

PRESS RELEASE

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Intralogistics made fit - without production downtime

A new stacker crane for 11-ton aluminum coils and a modern automatic crane system for extruded profiles have been speeding up the production processes of Hydro Aluminium Rolled Products and Neuman Aluminium since the beginning of the year. For the replacement of the central conveyor systems, two Vollert teams took advantage of the short production-free period over Christmas. With foresighted planning, they mastered the complex tasks even in the tightest of spaces and under tightened pandemic conditions.

For Neuman Aluminium in Marktl, Austria, it was already the second Christmas visit from Vollert. Back in 2017, the intralogistics specialists modernized the production processes of the manufacturer of aluminum solutions with one of the fastest automatic crane systems ever used in the extrusion industry. This was now followed by the replacement of a second crane in the neighboring hall. This time, too, a time window over the holidays was chosen for the dismantling and assembly - including the replacement of the complete crane runway with conductor line, catwalk and rails, as the new crane system has significantly more dynamics: With a span of 16 m and a travel distance of 30 m, the manipulator stacks the 3 t skids with 7.5 m long aluminum profiles six high at a cycle time of 145 seconds. A 4-wheel drive provides the high acceleration required for this. A special gripper with pre-centering ensures that the baskets are picked up safely.

"To save time, the assembly of the crane runway and the crane system took place at the same time, which requires perfect coordination," reports Dieter Schäfer, Vollert's project manager. "But we have many years of experience with time-critical conversions, so despite aggravating pandemic conditions and quarantine periods for the fitters, we were able to put the new plant into operation with immediate high availability after just three weeks." Even the TÜV acceptance could be completed in the period between the holidays.

Large stacker crane, small roof hatch

In parallel with the replacement in Austria, Hydro Aluminium Rolled Products in Grevenbroich also modernized a production-critical system, namely a 29 m high stacker crane in the central coil store. This is responsible for feeding the cold roll, which is why different production areas access the warehouse and depend on its smooth functioning. "Due to the central function of the stacker crane, we had to ensure recommissioning after only 14 days

by perfectly timing all processes. Thanks also to the good cooperation with our customer, the installation then went smoothly," explains the responsible project manager Henry Schulze. A special feature, however, was the narrow access to the high-bay warehouse - even for the experienced retrofit experts. The dimensions of the roof hatch were only 2 x 2 m, which could not be enlarged due to the concrete skeleton construction. "Actually, it's hard to imagine that a twelve-story-high stacker crane for 11-ton coils could fit through such an opening - it was the narrowest access in a Vollert project to date," reports Henry Schulze. The engineers made this possible, among other things, by the bolted design of the lift cage, instead of the usually welded design. This allowed it to be completed on site in the aisle of the high-bay warehouse. In addition, all electrical connections of the system were designed to be pluggable in order to save time during assembly. After all, Vollert's fitters had a lot to do: In addition to the removal and installation of the plant components, the 65 m long travel and conductor rail was also replaced and a new S7 control system with the latest safety standard was installed.

1,000 coils in the first six days

At the start of production after the turn of the year, all work had been completed so that the plant was able to provide the desired availability right from the start: In the first six days alone, over 1,000 coils were transported. The stacker crane in the single-aisle high-bay warehouse of Hydro Aluminium Rolled Products reaches a speed of 2 m/s and 0.7 m/s during lifting. The coils are transported material-friendly on the reel, while storage is carried out via a telescope to the right or left.

Press contact

Frank Brost

Senior Marketing Manager

Vollert Anlagenbau GmbH
Stadtseestr. 12
74189 Weinsberg/Germany
Phone: +49 7134 52 355
Fax: +49 7134 52 203
E-mail: frank.brost@vollert.de



Image 1 + 2

High and narrow and across and wide: With the retrofit of a coil stacker crane and the replacement of an automatic crane for aluminum extrusion profiles, Voller provided new momentum in the aluminum industry in two projects at the turn of the year - without any production shutdown. Despite the dimensions of the heavy-duty intralogistics systems, the short time window over the Christmas holidays was sufficient for the specialists to complete the installation.