

DESIGN - MANUFACTURE - INSTALL

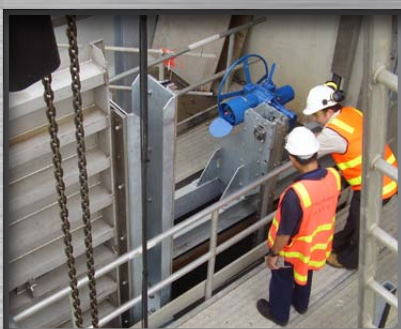
AWMA scores a century at the Eastern Treatment Plant Melbourne

AWMA have now supplied over 100 custom designed control gates for Melbourne Water's Eastern Treatment Plant (ETP).

Over the past five years AWMA have worked with contractors including the John Holland Group and Tenix Alliance on many staged upgrade programs including manual, automated and SCADA operated structures. The custom designed, manufactured and installed penstocks, segmented stopboards, stoplogs and specialised odour control gates all contribute to the operation of ETP, which is one of the most sophisticated facilities of its kind in Australia.

AWMA are acutely aware of compliance requirements within water treatment applications including stringent regulations concerning material composition, welding specifications, OH&S policies and installation procedures.

Key infrastructure installations are mostly carried out during a limited shut down period between 1am and 9am. During this time the work space is isolated, drained, cleared and cleaned. The works are then undertaken, completed, tested, commissioned and the site reopened inside the strict maximum eight hour period. Many installations are subject to risks and safety issues including site access, contamination, confined spaces and manual handling. These often result in modified procedures, risk assessments, safe work method statements and partnership arrangements with third party contractors. The latest ETP project for AWMA's dedicated installation team (pictured right) involved stoplogs and penstocks measuring up to 3m high.



GENERALLY SPEAKING

AWMA design, manufacture and install water control solutions.

It is worth taking some time to consider the word “**solutions**”... what it means to us, and what it delivers to you!

‘Solutions’ in AWMA’s context incorporates:

- Accredited quality systems
- Innovative design
- Efficient installations
- Low maintenance products
- Comprehensive 3D drawings
- Low whole of life cost
- Turn-key services
- Reduced risk
- Compliance with all specifications
- Customer support
- On-time delivery
- Project management
- Detailed documentation
- Partnerships

A true solution means a lot of work for us, but a lot less work for you.

We understand that a solution has to be economically viable. True value has to be assessed, taking into account the whole package including the final outcome. Not achieving compliance or performance specifications will quickly offset small differences in the initial purchase price.

Being a great company does not prevent problems occurring, look at Toyota, one of the world’s biggest and best car companies and the current challenges they have with the Prius. What defines a company is how they resolve these issues, how they look after their customers and that they do the right thing.

AWMA take pride in our products, projects and relationships. We guarantee that we’ll stand by our products and our clients.

AWMA are specialists in our field, we can guarantee value for money and a successful, compliant project.

Brett Kelly
General Manager

AUTOMATED LAYFLAT REGULATES CHANNEL FLOWS ON WIMMERA MALLEE PIPELINE SYSTEM

“AWMA provided a quality built regulator gate both on-time and with precision installation” was the comment from Mitchell Water’s Engineering Manager Lee Briggs, head contractor for the GWMWater project.

The Wimmera Mallee Pipeline replaces 18,000 kilometres of inefficient earthen channel with 8,800 kilometres of pressurised pipeline and associated infrastructure. Due to the continuing drought conditions and the severely restricted water supply situation, construction of the pipeline has been fast tracked.

On behalf of Mitchell Water Australia a fully automated ‘2-in-1’ MultiBay LayFlat Gate has been designed, manufactured

and installed by AWMA for the Moora Channel near the Brimpaen Storage and Pump Station. The gates will regulate flow in the channel to allow the pumped diversion of channel water from the upstream pool into large storages which form the head works to the project’s ‘Supply System 6’ pipeline network.

The 2.5m wide MultiBay consists of two LayFlat Gates that measure 1255mm x 1090mm x 700mm. Both LayFlats are equipped with TLT 80 Series 24 volt actuators for connection into the GWMWater SCADA system.

The gates may be locally or remotely operated to maintain a constant weir pool level or a constant flow release with a varying pool level.

