



QualiTest® Diagnostics

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August 27, 2020

Cascades Tissue
Memphis, TN

The following is a summary of findings from the August 2020 monthly vibration survey of the Paper Machine area. The Paper Machine was operating at around **3400** FPM during this month's survey.

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

Defects

Wire Roll 2

Tending side bearing is starting to show early signs of bearing defects/wear. This issue will be monitored closely. Rated as a **CLASS I** defect.

Felt Roll 10 Drive Side

Drive side roll bearing has an increase in 1 x rpm vibration. This may be due to loose or flexible mounting structure. Inspect roll bearing fasteners and pedestal for signs of looseness. Rated as a **CLASS II** defect.

Reel Drive Bearings

Reel bearings are starting to show some rpm harmonic vibrations again especially in the drive side bearing. Check bearings for looseness as time allows. Rated as a **CLASS II** defect.

Supply Hood Fan

Newly installed motor appears to have excessive heat on the DE motor bearing. Vibration seems low at this time other than some electrical related vibrations in the motor, however the excessive DE motor bearing heat is concerning. Ensure motor has adequate grease and check belt for proper tension. Belts may over tightened and could cause overheating of the bearing. For now, this is rated as a **CLASS II** defect.

East Sump Pump

Pump was not in operation during this survey; however, the following likely still applies if no actions have been taken: Pump has increased axial vibration. This may be caused by a coupling issue, but also be excessive thrust in the pump. Inspect coupling and pump soon. Rated as a **CLASS II** defect.

Roto Jet Pump (Basement)

The pump remains to have a high vibration at around 2 x rpm. This may be belt/sheave related, but could also be structural. Ensure sheaves are aligned properly with minimal angularity and offset and check belt for wear/defects. Ensure base is secure and that there are no cracks or other looseness. Pump also has a high 20 x rpm vibration that appears to be related to vane pass frequency of the pump. Pump may be plugged, or impeller has defect. Ensure that the pump has proper suction and discharge pressures. Rated as a **CLASS II** defect.

Primary Screen #2

Spectral data of the gearbox is showing an increase in input gear related vibrations. Data indicates signs of a gear issue such wear or excessive backlash. Drive end motor bearing also has excessively high temperature. Motor may also have some misalignment. We will monitor this closely. Rated as a **CLASS II** defect.

Hi-Pressure Shower Pump (MOTOR)

Pump has high 1 x rpm vibration. Pump likely has imbalance or other internal issue. Seal is also leaking. Pump needs to be replaced as soon as time allows. Rated as a **CLASS II** defect.

Suction Press Roll Vac Pump #1

Motor drive end bearing is showing signs of bearing issue. Ensure motor has adequate grease. We will monitor this closely. Rated as a **CLASS II** defect.

Uhle Box Vacuum Pump MOTOR

Vibration data of the drive end motor bearing continues to show defects of the DE bearing. Acceleration has had significant increase in high freq. amplitude over the past few weeks. **Motor needs to be replaced soon.** Because of this issue, this is rated as a **CLASS III** defect.

Seal Tank #2 Pump

Motor has an increased amount of non-synchronous vibrations. This is likely a severe bearing issue. Motor needs attention SOON. Rated as a **CLASS III** defect.

Fresh Water Booster Pump

Pump data is starting to indicate pump defects. We will monitor this closely. Rated as a **CLASS II** defect for now.

Couch Helper Pump (right pump)

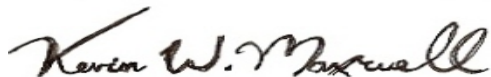
Not sure if this one is A or B, but it is the right-side MOTOR. This pump rarely runs which is most likely the reason why the motor data is showing defects in the motor bearings. Ambient vibration can cause false brinelling in bearings that do not rotate for a long period of time. Motor needs attention in the near future. We will monitor this closely. Rated as a **CLASS II** defect.

Boiler Feedwater Pump #1

Motor has a higher vibration this month especially at the tope end of the motor. The spectral data shows a large amount of sub-synchronous vibration. This could be due to recirculation or some other hydraulic/process related issue. For now, ensure pump is operating within normal parameters. Rated as a **CLASS II** defect.

As always, it has been a pleasure to serve the Cascades Tissue Memphis, TN 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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