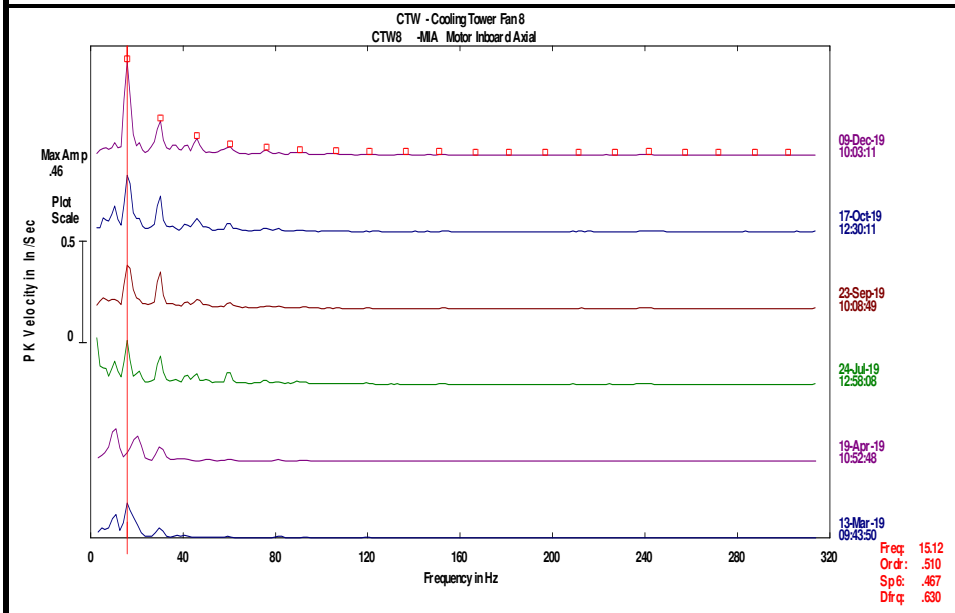
HI-SPEED PREDICTIVE MAINTENANCE

Machinery Vibration Report

Client	Dell Power Plant	**Survey Date**	10-9-19
Location	Dell AR	**Report Date**	10-11-19
Machine	Cooling Tower 8 Motor	**QMS No.**	141345
Component	Axial	**Analyst**	DWS

Defect Rating for this machine	**Class III**
Defect Rating System	
Class I: Defect is present, but effect on reliability is not clear; no immediate action is required. Continue normal monitoring.	**Class III;** Defect (s) present that may cause failure in short term (less than 2 mos.). Should be addressed as soon as practical, with a high maintenance priority. Increase monitoring frequency.
Class II: Defect (s) present that may cause problem in long term (2-6 mos.). Repair during normal maintenance scheduling. Continue to monitor.	**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.***

Vibration Data



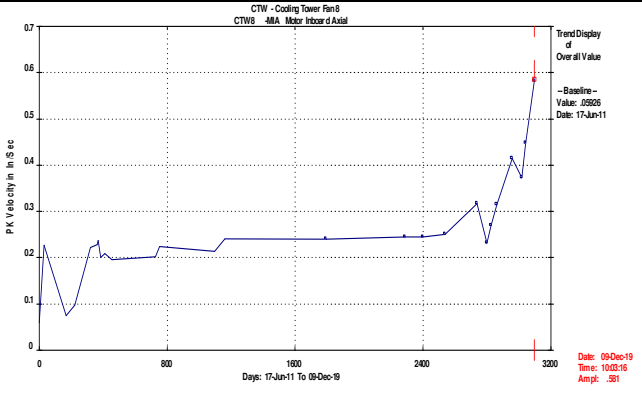
Analysis

Trend increase in the motor axial measurements.

Discussion / Repair recommendations

A 15 Hz vibration dominates the motor axial measurement. This is the largest vibration in the Cooling Tower, and is thought to be related to blade pass. We recommend a thorough inspection of the motor gearbox drive train, including all fasteners, couplings and the alignment. **Rated a Class III Defect.**

Trend Data



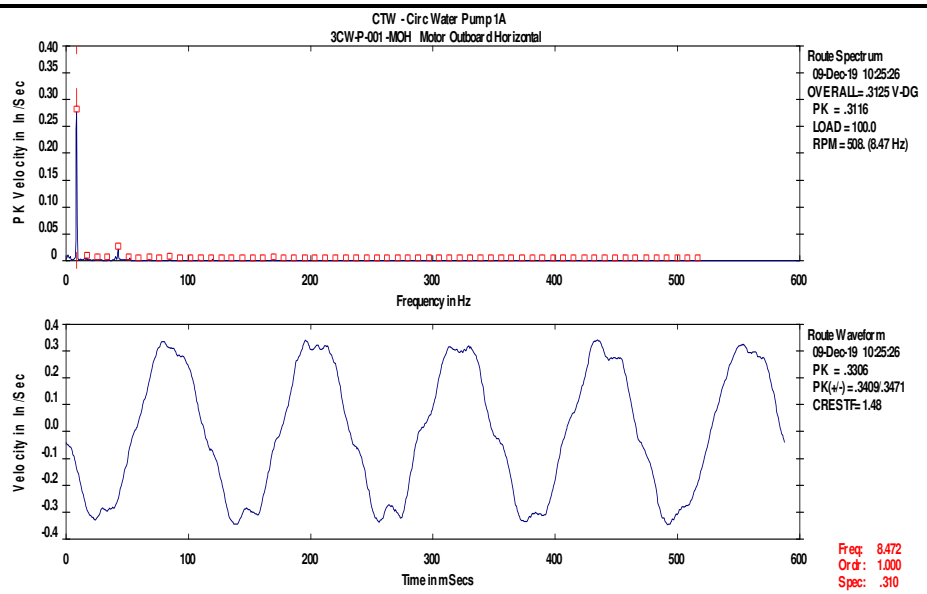
HI-SPEED PREDICTIVE MAINTENANCE

Machinery Vibration Report

Client	Dell Power Plant	**Survey Date**	10-9-19
Location	Dell AR	**Report Date**	10-11-19
Machine	Circulating Water Pump 1	**QMS No.**	141345
Component	Unit	**Analyst**	DWS

Defect Rating for this machine	**NA**
Defect Rating System	
Class I: Defect is present, but effect on reliability is not clear; no immediate action is required. Continue normal monitoring.	**Class III;** Defect (s) present that may cause failure in short term (less than 2 mos.). Should be addressed as soon as practical, with a high maintenance priority. Increase monitoring frequency.
Class II: Defect (s) present that may cause problem in long term (2-6 mos.). Repair during normal maintenance scheduling. Continue to monitor.	**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.***

Vibration Data



Analysis

The dominant vibration is at near 8.5 HZ.

Discussion / Repair recommendations

The motor vibration has dropped after replacement. We will keep a close eye on it in the near future. Not Rated.

Trend Data