INSOCOAT bearings help prevent damage and downtime caused by stray electric currents

Benefits

- **Extend bearing and motor service life**
- **Improve motor reliability and uptime**
- **Reduce unplanned downtime**
- **Cut maintenance and repair costs**

Typical applications

AC and DC motors that drive a range of equipment, including:

- **Compressors**
- **Crushers**
- **Fans**
- **Grinding mills**
- **Hoists**
- **Pumps**
- **Separators**

Ceramic coating protects bearings, electric motors and plant uptime

Bearings in many electric motors at work inside cement and other mineral processing plants are prone to electrical erosion and pitting. Passage of electric currents can damage the rolling elements and raceways of steel bearings and degrade bearing lubricant. Eventually, the damage can lead to failed bearings, unplanned downtime, increased repair costs and lost productivity.

To guard against these costly failures, plants often install slip rings or insulated housings – an expensive, time-consuming solution at best. INSOCOAT bearings from SKF offer a much simpler, more affordable fix.

The INSOCOAT solution from SKF

All-steel INSOCOAT bearings feature an electrically insulating plasma-sprayed ceramic coating that keeps stray electric currents from passing through the bearings.

Depending on the bearing size, this coating is applied to the outside surface of the bearing inner or outer ring, and is virtually insensitive to moisture, high operating temperatures and chemicals.

Along with protecting against electrical erosion damage, INSOCOAT bearings also help prevent lubricant degradation resulting from electric current discharge. Because they have the same boundary dimensions and tolerances as standard bearings, INSOCOAT bearings do not require special installation procedures or expensive equipment modifications.

Suitable for AC or DC motors, generators and related equipment, INSOCOAT bearings can help plants drive reliability and productivity for a wide range of equipment.

In the front, INSOCOAT deep groove ball bearing with coated outer ring, suffix VL0241.

At the back, INSOCOAT deep groove ball bearing with coated inner ring, suffix VL2071.

For more information about SKF products and solutions for the mining and mineral processing industry, contact your SKF representative.

Increase the return on your maintenance investment with SKF.

The whole idea behind the SKF 360° Solution is to help you get more out of your plant machinery and equipment investment. This may mean lowering your maintenance costs, raising your productivity, or both! Here's an example of the SKF 360° Solution at work in the mining and mineral processing industry.

INSOCOAT bearings from SKF save cement plant €55 000

The challenge

A cement plant based in South East Asia has been experiencing excessive premature bearing failures on a 288 kW AC motor that powered a production-critical separator in a vertical roller mill. Failures were occurring once every three to six months, causing an average of six hours of unplanned downtime and significant productivity losses.

Looking for a way to boost uptime while cutting repair and lost productivity costs, the plant looked to SKF.

The SKF solution

SKF engineers determined that stray electric currents passing through the motor bearings were causing the failures. To alleviate the problem, SKF installed INSOCOAT bearings – an INSOCOAT bearing with a coated outer ring on the non-drive side, and an INSOCOAT bearing with a coated inner ring on the drive side.

The result

The INSOCOAT bearings outlasted the conventional bearings by three years, more than tripling service life and saving the plant €55 000 in lost productivity. After subtracting the cost of the SKF solution, the productivity gains represented a 6 122% return on investment!

Summary over 3 years*

Lost productivity costs	**€56 000**
Initial bearing solution investment	**€1 000**
Total savings	**€55 000**
Total ROI	**6 122%**

* All numbers are rounded off and based on customer estimates. Your particular cost savings may vary.

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