

## TMEIC Delivers Electric Driving Systems for Compressors, Pumps and Extruders for World-class Refining and Petrochemical Projects in Dalian, China

Toshiba Mitsubishi-Electric Industrial Systems Corporation (hereinafter "TMEIC"; President & CEO Masahiko Yamawaki) successfully delivered electric driving systems (motors and inverters) for different types of compressors, pumps and extruders in May and December 2019 in cooperation with its Chinese subsidiary Toshiba Mitsubishi-Electric Industrial Systems (China) Corporation (hereinafter "TMEIC China") for world-class petroleum refining and ethylene projects being constructed in Dalian by Hengli Petrochemical (Dalian) Co., Ltd., which is a major petrochemical company under Hengli Group Co., Ltd. These projects are a part of the promotion and development strategy project supported by China.

\* Of the electric driving systems, TMEIC delivered 51 large motors and TMEIC China delivered 167 TMdrive-MVG2 inverters manufactured by Guangzhou Toshiba Baiyun Ryoki Power Electronics Company, Limited (hereinafter "GTMBU"), a subsidiary of TMEIC.



Reciprocating Compressor (left) and TMEIC Synchronous Motor (right)

At this oil refining plant, Continuous Catalyst Regeneration (CCR) is employed for distillation processes, where the generated gas is utilized to produce high-purity hydrogen, and eliminating impurity from refined petrochemical products thereafter to generate high purity refined products.

TMEIC's electric driving systems delivered for this project drive the gas compressors used for a series of these processes from gas to high-purity hydrogen and finally to high-purity refined products. The equipment is required of a high quality and reliability as a critical part of these refining processes, where no system failure is allowed.

TMEIC successfully accomplished this project with the following capabilities in engineering, manufacturing and project management to cater to the customer's requirements:

- Expertise in engineering and project management:
  With the system engineering capabilities supported by our high technical knowhow, TMEIC supplied the electric
  driving systems best suited for this project, combining Japanese motors and Chinese inverters, both
  manufactured by TMEIC. The whole project, from equipment supply to commissioning, was smoothly executed
  based on the rich experiences gained from the past projects.
- 2. Manufacturing capability to contribute to early project launch: The motors were manufactured and shipped with approximately half the regular lead time by optimizing the manufacturing capabilities of TMEIC's two factories in Yokohama and Nagasaki. For the inverters, GTMBU reinforced its manufacturing capability, thereby accomplished the equipment supply with half the regular lead time, contributing to the early project launch, in combination with the Item 1 above.
- 3. High product quality supported by abundant field experiences and innovative technologies: TMEIC motors and inverters have been delivered and used in over 120 countries and regions. A number of large capacity products and high efficiency products to meet the recent energy saving needs have been shipped all over the world, each gaining high evaluation from the customers.



Comments by Vice President Makio Ohtawa, Industrial Systems Division, TMEIC:

"We are proud that TMEIC electric driving systems have been employed for this major project, which is one of the national projects initiated by China, and also grateful that Hengli Petrochemical highly evaluates TMEIC team and equipment. TMEIC ranks large-capacity variable-speed and ultra-high-speed high-voltage inverter systems as one of its key technologies and will sincerely continue to strive for satisfying a challenge and requirements for our customers."

## Media inquiries:

For further information, please contact the Corporate Branding Group, Corporate Planning Division, TMEIC.

Tokyo Square Garden, 1-1, Kyobashi 3-chome, Chuo-ku, Tokyo 104-0031, Japan

Tel: +81-3-3277-4319; Fax: +81-3-3277-4578

https://www.tmeic.co.jp/

In order to respond to the needs of manufacturing sites that serve as a foundation for supporting society, TMEIC always sets its eyes on the future of industry, society and the environment as an industrial systems integrator striking a balance between the development of society and a beautiful global environment. TMEIC will contribute to manufacturing and environmental management through leading-edge technologies based on its core technologies of rotating machinery, power electronics and engineering.