

SJ CRUSHING – KOOLAN ISLAND CRUSHING PLANT

Engineering Design & Drafting

3D Scanning & Point Cloud Conversion

Plant Design & Detailed Studies

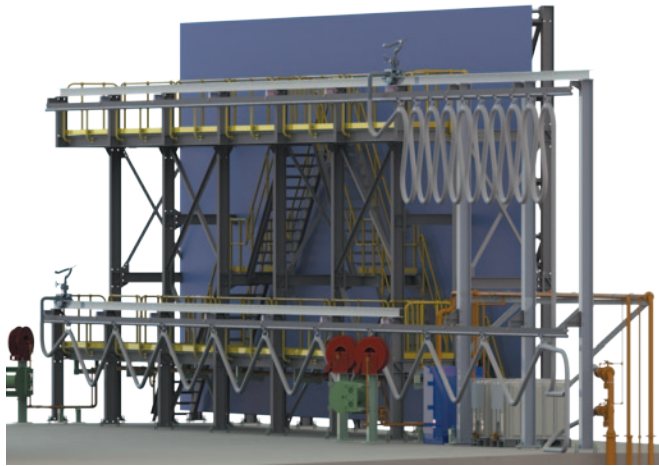
Prototype & Concept Design

General Structural & Mechanical Design

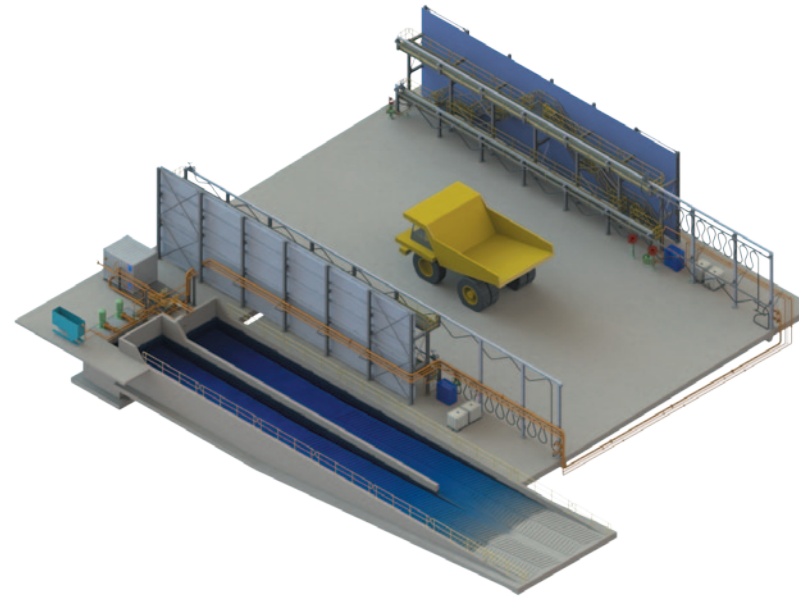
Structural Detailing & Shop Fabrication Drawings

SolidWorks® Software Development

Capability Statement



MINE SITE WASH PLANTS



Capability statement

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A bit about us and our track record



KLEN/QUADRO FLUX FILLER WITH 1000KG OVERHEAD BULK BAG

Quadro Design was formed in 2004 and currently has an efficient team of designers, engineers, drafters and support staff.

During this time we have undertaken in excess of 2500 projects for a wide variety of clients, including some very large projects.

Many of our projects involve **fixing design shortfalls** or **designing enhancements to existing mining plant**, e.g. transition re-design, wear liner re-design, maintenance or safety improvements, equipment upgrade, etc.

- Design & detail drafting of a 4mtpa primary & secondary crushing plant.
- Coal plant launders, thickeners & associated steel works.
- Mill liner design, both steel & rubber, for SAG, AG, Ball & Scrubber mills across a broad variety of processes.
- Model the entire berths C & D wharf (1.6km long), including the sea bed.
- Model & detail drafting of a large scale pilot plant.
- A flexible, sub-sea pipeline deployment system.
- Rubber wear liner system for a large variety of new sumps, hoppers & chutes.
- Development of a revolutionary 'linerless' chute design & skirt system for the Iron ore and gold mining sectors.
- Piping and spools 'as-built' documentation for a large mine site. Subsequent replacement of spools during shutdowns were fitting first time, something that up till now not been achieved.
- Subsea manifold and ship borne pipework/small bore tubing undertaken for local, defence & overseas clients.
- Numerous aviation, diesel fuel & oil tank installations, c/w associated pipework, pump skids & access platforms, for mine sites & port facilities.
- Design of a batch line, travelling cut-off saw & moulding equipment for the precast concrete industry.
- Converting 3D point cloud data into 3D models & integrate new designs.
- Unique lifting equipment solutions engineered, tested & supplied.

