

## Technical Review Special Edition: M-FET

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Welcome to this special edition of our technical review featuring Mitsubishi Heavy Industries Forklift, Engine and Turbocharger Holdings, Ltd. (M-FET).

M-FET controls the three business domains of logistic systems, engines/energy and turbochargers and our mission is to create joy and inspiration through the fusion of logistics and energy. Recently, market environments in these fields have been drastically changing.

This special edition introduces our new products in response to the changes of the times and advanced technologies to solve various issues.

The distribution amount in the logistics field has been dramatically increasing as e-commerce is growing and against such a backdrop "unmanned or automated operations for solving workforce shortages" and "safety operation support" are our current challenges.

In this context, we introduce "laser-guided unmanned transfer using IT technology," "an operation monitoring system utilizing IoT," "a human detection system using image processing technology" and "a troubleshooting system using robotic process automation (RPA)."

The engines and energy business is changing along with the shift to electricity deregulation and a carbon-free society. Highlighted in this edition for this sector are "a hybrid power generation system using renewable energies toward the era of distributed power supply," "new value created through private power generation systems in power supply and demand balancing market," "advancements of predictive diagnosis system" and "smart cruising assist contributing to fuel-efficient operation for ships."

The turbocharger business has to realize "digitalization," in addition to "even enhanced efficiency" and "a global fabrication system." The challenges for even enhanced efficiency that we introduce in this edition include "elucidating complicated internal flow pertaining to pulsating flow," "the development of a Variable Geometry (VG) turbocharger," "improving productivity using 3D printers with additive manufacturing (AM) technologies," "introduction of a Thai factory that produces core components with high quality" and "electric supercharging technology."

All in all, utilization of digitalization using IoT, AI, image recognition, speech recognition technologies, etc., has lately become necessary.

Together with Mitsubishi Logisnext Co., Ltd. and Mitsubishi Heavy Industries Engine & Turbocharger, Ltd., we will make every effort to contribute to our clients' businesses. We would appreciate your continued support and cooperation.