

*“Additional coats of paint and clear coat were applied to assist with corrosion resistance and UV protection in this extremely challenging environment”*



**Sector:** Water  
**Category:** Waste Water  
**Products:** Limitorque Electric Actuators

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

## PLANT UPGRADE TO COMBAT THE HARSH ENVIRONMENT

### Site Overview

A Victorian Recycled Water Plant that required the upgrade is located in its environmental precinct. The precinct is also home to the existing water reclamation facility and biosolids drying plant. The plant supplies high quality Class A and consistent quality Class C recycled water for a range of customers and uses.

### The Project

Acrodyne were commissioned to replace the original actuators that were still running but needed critical upgrades due to process improvements at the plant. The actuators that were in place for over 13 years provided some impressive service but with the harsh environment and the need to open the shell to adjust switches occasionally caused the paint to chip and corrosion became an ongoing issue.

A non-intrusive option was required and with Acrodyne's experience and product range the work was ahead to extend duty times of a Limitorque Mxa Electric Actuator to match the heavy demands of the decant process.



### The Solution

To replace the L120-20 insitu, Acrodyne had to extend the run time of the Limitorque Mxa electric actuator and at the same time needed to keep the excessive heat associated to a minimum.

Acrodyne's R&D department were successful in having the motor rewound and passing the strict heat rise test that was conducted under maximum load.

Additional coats of paint and clear coat were applied to assist with corrosion resistance and UV protection in this extremely challenging environment.

Fortunately the end user allowed for the actuator to be trialed and tested on site for 12 months and as expected the actuator and valve operated to the required 75% daily cycle faultlessly for that period.



Design advantages of the process:

- The decanting flow rate can be controlled and varied by adjustment of the drive speed.
- Decanting depth and park positions can be controlled through limit switch adjustment.
- During the aeration phase, the decanter trough is parked above the water level and prevents scum and floating objects from entering the trough.
- The screw jack and drive system is mounted above the water for ease of maintenance.
- The floating scum baffle prevents scum and floating objects from entering the decant trough during the decanting phase.
- All underwater bearings are self-lubricated and corrosion resistant.
- AquaDecanter-R rotary decanter can be made of stainless steel material or galvanised steel to suit customer requirements.

### The Result

Due to the initial success of the trial unit, 9 more actuators have been purchased and another large amount to be ordered in the future to complete the process upgrade.

### Products and Services Used

Limitorque Mxa Electric Actuators  
Acrodyne's Professional Paint Service and Booth  
Acrodyne's Sales and Service



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