

High-power equipment moves 240-tonne component

A mammoth project in Western Europe's largest paper mill: Norske Skog built a new wood processing plant in Golbey, France. Its centrepiece was a huge 240-tonne drum from the Voith Group's Paper Division. This was a complex move-in due to the extreme load, long route and confined space. Thanks to precise engineering and high-power equipment, SCHOLPP solved the challenge with ease.



With a capacity of 600,000 tonnes, the Norske Skog plant in Golbey, France, is the largest paper production site in Western Europe. Voith supplied the centrepiece for a new production area: a 240-tonne drum for pulp production. SCHOLPP was commissioned to install the drum in a hall in a series of heavy-duty lifts. Two years of intensive preparations went into the project before it got under way.

Planning and organising the project posed a particular challenge. Our engineering department prepared a technical feasibility study, ensuring not only that the enormous loads could be moved safely, but also that the cranes and lifting equipment could be positioned in such a way that the operators could work in the confined environment within the building.

Two cranes perform tandem lift: Unloading and positioning for welding

The first step involved delivering and unloading two drum segments (180 and 60 tonnes). The fitters then had the task of moving the segments from the set-down position to the welding position. They used two 650-tonne cranes for this task. The cylindrical giants were moved onto the welding frame in a tandem lift using XL-sized lifting gear: shackles and round slings, each with a load capacity of 125 tonnes. The Voith specialists then welded the two drum parts together.

Mobile moving-in powerhouse: Hydraulic lifting gantry transports cargo more than 80 metres

The second step was to bring the entire drum into the wood-processing plant. This required extensive preparatory work to get the construction site ready. Floor loads of 30 tonnes per square metre had to be guaranteed on the site; the SCHOLPP team verified this and made improvements where necessary. Our specialist equipment was transported to the installation site from several locations.

The fitters installed an 80-metre-long rail system, on which a mobile TG 1,000 hydraulic lifting gantry with six columns was mounted. It would be used to pick up the drum from the storage area, move it into the hall and position it on the drum foundations.

Precision entry in narrow building: Huge length and little room for manoeuvre

The space available in the hall presented a challenge. There was very little room





for the mobile lifting gantry to the left and right of the foundations on which the drum was to be set down. The track width on the lifting gantry had to be adapted using a special construction, as the foundation widths exceeded the standard dimensions. Our engineers therefore calculated the travel distances and space requirements precisely.

The same applied to the move-in height. The foundations were approximately 5.5 metres high. The heights of the columns when fully extended had to be redesigned, taking into account the height limit imposed by the building's ceiling. There was minimal room for manoeuvre in all three dimensions - and this was combined with the challenge of moving an enormous weight of 240 tonnes and a considerable length of 48 metres.

Keeping things balanced: Checking load distribution and load cases

Multiple transfer and handover manoeuvres using the lifting gantry system were required between the individual sections of the foundations. As a result, the move-in operation took three days. Our fitters had to pay particular attention to balancing the load cases, firstly to ensure safety and secondly to prevent the drum from deforming. Thanks to their precise advance calculations, the drum was placed perfectly on the

foundations on the agreed date, and the construction site was handed over to Voith and Norske Skog.

Customer:

Voith Group, Paper Division
Voith SE & Co. KG, Heidenheim

Task:

Moving a drum (240 tonnes) into a paper mill

Location:

Golbey/France

Special equipment:

Lifting gantry with a load capacity of up to 1,000 tonnes combined with precise timing when moving heavy and large loads in confined production areas

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