Pump Vibration Service Report

Service Date: March 10, 2024
Service Technician: David Anderson
Customer Name: LM Energy Solutions
Customer Address: 789 Energy Drive, Powerville, USA
Contact Information: (555) 789-0123, david.anderson@email.com
Pump Information:
- **Pump Type:** Horizontal Split Case Pump
- **Pump Serial Number:** HSC-456789
- **Pump Location:** Pump Room C, LM Energy Solutions

Service Details:

1. Initial Assessment:

Upon arriving at the customer's facility, a detailed assessment of the pump with vibration issues was conducted to identify the root cause. Key observations include:

- The pump, identified as a Horizontal Split Case Pump, was located in Pump Room C and was readily accessible for inspection.
- Verification of the pump's serial number, HSC-456789, was confirmed.
- Initial visual inspection revealed noticeable vibrations, suspected to be related to issues in the suction piping.
- Further examination revealed that the pump's suction piping insulation was improperly installed, contributing to the vibration problem.

2. Vibration Analysis:

An in-depth vibration analysis was carried out to quantify and diagnose the pump's vibration issue. Key measurements and findings include:

- **Vibration Measurements:** Utilizing advanced vibration sensors, measurements indicated vibrations beyond acceptable thresholds.
- **Frequency Analysis:** Frequency analysis highlighted resonance within the system, primarily originating from the insulation issues in the suction piping.

3. Corrective Actions:

To address the vibration issue linked to the suction piping insulation, the following corrective actions were undertaken:

- **Suction Piping Insulation Rectification:** The improperly installed insulation was corrected to eliminate resonance issues. Correct insulation procedures were applied to minimize vibrations.

4. Equipment Calibration and Testing:

Following the corrective actions, the pump underwent recalibration to ensure proper alignment and functionality. Tests performed include:

- **Vibration Reassessment:** Subsequent vibration measurements confirmed a reduction in vibration levels within acceptable limits.
- **Functional Test:** The pump was operated to validate that the vibration issue had been successfully resolved, and the pump was operating optimally.

5. Documentation:

Comprehensive documentation of all service and repair activities was recorded, including visual documentation, vibration analysis data, calibration records, and maintenance logs. This documentation will be provided to the customer for their records.

6. Customer Feedback and Approval:

The customer was briefed on the service outcomes and given the opportunity to inspect the pump. Satisfactory results were communicated, and customer approval was secured.

7. Recommendations:

In light of the assessment and service, the following recommendations were provided to the customer:

- Regular monitoring of vibration levels to identify potential issues at an early stage.
- Periodic inspection of the insulation system to ensure sustained proper installation and prevent vibration-related problems.

8. Conclusion:

The pump's vibration issue, traced back to suction piping insulation concerns, has been successfully addressed. The customer expressed satisfaction with the service, and all pertinent documentation was updated to reflect the service details and customer approval.

10. Service Technician Signature:

Technician Signature: David Anderson
Date: March 10, 2024