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December 5, 2022

Nucor Roll Mill Jackson-Flowood, MS

Subject: November vibration survey

Below is a summary report for the monthly Roll Mill vibration survey that was performed on November 29, 2022. Please note that there are some missing measurement points on stands 9-16 due to mill shutting down due to issues down at the end of the line. 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.

<u>Class I:</u> Defect is present, but effect on reliability is not clear; no immediate action is required. Continue to normally monitor.

<u>Class II:</u> Defect (s) present that may cause problem in long term (2-6 months). Repair during normal maintenance scheduling. Continue to monitor.

<u>Class III:</u> 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.

As always, it has been a pleasure to NUCOR Steel Flowood, MS. If there are any comments or questions, do not hesitate to contact us.

Sincerely,

Cerin W. Maruell

ISO Certified Vibration Analyst, Category III



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Roll Stand 1A

Planetary gearbox vibration has increased some at the input end of the gearbox. This issue can come and gone since replacing gearbox internals. The increased amplitudes and gear mesh frequencies in spectral data may be due to load and speed. We are monitoring this close. Rated as a **CLASS I** defect.

Roll Stand 1

Drive motor continues to have elevated axial vibration in drive end of motor. Vibration is dominant at 360 HZ. This is likely SCR card firing rate frequency. Check VFD drive components for issues. Rated as a **CLASS I** defect.

Roll Stand 3

Outboard motor bearing is starting to show some signs of bearing issue. May be due to fluting. Data is showing outer race defects harmonics on the ODE bearing. This will be monitored very closely in the coming surveys. Rated as a **CLASS II** defect for now.

Roll Stand 5

Cooling fan motor has increased vibration. Check all fasteners and motor frame for looseness. Gear mesh vibration increased slightly this month. Last gear inspection of the gearbox does show some tooth wear in this gearbox. The up and down amplitude of this peak from month to month is likely due to change in tooth load and machine speed. We will continue to monitor this very closely. This is rated as a **CLASS II** defect.

Roll Stand 6

Gear mesh vibration was slightly higher this month. A dominant gear mesh vibration is sometimes present towards the output of the gearbox. The up and down amplitude of this peak is likely due to change in tooth load and speed. We will continue to monitor this very closely. Because of the high amplitude this month, this issue is rated as a **CLASS II** defect.

Roll Stand 7

Gearbox vibration was slightly higher this survey. We still suspect this to be possibly due to a resonant gear mesh frequency vibration. The up and down amplitude of this peak from month to month is likely due to change in tooth load and machine speed. We will continue to monitor this very closely. Because of the high amplitudes in the gearbox and bearing defect related vibrations in the motor, this is rated as a **CLASS II** defect.

Roll Stand 16

Motor was down this survey. Drive motor still likely has bearing issues. Vibration data indicates race defects in the motor bearings which likely caused by electrical fluting. Motor should be scheduled for replacement as scheduling allows. Ensure new motor has proper grounding/fluting protection. Rated as a **CLASS III** defect.

Furnace Cooling Tower Drives North and South

Motors data shows axial vibration that appears to be occurring at or near 1 x motor rpm and may indicate a structural issue such as loose fasteners, weak flexible motor base. This could also be caused by a resonance or air flow turbulence in this unit. We will continue to monitor this issue closely. Rated as a **CLASS II** defect.

Mill Water West Pump

Top thrust bearing spectral data shows signs of bearing defects according to the spectral data of the Outboard end of the motor. This appears to be light defects at this time and will be monitored closely. Rated as a **CLASS I** defect.

