

Success Story

Industry: Quarrying, Mining and Construction

Application: Shaker Screen

Cost Savings: € 16 800

Introduction

A large OEM manufacturer of quarry and mining equipment used NSK products within their machinery. The nature of the application is very high vibration used to separate out product on a shaker screen. The bearing condition is very difficult to ascertain, so often they run to fail. These failures can incur loss of production and replacement part costs. NSK provided CMS service to analyse the condition of the bearing using our multi channel analyser which was able to distinguish between the machine natural vibration frequencies and the bearing frequencies, thus enabling NSK to determine the bearing health without stopping the machine.

Key Facts

- Bearing and motor details for the CMS analysis was as follows:
- The shaker screen motor is rated at 12.5Kw
- The shaker screen speed is adjustable, this ran at 1030 rpm
- The combined bearing cartridge assembly was supplied with NSK spherical roller bearings
- NSK Solution: Condition Monitoring Service (CMS) with detailed analysis to identify bearings and associated components health. NSK performed a full analyse of the shaker screen while it was in cycle
- The CMS service indicated there were no concerns, the bearings were in good health



↑ Shaker Screen

Value Proposals

- An NSK expert performed an Condition Monitoring Service (CMS) on the running shaker screen
- The test indicated there was no issue of concern from the bearings within the SX units
- Regular monitoring of the bearing units will allow bearing health to be trended
- 2 days to strip the shaker screen and investigate the potential bearing problem was avoided, along with the associated loss of production

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.



↑ NSK CMS Service

Cost Saving Breakdown

Before	Cost p.a.	NSK Solution	Cost p.a.
 1 engineer to strip/refit the machine	€ 800	No need for maintainance	€ 0
 Machine runs for 10 hrs/day @800/hr production cost	€ 16.000	No lost production cost	€ 0
Total Costs	€ 16 800		€ 0