DOYLE
PUMP & ENGINEERING

Project Highlights

Project Name: New Cooling Water Pumps for Robotic Welders.

Equipment Supplied: Consult, Design, Supply 2 x Turnkey IBOOST Pressure Packaged Booster Pump Sets.

Trams are a crucial transport mode in Melbourne and Alstom was awarded to locally supply the largest light rail contract in Australia to deliver Next Generation Trams in Melbourne, Victoria. Doyle Pump & Engineering were engaged by a commercial & industrial plumber to provide detailed piping and pump system design for the provision of efficient process/cooling water requirements to ensure the robotic welders have precise temperature control in the manufacturing of these new trams.

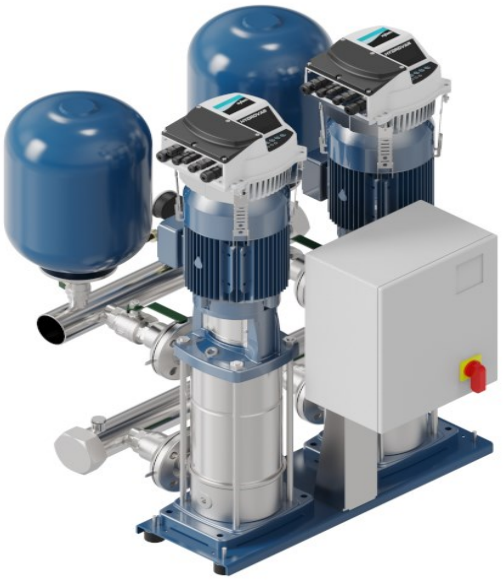
As part of the design specification, Doyle Pump & Engineering provided a complete hydraulic and engineering design with detailed pipe sizing, technical data, CAD drawings and sustainable pumping solutions.

The Brief

With new production facilities to be ramped up at the Dandenong rolling stock factory, there was a requirement to provide reliable & sustainable process cooling water to the robotic welders. As part of the consultation process, Doyle Pump & Engineering team attended a site assessment and provided a detailed proposal of pipe design & reliable fit for purpose automated packaged booster pump sets.

The Recommendations & Solutions

- Hydraulic design of the water distribution system ie, estimating water demand, selecting proper pipe sizes and materials in suitable pumps and storage system.
- Provide CAD designed system drawings.
- Design and propose reliable and efficient turnkey automated water pumping system to provide variable load requirements of the robot welding heads.
- Due to the critical requirement of precision water in manufacturing of the new trams, we recommended the pressure packaged booster pump sets to be installed as Duty/ Parallel pumps for built in redundancy.
- Proposal included commissioning of the pump sets.



The Outcome

New cooling water pumps for the Robotic welders were supplied by Doyle Pump & Engineering, using 2 IBOOST booster pump package sets. Each set consisting of 1 x duty/Parallel + 1 Standby variable speed pumps, complete with high pressure accumulator tanks, stainless steel pressure transducer, stainless steel inlet and discharge manifold complete with isolating and non-return valves and terminated with 80mm table ‘E’ flanges. The pumps are on a common fabricated steel base plate.