

## Success Story

Industry: Food and Beverage

Application: Conveyor Tail Drum

**Cost Savings: € 192 600**

### Introduction

An internationally renowned Italian Food Company was experiencing problems with its fixed tail drum conveyor bearings. Operating in a damp environment the bearings had a life of only 6 months. The company asked NSK to analyse the application and propose technical solutions to increase the bearing life and reduce maintenance costs, which had become excessive due to frequent bearing failures. NSK proposed a heavy duty Spherical Roller bearing fitted with Molded-Oil lubrication system. Resultant performance was increased improving machine reliability and reducing maintenance costs.

### Key Facts

- Food Production with frequent wash downs
- Conveyor Tail Drum Application
- Regular failure of existing bearings due to water ingress
- NSK analysed the application to find the best solution
- Spherical Roller bearings with Molded-Oil Lubrication
- Improved reliability, reduced maintenance costs



↑ Tail Drum Conveyor

### Value Proposals

- Failed bearing analysis and application review
- NSK proposed Molded-Oil Spherical Roller Bearings to replace the existing double-row ball bearing with grease lubrication
- Increased load capacity and Molded-Oil lubrication resulted in 15 months maintenance free operation
- Improved machine reliability allowed maintenance intervals to be increased
- New tests are on-going in order to verify the possibility of increasing the bearing life even more
- Cost saving calculation based on reducing maintenance costs and stopping unplanned failures was valued at €193.000

## Product Features

- High Capacity Spherical Roller Bearings with Machined Brass Cage Molded-Oil lubrication system provides a maintenance free bearing solution
- Grease-free property with no oil refilling keeps operating environments clean
- Operating life more than twice as long as grease lubrication, in water or dust-contaminated environment
- Achieves extended maintenance-free performance as Molded-Oil provides a continuous supply of lubricant. Available for high speed applications
- Available in ball bearing, spherical roller bearing and tapered roller bearings types



↑ Molded-Oil Bearings

## Cost Saving Breakdown

Before	Cost p.a.	NSK Solution	Cost p.a.
 Bearing replacement costs (per year)	€2.160	Bearing Costs	€1.800
 Production loss due to bearing replacement operations: 6 production lines × 3 maintenance stops × 3 hours × €3.500/h	€189.000	No production stoppages. The bearings can be replaced during standard maintenance - bearings are still running after 15 months	€264
 Costs due to maintenance operations: 6 production lines × 3 maintenance stops × 2 persons × 3 hours × €30/h	€3.240	No maintenance costs	€0
<b>Total Costs</b>	<b>€ 194 400</b>		<b>€ 1 800</b>