

becker®

MINING AUSTRALIA



CAPABILITY STATEMENT 2020

Overview

Becker Mining Systems is a world-leading global supplier of unique system solutions for the mining sector. Family owned with headquarters in Germany, the company has over 1,600 employees in every essential mining region globally, providing solutions to leading mining companies around the world. In addition to Germany, Becker Mining Systems also has subsidiaries in Australia, Canada, Chile, China, France, Poland, Russia, South Africa and the United States. For over thirty years, Becker Mining Systems has followed a consistent strategy of internationalism, providing mining infrastructure to the global market.

Becker Mining Systems is the only worldwide supplier of complete energy, automation, communication and transportation infrastructure for the mining industry. We are proud of our technology innovation and leadership in the industry, with a focus on being completely aligned to where our customers are heading: an autonomous, AI and IOT future. As we continue towards this future state, we ensure our products remain not only relevant, but cutting edge, enabling them to be used in all mining operations to fulfil even the highest demands for use in explosive atmospheres.

Mission Statement

Becker Mining Australia are committed to providing innovative, reliable and cost-effective technology solutions to the mining and tunnelling industry. Through the combination of leading-edge technologies and highly competent and professional people, we will improve our client's productivity and safety performance.

Values Statement

We will challenge and empower our people to remain the most customer-focused organization in our industry. We will create a working culture which continually strives to provide a safe working environment and improve our processes whilst delivering the latest technologies. Through sound commercial, project and product management, we will create the best value for our customers and ensure the sustainability of all stakeholders.



Becker Mining Australia

Becker Mining Australia is an ISO 9001 certified organisation. As a diversified equipment and services supplier to the Australian Pacific hard rock, coal mining and tunnelling market we provide innovative and cost-effective solutions.

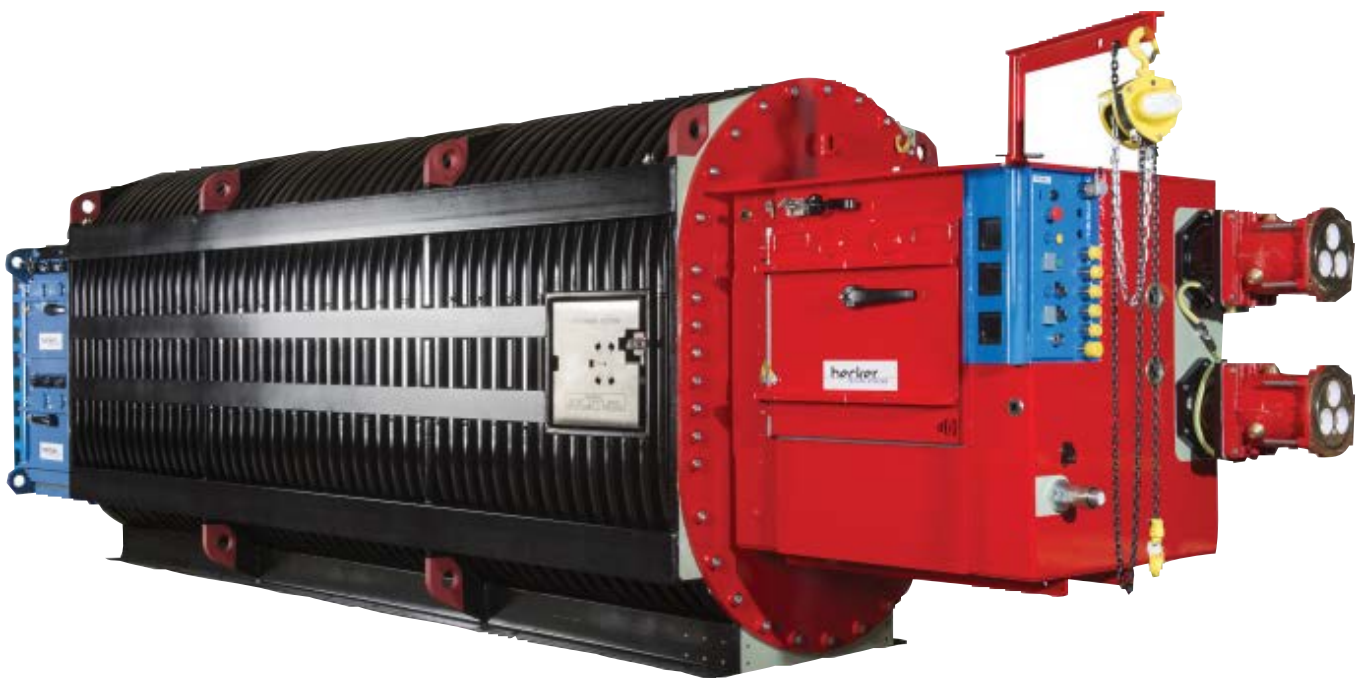
We pride ourselves not only on safety but the ability to provide the latest in reliable leading-edge technology & the highest level of customer service.

