

September 24, 2021

IFF

Subject: MSP September (2nd vibration report)

Most of the machines surveyed were found to be in good condition with the exception of the following:

QualiTest® uses a four step rating system for defects.

<u>Class I:</u> Defect is present, but effect on reliability is not clear; no immediate action is required. Continue to normally monitor.

<u>Class II</u>: Defect (s) present that may cause problem in long term (2-6 months.). Repair during normal maintenance scheduling. Continue to monitor.

<u>Class III</u>: Defect (s) present that may cause failure in short term (less than 2 months.). This should be addressed as soon as practical, with a high maintenance priority. Increase monitoring frequency.

<u>Class IV;</u> Defect (s) present that makes continued reliability unpredictable, and possibility of secondary damage is high. Repairs should be made ASAP. An unscheduled shutdown should be considered for repairs

Hi-Speed Industrial Service tests and inspects industrial machinery and equipment and makes recommendations concerning maintenance and repairs based on its experience in the field of industrial repair and maintenance. The information contained herein is provided as an opinion only, not as a guaranty or warranty of the matters discussed herein.

This completes our assessment of your equipment for this survey. Thank you for your business and feel free to call if you have any comments or questions.

Sincerely, $\mathcal{D}_{1} \cdot \mathcal{U}_{1} \cdot \mathcal{U}_{2}$

David W Shook

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<u>MSP</u>

14-3800 DOUBLE PADDLE MIXER CONVEYOR

Vibration data for the motor shows a dominant sub-synchronous peak. This could be a resonance or an issue with the conveyor shaft. Inspect the unit for poor fasteners, structures, and drive train components. **Rated a Class II Defect.**

14-3828 FEED DRYER RECYCLE BLOWER

Vibrations are still up in the blower axials and verticals. The vibrations are dominated by a peak at about 86.5 Hz at close to 3x motor speed. This is possible lobe pass or some resonance. Inspect the unit structure, fasteners, and concrete base. Ensure there is no pipe strain. **Rated a Class II Defect.**

14-3832 F.D. RECYCLE SCREW CONVEYOR

Vibration data for the motor shows a dominant sub-synchronous peak. This could be a resonance or an issue with the conveyor shaft. Inspect the unit for poor fasteners, structures, and drive train components. **Rated a Class I Defect.**

14-3836 DRY FEED RECEIVER ASP FAN

Motor vibrations are strong for some points. We suspect that they are at motor shaft speed, but the database speeds do not match. Inspect the motor base, fasteners, and structure for defects. Check the drive train components for wear, eccentricity, and alignment. **Rated a Class II Defect. Please confirm speeds.**

14-3843 S INLET BURNER 1 PROCESS FAN

Motor vibrations are up. The dominant vibration peak is at 22.73 Hz, and we believe it is a shaft speed vibration, but the database speeds do not match. Inspect the base, fasteners, and structure for defects. Check the drive train components for wear, eccentricity, and alignment. Clean and inspect the fan wheel. **Rated a Class I Defect.**

14-3844 S BURNER #1 COMBUSTION FAN

Unit vibrations are still reportable but slightly down. The dominant vibration peak is still at 22.21 Hz, and we believe it is a shaft speed vibration, but the database speeds do not match. Inspect the base, fasteners, and structure for defects. Check the drive train components for wear, eccentricity, and alignment. Clean and inspect the fan wheel. **Rated a Class I Defect.**

14-3863 MSP-FEED DRYER EXHAUST FAN

The motor speed is probably incorrect and is most likely about 1300 RPM. We see a motor speed vibration and a sub-synchronous vibration in the motor data. Inspect the base, fasteners, and structure for defects. Check the drive train components for wear, eccentricity, and alignment. Clean and inspect the fan wheel. **Rated a Class I Defect.**

14-4203 HOT WATER PUMP TO H-HEATER

Units still shows 1x and 2x shaft speed vibration in the pump. Check the coupling, shaft alignment, fasteners, base, and structures. Pump could be slightly worn. **Rated a Class I Defect.**

14-4208 90DEGREE PROCESS WTR PUMP

Pump vibration shows 1x, and 2x RPM vibration with the 2x dominant. Check and inspect the unit fasteners, coupling, alignment, and base. **Rated a Class III Defect.**