

Industry: Thermal Power Generation
End User: National Grid USA, Long Island, NY, USA
Application: Travelling Screen
Thordon Grade: ThorPlas-Blue
Date of Original Installation: November 2018

About:

The E.F Barrett Power Station and the Port Jefferson Power Plant in Long Island, New York are owned and operated by National Grid USA. They are one of the largest investor-owned energy companies in the world—covering Massachusetts, New York, Rhode Island and the UK.

Challenge:

In 2013, Thordon worked with the OEM to design SXL bearings that would replace greased bronze bearings in the OEM's travelling screens at the E.F Barrett and Port Jefferson facilities. Approximately one year later there were reports of problems. After 2 to 4 months in service the SXL bearings showed signs of wear on the bottom half of the bearings, an indication of excessive load. Thordon and the local distributor, Fleetwood Industrial Products, visited the facility to investigate the problem and it was discovered that the load on the bearings was higher than Thordon was originally advised during the design stages. At this point, there was also no means of aligning the shaft with the housing as the housing was no longer round due to irregular wear. Up until that point, the end user had no issues with SXL bearings that had been in operation for over six years on screens from another screen manufacturer.

Despite Thordon's calls for fixing other issues, the OEM re-installed bronze bearings, however they did not last for much longer than the SXL bearings previously installed. The bronze bearings were also wearing quickly and unevenly resulting in the screen getting misaligned and hanging up. It took a crew of four several days to take the screen apart and install new bearings.

Solution:

In 2017, the two plants contacted Fleetwood Industrial Products to help solve their travelling screen bearing problems. It was recommended that the housings be machined true, and that ThorPlas-Blue bearings be installed due to the higher load capacities that ThorPlas-Blue is capable of handling compared to SXL. Historically, Thordon has had good success in a similar screen application with another customer, Evoqua, who were happy to share their positive experiences with ThorPlas-Blue with the plant engineers.

In 2018, Fleetwood Industrial Products, received the order to bore out the housings, install ThorPlas-Blue and refurbish the mating hardware.

Results:

After less than one year in service the plants are extremely happy with the ThorPlas-Blue bearings based on their excellent performance in this application. ThorPlas-Blue has lasted four times as long as the bronze bearings. This has eliminated the need to replace them 3-4 times a year and has also reduced the downtime and labour required to replace them. The plants are now opening their pump repair business to the local Thordon Distributor, Fleetwood, to standardize the Thordon solution in their plants.

