REFERENCE

Profile manufacturing for shipbuilding

OPTIMISATION OF THE PRODUCTION,

REDUCED RE-EQUIPMENT TIMES AND OFFCUTS

MEYER WERFT

PAPENBURG SEIT 1795

Unitechnik

PERFECTION AUTOMATED.

JOS.L.MEYER GMBH&CO.

PAPENBURG, GERMANY

Connected works and warehouses:

Blank processing
12 m storage for blanks for raw profiles
Butt-welding machine
Profile grinding machine
Profile labelling
Intermediary store with distribution crane
Cutting robots (2 lines)
20 m specific floor store for finished profiles, 3 lines
Rotating rolling equipment
Cassette wagons (retrieval)
Distribution wagons (retrieval)
“Steg-Gurt” carriers (retrieval)

Material flows and flexible production control for profile line

Meyer Werft is one of the world market leaders in passenger ship construction. But Meyer Werft is also known for ro-ro ferries, gas tankers or livestock transport. The walls of a ship consist of steel plates which are stiffened with profiles. Individual profiles must be delivered just in time to the wall manufacture in the correct length, strength and form.

The manufacturing data of the profiles defined in CAD are transferred to the Unitechnilk management system, “UniWare”. The management system calculates the requirement for raw materials(standard profiles) and issues the orders for them. While taking into consideration, a multitude of conditions an optimal manufacturing plan can be made from the still existing raw materials and the newly delivered material. In this connection the remaining lengths and the new profiles are welded together into lengths of 20 m, stored and then cut to the target length. The different profiles are stored in space optimising shelves by means of magnetic beams. The subsequent production obtains the prepared products from the finished profile store.

Scope of Unitechnik contribution

Control technology:
Simatic S7-400
Profibus-DP

Warehouse management system:
UniWare management system for store administration, material flows as well as production planning and control
Optimisation with fuzzy algorithms

Control cabinet construction, assembly, commissioning and training
Service contract

Completion: 2005

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