

Case Study

Rotork electric actuators provide reliable flow control after upgrade at Chicago water purification plant



Industry: Supply and Distribution

Client: The City of Chicago Department of Water Management, USA

Product: IQ3, IW

Summary

Hundreds of Rotork multi-turn and part-turn IQ electric actuators and gearboxes were installed as part of a US water filtration plant upgrade.

Overview

The Eugene Sawyer Water Purification Plant supplies drinking water to the population of Chicago.

Challenge

As part of an extensive upgrade, electric actuators were specified to replace water hydraulic cylinders in order to control the flow of water at multiple points within the plant.

Solution

The Rotork actuators will operate 12 to 30 inch butterfly valves to provide improved flow control for water travelling into and out of the facility's sand filters. Water from Lake Michigan is collected from a crib, a structure which serves as an offshore water intake away from pollution closer to shore, and transported to the Eugene Sawyer Purification Plant.

The water will be allowed to flow into the Eugene Sawyer plant's sand filters via a 30 inch valve controlled by Rotork's intelligent IQ actuator. The actuator will also carry out modulating duties to ensure the filter is kept full. The water will then seep through the sand bed and supporting gravel material before it is controlled by a 12 inch valve operated by a part-turn continuous modulating IQTM actuator to be sent to the clear water well and distributed to the public.

IQ actuators will also handle backwash and drain processes while the IQT actuators will carry out surface wash flow control.



Customer Benefits

Rotork's actuators were specified by the Department of Water Management due to their user-friendly control interface. The actuators feature an advanced backlit display protected by a toughened glass window.

The watertight protected IQ3 actuator is double-sealed and certified to IP66/68 standards (20 m for 10 days); this is essential in any water application.

The availability of Rotork Site Services (RSS) support for actuator maintenance was specified as key in securing the IQ3 and IQT3 order and RSS carried out initial set up of all the actuators.



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