



Murray Irrigation Project Profile

Client: Murray Irrigation
Location: NSW, Australia
Project Value: AUD115 million

MURRAY IRRIGATION PIOP IRRIGATION MODERNISATION PROJECT



Murray Irrigation's PIOP Project was a modernisation project focused on upgrading the larger irrigation assets within Murray Irrigation's main canals. The objectives were to gain water savings, increase asset longevity and improve operational efficiencies.



AWMA's team of qualified tradesmen processed over 250 tonnes of stainless steel which required approximately 7.5km of welding, 1.43km of purpose-engineered stainless steel wire rope cables, 65 grade 431 stainless steel shafts, 260 grade 2205 stainless steel hinges and over 27,000 grade 316 stainless steel bolts.



AWMA work in partnership to offer as much support and advice as possible in the early stages of a project, to ensure stakeholders receive an end-product that will satisfy all objectives.



AWMA Water Control Solutions were engaged by Murray Irrigation to supply mechanical water control structures for numerous sites along the Mulwala Canal, the largest irrigation canal in the Southern Hemisphere. The Mulwala Canal is approximately twice the length of the Panama Canal and together with the Wakool Canal runs almost 160km from end to end.



AWMA's ISO 9001:2015 compliant quality management system requires dedicated processes and procedures to be carried out throughout the duration of a project, ensuring the end result does in fact meet customer requirements.



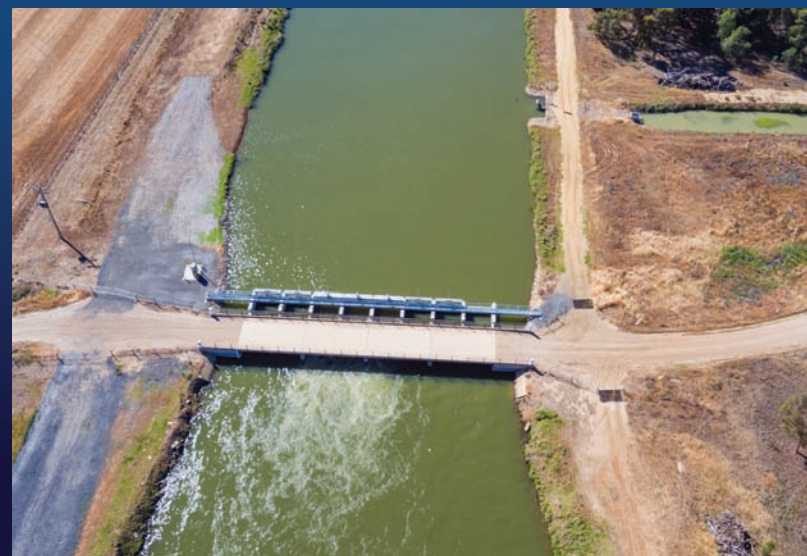
Stainless steel was selected for this project due to its longevity and durability, particularly with the water control gates being submerged in irrigation water. Stainless steel also extends the nominated asset life from 25 years to 50 plus years. The inclusion of stainless steel offers an economically maintainable and longer lasting infrastructure solution. The innovative gate design has been integral to improving the efficiency and productivity of water delivery for the benefit of Murray Irrigation and their customers.



The new Irrigation System includes fully automated SCADA to ensure end-to-end delivery efficiencies, in addition to improved service and water savings.



The AWMA water control gates measure up to 5.5m wide and 3m high in size, per gate. They were engineered to withstand hydrostatic loads of up to 24.3 tonnes of water pressure as well as hydrodynamic effects such as wave loads and flow induced vibrations. The grade 304 stainless steel wire rope cables, for the purposes of raising and lowering the LayFlat gates, were custom designed to have an individual Minimum Breaking Strength (MBS) of over 27,000kgf. The Edward River Escape Bulkheads incorporate a concrete weighted gate design to ensure fast in-flow insertion and excellent sealing in emergency conditions.



ASSDA Fabrication Project of the Year AWARD WINNING PROJECT



Comment from Murray Irrigation post practical completion:

'Following the development of a technical specification and a competitive tendering process, we narrowed down our options and had them reviewed by a third party subject expert. The long term value for money and 50 year design life achievable with stainless steel was perfect for use in a large scale irrigation application like the water regulating infrastructure present in the iconic Mulwala Canal.'

Regards,
Jorge Luengas
Construction Manager - Major Engineering Projects

Comment from Chris Waltos ASSDA:

AWMA are a very worthy recipient of the award, and won out in a highly competitive category against other innovative and high quality projects. We were particularly impressed with the following aspects; the scale of fabrication and quality of workmanship, the ability to work with stainless steel to deliver a superior outcome, and the positive impact towards environmental sustainability, asset life and in supporting regional irrigation communities.

Chris Waltos
Marketing Development Manager
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