

Success Story

Industry: Chemical and Pharmaceutical

Application: Conveyor

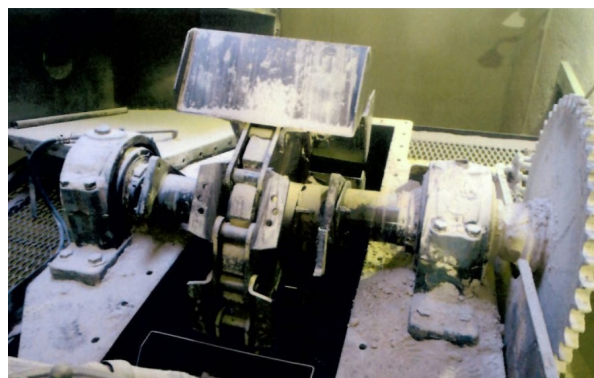
Cost Savings: € 7 000

Introduction

One potash processing plant had problems with chain conveyor's plummer blocks equipped with tapered roller bearings. The bearings failed several times per year due to tough operation conditions (production dust, high shaft temperature). The customer was not satisfied with the short lifetime of bearings causing additional maintenance costs and unplanned stoppages. The requirement was at least one year operation until bearing replacement in planned maintenance periods. NSK engineers checked the application unit and identified that plummer blocks from both sides of the shaft did not have a free-end scheme which could negatively impact on the bearing lifetime. NSK offered to use SNN Series Plummer Blocks equipped with Spherical Roller Bearings with increased radial clearance and additional heat treatment. After the tests, the conveyor operated without problem until planned maintenance.

Key Facts

- Conveyor in potash processing plant
- Plummer Blocks equipped with Tapered Roller Bearings
- Additional costs for unplanned stoppage and maintenance works
- NSK Solution: SNN Series Plummer Blocks with Spherical Roller Bearings, additional heat treatment
- Increased bearing lifetime
- Cost savings on maintenance and bearings



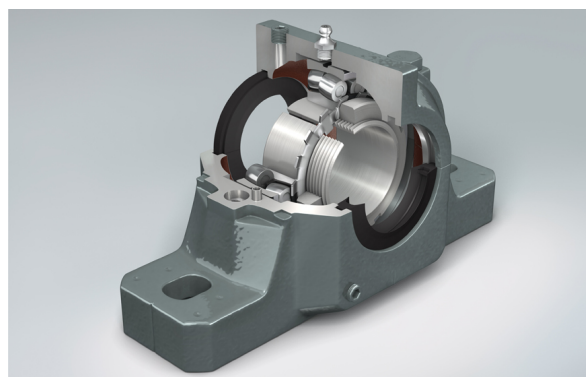
↑ Conveyor

Value Proposals

- NSK engineers conducted an Application Review and analysed the operating conditions
- NSK recommended the use of SNN Plummer Blocks with Spherical Roller Bearings with increased radial clearance and additional heat treatment
- As a further result of the Application Review, it also was recommended to provide free-end scheme for one side of the shaft to withstand axial loads during operation
- Trials were set up and resulted in cost saving for bearing consumption as well as reduction of maintenance activities

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



↑ NSK Plummer Blocks SNN Series

Cost Saving Breakdown

Before	Cost p.a.	NSK Solution	Cost p.a.
 Downtime, maintenance and bearing consumption	€ 7.000	No unplanned machine failures	€ 0
Total Costs	€ 7 000		€ 0