



Detect conveyor idler faults with the SKF Idler Sound Monitor Kit

Benefits

- Early detection of faulty conveyor idlers
- Helps avoid unplanned downtime
- Helps avoid costly belt damage and hazardous repairs
- Offers safer, easier inspection compared to traditional conveyor belt walk-arounds
- Can be used as part of an Operator Driven Reliability maintenance programme

Typical applications

Conveyor idlers for:

- Aggregate, cement, metal ore, coal and minerals processing

Handheld unit uncovers idler faults earlier than other methods

Conveyors are an important part of a material conveying system in the mining and cement industries. Failure of an idler can lead to belt damage, expensive downtime and lost production.

The SKF Idler Sound Monitor Kit is a handheld monitoring device for early detection of faults in conveyor impact, support and return idlers. Using acoustic enveloping technology, the SKF Idler Sound Monitor Kit distinguishes between the sounds of a good idler and a faulty one even in high ambient noise environments. It detects faulty idlers earlier and more reliably than when a maintenance worker walks the length of the conveyor belt to listen or look for problems. The device also provides shorter measurement time and earlier fault detection than a thermographic camera.

The device has a simple to understand “traffic light” visual alarm display and headphones with audible condition alarm for fault detection. The kit includes a microphone encased in a rugged parabolic holder for aiming at the idlers. It is so easy to use that even inexperienced workers are able to detect faults with minimal training. Data can be downloaded from the device for subsequent review.

Safer and reliable detection up to 3 metres (10 feet) away while walking the belt

The SKF Idler Sound Monitor Kit provides maintenance workers with a safe to use and objective tool for idler inspection. The kit serves as an alternative to traditional “walk arounds” that depend on the skill of the worker to listen and recognize a faulty idler. The device can be used with one hand and, therefore, complies with safe procedures for three-point contact while working in a plant or mine.

The device helps workers detect faults earlier, avoid or limit belt damage and, therefore, avoid dangerous situations during belt repair. The operator can walk the length of the conveyor at a pace as fast as 2 km/hr (1.2 mph) and detect faulty idlers from up to 3 m (10 feet) away. Since the device can detect faulty idlers on the far side of the belt, there is no need to walk both sides of it. This positions the worker during the measurements at a safe distance from the moving conveyor belt.



SKF Idler Sound Monitor Kit detecting a faulty idler.



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.



SKF Idler Sound Monitor Kit

The main benefits of the SKF Idler Sound Monitor Kit are enhancing worker's safety, reducing downtime and avoiding maintenance costs. There are many scenarios in which the SKF Idler Sound Monitor Kit helps avoid maintenance costs. Three scenarios of conveyor belt savings using the SKF Idler Sound Monitor Kit are shown in the table on the right.

Scenario	End user expenses (USD)			End user savings **		
	Labour	Equipment (crane, vulcanizer, etc)	Materials	Savings	Return on Investment (ROI)	Pay off
2 x Splices* 60 inch wide splice kit	\$10 000	\$8 000	\$13 200	\$11 200	56%	Avoid two splices
Saddle* 60 inch wide belt (2 splices and 200 ft belt)	\$6 000	\$4 000	\$30 000	\$20 000	100%	Avoid one saddle
Replacement* 54 inch wide x 1500 ft long belt	\$9 000	\$12 000	\$145 000	\$146 000	730%	Avoid one replacement

* multi-ply steel cable conveyor belt
 ** approximate \$20 000 USD total investment (SKF Idler Sound Monitor and incidentals)
 Does not include lost production costs. Material surge pile is providing sufficient material.

© SKF is a registered trademark of the SKF Group.

© SKF Group 2010

The contents of this publication are the copyright of the publisher and may not be reproduced (even extracts) unless prior written permission is granted. Every care has been taken to ensure the accuracy of the information contained in this publication but no liability can be accepted for any loss or damage whether direct, indirect or consequential arising out of the use of the information contained herein. Any cost savings and revenue increases in this publication are based on results experienced by SKF customers and do not constitute a guarantee that any future results will be the same.

PUB 73/57 11051 EN · September 2010

Printed in Sweden on environmentally friendly paper.

Certain image(s) used under license from Shutterstock.com.

