



Audits and Optimisation for Dewatering and Classification

Maximising productivity and availability while minimising costs for any dewatering or classification circuit, especially ones that utilise filtration technology, requires specialised knowledge and in-depth experience. Our expert team provides comprehensive on-site audits for mine operators, focusing on identifying opportunities to improve the capacity, efficiency, operation and maintenance of your processes.

What We Offer

- **Preventative recommendations** - Recognise potential issues and provide proactive solutions.
- **Troubleshooting** - Identify and address issues that are affecting the performance of your system.
- **Debottlenecking** - Audits reveal and resolve process and mechanical constraints that limit productivity.
- **Optimisation** - Fine-tune your system targeting a more streamlined and cost-effective operation.
- **Operation and Maintenance Audits** - Improving operation and maintenance practices is one of the best ways to maximise the productivity of your assets and reduce life cycle costs. Our audits aim to minimise manpower, spares, and consumable costs while maximising equipment and systems availability. Evaluations include manpower studies, operator and maintenance personnel proficiency, and maintenance and preventative maintenance procedures. Consumables reduction opportunities such as filter cloth and flocculant usage are identified and quantified.

Service Scope

- **Equipment and Process Audits** - Our audits optimise your existing dewatering and classification equipment and processing systems to maximise your return on investment. Audits include evaluations and recommendations for all equipment and instrumentation, including thickeners, filters, feed



- **Performance Reporting** - Comprehensive reports with key findings, benchmarking between industry standards and similar operating facilities, improvement opportunities with actionable recommendations are provided.

If you're looking to optimise your dewatering and classification systems, consider reaching out to our team of experts to find out how we can support you in making informed improvements that can benefit your operations.

Why Choose Paterson & Cooke?

Built on decades of knowledge and experience, we are a forward-thinking company driven by our passion for being the best at what we do.

- **In-Depth Analysis** - We provide a detailed assessment of your current system, offering actionable insights and recommendations.
- **Customised Solutions** - Tailored, practical strategies that address the specific needs of your operation, considering site conditions and operational goals.
- **Measured Improvements** - The focus is on achieving tangible improvements in system performance and reducing downtime and operating costs.

Case Studies:

Thickener Audit - Copper Tailings

An audit was conducted on a high-density tailings thickener experiencing high rake drive torque issues and underflow solids concentrations. The audit recommended operating a shear thinning loop on the thickener underflow instead of using dilution water to control the rheology of the slurry pumped to the TSF, which solved both issues.

Filtration Audit - Copper Concentrate

A pressure filtration audit was conducted for a large copper operation to improve concentrate cake moisture levels and production capacity. An expert assessment of the filters led to specific recommendations improving the process design, filter operation, and filter maintenance procedures.

Cake moistures were significantly improved and cycle times reduced which increased concentrate production. Additionally, recommendations for new equipment to provide a long-term, sustainable solution that meet the client's future operations were outlined.

Group Capabilities

Tailings & Mine Waste
Long-Distance Pipelines
Mine Backfill
Mineral Processing
Mine Services
Bulk Water Supply
Dredging & Marine Pipelines
Laboratory & Test Work
Engineering Services

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