Abbreviated Last Measurement Summary

Database: nucorja9.rbm Station: Roll Mill Rolls MEASUREMENT POINT OVERALL LEVEL HFD / VHFD _____ _____ -----STD1A - Stand 1A (30-Nov-22) OVERALL LEVEL 1K-20KHz .066 In/Sec .023 G-s MOH .072 G-s .071 In/Sec MIH .188 G-s .148 In/Sec MIA .045 G-s .186 In/Sec СОН .122 G-s .083 In/Sec GIA .335 G-s .114 G-s .207 G-s GIH .155 In/Sec .126 In/Sec GI2 .129 In/Sec GI3 .225 G-s .095 In/Sec GI4 .067 In/Sec .289 G-s GI5 .057 In/Sec .085 G-s GI6 GOH .0074 In/Sec .0073 G-s (30-Nov-22) STD2A - Stand 2A OVERALL LEVEL 1K-20KHz .0070 G-s .064 In/Sec MOH .047 In/Sec .054 G-s MIH .062 G-s MIA .101 In/Sec .137 In/Sec .024 G-s СОН - Stand 1 STD1 (30-Nov-22) OVERALL LEVEL 1K-20KHz MOH .159 In/Sec .138 G-s .048 G-s .067 In/Sec MIH .067 In/Sec .040 G-s .751 In/Sec .875 G-s .034 In/Sec .052 G-s .064 In/Sec .014 G-s .094 In/Sec .040 G-s MIA GIA GIH COH STD2 - Stand 2 (30-Nov-22) OVERALL LEVEL 1K-20KHz .123 G-s .157 In/Sec MOH .071 G-s .140 In/Sec MIH .260 G-s .035 G-s .278 In/Sec .114 In/Sec .154 In/Sec MIA GIA .229 G-s GIH .610 In/Sec COH .052 G-s (30-Nov-22) STD3 - Stand 3 OVERALL LEVEL 1K-20KHz .096 G-s MOH .078 In/Sec MIH .068 In/Sec .075 G-s .100 In/Sec MIA .095 G-s .013 In/Sec .0075 G-s GIA .029 G-s .049 In/Sec GIH .212 In/Sec .029 G-s COH STD4 - Stand 4 (30-Nov-22) IK-20KHz .013 G-s .086 In/Sec .031 G-s .006 In/Sec .048 In/Sec .037 In/Sec .025 G-s .162 In/Sec MOH MIH MIA GTA GIH COH STD5 - Stand 5 (30-Nov-22) OVERALL LEVEL 1K-20KHz .042 In/Sec .014 G-s .055 In/Sec .141 G-s MOH

