

**A Conversation with Vice President of the Plant & Infrastructure Company**

# Current status and future prospects of the plant & infrastructure business



**Eiji Inoue**

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## Can you tell us about recent developments in the plant & infrastructure business?

Orders for new products were up in fiscal year 2014. That's including the U-KACC boiler, which generates electricity using difficult-to-burn petroleum coke and residues (for Fuji Oil Company, Ltd.), a gas-to-gasoline (GTG) plant (for State Concern Turkmenigas, a state-owned company in Turkmenistan), and an ultra-large earth-pressure balanced shield machine (for Kajima Corporation), with a diameter of 16.1 m, which will be used to construct Tokyo Outer Ring Road.

The U-KACC boiler is equipped with a burner in the upper part of the combustion chamber. It's a unique design that makes it possible to efficiently burn solid residues (such as petroleum coke) left over

from the oil refining process, which are more difficult to burn than other types of fuel. We worked with the Corporate Technology Division in conducting repeated combustion tests and simulation analyses. These joint R&D efforts really paid off with one of the results being this latest order.

In October 2014, Kawasaki became Japan's first private corporation to build a fertilizer plant in natural gas-rich Turkmenistan. The President of Turkmenistan himself attended the ribbon cutting ceremony that marked the opening of the plant. This major project should pave the way for other Japanese companies looking to make inroads into the country. Our success in Turkmenistan is owed in large measure to Kawasaki's excellent track record in fertilizer plant construction.

We are expecting to see a flood of orders for large

shield machines in Japan up until 2020. The manufacturing technology we are working on for the Tokyo Outer Ring Road project will enable us to deliver high quality shield machines with a short lead time.

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## **What is your outlook for the future?**

We relocated our engineering department in Tokyo, consisting of about 210 employees, to Kobe in April 2015 and finished consolidating our engineering operations in Kobe. Since Kawasaki Plant Systems, Ltd. (K Plant) was launched in 2005, we have been working on ongoing reform initiatives with a focus on four areas (organization, awareness, operations, and technologies / products). We see the recent consolidation of engineering operations in Kobe as the culmination of our organizational reform efforts. Now that our engineering operations are all based in Kobe, we will combine and leverage our company-wide technological capabilities to spark synergy and realize the following objectives: 1. Enhance cooperation among the Energy plant BU, Environmental Plant BU, Industrial Plant BU, Chemical Plant & Cryogenic Storage System BU, and Production Center with an eye to making our products more competitive; 2. Sign more contracts with independent power producers (IPPs) for coal-fired power plant projects via collaboration between the Ash Handling BU and Materials Handling BU; and 3. Combine the technological capabilities of the Nuclear Plant BU and the R&D BU to expand the horizon of business opportunities.

Looking at current market conditions, we see the economy generally remaining on an upward trajectory despite some uncertainties. We anticipate that energy and environmental projects will continue to grow in resource-rich countries and emerging markets.

More than anything else we are seeing demand for natural gas, which makes a smaller carbon footprint than fossil fuels like coal and petroleum, grow by leaps and bounds. We have already delivered floating liquefied natural gas (FLNG) boilers to be installed on the Prelude, the world's first FLNG plant.

Now we are looking to win a contract for the next FLNG project as well as orders for large LNG tanks overseas following on the heels of the order we received from Taiwan's CPC Corporation for the Ichthys LNG Project in Australia.

While the competition is heating up in China and Southeast Asia, we are likely to see orders for waste incinerators and other waste treatment facilities increase there. We are working with our joint venture partner in China to bring in more orders for our existing lines of stoker incinerators as well as the CONCH Kawasaki Kiln (CKK) System. That's our state-of-the-art waste treatment system, a cement manufacturing plant and incinerator in one that cuts energy consumption dramatically.

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## **Is there anything else you would like to add?**

In addition to creating synergy via the consolidation of engineering operations in Kobe, we are also actively working on enhancing project profitability while minimizing defects, maintaining and strengthening human resources, which are our core competence, and boosting non-price competitiveness.

Under the initiative to boost non-price competitiveness, we have developed and promoted new lines of high-value added products, such as the GTG plant, U-KACC boiler, FLNG boiler, and CKK System.

In addition to focusing on our existing lines of products, we are cooperating with Kawasaki's group-wide effort to realize the concept of a hydrogen energy supply chain with an eye to creating even more new products.

As always we are moving forward to maintain an optimal balance of established and new products that will continually enhance our corporate value.