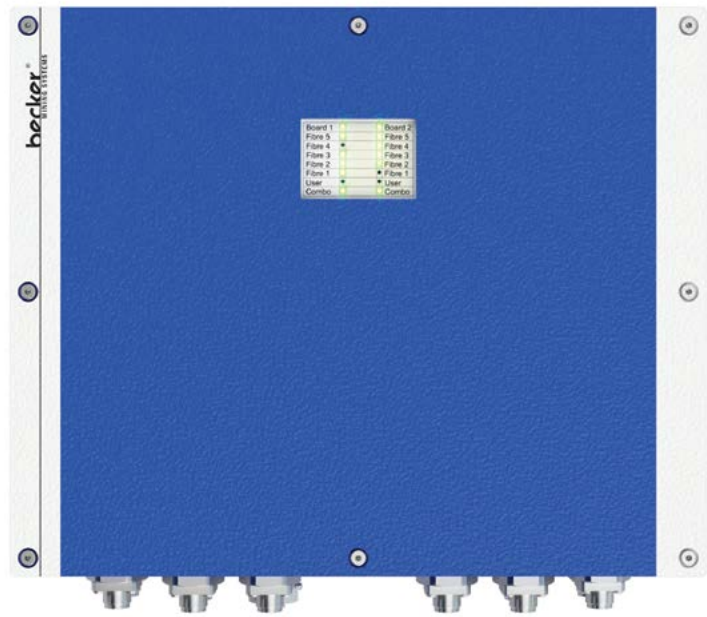
Becker undertake a broad range of solutions and services such as:

- Design Engineering
- Power Distribution
- Communications
- Gas monitoring
- Overhaul Services
- Ventilation Solutions
- Mechanical Equipment for Underground
- Installation and Maintenance Services
- Project Management
- Statutory inspections

Becker provide a wide range of products suitable for the most hazardous conditions in operation.

Becker Mining Australia's locally employed staff includes Electrical and Mechanical Engineers, Communication System Engineers, Software Engineers, Project Managers and Technical Trades. The Australian Becker team are highly skilled and have a broad range of experience and are proud to uphold Becker's highly regarded industry reputation. Our certified ISO9001 facility allows Becker Mining to extend its customer service by providing a controlled environment to repair, overhaul, modify & commission all certified products.





Mining and Tunneling Communications

Becker specialise in open pit and underground communications, mission critical voice, tagging and tracking, proximity detection systems and system automation for surface and underground hard-rock mines as well as Intrinsically Safe products for the underground Australian coal industry.

The skill and expertise of our staff are what set us apart and enable us to offer the following capabilities:

- ▶ System engineering design and installation of VHF, UHF, Wi-Fi and LTE
- ▶ Intrinsically safe radios
- ▶ Asset and personnel tagging and tracking
- ▶ Proximity detection design and installation

- ▶ Gas and environmental monitoring solutions
- ▶ Ventilation, dewatering and traffic automation
- ▶ LED signage for tracking and gas information
- ▶ Radio Frequency over Fibre/Radio over IP bridges (RFoF/RoIP)
- ▶ Voice over IP solutions (VoIP)
- ▶ LED lighting ANZExia
- ▶ Intrinsically safe PC system (Betworks III)
- ▶ Intrinsically safe PLC systems (MMS)
- ▶ Intrinsically safe power supplies
- ▶ Communication maintenance services and labour solutions



Electrical

Becker Mining are experts in electrical manufacturing and installation of electrical distribution, contracting services, maintenance labour solutions, and control equipment for the mining industry. Our experienced electrical personnel have extensive industry knowledge to undertake any electrical installation a customer requires.

IP Rated Electrical Equipment

Becker Mining Australia provides alternative solutions for both industrial and underground non-hazardous operations, with our vast range of IP rated control systems we provide standard & custom built equipment as required by the customer.

