

April 29, 2021

IFF

Subject: April 29 MSP/MS2P final 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 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

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# MS2P WET

### 2P 3539 WEST BOEGY VACUUM PUMP

Pump vibration has increased again and is still dominated by a 3x RPM vibration and multiple shaft speed harmonics. Check for looseness in the pump bearing or impeller to shaft fits, process parameters, drive line components, and all fasteners. **Rated a Class II Defect For now.** 

# MS2P-CIP

### 2P 4209 90 Degree Water Pump #2

Recent data indicates a drop in vibrations. There is a 1x RPM vibration in the pump and a slight elevated noise floor. Check unit base and fasteners and coupling and alignment as time allows. **Rated a Class I Defect.** 

## 2P4203 HOT WATER PUMP

The motor bearing data still shows non-synchronous harmonic peaks. Raised noise floor throughout the acceleration spectrum could be due to lack of lubrication. Overall acceleration has decreased this survey, but still suggests distress in the bearings. Replace the motor and ensure a precision alignment before returning to service. **Rated a Class III Defect.** 

## **2P 4019 CAUSTIC TANK PUMP**

Large motor axial vibration is still near 0.7"/second velocity peak. Data still suggests an alignment or coupling issue. Inspect the unit for defects and perform a precision alignment. **Rated a Class II Defect.** 

### 2P 4007 RINSE TANK PUMP

1x and 2x RPM vibration still in the pump inboard bearing indicates an alignment issue. Pump axial shows a dominant 1x RPM vibration too. Inspect the unit for loose or missing fasteners, shaft run out, coupling defects and perform a precision alignment. **Rated a Class II Defect.** 

# MS2P FEED DRYER

No current data

**MS2P DRYER** 

No current data

# MSP WET

No noted issues on collected units.

# MSP CIP ROOM

No current data

# **MSP FEED DRYER**

No current data

# MSP DRYER

No current data

# 800 T GRINDING

## 2040 TRACK 5 BLOWER

Data for the motor bearings seem to be influenced by blower vibrations. We will watch for changes carefully. The blower data shows harmonic vibrations throughout the spectrum which indicates increasing wear. **Rated a Class I Defect.** 

# **TRACK 1 RECEIVER ASP BLOWER**

The data for motor bearings appear to show large reduction in acceleration. The motor data does still show a strong 1x RPM vibration though. Inspect the base, fasteners, and drive train components for defects and wear. Check the drivetrain alignment. **Rated a Class II Defect for now.** 

# **5032 TRACK 1 SOUTH BLOWER**

Multiple vibrations in the spectrum of the inboard blower bearing axial that appear to be harmonic in nature that are possible due to rotor mesh or bearing defects. Inspect the unit for drive train issues as time allows. Check for anything that would cause high axial loading. **Rated a Class II Defect.** 

# **5031 TRACK 1 NORTH BLOWER**

Motor vibration data is dominated by a motor 1x RPM peak in the spectrum. The overall velocity is above 1"/second peak. Blower has input speed vibration and 2x input speed. Inspect the unit for defects in structure, fasteners, drive train issues such as run out, wear, eccentricity and alignment. **Rated a Class III Defect.** 

# MS2P GROUND FLAKE

No noted issues on collected units.

## SOUTH PLANT UTILITIES

#### 2P 4112 #2 COOLING TOWER WATER PUMP

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 III Defect.** 

### MSP GROUND FLAKE

### **3050 SOUTH ASPIRATION FAN**

Motor vibration is dominated by a sub synchronous vibration based on the data base parameter sets. This could be a belt issue or structural resonance. Inspect the unit base, fasteners, and drive train for issues associated with those items. **Rated a Class II Defect.** 

#### 3090 MSP WET IN PUMP

Pump has dominant shaft speed vibration with multiple harmonics and slight noise floor in the spectrum. Check for looseness in the pump bearing fits as well as issues in the drive train. Inspect the unit for other normal maladies. **Rated a Class II Defect.**