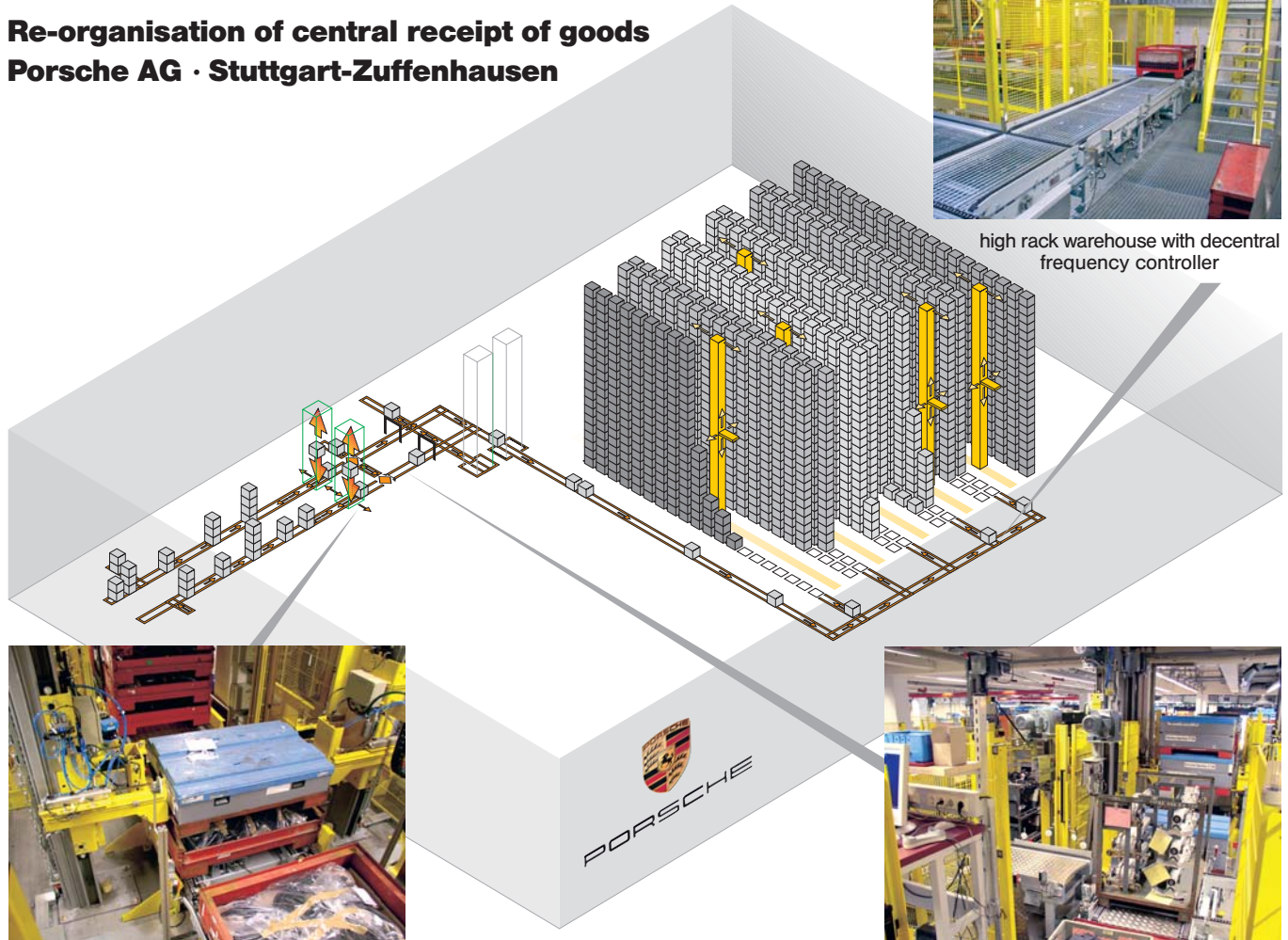




PORSCHE

Re-organisation of central receipt of goods Porsche AG · Stuttgart-Zuffenhausen



high rack warehouse with decentral
frequency controller



depalletting device with optical outline
detection



i-point area

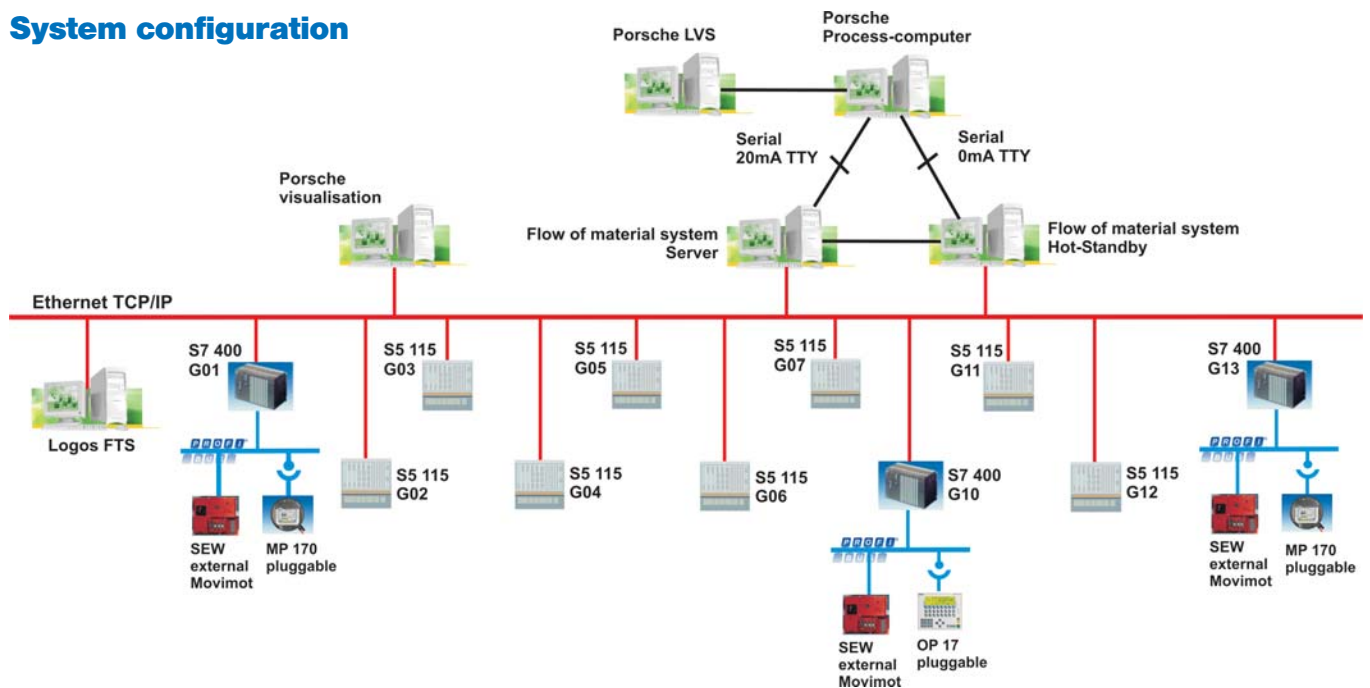
Task

The Porsche AG assigned Aberle Steuerungstechnik GmbH as general contractor for the realization of the central receipt of goods in plant 2 in Stuttgart-Zuffenhausen. Due to the upcoming change of model of type series 911 a new organisation of the physical flow of material in the area of control to the high rack warehouse became necessary. The conveyor technique played a significant role here, which conveys the pallets to be stored to the high rack warehouse – from receipt of goods until storage.

Integrated components

The new receipt of goods G01 is controlled with an up to date control of the Simatic-family S7 414-3DP. The new stock level for the high rack warehouse G13 also got a separate control with a S7 414-2 DP. Due to the enlargement it became necessary to replace the existing S5 high rack warehouse data concentrator by a new high rack warehouse flow of material system. The connection from the new Aberle-high rack warehouse-flow of material system to the customers' warehouse management system (WMS) was reproduced on the existing serial interface. The connection to the completely subordinate old and new control level of the conveyor systems G01-G13 and the S/R machines 1-5 was changed parallel from H1 to TCP/IP communication via Ethernet.

System configuration



