HI-SPEED INDUSTRIAL SERVICE

MILLINGTON, TN

November 6, 2020

Arkema

Subject: November week 1 vibration service report

Most of the machines surveyed were found to be in good condition except for the following:

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.

This completes our assessment of your equipment for this survey. Thank you for your business and don't hesitate to call if you have any comments or questions.

Sincerely,

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Weekly Peroxide Route Critical Equipment Observations

C Concentrator Vacuum Pump 2130-1
Vibrations appear to be slightly elevated this survey. Motor axial has jumped to 0.204”/sec velocity peak. No actions required just yet.

Agitator, Hydrogenator C 7001-01
The highest motor overall vibrations have dropped again and are 0.106”/sec velocity peak for the inboard vertical. We will continue to monitor normally.

A/B Concentrator Vacuum Pump 57
This unit’s motor vibration is still below 0.10”/sec velocity peak. The outboard pump bearing overall is 0.268”/sec peak velocity, with a dominant vibration at 16 orders, which is most likely blade pass. We will continue to watch for changes. **Rated a Class I Defect.**

Flash Vacuum Pump 2130-1
Vibrations appear to be normal this survey. All velocity measurements are below 0.10”/sec peak. No actions required.

Air Compressor C-201
Rotor bar vibrations are low again for this motor’s history. The trend clearly shows that the vibrations vary considerably over time but have risen considerably. We still believe these motors have possible weak rotor bar end connections that cause the vibrations to fluctuate higher due to loading. There is also an increase in blower case vibrations around 3 KHz. With a wide noise floor. We will continue to monitor this unit for changes. **Rated a Class I Defect**.

Air Compressor C-202
Rotor bar vibrations are very low for this motor’s history. The trend clearly shows that the vibrations vary considerably over time. We are still watching an increase in acceleration for the compressor section. **Rated a Class II Defect**. No immediate actions required at this time.

Air Compressor C-203
Rotor bar vibrations are normal for this motor’s history. The waterfall spectra clearly show that the vibrations vary considerably over time. We still believe these motors have possible weak rotor bar end connections that cause the vibrations to fluctuate higher due to loading There is also an increase in blower case vibrations around 3 KHz. With a wide noise floor. We will continue to monitor this unit for changes. **Rated a Class II Defect**.

Instrument Air Compressor
The male and female shaft vibrations still seem to show gear mesh and harmonics as well as a beat vibration occasionally. The male and female shaft vibrations are up to 8.5 g's RMS. The dominant vibration appears to be the second gear mesh harmonic at near 2500 Hz. Two other harmonic vibrations at near 1500 and 1600 Hz are beating near 120 Hz. The beat is strong sometimes since the vibrations are close and of nearly equal amplitude. We are still watching this unit closely and will be going forward. **Rated a Class II Defect for now.**

Air Compressor NASH A 201-08A
Highest vibration is still in the pump itself at just under 0.3"/sec velocity peak for the outboard vertical. The vibration spectrum is still dominated by a 20-order vibration, which is thought to be vane pass. **Rated a Class I Defect.**

D Hydrogenator Agitator 9002-10
Vibration data shows a slight decrease in vibrations this survey. Highest overall vibration is 0.214"/sec velocity peak for the gearbox top output bearing plate in the N/S direction. No issues today.

Hydrogen Monthly Service

East BFWP P1B
Pump inboard bearing continues to show distress with overall acceleration at 7 G's RMS now. **Rated a Class I Defect for now.**

FD Blower C2
The 1x RPM vibration has increased throughout the unit and is the highest in the motor outboard. Inspect for imbalance, coupling or alignment issues as time allows. **Rated a Class I Defect.**

EAST Cooling Tower Pump CTPE
Pump inboard vertical vibration data is dominated by a 1x RPM vibration at 0.5"/sec velocity peak. Inspect the coupling for wear and have the shafts checked for eccentricity and alignment. The bases were installed poorly and should be reviewed, leveled, and reset. Finally, they should be grouted in. **Rated a Class II Defect.**

Abbreviated Last Measurement Summary

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Database: Arkema.rbm
Station: PEROXIDE
Route No. 3: ARK WK 1
Report Date: 06-Nov-20 14:14

