

Challenge

A major mining company experienced costly bearing failures on an important piece of process equipment. The company requested NSK's assistance to reduce unexpected downtime and address increased productivity requirements.

Corrective Measures

NSK reviewed the application thoroughly and recommended an upgrade to NSK cast steel SAF housing units. To ensure optimum performance and extend bearing life, NSK provided technical support to ensure the units were installed correctly.

Cost Saving Description:

Issue



Product service – Used 52 replacement units per year x \$3,500 per unit = \$182,000



Maintenance cost to replace units = 52 units x \$396 labor cost per unit = \$20,592

Total Cost Per Year = \$202,592

NSK Solution

Extended product service, no replacement units for over a year = 0

Maintenance cost to replace units eliminated

Total Cost Per Year = \$0

Total Cost Savings = \$202,592

Result

ACTUAL COST SAVINGS

\$202,592

COST SAVING DESCRIPTION:

- ➔ *Reduced Maintenance*
- ➔ *Reduced Downtime*
- ➔ *Technical Service*

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1. Situational Analysis

- ➔ A major mining company was having severe bearing problems on their chain mill.
- ➔ The chain mill application is one of the harshest applications and subjects the bearings to contamination, heat and vibration.
- ➔ NSK was asked to review the application and determine an alternative to the existing competitor design.

2. Value Proposition

- ➔ NSK conducted a thorough application review including maintenance history to identify potential areas of improvement.
- ➔ NSK recommended a change to a cast steel SAF housing equipped with NSK HPS spherical roller bearings and taconite seals to improve protection against bearing contamination.

3. Value Implementation

- ➔ End-user accepted the recommendations and agreed that proper installation would be critical to the success of this upgrade to NSK.
- ➔ NSK provided technical support to ensure that the recommended bearings were installed correctly.

4. Measuring Value

- ➔ As a result of the recommendations made by NSK, the end-user was able to reduce the quantity of bearing units replaced on application.
- ➔ The upgrade to NSK SAF housing units took place in January 2006 – as of March 2007 there were no bearing failures.

5. Share Best Practice

- ➔ This case study was developed to highlight the value NSK technology provided through its authorized distributor to a valued end-user.