

Success Story

Industry: Steel and Metals

Application: Pilger Mill

Cost Savings: € 159 933

Introduction

A Steel Mill customer was experiencing regular failures on bearings in their Pilger Mill. NSK investigated this and found that the main problems were severe operating conditions with high loads and inadequate lubrication. NSK proposed a special Spherical Roller Bearing with optimised internal design and Super Tough (STF) steel. A trial showed that the new bearings gave a 2 times longer life and a consequential reduction in maintenance costs.

Key Facts

- Pilger Mill application
- Bearings failure due to heavy and severe operating conditions
- NSK solution: Special Spherical Roller Bearings made in STF steel
- Bearings reached 2 times longer life than old bearings
- Reduced maintenance and plant stoppage
- Cost saving generated



↑ Seamless Stainless Steel Pipe and Tubes

Value Proposals

- NSK application technical analysis
- NSK proposed bearings with Super TF steel
- Bearings reached 200% longer life than old bearings
- Reduced maintenance time
- No unexpected bearing failure and no unplanned downtime



Product Features

- Innovative heat treatment technology
- Outperforming standard bearing steel
- Up to 10 times service life with contaminated lubrication
- Up to twice the service life under clean lubrication
- Up to 4 times the service life at 160°C
- Less than one-third the rate of wear
- 40% improvement in seizure resistance



↑ Bearings TF Series

Cost Saving Breakdown

Before	Cost p.a.	NSK Solution	Cost p.a.
 Bearing replacement costs	€ 21.788	Bearing replacement costs	€ 8.799
 Lost production: 2 hours x 2250€/hr x 52/year	€ 234.000	Lost production: 2 hours x 2250€/hr x 21/year	€ 94.500
 Labour costs: 31€/hr x 2 hrs x 2 People x 52/year	€ 6.448	Labour costs: 31€/hr x 2 hrs x 2 People x 21/year	€ 2.604
 Other material replacement	€ 4.000	Other material replacement	€ 400
Total Costs	€ 266 236		€ 106 303