

# Case Study

## Bearings



### Summary



<b>Industry:</b>	Food and Drink
<b>Application:</b>	Steam Tunnel Ovens
<b>Actual Saving:</b>	£n/a
<b>Payback Period:</b>	



## Molded Oil Bearings from NSK Reduce Failures

Excellent performance in water and dust contaminated environments

### ISSUE

ERIKS were invited to visit a large pet food manufacturer in partnership with NSK to discuss bearing replacement and recommendations on two of their steam tunnel ovens. Both lines are used to cook pre made pet food.

The ovens are of similar design and use two large spherical roller bearings located in bespoke made housings at the return end of the oven conveyor and self-lube units locating the drive roller at the opposite end of the oven.

The customer was experiencing bearing failures on the drive end and had also commented on the bearing inserts corroding. Due to the manufacturing process, heavy water contamination was evident and water was being sprayed onto the bearings directly, it was also understood that the machines were pre washed with a caustic solution and washed down frequently, re-lubrication frequencies and quantities were unknown.

### SOLUTION

The failure of the bearing inserts was probably be due to water contamination entering the bearing insert causing the dispersal of lubrication film between the rolling element and raceways causing metal to metal contact and eventual failure of the insert). Just a small amount of water entering a bearing will reduce the bearing life considerably.

Due to the heavy water contamination and potential of corrosion within the insert it was recommended they trial NSK Molded oil stainless steel inserts, molded oil stainless steel inserts incorporate NSK oil impregnated material providing sufficient lubrication and a single lip seal with external flinger seal providing protection from water ingress and washout of lubrication, the insert does not require re-lubrication due to the oil impregnated polymer.

### OTHER BENEFITS

- Molded Oil bearings offer excellent performance in water and dust contaminated environments
- Grease free properties with no oil refilling keeps operating environments clean
- Achieve extended maintenance-free performance as Molded Oil bearings provide a continuous supply of lubricant

### FURTHER COMMENTS...

The NSK molded oil inserts have proved to be a success, and have significantly reduced failures.

### MORE INFORMATION

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