HI-SPEED INDUSTRIAL SERVICE

MILLINGTON, TN

April 30, 2021

Plaskolite

Subject: April vibration report

Most of the machines surveyed were found to be in good condition, with 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
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Data

Blower Slow Cooling (Lower)
The velocity overall has slightly increased to just over 0.25”/second peak. The acceleration overall has also increased to 5.7 g’s RMS for the drive end bearing. Speed affects vibrations. It appears fluting is still the issue. We believe the bearing damage needs to be addressed in the future. Replace the bearings or complete motor as time allows. Take steps to reduce bearing fluting going forward. **Rated a Class II Defect.**

Blower Slow Cooling (Upper)
The acceleration overall increased to 6.6 g’s RMS for the drive end bearing. Fluting is suspected. Speed affects vibration amplitude. No Immediate action required. **Rated a Class II Defect.**

West Syrup Pump
Pump data shows a vibration at near 35 Hz which we believe to be pump impeller vane pass at about 0.3”/second velocity peak. Data also seems to indicate gear mesh vibrations are elevation the overall pump vibrations. Check for flow restrictions and make sure the coupling is in good working order.
Rated a Class I Defect.

Overall vibration data follows:

Abbreviated Last Measurement Summary

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Database: mmaold.rbm
Station: PLASKOLITE MEMPHIS
Report Date: 04-May-21 11:14

MEASUREMENT POINT	OVERALL LEVEL	HFD / VHFD	MACHINE SPEED
5285-12 - FAN,COOLING TWR EAST	(30-Apr-21)		
	OVERALL LEVEL	1-20 KHz	
E1	.011 In/Sec	.0068 G-s	430.0 RPM
	OVERALL LEVEL	HFD (>5 kHz)	
E2	.015 In/Sec	.0008 G-s	
81H	.077 In/Sec		
5285-21 - RETURN AIR FAN 100 AREA	(30-Apr-21)		
	OVERALL LEVEL	1-20 KHz	
11	.056 In/Sec	.073 G-s	1745.0 FPM
21	.111 In/Sec	.023 G-s	
23	.070 In/Sec	.017 G-s	
71	.062 In/Sec	.026 G-s	
81	.071 In/Sec	.028 G-s	
S1100 - FLARE BLOWER	(30-Apr-21)		
	OVERALL LEVEL	1-20 KHz	
11	.017 In/Sec	.017 G-s	3450.0 FPM
12	.016 In/Sec	.016 G-s	
21	.014 In/Sec	.016 G-s	
22	.016 In/Sec	.017 G-s	
23	.015 In/Sec	.017 G-s	
53	.021 In/Sec	.017 G-s	
23	.079 In/Sec	.017 G-s	
31	.112 In/Sec	.017 G-s	
53	.130 In/Sec	.017 G-s	
5214-04 - EAST SYRUP COOL PUMP	(30-Apr-21)		
	OVERALL LEVEL	1-20 KHz	
11	.023 In/Sec	.083 G-s	1180.0 RPM
21	.027 In/Sec	.161 G-s	
23	.015 In/Sec	.088 G-s	
31	.038 In/Sec		
61	.038 In/Sec		
71	.058 In/Sec	.049 G-s	
81	.042 In/Sec	.042 G-s	
5214-03 - MIDDLE SYRUP COOL PUMP	(30-Apr-21)		
	OVERALL LEVEL	1-20 KHz	
11	.052 In/Sec	.025 G-s	1180.0 RPM
21	.063 In/Sec	.084 G-s	
23	.071 In/Sec	.047 G-s	
31	.109 In/Sec		
61	.100 In/Sec		

71	.078 In/Sec	.022 G-s		
81	.054 In/Sec	.033 G-s		

5214-01 - WEST SYRUP COOL PUMP (30-Apr-21)

	OVERALL LEVEL	1-20 KHz	
11	.138 In/Sec	.122 G-s	1180.0 RPM
21	.125 In/Sec	.143 G-s	
23	.124 In/Sec	.078 G-s	
31	.185 In/Sec		
61	.169 In/Sec		
71	.361 In/Sec	.400 G-s	
81	.367 In/Sec	.142 G-s	

5282-03 - PUMP #2 HOT WATER 5282-03 (30-Apr-21)

	OVERALL LEVEL	1-20 KHz	
11	.036 In/Sec	.314 G-s	1800.0 RPM
12	.066 In/Sec	.170 G-s	

5282-04 - PUMP #3 HOT WATER 5282-04 (30-Apr-21)

	OVERALL LEVEL	1-20 KHz	
11	.116 In/Sec	.374 G-s	1800.0 RPM
12	.208 In/Sec	.346 G-s	

5282-06 - PUMP #5 HOT WATER 5282-06 (30-Apr-21)

	OVERALL LEVEL	1-20 KHz	
11	.200 In/Sec	.630 G-s	1800.0 RPM
12	.124 In/Sec	.669 G-s	

5283-01 - BLOWER, EDGE WATER REMOVAL (30-Apr-21)

	OVERALL LEVEL	1-20 KHz	
11	.134 In/Sec	.114 G-s	3600.0 RPM
21	.136 In/Sec	.122 G-s	
23	.111 In/Sec	.121 G-s	
71	.061 In/Sec	.733 G-s	
81	.122 In/Sec	.328 G-s	

5281-12 - BLOWER,SLOW COOLING (UPPER) (30-Apr-21)

	OVERALL LEVEL	1-20 KHz	
11	.034 In/Sec	1.799 G-s	1770.0 RPM
21	.067 In/Sec	6.593 G-s	
23	.035 In/Sec	3.516 G-s	
71	.028 In/Sec	.257 G-s	
81	.029 In/Sec	.279 G-s	

5281-13 - BLOWER,SLOW COOLING (LOWER) (30-Apr-21)

	OVERALL LEVEL	1-20 KHz	
11	.083 In/Sec	3.620 G-s	1770.0 RPM
21	.156 In/Sec	5.760 G-s	
21H	.251 In/Sec		
23	.091 In/Sec	1.746 G-s	
71	.031 In/Sec	.264 G-s	
81	.027 In/Sec	.157 G-s	

5281-14 - BLOWER,RAPID COOLING (UPPER) (30-Apr-21)

	OVERALL LEVEL	1-20 KHz	
11	.075 In/Sec	.569 G-s	1770.0 RPM
21	.217 In/Sec	.723 G-s	

23	.159 In/Sec	.189 G-s	
71	.022 In/Sec	.101 G-s	900.0 RPM
81	.021 In/Sec	.080 G-s	

5281-08 - BLOWER,RAPID COOLING (LOWER) (30-Apr-21)

	OVERALL LEVEL	1-20 KHz	
11	.094 In/Sec	.775 G-s	1770.0 RPM
21	.092 In/Sec	.850 G-s	
23	.103 In/Sec	.390 G-s	
71	.023 In/Sec	.071 G-s	900.0 RPM
81	.022 In/Sec	.082 G-s	

5281-10 - 200 BELT DRIVE, POLYMERIZER (30-Apr-21)

	OVERALL LEVEL	1-20 KHz	
11	.026 In/Sec	.894 G-s	1800.0 FPM
21	.030 In/Sec	.396 G-s	
33	.0078 In/Sec	.027 G-s	
31	.014 In/Sec	.104 G-s	
61	.0054 In/Sec	.050 G-s	
71	.0026 In/Sec	.0017 G-s	
81	.0031 In/Sec	.0013 G-s	

Clarification Of Vibration Units:

Acc	-->	G-s	PK
Vel	-->	In/Sec	PK
HFD	-->	G-s	PK