

PRESS RELEASE

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Intralogistics system with inductive power transfer

Fully automatic coil transport in Hydro aluminium mill

Hydro Aluminium Rolled Products GmbH has commissioned Vollert Anlagenbau to modernise its existing plant in Grevenbroich by designing an end-to-end intralogistics system that automatically loads and unloads lorries, stores up to 4,000 tons of aluminium coil, and uses trolleys with inductive power transfer.

Litho aluminium strips serve as carrier material for offset printing plates and are very sensitive. This is why it is a particular challenge to transport them safely and without damage within a plant. The modernization of the Hydro plant in Grevenbroich, one of the world's largest production sites for the rolling and refining of aluminium, will also enable the production of coils that are twice as heavy as they are now. A great deal of effort was therefore spent to realise a system that safely and automatically unloads the delicate aluminium coils off of the lorry, transports them to the high-bay warehouse and the new Sexto mill, and loads them for shipping. "A fully-automated transport system for the mill eliminates the need for forklifts or other equipment and minimizes the risk of the coils being damaged", says Frank Hirschmann, Litho Production Manager at Hydro, when explaining the benefits.

Automatic Loading and Unloading

An automatic crane loads and unloads the trucks and can handle coils of different lengths thanks to its contour inspection and special gripping systems. With 6 meters of vertical lift and a ground speed of 1.5 meters per second, the crane travels to the rack feeder 40 meters away, rotates 90 degrees, and unloads the coils. The building of the existing high-bay warehouse will be extended by raising the roof and erecting a 25-metre

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high, 60-metre long steel structure with eight levels for accommodating up to 4,000 tons of coils. The conveyors will also be modified to move a maximum of 11 tons, thereby increasing payload by over 200 percent.

Inductive Coil Trolleys

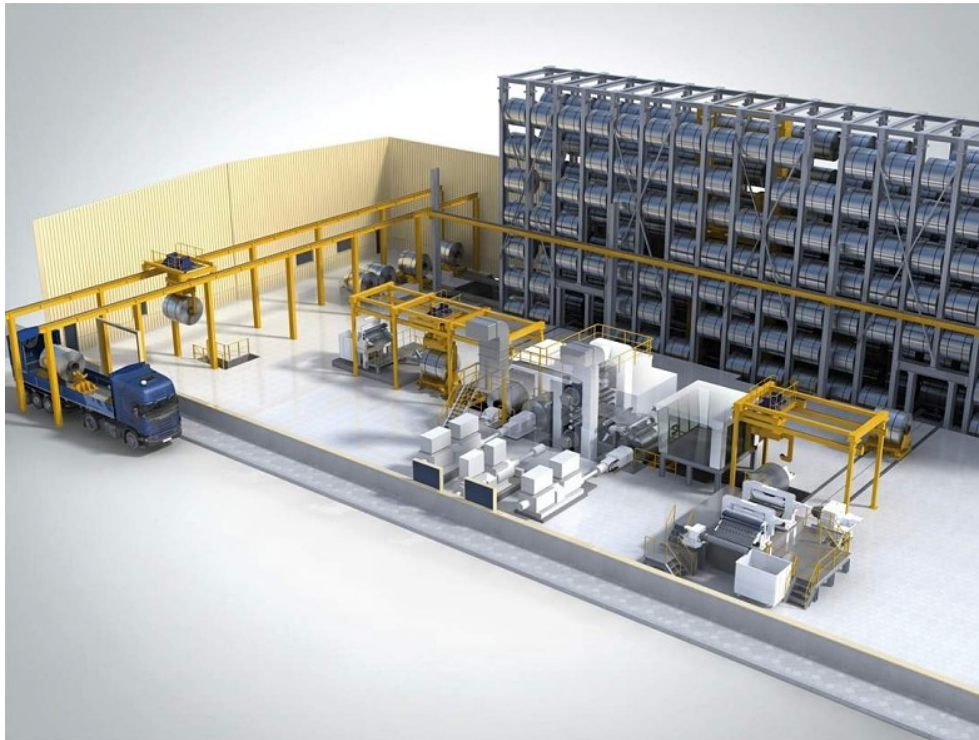
The single-aisle rack feeder moves the coils between the working processes in and out of storage, and inductive trolleys shuttle them to the mill while providing vertical access without a drag chain. “Inductive power transfer makes it possible to design the work area more flexibly”, explains Vollert project manager Dieter Schnell. “Not only does the plant's roll-changing car need to be negotiated; nearby personnel must also be taken into account. The coil trolleys move through the high-bay warehouse and mill without being pulled by a cable.” Compatible with the existing layout, the entire intralogistics system should be fully integrated by mid-2012.

About Vollert Anlagenbau

Founded in 1925, Vollert Anlagenbau GmbH specialises in developing made-to-order systems that move, transport, store, and handle heavy goods. The company also devises intralogistics solutions for the metal and aluminium industries and engineers shunting equipment in addition to catering to the production requirements of the building materials sector. The company employs some 200 personnel at its headquarters in Weinsberg. www.vollert.com

Images:

SOURCE: Hydro



The Hydro Aluminium Rolled Products GmbH modernises its rolling mill in Grevenbroich for higher production quality. With smooth fully-automatic transport in the whole of the rolling mill and the loading and unloading of lorries, Vollert Anlagenbau ensures secure handling of the sensitive coils in litho quality. The high rack bay provides space for 336 aluminium coils with a total weight of 4,000 tons. (Graphic: Hydro)

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