition's official TV program. The event was a great opportunity to promote our global marine machinery business operations.

It also provided us with a valuable opportunity for direct dialog with Chinese customers and licensees, and we enjoyed active interaction with them.

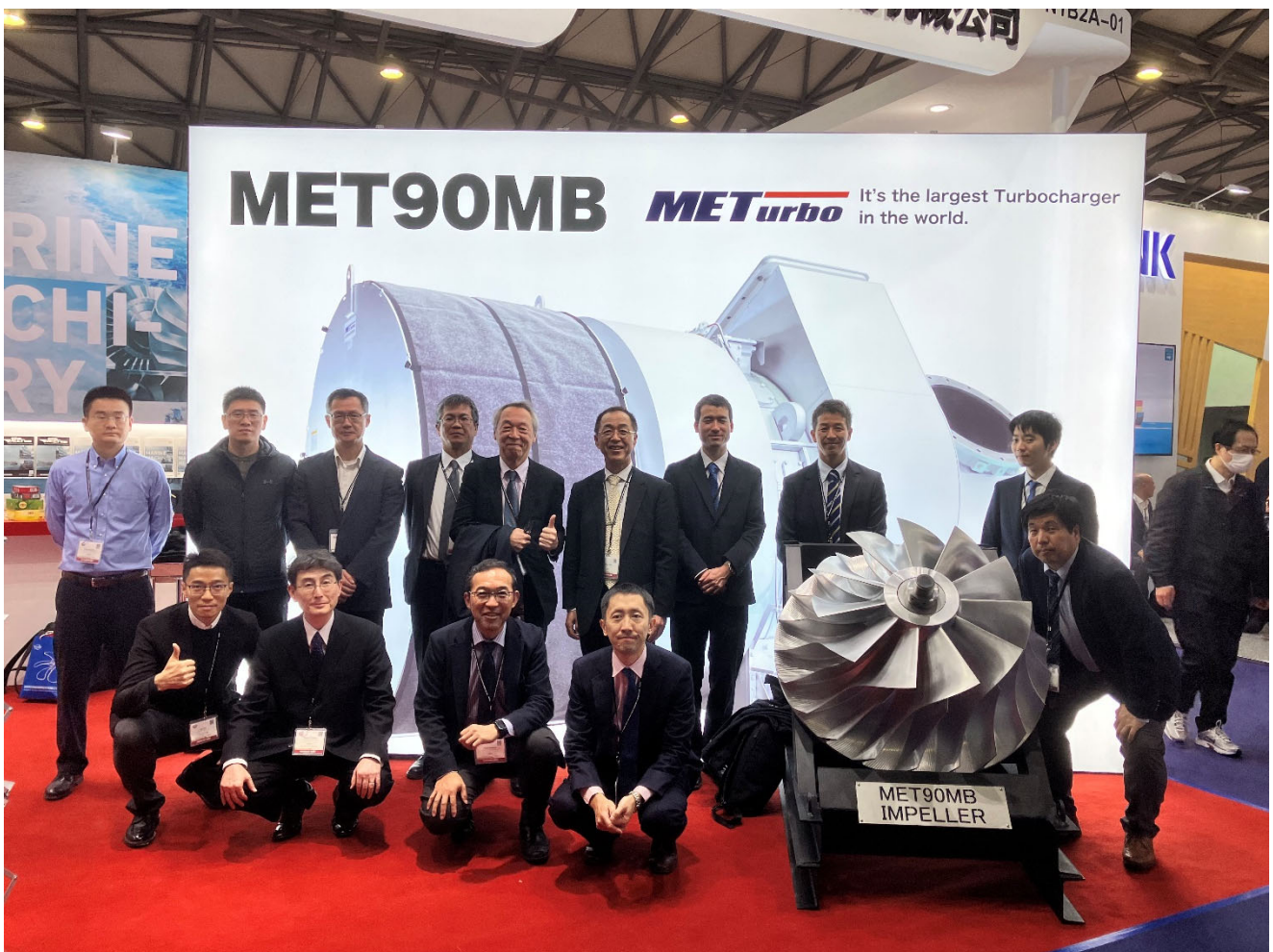
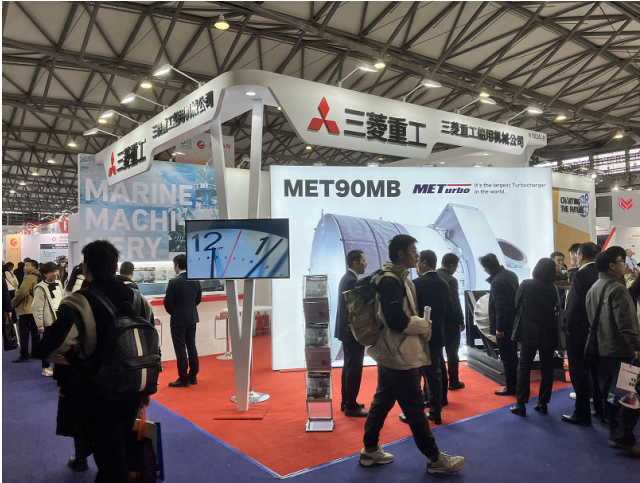


