Case study

BOWMAN SOLVES 40 YEARS OF BEARING ISSUES FOR LEADING PAPER MANUFACTURER

KEY PROJECT STATISTICS

- Paper mill drying cylinder application
- High temperature environment
- Hollow shafts with excessive thermal growth
- Longstanding maintenance, inspection and replacement issues
- Upskilling onsite engineers to maintain uptime

BEARING TECHNICAL DETAILS

- Shaft diameter: 6 inch
- Maximum dynamic radial load: 428 Cr kN
- Maximum static radial load: 616 Cor kN
- Maximum dynamic axial load: 29.40 Ca kN

> *This global leader in advanced materials and paper products had been plagued by bearing maintenance, inspection, and replacement issues for more than 40 years. The Bowman Advanced split roller bearing solved these issues, and their onsite engineers now have the knowledge they need to maintain uptime on their drying cylinders.*
>
> Chris Ager, Director of Global Operations, Bowman Split Bearings

APPLIED Industrial Technologies

BOWMAN SPLIT BEARIN

www.bowmansplitbearing.com

CLIENT CHALLENGE

One of the world's leading pioneers in advanced materials and paper products, had experienced over 40 years of bearing maintenance, inspection, and replacement issues at its paper mill in the UK.

In total there were 136 bronze shell bearings in cast iron housings, supporting the hollow shafts of the mills drying cylinders.

Due to access constraints and the steam temperatures associated with drying applications, inspecting and maintaining what had become an obsolete bearing design, required significant downtime.

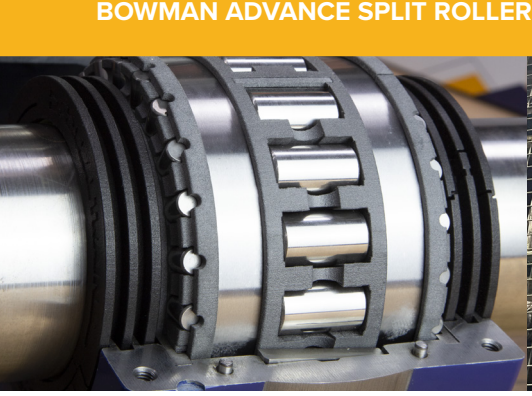
In more recent years, replacing this legacy bearing product had become significantly more challenging, with no adequate engineering knowledge of older bearing designs onsite.

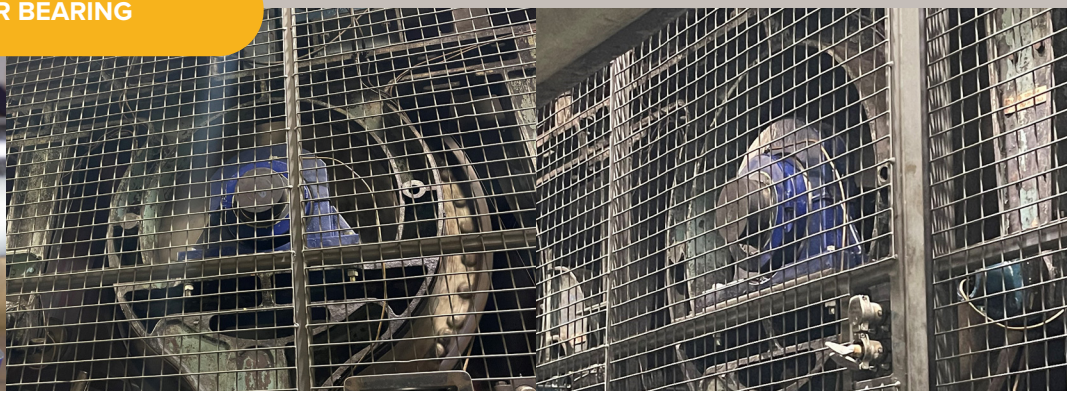
The mill needed a bearing that could withstand the high temperatures and excessive thermal shaft expansion, whilst offering fast and safe access for maintenance and inspection.

Furthermore, the customer was looking for a supplier that offered fast delivery from a reliable stock inventory, so that when a changeout was needed, downtime would be minimal.

To bring 40 years of bearing challenges to a close, the mill also needed hands-on engineering support to upskill its onsite maintenance team on how to maintain, inspect and change the new bearings.

BOWMAN ADVANCE SPLIT ROLLER BEARING





> *When updating legacy equipment in which bearing designs have become obsolete, we have the opportunity to extend the usable life of our customer's machinery and make their maintenance and inspection processes far simpler.*
>
> *By innovating split roller bearings that keep downtime minimal during predictive maintenance, and changeouts, we are able to support our customers in maintaining profitability.*
>
> Chris Ager, Director of Global Operations, Bowman Split Bearings

BOWMAN'S SOLUTION

Unaware that there was a split roller bearing on the market capable of meeting its needs, especially within a retrofitted footprint, the mill was delighted when Bowman introduced its class-leading high capacity Advanced Split Roller Bearing.

Dimensionally interchangeable and capable of delivering faster change outs, plus quick and safe access for maintenance and inspection, this market-first split bearing was the ideal upgrade for the mill's drying cylinders. An initial four assemblies were installed with the support of Bowman's field service engineers.

Whilst onsite, Bowman supported the mill's maintenance engineers in learning a new, far simpler installation processes, showcasing first-hand the potential reduction in man-hours compared to the legacy bearings that had troubled the team for over four decades.

Following an initial period of performance testing, the mill agreed to further investing in complete Bowman Advanced Split Roller Bearing assembles.

BOWMAN® SPLIT BEARINGS

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