



**Quality Engineering to the
Mining Industry Since 1991**

www.PatersonCooke.com

About Us

Paterson & Cooke was founded as an engineering consultancy in 1991 by Angus Paterson and Robert Cooke specialising in slurry pipeline and mine backfilling consulting services to the South African mining industry.

More than three decades later our expertise has grown to include slurry pipeline systems, tailings & mine waste, mine backfill, mineral processing, mine services, marine pipelines systems, and laboratory services.

Our reputation as global leaders in this industry is directly attributed to the work of our diverse team of world-class engineers and specialists operating out of nine offices across five continents. We currently have offices in Australia, Canada, Chile, South Africa, Spain, Sweden, the United Kingdom, and the USA. Six of these offices have comprehensive laboratory testing facilities - these are in Australia, Canada, Chile, South Africa, the United Kingdom, and the USA.

Mineral Processing

With declining feed grades, increasingly challenging and problematic ores being processed, and a drive for more sustainable mining practices, the modern process plant needs to adapt. Often this means adopting newer and novel technology or modifying and/or optimizing the process flowsheet. From early-stage conceptual studies through to construction, commissioning and training, P&C can provide solutions every step of the way. Our engineering is backed by in-house laboratory testing to assist in ensuring novel process solutions which are cost effective and operationally robust. Our range of services includes:

- Site audits
- Site feed trials
- Instrumentation and process control
- Process optimisation and upgrades
- Metallurgical test programs
- Operations planning
- Process modelling
- Flowsheet development
- Debottlenecking studies
- Conceptual, basic & detailing engineering
- Commissioning support
- Operator training
- Qualified persons (QP) for technical reports

Group Capabilities

Engineering Services / Qualified Persons (QP) for Technical Reports

At Paterson & Cooke, we pride ourselves on being at the forefront of mineral processing engineering, offering comprehensive support across every phase of project development. Our dedicated team, comprised of internationally based experts, includes multiple Qualified Persons (QPs) who bring a wealth of knowledge and experience to the table. From the early stages of conceptual and feasibility studies to the intricacies of detailed engineering, we are committed to ensuring that your projects transition smoothly from design through to commissioning and operation.

Our top-tier mineral processing engineering services are designed to provide a bottom-to-top understanding of the industry's complexities. We are committed to delivering solutions that are not only reliable but also adhere strictly to all regulatory requirements. Whether your project is in its initial planning phases, undergoing an evaluation of the base design, or navigating through intricate engineering specifications, our expertise serves as steadfast assurance of quality and precision throughout the entire project lifecycle.

With a keen awareness of the evolving landscape of mineral processing, we bring innovation, efficiency, and a forward-thinking approach to address the unique challenges posed by each project. Paterson & Cooke's dedication goes beyond meeting expectations; we aim to set new benchmarks in the industry, providing tailored solutions that propel your project toward success. Your partnership with us will ensure a seamless integration of expertise, reliability, and compliance, making Paterson & Cooke the trusted companion for your mineral processing engineering needs.



Process Modelling / Flowsheet Development

The basis of successful mineral processing lies in effective flowsheet development and process modelling, areas where Paterson & Cooke excel. We specialize in translating complex geometallurgical systems into optimized, efficient processes. Our team combines the power of cutting-edge software and industry-specific knowledge to craft flowsheets that will maximize operational efficiency and production. Whether it is a greenfield or brownfield project, our process modelling solutions are tailored to meet your specific mineral needs.

Process Optimization (Debottlenecking Studies) & Site Audits

Process operations often face challenges related to changing orebodies or equipment inefficiencies, creating unforeseen bottlenecks. Periodic reassessments of a plant's performance become necessary to ensure that the most appropriate operating conditions and technologies are being used for current and future mine plans.

Our process optimization expertise, together with thorough site audits, allows us to identify and rectify these issues, reestablishing control of the circuit baseline. The site audit process provides a holistic view of the facility, enabling us to implement targeted solutions for process improvement that can make a substantial impact by increasing throughput and minimizing operational costs.

Commissioning Support / Operator Training

Paterson & Cooke also offers comprehensive commissioning support services to ensure a smooth transition from construction to operation. The commissioning phase of mineral processing plants is critical to the success of the plant. Our expert guidance and operator training programs empower your team with the knowledge and skills necessary to run the plant efficiently and safely by working with the operating team through pre-commissioning, wet commissioning, and full commissioning/start-up phases.

Each phase requires different sets of procedures with varying considerations for safe and effective operations. Paterson & Cooke is able to develop these procedures for various unit operations and ancillary systems and provide hands-on support through each of the commissioning stages.

Once the mineral processing plant is operational, we offer a diverse range of training topics developed by our experts. These training sessions are aimed at enhancing the capabilities of your operation's team, covering aspects that contribute to sustained efficiency and safety. Our training programs are flexible, allowing for on-site delivery and customization based on the specific needs and dynamics of your operation. This commitment to ongoing education ensures that your team remains well-equipped to handle the challenges of day-to-day plant operations effectively.

Metallurgical Test Programs & Laboratory Services

Precise metallurgical testing is the foundation of any successful mineral processing engineering project. Our metallurgical test programs, conducted in our state-of-the-art laboratory facilities, provide valuable insights into ore characteristics and processing requirements. We develop metallurgical test programs for all phases of development, to be conducted on site or in one of our many international laboratories. Our laboratories provide a wide range of testing capabilities, from understanding comminution characteristics and bench-top extraction and variability testing, through to large-scale pilot test campaigns.



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OUR VISION

To be one of the most respected
independent engineering companies
and sought-after employers
in the mining industry