CC-Link In Action

OPEN NETWORKS

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CC-Link

CC-Link Finds Fitting Application

CC-Link communications has allowed a modest project to automate a compressor house to be expanded to embrace the whole of Yorkshire Fittings Leeds factory.

The initial project was based on the installation of a SCADA (supervisory control and data acquisition) programme to monitor the performance of a bank of compressors. The main idea was to optimise energy usage, but it also became possible to log detailed operational data for productivity analysis allowing a move to predictive maintenance.

The efficiency gains achieved with the compressors were almost immediate and, because of the data logging, full management reports were produced. These impressed the directors so much that they were soon asking the electrical engineers if the control network could be extended into adjacent areas of the plant. There was some scope for doing this and improved productivity was quickly noted.



It was not long before the idea of running the network across the entire site was taking root.

An audit of all the existing control systems running different parts of the plant identified that much of the hardware already in place was either already CC-Link enabled, or could be made so very simply and cheaply through the use of standard plug in cards.

CC-Link is an open field device level network that provides high speed deterministic communications, linking a wide range of automation technologies over a single cable. It is ideal for machine, cell or process control in manufacturing and production industries, and is also widely used in facilities management and building automation.

With the hardware in place the next objective was to connect it all up into a single plant-wide network, and naturally CC-Link was chosen as the as the shop floor protocol for communicating between field devices and production machinery.

The local networks were then connected to the high level servers providing enterprise management capabilities via an Ethernet network. In fact the decision was made to design-in two servers, a primary and a standby so that the system would be virtually bombproof against downtime.