mobile operating station MP 170



external field splitter of SEW

Solution

In order to increase the efficiency of the conveyor system two fully automatic depalleting stations were integrated. Due to the different kinds of pallets and stacking patterns an ultra-modern laser system was applied for the identification of the pallet type. Thus the complex depalleting could be granted.

For the whole plant a decentral drive concept with external SEW-Movimot frequency controllers was chosen. Thus individual adjustments of each drive are possible on site. By the crosslinking of the SEW-Movimot with the according group control differentiated status- and error messages are relayed to the visualization.

By the new portable Siemens MP170 with touch screen today a continuous and easy-to-understand manual control of the plants is possible.

Advantages for the customers

Due to the high grade of decentralization the plant could be started up in time after the reconstruction in between the Christmas holidays.

The new high rack warehouse-flow of material system was constructed as powerful and highly available Hot-Standby client-server solution. In this configuration several emergency strategies were considered. If single plant parts are faulty the computer will bypass them. Due to this solution and the efficient new conveyor technique Porsche is in a position to react flexibly to future increases in production.



Aberle Steuerungstechnik GmbH · Daimlerstraße 40 · D-74211 Leingarten · www.a-s.de
Fon +49 (0) 71 31 / 90 59 0 · Fax +49 (0) 71 31 / 90 59 59 · Email: Info@a-s.de



www.a-s.de