MEASUREMENT POINT	OVERALL LEVEL	HFD / VHFD
2130-1old - C Concentrator Vacuum Pump	(06-Nov-20)	
	OVERALL LEVEL	1-20 KHz
11 - Motor OB HOR	.064 In/Sec	.490 G-s
21 - Motor IB HOR	.064 In/Sec	.472 G-s
23 - Motor IB AXIAL	.204 In/Sec	.179 G-s
71 - Compressor IB HOR	.131 In/Sec	.899 G-s
81 - Compressor OB Horiz	.163 In/Sec	.799 G-s
83 - Compressor OB Axial	.097 In/Sec	1.514 G-s
7000-01 - AGITATOR,HYDROGENATOR C	(06-Nov-20)	
	OVERALL LEVEL	1-20 KHZ
02 - DRIVESHAFT BRG-EAST-WEST	.043 In/Sec	.036 G-s
03 - DRIVESHAFT BRG-VERTICAL	.045 In/Sec	.034 G-s
11 - C Hydro Agitator MOTOR OB HORIZ	.073 In/Sec	.950 G-s
12 - C Hydro Agitator MOTOR OB VERT	.083 In/Sec	.806 G-s
13 - C Hydro Agitator Motor OB Axial	.082 In/Sec	.240 G-s
21 - C Hydro Agitator MOTOR IB HORIZ	.082 In/Sec	.205 G-s
22 - C Hydro Agitator MOTOR IB VERT	.106 In/Sec	.252 G-s
23 - C Hydro Agitator Motor IB Axial	.091 In/Sec	.227 G-s
31 - C Hydro Agitator GrBx In Horizon	.051 In/Sec	.406 G-s
32 - C Hydro Agitator GrBx In VERT	.102 In/Sec	1.137 G-s
33 - C Hydro Agitator GrBx In Axial	.061 In/Sec	.468 G-s
41 - C Hydro GrBx shaft 2 Top HZ E-W	.067 In/Sec	.655 G-s
42 - C Hydro GrBx shaft 2 BOT HZ E-W	.022 In/Sec	.381 G-s
51 - C Hydro GrBx OUTPUT TOP HZ E-W	.052 In/Sec	.441 G-s
52 - C Hydro GrBx OUTPUT BOT HZ E-W	.022 In/Sec	.319 G-s
53 - C Hydro GrBx OUTPUT Top Axial	.047 In/Sec	.515 G-s
57 - A/B Concentr Vac Pmp-var RPM	(06-Nov-20)	
	OVERALL LEVEL	1-20 KHz
11 - Motor OB HOR	.063 In/Sec	.340 G-s
12 - Motor OB VERT	.049 In/Sec	.255 G-s
21 - Motor IB HOR	.074 In/Sec	.149 G-s
23 - Motor IB AXIAL	.055 In/Sec	.111 G-s
71 - Compressor IB HOR	.124 In/Sec	1.086 G-s
81 - Compressor OB Horiz	.268 In/Sec	.754 G-s
83 - Compressor OB Axial	.045 In/Sec	1.063 G-s
2130-1 - FLASH VAP VAC PUMP-var speed	(06-Nov-20)	
	OVERALL LEVEL	1-20 KHz
11 - Motor OB HOR	.048 In/Sec	.139 G-s
12 - Motor OB VERT	.035 In/Sec	.249 G-s
21 - Motor IB HOR	.043 In/Sec	.174 G-s

22	- Motor IB VERT	.045 In/Sec	.170 G-s
23	- Motor IB AXIAL	.050 In/Sec	.147 G-s
71	- Compressor IB HOR	.060 In/Sec	.666 G-s
72	- Compressor IB VERT	.072 In/Sec	.561 G-s
81	- Compressor OB Horiz	.076 In/Sec	.282 G-s
82	- Compressor OB VERT	.084 In/Sec	.473 G-s
83	- Compressor OB Axial	.042 In/Sec	.460 G-s

236-06	- HYDRO FD PUMP N 236-06 -2FLR	(06-Nov-20)	
		OVERALL LEVEL	1-20 KHz
11	- Hydro Fd Pmp B No. Motor Top	.102 In/Sec	.222 G-s
21	- Hydro Fd Pmp B No. Motor Bottom	.070 In/Sec	.185 G-s

