Maintenance Guidelines for Pumps

Pumps are generally considered simple and reliable machines, which can make it easy to overlook regular preventive maintenance. Establishing a formal preventative and predictive maintenance program can help identify potential problems early and provide an opportunity to repair or replace pumps before a forced outage disrupts your operations.

Preventative and Predictive Maintenance Guidelines

The frequency of maintenance activities may depend on conditions such as the environment, size, working load, age, and operational importance of the pump. Semi-annual inspections, cleaning, lubrication and pressure verification are generally recommended. These maintenance activities should be performed by a qualified operator or technician. For additional guidance, consult the original equipment manufacturer.

The following preventive and preventive maintenance practices are recommended for pumps.

- Inspect the housing, base plates, foundation and mounting bolts to verify the pump is secured in place.
- Inspect for leaks (including air leaks) or pump damage.
- Inspect moving parts for abnormal wear, corrosion, dirt, debris and insufficient lubrication.
- Ensure the area around the pump is free of dirt and debris.
- Remove debris from the suction strainer during cleaning to help avoid blockage.
- Check the temperature of the motor. An increased temperature while under normal operating conditions may indicate internal problems or insufficient cooling. Additional ventilation may be needed if a pump is located in an area where heat generated from normal operation cannot dissipate effectively.
- Listen for abnormal conditions, such as grinding, squealing, or excessive vibration, which may indicate internal problems. A formal vibration monitoring program should be established for critical rotating equipment.
- Grease or lubricate bearings and other moving parts associated with the pump and motor according to the manufacturer's guidelines.
- Perform a shut-off test (non-positive displacement pumps only). This test involves slowly closing the discharge valve and monitoring the discharge and suction pressure gauges to determine operational anomalies.

Business Continuity Guidelines

Develop a contingency plan for key equipment to help reduce the risk of costly business interruptions. When developing a contingency plan, outline the availability of direct replacements and lead times, contractors required for replacement, critical spare parts or spare equipment to be kept on site, rental options, and the expected time to restore service in the event of failure.

Some pumps can have limited market availability, which can result in long replacement times. Pumps that are critical for continued operations should be identified and replacement pumps kept in inventory as a critical spare.