MIH

	MIA				.101 In/Sec	.147 G-s
	GIA				.089 In/Sec	.0059 G-s
	GTH				069 Tn/Sec	020 G-s
	CO11				257 Tp/Sec	254 C a
	GOH				.25/ 11/560	.354 G-8
	СОН				.363 In/Sec	.065 G-s
STD6		-	Stand	6		(30-Nov-22)
					OVERALL LEVEL	1K-20KHz
	MOH				.065 In/Sec	.0095 G-s
	мтн				066 Tr/Sec	014 G-s
	MTA				141 In/Sec	.014 0 5
	MIA				.141 11/360	.078 G-S
	GIA				.075 In/Sec	.086 G-s
	GIH				.072 In/Sec	.029 G-s
	GOH				.394 In/Sec	.381 G-s
	СОН				.192 In/Sec	.047 G-s
STD7		_	Stand	7		(30 - Nov - 22)
				•	OVERALL LEVEL	1K-20KHz
						115 0
	MOH				.092 In/Sec	.115 G-s
	MIH				.061 In/Sec	.093 G-s
	MIA				.182 In/Sec	.218 G-s
	GIA				.047 In/Sec	.025 G-s
	GTH				096 In/Sec	082 G-s
	CO11				645 TR/Sec	470 6 6
	GOH				.645 IN/Sec	.470 G-S
	СОН				.465 In/Sec	.117 G-s
STD9		-	Stand	9		(30-Nov-22)
					OVERALL LEVEL	1K-20KHz
	СОН				.146 In/Sec	.079 G-s
	0011					
CTTD 1 1		_	Stand	11		(20-Nor-22)
SIDII		-	Stand	ΤT		(30-NOV-22)
					OVERALL LEVEL	IK-20KHz
	сон				.142 In/Sec	.030 G-s
STD13		-	Stand	13		(30-Nov-22)
					OVERALL LEVEL	1K-20KHz
	СОН				.437 In/Sec	.247 G-s
					,	
			0 +	14		(30 - Now - 22)
CTTD 1 /		-	ST SDA			
STD14		-	Stand	14		(30 100 22)
STD14		-	Stand	14	OVERALL LEVEL	1K-20KHz
STD14	сон	-	Stand	14	OVERALL LEVEL .201 In/Sec	1K-20KHz .296 G-s
STD14	СОН	-	Stand	14	OVERALL LEVEL .201 In/Sec	1K-20KHz .296 G-s
STD14 STD15	СОН	-	Stand	14	OVERALL LEVEL .201 In/Sec	1K-20KHz .296 G-s (30-Nov-22)
STD14 STD15	СОН	-	Stand	14	OVERALL LEVEL .201 In/Sec OVERALL LEVEL	(30-Nov-22) 1K-20KHz
STD14 STD15	СОН	-	Stand	15	OVERALL LEVEL .201 In/Sec OVERALL LEVEL 226 In/Sec	(30 NOV -22) 1K-20KHz .296 G-s (30-Nov-22) 1K-20KHz 129 G-s
STD14 STD15	сон	-	Stand	15	OVERALL LEVEL .201 In/Sec OVERALL LEVEL .226 In/Sec	(30 Nov 22) 1K-20KHz .296 G-s (30-Nov-22) 1K-20KHz .129 G-s
STD14 STD15	сон	-	Stand	15	OVERALL LEVEL .201 In/Sec OVERALL LEVEL .226 In/Sec	(30 Nov-22) 1K-20KHz .296 G-s (30-Nov-22) 1K-20KHz .129 G-s (20 Nov-22)
STD14 STD15 STD16	сон	-	Stand	15	OVERALL LEVEL .201 In/Sec OVERALL LEVEL .226 In/Sec	(30-Nov-22) (30-Nov-22) 1K-20KHz .129 G-s (30-Nov-22)
STD14 STD15 STD16	СОН	-	Stand	15 16	OVERALL LEVEL .201 In/Sec OVERALL LEVEL .226 In/Sec OVERALL LEVEL	(30-Nov-22) 1K-20KHz .296 G-s (30-Nov-22) 1K-20KHz .129 G-s (30-Nov-22) 1K-20KHz
STD14 STD15 STD16	сон сон	-	Stand	15 16	OVERALL LEVEL .201 In/Sec OVERALL LEVEL .226 In/Sec OVERALL LEVEL .169 In/Sec	(30-Nov-22) 1K-20KHz .296 G-s (30-Nov-22) 1K-20KHz .129 G-s (30-Nov-22) 1K-20KHz .096 G-s
