2013

CASE STUDY | MANUFACTURER, RAW MATERIALS | HEAVY DUTY

EGGER HOLZWERKSTOFFE

GERMANY

GREAT PERFORMANCE

UNSURPASSED EXPERTISE IN THE HEAVY DUTY SECTOR

Engineered wood manufacturer Egger found a particular challenge for us at its site in Wismar, Germany. A rather antiquated high-bay warehouse from a different supplier had to be replaced – while operations continued. The challenge here is that the goods weigh almost 8 metric tons! But our expertise in the heavy duty sector enabled us to tackle this task.

Way back in 2001, an automatic high-bay warehouse was installed at a sensitive interface in the laminate production line. After hot-pressing, the fiberboards, which can be up to 12 m² in size, go through a maturing process that lasts several days, which means they are placed in intermediate storage. Even back then, Egger opted for an automatic solution: a high-bay warehouse with a 29-meter high stacker crane from a third-party manufacturer.

The decision

Two crucial factors were overlooked in the 2001 concept: the handling of half-width pallets, but with a maximum payload, and the asymmetric load distribution, which resulted in increased wear of the stacker crane.

For example, ropes had to be changed frequently. After just seven years of operation, the existing stacker crane is no longer up to the job and a new device has to be purchased.

The challenge

Despite more than twenty years of experience in the heavy duty sector, this project posed a number of new challenges – even for our designers. The extreme combination of factors such as overall height, payload, loading cubature, and eccentric load produced an impressive solution: a stacker crane with components that exceed all standard dimensions and weighs a total of 45 metric tons. That's twice that of a crane of a similar height in the pallet warehouse.

Pallet warehouse: Five stacker cranes with complex conveyor system

The implementation

As part of the Doppelmayr Group, the manufacturing process didn't present any particular hurdles for us – cable car components are often much larger and heavier. What was more

EGGER

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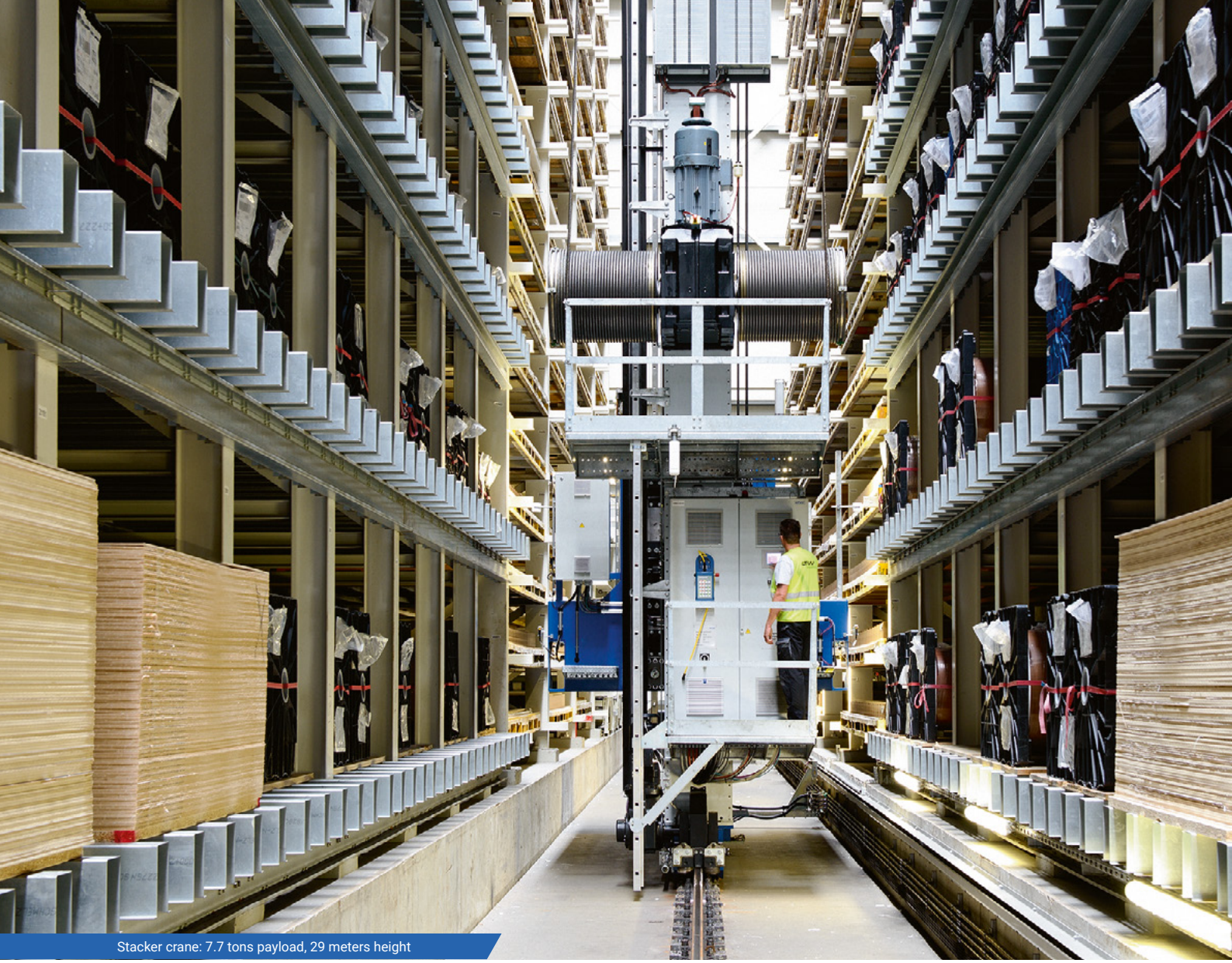
Founded: 1961
Egger Group: 10,400 employees
Head office: St. Johann im Tirol
Production of engineered wood products: chipboard and fiber boards



