



engenium

smart project delivery

Flash Flotation Facility Engineering Design

Demonstrated Capabilities

- Nickel processing knowledge.
- Brownfields capability with shutdown understanding.
- Flexibility to overcome budget constraints, whilst still achieving the desired outcome.

Project Location Goldfields, Western Australia

Scope

Engenium's scope for this project was to develop process and layout options, from concept through to IFT, for a flotation cell at a nickel refinery in order to increase throughput. The flash flotation facility consisted of a new building alongside the existing facility with a new cyclone cluster, flash cell, gantry crane and ancillary equipment to enable a tie-in to the existing circuit.

Business Objective

The primary objective was to ensure the plant would achieve higher future production rates. Additional objectives included improving the maintainability of the plant and, more importantly, enabling a minimal shutdown duration to complete the tie-in to the existing plant. The new facility was designed so that it could be constructed during operation, with minor tie-in works required to switch over from the old facility to the new facility.

Challenges to Overcome

We were required to maintain adequate fall angles from the facility to the existing mills, as the lines were not pressurised. This required extensive attention to layout. Budget constraints were unique as there were significant scope changes that need to be accommodated with existing project funds. Further to this, the design team were challenged with new software to progress Engenium's technology development pathway.

Smarts

Scope reduction from AFC to IFT enabled the client to tender the works for board approval and recommence design to AFC after board approval was received. This enabled the client to maintain its budget ceiling.

Project Outcome

The project was delivered on time and the new design software was successfully utilised by our team. Engenium worked with the client to produce a fit for purpose outcome and remained within the budget constraints.

Delivering Value. Delivering Results.