Our key staff



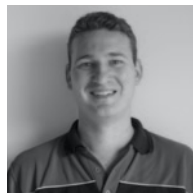
Jack de Blank Director

Jack's mechanical design background of over 40 years has been centred on the concrete batch plant, machine design and mining sectors. Over these years, Jack has become an expert in the various aspects of the mining and material handling processes, such as conveyors, feed chutes, mill design, liner systems, thickeners, launders, hoppers and associated structures. In addition, Jack is very adept at concept plant proposals and innovative machine design.



Rodney Dietsch Office Manager, Partner

Rod's experience as a patternmaker for over ten years, before joining Quadro Design in 2004, gives him a practical background in our many areas of design and drafting. Rod's astute attention to detail has made him a specialist in liner system design (steel and rubber), mould design, structural steel design and detailing, whilst ensuring that all within the office adhere to both our standards and those required by our clients.



Paul de Blank Senior Drafting Manager, Partner

Paul has over ten years experience at Quadro Design and his main focus is in the oil and gas industry, using SolidWorks® Routing-Piping to produce diesel and lube oil farm tank layouts, installation documentation and fabrication drawings. His work also includes chemical injection pump-equipment skids, new and existing pipe work upgrades on mining sites. Paul also has experience in managing Steel Structural projects including, workshops and general structures. Seeing projects through from start to finish with high level attention to detail, documentation and data management have been his strengths.

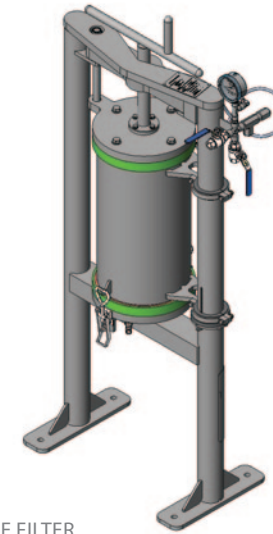
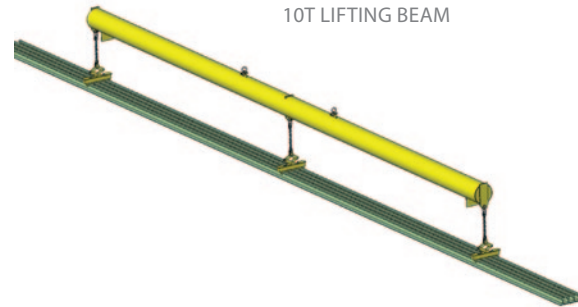


Cain Falconer Lead Designer

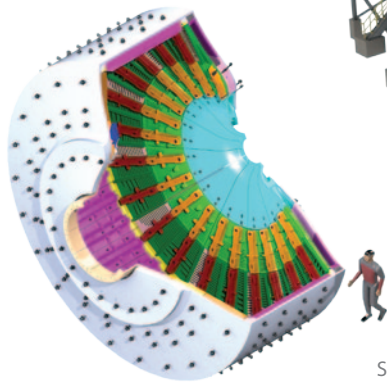
Cain's boilermaking and sheetmetal experience brings a wealth of practical design knowledge to Quadro Design. His practical manufacturing skills have been responsible for product development of specialised equipment, geo survey equipment, booms, winches and down hole tools.

Services we offer

- Engineering design & drafting
- Prototype & concept design
- Engineering design review & verification
- Site measurement & reverse engineering
- Detail drafting for manufacture
- SolidWorks® & TSD onsite advanced training
- SolidWorks® software development
- Supply of custom lifting equipment, liner systems, chutes & structure



