Success Story

Industry: Paper

Application: Paper Mill Combustive Air Unit

Cost Savings: € 7 203

Introduction

An important Italian paper company was having reliability problems with bearings fixed in a combustive air unit of a continuous paper machine. Bearings lasted 4 months on average and, in some cases, they broke down prematurely with correspondent costly unplanned maintenance operations. The customer requested an NSK technical proposal in order to increase bearings life. NSK engineers analysed the application and found high temperature was causing bearing failure. NSK proposed a high temperature specification bearing (heat treatment, seals and lubrication grease). The bearings are still running after 12 months, with reduced maintenance requirement. In addition, re-lubrication operations are no longer necessary.

Key Facts

- Combustive air unit
- Bearing failures due to high temperature
- NSK solution: Deep Groove Ball Bearing with high temperature features
- 3 times bearings life increase
- No unexpected machine downtime

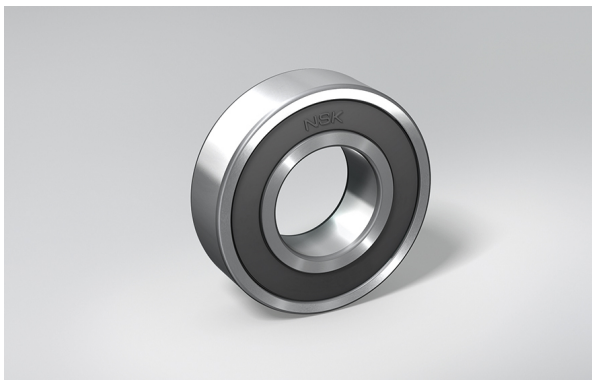
↑ Paper Mill Combustive Air Unit

Value Proposals

- NSK performed Application Review
- Failed Bearing Analysis showed bearing failures due to high operating temperature
- NSK proposed Deep Groove Ball Bearings with high temperature features resulting in 3 times longer bearing life
- No unplanned downtime

Product Features

- Steel Cage
- Heat treatedrings
- C3 Internal clearance
- High temperature grease
- Viton®* Seals
- "E" class (noise level)
- High performance in contaminated environment
- Temperature stability: up to 150°C
- Longer bearing life through superior seal performance
- Reduced noise level "E" class for electrical applications



↑ High Temperature Sealed DGBB

Cost Saving Breakdown

Before	Cost p.a.	NSK Solution	Cost p.a.
Bearing replacements	€ 292	Bearing replacements	€ 114
Maintenance time 3 hours/failure. Costs €25/h x 3 people	€ 900	Maintenance time 3 hours/failure. Costs x €25/h x 3 people	€ 225
Downtime x 3 hours x €700/h. 4 replacements	€ 8.400	Downtime x 3 hours x €700/h. 1 replacement	€ 2.100
24 operations x 5 min x €25/h	€ 50	Lubricant is no longer necessary	€ 0
Total Costs	**€ 9 642**		**€ 2 439**