HI-SPEED INDUSTRIAL SERVICE

MILLINGTON, TN

March 1, 2021

Plaskolite

Subject: February 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
Senior Reliability Specialist
Hi-Speed **Industrial Service**
dshook@gohispeed.com

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

Data

Blower Slow Cooling (Lower)
The acceleration overall has dropped to 5.8 g's RMS respectively 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 near 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 shows over 5 g's RMS for the drive end bearing. Fluting is suspected. Speed affects vibration amplitude. No Immediate action required. **Rated a Class II Defect.**

Blower rapid Cooling (Upper)
The acceleration overall shows over 3 g's RMS for the drive end bearing. Fluting is suspected. Make sure these motor bearings are lubricated on a schedule they are equipped with grease fittings. Speed affects vibration amplitude. No Immediate action required. **Rated a Class I Defect.**

Vertical Hot water pumps 4, 5
Pumps 1, 4, have overall vibrations over 0.3 "/sec velocity peak. Vibrations seem to be a combination of mostly resonance and some shaft 1xRPM. Check flow and fasteners. **Rated Class I Defects.**

Overall vibrations follow:

Abbreviated Last Measurement Summary
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Database: mmaold.rbm
Station: PLASKOLITE MEMPHIS
Route No. 3: PLASKOLITE NEW
Report Date: 01-Mar-21 08:14

MEASUREMENT POINT	OVERALL LEVEL	HFD / VHFD	MACHINE SPEED
5285-12 - FAN,COOLING TWR EAST	(26-Feb-21)		
	OVERALL LEVEL	1-20 KHz	
E1	.010 In/Sec	.0050 G-s	430.0 RPM
	OVERALL LEVEL	HFD (>5 kHz)	
E2	.0071 In/Sec	.0010 G-s	
5285-21 - RETURN AIR FAN 100 AREA	(26-Feb-21)		
	OVERALL LEVEL	1-20 KHz	
11	.047 In/Sec	.077 G-s	1745.0 FPM
21	.075 In/Sec	.023 G-s	
23	.060 In/Sec	.035 G-s	
71	.056 In/Sec	.022 G-s	
81	.087 In/Sec	.020 G-s	
S1100 - FLARE BLOWER	(26-Feb-21)		
	OVERALL LEVEL	1-20 KHz	
11	.013 In/Sec	.019 G-s	3450.0 FPM
12	.011 In/Sec	.018 G-s	
13	.011 In/Sec	.019 G-s	
21	.012 In/Sec	.019 G-s	
22	.011 In/Sec	.020 G-s	
23	.011 In/Sec	.021 G-s	
5214-04 - EAST SYRUP COOL PUMP	(26-Feb-21)		
	OVERALL LEVEL	1-20 KHz	
11	.035 In/Sec	.049 G-s	1180.0 RPM
21	.027 In/Sec	.104 G-s	
23	.012 In/Sec	.112 G-s	
31	.043 In/Sec		
61	.061 In/Sec		
71	.076 In/Sec	.013 G-s	
81	.043 In/Sec	.035 G-s	
5214-03 - MIDDLE SYRUP COOL PUMP	(26-Feb-21)		
	OVERALL LEVEL	1-20 KHz	
11	.055 In/Sec	.093 G-s	1180.0 RPM
21	.052 In/Sec	.105 G-s	
23	.051 In/Sec	.069 G-s	
31	.116 In/Sec		
61	.100 In/Sec		
71	.125 In/Sec	.032 G-s	
81	.116 In/Sec	.045 G-s	

5214-01 - WEST SYRUP COOL PUMP (26-Feb-21)

	OVERALL LEVEL	1-20 KHz	
11	.096 In/Sec	.170 G-s	1180.0 RPM
21	.093 In/Sec	.143 G-s	
23	.071 In/Sec	.055 G-s	
31	.132 In/Sec		
61	.126 In/Sec		
71	.180 In/Sec	.143 G-s	
81	.129 In/Sec	.346 G-s	

5282-02 - PUMP #1 HOT WATER 5282-02 (26-Feb-21)

	OVERALL LEVEL	1-20 KHz	
11	.058 In/Sec	1.283 G-s	1800.0 RPM
12	.081 In/Sec	.760 G-s	

5282-05 - PUMP #4 HOT WATER 5282-05 (26-Feb-21)

	OVERALL LEVEL	1-20 KHz	
11	.319 In/Sec	.468 G-s	1800.0 RPM
12	.266 In/Sec	.355 G-s	

5282-06 - PUMP #5 HOT WATER 5282-06 (26-Feb-21)

	OVERALL LEVEL	1-20 KHz	
11	.323 In/Sec	.749 G-s	1800.0 RPM
12	.224 In/Sec	.839 G-s	

5283-01 - BLOWER, EDGE WATER REMOVAL (26-Feb-21)

	OVERALL LEVEL	1-20 KHz	
11	.117 In/Sec	.133 G-s	3600.0 RPM
21	.115 In/Sec	.116 G-s	
23	.059 In/Sec	.152 G-s	
71	.052 In/Sec	.730 G-s	
81	.124 In/Sec	.332 G-s	

5281-12 - BLOWER,SLOW COOLING (UPPER) (26-Feb-21)

	OVERALL LEVEL	1-20 KHz	
11	.030 In/Sec	2.327 G-s	1770.0 RPM
21	.047 In/Sec	5.231 G-s	
23	.038 In/Sec	3.242 G-s	
71	.029 In/Sec	.305 G-s	
81	.026 In/Sec	.696 G-s	

5281-13 - BLOWER,SLOW COOLING (LOWER) (26-Feb-21)

	OVERALL LEVEL	1-20 KHz	
11	.080 In/Sec	2.778 G-s	1770.0 RPM
21	.093 In/Sec	5.869 G-s	
21H	.271 In/Sec		
23	.077 In/Sec	1.494 G-s	
71	.030 In/Sec	.222 G-s	
81	.025 In/Sec	.182 G-s	

5281-14 - BLOWER,RAPID COOLING (UPPER) (26-Feb-21)

	OVERALL LEVEL	1-20 KHz	
11	.058 In/Sec	1.425 G-s	1770.0 RPM
21	.117 In/Sec	3.035 G-s	
23	.095 In/Sec	.645 G-s	
71	.030 In/Sec	.223 G-s	900.0 RPM

81	.029 In/Sec	.191 G-s		

5281-08 - BLOWER,RAPID COOLING (LOWER) (26-Feb-21)

	OVERALL LEVEL	1-20 KHz	
11	.039 In/Sec	1.026 G-s	1770.0 RPM
21	.080 In/Sec	.962 G-s	
23	.051 In/Sec	.725 G-s	
71	.021 In/Sec	.265 G-s	900.0 RPM
81	.017 In/Sec	.259 G-s	

5281-10 - 200 BELT DRIVE, POLYMERIZER (26-Feb-21)

	OVERALL LEVEL	1-20 KHz	
11	.029 In/Sec	.941 G-s	1800.0 FPM
21	.029 In/Sec	.793 G-s	
33	.0087 In/Sec	.023 G-s	
31	.012 In/Sec	.149 G-s	
61	.0056 In/Sec	.070 G-s	
71	.0033 In/Sec	.0018 G-s	
81	.0034 In/Sec	.0018 G-s	

Clarification Of Vibration Units:

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