2130-6	- ABC SEC FILT FEED PUMP-NORTH	(06-Nov-20)	
		OVERALL LEVEL	1-20 KHz
11	- MOTOR OUTBOARD HORIZONTAL	.072 In/Sec	.924 G-s
21	- MOTOR INBOARD HORIZONTAL	.074 In/Sec	.382 G-s
23	- MOTOR INBOARD AXIAL	.046 In/Sec	.305 G-s
71	- PUMP HORIZONTAL	.186 In/Sec	.769 G-s
72	- PUMP VERTICAL	.106 In/Sec	.860 G-s

9001-1	- EAST OXIDIZER FEED PUMP	(06-Nov-20)	
		OVERALL LEVEL	1-20 KHz
11	- MOTOR OUTBOARD HORIZONTAL	.035 In/Sec	.350 G-s
21	- MOTOR INBOARD HORIZONTAL	.062 In/Sec	.360 G-s
23	- MOTOR INBOARD AXIAL	.047 In/Sec	.188 G-s
71	- PUMP HORIZONTAL	.119 In/Sec	.508 G-s
72	- PUMP VERTICAL	.147 In/Sec	.289 G-s

9001-2	- MIDDLE OXIDIZER FEED PUMP	(06-Nov-20)	
		OVERALL LEVEL	1-20 KHz
11	- MOTOR OUTBOARD HORIZONTAL	.026 In/Sec	.588 G-s
21	- MOTOR INBOARD HORIZONTAL	.036 In/Sec	.688 G-s
23	- MOTOR INBOARD AXIAL	.038 In/Sec	.461 G-s
71	- PUMP HORIZONTAL	.077 In/Sec	.195 G-s
72	- PUMP VERTICAL	.080 In/Sec	.223 G-s

7016-11	- WEST OXIDIZER FEED PUMP	(06-Nov-20)	
		OVERALL LEVEL	1-20 KHz
11	- MOTOR OUTBOARD HORIZONTAL	.024 In/Sec	.674 G-s
21	- MOTOR INBOARD HORIZONTAL	.026 In/Sec	.485 G-s
23	- MOTOR INBOARD AXIAL	.017 In/Sec	.228 G-s
71	- PUMP HORIZONTAL	.096 In/Sec	.732 G-s
72	- PUMP VERTICAL	.073 In/Sec	.768 G-s

234-01	- CHILL WATER PUMP 234-01	(06-Nov-20)	
		OVERALL LEVEL	1-20 KHz
11	- Chilled H2O Pump Motor OB Horizo	.062 In/Sec	1.157 G-s
		OVERALL LEVEL	1-20 KHZ
11L	- MOTOR HORZ OUTBOARD - L-FREQ	.050 In/Sec	1.345 G-s
		OVERALL LEVEL	1-20 KHz
21	- Chilled H2O Pump Motor IB Horizo	.040 In/Sec	1.050 G-s
23	- MOTOR INBOARD	.083 In/Sec	
		OVERALL LEVEL	1-20 KHZ
23L	- MOTOR AXIAL INBOARD - L-FREQ	.085 In/Sec	.784 G-s
		OVERALL LEVEL	1-20 KHz
71	- Chilled H2O Pump IB Horizontal	.073 In/Sec	.231 G-s

