



CASE STUDY

BoomerHD XHD Series HEAVY DUTY ROCKBREAKER FOR UNDERGROUND MINING

Location:
Papua, Indonesia

Operation Type:
Gold Ore & Copper

Equipment Solution:
BoomerHD XHD Series

Scope of Project

Due to ongoing maintenance problems with their existing Rockbreaker, Transmin was approached to design, engineer and fabricate a heavy duty Rockbreaker that could handle very competent, abrasive rock underground at a mine based in Indonesia.

Working in a high vibration, high humidity and dust laden environment, the Rockbreaker's job is to break oversize and bridging rock in, around and over the gyratory crusher. It must be able to reach, manipulate and break rocks, with the hammer operating in a vertical position.

Designed, engineered and fabricated within 30 weeks, Transmin delivered ahead of time and on budget - easily meeting the Clients expectations and requirements.

To date Transmin has supplied the client with over 13 BoomerHD Rockbreakers which all utilise the same or similar cylinders, hammers and power packs which make for good commonality for spares on site.

The XHD series supplied is considered to be the heaviest duty Rockbreaker presently being manufactured.

Project Outcome

Transmin's standard design of cylinder rod-ends with full penetration butt welding and 100% ultrasonic testing were supplied. The cylinder rods have HVOF (High Velocity Oxygen Fuel) coatings on surfaces to provide wear characteristics far superior than chrome plating for mining conditions.

Transmin used custom designed boom and jib locking valves specifically to suit Transmin's inhouse designed cylinders. These bolt directly onto a machined port to allow the best possible safety that can be provided.

Hydraulic test points with quick connect couplings were fitted throughout the system at all critical areas, making testing and troubleshooting very easy to perform without spillage.

The boom system also incorporates Transmin's proven "Taper Lock" style pin and bush locking system. The system was designed to enable the tapered caps at each end of the pin to provide rigid support, even though the pins may become worn. The taper lock system also allows easier maintenance and access to the pins.

To date the boom system is working better than expected - aiding plant productivity and reducing downtime.

Key Features:

► Heavy Duty Design

Decades of testing and analysis has allowed Transmin to compare calculated loads with actual readings; continuously refining our internal design programs to deliver the most reliable boom systems on the market.

► Boom & Jib Locking Kit

These ensure that the boom and jib do not collapse if a hydraulic line is severed.

► Heavy Duty Slew - motion control

The unique slew motion control valve brings the rock breaker to a controlled stop when the slew control is released and delivers optimum torque through the drive train, improving wear rates and reliability.

► Radio Remote Control

Allows precise movements whilst remote operating maximises user visibility and personal safety.

► Taper Lock Bush Assembly

Ensures that the pins remain correctly aligned, whilst preventing any suffering from unforeseen bending loads.

► Custom Boom Design

Transmin has the engineering capability to custom design booms to any requirements.

► Custom Cylinder Design

Transmin cylinders are specifically designed and built using special rod coatings and full strength rod end attachments to provide superior strength and extended life under arduous conditions.



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