## Splash Line on the production line



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VW wants to have a transparent, digital factory. More and more pieces of information have to be interrelated in the motor industry. To cope with this, production and test units on the new assembly lines for the works in Mexico networked were **Fthernet** with right from the start. Splash Line

by R&M ensures reliable connections.

The new assembly lines for VW are a striking example of the challenges of industrial cabling. The full integration of manufacturing into enterprise-wide data networks is key to meeting market demands and implementing production strategies.

This is because consumers want ever more individual cars and shorter delivery times. Models have to be changed frequently to retain the public's interest, and this reduces batch sizes. As a consequence, construction and production have to work more efficiently. Simultaneous engineering, distributed worldwide, is commonplace. Manufacturing structures require to be constantly optimised

The only way to keep on top of all this is by the optimal integration of information technology and data transmission. Conventional bus systems in the mechanical engineering world and Ethernet from the office world are converging. The car deliv-



From left to right: Mr Jens Schröder, Project Manager, LSW Maschinenfabrik GmbH, Mr Hans-Wilhelm Balssen, Head of Sales, Ing. Büro G. Fleischhauer Bremen GmbH, Mr Andreas Selle, Head of Region North, R&M GmbH Germany.

## R&M partners in industrial cabling: LSW and Fleischhauer

LSW Maschinenfabrik GmbH, Bremen, has been in operation since 1982. Belonging to the IWKA AG holding company in Karlsruhe, it employs 300 engineers and technicians and makes a turnover of about eighty million euros. It designs assembly lines for car manufacturers and their suppliers, especially for the drive train area, and has them built worldwide. Process engineering, process planning and simultaneous engineering are among its core competences.

The G. Fleischhauer Ing. Büro Bremen GmbH belongs to the Fleischhauer group, which at present employs around 470 skilled workers at eleven locations and has a turnover of approximately fifty million euros. Its core business includes consultancy, project management, planning, installation, training and further services in all areas of information, communications, electrical, media and reliability engineering.

ery and production process will soon be entirely digitised.

The LSW Maschinenfabrik GmbH in Bremen faced up to these challenges when it was given an order to supply new assembly lines for rear axles and wheel bearings for VW Mexico. The production and test units were to be networked with Ethernet right from the start. In order to be able to implement this, LSW called in a competent partner in the domain of data networks: the Fleischhauer engineering company.

## Only the best products count

Fleischhauer has been active for many years at VW works, so was aware of current requirements. Together with LSW, they worked out the detailed design of the networking structure. The components had to be suitable for industry in every respect, meeting special reliability and quality requirements. Among the latter was, for example, long-term, stable compliance with the IP54 protection class

«As a manufacturer-independent service provider, we invariably go for the best the market has to offer when selecting products», emphasises Hans-Wilhelm Balssen of Ing. Büro G. Fleischhauer Bremen GmbH. Executing the project also demanded great flexibility and cooperation with other works.



R&M IP54 Splash Line on a production line for car axles.

Balssen further reports: «In order to meet the requirements, the Splash System from R&M was projected for the passive networking.» Specifically, wall-mounted Splash Line outlets (IP54) are employed in direct engine assembly. In the switch cabinet, LSW is using 24x RJ45 patch panels from R&M, with patch cables and installation cables.

«R&M has already shown its strong commitment to the industrial environment, and knows its way around there», confirms Hans-Wilhelm Balssen. The project was implemented at a very brisk pace in autumn 2003. Close cooperation with our partners in Bremen also enabled us to react very flexibly to design changes.

## Splash Line

- The plug connector is protected against dust and water, up to IP54.
  Even with the connections made.
- Clearer overview thanks to the colour coding of data ports and patch panels
- Simple installation: one action to install the bush on RJ45 patch cord.



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