HI-SPEED INDUSTRIAL SERVICE

QualiTest® Diagnostics

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February 20, 2024

George Young
Georgia Pacific Cellulose
Memphis, TN

George,

The following is a summary of findings from the South Thune Press Gearbox vibration analysis that was performed on February 19, 2024. Motor rpm was approximately 1485 rpm (24.75 Hz) while gearbox had an approximate 984 rpm (16.4 Hz).

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.

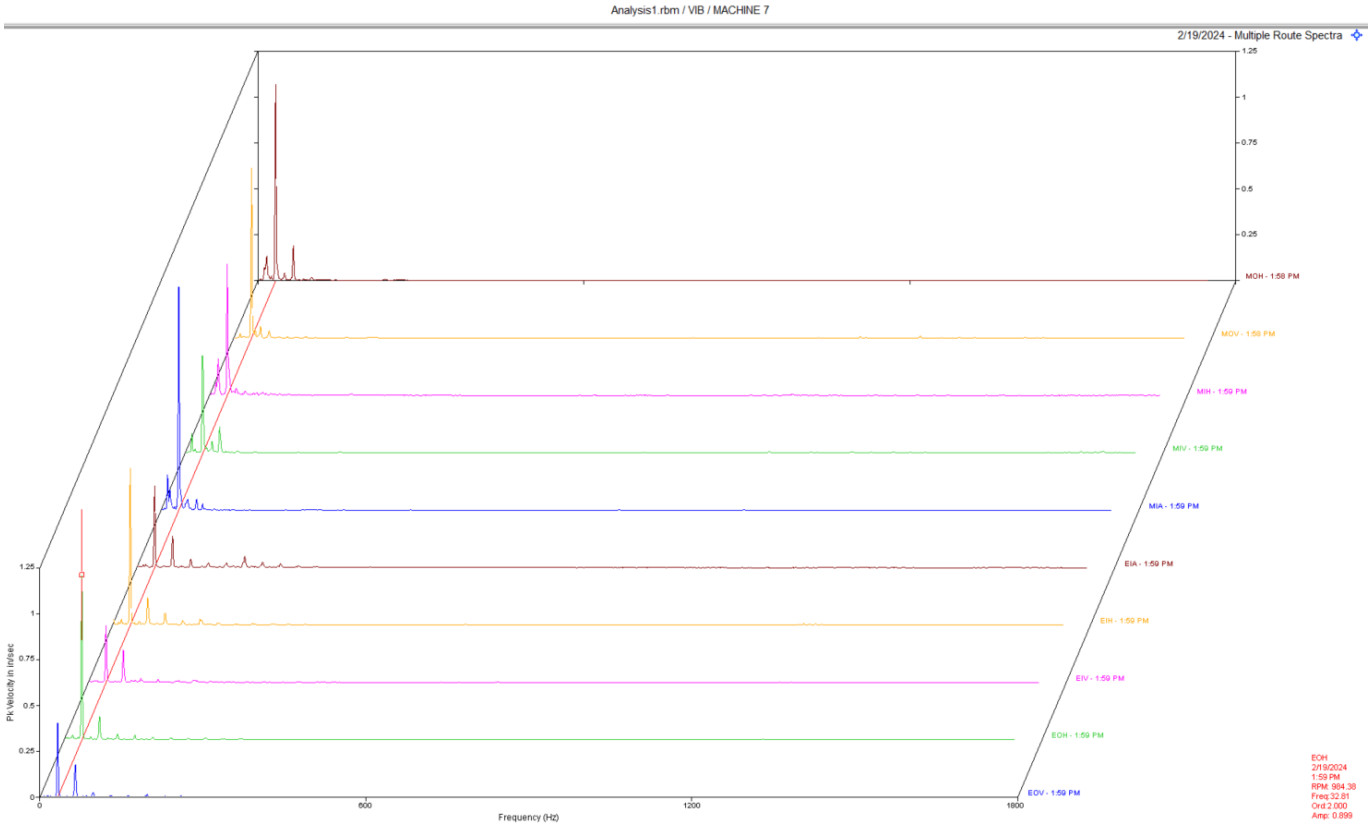
CLASS II: Defect (s) present that may cause problem in long term (2-6 months). Repair during normal maintenance scheduling. Continue to monitor.

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

Defect Summary

South Thune Press Gearbox CLASS III



Observation:

Data plot above is the multipoint spectral waterfall for the motor and the gearbox. There is a dominant vibration at 32.8 Hz. present in the motor and gearbox with highest amplitude in the motor inboard axial. This frequency appears to be 2 x gearbox rpm.

Recommendation:

The 32.8 Hz vibration present in the motor and gearbox appears to be very dominant and amplitude is quite high. 2 x rpm vibration is typically caused by misalignment, bent shaft at the coupling, or cocked bearing/sheave. A visual inspection of the unit was performed while on site. We did not find any base or fastener issues to note. For now, it is recommended to inspect the sheaves for angular/parallel misalignment and face run-out using a dial indicator/mag base. Check the gearbox shaft for run-out as well. Given that this motor is controlled by a VFD, it is possible that the unit was operating near a resonant frequency, therefore, it is also recommended to lower the Hz. on the drive some to see if vibration decreases. If vibration decreases significantly after lowering speed, then the unit is likely operating near a resonant frequency.

Abbreviated Last Measurement Summary
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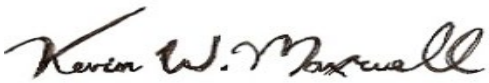
MEASUREMENT POINT	OVERALL LEVEL	HFD / VHFD
South Thune Press Gearbox -		(19-Feb-24)
	OVERALL LEVEL	1K-20KHz
MOH	1.149 In/Sec	2.430 G-s
MOV	.994 In/Sec	.690 G-s
MIH	.808 In/Sec	1.401 G-s
MIV	.687 In/Sec	1.526 G-s
MIA	1.317 In/Sec	.784 G-s
EIA	.535 In/Sec	.151 G-s
EIH	.972 In/Sec	.283 G-s
EIV	.418 In/Sec	.195 G-s
EOH	.965 In/Sec	.252 G-s
EOV	.484 In/Sec	.191 G-s

Clarification Of Vibration Units:
Acc --> G-s RMS
Vel --> In/Sec PK

As always, it has been a pleasure to serve GP Cellulose Memphis Plant. If there are any comments or questions, do not hesitate to contact us.

Sincerely,



ISO Certified Vibration Analyst, Category III

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