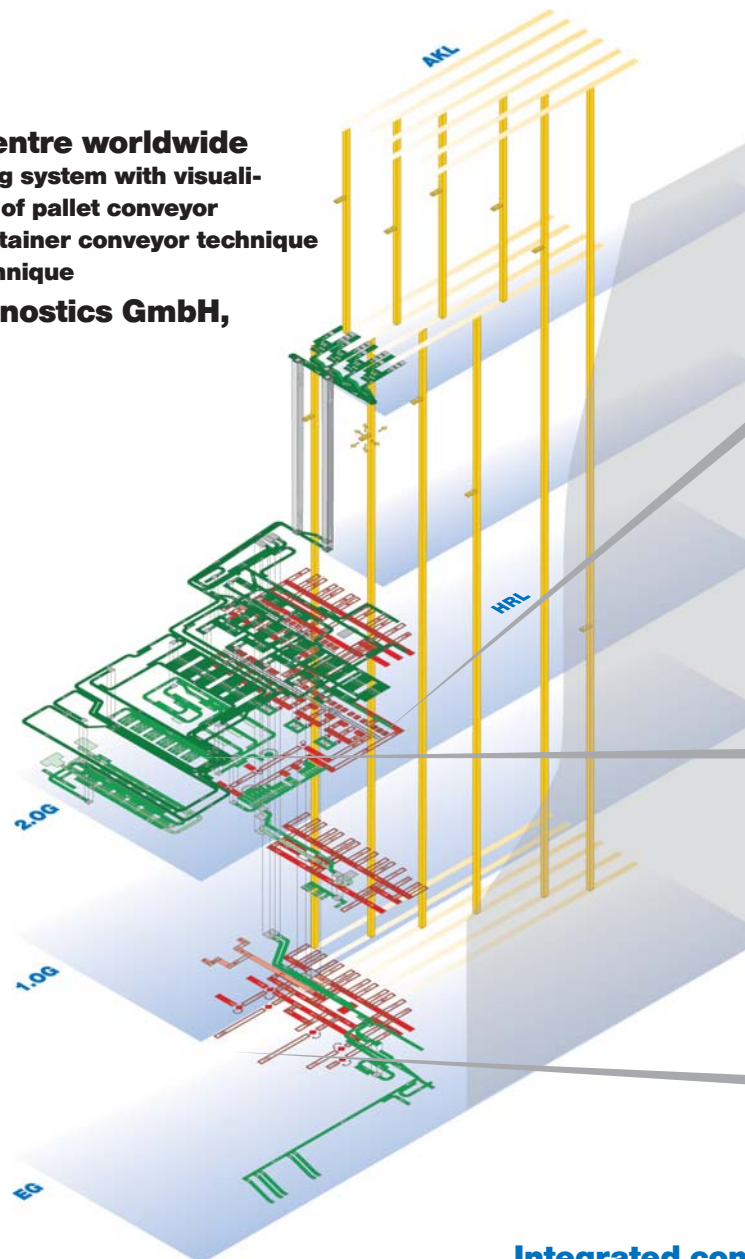


COMPANY-INFORMATION



CONTROL- AND OVER-ALL-
LOGISTIC-CONSTRUCTIONS

Logistics centre worldwide
Process leading system with visuali-
sation, control of pallet conveyor
technique, container conveyor technique
and safety technique
Roche Diagnostics GmbH,
Mannheim



T-car



delivery note work stations



receipt of goods

Task

The company Roche Diagnostics GmbH is world wide number one in the diagnostics area. From the central logistic centre in Mannheim Roche's subsidiaries in 170 countries, as well as customers in Europe are supplied with reagents, instruments and spare parts. More than 4.000 consignments each day leave the site in Mannheim. With the extension of the logistic centre the growth of the next years should be covered.