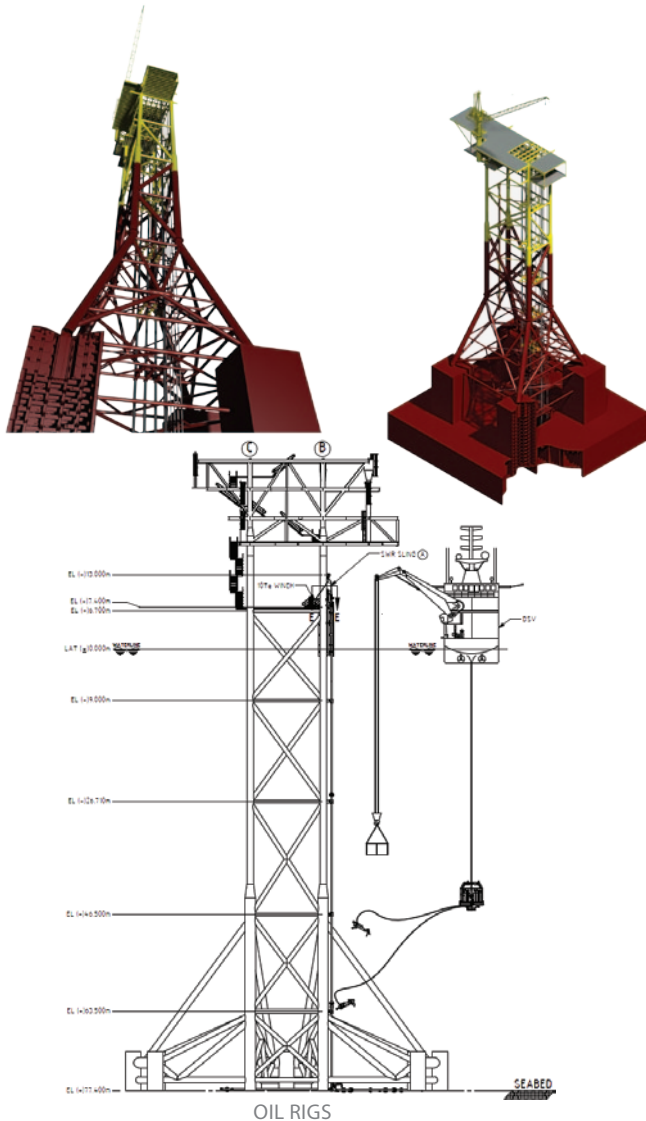
JAGUAR MILL AREA



Quadro specialisations

- Materials handling – chutes, transfers conveyors, skirts, etc.
- Crusher & mill circuit design & improvements
- Mining wear parts (rubber & steel), initial design & improvements to existing
- Plant & fuelling installations, extensions & modifications
- 3D scanning & converting scan data to 3D models
- Equipment & pumping skids
- General structural & mechanical design
- Weldments & fabricated products
- Pressure vessels & tanks to code
- Structural steel detailing
- Pipework, instrument tubing installations & detail for manufacture
- Photo rendering & 3D visualisation of our projects

Technical capabilities



We utilise the very latest versions of SolidWorks® and its associated products.

- SolidWorks® – 3D modelling & drafting software
- The Steel Detailer (TSD) – a structural detailing add-in to SolidWorks®
- SolidWorks® Simulation – FEA for engineering review of SolidWorks® models
- Photo360 – Photo realistic rendering of SolidWorks® models & assemblies
- Routing – intelligent piping & tubing systems within a SolidWorks® assembly
- eDrawings – ‘free’ viewer for SolidWorks® models & drawings
- Along with other design software such as Space Gass & Pipeflow Expert

TRAINING

Quadro Design makes a point of training our personnel to the highest level and giving them a high degree of responsibility, whilst being under the guidance of the senior members. This coupled with the variety of work that we undertake, improves our ability to attract and maintain staff.

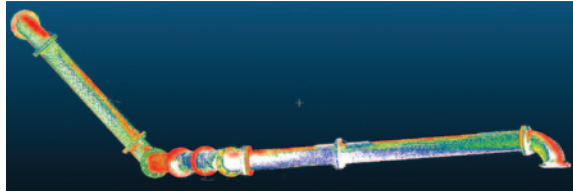
Q-TRAK

Quadro Design has also developed an elaborate intranet based job tracking database and document store, to administer all timesheets, correspondence, drawings and transmittals associated with a project.



Q-Trak allows secure access by our clients to view and print their job details and associated drawings.

