

Main Instrument Vendor services improve project efficiencies

Reducing complexity, saving time and costs for a packaged desalination plant



Osmoflo is a global desalination and water treatment company with offices in Australia, the Middle East, India and Asia. They offer world-class capabilities in delivering water treatment solutions for many industries, including oil and gas, remote mine sites, power stations, breweries and government end users. Their complete turnkey solutions offer market leading desalination technology, guaranteeing optimal process and operational performance.

"Overall the tools and support provided by Endress+Hauser simplified the process from the tender stage through to project execution. The online My Endress+Hauser account was particularly useful when pricing, drawings, documentation and technical information were immediately required. Having a sole supplier for the majority of plant instrumentation facilitated the delivery of the project."

Aragon White
Project Engineer
Osmoflo



Endress+Hauser's MIV services included the supply of 12 turnkey turbidity monitoring panels (left) and more than 70 pressure monitoring instruments pressure monitoring instruments (right)

Osmoflo are a globally recognised desalination expert, providing turnkey solutions across multiple industries. Desalination is the process of removing salt out of water, generally through a semi-permeable membrane in a process known as reverse osmosis (RO). Desalination is ubiquitous in Australia both for drinking water production and industrial wastewater treatment.

Whether required for the supply of potable drinking water in a local community or the treatment of pumped water from a mine site, the location of desalination plants is often remote. These applications typically require turnkey, skid-mounted solutions, which are easy to transport and can be commissioned quickly on site. As an expert in this area, Osmoflo



relies on its suppliers to provide high quality, reliable instrumentation to control the desalination process.

The Challenge: Osmoflo was contracted to provide a desalination plant to treat high salinity water produced from a variety of coal seam gas (CSG) wells in Australia. Their solution consisted of multiple 40 ft high cube shipping containers, in which micro filtration (MF), reverse osmosis (RO) and service skids were housed. The packaged plant required flow, pressure, temperature and liquid analysis monitoring for process control and optimisation. In total, more than 170 separate instruments were needed, including 12 turbidity panels to monitor MF and RO membrane performance. Using multiple instrument vendors for a project of this size can add complexity,

increase coordination efforts, and introduce a greater potential for errors and delays, risking deadlines and budgets. To reduce complexity and drive efficiencies, Endress+Hauser were approached to provide Main Instrument Vendor (MIV) services for the balance of instrumentation.

Our solution: As a MIV, Endress+Hauser provided expertise at all stages of the project, from FEED (Front End Engineering Design) through to procurement and delivery, bringing significant efficiency improvements. A particular highlight was the provision of 12 custom-designed water quality monitoring panels for turbidity. These plug and play panel solutions provided time savings during installation and commissioning. In total, more than 170 separate tags were delivered. A dedicated project manager provided support throughout the delivery stage, allowing staggered delivery of components (in two batches) to ensure the project remained on time. A single point of contact quickly managed any changes to the scope. Our broad product range limited variances, reduced the complexity of implementation and minimised costs.

Benefits: The MIV strategy has been proven to reduce overall project costs versus the traditional, multi-vendor approach. By partnering with Endress+Hauser in this project, Osmoflo were able to achieve several benefits, including:

- Reduced technical risk, with expert product selection and application advice



Conductivity sensors and flow assemblies installed to monitor the efficiency of salt removal in RO (left) and one of the many Promag P 300 electromagnetic flowmeters (right).

- Reduced engineering time and costs, as we use our experts to take on the burden of instrumentation selection
- Simplified procurement and reduced administration costs
- Reduced re-work and minimised change orders
- Dedicated project manager for optimised logistics, warehousing, inspections and tagging

Solution highlights: As MIV in this project, Endress+Hauser were responsible for the supply of all instrumentation components, including:

- 38x Promag P 300 electromagnetic flow meters
- 70x Cerabar PMC11 / PMP71 pressure transmitters

- 56x analytical monitoring points (combination of conductivity, pH, ORP and turbidity)
- 12x pre-fabricated turbidity panels



Scan the above QR code or click [here](#) to learn more about our MIV services

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