



Industry: Electric Motors

Application: Motors

Cost Savings: EUR 26,534

Introduction

The end customer produces viscose fibers for a wide variety of applications, such as sanitary materials or tea bags. In an electric motor with a frequency converter, the bearings had to be replaced 6 times a year due to electrical corrosion. NSK recommended the use of current-insulated deep groove ball bearings. After that, there were no more unplanned failures. This drastically reduced the costs associated with production downtime.



↑ Hygienic Papers - Viscose fibres

Key Facts

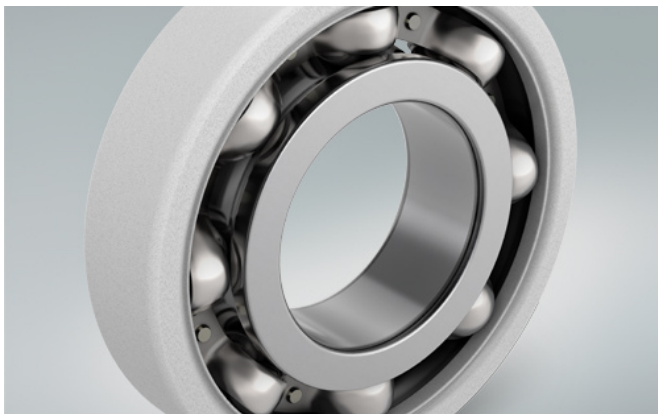
- The end customer produces viscose fibers for sanitary paper, tea bags and other applications
- The machine for the production of viscose fibers is driven by an electric motor with frequency converter
- Due to electrical corrosion, there were regular bearing failures. 6 times a year the bearings had to be replaced
- NSK reviewed the application and recommended the use of current-insulated deep groove ball bearings
- With HDY2C3 bearings the current permeability is reduced
- After the conversion to the NSK bearings, there were no more failures

Value Proposals

- NSK Engineers performed Application Review
- Bearing failing due to electric corrosion
- NSK recommend to exchange existing bearing to ceramic coated insulated bearings
- HDY2 series show optimized insulation and thermal conductivity characteristics

Product Features

- Alumina-based ceramic coating material plasma sprayed to ensure bonding to the bearing steel
- Coating sealed with special acrylic resin
- Bearings produced from ultra clean steel for extended fatigue life
- Effective prevention of electrical corrosion damage
- Superior insulation properties, with performance improved greater than 10 times
- Excellent heat dissipation, dimensionally interchangeable with standard bearings



↑ Deep Groove Ball Bearings ceramic coated insulated

Cost Saving Breakdown

Previous Solution	Costs p.a.	NSK Solution	Costs p.a.
 Bearing costs	€ 384	Bearing costs	€ 410
 Engineering costs	€ 1,872	Engineering costs	€ 312
 Cost of lost production	€ 18,000	Cost of lost production	€ 500
 Lubrication costs	€ 50	Lubrication costs	€ 50
 Other Costs:	€ 9,000	Other Costs:	€ 1,500
Total Costs	€ 29,306		€ 2,772