

Mining Maintenance Management

Copper Mine Maintenance Audit



Location

Chile



Client

Cia. Minera Doña Ines de Collahuasi



Expertise

Copper Mine, Maintenance Audit, Conveyor, Bulk Transportation, Concentrator Plant, Operating Performance Improvements

Our Services

Project:

- Audit of the maintenance status of the conveyors within the mine and the concentrator.

Scope:

- Audit of the entire system considering operation and maintenance of conveyors
- Suggest improvements and corrections in order to increase productivity



Project description

Collahuasi copper mine is situated in northern Chile, about 180 km southeast of the port of Iquique, at an altitude of 4,000 m. The operating company is Cia. Minera Doña Ines de Collahuasi.

RWE was appointed to conduct a maintenance audit aiming to improve operating performance. Our services include a status review of maintenance practices of conveyor and concentrator plant. Our chief maintenance planner identified areas for improvement and made recommendations for various improvement strategies.

Three inspections were carried out by RWE to indicate possible causes of the conveyor damages and production lacks. Various measures were recommended to improve the cooling systems of gearboxes and drive motors, to carry out professional repairs in steel structures and to reinforce the foundations. The elimination of failures in gearboxes bearings and gears was recommended to lower the stimulation of vibrations. Also the installation and commissioning of further measurements to increase the operational safety and productivity was carried out.



The measurements covered:

- Removal of the tensioning tower of CV-206 and the installation of an active winch
- Installation of backstops in CV-206 and CV-207
- Installation of an overflow chute in CV-206
- Adjustment of the brakes
- After commissioning the conveyor line was proved to handle the desired transport capacity of 11,000 t/h. The performance increase of the overland conveyor line was almost 30%.

