

# Electric actuators replace hydraulics

Municipal drinking water supply network, Sydney, Australia

## AR24001 | AUMA APPLICATION REPORT

By replacing hydraulic actuators with AUMA electric actuators, the supply of water from the Potts Hill Outlet Works to the City of Sydney's drinking water supply network can now be guaranteed to be free of contamination from leaking oil.

The customer appreciated AUMA's comprehensive experience and services during the retrofit project.



### CONVERSION TO ELECTRIC DRIVE TECHNOLOGY

An existing hydraulic actuation system has been replaced with advanced electric actuators from AUMA at Potts Hill Outlet Works in Sydney, the metropolis of 5 million people in eastern Australia. The actuators automate three large penstocks that control the water flow from a set of three pipelines into the city's network of pipes and reservoirs. The installation is part of a major pipeline network operated by Sydney Water Corporation that handles approximately 80 percent of the city of Sydney's drinking water supply.

### CLEAN DRINKING WATER THANKS TO MODERN ACTUATORS

The main reason for replacing hydraulic with electric actuation technology was great concern that the hydraulic oil might leak and mix with the drinking water. The AUMA solution consists of SA 14.2 multi-turn actuators equipped with GST 25.1 spur gearboxes and AC .2 actuator controls. The actuators were delivered in the extra-robust STW version that is particularly suited to penstocks and other civil engineering constructions for water applications.

A key reason for choosing AUMA was Sydney Water's positive experience with AUMA actuators that have been operating reliably for several years in other installations. Additional reasons include the modular design that made the actuators easy to adapt to the application's requirements, the advanced data logging features of the AC .2 actuator controls, and the special long-runtime motors suitable for S2 – 30 min/class A duty.

The customer appreciated AUMA's long experience and deep knowledge of the water industry, as well as the comprehensive aftersales service. Experts from AUMA's local Australian subsidiary, Barron, completed the selection and sizing of the actuator/gearbox combinations. Barron also supplied three 4-meter custom-made linear thrusters needed to replicate the operation of the old hydraulic system and to provide the required stroke of 2.4 meters. Barron service engineers provided supervisory help on-site during mechanical installation, commissioning and site acceptance test.

Project responsibility:  
Barron GJM, Australia

[www.auma.com](http://www.auma.com)



WATER

### APPLICATION

Water distribution

### AUMA SOLUTION

- > Retrofit | Replacement
- > SA 14.2 actuators with intelligent AC 01.2 actuator controls in version for hydraulic steel structures
- > GST 25.1 gearboxes
- > Project management & on-site service

### CUSTOMER BENEFITS

- > No water contamination from oil
- > High reliability
- > Simple adaptation to the installation
- > Advanced data logging features
- > Complete project implementation by AUMA

"The AUMA actuators installed in the Potts Hill Outlet Works have now been in use for almost ten years without any incidents. We greatly appreciate the reliability and longevity of AUMA products."

**Hieu Pham**  
Lead Networks Operations Engineer  
South, Sydney Water Corporation

