A NEW CORE

Modern machine monitoring for river cruiser

A ship repair often also involves the replacement of a large section of the automation system. In this operation the technology is brought up to the state of the art and made ready for the challenges of the future. besecke GmbH & Co. KG was awarded a repair order requiring the replacement of the machine controls. For this, they approached Bachmann electronic.

besecke was founded in 1948 as an armature winding shop and now supplies automation and system technology all over the world. Maritime systems is one of the company's specializations in addition to the food and automotive industry as well as specialized engineering. The portfolio includes basic and detailed planning, project and building management, as well as the commissioning of maritime plants. The company has been part of the Lürssen Group since 1989 and has approx. 170 employees at sites in Bremen, Emden and Rostock (Germany).

www.besecke.de

The Maritime Systems business unit of besecke specializes in ship automation. Besides the planning, project management and commissioning of turn-key installations, the company also offers a host of specialized product solutions such as scalable automation systems, power management systems, navigation, fire alarm systems and infotainment systems. Solutions from besecke are installed in yachts, river cruisers, ferries, containers and government vessels.

In 2014 a German shipping company approached besecke. The wheel house of one of their river cruisers had been severely damaged in an accident. besecke was awarded the order to restore and maintain the machine monitoring system. »The machine monitoring system consisted of two old MODICON controllers,« recalled Knut Hermann, software designer at besecke. »These old controller components were hardly available, and so we ultimately had to modernize the entire machine monitoring system in order to ensure the availability of spare parts in the future.«

Impressive technology

The client's requirements were clear: »The repair had to be completed during winter storage – a period of three months. It was also necessary for the existing control cabinets, terminals and cables to be further used and so the new components had to fit into the old structures,« Knut Hermann lists the most important criteria. »We built an entirely new redundant communication system between the two controllers in the engine room and in the wheel house.« besecke used Bachmann's M1 automation system for the project. »We chose the MX213 processor module with its two serial interfaces which we require for engine monitoring as well as for different input and output modules,« Knut Hermann explains. Besides the innovative and robust technology, the compact design of the Bachmann modules also impressed.
»This allowed us to save space, which is always required on board a ship,« the project designer continued. The programming was carried out by integrating the CODESYS development environment. »We also found the Bachmann SolutionCenter appealing, as it allowed us to enter all the parameters. The wide range of analysis options that the software offers impressed us,« Knut Hermann explained.

State-of-the-art visualization

besecke also used Bachmann technology for the operator interface. »OT1312 and OT1207 operator terminals from Bachmann were also used both in the engine room and in the wheel house, for which we implemented a web-ba-

▲ The new OT panel, integrated in the wheel house

▲ The new operator interface is clearly designed and meets the requirements of the skipper. Alarms in the event of faults or limit value violations are recognizable at a glance.

sed visualization with M1 webMI pro,« Knut Hermann adds. »The customer thus benefits from the features of a new and advanced vector-based visualization user interface via which it is possible to set alarms and tank monitoring functions as required. The skipper thus has an overview of all relevant data and alarms, which are shown clearly and immediately.« The M1 webMI pro web server is installed on the controller without the need for additional hardware. Any terminal device can thus access it independently of the operating system installed.

Partnership with a future

besecke is entirely delighted with Bachmann. »We found the collaboration with Bachmann to be very good. We were optimally supported, both from the commercial as well as the technical sales side,« Knut Hermann confirms. »All our questions concerning project design, parameters and programming were always answered as quickly as possible.« It is therefore no surprise that besecke wishes to implement other projects with Bachmann.

» All our questions concerning project design, parameters and programming were always answered as quickly as possible. «

Dipl.-Ing. (FH) Knut Hermann,
Software project design engineer for ›Maritime Systems‹,
besecke GmbH & Co. KG