

Schaeffler Global Technology Solutions

Pulp and paper

Saving Costs by Reconditioning of Hybrid Deep Groove Ball Bearings

The customer is a leading player in the international paper market. The portfolio comprises newsprint and book paper, magazine paper, fine paper, consumer board, industrial packaging and wood products.

Challenge for Schaeffler

The customer uses hybrid deep groove ball bearings (made up of ceramic balls and steel rings) in his spreader rolls as these bearings offer numerous advantages, like less lubricant consumption or higher speeds. Although the initial costs of these bearings are significantly higher than those of standard bearings, they still are cost-effective if all influencing factors are taken into account. As reconditioning is a measure that extends the bearings' service lives it must also be included in the calculation of the amortization of the costs of hybrid deep groove ball bearings. So the company, which had not reconditioned any bearings so far, was looking for a qualified service company for reconditioning.

Schaeffler Solution

At the beginning of the cooperation, the customer sent a batch of hybrid deep groove ball bearings from the spreader rolls to the Reconditioning Center in the Schaeffler plant Schweinfurt. The bearings were cleaned and checked very carefully. Thus it was determined if reconditioning was economically against the background of technical feasibility. Moreover, it was specified which operations had to be carried out.



Technical Information about the Plant

Typical bearing types:

Deep groove ball bearings,
e.g. special hybrid deep groove ball
bearings F-HC807861.KL



Hybrid deep groove ball bearings with ceramic balls



Visual verification in terms of reconditioning



Spreader roll

Customer Benefit

The examination showed that two third of the hybrid deep groove ball bearings could be reconditioned. The reconditioning costs were 60 percent lower than the price of new bearings. In this way the customer has realized enormous savings without any quality losses, a fact that also contributes to amortizing the high initial cost of the hybrid deep groove ball bearings. Moreover, the customer received an inspection report containing detailed statistics of the amount and type of damage detected in the batch.

In numerical terms:

Saving potential	
Initial costs for the batch of hybrid deep groove ball bearings:	approx. € 9 000
Reconditioning costs for the bearings:	approx. € 3 500
Cost savings compared to new bearings:	approx. € 5 000

Technical Information about the Solution

Reconditioning Level II

- Cleaning
- Dismounting
- Wear pattern analysis
- Dimensional check
- Decision if bearing can be reconditioned
- Polishing of raceways
- Re-assembly with new cage
- Preservation
- Statistics

What's special

The customer was so satisfied that he keeps sending bearings that require reconditioning. In principle reconditioning is applicable to all types of bearings.