HI-SPEED INDUSTRIAL SERVICE

MILLINGTON, TN

February 28, 2021

Solae

Subject: February 28 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.

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

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

Class III; 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.

Class IV; 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 don't hesitate to call if you have any comments or questions.

Sincerely,

David W. Shook
Senior Reliability Specialists
Hi-Speed **Industrial Service**
dshook@gohispeed.com

7030 Ryburn Drive
Millington, TN 38053
P. 901-873-5300
F. 901-873-5301

MS2P WET/ 2P CURD

No new data

MS2P WET/ 2P BATCH

No new data

MS2P-CIP/MS2P-CIP

No new data

MS2P FEED DRYER/ 2P FEED DRYER

No new data

MS2P DRYER/ 2P DRYER

No new data

MSP WET/ MSP CURD

No new data

MSP WET/ MSP BATCH

No new data

MSP CIP/ MSP CIP ROOM

No new data

MSP FEED DRYER/ MSP FEED DRYER

No new data

MSP DRYER/ MSP DRYER

3608 COOLING FAN
Inspect the motor to fan drive train for wear and alignment as time allows. **Rated a Class I Defect.**

3636 WEST EXHAUST FAN
Fan shows high axial vibration. Inspect the motor to fan drive train for wear and alignment. Check fan for process variables. Motor shows an increase in rotor bar frequency vibrations They are not normally an issue unless they rise substantially including a rise in 1xRPM vibration. **Rated a Class II Defect.**

3618 EAST EXHAUST FAN
Odd motor vibrations near 5 and 10 Hz, and elevated fan speed vibration in the fan bearings at 25 Hz. We suspect a possible resonance in the motor or some issue in the motor mounting and possibly some wear, run out, eccentricity, looseness, or an alignment in the drive train to the fan. Inspect as time allows. **Rated a Class I Defect.**

3712 BLENDER EXHAUST FAN
Check the drive train for wear, run out, eccentricity, and alignment, and looseness in the fan bearings. Bearings show multiple harmonics. **Rated a Class II Defect for now.**

3710 BLENDER
Vibrations near16 and 20 Hz dominate the data. Inspect the drive train for defects, wear and alignment as time allows. **Rated a Class I Defect.**

3761 Inlet Fan
The motor vibration is at 0.8”/second velocity peak overall and is dominated by peak at 10 Hz. The vibration has dropped considerably for the inboard fan bearing. Inspect the motor, feet, fasteners and base, as well as the fan wheel, bearings and drive train components.as time allows. **Rated a Class II Defect.**

3627-1 NE CS FILTER FAN
The bearings have non-synchronous harmonic vibrations in them. This could be early sign of defects. Ensure they are lubricated. We will watch for changes. **Rated a Class I Defect.**

3649 PRODUCT COLLECTOR FAN
Large jump in motor vibration at what looks to be fan speed. Motor vibration overall is at 1.3”/second velocity peak. Inspect the unit and drive train as soon as possible. **Rated a Class III Defect.**

4070 PRODUCT TRANSFER BLOWER
Jump in motor axial vibration at motor speed to over 0.4”/second velocity peak overall. Inspect the drive train for defects. **Rated a Class I Defect.**

3617-1 SE CS FILTER BLOWER
The bearings have non-synchronous harmonic vibrations in them. This could be early sign of defects. Ensure they are lubricated. We will watch for changes. **Rated a Class I Defect.**

3655 TURBO FAN
Bad data.

5304 PH1 PACKER SURGE BIN ASP FAN
The fan inboard axial shaft speed vibration has jumped up to over 0.8”/second velocity peak overall but primarily at fan speed. Clean and inspect the fan wheel and all drive train components. **Rated a Class II Defect.**

800 T GRINGING/ 800 T MONTHLY

Nothing new to report.

MS2P GROUND FLAKE/ 2P WET IN

No new data

MSP GROUND FLAKE/ MSP GROUND FLAKE

No new data

MSP-2P UTILITIES/SOUTH PLANT UTILITIES

2P 4112 #2 COOLING TOWER WATER PUMP
Large drop in motor vibrations; however, there is still a considerable vibration at shaft speed. Inspect the unit including the coupling, alignment, and all fasteners and structures as soon as possible. **Rated a Class II Defect.**

2P 4161 CENTRAL CHILL WATER PUMP
Motor vibration is still near 1”/second velocity peak at shaft speed. Inspect the unit including the coupling and all fasteners and structures at the next opportunity. **Rated a Class III Defect.**

4161 #2 SUPPLY PUMP
Motor vibration is down, and pump vibration is up to near 0.7”/second velocity peak at shaft speed. Inspect the unit including the coupling and all fasteners and structures at the next opportunity. **Rated a Class II Defect.**

2P41111 E COOLING TOWER WATER PUMP
The motor bearings vibrations are showing signs of distress. We will watch for changes. **Rated a Class I Defect.**