COST SAVINGS: $119,600
Application: 4 Stand - 6 Hi Tandem Mill
Solution: Super-TF Bearing

INTRODUCTION
A major steel manufacturer was using work roll bearings manufactured from conventional steel in their rolling mill. Bearings were failing before their design life as a result of application conditions. Contamination entering the bearings was causing debris denting resulting in premature bearing failures.

THE KEY FACTS
› Application: 4 Stand - 6 Hi Tandem Mill, Intermediate Roll Position (Country: USA)
› End-product: steel
› Number of machines: 4 rolling stands with 6 bearing locations each
› Status: Frequent replacement of bearings manufactured from conventional steel
› Problem: High bearing failure due to contamination
› Objective: Increase bearing life

VALUE PROPOSALS
› Due to the conditions of the application, NSK recommended the use of STF Bearings. The STF premium material is designed to perform longer in contaminated environments.
› Using STF reduced the harmful effects that were caused by contamination and debris denting the raceways. As a result, flaking and spalling caused by contamination were eliminated.
PRODUCT FEATURES

› Improved heat resistance provides a high temperature service life (maximum 160°C) that is four times longer than that of conventional bearings.
› Service life is 10 times longer than that of conventional bearings operating under contaminated conditions.
› Service life is twice that of conventional bearings operating under clean lubricant conditions.
› Rate of wear is reduced to less than one-third of conventional bearings.
› Available for four-row cylindrical and four-row taper roller bearings.

COST SAVINGS BREAKDOWN

<table>
<thead>
<tr>
<th>BEFORE</th>
<th>COST</th>
<th>NSK SOLUTION</th>
<th>COST</th>
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</thead>
<tbody>
<tr>
<td>Annual usage</td>
<td>24 standard bearings</td>
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<td>11 Super-TF bearings</td>
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<tr>
<td>Total</td>
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<td>$102,200.00</td>
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<tr>
<td>Total Cost Saving</td>
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