



RE-ENGINEERING POSSIBILITIES

HYDRAULIC REPAIRS AND MAINTENANCE SAVES CUSTOMER CRITICAL HOURS

10

DAY TURN TIME PER
CYLINDER

11

TASKS COMPLETED PER
CYLINDER

40

DAYS SAVED ON
PROJECT

THE CHALLENGE

A multinational mining company approached Austchrome to overhaul a large quantity of their underground cylinders from one of their coal mines in North Queensland.

The leg cylinders were a critical part of mine operations and were often pushed to maximum limits when in use. It was crucial that the cylinders underwent increased torque testing to align with new OEM specifications. In addition to the testing specification, the job was time-critical and required an urgent turnaround time.

THE SOLUTION

During discussions of the project, the key objectives were identified which included an increased leg cylinder bench pump output to achieve a greater torque from the bench motor.

This now aligns with new OEM and client requirements. During the risk assessment, it was clear that custom tooling was required to complete the scope of work.

Austchrome manufactured tooling and safety barriers to ensure the project could be executed with no increased risk to operators. The design and manufacture of the barriers enabled the operators to effectively perform tasks and allow sufficient viewing of the cylinder to check for any leaks whilst undergoing pressure testing.

Cylinders are currently pressure tested in the full-extend, full-retract and mid-stroke positions at a predetermined measure in excess of 400 bar. Cylinder pressure is held for a minimum of five minutes during testing to ensure it does not decrease. Customised tooling was manufactured to complete a preassembly pressure test on the second stage rods to ensure repair work on dome head ports was sufficient. Second stage rods are now pressure tested to a predetermined measure in excess of 400 bar prior to assembly.

On this job, the time frame was urgent. This scope of work would typically require 14 days per cylinder to complete, however, Austchrome scheduled shifts and overtime accordingly and completed the job with a turnaround time of 10 days per cylinder.



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