

Success Story

Industry: Quarrying, Mining and Construction

Application: Vibrating Screen

Cost Savings: € 117 000

Introduction

A Vibrating Screen manufacturer was experiencing difficulties with consistency of the bearing mounting in their shaker box assembly. At the same time they were looking for opportunities to save manufacturing cost and improve the overall performance of their machines. NSK engineers worked closely with this manufacturer and proposed that 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 environment requiring special bearings
- Pressure to reduce manufacturing costs
- NSK employed special vibratory screen bearings
- NSK bespoke design for supply of complete housing, bearing and sealing solution
- Resultant bolt on complete solution
- Reduced need for complex fitting



↑ Vibrating Screen

Value Proposals

- NSK design review of the original machine
- Bespoke 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

- Bespoke 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



↑ Integrated Bearing Assembly

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 | €273.000 | Annual cost of pre-assembled bearing housings from NSK | €156.000 |
| Total Costs | € 273 000 | | € 156 000 |