STD14 STD15 STD16	сон сон	-	Stand	15	OVERALL LEVEL .201 In/Sec OVERALL LEVEL .226 In/Sec OVERALL LEVEL .169 In/Sec	(30-Nov-22) 1K-20KHz .296 G-s (30-Nov-22) 1K-20KHz .129 G-s (30-Nov-22) 1K-20KHz .096 G-s
STD14 STD15 STD16 SOUTH	сон сон сон ас	-	Stand Stand Stand	15 16 AIR	OVERALL LEVEL .201 In/Sec OVERALL LEVEL .226 In/Sec OVERALL LEVEL .169 In/Sec COMPRESSOR QUINCY	(30-Nov-22) 1K-20KHz .296 G-s (30-Nov-22) 1K-20KHz .129 G-s (30-Nov-22) 1K-20KHz .096 G-s (30-Nov-22)
STD14 STD15 STD16 SOUTH	сон сон сон ас	-	Stand Stand Stand	15 16 AIR	OVERALL LEVEL .201 In/Sec OVERALL LEVEL .226 In/Sec OVERALL LEVEL .169 In/Sec COMPRESSOR QUINCY OVERALL LEVEL	(30-Nov-22) 1K-20KHz .296 G-s (30-Nov-22) 1K-20KHz .129 G-s (30-Nov-22) 1K-20KHz .096 G-s (30-Nov-22) 1 - 20 KHz
STD14 STD15 STD16 SOUTH	сон сон сон ас мон	-	Stand Stand Stand SOUTH	15 16 AIR	OVERALL LEVEL .201 In/Sec OVERALL LEVEL .226 In/Sec OVERALL LEVEL .169 In/Sec COMPRESSOR QUINCY OVERALL LEVEL .085 In/Sec	(30-Nov-22) 1K-20KHz .296 G-s (30-Nov-22) 1K-20KHz .096 G-s (30-Nov-22) 1 - 20 KHz .206 G-s
STD14 STD15 STD16 SOUTH	сон сон сон ас мон	-	Stand Stand Stand	15 16 AIR	OVERALL LEVEL .201 In/Sec OVERALL LEVEL .226 In/Sec OVERALL LEVEL .169 In/Sec COMPRESSOR QUINCY OVERALL LEVEL .085 In/Sec .090 In/Sec	(30-Nov-22) 1K-20KHz .296 G-s (30-Nov-22) 1K-20KHz .096 G-s (30-Nov-22) 1 - 20 KHz .206 G-s 227 C-2
STD14 STD15 STD16 SOUTH	сон сон сон ас мон мін	-	Stand Stand Stand	15 16 AIR	OVERALL LEVEL .201 In/Sec OVERALL LEVEL .226 In/Sec OVERALL LEVEL .169 In/Sec COMPRESSOR QUINCY OVERALL LEVEL .085 In/Sec .090 In/Sec	(30-Nov-22) 1K-20KHz .296 G-s (30-Nov-22) 1K-20KHz .129 G-s (30-Nov-22) 1K-20KHz .096 G-s (30-Nov-22) 1 - 20 KHz .206 G-s .327 G-s
STD14 STD15 STD16 SOUTH	COH COH COH AC MOH MIH MIA	-	Stand Stand Stand	15 16 AIR	OVERALL LEVEL .201 In/Sec OVERALL LEVEL .226 In/Sec OVERALL LEVEL .169 In/Sec COMPRESSOR QUINCY OVERALL LEVEL .085 In/Sec .090 In/Sec .352 In/Sec	(30-Nov-22) 1K-20KHz .296 G-s (30-Nov-22) 1K-20KHz .129 G-s (30-Nov-22) 1K-20KHz .096 G-s (30-Nov-22) 1 - 20 KHz .206 G-s .327 G-s .130 G-s
STD14 STD15 STD16 SOUTH	COH COH COH AC MOH MIH MIA	-	Stand Stand Stand	15 16 AIR	OVERALL LEVEL .201 In/Sec OVERALL LEVEL .226 In/Sec OVERALL LEVEL .169 In/Sec COMPRESSOR QUINCY OVERALL LEVEL .085 In/Sec .090 In/Sec .352 In/Sec OVERALL LEVEL	(30-Nov-22) 1K-20KHz .296 G-s (30-Nov-22) 1K-20KHz .129 G-s (30-Nov-22) 1K-20KHz .096 G-s (30-Nov-22) 1 - 20 KHz .206 G-s .327 G-s .130 G-s 1K-20KHz
