

Success Story

Industry: Quarrying, Mining and Construction

Application: Vibrating Screen

Cost Savings: \$125,137

Introduction

A Vibrating Screen manufacturer was having difficulties with consistent mounting of bearing in their shaker box assembly. In addition, they were looking for opportunities to save manufacturing cost and improve the overall performance of their machines. NSK engineers proposed a complete bearing assembly be designed such that the resultant unit could simply be bolted down to the machine frame without complex assembly of bearings, seals and lubrication.

Key Facts

- Manufacturer of Vibrating Screen Machines
- Severe operating environment requires specialized bearings
- Pressure to reduce manufacturing costs
- NSK specially design for supply of complete housing, bearing and sealing solution
- Resultant bolt on complete solution
- Reduced need for complex fitting



↑ Vibrating Screen



↑ Integrated Bearing Assembly

Background Information

- Industry: Quarrying and Mining
- Application: Vibrating Screen
- End-product: Vibrating Screen Machines
- No of machines: Annual Production
- Problem: Need to reduce manufacturing costs

Value Proposals

- NSK design review of the original machine
- Customized design created with full CAD drawings for approval by the customer
- NSK took over the manufacture and assembly of the complete housing, seals and bearing assembly
- Product supplied to the customer as a built unit, packed and pre-greased ready to run
- NSK worked with the customer to develop a simple bolt on assembly process
- Significant reduction in manufacturing costs documented
- Bearing performance and reliability improved

Product Features

- Customized housings
- High strength SG iron housing
- Vibratory specification bearings - CAM-VS
- Labyrinth and contact seals included
- Pre-greased and ready to fit with bearing location features
- Integrated assembly reduces need for customer to manufacture sub components
- Vibration and noise level reduced by 50-60%
- Increased fatigue strength against vibration & shock loads, wear and corrosion
- Installation ease and benefits reduce manufacturers in-house costs
- Can be re-greased

Cost Saving Breakdown

Before	Cost p.a.	NSK Solution	Cost p.a.
 Annual cost of manufacturing housings in-house, together with bearing purchase and assembly cost	\$291,987	Annual cost of pre-assembled bearing housings from NSK	\$166,850
Total Costs	\$291,987		\$166,850