Eliminating costly production losses due to conveyor pulley breakdowns

SKF Three-barrier solution

A gold mine improves output by 1.4 million USD per year thanks to contamination-resistant SKF Three-barrier solutions in the conveyor pulleys.

A gold mine in Indonesia was suffering from frequent breakdowns in the conveyor used for bringing up the ore from the mine. Typically, the pulley bearings only lasted for some 8 months before breaking down due to heavy contamination and loads. As it takes 4 hours to change a bearing, every bearing failure was causing considerable unplanned production loss.

To minimize downtime and production losses, the gold mine owners wanted to extend the service life of their pulley bearings to match the 2–3 years' service life of the other bearings in the conveyor. In this way, all bearings could be exchanged at the same time, minimizing downtime and corresponding production losses.

The gold mine owners found their solution in the contamination-resistant SKF Three-barrier solution. With a sealed SKF spherical roller bearing, a SNL 3048 housing complete with taconite seal and an end cover, the SKF Three-barrier solution triples the service life of conventional open pulley bearings with labyrinth seals. In addition, the SKF Three-barrier solution is virtually relubrication free.

Application	
Type of mine	Gold mine
Temperature	< 45 °C
Speed	73–81 r/min
Load	High
Contamination	Slurry containing silica

Comparison	Before	After
Pulley bearing technology	Conventional pulley bearing – Open bearing – Labyrinth seal	SKF Three-barrier solution – Sealed spherical bearing – SNL 3048 housing (grease barrier) – Taconite seal with end cover
Bearing service life	Failure after 8 months	No failure after 24 months
Number of replacements per planned maintenance interval	3 changes, i.e. two extra stops	1 change, i.e. no extra stop
Lubrication intervals	Regular re-greasing	Virtually relubrication free

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