



**QualiTest® Diagnostics**

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Cascades Tissue  
Memphis, TN

The following is a summary of findings from the December 2019 monthly vibration survey of the Paper Machine area. The Paper Machine was operating at around **3800** 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**

### **Supply Hood Fan**

Fan bearings have 1, 2, and 3 x rpm peaks present in the outboard axial. This vibration comes and goes. We will monitor this unit closely. Rated as a **CLASS I** defect.

### **Felt Roll 11 tending side**

Data suggests loose bearing housing in clamp. Inspect rubber shims between clamp and bearing, and ensure all fasteners are tight. Rated as a **CLASS II** defect.

### **Wire Roll 4 tending side**

Data suggests loose bearing housing in clamp. Inspect rubber shims between clamp and bearing, and ensure all fasteners and mounting structure is tight. Rated as a **CLASS II** defect.

### **Wire Roll 5**

Tending side bearing has a higher than normal 1 x rpm vibration. This may be a structural issue or resonance. For now, ensure that the mounts and structure for the roll are not loose or having any other issues. Rated as a **CLASS II** defect.

### **Reel Drive Bearings**

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

### **Suction Press Roll Drive**

Motor data is showing signs of looseness again like a few months ago. Check tach assembly and also check coupling SOON. Rated as a **CLASS II** defect.

### **West and East Sumps Pumps (Basement)**

Pumps have loose feet bolts and shaft guards are loose causing a rub Coupling also has issue on the West Pump. Inspect and repair pumps soon. Realign pumps after fixing feet bolts. Rated as a **CLASS II** defect.

### **Roto Jet Pump (Basement)**

Motor and pump both appear to have increased 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. 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.

### **Suction Press Vacuum Pump #1**

Vibration data of the motor drive end bearing is suggesting a lubrication issue and also signs of bearing wear/defects. Motor may need attention in the near future. We will monitor this closely. Rated as a **CLASS II** defect for now.

### Uhle Box Vacuum Pump

Outboard pump bearing spectrum is showing some signs of possible bearing issue or some other type of internal issue in the pump. Pump sheave still has issue causing a high vibration in pump. Inspect pump sheave/bushing as time allows. We will monitor these issues closely. Rated as a **CLASS II** defect.

### Couch Helper Pump B (right pump)

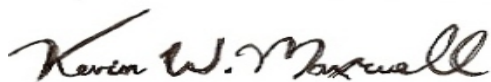
This pump rarely runs which is most likely the reason why the motor data is showing defects in the motor bearings. Ambient vibration can cause false brinelling in bearings that do not rotate for a long period of time. Motor needs attention in the near future. We will monitor this closely. Rated as a **CLASS II** defect.

### Yankee Repulper MOTOR

Motor data is starting to show bearing issue in the motor. Waveform data shows pulsing which is a good indication of inner race defects. Motor may need attention soon. Rated as a **CLASS II** defect for now.

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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