72 - PUMP VERTICAL		.066 In/Sec	.238 G-s
C-203	- C-203 Comp	(06-Nov-20)	
		OVERALL LEVEL	1-20 KHz
11 - MOTOR OB HOR		.067 In/Sec	2.614 G-s
12 - MOTOR OB VERT		.035 In/Sec	.682 G-s
21 - MOTOR IB HOR		.034 In/Sec	1.174 G-s
22 - MOTOR IB VERT		.065 In/Sec	2.043 G-s
23 - MOTOR IB AXIAL		.018 In/Sec	.333 G-s
		OVERALL LEVEL	1-20 KHZ
71M - COMP MALE SHAFT IB HOR		.055 In/Sec	3.728 G-s
72M - COMP MALE SHAFT IB VERT		.040 In/Sec	1.582 G-s
73M - COMP MALE SHAFT IB AXIAL		.086 In/Sec	2.260 G-s
81M - COMP MALE SHAFT OB HOR		.073 In/Sec	3.740 G-s
82M - COMP MALE SHAFT OB VERT		.061 In/Sec	2.083 G-s
71F - COMP FEMALE SHAFT IB HOR		.067 In/Sec	3.447 G-s
72F - COMP FEMALE SHAFT IB VERT		.065 In/Sec	2.041 G-s
73F - COMP FEMALE SHAFT IB AXIAL		.129 In/Sec	6.337 G-s
81F - COMP FEMALE SHAFT OB HOR		.052 In/Sec	2.253 G-s
82F - COMP FEMALE SHAFT OB VERT		.058 In/Sec	1.135 G-s
9000-01	- D HYDROGENATOR FD PUMP- WEST	(06-Nov-20)	
		OVERALL LEVEL	1-20 KHz
11 - MOTOR OUTBOARD HORIZONTAL		.032 In/Sec	.136 G-s
21 - MOTOR INBOARD HORIZONTAL		.038 In/Sec	.410 G-s
23 - MOTOR INBOARD AXIAL		.024 In/Sec	.275 G-s
71 - PUMP HORIZONTAL		.090 In/Sec	.845 G-s
72 - PUMP VERTICAL		.054 In/Sec	.835 G-s
236-04A	- HYDROGNTOR PRECOOLER FD PUMP	(06-Nov-20)	
		OVERALL LEVEL	1-20 KHz
11 - MOTOR OUTBOARD HORIZ		.051 In/Sec	.325 G-s
21 - MOTOR INBOARD HORIZ		.078 In/Sec	.610 G-s
23 - MOTOR INBOARD AXIAL		.037 In/Sec	.403 G-s
71 - PUMP HORIXONTAL		.109 In/Sec	.313 G-s
72 - PUMP VERTICAL		.075 In/Sec	.235 G-s
C-202	- C-202 Comp	(06-Nov-20)	
		OVERALL LEVEL	1-20 KHz
11 - MOTOR OB HOR		.041 In/Sec	.534 G-s
12 - MOTOR OB VERT		.120 In/Sec	.547 G-s
21 - MOTOR IB HOR		.066 In/Sec	.441 G-s
22 - MOTOR IB VERT		.085 In/Sec	.981 G-s
23 - MOTOR IB AXIAL		.033 In/Sec	.228 G-s
		OVERALL LEVEL	1-20 KHZ
71M - COMP MALE SHAFT IB HOR		.033 In/Sec	.966 G-s
72M - COMP MALE SHAFT IB VERT		.047 In/Sec	1.073 G-s
73M - COMP MALE SHAFT IB AXIAL		.067 In/Sec	1.210 G-s
81M - COMP MALE SHAFT OB HOR		.083 In/Sec	1.642 G-s
82M - COMP MALE SHAFT OB VERT		.066 In/Sec	4.508 G-s
71F - COMP FEMALE SHAFT IB HOR		.044 In/Sec	1.595 G-s
72F - COMP FEMALE SHAFT IB VERT		.065 In/Sec	1.624 G-s
73F - COMP FEMALE SHAFT IB AXIAL		.087 In/Sec	3.780 G-s
81F - COMP FEMALE SHAFT OB HOR		.043 In/Sec	3.443 G-s
82F - COMP FEMALE SHAFT OB VERT		.055 In/Sec	1.404 G-s
C-201	- C-201 Comp	(06-Nov-20)	

		OVERALL LEVEL	1-20 KHz
11	- MOTOR OB HOR	.094 In/Sec	1.636 G-s
12	- MOTOR OB VERT	.094 In/Sec	3.097 G-s
21	- MOTOR IB HOR	.097 In/Sec	1.467 G-s
22	- MOTOR IB VERT	.069 In/Sec	2.401 G-s
23	- MOTOR IB AXIAL	.063 In/Sec	.739 G-s
		OVERALL LEVEL	1-20 KHZ
71M	- COMP MALE SHAFT IB HOR	.045 In/Sec	1.986 G-s
72M	- COMP MALE SHAFT IB VERT	.047 In/Sec	1.708 G-s
73M	- COMP MALE SHAFT IB AXIAL	.078 In/Sec	1.793 G-s
81M	- COMP MALE SHAFT OB HOR	.063 In/Sec	2.264 G-s
82M	- COMP MALE SHAFT OB VERT	.064 In/Sec	2.293 G-s
71F	- COMP FEMALE SHAFT IB HOR	.068 In/Sec	2.274 G-s
72F	- COMP FEMALE SHAFT IB VERT	.040 In/Sec	.647 G-s
73F	- COMP FEMALE SHAFT IB AXIAL	.049 In/Sec	1.574 G-s
81F	- COMP FEMALE SHAFT OB HOR	.074 In/Sec	3.403 G-s
82F	- COMP FEMALE SHAFT OB VERT	.056 In/Sec	1.306 G-s

new AC	- INSTRUMENT AIR COMPRESSOR	(06-Nov-20)	
		OVERALL LEVEL	1-20 KHz
11	- MOTOR OB HOR	.153 In/Sec	1.608 G-s
12	- MOTOR OB VERT	.103 In/Sec	.623 G-s
13	- MOTOR OB AXIAL	.058 In/Sec	.450 G-s
21	- MOTOR IB HOR	.193 In/Sec	1.547 G-s
22	- MOTOR IB VERT	.099 In/Sec	.955 G-s
23	- MOTOR IB AXIAL	.071 In/Sec	1.691 G-s
		OVERALL LEVEL	1-20 KHZ
71F	- COMP FEMALE SHAFT IB HOR	.207 In/Sec	6.915 G-s
72F	- COMP FEMALE SHAFT IB VERT	.156 In/Sec	3.365 G-s
73F	- COMP FEMALE SHAFT IB AXIAL	.175 In/Sec	3.678 G-s
81F	- COMP FEMALE SHAFT OB HOR	.154 In/Sec	3.196 G-s
82F	- COMP FEMALE SHAFT OB VERT	.322 In/Sec	8.575 G-s
83F	- COMP FEMALE SHAFT OB AXIAL	.180 In/Sec	3.820 G-s
71M	- COMP MALE SHAFT IB HOR	.105 In/Sec	4.765 G-s
72M	- COMP MALE SHAFT IB VERT	.169 In/Sec	4.419 G-s
73M	- COMP MALE SHAFT IB AXIAL	.137 In/Sec	3.274 G-s
81M	- COMP MALE SHAFT OB HOR	.195 In/Sec	3.700 G-s
82M	- COMP MALE SHAFT OB VERT	.205 In/Sec	2.774 G-s
83M	- COMP MALE SHAFT OB AXIAL	.183 In/Sec	.819 G-s

201-08A	- COMPRESSOR,NASH A 201-08A	(06-Nov-20)	
		OVERALL LEVEL	1-20 KHz
11	- Nash Compr A Motor OB Horiz	.073 In/Sec	.107 G-s
12	- Nash Compr A Motor OB Vertical	.076 In/Sec	.099 G-s
13	- Nash Compr A Motor OB Axial	.149 In/Sec	.071 G-s
21	- Nash Compr A Motor IB Horiz	.076 In/Sec	.106 G-s
22	- Nash Compr A Motor IB VERT	.115 In/Sec	.103 G-s
23	- Nash Compr A Motor IB AXIAL	.165 In/Sec	.092 G-s
71	- Nash Compr A COMP IB HORIZ	.147 In/Sec	.793 G-s
72	- Nash Compr A Compressor IB Verti	.253 In/Sec	.940 G-s
73	- Nash Compr A COMP IB AXIAL	.159 In/Sec	.362 G-s
81	- Nash Compr A COMP OB HORIZ	.176 In/Sec	.461 G-s
82	- Nash Compr A Compressor OB Verti	.292 In/Sec	.436 G-s
83	- Nash Compr A Compressor OB Axial	.172 In/Sec	.351 G-s

9002-10	- D-HYDROGENATOR AGITATOR	(06-Nov-20)	
		OVERALL LEVEL	1-20 KHz

11	- MOTOR OUTBOARD HORIZONTAL	.085 In/Sec	.066 G-s
21	- MOTOR INBOARD HORIZONTAL	.070 In/Sec	.257 G-s
23	- MOTOR INBOARD AXIAL	.046 In/Sec	.038 G-s
31	- GEARBOX INPUT SHAFT -HORIZONTAL	.186 In/Sec	.598 G-s
51	- GEARBOX TOP PLATE- E-W	.139 In/Sec	.244 G-s
52	- GEARBOX TOP PLATE- N-S	.214 In/Sec	.277 G-s
53	- GEARBOX OUTPUT TOP -VERTICAL	.122 In/Sec	.541 G-s
61	- GEARBOX BOTTOM E-W-HORIZONTAL	.070 In/Sec	.120 G-s
81	- AGIT INTERMED BRG @ SEAL- N-S	.039 In/Sec	.024 G-s
82	- AGIT INTERMED BRG @ SEAL- E-W	.039 In/Sec	.028 G-s
83	- AGIT INTERMED BRG @ SEAL- VERT	.034 In/Sec	.185 G-s