- ▶ Sub-Station 1.5-7.5MVA Substations
- ▶ Motor/Pump starters 240V/415V/1000V/3.3kV
- ▶ Section Isolators 11kV
- ▶ Motor/Pump Starter Enclosures
- ▶ Other control monitoring enclosures & systems
- ▶ High Voltage Switch Rooms

- ▶ Communication Enclosures & Containers
- ▶ Pie Warmers
- ▶ Manufacture and Re-build of Non-flameproof electrical equipment

Installation capabilities include:

- ▶ Installation and termination of high voltage, low voltage, communications, instrumentation, network control and fibre optic cabling
- ▶ Switch rooms, control rooms, MCC's, switchboards, distribution boards
- ▶ Transformers, ring main units and power factor correction units
- ▶ HV switchyards and substations
- ▶ Earthing and lightning protection
- ▶ Cable ladders, cable trays and metal conduits, trenching, PVC conduits, cable pits and culverts
- ▶ Onsite maintenance, break downs (Surface & Underground)
- ▶ Remote Support
- ▶ Pre – Overhaul Inspections (Surface & Underground)
- ▶ Upgrades and shutdowns



Flameproof

FLAMEPROOF MANUFACTURING Ex d

Becker Mining Australia, provides multiple solutions for power distribution and ventilation equipment for both development and Longwall operations, Becker Mining Australia provides but not limited to:

- ▶ Auxiliary Ventilation Fans 150kW - 200kW
- ▶ Substations 2.5MVA 11kV/3.3kV/1.1kV
- ▶ 8 outlet DCBs
- ▶ Motor/Pump Starter Enclosures
- ▶ Flame Proof PCs
- ▶ Longwall CME Enclosures
- ▶ Longwall DCBs
- ▶ Drill Rigs

SUPPORTING EXPLOSION PROTECTIVE EQUIPMENT

- ▶ Intrinsically Safe LED Lights
- ▶ Longwall Face power Supplies
- ▶ Longwall communication/Emergency Stops
- ▶ Becker Gas Monitoring System



FLAMEPROOF EQUIPMENT OVERHAUL/REPAIR Ex d

Becker Mining Australia facilitates all repairs, overhauls, & upgrades. Our Newcastle facility is certified to AS/NZS 3800 Electrical Equipment for Explosive Atmospheres – Repair and Overhaul LIC # SMKE 2034.

- ▶ MLA 158511 LIC Ref: MLA 158511
- ▶ ISO9001:2015 LIC Ref: QEC25294

Certifications enable our team to provide statutory certified overhauls, repairs and modifications of Ex d, Ex e and Ex p enclosures.

Our workshop is NSW Government Planning and Environment Resources Regulator approved for the purposes of repair, overhaul and modification of Explosion Protected Equipment. We have a team of competent certified electrical personnel who undertake our statutory work in house.

Our services include:

- ▶ Code D Overhaul
- ▶ Full electrical overhauls on all flameproof and out-by machinery
- ▶ Industrial machining utilizing our large milling machine and associated equipment
- ▶ Mechanical & electrical equipment repair
- ▶ General Fitting and Turning
- ▶ Hydraulic re-hosing of machines
- ▶ CAD facilities in house
- ▶ Extensive certification library
- ▶ Gap analysis
- ▶ Full fabrication services
- ▶ Statutory Pre-Overhaul Inspections (workshop and underground)

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MINING AUSTRALIA



Mechanical Underground Equipment

Becker Mining Australia provides support with regards to engineering, design, manufacturing & repair of a wide range of mechanical equipment.

Mechanical Capabilities Include

- ▶ Industrial machining utilizing our large milling machine and associated equipment
- ▶ Mechanical & electrical equipment repair
- ▶ General Fitting and Turning
- ▶ Hydraulic re-hosing of machines
- ▶ CAD facilities in house
- ▶ Extensive certification library
- ▶ Gap analysis
- ▶ Full fabrication services
- ▶ Q.D.S Attachments and Pods
- ▶ Trailers
- ▶ Underground Mobile Crib Rooms
- ▶ Elevated Work Platforms
- ▶ Stone Dust Suppression Barriers
- ▶ Remote Operation Centres



Rail Transport Systems

Based on floor mount and suspended railways for transporting materials and personnel to headings and faces. In association with Becker Warkop extensive transport systems can be built from outbye through to the longwall.

- ▶ Diesel Suspended monorail with toothed drive
- ▶ Diesel Suspended monorail with friction wheel drive
- ▶ Diesel Suspended monorail with frictional toothed drive
- ▶ Diesel floor mounted rack-and-pinion railway
- ▶ Electric floor mounted rack-and-pinion railway

Rope Attachments

Becker Mining is a leading supplier of mine winding and rope guide attachments. All rope attachments proposed comply with international and mining standards. Testing is performed at critical stages of production to ensure that our company's high standard as well as those of our customers are met.