Photo of the Marine Tech China 2023 Exhibition

## Participated in the Turkey Japan Maritime Business Matching Forum 2023

Mitsubishi Heavy Industries Marine Machinery & Equipment participated in the Turkey Japan Maritime Business Matching Forum 2023 held in Istanbul on November 8 (Wed), 2023, as a member of the Japan Ship Machinery and Equipment Association.

The forum had over 200 visitors and we made a presentation on our products before an audience of more than 80 visitors. Our company executive attended the forum to represent the Japan Ship Machinery and Equipment Association and met with the Turkish Shipowners' Association. We had the opportunity to deepen to our relationships with many customers who visited our booth.



Photo of the Turkey Japan Maritime Business Matching Forum 2023

## DECK CRANE PRODUCTION RECORD

### Deck Crane Production Volume for 2024 to Reach a Record High

Mitsubishi Heavy Industries Machinery Systems, Ltd. (MHI-MS) has been in the deck crane business for over half a century, since introducing them to the market in 1972.

Currently, MHI-MS is the sole deck crane manufacturer supplying both Japan and China, two major global markets, and holds the largest market share.\*

In 2024, MHI-MS anticipates producing over 500 deck cranes, including licensed products, which would be a record high.

MHI-MS is committed to maintaining a consistent supply of high-quality products to support global logistics.

\*Deliveries to be made in 2024. Based on a survey by MHI-MS.



Deck Crane Production Line

## Message of New President & CEO

I have become President & CEO of Mitsubishi Heavy Industries Marine Machinery & Equipment, succeeding Mr. Hori. Our Company celebrated the 10th anniversary of its foundation in October 2023. This year marks its first step toward the next 10 years.

I am humbled to take on the heavy responsibility as President & CEO in the year when our Company embarks on a new stage in its history.

Looking at the maritime and shipbuilding markets, the new ship building market is rapidly recovering from the effect of the COVID-19 pandemic. Ship builders in Japan, China, and Korea have received orders that will fulfill their slots for several years. In China, supply capacity is being increased with idle shipyards and engine factory reopening. Our Company and licensees have also received many orders. Meanwhile, we are faced with the effect of the prolonged Russian-Ukraine crisis, and a continued increase in raw material, energy, labor, and other costs, as well as new issues such as the attacks on merchant vessels in the Red Sea. Moreover, shipbuilders and engine manufactures, who are direct customers for marine machinery manufacturers like us, are implementing restructuring, and we are closely watching how it will affect the market and our business.

Under these circumstances, the Energy Efficiency Existing Ship Index (EEXI) and the Carbon Intensity Indicator (CII) came into effect in January 2023 to regulate GHG emissions from existing ships.

Furthermore, at the MEPC 80 in July 2023, it was decided to bring forward the target year for Net-zero GHG emissions by or around 2050.

It is imperative to implement energy-saving and environmental measures for ships.

As stated in our corporate vision, we aim to contribute as a maritime technology provider to the achievement of Net-zero GHG emissions in the maritime and shipbuilding areas by sharing and leveraging the Mitsubishi Heavy Industries Group's expertise. We are participating with the Maersk Mc-Kinney Moller Center for Zero Carbon Shipping (MMMCZCS), an international research institution working to promote decarbonization of the maritime industry. We are also implementing a joint project called "MaTIS" with another Mitsubishi Heavy Industries Group company.

Specially, such as propeller retrofitting and waste heat recovery systems, which have been adopted by many customers, we will continue enhancing the portfolio of our products and services by creating new energy-saving solutions making full use of the Mitsubishi Heavy Industries Group's technologies.

We will further accelerate the exploration and development of new technologies and solutions aimed at achieving Net-zero GHG emissions in the future.

We, Mitsubishi Heavy Industries Marine Machinery & Equipment will step up efforts to provide high quality products and services and thereby continue to be a company that customers need and trust. We would appreciate your patronage of our products



Katsuhide Matsunaga,  
President & CEO