SUNWATER’S SAFETY INITIATIVE

Nearly \$8 million will be spent on upgrading around 1500 assets on SunWater’s regional channel network over the next two years.

SunWater’s commitment to safety continues as they make significant progress in the state-wide investment in their water supply schemes to ensure the safety of staff and the general public.

AWMA have been awarded the contract to design, manufacture and install the water control gates, walkways, hand rails, trash racks, safety screens and pit covers for this project. AWMA’s open platform designs will allow for easy conversion to automated channel control, if required at a later date.

Sites across all SunWater regions including Ayr, Biloela, Mackay, Mareeba, Toowoomba and Bundaberg have been investigated to ascertain the custom designed solution that will achieve the

most beneficial outcome per site.

In order to install these safety measures, there is a requirement to drain some channels for minimal periods of time. AWMA have the experience and capacity to ensure all installations take place within the specified time schedules to minimise interruption to customer supply levels.

Principle engineer and contract superintendant Graham Kelly said **“The value AWMA brings to this contract includes their extensive experience in retro-fitting gates in similar systems within Australia, their range of standard and non-standard gate designs, their in-field experience and their flexibility to resolve unforeseen difficulties.”**

Operator and public safety around water structures increases this month with completion of the first site upgrade. All works will be finalised by June 2011.



\$50M STP UPGRADE IN QLD

Monadelphous Engineering engaged AWMA to design, manufacture and install nearly 50 custom designed stainless steel undershot penstocks in a staged program conducted over an eight month period.

Monadelphous is currently undertaking major augmentation works at the Burpengary East STP in Queensland, worth nearly \$50 million. The Moreton Bay Regional Council civil infrastructure project involves mechanical and electrical works to convert and upgrade the existing sewage treatment process. Upon completion the plant will achieve capacity for an equivalent population of 49,000 in addition to improving the quality of the treated wastewater discharged to the Caboolture River.

The AWMA penstocks provide regulation of flow through the tank inlet and outlet structures, under head pressures of up to 5m. All penstocks may be manually or automatically operated. The majority of penstocks are fitted with Rotork HOB410 gearboxes to be manually operated with 700mm hand wheels or powered with the AWMA Portable Electric Actuator. The remaining penstocks are automated with Rotork IQ electric actuators including a manual override feature. Existing penstocks were also modified to be operated with the portable actuator and fitted with reed switches to provide open and closed limit readings.

Any manually operated gates or penstocks may be easily adapted to suit the AWMA Portable Actuator. Monadelphous Project Engineer Alex Watson stated they were **...“pleased with the willingness and cooperation of the AWMA installation crew. The work was undertaken at all times in a safe, efficient manner to give a quality finish installation, meeting timeframe requirements despite various minor issues encountered.”**



WA DESALINATION PENSTOCKS TO WITHSTAND OVER 80 TONNE OF HEAD PRESSURE

AWMA's super duplex stainless steel water control structures for The Southern Seawater Desalination Plant (SSDP) measure over 6m high x 2.8m wide and have been hydrostatically tested to withstand 1.5 times the required 80 tonne of head pressure.

The SSDP will be the next major water source for WA. Producing 50 gigalitres of drinking water annually, it will contribute to the 30% of WA's water supply to come from climate independent sources.

Following a stringent tender process AWMA are proud to be chosen as a supplier for this vital water project. AWMA's project experience and capacity to deliver on-time and on budget within other desalination, water and wastewater treatment applications, along with a reputation for innovative custom designed solutions, was valuable in securing this project.

The TLF penstocks allow for 4m x 2.4m open waterway. The separate 6.4m high pedestal headstocks support Rotork IQ90 electric actuators powered by IB11 gearboxes.

Manufacturing has begun with all penstocks fabricated from SAF 2507 stainless steel to be pickled, passivated and passed through a number of quality assurance procedures including independent welding inspections, dye pen testing and hydrostatic testing. The penstocks will be completed in March and installed in August this year.



AUTOMATED TRASH SCREENS REDUCE RISKS

Melbourne Water has been working in partnership with AWMA on a debris removal project to decrease long term maintenance and operation costs as well as reducing OH&S issues in remote locations.

AWMA have custom designed, fabricated and installed an automated trash screen 5m high x 3m wide to be remotely monitored and controlled via Melbourne Water's SCADA system.

