

PRESS RELEASE

Prepared for peak periods

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- **Two automatic cranes for Blue Paper's roll-shipping store**
- **World's first installation where crabs can travel separately**
- **Significant increase in handling capacity for lower number of crane travel cycles**

Two Demag process cranes provide fully automated material handling in the new shipping store at the Blue Paper paper mill in Strasbourg, France. The paper-roll shipping store has a theoretical capacity of 15,250 tons (at a fill capacity of 100%). It replaces the old store that could only accommodate the production of seven days weighing some 7,500 tons, and will enable the material flow to be very much faster and more efficient.

Planning needed to consider that the paper machine operates 24/7, which means that the store is continuously filled. However, the shipping times are limited to 75 hours per week. This means that the shipping store must be able to "breathe" accordingly and perform retrieval operations at very high speed – especially at the beginning of the week when the roll store is filled to above-average capacity.

This challenge is met by two Demag process cranes, which are each equipped with two open-winch crabs and vacuum lifters as load handling attachments. The crabs can travel independently of each other. This allows the owner to benefit from additional flexibility and higher load handling rates.

Each of the two cranes can store or retrieve single or pairs of rolls measuring up to 1,450 mm in diameter, 3,350 mm in width and weighing up to 4.2 t. This results in very high maximum system performance of up to 100 roll movements per hour.

Blue Paper's shipping store is the first project in the world where two Demag automatic cranes each operate with two independently travelling crabs. Dr Thomas Bönker, Senior Vice President, Business Unit Process Solutions comments: "Until now, cranes were employed with one hoist unit or two mechanically coupled crabs. State-of-the-art control systems offer us new possibilities and further boost handling speeds in peak periods – for a reduced number of crane travel cycles. In addition, these cranes provide maximum flexibility."

Additional information

Blue Paper SAS in Strasbourg is a joint venture founded by the Klingele Group (Germany) and the VPK Packaging Group (Belgium). The mill was established in 2013 by converting a magazine paper mill into a state-of-the-art plant for the production of lightweight corrugating base paper (80 to 135 g/m²) for corrugated paper packaging.

The paper machine operated by Blue Paper has a cut working width of 8.54 m and can therefore cope with the most commonly-used widths of the majority of modern corrugated paper production systems. Production is designed for an annual capacity of more than 350,000 tons of lightweight corrugated paper and Testliner (surface weights of 80 to 135 g/m²). 100% of the raw material used is recycled paper.

Until now, Blue Paper has used its existing paper-roll shipping store, which can accommodate some 7,500 tons of paper. In future, it will only be used for smaller rolls. The majority of production is transported direct to the new shipping store, which has a nominal capacity of more than 15,000 tons. The rolls are stacked in piles up to 15 metres high in an area measuring 2,250 square metres.

The material is handled by two fully automated Demag process cranes that have a span of 27.2 metres. They operate on the same crane runway and are each equipped with two crabs that can travel independently of each other. This makes it possible to reduce the number of crane travel cycles. The high travel and lifting speeds of the Demag process cranes did not have to be reduced.

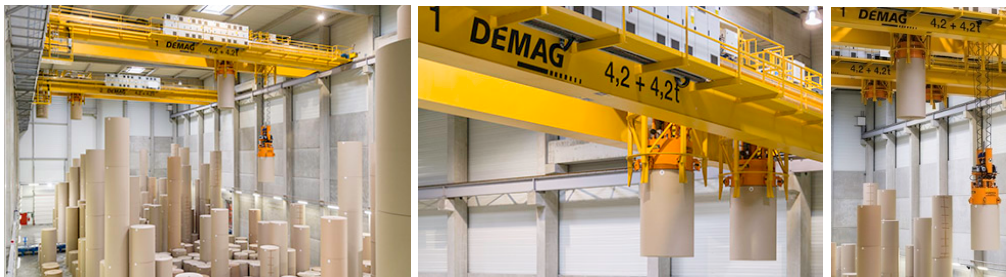
A total of four vacuum lifters are used as load handling attachments to ensure rapid and gentle handling of the rolls. Depending on the load, product can be lifted and lowered at speeds of up to 120 m/min.

The two process cranes utilise benefits both for handling rolls as well as for power consumption: electric power generated during the lowering and braking operations is fed back into the power supply by smart power recovery units. In this way, the customer's energy footprint is further improved.

Smart warehouse management

The crane installations were supplied and put into operation complete with the warehouse management software. The Demag warehouse management system (WMS) is connected to the paper mill's materials management system and, therefore, also to the production scheduling system. Consequently, all production data that are relevant for the logistics and storage operations are available to the crane control system. This enables the cranes to perform optimisation duties in the periods in which shipping cannot take place. They then prepare any scheduled retrieval tasks. This also accelerates the retrieval cycles in the 75 hours per week that are scheduled for this work.

Photos:



41540- 92 / 74 / 123: Two automatic cranes for Blue Paper's roll-shipping store

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