Industry:
Mining

Application:
Cone crusher at gold mine

Problem/Requirement:
Torque overloads due to wet ore cause expensive unforeseen down-time

Solution:
Rexnord Autogard 820 Series Torque Limiter adapted to offer reliable overload protection to a pulley drive

Result:
Rexnord Autogard 820 Series Torque Limiter, with customized pulley drive attachment, allows for a quick reset after a torque overload, and decreases downtime caused by bearing failure and shaft breakage

Rexnord Autogard Torque Limiters Reduce Downtime at Gold Mine

Mining Cone Crusher Applications

Cone crushers are used in a gold mine to break down ore at the primary, secondary and sometimes tertiary stages.

The ore is processed wet which causes blockages and torque overloads resulting in production stops. In extreme cases this can lead to belt and shaft breakages, resulting in unplanned downtime.

Electrical overload protection was previously in place but was found to be inadequate, causing extended stoppages to production. Mine personnel turned to Rexnord for a reliable mechanical overload protection device.

Cone crusher application showing v-belt pulley with Autogard connection.

Rexnord Autogard 820 Series Torque Limiter

The Rexnord Autogard® 820 Series Torque Limiter has been designed to meet the emerging need for overload protection on very high-torque drives in heavy-duty industry applications, and is designed using a modular principle which enables the trip torque capacity to be set to virtually any value. Individual torque limiting elements are then mounted around the periphery of the torque limiter. The overall torque capacity is dependent upon the radius at which the modules are located and the quantity of modules used. Each module is set to give repeatable and reliable disengagement in the event of a torque overload.

To prevent costly drive modifications for the customer, Rexnord designed a custom-built Autogard 820 Series Torque Limiter with a v-belt pulley assembly to fit the existing drive arrangement. This allowed mine personnel to quickly reset the Autogard Torque Limiter without having to use specialized tools. As a result, disruptions to production caused by torque overloads were minimized.

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