

Valve control for desalination plant provides drinking water for Barcelona

Industry: Desalination

Client: Llobregat desalination plant, Barcelona, Spain

Product: IQ

Summary

IQ and IQT actuators were installed to control the valves at a desalination plant in Spain. The plant operates an innovative seawater reverse osmosis technology to create a drinking water output of 200,000 m³/day (for approximately 4.5 million people).

Overview

Llobregat desalination plant is the largest reverse osmosis (RO) based desalination plant in Europe. The RO process uses a semi-permeable membrane to separate ions, molecules and particles from the water to create a potable water supply.

Challenge

The plant's engineering contractor specified a valve control package (with control bus technologies) to provide flow control for the seawater and treated water. This was required for the launch of the plant in 2009.

Solution

More than 400 Rotork IQ and IQT actuators were installed and are controlled by eight hot-standby Pakscan P3 master stations, providing a direct interface for each of the actuators controlled on its secure, two-wire loop with the site's PLC.





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Customer Benefits

Reverse osmosis desalination takes advantage of the huge amounts of seawater (compared with freshwater) and makes it suitable for human consumption. The residents of Barcelona now benefit from this innovative technology.

IQ actuators are waterproof to IP 66/68, essential in this application in providing reliable, continuing operation.

The combination of Rotork IQ actuation technology and Pakscan P3 two-wire control meant a capacity for up to 240 actuators on a single 20 km with a direct reduction in cable and engineering costs, and increased information flow.

The customer specified Rotork's service offering, with seven expert service engineers available, as an additional reason for choosing Rotork.