- ▶ Safety detaching hooksets for drum winders
- ▶ Koepe winder rope attachment sets
- ▶ Rope handling and maintenance equipment
- ▶ Guide rope attachments
- ▶ Maintenance and refurbishment of existing rope attachment sets
- ▶ Compensating sheave wheels



FACE EQUIPMENT MECHANISED SETS

Becker Mining are increasing our active participation on the international stage to support and service mechanical longwall equipment. Our capabilities in this area are on the rise with an excited team in Europe enabling delivery of longwall design, production and maintenance.

Becker Warkop's construction department have recently been involved in developing material on a technical project of powered roof support for an Australian underground coal mine. Powered roof support with 5000mm operation range was designed and tested in accordance with Consol requirements for 60,000 cycles.

Becker Mining have successfully implemented mechanical longwall equipment on projects and operations globally. We work closely with our customers in preparation of the designs and technical proposals and provide full technical support to bring the contract to completion and ongoing support through the warranty period.

CABLE REPAIRS

Becker Mining Australia manages cable repair and maintenance service from highly trained and experienced cable repair technicians.

Cable repairs are supplied fully tested with or without plugs and terminations.

Cable terminated and repaired under various licensed workshops

Cable repair services provided include:

- ▶ HV cable testing
- ▶ Cable repairs –trailing and distribution
- ▶ Cable sales – new and second hand
- ▶ HV plug fittings and supply
- ▶ Cable maintenance packages
- ▶ Couplers and plug fitting
- ▶ Cable management services



Other Mechanical Products

- EWP Platforms
- Stone Dust Platforms
- Crib Rooms

BECKER EQUIPMENT HIRE

Pay as you go. If equipment is only required for a period of time a great option is to hire.

Hire reduces the capital expenditure required and also provides warranty over the hire period.

If the purchase lead time is not acceptable, hire equipment can be made available within the month.

Becker has an extensive equipment hire fleet for the mining and tunnelling market.

Available equipment includes:

- Energy Distribution Boards (8 outlet DCBs)
- Substations
- Auxiliary Ventilation Fans
- Drill Rig
- Switchrooms
- Compact Tunnel Substations
- Power Cables with Couplers
- Tunnel Communication Systems

IBMS INTEGRATED BUSINESS MANAGEMENT SYSTEM

Becker Mining Australia incorporate Occupational Health & Safety, Environmental and Quality within its Integrated Business Management System (IBMS). The IBMS has been designed to function in accordance with the principles conveyed in AS/NZS 4801:2001, ISO 14001 and ISO 9001. The principles are based around these 10 concepts:

1. Customer Focus
2. Leadership
3. Involvement and Empowerment of our People
4. Process Approach
5. Systematic Approach to Management
6. Continual Improvement
7. Fact Based Approach to Decision Making
8. Mutually Beneficial Supplier Relationships
9. Risk Based Thinking
10. Performance Measurement

OCCUPATIONAL HEALTH AND SAFETY

Becker Mining Australia is fully committed to:

- Ensuring a safe workplace for its employees
- Continually striving to improve safety performance
- Instilling a cultural mind set in the company to achieve an accident and incident free work environment.

This is achieved by identifying and rectifying any unsafe work conditions and practices, as well as promoting safe working practices.

Our teams recognise that in order to achieve an outstanding safety performance and best practice

we must have a proven systematic safety system, a committed management and a pro-active workforce. Becker Mining Systems has implemented a comprehensive safety system across the business in full compliance with Workplace Health & Safety legislation. All employees and sub-contractors are fully engaged in the system (which is based on AS/NZS 31000) and are aware of their responsibilities through company and project inductions, toolbox meetings, Safe Work Methods (SWMs) and/or Job Safety and Environment Assessments (JSEA).

Safety audits are conducted at site level, and independent third-party audits of our Integrated Business Management System are conducted to ensure ongoing compliance.

ENVIRONMENTAL

Becker Mining Australia understands the potential sensitive nature on our company facilities and project locations, and the possible impacts and interfaces with the local environment and the communities. Our project planning specifically identifies potential impacts, risks and compliance requirements as they relate to the project involvement, ensuring appropriate proactive actions are implemented to achieve zero incidences and to fully comply with ISO14001 Environmental Management System.