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

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Database: Arkema.rbm
Station: HYDROGEN
Route No. 1: H2 MONTHLY
Report Date: 06-Nov-20 14:45

MEASUREMENT POINT		OVERALL LEVEL	HFD / VHFD
P2A	- PUMP MEA CIRC WEST P2A	(06-Nov-20)	
		OVERALL LEVEL	1-20 KHz
11	- West MEA Circ Pmp Mtr OB Horizon	.067 In/Sec	.151 G-s
21	- West MEA Circ Pmp Mtr IB Horizon	.046 In/Sec	.121 G-s
23	- motor inboard axial	.056 In/Sec	.077 G-s
71	- West MEA Circ Pmp Pump IB Horizo	.192 In/Sec	.409 G-s
72	- pump vertical	.121 In/Sec	.644 G-s
P1B	- PUMP BFW EAST P1B	(06-Nov-20)	
		OVERALL LEVEL	1-20 KHz
11	- East Boiler FW Pmp Mtr OB Horizo	.256 In/Sec	.622 G-s
21	- East Boiler FW Pmp Mtr IB Horizo	.166 In/Sec	7.002 G-s
23	- motor inboard axial	.105 In/Sec	1.671 G-s
71	- Pump IB HORIZ	.153 In/Sec	.344 G-s
72	- East Boiler FW Pump IB Vertical	.144 In/Sec	.191 G-s
81	- Pump OB HORIZ	.160 In/Sec	.058 G-s
82	- East Boiler FW Pump OB Vertical	.114 In/Sec	.211 G-s
83	- East Boiler FW Pump OB Axial	.061 In/Sec	.513 G-s
C2	- FD BLOWER C2	(06-Nov-20)	
		OVERALL LEVEL	1-20 KHz
11	- F.D.Fan Motor OB Horizontal	.287 In/Sec	.240 G-s
21	- F.D.Fan Motor I Horizontal	.259 In/Sec	.309 G-s
23	- F.D.Fan Motor AXIAL INBOARD	.164 In/Sec	.142 G-s
71	- F.D.Fan Coupling End Brg Horizon	.195 In/Sec	1.662 G-s
81	- F.D.Fan Fan End Brg Horizon	.213 In/Sec	1.233 G-s
C1	- ID -BLOWER C1	(06-Nov-20)	
		OVERALL LEVEL	1-20 KHz
11	- I.D.Fan Motor OB Horizontal	.065 In/Sec	.299 G-s
21	- I.D.Fan Motor IB Horizontal	.070 In/Sec	.409 G-s

23	- motor inboard axial	.100 In/Sec	.500 G-s
71	- I.D.Fan Coupling End Horizontal	.088 In/Sec	.925 G-s
72	- I.D.Fan Coupling End VERTICAL	.069 In/Sec	.690 G-s
81	- I.D.Fan Fan End Horizontal	.169 In/Sec	.447 G-s
82	- I.D.Fan Fan End VERTICAL	.154 In/Sec	.364 G-s

CTPE - EAST COOLING TOWER PUMP (06-Nov-20)

		OVERALL LEVEL	1-20 KHz
11	- MOTOR OUTBOARD HORIZONTAL	.329 In/Sec	.708 G-s
21	- MOTOR INBOARD HORIZONTAL	.084 In/Sec	.084 G-s
23	- MOTOR INBOARD AXIAL	.276 In/Sec	.724 G-s
71	- PUMP HORIZONTAL	.313 In/Sec	.551 G-s
72	- PUMP VERTICAL	.517 In/Sec	.511 G-s

CTPW - WEST COOLING TOWER PUMP (06-Nov-20)

		OVERALL LEVEL	1-20 KHz
11	- MOTOR OUTBOARD HORIZONTAL	.068 In/Sec	1.191 G-s
21	- MOTOR INBOARD HORIZONTAL	.071 In/Sec	2.390 G-s
23	- MOTOR INBOARD AXIAL	.078 In/Sec	.822 G-s
71	- PUMP HORIZONTAL	.205 In/Sec	.570 G-s
72	- PUMP VERTICAL	.151 In/Sec	.996 G-s

Clarification Of Vibration Units:

Acc	-->	G-s	PK
Vel	-->	In/Sec	PK