



OHP Plant and Fire Water Tank

PROJECT DETAILS

Centrals were engaged by BHP to execute the design, supply, construction and installation, testing, integration and commissioning of a new process and fire water industrial tank (TK13) and associated pump sets, piping, valves, instrumentation, and support infrastructure for OHP1, and integrate into the existing Tank TK12 water system with the capability to act both as a dual tank system or individually.

Detailed Design:

- Earthworks, civil, mechanical, structural and electrical design components

Civil Earthworks and Concrete Works:

- Geotechnical Investigation, Testing and Reporting for foundation improvements
- Removal of existing unsuitable foundation fill material, and replace
- Backfill and excavations for foundation preparation for concrete footings
- Installation of sand layer and geotextile fabric to inside of concrete ring beam
- Excavations and installation of bollards to protect the tank and structure
- Construction of concrete ring beam, slabs, footings, and plinths

Structural, Mechanical and Piping (SMP) Works:

- Construction of the new Water Tank TK13– 2000kL, 17.38m diameter x 8.435m high, bolted steel panel construction, including nozzles, manholes, geotextile fabric liner, and mechanical visual level indicator
- Installation of tank roof structure, cladding and associated roof items
- Installation of 4 off pump sets
- Fabrication and installation of below ground HDPE water pipeline
- Assembly and installation of above ground carbon steel pipelines, including associated valves and instrumentation, and tie-in to new tank nozzles and existing Tank TK12 pipework system

Electrical and Instrumentation Works:

- Supply and installation of new Field Marshalling Change-over Panels
- Installation of cable conduits and cable tray
- Integration of instrumentation for fire water control, water pump control, and level control between the new tank and the existing tank (TK12)
- Installation of lighting
- Earthing for the tank and associated equipment

Testing and Commissioning:

- Earthworks compaction testing, concrete field testing, hydro pressure testing, and in service testing of pipework
- Commission and test all cabling and terminations, mechanical Commissioning of pump sets and instrumentation
- Commissioning and testing of PLC / Citech Programming

Client: BHP Billiton Iron Ore
Location: Mining Area C, Newman WA
Duration: 8 months
Estimated Completion: January 2019
Value: \$4.5M



PROJECT HIGHLIGHTS
Personnel on Site: 10-20
Manhours to date: 7,320