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STD14 STD15 STD16 SOUTH	COH COH COH AC MOH MIH MIA CIA CIA	-	Stand Stand Stand	15 16 AIR	OVERALL LEVEL .201 In/Sec OVERALL LEVEL .226 In/Sec OVERALL LEVEL .169 In/Sec COMPRESSOR QUINCY OVERALL LEVEL .085 In/Sec .090 In/Sec .352 In/Sec OVERALL LEVEL .407 In/Sec .193 In/Sec .214 In/Sec	(30-Nov-22) 1K-20KHz .296 G-s (30-Nov-22) 1K-20KHz .129 G-s (30-Nov-22) 1K-20KHz .096 G-s (30-Nov-22) 1 - 20 KHz .206 G-s .327 G-s .130 G-s 1K-20KHz .402 G-s .383 G-s 202 G-s
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STD14 STD15 STD16 SOUTH	COH COH COH AC MOH MIH MIA CIA CIA COH	-	Stand Stand Stand SOUTH	15 16 AIR	OVERALL LEVEL .201 In/Sec OVERALL LEVEL .226 In/Sec OVERALL LEVEL .169 In/Sec COMPRESSOR QUINCY OVERALL LEVEL .085 In/Sec .090 In/Sec .352 In/Sec OVERALL LEVEL .407 In/Sec .193 In/Sec .214 In/Sec	(30-Nov-22) 1K-20KHz .296 G-s (30-Nov-22) 1K-20KHz .129 G-s (30-Nov-22) 1K-20KHz .096 G-s (30-Nov-22) 1 - 20 KHz .206 G-s .327 G-s .130 G-s 1K-20KHz .402 G-s .383 G-s .202 G-s (30-Nov-22)
STD14 STD15 STD16 SOUTH	COH COH COH AC MOH MIH MIA CIA CIH COH	-	Stand Stand Stand SOUTH	14 15 16 AIR	OVERALL LEVEL .201 In/Sec OVERALL LEVEL .226 In/Sec OVERALL LEVEL .169 In/Sec COMPRESSOR QUINCY OVERALL LEVEL .085 In/Sec .090 In/Sec .352 In/Sec OVERALL LEVEL .407 In/Sec .193 In/Sec .214 In/Sec	(30-Nov-22) 1K-20KHz .296 G-s (30-Nov-22) 1K-20KHz .129 G-s (30-Nov-22) 1K-20KHz .096 G-s (30-Nov-22) 1 - 20 KHz .402 G-s .383 G-s .202 G-s (30-Nov-22) 1 - 20 KHz
STD14 STD15 STD16 SOUTH	COH COH COH AC MOH MIH MIA CIA CIH COH	-	Stand Stand South WEST A	15 16 AIR	OVERALL LEVEL .201 In/Sec OVERALL LEVEL .226 In/Sec OVERALL LEVEL .169 In/Sec COMPRESSOR QUINCY OVERALL LEVEL .085 In/Sec .090 In/Sec .352 In/Sec OVERALL LEVEL .407 In/Sec .193 In/Sec .214 In/Sec COMPRESSOR QUINCY OVERALL LEVEL .225 In/Sec	(30-Nov-22) 1K-20KHz .296 G-s (30-Nov-22) 1K-20KHz .129 G-s (30-Nov-22) 1K-20KHz .096 G-s (30-Nov-22) 1 - 20 KHz .402 G-s .383 G-s .202 G-s (30-Nov-22) 1 - 20 KHz .57 G-s
STD14 STD15 STD16 SOUTH	COH COH COH AC MOH MIH CIA COH C MOH MIH	-	Stand Stand South WEST A	14 15 16 AIR	OVERALL LEVEL .201 In/Sec OVERALL LEVEL .226 In/Sec OVERALL LEVEL .169 In/Sec COMPRESSOR QUINCY OVERALL LEVEL .085 In/Sec .090 In/Sec .352 In/Sec .193 In/Sec .214 In/Sec COMPRESSOR QUINCY OVERALL LEVEL .225 In/Sec .185 In/Sec	(30-Nov-22) 1K-20KHz .296 G-s (30-Nov-22) 1K-20KHz .096 G-s (30-Nov-22) 1 - 20 KHz .206 G-s .327 G-s .130 G-s 1K-20KHz .402 G-s .383 G-s .202 G-s (30-Nov-22) 1 - 20 KHz .402 G-s .383 G-s .202 G-s (30-Nov-22) 1 - 20 KHz .157 G-s .187 G-s
