



First-rate painting line

Liebherr uses WAGNER equipment to coat cranes

November 2016

The coating of large workpieces presents manufacturers with exactly the same challenges. The Liebherr plant in Ehingen was thus looking for a customized solution to paint the components of its telescopic and lattice boom cranes that measure up to 15 meters in length. An impressive painting line has now been in operation there since October 2016 – it is equipped with four painting booths, several 1,000-liter paint containers, over 2,000 meters of pipes, 35 pumps, and five mixing and dosing systems from WAGNER. The system was planned, supplied, installed, and commissioned by Thüma Maschinenbau und Service GmbH from Gotha.

Positive experiences meet excellent advice

Before the project started, Liebherr had positive experiences both with Thüma and with WAGNER products. Thüma also stood out from the competition with a sophisticated system concept. "Thüma and WAGNER collaborated closely with us and provided us with competent support. This enabled us to test a trial system over several months, for example. The advice, service, and products won us over in the end," reports Thomas Nüssle, Head of Plant Planning at Liebherr.

Innovative loop line concept

The entire system consists of one central paint supply container and four painting booths. In the paint supply room, the primer, top coat, hardener, and thinner are delivered and stirred in 1,000-liter containers, and supplied in separate stainless steel work containers for processing. Seven Puma 8-300 pumps from WAGNER transport the components at low pressure via the piping systems to the painting booths. "To bridge the large distances between the paint supply and the painting booths, and to be able to supply all ten painting guns uniformly, we have designed an innovative loop line concept with a switchover between the flow and return pipe," explains Tino Seifert, Managing Director at Thüma. On the booths, 28



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IceBreaker high-pressure pumps from WAGNER increase the pressure of the materials and supply the **five 2K COMFORT mixing and dosing systems**. To process special paint colors, an additional high-pressure pump has been installed directly adjacent to each 2K COMFORT. One of the four painting booths, which is considerably larger than the other three at 26 x 9 meters, has been equipped with two mixing and dosing systems, more powerful pumps, and with four instead of two painting guns.

"Admixing" desirable

One special feature of the system concept is that minimal quantities of the subsequent top coat can be mixed in with the primer in each 2K mixing and dosing system. The white or gray primer is thus colored in such a way that the subsequent top coat application is optimized and has a more brilliant appearance in the end. "COMFORT is actually a 2K system, based on which the WAGNER Development Department has developed a 3K version. The AIS dosing system automatically controls not only the injection of the hardener, but the quantity of the top coat as well," explains Tino Seifert. In addition to the 3K version used at Liebherr, WAGNER launched another version of the mixing and dosing system on the market in March 2016: the 2K COMFORT with two fluid circuits, which enables two different materials to be applied simultaneously using just one system.



Planning for the project began back in 2012. When it came to the finer details of planning, it was possible for key optimization points to be implemented, which resulted in trouble-free commissioning in October 2016. By acquiring the system, Liebherr's aim was to take advantage of new advances in technology and to commission a resource-friendly painting line. Due to the central data collection, it is now possible to record times, paint quantities per project, as well as flow rates, and to evaluate them in a VOC balance sheet. "Thüma and WAGNER have accompanied us throughout the entire process and made their expertise available to us. This was a key factor to our success," says Thomas Nüssle. "In all likelihood, the close collaboration will continue in future."