



HIGHLIGHTS

- 1000 Series mono-spring failsafe, direct-acting hydraulically-released caliper brakes
- Custom hydraulic power units manufactured and tested in-house
- Three braking systems share the same design, allowing for standardization and reduced spare parts inventory
- Locally-based Svendborg Brakes technicians assisted with on-site installation and commissioning
- Custom-fabricated pedestals feature hard hydraulic piping

Application Success Story



1000 Series Braking Systems Copper Mine Gearless Ball and SAG Mills

PROBLEM

A copper mine located in the mountains of central Chile required braking systems for its gearless SAG mill and twin gearless ball mills. The large open-pit mine produces approximately 45,000 tonnes of copper annually.

SOLUTION

The braking systems for each of the three mills consist of Svendborg Brakes 1000 Series mono-spring caliper disc brakes controlled by a Svendborg gearless mill hydraulic power unit (HPU).

The 1000 Series braking systems provide a minimum of 11,414,975 Nm braking torque for the 40 ft. diameter, 26 ft. long 32,000 HP gearless SAG mill and 10,584,241 Nm braking torque for each of the two 27 ft. diameter, 46 ft. long 27,000 HP gearless ball mills.

The spring-applied, hydraulically-released brakes are used in the event of a power failure to prevent bearing damage, or in an emergency stop, protecting against further damage to equipment or personnel. The brake system is also used to hold the mill and inch/creep the mill into the correct position/angle for easy and safe liner replacement or general mill maintenance.

The custom-designed Svendborg Brakes hydraulic power units supplied feature failsafe 2-stage controlled braking and a parking/service safety valve. The two braking modes can be controlled locally on the HPUs control panel or remotely via the end user's main PLC. The HPUs are manufactured in-house and are equipped to monitor oil level and temperature, motor and pump function, and operational pressure.

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