Operation

This API was developed to classify stages of degradation of mechanical components based on vibration data collected in horizontal and vertical directions (in CSV), as well as collection frequency (in Hz), intervals between data collections, and data collection windows (both in seconds).

If the user has any doubts or curiosities about the stages of degradation, click here for more information.

Inspiration

A skinny, sorrowful-looking bird that resembles a small, malnourished vulture, the Augurey is dark greenish-black. It is extremely shy, only flying in heavy rain, and otherwise stays hidden in its tear-shaped nest. The Augurey has a low, sobbing song that was once believed to herald death. However, over time, patient research revealed that this bird merely announces the coming of rain.

Analogously, the Augurey bearing the bearing degradation analysis API does not simply announce the end of a device's lifespan and, consequently, the machine's, which is somewhat inevitable. The system aims to prepare the analysis and maintenance team for the changes that will occur as a normal process of rolling device degradation. Thus, prepared for the impending changes in the device due to the degradation process, the team can take action to avoid damage to components working alongside the bearings, extending the life of the machine the bearing belongs to.

Augurey

The sad song that precedes the rain.

Enter the collection frequency in Hz:

25600,00

What is the interval between collections? (In s):

10,00

What is the collection window size? (In s):

0,10

Upload the vertical CSV file with the bearing time series

Drag and drop file here
Limit 200MB per file • CSV
Browse files

FEMTO_Test_B33V.csv 6.4MB

Upload the horizontal CSV file with the bearing time series

Drag and drop file here
Limit 200MB per file • CSV
Browse files

FEMTO_Test_B33.csv 6.4MB

Submit

Files successfully uploaded!

`Analysis completed`

Analysis of Stages

This application displays the time spent in each stage and the time intervals.

Time spent in each stage:

Stage 0: 0h 9min

Stage 1: 0h 21min

Stage 2: 0h 20min

Stage 3: 0h 16min

Time intervals for each stage:

Stage 0:

- Start: 0h 0min, End: 0h 3min
- Start: 0h 4min, End: 0h 11min

Stage 1:

- Start: 0h 3min, End: 0h 4min
- Start: 0h 11min, End: 0h 30min
- Start: 0h 50min, End: 0h 50min
- Start: 0h 51min, End: 0h 51min
- Start: 0h 51min, End: 0h 51min

Stage 2:

- Start: 0h 30min, End: 0h 50min
- Start: 0h 50min, End: 0h 51min

Stage 3:

- Start: 0h 51min, End: 0h 51min
- Start: 0h 51min, End: 1h 8min

Current stage:

The system is currently in Stage 3. This phase is concerning and requires urgent corrective action. The probability of being in this stage is 90.00%.

The degradation evolutionary chart can be analyzed below: