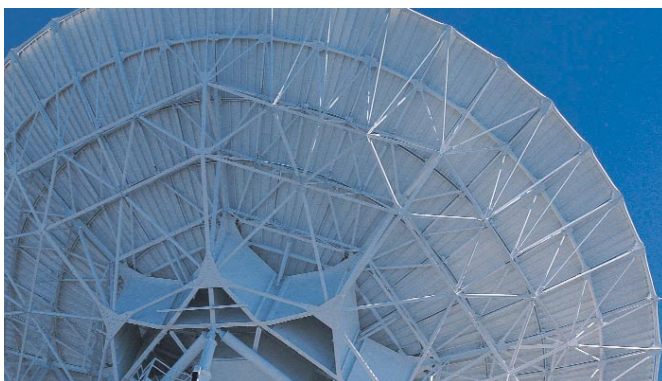


Industry: Manufacturing

Products Used: Modular PLCs /// SCADA /// Telemetry

Remote monitoring of production equipment

Throughout the world, more and more manufacturing companies are decentralising their production facilities. With satellite production plants often situated some distance from the parent plant, easy to use and rapid communication between the sites is now becoming essential.



IMI Range needed a control system that would provide remote diagnostic and maintenance facilities for their central and satellite production plants. They enlisted the services of John Jeffreys Controls Ltd of Rochdale who installed a new control system based on the Mitsubishi A1S Programmable Logic Controllers (PLCs) and employing Mitsubishi SCADA software.

The new system supplied to IMI Range is used to manufacture thermal storage cylinders that are supplied complete with an insulated polyurethane foam cover. These are manufactured at three separate production facilities, in Newport, Wakefield and Stalybridge, producing a variety of coated cylinders, with different heights, diameters and foam thicknesses.

Foam is automatically applied onto the cylinders by a robotic spraying arm which is triggered by a signal from the PLC. On entering the spray booth, two separate chemicals are sprayed onto the cylinders that react on contact to form a coating of expanded polyurethane foam. Using bar codes, different types of cylinders are recognised by the A1S before they enter the spray booth. Output signals from the PLC tell the robot what cylinder is next, and the robot adapts the spraying to suit the cylinder. When the spraying is completed, a signal is sent from the robot to the PLC.

A system linking the three remote sites A1S PLCs was installed in the central production facility at Stalybridge. Using this system the engineers at Stalybridge have a remote production control facility at the Newport, Wakefield and Stalybridge plants.

The success of the system is due to the flexible communications options of the Mitsubishi A1S PLC. Each A1S has two communications modules, linked by private telephone lines through modems. The Interface to the system is via a PC running the SCADA software. This network of three A1S PLCs effectively provides a permanent maintenance engineer at each site via a computer interface. Controlling and monitoring all three sites production lines from one desk is made possible by the versatile communications ability of the A1 S PLC.

Application story first released September 1996 by Mitsubishi Electric UK