

Industry: **Water**
Products: **Modular PLC, HMI**

Mitsubishi Electric controllers improve water quality on British coast

Mitsubishi Electric controllers have streamlined one of the most ambitious waste water purification projects in Europe thanks to their easy and problem-free integration. The focus of the megaproject organised by Southern Water is the purification of waste water along with the improvement of water quality within a number of towns along the Sussex coast in Southern England. The environmental improvement program includes a new waste water purification plant, a sewage sludge recycling plant, two pumping stations, an 11-kilometre long waste water sewer tunnel and a 2.5-kilometre long outfall into the sea. The new system will be able to treat the 95 million or so litres of waste water generated each day in the towns connected to it.

The control centre for the waste water purification plant is located in Peacehaven. At the heart of the control system are PLCs from the MELSEC Q series along with HMIs from Mitsubishi Electric. Like HMIs, PLCs are programmed according to the IEC standard via the Mitsubishi Electric design environment and consequently have interfaces to connectivity and field devices made by other manufacturers.

The main reasons behind the decision to use Mitsubishi Electric PLCs were that they were easy to install, extremely user-friendly and could be seamlessly integrated with products made by other manufacturers. Mitsubishi Electric PLCs and HMIs are compatible with all major open networks such as Ethernet, CC-Link or the profibus installed at Peacehaven.

The Mitsubishi Electric PLC from the MELSEC Q series provides a uniform automation platform that links modular control functions such as logic, motion, IT and process control. It is also easy to install and commission and helps to increase productivity. Southern Water will use the MELSEC Q series to combine the start-up module with process-specific instructions. A simple highly reliable control system will enable system performance to be improved.

The Mitsubishi Electric HMIs used throughout the project will set new technical benchmarks for display-based operating devices. The design is consistent with ergonomic principles and offers intuitive ease of use. This will enable stronger function integration within the control system.



"The fact that Mitsubishi Electric components are so user-friendly is key to the success of the project. The team from Mitsubishi Electric only had to visit the plant a few times to help to solve the main problems encountered on site."

Paul Abbott,
proprietor,
PJA Control Systems Ltd.

Despite its comprehensive functionality, the new system can be operated by a single person. Only four or five people are needed to operate the entire system. Mitsubishi Electric PLCs will control and monitor devices at field level such as pumps and flow meters. System operation will be managed from the control room where the whole system can be graphically displayed and remotely controlled using the SCADA system.