

Success Story

Industry: Food and Beverage

Application: Band Saw

Cost Savings: 5,373 euros

Introduction

Key Facts

- Frequent bearing failures occurring every 6 to 7 weeks
- Water ingress from frequent wash down resulting in lubricant degradation and corrosion of the rolling elements and raceways
- NSK Solution: Stainless steel Deep Groove Ball Bearings with DDU seals and Molded-Oil lubrication
- Significant lifetime increase



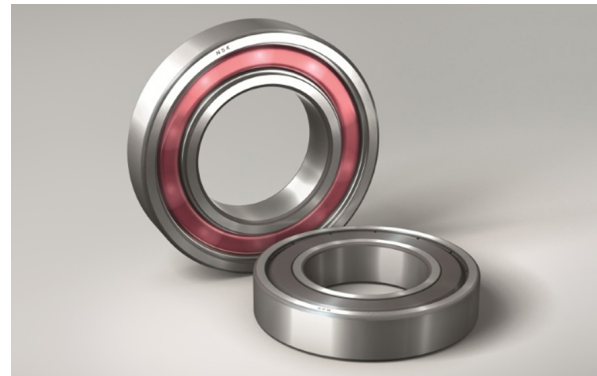
↑ Band Saw

Value Proposals

- NSK Application Review determined the bearing failure due to degradation of the lubricant and ingress of water
- NSK recommended the use of stainless steel Deep Groove Ball Bearings with DDU seals and Molded-Oil lubrication.
- Molded-Oil bearings use an oil impregnated polymer as the lubricant instead of grease. The polymer matrix slowly releases oil to lubricate the bearing, while at the same time acting as a barrier to protect the bearing from contamination. The lubricant cannot be washed out as with standard greases and therefore the life of bearings in wet environments can be increased significantly.
- A trial resulted in a substantial increase in bearing life and a reduction of the machine down time





Product Features

- Molded-Oil provides continuous supply of lubricant
- Grease-free property with no oil refilling keeps operating environments clear
- Operating life more than twice as long as grease lubrication, in water or dust contaminated environments
- Contact-seal type available in standard inventory for ball bearings
- Achieves extended maintenance-free performance through constant supply of lubricant; available for high speed applications
- Available in ball bearings, spherical and tapered rolling bearings
- Stainless steel for corrosive environments



↑ Deep Groove Ball Bearing with Molded-Oil

Cost Saving Breakdown

Before	Cost p.a.	NSK Solution	Cost p.a.
 Old bearing design	€ 525	New bearing design	€ 248
 0,5 hrs downtime x 8 times/year x €586/hr	€ 2.344	No downtime	€ 0
 1 hr fitting time x 8 times/year x €25/hr + frequent blade failure cost	€ 942	Initial fitting time 1 hr x 25/hr + normal blade replacement cost	€ 135
 Annual lubrication cost	€ 1.945	No re-lubrication	€ 0
Total Costs	€ 5.756		€ 383