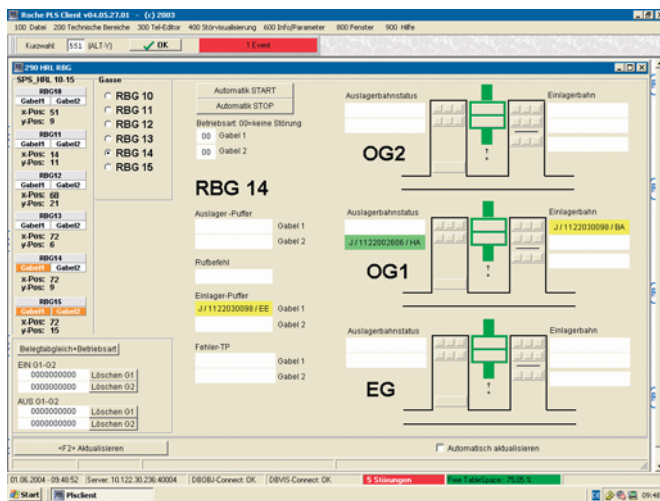
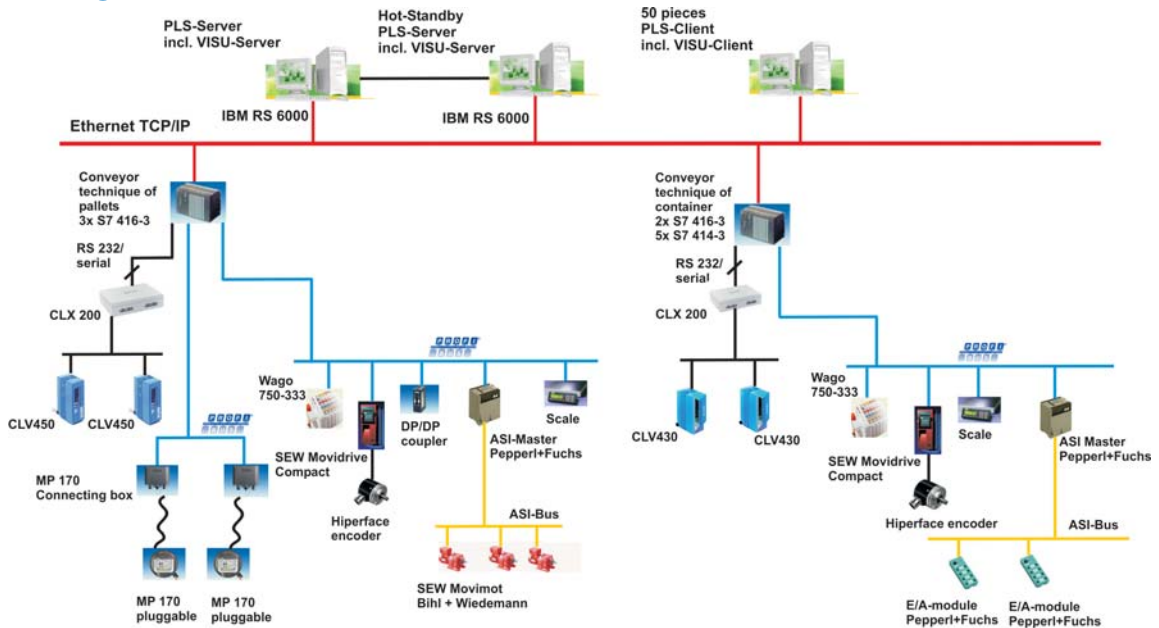
Aberle Steuerungstechnik GmbH received – lead-managed by TGW Transportgeräte GmbH & Co. KG – the order to supply the complete safety- and conveyor system controls. The required process control system was supplied by Aberle Steuerungstechnik GmbH by order of Aldata Retail Solutions GmbH. The realization was done within 12 months.

Integrated components

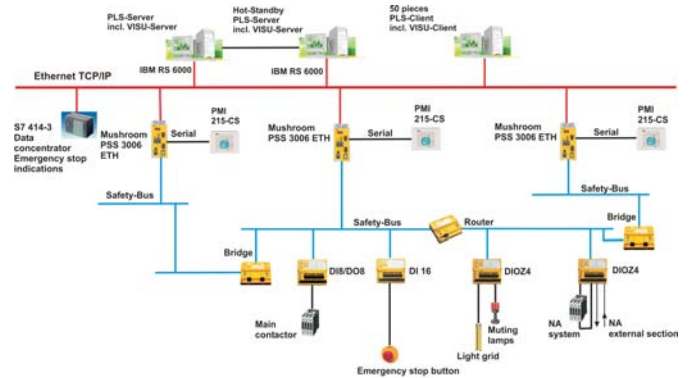
Below the order handling system the supplied process control system coordinates and controls the material flows of the connected conveyor system and machine controls. A complex plant visualization is part of the process control system and is installed on approx. 50 PCS-clients. The subordinate controls are run by Siemens S7-400 modules as well as Profibus DP/ASI-bus. The manual control of the pallet conveyor system was realized by the newest panel generation Siemens MP 170. The registration of the barcodes is executed by 250 scanners (Sick CLV430/450), serially connected to a network controller type CLX200.

Due to the spacious dimensions of the plant and the complex safety related requirements four safety controls (Pilz PSS 3006-ETH) with safety bus connection were applied.

System configuration



PCS-mask-state and assignment high rack warehouse-S/R machine



control configuration - safety engineering

Solution

Due to the complexity of the plant the 2,000 drives of the pallet conveyor technique are equipped with ASI-compatible de-central SEW-Movimot controls. The universal manual control allows an operation with the same device on three different controls. On the portable MP170 panels simple, easily understandable dialogues were realized.

The 2,000 drives of the container conveyor technique are controlled conventionally by de-central control cabinets in the field.

The 400 emergency-stop buttons, openings for maintenance and guard doors in the whole plant are integrated by 98 E/A modules over the safety-bus.

Advantages for the customers

The automation realized by Aberle Steuerungstechnik GmbH is based on a continuous concept, which leads to quick understanding and acceptance of the plant by users and maintenance staff.

The realized complete solution allows Roche a substantially higher order processing per day. Thereby Roche's constantly rising sales market is assured.



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