3D Scanning



3D MODEL, CLOUD POINT OVERLAY

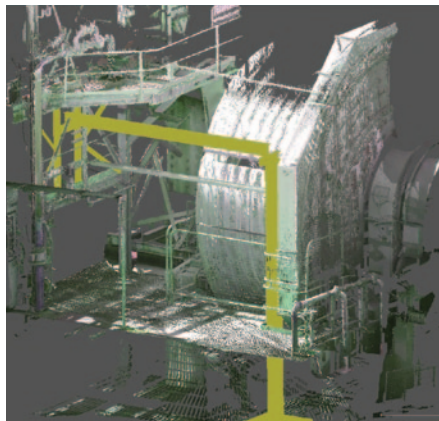
3D scanning is an accurate and time effective method to obtain the necessary data for some projects.

A few major factors are considered when making the decision between scanning and conventional measuring methods:

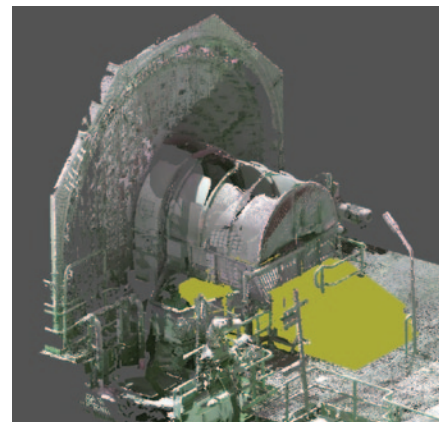
- Remote location
- Time constraints onsite to capture the data
- Levels of accuracy

One major advantage when using scan data is the ability to review and measure the point cloud data off-site at a later date.

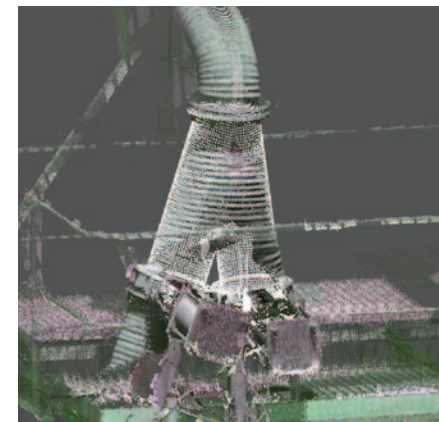
This eliminates concerns about missing measurements done conventionally often the case when under strict time constraints.



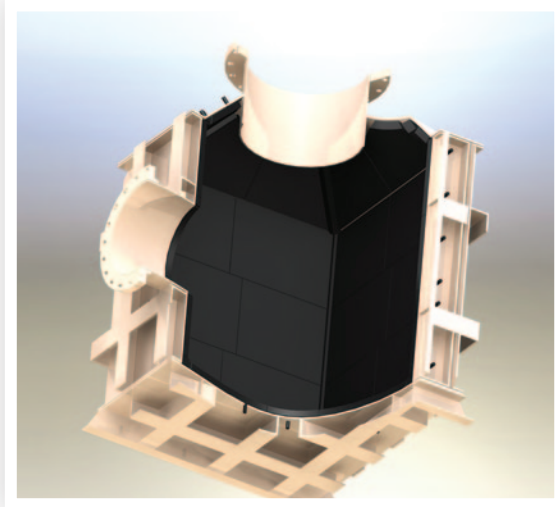
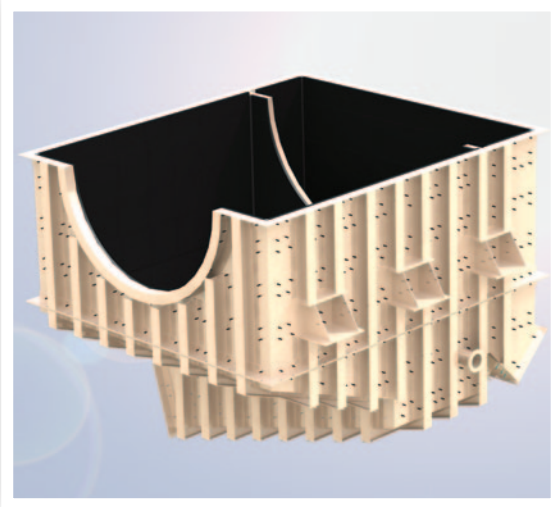
THUNDERBOLT MONORAIL INSTALLATION FRAME TO BE INSTALLED AROUND AN EXISTING SAG MILL STRUCTURE



SCREEN DECK INSTALLATION UNDERNEATH SAG MILL STRUCTURE RETROFIT INTO EXISTING SUPPORTING STRUCTURE



REPLACEMENT WARMAN INLET PIPES SCAN DATA



CONVEYORS, CHUTES & HOPPERS



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