

Increasing Product Quality in Field Tests



The Customer

Liebherr-Werk Ehingen GmbH is a leading global manufacturer of wheeled and crawler cranes. With the wide product portfolio of telescopic mobile cranes and lattice boom cranes, any challenge can be mastered. The cranes from Ehingen are used worldwide in the build up of wind power plants, industrial and plant construction, infrastructure, opencast mining and construction industry.

The Challenge

Universal application brings complexity

Liebherr is currently successfully introducing the state-of-the-art LICCON3 crane control system in its new products. In addition to the „travel“ functionalities, this powerful crane control system also includes all the software modules required for crane operation. Validating the wide range of functions and variants of the mobile crane control system poses major challenges for everyone involved. Many subcomponents and subsystems are networked with the crane control system and thus require close coordination at the interfaces in each case.

Liebherr has therefore decided to carry out field testing with selected customers in addition to the usual validation in tests for the introduction of LICCON3.

The Solution

Two All-Rounders: Off-Road with Connection

Liebherr uses the GL Logger from Vector to record measurement data. These are installed in the crane and record the CAN communication between the control units completely autonomously. Additional data from diagnostic interfaces of the control units are actively requested by the GL Logger via Ethernet.

The sophisticated power management of the loggers ensures that the GL Loggers are ready to record at any time without putting a load on the vehicle battery during idle phases. Even large temperature fluctuations at rough locations cannot harm the GL loggers. So the GL loggers have already been operated successfully and maintenance-free for a very long time.

To ensure that the recorded data is available to the development department as promptly as possible, it is regularly transmitted to a server using an LTE router. This information is automatically evaluated and summarized in reports, which are then used in weekly meetings to evaluate the control system.

The crane operator has the option of reporting special incidents at any time by pressing a button. In this case, the data relevant to the development department is passed on directly so that experts can gain an immediate overview.

If it is still necessary to send a service technician during the field testing phase, he can already arrive with the findings of the development team.

The Advantages

The following features support the implementation of the project:

- > Wide operating temperature range of the GL Logger allows for use in adverse climatic conditions
- > The establishment of a TCP connection by the GL Logger to the diagnostic access of the control units makes it possible to retrieve important information directly from the control unit.
- > Timed data transmission, even outside the operating hours of the crane, allows early evaluation of the data. After the transmission the storage medium is free again to continue any of the measuring tasks.
- > Triggering of the transmission by the crane operator provides important data in advance of and after special events

More Information:

www.vector.com/gl-logger