

## Migrated while producing non-stop Successful conversion of the control system to Freelance



In order to continue to guarantee high quality and efficient production in the future, Martinswerk GmbH, Germany migrated its entire control system to the ABB Freelance distributed control system (DCS). As they did not want continuous operation to be affected, the conversion was performed step by step – with a convincing result.

Martinswerk GmbH produces more than 100 special chemical products, such as flame retardants, ceramic additives or filling materials, at its plant in Bergheim, North Rhine–Westphalia. The enterprise, with around 500 employees, belongs to the Albemarle Corporation from the United States.

The key customers of Martinswerk are from the automobile, cable, ceramic and paint industries – all sectors in which high product quality and permanent development are of great significance. To ensure that innovations are still possible in the future, the entire control system at the Bergheim plant was migrated to the ABB Freelance system in just two years.

50 decentralized Contrinsic-P stations from the 1980s as well as all the production lines with around 20,000 I/Os and two power plant boilers from the company's own coal-fired power plant needed to be migrated to the new system. "Changes in the production processes or modernization measures are always difficult to implement," says Martin Olschowski, head of the Process Control department at Martinswerk GmbH.

"For this reason, we needed a partner who could deliver an interruption-free conversion independently and without increasing our employees' workload – and it had to take place during ongoing production," adds production manager Dr. Claudius Goße.

The decision was made in favor of ABB and the Freelance system. A core team of six ABB specialists worked for the most part in the plant's own offices. From there, the team planned the entire exchange of the aged control systems and replaced them with two 800xA Operations and four DigiVis operator stations with AC 800F controllers.

A giant project: from the beginning of 2012 until the end of 2013, 50 Contrinsic-P stations in 15 different control rooms across the entire plant premises were replaced with AC 800F controllers with 120 S900 remote I/O systems under ABB's guidance. Six control rooms were converted or dismantled, one of them was fully overhauled and completely rebuilt, and control systems were merged.



Foto: Luca Siemann

### One control system – three visualizations

During the migration at Martinswerk, a major advantage was that ABB control systems can be operated from different interfaces. With 800xA Operations, Freelance DigiVis and Panel 800, three process visualizations are now in use, which perfectly complement one another in their application.

With the 800xA Operations, offering a high-performance HMI (Human–Machine Interface), ABB provides users with consistent access to company-wide data and allows interaction with numerous applications from any connected client. Freelance Operations (DigiVis), the standard operator interface of the Freelance DCS, is particularly easy to operate: on the one hand, it is based on the graphical user interface of Microsoft Windows and, on the other hand, a clearly structured information hierarchy ensures a clear layout. Alongside the newly installed DigiVis on-site terminals, the ABB Panel 800 operator panels significantly increase the quality of information and allow the operating staff to work much more efficiently.

### Under one operator interface

In order to keep production going, the conversion was performed in steps. At the start of the project, mixed operation using the old and new technologies had to be implemented with the same operator interface. This was performed using the Operate IT B (OIT-B) operator interface from ABB. “The project was like a heart transplant. But with our control systems, it is possible to operate systems from the 1980s together with the modern Freelance controllers under one operator interface,” explains Günter Siemer, project-management engineer at ABB Automation GmbH. The OITB intermediate step was followed by the online conversion of the operator interface to 800xA Operations on top of the Freelance system.

“Thanks to the ABB team’s target-oriented project management at all times, we were able to master even the difficult phases of merging and converting the measuring stations together with our employees,” says Dr. Ingo Heim, head of the

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“The project is a major milestone for Martinswerk GmbH,” adds Dr. Claudius Goße. “The new control system is the basis for efficient and future-oriented production and future product innovations.”

Martinswerk a company of Albemarle:  
<http://www.martinswerk.com>

Projects department at Martinswerk GmbH. “The project is a major milestone for Martinswerk GmbH,” adds Dr. Claudius Goße. “The new control system is the basis for efficient and future-oriented production and future product innovations.” The project even made a lasting impression in the USA. “Our Group management was extremely impressed that Martinswerk was able to implement a project of this scale on time and within the budget,” Rene Heijenberg, project manager at Albemarle Corporation, reports.

For more information please contact us:

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