



engenium

smart project delivery

Crane Support Structural Certification Structural Engineering

Demonstrated Capabilities

- Structural Engineering
- Structural Design drawings from 3D laser scan data
- Project and Engineering Management
- Structural Inspection.

Project Location

Pilbara, Western Australia

Scope

Engenium was asked to complete Structural Certification of the crushing and screening buildings at a blue-chip mining operation in the Pilbara. Both buildings house large capacity (20 tonnes) overhead travelling cranes used for maintenance on crushers and screens. These cranes are registered with the Department of Mines and Petroleum (DMP) and as part of their compliance requirements, these assets were due for their 25-year design recertification which included engineering design checks, site inspections, surveys, NDT inspection, and re-registration in consultation with the DMP and its procedures.

Business Objective

The certification was necessary to validate the structure's integral design life for an additional 25 years, following AS1418 and DMP compliance. This was an urgent project as there were upcoming planned maintenance tasks requiring usage of the cranes, which could not be carried out until the cranes were recertified.

Challenges to Overcome

The historical drawings did not show sufficient detail to completely analyse the buildings. Over the years there had been several modifications to the buildings that were not captured, so Engenium reproduced structural design drawings based on 3D laser scan data for the crane recertification. Following an initial assessment of the structure, Engenium found the old buildings were no longer compliant with Australian Standards as the design requirements had since changed. To expedite this work, Engenium worked closely with the client to propose strengthening modifications that were fit for purpose and could be installed within the necessary timeframe.

Project Outcome

Engenium provided support to the client throughout the recertification process and was able to expedite the remedial works to ensure the cranes were operational by the required milestone date. Following this project, Engenium conducted similar crane recertification projects at this location, as well as for other sites and clients.

Delivering Value. Delivering Results.