

Structural Audits





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Engineering Audits & Inspections

Engineering audits and engineering inspections are an integral part of both new projects on site and ongoing operations. They are an exercise in benchmarking to assess and understand what is currently in place and quantifying this through reporting. They can identify areas where corrective actions may be required to achieve compliance, or where improvements would provide a benefit to the client. Engineering audits and engineering inspections are tools that can also be used to determine if a project was installed in accordance with the original designs, and provide an accurate starting point for future projects. They can also be an opportunity to have an independent set of eyes review the situation and provide an informed assessment.

Syngineering employs a risk based approach to help clients prioritise any corrective actions or recommendations. Engineering reports are produced confirming how existing systems and operations align against current standards or amendments to standards and identify any corrective actions that may be required to meet compliance.

Our audits and inspections services are relevant across all engineering disciplines including electrical, mechanical, structural and control systems. Explore the case studies below for more information on engineering audits and inspections services by Syngineering.



Structural Audit

Syngineering prides itself on attention to detail, not only in our engineering design and drafting services, but also in our audit and inspection

services. Syngineering was requested to perform a structural integrity audit/inspection of major assets. The audit was a non-invasive, visual inspection of major assets. This inspection was completed alongside an audit of access systems to AS 1657 to gain efficiency by completing two audits in one visit.

The inspections were completed over a period of 5 days with Syngineering staff working in tandem with site representatives to access all areas of the underground operations and surface infrastructure. Faults were recorded and photographed to assist in the creation of a register and report outlining each individual fault, coupled with a detailed observation and recommended remedial actions.

The faults were categorised based on client provided assessment criteria and internal Syngineering risk analysis, where the report grouped defects within the relevant categories to assist in prioritising actions. The report could then be used by the client to form the basis for a formal site based risk assessment and to create an action plan to rectify faults as required. By completing thorough inspections and through detailed reporting, Syngineering was able to provide a number of recommendations that would assist our client to maintain a safe work environment.



Site AS1657:2013 Audit

Syngineering prides itself on attention to detail which we not only apply to our engineering design and drafting services, but also our audit and inspection services which we offer to our clients.

Syngineering was requested to perform a site audit/inspection of all operational assets to AS 1657:2013 with a particular focus on access

platforms, walkways, ladders, stairs, and ramps. The scope of the audit was for compliance of access systems to AS 1657:2013 with respect to design, construction and installation of these systems. This inspection was completed alongside a structural condition audit to gain efficiency by completing two audits in one visit.

The inspection was completed over a period of 4 days with Syngineering staff working in tandem with site representatives to access all areas of the underground operations and surface infrastructure. Defects and non-compliances with the relevant standards were recorded and photographed to assist in the creation of a register and report outlining each individual fault, coupled with a detailed description of what the fault or defect was and a reference to the relevant clause of the standard, as well as provide a proposed action to rectify the issue. The report was structured so that our client could easily track and locate each defect for the purpose of rectification.

The report categorised the defects based on client provided assessment criteria and an internal Syngineering risk analysis, where the report grouped defects within the relevant categories to assist in prioritising actions. The report could then be used by the client to form the basis for a formal risk assessment and to create an action plan to rectify faults as required.

By completing thorough inspections and through detailed reporting, Syngineering was able to provide a number of recommendations that would assist our client to maintain a safe work environment.



Plant Condition Assessment

Syngineering was requested to complete an assessment of a Water Treatment Facility. The inspection and assessment covered civil/structural, mechanical and electrical assets for the facility.

The inspections were completed over a period of 10 days with multiple disciplines of Syngineering staff working in tandem with site representatives to access all areas of the relocatable plant infrastructure. Observations were recorded and photographed to assist in the creation of a register and report outlining each individual item, coupled with a detailed observation. Additionally,

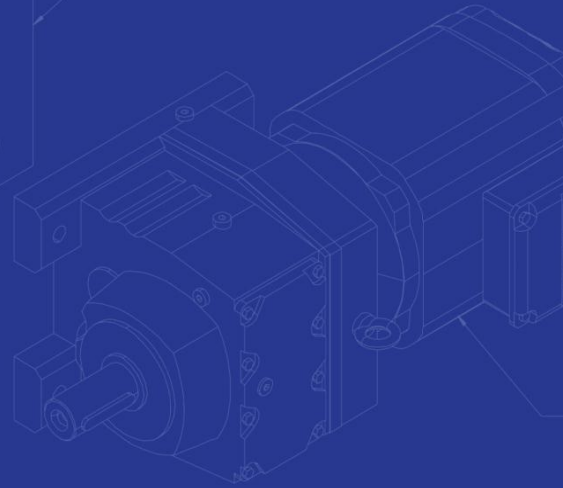
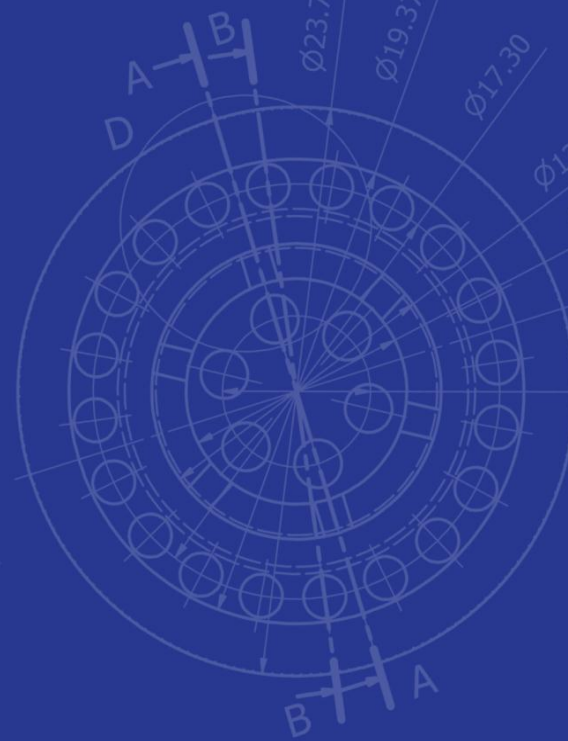
Syngineering updated the relocatable plant asset register to assist with ongoing management of the plant and equipment and to ensure observations were in a format that was easily tracked and workable by the plant operators.

The condition assessment observations were categorised based on client provided assessment criteria and internal Syngineering risk analysis, where the report grouped items within the relevant categories to assist in prioritising actions. The report could then be used by the client to create an action plan to rectify faults as required.

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