

Success Story

Industry: Machine Tools

Application: Workhead Dresser

Cost Savings: € 13 080

Introduction

Within NSK's own plant in the UK, a grinding machine was experiencing raceway form errors. After numerous attempts to correct the error, the fault remains unidentified. Initial readings were taken by NSK Condition Monitoring Service prior to replacing the bearing and subsequent readings were taken within the following weeks. This helped to identify the root cause of the machine problem and saved time on unnecessary investigative maintenance and machine down time stripping down good components.

Key Facts

- The wheel spindle motor is rated at 10 Hp max rpm 3600
- The wheel spindle speed is adjustable from 50 to 6000 rpm
- The wheel spindle bearings are 1 pair front and rear
- The work head motor is an AC servo rated at 2 kw
- Fitted with 2 pairs of RHP bearings
- The rpm is adjustable from 50 to 500 rpm
- NSK Solution: Condition Monitoring Service (CMS) with bearing and motor details for the analysis
- After the CMS Service the fault was identified and no further problems with the surface finish and the raceway form appeared



↑ Machine Tool Application

Value Proposals

- An NSK expert performed an Condition Monitoring Service (CMS) on a grinding machine
- The CMS Service indicated there were no issues of concern from either the spindle or the dresser
- 3 days to strip the spindle and investigate the potential bearing problem was avoided, along with the associated loss of production from that production cell
- This now allows the maintenance engineers to focus their time in other areas
- Performance improvements and operational cost savings

Product Features

- Live assessment of a machine's condition and health while the machine is still in operation
- Predicted life of the critical components inside a machine allowing the customer to plan maintenance more accurately
- Early warning of problems occurring in machinery
- Condition Monitoring is the most sensitive and long reaching method of detecting the signs of machine wear
- On-site support from NSK Engineers
- Assurance that NSK as a full range supplier can help with the provision of critical bearing and linear motion spares



↑ Condition Monitoring Service (CMS)

Cost Saving Breakdown

Before	Cost p.a.	NSK Solution	Cost p.a.
 2 x Maintenance engineers x 3 days investigation @ 84€ / hr	€ 4.680	No need to strip and investigate machine	€ 0
 3.5 days machine downtime @ 2.400 € / day	€ 8.400		
Total Costs	€ 13 080		€ 0