



MINING, BULK MATERIALS & MINERAL PROCESSING

At Engenuity Solutions, we pride ourselves on our ability to provide high-quality electrical engineering services for miners, bulk materials handlers & processing plant operators. We:

- Have a proven track record of using our in-depth knowledge to provide you with the best design at the lowest cost.
- Have a deep understanding of working plant operational requirements, enabling us to design safe & practical systems.
- Collaborate with our mechanical & process engineering partners to provide you a seamless, integrated solution.
- Bring extensive and insightful experience from a variety of industries to the table.
- Value our customers and base our success upon satisfied clients.

OUR SOLUTION OFFERING

Mining, mineral processing and bulk materials handling are critical operations in today's world, providing us with the raw materials we need to maintain and enhance our standard of living. These operations require dedicated & complex electrical, instrumentation and control systems (EIC) to ensure maximum productivity, up-time and safety.

Engenuity has extensive experience in providing EIC design services to our clients, ranging from completing feasibility studies and detailed design to upgrading and commissioning plant and equipment throughout Australia and the world.

We specialise in our understanding of process requirements and operations for a range of commodities including: Gold, copper, iron ore, coal & mineral sands.

We seek to provide a one-stop-shop of EIC design, with some of the services we offer being:

- Detailed power system analysis using state-of-the-art software, including arc flash analysis
- High voltage and earthing system design
- LV and ELV system design, from MCCs to instrumentation, distribution boards to PLC systems
- Functional specifications and P&ID design
- Tender reviews and recommendations
- Construction support and commissioning assistance

We can also leverage our renewable generation and energy management system (EMS) expertise into our designs, giving you the ability to minimise your losses & power bills and maximise your energy efficiency – putting us and you one step ahead of the competition.



SAMPLE PROJECTS

Chemours – Jesup Processing Plant Design (GA, USA)

Detailed design and construction support for a wet concentrator plant (WCP) and concentrate upgrade plant (CUP), including HV & LV reticulation, MCC & switchroom design, instrumentation and control system specification, power systems studies and electrical vendor tendering coordination. Completed as a supply partner with Mineral Technologies.

Egyptian Black Sands – El Burullus Processing Plant Design (Egypt)

Detailed design and construction support for a floating WCP and mineral separation plant (MSP), including HV & LV reticulation, MCC & switchroom design and instrumentation and control system specification. Completed as a supply partner with Mineral Technologies.

TiGa – Barrytown Definitive Feasibility Study (NZ)

Definitive feasibility study ($\pm 10\%$) CAPEX and design, including LV reticulation, MCC & switchroom design, instrumentation and control system specification, P&ID design and drafting, control philosophy review and electrical vendor tendering coordination. Completed as a supply partner with IHC Mining.

Roy Hill – Stanley Port Berth 3 Design (WA)

Detailed design of additional 4 km of iron ore conveying including an innovative ‘piggyback’ overland conveyor to increase capacity from 60 Mtpa to 110 Mtpa. Our design included new high & low voltage reticulation, switchroom, substations, motor control centres, drives, instrumentation, PLC & control systems. Currently in progress as a supply partner with Aspec Engineering.



WHY ENGENUITY SOLUTIONS

Trusted experts - We are experts in our field and value the trust placed in us by our clients.

Innovative - We offer a holistic and innovative approach to our audits and investigations, maximising value from your assets while maintaining integrity and safety.

Mindset - We possess not only a depth of auditing expertise, but a breadth of experience in a variety of other industries which fuels our inventive thinking.

Solutions - We have a proven track record of delivering valuable & original solutions to complex & challenging problems.

Quality - We execute systematically and with discipline to ensure high quality; yet remain nimble enough to quickly respond to a project, market or technological change.

Outcomes - We work with you to find the best possible solution for challenges that others can't solve, delivering nothing less than the best.

