

Industry: Chemical /// Plastics

Products Used: Modular PLCs /// SCADA

Dual redundant PLCs slash costs at PVC plant

European Vinyls Corporation (EVC) has avoided costs of £750,000 by adopting dual redundant PLCs instead of a traditional Distributed Control System (DCS) at its Fleetwood, Lancs manufacturing plant. Safety, efficiency, availability, emissions and running costs have all been improved by the project, which was spearheaded by specialist systems integrator Tritec.



The project is based around the installation of a combined heat and power (CHP) system, capitalising upon opportunities arising from the deregulation of power generation. EVC decided to outsource the building and running of the CHP plant to BP Energy, who subcontracted the control elements to Tritec.

The backbone of the new control system is Mitsubishi Electric's hot-standby Q series PLCs. The Q series guarantees the CHP process will operate non-stop due to its parallel onboard processors automatically changing over should a fault be detected. Changeover is achieved without loss of

any data and gives a great improvement of the overall systems reliability over a conventional PLC. Q series combines the PLC advantage of processing discrete I/O and ladder logic type programming with the superior handling of analogue signals and closed loop control that was traditionally associated with DCS.

For extra reliability and availability, Tritec has also installed two MX SCADA systems in dual hot-standby mode. The overall effect of the system's architecture is to ensure both high levels of systems availability for the production department, and high levels of data integrity for senior management and financial analysis.

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Tim Hartley
Tritec

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Tritec's Tim Hartley states, "With the latest advances in technology there is now very little to choose between PLC and DCS control systems in terms of performance. With PLCs there are supplementary gains, such as ease of use and understanding and more open availability. There are also international infrastructures for support in the field, plus common working practises and standards, and of course they interface more easily with other systems. The PLC control system we developed had a system cost of around £0.25m, compared to £1m or more for a conventional DCS system."

Application story first released January 2000 by Mitsubishi Electric UK