

Press release

Right on track with Liebherr: 24 digital eyes for track construction giant

- Tamping machines manufacturer system7 has been relying on digital camera technology from Liebherr since 2016
- The Liebherr digital cameras have proven their high quality and robustness in long-term use
- The MDC3 cameras reliably deliver detailed and high-contrast images even during night-time operations

The Austrian track maintenance machines manufacturer system7 installs up to 24 Liebherr cameras in its lifting, lining and tamping machines. The MDC3 cameras show the hard-to-see areas of the complex machine, contributing to greater efficiency, comfort and safety during track maintenance work. For system7, Liebherr's digital camera technology also means a further step towards automation and the improved cost-effectiveness of the machines.

Nussbaumen (Switzerland), 24 January 2023 – Track maintenance and construction machines have to withstand extreme mechanical and climatic conditions over decades. Therefore, all the components have to be resilient and durable to ensure the functionality of the machines. Machine breakdowns would be extremely costly and have for a significant impact on railway operations. The robustness of the components used also plays a decisive role for system7. That is why the internationally acting manufacturer of track maintenance machines has opted for the MDC3 camera by Liebherr-Components.

A tough test for the cameras

"We have been using digital camera technology by Liebherr since 2016. Track works are really challenging for all the components in our machines. In particular, they have to cope with strong vibrations, dust and temperature changes. The MDC3 camera deals with these demanding operating conditions in an exemplary manner. Should a camera be damaged, we can replace it quickly and easily in the field using plug and play," says Thomas Stadler, automation engineer at system7.

For a more detailed view, system7 has currently installed up to 24 Liebherr cameras on its universal lifting, lining and tamping machines. They support the machine operators in monitoring not only the tracks, but also the work process. To ensure flawless track work, the operators must always keep the machine and working units in an exact position. For this purpose, several cameras image the tracks and the markings located there directly, actively supporting the operators in this task. In addition, system7 uses the cameras as a rear view camera and side mirror.

Multicasting - one image at several locations

Tamping machines are equipped with several driving and working cabins. Therefore, some of them are located at a great distance from the track section, where works are being carried out. For system7, the so-called multicasting option in the Liebherr MDC3 camera is an important feature. The option ensures that the cameras stream the recorded images to several displays simultaneously in real time. This makes the MDC3 cameras ideal for keeping an eye on the tamping process from several operator stations at the same time and for detecting obstacles and disruptions in the workflow at an early stage.

Sharp images in any lighting situation

A large part of track maintenance and construction works takes place at night, when there are fewer trains on the tracks. The more important it is for a camera to deliver detailed image information, even under difficult lighting conditions. With its high-performance imager and HDR technology, the MDC3 always provides high-contrast and detailed images to the machine's operator stations, even in dark environments. The MDC3 also adapts to new lighting situations, such as rapidly changing lighting conditions, including backlighting, very quickly.

"Since the Liebherr camera of the previous generation has proven itself in long-term use, our machines now benefit from the features and high image quality of the MDC3. A sharp image with many details facilitates image interpretation, and thus ensures greater efficiency and safety in operation," adds Harald Hüttmayr, head of automation technology at system7.

To round it off, Thomas Stadler takes a look into the future: "The high image quality and the digital camera technology pave the way for further automation, which will make the use of the machine even more comfortable and efficient. At this point, of course, the low latency we can achieve with the MDC3 is also crucial."

About system7 railtechnology GmbH

The company system7 develops, produces and distributes machines for railway maintenance and construction. It consciously and strategically uses the up-to-date technologies to develop advanced economic and ecological products for the benefit of the railway. system7 places great emphasis on the safety and economic efficiency of the railway system as well as environmental protection. The company, based in Laakirchen, Upper Austria, specialises in tamping machines, among other things. The tamping units of these machines plunge with the tamping tines into the ballast bed, compact it with the correct high vibration forces and thus stabilise the ballast bed homogeneous and recreate the track geometry demanded.

About Liebherr-Components

In this segment, the Liebherr Group specialises in the development, design, manufacturing of high-performance components in the field of mechanical, hydraulic and electric drive and control technology. Liebherr-Component Technologies AG, based in Bulle (Switzerland), coordinates all activities in the Components product segment.

The extensive product range includes combustion engines, injection systems, engine control units, axial piston pumps and motors, hydraulic cylinders, slewing bearings, gearboxes and winches, switchgear, electronic and power electronics components, and software. The high-quality components are used in cranes and earthmoving machinery, in the mining industry, maritime applications, wind turbines, automotive engineering or in aviation and transport technology. Synergy effects in other product segments of the Liebherr Group are used to drive continuous technological development.

About the Liebherr Group

The Liebherr Group is a family-run technology company with a highly diversified product portfolio. The company is one of the largest construction equipment manufacturers in the world. It also provides high-quality and user-oriented products and services in a wide range of other areas. The Liebherr Group includes over 140 companies across all continents. In 2021, it employed more than 49,000 staff and achieved combined revenues of over 11.6 billion euros. Liebherr was founded in Kirchdorf an der Iller in Southern Germany in 1949. Since then, the employees have been pursuing the goal of achieving continuous technological innovation, and bringing industry-leading solutions to its customers.

Images



liebherr-mdc3-digital-cameras-for-system7.jpg

More efficiency, comfort and safety: system7 relies on digital camera technology by Liebherr for its tamping machines.



liebherr-mdc3-system7-detail.jpg

Up to 24 digital cameras by Liebherr provide detailed views in the operator's cabs of each machine.

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Published by

Liebherr-Components AG
Nussbaumen / Switzerland
www.liebherr.com/mdc3