

Schaeffler Global Technology Solutions

Raw material extraction and processing

KCGM Mt Charlotte, Australia

FAG Sliding Sleeve Housing replaces Sliding Base Housing

KCGM Pty Ltd. (Kalgoorlie Consolidated Gold Mines) has its headquarters in Kalgoorlie, Western Australia. The company owns a number of gold mines, including the Fimiston Open Pit (Super Pit) Mine and the Mt. Charlotte Underground Mine. Together, they produce 850 000 ounces (approximately 26 350 kg) of gold every year. Mining is undertaken 24 hours a day, 365 days a year.

Challenge for Schaeffler

The tube mills are exposed to adverse environmental conditions; high temperatures during the day and low temperatures at night. A local company had equipped the tube mill with a sliding base housing at the floating bearing location. Bearings were failing on an annual basis; this always meant that production was disrupted for several days at a time.

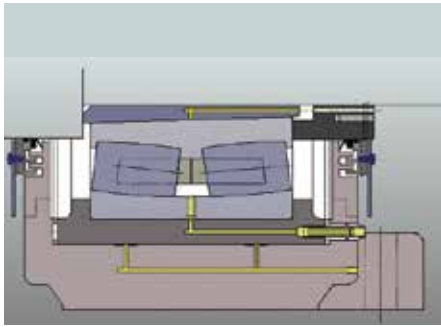
Schaeffler Solution

Schaeffler has supplied a complete package consisting of sliding sleeve housings and spherical roller bearings. Now floating bearing displacement no longer takes place between housing and sliding plate but between sliding sleeve and housing bore. Lubricant is constantly fed between sliding sleeve and housing bore, ensuring a low coefficient of friction when thermal expansions take place inside the tube mill.



Technical Information about the Plant

Machine:	Tube mill (SAG mill) for ore processing in gold mine
Length:	7 000 mm
Diameter:	4 700 mm
Drive power:	3 000 kW
Speed:	14 U/min
Load acting on locating bearing:	1 600 kN
Load acting on floating bearing:	1 800 kN



FAG spherical roller bearing



Tube mill



Tube mill

Customer Benefit

Now bearings are no longer failing on an annual basis. As there have been no more shutdowns to carry out repairs, KCGM has been able to increase its production volume. In this way, the customer no longer needs to shut down the plant for up to two days at a time to replace damaged bearings, saving an average downtime cost of approximately 30 000 euros per hour.

What's special

Sliding sleeve housings are a long-lived, field-proven machine element for large rock and ore crushing machines. This design principle has been especially designed for these applications and can be used universally for these machines.

Technical Information about the Solution

Sliding Sleeve housing

Locating and floating bearings:

FAG spherical roller bearing 249/1180