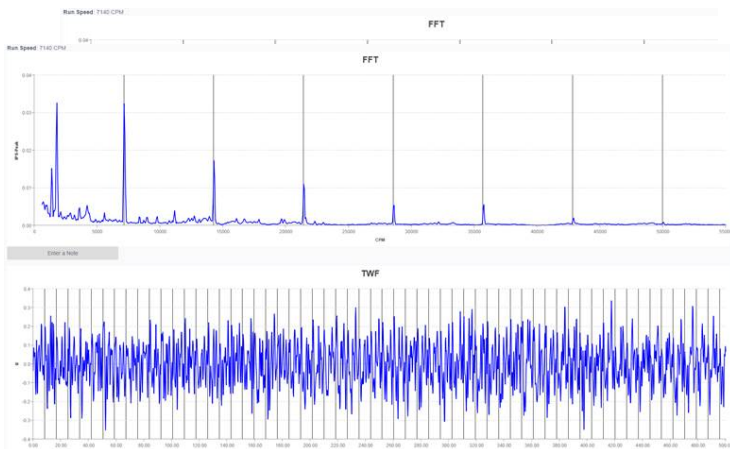


## Application: Chemical

### Problem

A North American-based chemical company has many pumps that must be maintained in top working condition. This was accomplished through a predictive maintenance program based on measuring vibration using micro-log data collectors and aptitude analyst software. Yet they were experiencing frequent failures on one of their key chemical pumps. The failures could not be explained because the normal 30-day vibration predictive maintenance interval did not show any abnormal operating conditions.



### Benefit

Unlike handheld data collection programs, which can only provide “snap shot” data, the i-ALERT provides an uninterrupted stream of time-stamped data. And it is this ability to continuously monitor equipment that made a decisive difference for the company on this critical pump—and prove its superior capability.

### Solution

The customer elected to install an i-ALERT® device to monitor the pump. The i-ALERT is an affordable, compact sensor that can be quickly attached to any pump, motor, fan or other type of rotating equipment. Inside the sensor is everything needed to measure temperature and vibration in all three axes. The unit takes readings every five minutes, records them every hour, and stores them for 170 days. Data can then be conveniently collected with a smart phone or tablet via Bluetooth from as far away as 30-to-100 feet.

Within 187 hours (about a week) of operation, two abnormal spikes in vibration in all three axes were recorded. From the time stamp of the alarm condition, the root cause of the problem was quickly traced back to low tank level feeding the pump, which caused cavitation. Because the low-level alarm for the tank was set too low, the operator had never been alerted to the problem.