## Machinery & Systems

Combining our strong product lineup with a system for supporting the total product life cycle to respond to the diverse needs of the global market.

Director and Managing Executive Officer General Manager of Machinery & Systems Headquarters

Shinsuke Minoda



#### Action Plan for Medium and Long-Term Growth

#### 01.Differentiation by Low-fuel-consumption / Eco-friendly Technology

- ①Marine diesel engine fuel diversity (natural gas, ethane, methanol, etc.)
- ②Foster and expand key component business (parts) such as exhaust heat recovery system for ship engines (THS)

#### 02.Development of Global Business Structure

- 1 Established process machinery manufacturing JV with local company in Vietnam
- ②Established crane sales functions in MES Asia (Singapore)

#### 03. Expansion of Business Engagement and Related Service Business

- ①Enhance and expand overseas bases of techno service business
- ②Expand crane service and enter into business of terminal facility

## Action

#### **Business Environment and Performance**

#### Policy Implementation Progressing Smoothly

Our marine diesel engines business has seen an increase in inquiries concerning gas-burning engines, which are highly environment-friendly. During the fiscal year, we received orders for six LNG and three ethane-burning engines, resulting in orders received that increased significantly year on year. Production volume was on par with the previous fiscal year at 3,540,000 horse power, which represents sustained construction volume.

Industrial machinery had a favorable environment for new orders received thanks to yen depreciation. Orders received were propelled mainly by reciprocating compressors to foreign oil refineries in Turkey and other countries. In addition to establishing a JV in Vietnam to serve as the manufacturing center for process machinery (pressurized containers), we execute a capital investment alliance with KAJI TECHNOLOGY CORPORATION, which specializes in compact reciprocating compressors. Promoting this alliance will accelerate business expansion and contribute to establishing a system of optimal production sites.

Interest in large cranes is exceptionally strong in both Japan and overseas. New orders received grew and we achieve a record high for orders received, including new orders for 14 portainers and 15 transtainers in the Westports of Malaysia. Currently, we are conducting large-scale capital expenditures at our Oita Works aimed at increasing production capacity. The Life-cycle Solution Service (LSS Service), and Customer Oriented Service which centered on after-sales services, is strengthening sales activities by focusing on proposal-based sales and expanding overseas offices. Due in part to the influence of yen depreciation, we achieved record highs for both orders received and net sales. We also established offices in Qatar and Turkey to provide after-sales services for industrial machinery.

#### Fiscal 2014 Earnings

### Orders Received Increased Significantly and Operating Income Also Grew

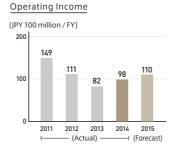
Orders received grew by 52.378 billion yen (+40.1%) year on year to 183.107 billion yen. This was due to increased orders for container cranes, marine diesel engines, various industrial machinery, and after-sales services.

Due to these products and businesses, net sales declined 1.301 billion yen (-0.9%) year on year to 146.501 billion yen. Operating income increased 1.632 billion yen (+20.0%) year on year to 9.814 billion yen due to favorable performance in the after-sales services and industrial machinery businesses.

#### Financial Highlights



# (JPY 100 million / FY) 2,000 1,553 1,450 1,478 1,465 1,000 2011 2012 2013 2014 2015



## Future

#### Marine Diesel Engine

#### **Expanding Environment Policy-Compliant Product Business**

The key to the marine engine market in the future will be fuel efficiency and environment regulation compliance. There is significant interest in energy-conserving, environment policy-compliant engines, thus the key will be our ability to offer high performance engines at fair prices. We were ahead of our competitors in offering an electronically-controlled gas injection diesel engine (ME-GI) that burns LNG and ethane and the ME-LGI, which uses methanol for fuel. We will continue to gain more experience by being first-to-market with engines incorporating new technology.

Moving forward, the measurement of engine efficiency (performance) will focus not only on the engine, but on the entire propulsion system, at which the engine is at the center. In addition to engine sales, we will aim to provide attractive propulsion systems that combine engines with energy conservation systems and offer packages that include the fuel gas supply system (FGSS) for the ME-GI.



Electronically-controlled gas injection diesel engine

#### Crane

#### Improving Production Capacity, Expanding Sales Routes

Southeast Asia continues to have strong demand as we have received numerous inquiries. This is due to the new construction of container terminals and the fact that we have entered a period of replacing the large number of old container cranes that were constructed during a boom in container transport in the 1980s and 1990s. For the next 10 years, we forecast annual replacement demand of 200 portainers and 300 transtainers. As for the domestic market, port construction is expected to accelerate as we head toward the 2020 Olympics. Much like the international market, replacement demand on the domestic market is expected to see strong demand.

#### Industrial Machinery

#### Participation in the Hydrogen Station Field

The capital investment alliance with KAJI TECHNOLOGY CORPORATION, which specializes in compact reciprocating compressors, enables us to break into the compact compressor field. Aiming for synergy between the two companies, we will expand sales regions for compact compressors used in petroleum refineries and petro-chemical plants and expand sales of compressors to hydrogen stations.



Quay gantry crane 「PORTAINER」



Reciprocating compressors

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