

Application Success Story



BSFH 520 Braking System with SOBO® Copper Mine Conveyors



HIGHLIGHTS

- BSFH 520 monospring brakes
- 134,354 ft.lbs. (182,160 Nm) total nominal braking torque
- Unique soft braking control (SOBO)
- Hydraulic power units manufactured in-house

PROBLEM

Complete braking systems were needed for use on a series of three downhill in-line conveyors at a large copper mine in Chile. Two of the conveyors are 1600 m (1 mile) long and the third is 700 m (.4 mile) long. The conveyors can transport 5,000 tonnes/hour with a belt speed of 5.5 m/s (12.3 mph). The braking systems provide emergency stopping and parking functions.

SOLUTION

Each conveyor braking system supplied by Svendborg Brakes supplied braking systems for all three conveyors. Each system consists of two model BSFH 520 caliper disc brakes, a SOBO control, a hydraulic power unit and a disc.

The spring-applied, hydraulically-released BSFH 520 brakes act on a 1.6 m (5.2 ft.) diameter disc mounted on the low-speed side of the drive shaft. The brake system provides up to 134,354 ft.lbs. (182,160 Nm) nominal braking torque to stop the conveyor in a controlled manner over a 50-second time period.

Svendborg's unique soft braking control (SOBO) provides a range of safety and durability benefits in heavy industrial applications including mining. Deceleration and the stopping of heavy conveyor loads is critical, and controlled braking is essential for a significant reduction of torque peaks, preventing damage to the belt and mechanical components.

Manufactured in-house, Svendborg's specialized hydraulic power units are engineered to meet any mining requirement. In order to minimize downtime, the braking systems are equipped to monitor oil level and temperature, motor and pump function, and operational pressure.

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