

Interview with President Kanehana

# The present situation of the railway vehicle business and its development going forward



**Yoshinori Kanehana**

President †

## Please tell us the global environment surrounding the railway vehicle business and its business development going forward.

Railway systems are an earth-conscious, effective means of mass transportation. They are now under construction and are being extended in many areas of many developed countries, emerging countries, and developing countries. National projects of high-speed railways, cargo railways, and other types of railways are taking shape throughout the world. We are also implementing actions to win bids in collaboration with

the government and private sectors on the basis of the success with the Taiwan Shinkansen.

However, the competitive environment of this business has become increasingly fierce: in addition to the European “Big Three,” China Railway Rolling Stock Corporation has emerged as a huge company as a result of a business merger between CSR Corporation Limited and China CNR Corporation Limited, and the overseas production bases of Japanese railway vehicle manufacturers have started their operation and their low-price strategies.

To show the predominant presence of Kawasaki’s railway vehicles in the world market to establish its status as the most reliable railway vehicle system

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manufacturer for our clients in this business environment, it is essential to pursue unique technologies to develop technologies different from those provided by other companies. As a general heavy industry manufacturer, we possess a wide variety of state-of-the-art technologies. Our biggest advantage is that we can combine those technologies in the technical development of railway vehicles.

## **Please tell us which of your products are distinctive.**

For example, we have commercialized a new-generation bogie, efWING, in which we were the first company in the world to use a CFRP frame with a suspension function. It is a uniquely differentiated product developed by combining technologies from our Aerospace Company, Corporate Technology Division Head Office, and other sections. We are the only company with such a product.

efWING is manufactured by using carbon fiber, an advanced material used for aircraft. This material was used for railway bogies for the first time ever. Thereby achieving significant weight reduction, and the decrease of wheel load has been reduced to less than half that of conventional products. As a result, efWING delivers excellent performance in "running safety."

To emphasize Kawasaki's character, we also placed importance on its design from the initial stage of its development. Based on affective engineering, we adopted a design created by total coordination of performance and appearance. Its impressive coloring and sophisticated functional beauty are changing the conventional image of railway bogies. In fiscal 2013, the design won the Good Design Gold Award for the first time as a bogie design.

This bogie has been well-received by our clients. In March 2014, Kumamoto Electric Railway Co., Ltd. started using it in the service operation for the first time in Japan. In 2015, running tests were performed by replacing service vehicle bogies with efWING in Shikoku Railway Company in March, Kyushu Railway Company in April, and Nishi-Nippon Railroad Co., Ltd. in October. Based on the performance results

obtained from those tests, we are aiming to expand efWING sales in the Japanese domestic market and the world market.

## **What business area will you focus on going forward?**

Rolling Stock Company has been focusing on the new-vehicle manufacturing business. However, the 2016 medium-term management plan has adopted enhancing stock-type business, focusing particularly on business based on IoT (Internet of Things).

For example, the vehicle maintenance work carried out by railway operators is required to change from maintenance according to time periods (Time Base Maintenance) to maintenance by monitoring condition (Condition Base Maintenance) in order to reduce lifecycle costs. Compared with other railway components, a bogie requires many inspections and many replacement parts, requiring much time to maintain. Since we possess many bogie-related technologies, we can provide a maintenance system that contributes to not only optimizing maintenance, but also to reducing the entire lifecycle cost of our clients by using our condition monitoring and diagnostic technologies based on IoT (bogie condition monitoring technology, track monitoring technology, etc.).

## **Closing comments**

Rolling Stock Company's mission is that "we contribute to society by providing railway vehicles and other products that ensure safe, secure, and comfortable travel for users." Based on our advanced technical capabilities and quality, which are our core competencies, we will develop unique technologies different from those of our competitors, thus spreading the use of Kawasaki-brand railway vehicles in the world market.