

Success story

KfeW-Plus detects, in sufficient time, a failure of the inner race in the bearing on a motor's coupling side. Thus saving thousands of euros in production and downtime.



Monitoring on a Yankee roller

For a tissue paper manufacturing and transformation plant, **suffering an unplanned stoppage can be devastating**, but even if it's not the worst case, its occurrence can be very expensive and undesirable.

One of the most critical parts you can find in this industry is related to the Yankee type dryer, which is used for the creping, pressing and later drying of the paper. Its proper maintenance is crucial for production.

Monitoring the working conditions of the Yankee dryer and an on-line variables check is indispensable.

Application

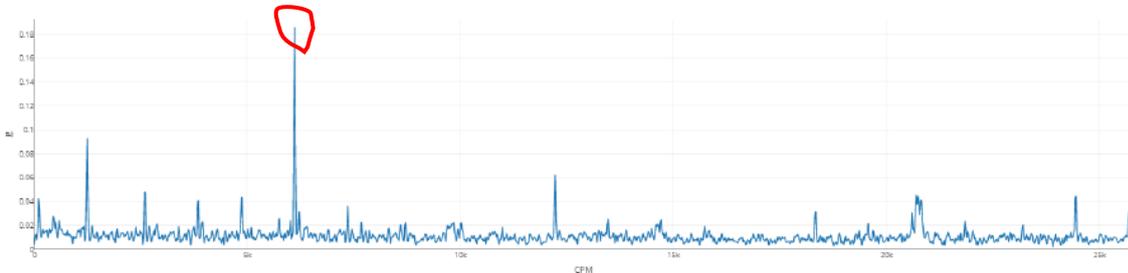
In this case, we cite a Spanish company in this sector that, a few months ago, installed a **KfeW-Plus (mechanical and electrical monitoring)** in the motor that drives the Yankee cylinder. A 355 kW and 640 amp motor with an asynchronous speed of 1487 rpm, according to the manufacturer. It is driven by a frequency converter and connected to a reduction gear, which are also monitored.

After a tailored configuration and the corresponding definition of alarms and warnings, the equipment started to **record the activity of the motor every 2 minutes**. After a few weeks, the system started to detect some unexpected behaviour.

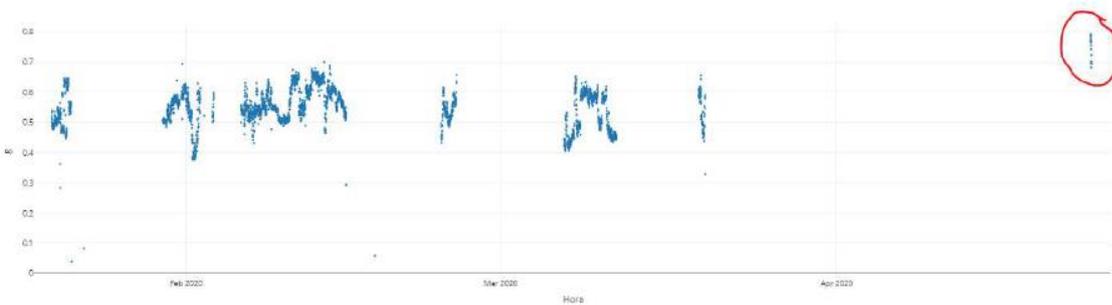
Diagnostic/Solution

By means of the bearing DB in KfeW, the system was able to determine, using the graphs, that some parameters were not correct or expected. We are referring to failure frequencies.

On this graph, we can see a peak of 6130 cpm or 102.1 Hz in the vibration acceleration envelope in the two units. And there's no doubt that it indicates damage on the inner race of that bearing on the roller (BPFI).



Furthermore, and **thanks to having an on-line data recording system**, we can plot a graph of the entire desired time period in order to identify whether what we see in the photo (graph) above is truly **a trend or an event** isolated in time. We can see the increasing vibration in the acceleration from the history.



Resolution

Taking advantage of a planned period of time with the line stopped, **both the detected** and the other bearing **were replaced, without loss of production** or delay in deliveries. The use of an on-line predictive solution, such as **KfeW-Plus**, **allowed the company to avoid an unplanned stoppage** and continue producing **and delivering its product on the agreed dates**.



KfeW-Plus is a www.KfeWSystems.com solution for monitoring and controlling critical assets on kinematic lines that captures mechanical, thermal and electrical variables, and then displays all the information in the cloud or local server, enabling feeding into Big Data.

KfeW

Early diagnostics to never stop