

Success Story

Industry: Food and Beverage

Application: Food Production Conveyor

Cost Savings: € 69 826

Introduction

The customer was experiencing failures every 4 – 6 weeks with ball bearing inserts on a food production conveyor line. Regular high pressure wash-downs led to corrosion, seal damage and grease wash-out from the bearings, resulting in regular maintenance and production downtime. NSK reviewed the bearing application and were able to recommend NSK Life-Lube® as a solution. Trial bearings were purchased and applied. This resulted in significant improvements in bearing life with no failures during the trial period. This solution increased reliability and reduced unplanned downtime resulting in a large cost saving.

Key Facts

- Food production conveyor
- Corrosion, seal damage and grease wash-out from the bearings due to high pressure wash-downs
- NSK Solution: Stainless steel Molded-Oil bearing inserts
- 12 month trial on 10 bearings
- Highly increased life-time: No failures even after 12 months of operation
- Cost reduction for bearings, lubrication and maintenance
- Productivity improvement



↑ Conveyor belt

Value Proposals

- NSK reviewed the bearing application and discovered that bearing corrosion and grease wash out were the main issues
- A trial was proposed using Stainless steel Molded-Oil bearing inserts
- After 12 months the bearings were still performing well with no failures
- From this trial the solution was applied to other similar applications generating significant cost savings
- This success was then transferred to further production sites of this customer




Product Features

- PBT thermoplastic resin housing
- Molded-Oil inserts (with solid lubricant)
- Martensitic stainless steel
- Nitrile rubber seals
- Available in Pillow Block, 2 and 4 bolt flanges and take-up unit housings
- Bore size 20mm - 40mm
- Corrosion resistance
- Paint free housings, preventing chipping & flaking
- Resistant to contamination increasing operating life
- Ideal for operations where process fluid is unavoidable
- No need for re-lubrication



↑ Molded-Oil Bearings

Cost Saving Breakdown

Before	Cost p.a.	NSK Solution	Cost p.a.
 Regular bearing failures every 4-5 weeks on two key process lines. Annual bearing costs: €922 per line × 2	€1.844	No bearing failures in 12 months, resulting in inventory reduction. €533 per line × 2	€1.066
 Maintenance costs per line, including re-lubrication, labour, overheads: €1.644 per line × 2	€3.288	No re-lubrication needed, reduced labour costs	€0
 Lost production downtime (12×/year). €32.880 per line × 2	€65.760	No production lost to unplanned downtime	€0
Total Costs	€ 70 892		€ 1 066