



**QualiTest® Diagnostics**

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The following is a summary of findings from the vibration analysis on CCU-1 at the Law CPM Building. Please let us know if there are any questions or comments.

**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.

## CCU-1

Motor vibration data is indicating bearing faults in the motor. Non-synchronous peaks are present in the spectra along with significant high frequency amplitude. The bearing defects are possibly caused by electrical fluting. Fluting occurs when electrical current flows through the shaft and exits through the bearing causing arcing which creates etch marks on the races of the bearing. We recommend pulling the motor and reconditioning the motor and installing an Aegis grounding mechanism inside the motor. This will protect the bearings from fluting. Because of the high acceleration amplitudes, this is rated as a **CLASS III** defect.

### Abbreviated Last Measurement Summary

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Database: OLE MISS.rbm  
Area: CHILLER PLANT  
Route No. 1: CHILLERS

MEASUREMENT POINT	OVERALL LEVEL	HFD / VHFD
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CCU-1 - CCU-1	(16-Sep-20)	
	OVERALL LEVEL	1K-20KHz
MOH	.127 In/Sec	2.488 G-s
MOV	.147 In/Sec	3.460 G-s
MIH	.069 In/Sec	2.622 G-s
MIV	.146 In/Sec	3.598 G-s
MIA	.051 In/Sec	1.623 G-s
CIA	.025 In/Sec	.450 G-s
CIH	.044 In/Sec	.481 G-s
CIV	.071 In/Sec	.511 G-s

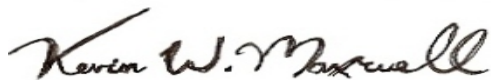
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#### Clarification Of Vibration Units:

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

As always, it has been a pleasure to serve the University of MS. If there are any comments or questions, do not hesitate to contact us.

Sincerely,



ISO Certified Vibration Analyst, Category III



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