

Interview with the Vice President and Senior Executive Officer

The Present Situation of the Precision Machinery Business and its Development Going Forward



Yasuhiko Hashimoto

Representative Director, Vice President and Senior Executive Officer
Assistant to the President †

How do you feel about the present situation of the precision machinery business?

The history of our precision machinery business dates back to 1916, when electro-hydraulic steering gear technology was first introduced from the UK. Since then, we have steadily developed our proprietary technologies, and now, we provide solutions around the globe in fields like construction machinery, industrial machinery, and marine machinery, with a focus on various types of hydraulic components.

The main products in our extensive lineup include hydraulic components such as pumps, motors, and valves; hydraulic equipment for industrial machinery; marine machinery such as deck machinery and steering gears; and electric control devices such as controllers. In 2018, we began the sales of high-pressure hydrogen regulators for fuel cell vehicles.

Today, products for construction machinery make up the majority of our sales. Excavators are one field of construction machinery where we are especially strong. Moving forward, we will continue to develop our strengths not only in excavators, but also in other fields of construction machinery and in agricultural machinery. From a global perspective, the growth rate

of construction machinery and agricultural machinery exceeds the average growth rate of the world economy, and we expect that this robust growth will continue into the future.

What is your future business strategy?

The Precision Machinery & Robot Company is comprised of the Precision Machinery Business Division and the Robot Business Division. As members of the same company, we will proactively work in a coordinated fashion to integrate robotics technology. For example, the movements of construction machinery share common features with the movements of robots. By applying the design and control technologies of robots to construction machinery devices and other products, we can explore new possibilities for products based on brand new ideas. Conversely, there will also be scenarios where we can apply the power mechanisms of hydraulic technology to robots.

Furthermore, technologies like ICT and IoT, which are starting to be used in fields like construction machinery, industrial machinery, and marine machinery, are proving to be very effective in failure detection, operator support, and for productivity and safety in general. These technologies are also shared by robots, which means further expansion of applications can be expected moving forward. We are also putting effort into the development of products that have advanced these technologies.

In addition, from the perspective of environmental protection, we expect environmental regulations such as those on exhaust gas to become even stricter around the world. Components of construction machinery such as diesel engines may eventually be

replaced by electric motors. Even in these scenarios, hydraulics is a power transmission system with high flexibility, and with superb features such as shock resistance, they can be used in combination with electricity to develop new technologies and products.

What is your technological strategy?

In order to improve the performance of products such as hydraulic components, we plan to fully utilize flow analysis, mechanical analysis, structural analysis, and various simulations while improving our capabilities for technological development.

In addition, in order to further strengthen our ICT and IoT technologies, we will also combine AI technology to pursue even more advanced technological developments. There will come a time in the future when construction machinery, agricultural machinery, and ships will become fully autonomous, fulfilling their functions without humans controlling them. In order to be able to provide solutions for this trend toward automation in terms of both ideas and equipment, we aim to continue making further progress and overcome challenges.

Closing comments

We often hear about self-driving technology for automobiles in the media, but in construction and agriculture, where workforces are shrinking, automation and autonomous technologies are needed to be deployed more rapidly. In order to respond to these needs fast, we will continue to pursue innovative new technological developments that focus on the future.