Stacker crane: 7.7 tons payload, 29 meters height

difficult was to install everything while production was in full swing. Everything went according to schedule, despite the occasional surprise during the installation phase.

The dismantling of the old high-bay warehouse and commissioning of the new one was completed on time, with a three-week period of trial operation and brief stoppages.

"Obviously with a project of this size, there are some obstacles to be negotiated. But crucially, LTW was back on track in no time at all."

Donald Zahm, Maintenance Manager

Once LTW – always LTW

Egger had already entrusted us with a similar project at another site in 2007. When it came to placing this project, it quickly became apparent that we are the best partner for heavy duty equipment. Customer satisfaction was later not only expressed in words: we have since implemented six further heavy duty projects for Egger, with the heaviest stacker crane boasting a payload of ten metric tons! Three more projects are currently at the planning stage.

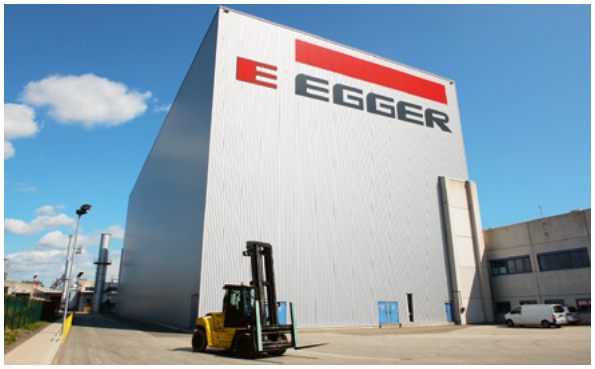
"This performance also qualifies LTW for tasks in the top weight category. That's why it was logical to contact LTW when looking for a partner to supply the new heavy duty stacker crane."

Donald Zahm, Maintenance Manager

More infos at:

LTW.AT/en/references/detail/egger-holzwerkstoffe

OUTLINE OF THE PROJECT



HIGH-BAY WAREHOUSE

Pallets

- Steel rack with silo structure
- L x W x H: 82 x 32 x 30 m
- 5 rack aisles
- Double-deep storage
- Approx 20,700 pallet spaces
- Payload: 1,200 kg
- Temperature range: + 5 to + 35 °C

STACKER CRANES

- 5 aisle-bound stacker cranes
- Driving speed: 180 m/min
- Driving acceleration: 0.60 m/s2
- Lifting speed: 60 m/min
- Lifting acceleration: 0.60 m/s2
- Load handling device: telescopic fork double-deep

CONVEYOR SYSTEM

On the ground floor with storage and retrieval stations including

- 1 transfer car in the high-bay warehouse, payload: 2,400 kg
- 2 transfer cars in the pre-zone, payload: 1,200 kg

SOFTWARE

- LTW warehouse management system for stacker cranes and conveyor system including visualization

HIGH-BAY WAREHOUSE

Heavy-Duty

- Steel rack with silo structure
- L x W x H: 106 x 11 x 29 m
- 1 rack aisle
- Single-deep storage
- Approx. 950 spaces
- Payload: 7,700 kg
- Temperature range: + 5 to + 35 °C

STACKER CRANES

- 1 aisle-bound stacker crane
- Driving speed: 120 m/min
- Driving acceleration: 0.35 m/s2
- Lifting speed: 20 m/min
- Lifting acceleration: 0.30 m/s2
- Load handling device: 6-tine telescopic fork single-deep

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