HOT TOPICS

Kawasaki Produces Five-Thousandth Locomotive

Kawasaki completed its 5,000th locomotive, and commemorated this achievement with a celebratory ceremony at the Hyogo Works on December 20. This unit was an EF210 electric locomotive built for the Japan Freight Railway Company (JR Freight). The EF210 is JR Freight's primary locomotive for major railway lines such as the Tokaido and Sanyo Lines, and Kawasaki has worked in cooperation with the Mitsubishi Electric Corporation to manufacture more than 100 EF210s to date.

Over 110 years have passed since Hyogo Works' establishment in 1906, and the facility has produced more than 90,000 railway vehicles since then. Its first locomotive, delivered in 1911 to the Ministry of Railways, was a Type 6700 steam locomotive. Hyogo Works also produced Japan's first diesel-electric locomotive, the DD10, and has provided AC electric towing locomotives for use by the Panama Canal Authority, JR Freight DF200 diesel-electric locomotives used primarily for freight services in Hokkaido, and other locomotives to numerous customers in Japan and abroad.

In recent years, various social challenges, including environmental concerns and a shortage of truck drivers, have been accelerating a modal shift in freight transport. Based on advanced technological capabilities and highly reliable products and services, Kawasaki will continue to provide trains, an environmentally friendly mode of transportation, to customers around the world.

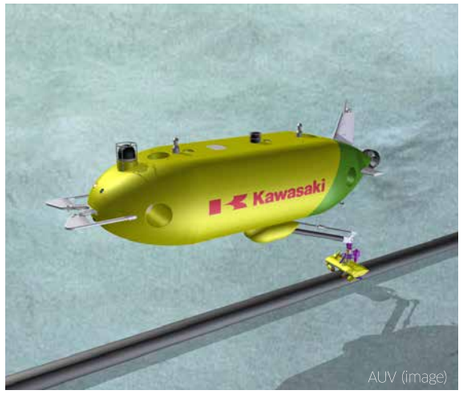
New UK Subsidiary Established to Produce Autonomous Underwater Vehicles (AUVs)

In Aberdeen, Scotland, UK, Kawasaki recently launched a new subsidiary of Kawasaki Subsea (UK) Limited, to specialize in the production, sale, and post-sale servicing of AUVs.

With a focus on the growing demand for pipeline maintenance in offshore oil and gas fields, Kawasaki has been developing the world's first AUV equipped with a robot arm for subsea pipeline inspection, based on a fusion of submarine technologies and industrial robot technologies fostered in-house over many years.

Kawasaki plans to launch the AUV in fiscal 2020. Prior to that, the company intends to increase its market presence and construct a business network through the new subsidiary, which is strategically located in Aberdeen — a hub city for North Sea oil and gas business.

Scotland is a global leader in offshore development, innovating subsea technologies for offshore oil and gas development. Following the establishment of this local subsidiary, Scottish Economy Secretary Mr. Derek Mackay stated, "I am delighted to welcome Kawasaki Heavy Industries who set up an office in Aberdeen." Expressing his strong expectations for Kawasaki's AUVs, he continued: "There have been a number of joint subsea projects between Scotland and Japan, and I am confident that Kawasaki Heavy Industries will play a leading role in this two-nation relationship in the subsea industry."



AUV (image)

Kawasaki Starts Sales of New H145//BK117 D-3 Helicopters

On March 6, Kawasaki released the new H145//BK117 D-3 helicopter (BK117 D-3), which was jointly developed with Airbus Helicopters Deutschland GmbH.

Central Helicopter Service Ltd., which operates 10 BK117 helicopters for EMS, disaster prevention operations, and VIP transportation in Japan, will be the first customer to use the BK117 D-3 in Asia.

The BK117 D-3 features a 150 kg increase in useful load with a five main rotor blade system and shortened maintenance downtime, while inheriting features of preceding BK117 D-2 that has earned high acclaim, such as versatility, wide clamshell doors at the rear, outstanding hovering performance, and low noise level.

The BK117 is a medium-sized, twin-engine helicopter used for various purposes, including emergency medical services, firefighting, disaster relief, law enforcement, broadcasting, and personnel and cargo transport. Following delivery of the first model in 1983, the BK117 has been continually improved over the years, and thanks to the aircraft's outstanding technological strengths and high reliability, Kawasaki has successfully delivered 178 units as of March 5, 2019. Including those delivered by Airbus, the total exceeds 1,500 worldwide, making it a global bestseller.

RPF and Biomass-fired Boiler Delivered to Korea's Jeonju Paper Corporation

Kawasaki delivered an RPF*1 and biomass-fired boiler ordered by Samchully ES Co., Ltd., a Korean engineering firm based in Seoul, which then supplied the boiler to Jeonju Paper Corporation, a leading paper manufacturer in Jeonju City, Korea.

The delivered unit is an internal circulation fluidized bed boiler (ICFB) that burns RPF and wood chips as fuel. It supplies 131 tons of high-temperature, high-pressure steam per hour, the largest capacity in its class ever manufactured by Kawasaki. Jeonju Paper has introduced the new ICFB as part of upgrades to the power generation system within its plant. Steam generated by the boiler and electricity created by the steam turbine power generation system will be used to operate the company's paper mill, with surplus power being sold to a local power supplier. Samchully ES, which was contracted to carry out the facility upgrade, has completed the necessary installation work and commissioning, and the boiler continues to operate steadily. Including this latest delivery, Kawasaki has delivered a total of three boilers of this type to Korean customers.

Kawasaki's ICFBs can use numerous types of fuel and are capable of providing the high-temperature, high-pressure steam needed for high-efficiency power generation operations. Compatible fuel types include fuels made from solid waste such as RDF*2 and RPF, waste plastic, biomass fuels such as PKS*3, gumwood, waste wood, and wood chips. This boiler features combustion and heat recovering cells that divide the fluidized bed portion into separate partitions, and its internal structure allows the fuel and bed materials to circulate from the combustion cell to the heat recovering cells by varying the velocity of airflow. By separating combustion gas and bed material flows, this design enables stable and sustained burning of fuels containing chlorine, a substance that creates the risk of problems such as corrosion and efficiency decreases within boiler heat exchanger tubes, and of alkaline fuels containing constituents such as potassium and sodium. As a result, it is possible to use refuse-derived fuels with high chlorine content and high-alkalinity biomass fuels, which have seen very little use until now.

*1 RPF: Refuse paper and plastic fuel. Solid fuel consisting primarily of waste paper and waste plastic, industrial waste materials that are difficult to recycle.
*2 RDF: Refuse-derived fuel. Solid fuel consisting primarily of combustible municipal solid waste.
*3 PKS: Palm kernel shells. Fuel consisting primarily of palm kernel shells collected from palm fruit.

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