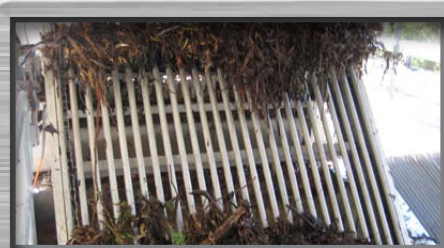
The trash screen is a new approach to debris removal, a way forward to a more sufficient and cost-effective operation system.

The Dalry Road project site features an inlet basin fed by an open channel aqueduct. This site collects a large amount of debris due to the adjacent eucalypt forests. Prior to the automated trash screen, Melbourne Water operators relied heavily on alarms, requiring on-call staff to manually clear away debris, often in adverse conditions.

The trash screens high strength design is virtually maintenance free, manufactured from grade 316 stainless steel and powered by an SEW Eurodrive motor and gearbox.

The AWMA trash screen will reduce OH&S risks and increase operational and resource efficiency. Trash screen designs are application based and flexible depending on the type of debris to be manually or automatically removed. The investment will provide long-term reduced operational, maintenance and whole of life costs.

To discuss your trash screen application please call AWMA on 1800 664 852.



WELCOME...

Hugh Watson Production Engineer

As Production Engineer, Hugh is actively involved in all stages of design, drafting and fabrication. With a background in mechanical engineering, Hugh oversees all drawings, facilitating innovative and sustainable solutions for AWMA clients. It is Hugh's primary objective to enhance efficiencies, processes and documentation to add greater value to AWMA solutions.

Craig Warren Project Manager

Following the completion of Tim Dickson's IBL placement, Craig joins our team of Project Managers. Craig is mechanically minded, bringing with him diverse experience from all sectors of the automotive industry. A diligent manager and communicator, Craig has ensured a smooth transition across current projects including the successful completion of Monadelphous's Burpengary STP upgrade project.

Brent Strahan Project Manager & Draftsman

Brent is a Mechanical Engineer with extensive experience and knowledge of SolidWorks. Brent will be responsible for all drafting requirements for the SunWater InterSafe project. We welcome Brent and his family to the region.

Rachel Whittaker & Justin Zarezky

AWMA continues to support and train local school leavers in 2010. This year sees the beginning of a four year fabrication apprenticeship for Justin Zarezky and an administration traineeship for Rachel Whittaker. AWMA would like to congratulate Justin and Rachel on their positions as both have displayed initiative and enthusiasm towards exceeding the high expectations of AWMA and our clients.



L.R: Brent Strahan, Hugh Watson and Craig Warren



Rachel Whittaker



Justin Zarezky

CURRENT PROJECTS

VIC

Tenix Alliance: Penstocks for ETP

Fulton Hogan: Penstocks and stopboards for Koorlong WWTP

Alluvium for Parks Victoria: Undershot and combination gate for McLeod Morass

Goulburn-Murray Water: Penstocks and bulkheads for Broken River

General Water Australia: Undershots for Castlemaine WRP

SA

Century Products: Penstocks and stopboards for Christies Beach

Scherer Contractors: Stoplogs for Katfish Reach project

Scherer Contractors: Stoplogs for Katarapko Bank project

NSW

Murrumbidgee Irrigation regulators

Kyabram Excavations: SideWinders and double leaf gate for the Lake Cargelligo fishway

QLD

North Burdekin Water Board: Mechanisation project

Thomas & Coffey Ltd: Penstocks and 4m wide SideWinders for the Gibson Island WRP

SunWater Intersafe Project: Over 400 water control gates and associated products

HVAC Queensland Pty Ltd: TopSeal penstocks for the Hinze Dam Fishway

WA

Southern Seawater Alliance (SSWA): SAF super duplex stainless steel penstocks up to 2.4m x 4m for WA's new desalination plant

Water Corporation: 4m high wedge gates for the Armagh Street pump station upgrade

TAS

Cradle Mountain Water: TopSeal penstocks for the Caroline Street pump station



Head Office

Phone 1800 664 852 **Email** info@awma.au.com
118 Roviras Road, PO Box 433, Cohuna Victoria 3568

www.awma.au.com

