BY ROBERTA PRANDI

The two 226 tonne transporters have been saved from the wreck of the New Orleans harbor after Hurricane Katrina.

Little Sensors Outlast Hurricane

Thumb-size Hall differential sensors by Rheintacho proved their worth in the devastating effects of Hurricane Katrina

When Hurricane Katrina hit the U.S. Gulf coast in 2005, a big part of the city of New Orleans, Louisiana, was flooded, including the harbor.

Among the structures and equipment that were under water in the New Orleans harbor were two new 226 tonne special transporters. They had been shipped from the manufacturer in Germany and were sitting in the New Orleans harbor waiting for further transportation to Newport News Shipbuilding in Virginia, U.S.A., which had ordered them for the handling of ship sections.

The two transporters remained under water for more than a year before the insurance companies settled on the best course to take. The Sierra Equipment Co. out of California, U.S.A., then acquired the two transporters and tried to repair them.

Soon, however, it became clear that although the mechanical and hydraulic systems of the two machines were still functioning, including the diesel engines, the electronic circuits were so badly damaged as to be beyond repair.

It was then decided that a full disassembly of the entire electronic control system was required; this was carried out by the German control system manufacturer Kinemotion. They dismantled all of the circuits and replaced them with a plug-and-play system for cabling, sensors and electronics.

During this process, they unexpectedly discovered that not all the electronic components were irreplaceably damaged. In fact, the service engineers of Kinemotion found that some little pieces had withstood the harsh condition of months beneath water and mud and were still properly working. These pieces were rotation angle sensors by Kinetronic (a German specialist in electronic- hydraulic control technology for special vehicles) and sister company Kinemotion, and rotational speed sensors by Rheintacho.

In particular, the rotational speed sensors by German manufacturer Rheintacho — and well they proved their resistance to harsh conditions — were from the FA-series, a group of products usually utilized for heavy-duty applications in mobile hydraulics.

The FA-series sensors, two-channel Hall differential sensors for the measurement of rotational speed and rotation direction, are the flagship of the Rheintacho product portfolio, the company said.

Sensors in the FA-series are single-wire sealed, a unique feature for rotational speed sensors, said Rheintacho. They are also gas proof and can be certified with IP 69K specifications upon customer request. FA-series sensors work in an operating temperature from -40° to 125°C and are resistant to diesel oil, hydraulic oil, salt and solvents.

Rheintacho components are used in demanding applications, such as large diesel engines for ships and power plants, high-speed engines for workboats and commercial vehicles, construction machines, mobile cranes, tanks, locomotives, and any mobile hydraulic and mobile electric-drive system.

The company said that the FA-series sensors are a preferred solution by Bosch Rexroth: Rheintacho has been certified as the preferred supplier for measuring instruments for the Bosch group since 2010.

Hall differential sensors in the FA-series are double-flange design. Rheintacho said the same electronic design is now available in both M18 and M12 sizes.

SEE DIRECTLINK @ WWW.DIESELGASTURBINE.COM

The Rheintacho FA-series Hall differential sensors with single-wire seals are used to measure rotational speed and direction in demanding applications.