

Industry: Pharmaceutical
Technology: Vibration Analysis
Machine: WFI Pump
Benefits:



Increase asset lifetime



Reduction outages



Improved quality and safety



Introduction

This case is the result of starting to work in a pharmaceutical plant in 2020 performing periodic vibration analysis routes in its "Clean Utilities" equipment.

During the monitoring process, cavitations were detected in 3 WFI pumps.

Situation

WFI pumps are used to achieve clean water in the production processes of pharmaceutical plants. During the vibration analyses, cavitations were detected, which basically is the sudden formation and bursting of bubbles.

In order to find out why this phenomenon had occurred, I-care experts consulted the data collected by the **Wi-care sensors** and those obtained from the production line.

Solution

From the production historical, a numerical twin was created with the pump manufacturer's data and the customer's conditions of use.

After a thorough analysis, it was concluded that the pumps were working in a slack area. To correct this and avoid future cavitations, the pumps and the circuit were reconfigured to more optimal speeds and compressions.

Results

Since the pumps started working with the most favorable conditions, the customer was able to notice:

- Reduced energy consumption.
- Improved equipment health
- Improved water quality

All this process made the client trust I-care's services and its performance, asking I-care to start working in other industrial plants of the company.