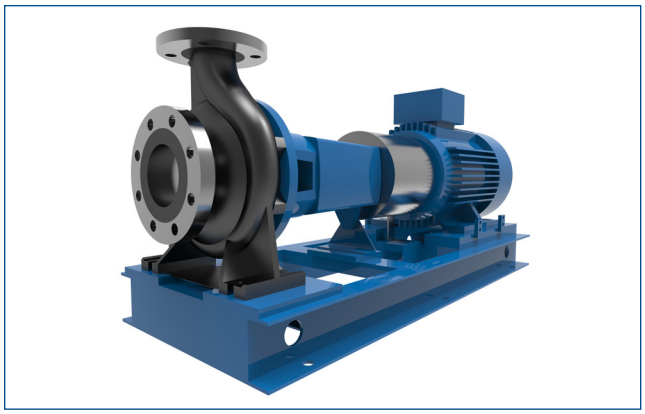
AMS ASSET MONITOR – PUMP ASSET HEALTH

Identify issues common to centrifugal and other pump types

Pumps are essential to the daily operation of industrial processes, but they begin to degrade the day they start up. It is estimated that pumps account for 7% of the total maintenance cost of a plant or refinery, and pump failures are responsible for 0.2% of lost production.[1] These might seem like small numbers until you consider that in the roughly 150 large U.S. refineries, more than $500 million is invested in pumps.[2] Pumps are, without question, significant players for maintaining production schedules.



The AMS Asset Monitor is an edge analytics device that delivers the benefits of continuous monitoring to more plant assets and far less installation expense.

QUICK, EASY DEPLOYMENT AND USE

- Small footprint size that is easy to mount.
- Field-located close to the pump for easy and lower-cost wiring.
- Predefined asset templates eliminate costly engineering.
- Easy DIY configuration.
- Built-in web service software interface replaces software, server, and licensing.
- Access asset health with any browser-enabled device from anywhere.

AUTOMATED COLLECTION AND BUILT-IN EDGE ANALYTICS

- Continuous data collection eliminates data gaps between collections.
- Automated analysis provides current asset health 24/7.
- Vibration training and experience not required for diagnosis.

INTERFACE DATA TO OTHER SYSTEMS AND ANALYTICS

- Acts as Modbus TCP/IP Slave and OPC UA Server.
- Connects to Plantweb Optics Platform, Historians, PLC, DCS, and Data Lakes.

