

## Success Story

Industry: Steel and Metals

Application: Quench Conveyor

**Cost Savings: € 241 802**

### Introduction

A customer was facing mechanical failures on quench drives due to wear in the Teflon bushes supporting the quench rollers. This led to the rollers dropping and damaging the sprockets and chains, causing the manufactured steel shoe to stick. The result was poor heat treatment of the shoes and subsequent quality issues. NSK recommended replacing the Teflon bushes with stainless steel Molded-Oil bearings. The bearings were on trial for 12 months without problem and subsequently all bushes were converted in the quench area.

### Key Facts

- Quench conveyor
- Mechanical failure of rollers causing manufactured heat treated shoes to stick and therefore insufficiently quenched
- Poor quality heat treatment of shoes
- NSK Solution: Molded-Oil
- Improvement to quality of heat treatment
- Significant cost saving on downtime, parts and maintenance labour



↑ Quench Conveyor

### Value Proposals

- NSK application review highlighted poor bearing life and costly downtime
- NSK recommended stainless steel Molded-Oil bearings which lasted 12 months operation without failure
- Additional benefit of not having to replace costly conveyor items - chain, sprockets and rollers


## Product Features

- Available for high speed applications
- Available in Ball Bearing, Spherical Roller Bearing and Tapered Roller Bearing types
- Rust-proof - Stainless steel for corrosive environments
- Ideal for applications where contact with liquids and chemicals is unavoidable
- Seals made from nitrile rubber
- Contact-seal type available in standard inventory for ball bearings
- Able to minimise oil leakage
- Longer service life
- No need for re-lubrication
- Smooth rotation of rolling elements



↑ Molded-Oil

## Cost Saving Breakdown

Before	Cost p.a.	NSK Solution	Cost p.a.
 Cost of parts replaced - Chain, Teflon bushes, Sprockets, Rollers	€ 20.614	Cost of Molded-Oil bearings	€ 15.067
 55 hours downtime @ € 4.109 / hour	€ 225.995	No downtime	€ 0
 Labour for maintenance 380 hrs @ € 27 / hour	€ 10.260	No maintenance	€ 0
<b>Total Costs</b>	<b>€ 256 869</b>		<b>€ 15 067</b>