WA Instrumentation Division of Acrodyne



Sector: Water & Waste Water Category: Waste Water Treatment Products: Limitorque Electric Actuators

THIS TECHNICAL REFERENCE IS ACRODYNE'S INTERPRETATION OF THE PROJECT AND HAS NOT BEEN APPROVED BY THE END USER

Actuation upgrade required to meet environmental requirements

Site Overview

Located on the Clarence River north of Sydney the Water Treatment Plant has recently had an extensive upgrade to its process and actuation.

The Project

Since the upgrade the actuation supplied on the dosing plant was repeatedly faulting. The cause was believed to be condensation and moisture affecting the electronics and in turn causing the actuators to drive past limits. The problem needed to be resolved and due to the trips occurring intermittently, it caused frustration and required the council electrician to travel considerable distances and be available 24/7. The location of the valves provides a mixture of sun and shade and could be considered ideal for production of frost / condensation on surfaces.

The project required 12 actuators to be upgraded to a device suitable for the environment and meet process parameters.



Limitorque QX on 8"600 # through conduit type gate valve



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The Solution

Limitorque QX Quarter-turn smart actuators were the solution. A total of 12 actuators were supplied with a mix of QX-1 (small 50mm butterfly valve) to QX-2 and QX-3 for the larger valves. The QX range of actuators are designed to provide valve control in addition to the normal task of simple opening or

closing. This satisfied the process parameter for flow control.

The major benefit of the Limitorque QX actuators for this installation was the double IP68 sealing of the terminal compartment, giving it the longest and deepest submersion rating of any actuator on the market, and the isolated & compact design of the electronics compartment area. These features helped resolve the major issue being experienced by the site and allowed the electrician to enjoy his weekends again.

The Result

Acrodyne supplied the plant with the following Limitorque actuators:

- 2x Limitorque QX1
- 2x Limitorque QX2
- 8x Limitorque QX3

The QX range of actuators are designed and tested to: Non-hazardous (weatherproof/submersion) certifications IEC 529 protection code IP68; 20 metres for 168 hours USA & CSA; NEMA 3, 4, NEMA 4X, NEMA 6

Products and Services Used

Limitorque QX-1, QX-2 and QX-3 Electric Actuators Acrodyne Sales and Service

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