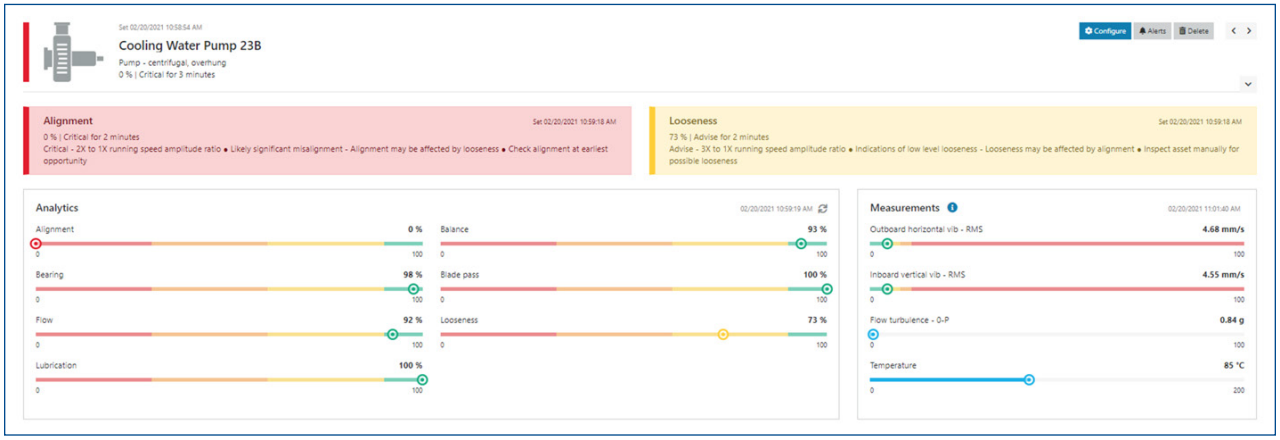
INTEGRATION WITH EMERSON'S DELTAV DCS

- Supports the new Module Type Packages (MTP) for DeltaV, facilitating integration and communication between operations and field assets.
- Uses the same **Char**acterization **M**odules (CHARMs) as DeltaV Remote for click-in-place technology.
- Similar housing to the DeltaV junction box for ruggedness and familiar installation.

1 & 2 Neal Analytics 2018, Industrial Pump Failures

AMS ASSET MONITOR – PUMP ASSET HEALTH

Intuitive Dashboard for Common Issues



Typical issues include:

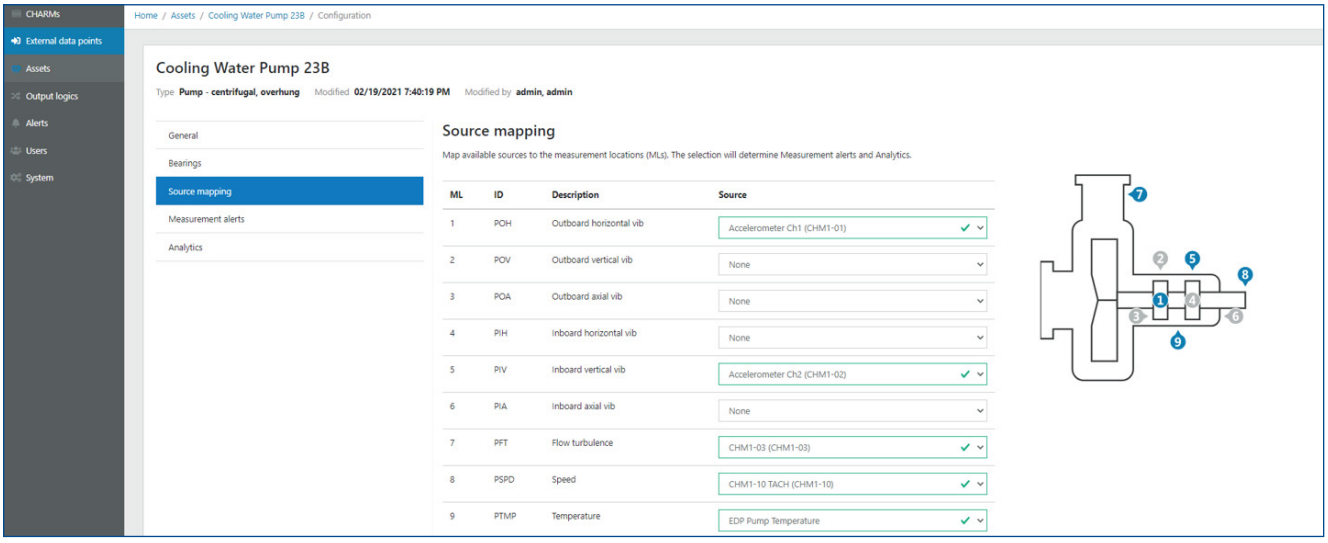
- Air gap
- Looseness
- Balance
- Bearing wear
- Alignment

These issues can lead to pump failure caused by:

- Premature bearing wear
- Seal failure
- Impeller/Shaft damage

Intuitive configuration in 8 easy steps:

1. Select and configure CHARMS
2. Configure external data points for process parameters such as flow rates and temperature
3. Choose asset type (pump, motor, gearbox, etc.).
4. Enter general information about the asset.
5. Enter bearing details, or select from the bearing library provided.
6. Map available sources to measurement locations
7. Configure alert limits
8. Select machine size...and you are done!



Step 6: Map available sources to measurement locations

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