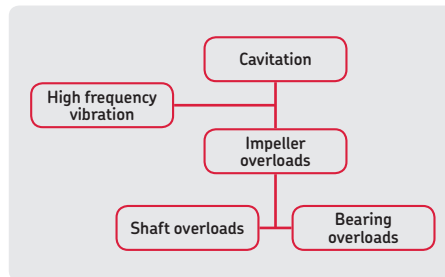
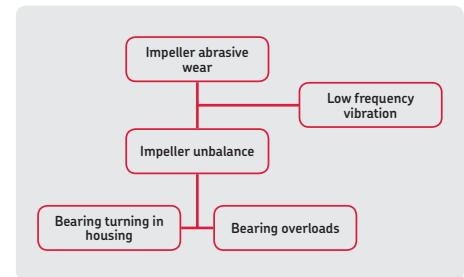


The Copperhead solution for slurry pumps

Reduce unplanned downtime and repair costs by identifying problems early



Consequences of cavitation



Consequences of impeller wear

Abrasive wear, and either a clogged suction or discharge pipe are three recurrent causes of premature pump failure. With the SKF Copperhead fault detection system it is possible to detect problems and take corrective action before a expensive failure occurs.

Abrasive solids and corrosives moving through a slurry pump can cause excessive impeller wear. As the impeller wears, it creates an imbalanced condition that leads to excessive vibrations, and loss of pump performance.

A clogged inlet can cause the conditions for cavitation to occur, also resulting in excessive vibrations. These vibrations can be severe enough to damage the impeller, bearings and seals.

The third condition – a clogged discharge – can also cause major pump damage. However, the damage is the result of excessive heat, which could lead to catastrophic failures.

The result of any of these conditions could be unplanned downtime, lost productivity and very high repair costs. With the SKF Copperhead fault detection system, operators can detect problems early and avoid unexpected, failures.



The Copperhead System

The SKF Copperhead solution for slurry pumps includes a vibration / temperature sensor mounted on the bearing housing. The sensor is connected to two transmitters. One transmitter is set to detect high frequency vibrations through SKF Acceleration Enveloping technique. The other monitors low frequency Velocity vibrations. The same system can be used to detect temperature.

When the sensor detects excessive vibrations, which can be caused by either an impeller imbalance or a clogged or closed inlet, the transmitter alerts the operator. The system will also alert the operator if operating temperatures exceed a predetermined value.

The SKF system solution

In addition to the Copperhead condition monitoring system, SKF offers complete system solutions for slurry pumps. From specialized bearing and seal arrangements to lubrication systems, bearing installation tools and techniques, SKF offers a single source of responsibility for enhanced slurry pump reliability and performance.



Copperhead Features

- Vibration sensor with optional temperature capability
- Compact, rugged sensor
- Digital vibration / temperature transmitter
- Includes SKF acceleration enveloping technology

Benefits

- Accurately identifies high and low vibration frequencies
- Minimize unplanned downtime
- Increase productivity
- Increase mean time between failure (MTBF)
- Decrease repair costs

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Publication **6354 EN**

Printed in Sweden.

skf.com/mount