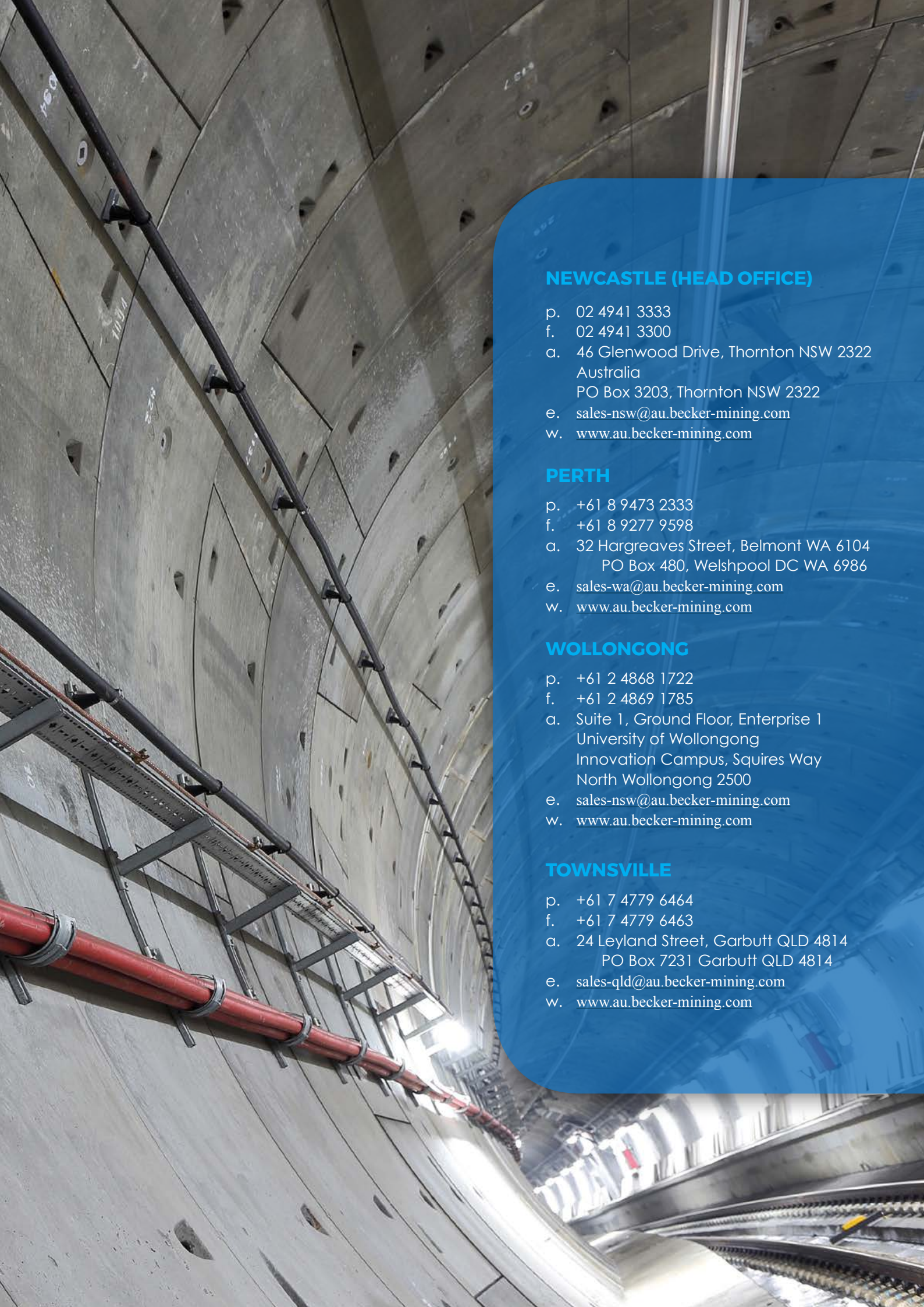
QUALITY ASSURANCE

Becker Mining Australia is registered as a quality certified company with SAI Global. Our quality system and procedures are certified for compliance across Australia to ISO9001:2015. Independent third-party audits are conducted across our system, and structured internal quality audits are performed to ensure ongoing compliance and continuous improvement to our systems and procedures. A specific quality plan is developed for each of our projects and covers all aspects of administration, management, work methods, document control, inspection, test and compliance check sheets.

Our Quality System and the system documentation are subject to continual review. All users are able to electronically submit change proposals to the System Manager, who distributes such requests to other users for review/comment/approval prior to any subsequent implementation.

Becker Mining Australia prides itself of the delivery of quality projects, continuing to provide excellence to all our clients throughout the sector.





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