



33 / 3.3kV Main Switchyard Replacement Project

South32 GEMCO – Groote Eylandt, Northern Territory

Client: South32 - GEMCO

Date: 2015

SCOPE

South32 GEMCO approached i.Power Solutions in 2013 to provide a turnkey solution for replacing their aging 33/3.3kV Main Switch yard at the Manganese Concentrator. i.Power Solutions engaged with the client over the ensuing period and offered a fully engineered solution to overcome the ongoing problems. The client reviewed the design and offer by i.Power Solutions and a contract was signed in 2014 to begin the new project.

A brief overview of the contract includes:

- Design, Manufacture and Supply of a new purpose built 33/3.3kV Main Switch Room.
- Full Testing of the new Switchroom and components at i.Power Solutions Cairns workshops prior to site shipment
- Technical assistance on-site with the unloading and mounting/re-assembly of the new Main Switchroom at the Concentrator Facility on Groote Eylandt

This contract also involved the full installation of the new Switchroom unit and all associated cabling and circuitry required for the Manganese Concentrator Unit.

These additional works included:

- All MV, LV and control cables associated with the operations of the Manganese Concentrator
- Cable support and conduit systems
- Installation of several new 3.3kV circuit breakers associated with the overall processes.

- Associated Power Transformers and connections
- Organisation of Civil and Mechanical works associated with the new installation.
- Earth grid and lightning protection systems
- Control and instrumentation upgrades
- Back-up diesel generator
- Plant lighting
- Fire detection protection and systems
- Security and communication systems

OUTCOMES

The new system was commissioned in mid-2015 and then put into full service. The new switchyard has proved to be very reliable in the first year of operations with no significant breakdowns or outages recorded to date.

This has been most pleasing for GEMCO as the old system it replaced was prone to issues and frequently had unplanned outages which caused GEMCO much frustration and had a negative effect on their production.

i.Power Solutions has been proud to be a part of this project and is currently working with GEMCO again to investigate other systems on the Groote Eylandt which have reliability and/or safety issues.

i.power
SOLUTIONS

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