

Success Story

Industry: Food and Beverage

Application: Bleed Shackle Roller

Cost Savings: € 27 263

Introduction

Key Facts

- Bleed Shackle Roller
- 4 Deep Groove Ball Bearings used per roller
- Failures occurred between 1 day and 14 days
- Brinelling damage was root cause of failure
- NSK Solution: Cylindrical Roller Bearings, two different types
- Application lifetime significantly increased, over 6 months



↑ Bleed Shackle Roller

Value Proposals

- NSK engineers performed an Application Review together with a Failed Bearing Analysis
- As a result, it was recommended to replace the deep groove ball bearings in use with cylindrical roller bearings which are more accommodating impact loading
- A trial of NSK Cylindrical Roller Bearings in the application showed over 6 months lifetime
- Significant reduction of replacement costs and downtimes
- Cost savings realised

Product Features

- High strength & wear resistant pressed steel cage
- Cage pocket design gives superior roller guidance
- Cage strength increased 1.5 – 2 times
- Cage symmetry reduces noise
- Controlled contour rollers
- Up to 30% increase in load Rating
- Longer operating life – up to twice the bearing life
- 10 - 25% higher limiting speed than conventional series
- 30 - 40% noise reduction (3 - 7dB quieter) & vibration reduction



↑ Cylindrical Roller Bearings - EW series

Cost Saving Breakdown

Before	Cost p.a.	NSK Solution	Cost p.a.
 Bearing replacement costs	€ 26.699	Bearing replacement costs	€ 4.015
 Downtime costs	€ 4.602	Downtime costs	€ 1.198
 10 new shackles	€ 1.175	No costs for new shackles	€ 0
Total Costs	€ 32 476		€ 5 213