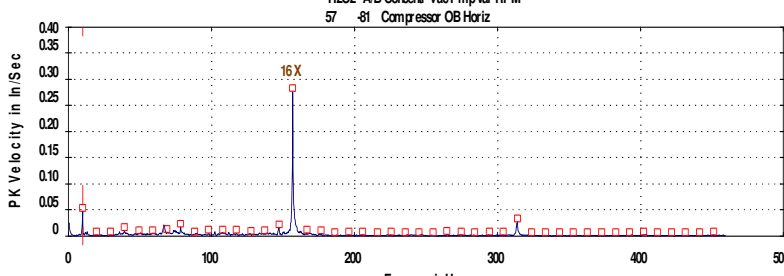
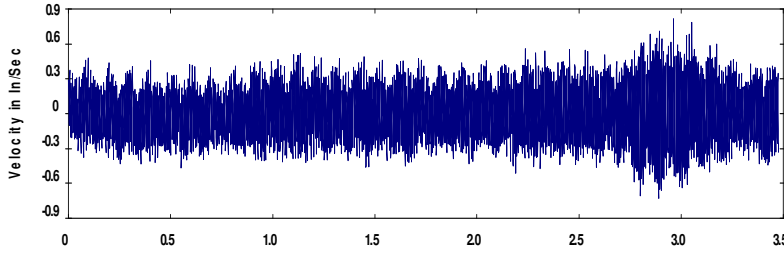
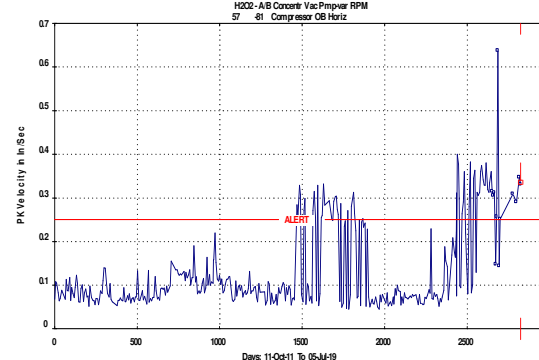




Client	ARKEMA	Survey Date	7-5-19
Location	Millington, TN	Report Date	7-9-19
Machine	AB Vacuum Pump 57	QMS No.	140108
Component	Pump	Analyst	DWS

Defect Rating for this machine	CLASS I
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
<p>H202 - A/B Concentr Vac Pmp-var RPM 57 -81 Compressor OB Horiz</p>  <p>Route Spectrum 05-Jul-19 08:52:17 OVERALL=.3308 V-DG PK = .3314 LOAD = 100.0 RPM=900. (15.00 Hz)</p>  <p>Route Waveform 05-Jul-19 08:52:17 PK = .3458 PK(w)=.8138/.7307 CRESTF=3.33</p> <p>Freq: 9.809 Ord: .654 Spec: .04809</p>	<p>16X vibration dominates the velocity spectrum and time waveform.</p>

Discussion / Repair recommendations	Trend Data
<p>Unit still has a clean vibration peak at what looks like vane pass. The highest vibration is just over 0.30 "/sec velocity peak. These are expected; however, it is slightly stronger than normal. There is most likely some wear or process issue. Rated a Class I Defect.</p>	 <p>Trend Display of Overall Value - Baseline - Value: .06765 Date: 11-Oct-11</p> <p>Date: 05-Jul-19 Time: 08:52:30 Ampl: .331</p>