

Success Story

Industry: Steel and Metals

Application: Dust Extraction Fan

Cost Savings: € 88 955

Introduction

A customer experienced high temperatures within a dust extraction fan application on an ore preparation plant. The bearing temperature was cooled down at considerable cost by using compressed air. NSK Engineering carried out an Application Review including a temperature survey revealing major issues with the sealing as they were operating at high speed causing seal lip burn off and over lubrication which contributed to the high running temperature. NSK recommended using NSKHPS Spherical Roller Bearings with SNN Plummer Blocks and labyrinth seals, along with recommendations for correct lubrication intervals and quantities. A trial was conducted resulting in a considerable temperature reduction and therewith significant cost savings as the compressed air cooling was no longer required.

Key Facts

- Dust extraction fan application
- Overheating of bearings was compensated by expensive compressed air
- Incorrect lubrication amounts and frequencies
- NSK Solution: NSKHPS Spherical Roller Bearings with SNN Plummer Blocks and Labyrinth seals
- Significant cost saving generated by removing the necessity of compressor running



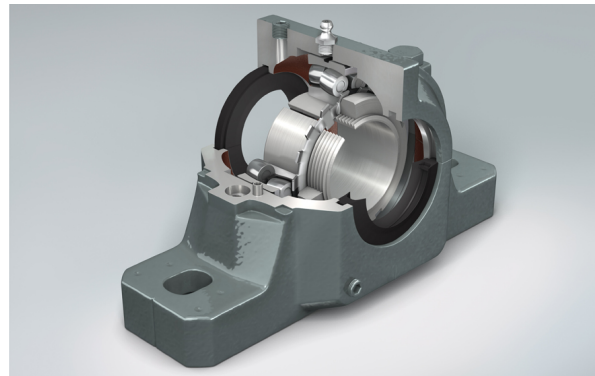
↑ Dust Extraction Fan

Value Proposals

- NSK engineering conducted an Application Review including a Temperature Survey and a Bearing Condition Report
- NSK engineering recommended NSKHPS Spherical Roller Bearings in combination with SNN Plummer Blocks and labyrinth seals and suggested changes in the lubrication amount and intervals
- Trial conducted, with NSK Engineering overseeing the installation and implementation of NSK recommendations
- The customer benefited from increased productivity, reduced maintenance costs and the removal of compressed air resulting in a significant cost saving

Product Features

- Equipped with 2 lubrication holes and 1 draining hole
- Solid corners in the base for locating pins
- Square shape and centre marks
- High grade casting - allows 5 different sealing arrangements: - Double lips seals / V-ring seals / Felt seals / Labyrinth seals / Taconite seals
- Easy assembly, easy alignment
- High rigidity (minimises deformation of the bearing seat)
- Comprehensive range of sealing & arrangements to match all needs
- Good heat transfer
- Same housing can be used with both double row self-aligning ball bearings or double row spherical roller bearings
- Low maintenance costs



↑ SNN Plummer Block

Cost Saving Breakdown

Before	Cost p.a.	NSK Solution	Cost p.a.
 Reduction of compressed air used to cool bearings	€88.955		
		No additional costs due to NSKHPS Spherical Roller Bearings with SNN Plummer Blocks and labyrinth seals	€ 0
Total Costs	€ 88 955		