STD14 STD15 STD16 SOUTH	COH COH COH AC MOH MIH COH C MOH MIH MIA	-	Stand Stand Stand SOUTH	14 15 16 AIR	OVERALL LEVEL .201 In/Sec OVERALL LEVEL .226 In/Sec OVERALL LEVEL .169 In/Sec COMPRESSOR QUINCY OVERALL LEVEL .085 In/Sec .090 In/Sec .352 In/Sec .193 In/Sec .214 In/Sec COMPRESSOR QUINCY OVERALL LEVEL .225 In/Sec .185 In/Sec .322 In/Sec	(30-Nov-22) 1K-20KHz .296 G-s (30-Nov-22) 1K-20KHz .129 G-s (30-Nov-22) 1 - 20 KHz .206 G-s .327 G-s .130 G-s 1K-20KHz .402 G-s .383 G-s .202 G-s (30-Nov-22) 1 - 20 KHz .402 G-s .383 G-s .202 G-s (30-Nov-22) 1 - 20 KHz .57 G-s .187 G-s .057 G-s
STD14 STD15 STD16 SOUTH	COH COH COH AC MOH MIH COH C MOH MIH MIA		Stand Stand Stand SOUTH	14 15 16 AIR	OVERALL LEVEL .201 In/Sec OVERALL LEVEL .226 In/Sec OVERALL LEVEL .169 In/Sec COMPRESSOR QUINCY OVERALL LEVEL .085 In/Sec .090 In/Sec .352 In/Sec .193 In/Sec .193 In/Sec .214 In/Sec COMPRESSOR QUINCY OVERALL LEVEL .225 In/Sec .322 In/Sec .322 In/Sec OVERALL LEVEL	(30-Nov-22) 1K-20KHz .296 G-s (30-Nov-22) 1K-20KHz .129 G-s (30-Nov-22) 1K-20KHz .096 G-s (30-Nov-22) 1 - 20 KHz .402 G-s .383 G-s .202 G-s (30-Nov-22) 1 - 20 KHz .402 G-s .383 G-s .202 G-s
STD14 STD15 STD16 SOUTH	COH COH COH AC MOH MIH CIA COH C MOH MIH MIA	-	Stand Stand Stand SOUTH	14 15 16 AIR	OVERALL LEVEL .201 In/Sec OVERALL LEVEL .226 In/Sec OVERALL LEVEL .169 In/Sec COMPRESSOR QUINCY OVERALL LEVEL .085 In/Sec .090 In/Sec .352 In/Sec OVERALL LEVEL .407 In/Sec .193 In/Sec .214 In/Sec COMPRESSOR QUINCY OVERALL LEVEL .225 In/Sec .185 In/Sec .322 In/Sec OVERALL LEVEL .314 Te/Sec	(30-Nov-22) 1K-20KHz .296 G-s (30-Nov-22) 1K-20KHz .129 G-s (30-Nov-22) 1K-20KHz .096 G-s (30-Nov-22) 1 - 20 KHz .402 G-s .383 G-s .202 G-s (30-Nov-22) 1 - 20 KHz .402 G-s .383 G-s .202 G-s (30-Nov-22) 1 - 20 KHz .57 G-s .187 G-s .057 G-s 1K-20KHz .459 C-c
STD14 STD15 STD16 SOUTH	COH COH COH AC MOH MIH CIA COH C MOH MIH MIA	-	Stand Stand Stand SOUTH	14 15 16 AIR	OVERALL LEVEL .201 In/Sec OVERALL LEVEL .226 In/Sec OVERALL LEVEL .169 In/Sec COMPRESSOR QUINCY OVERALL LEVEL .085 In/Sec .090 In/Sec .352 In/Sec OVERALL LEVEL .407 In/Sec .193 In/Sec .214 In/Sec .185 In/Sec .322 In/Sec .322 In/Sec .322 In/Sec .322 In/Sec	(30-Nov-22) 1K-20KHz .296 G-s (30-Nov-22) 1K-20KHz .129 G-s (30-Nov-22) 1K-20KHz .096 G-s (30-Nov-22) 1 - 20 KHz .206 G-s .327 G-s .130 G-s 1K-20KHz .402 G-s .383 G-s .202 G-s (30-Nov-22) 1 - 20 KHz .157 G-s .187 G-s .057 G-s 1K-20KHz .458 G-s
STD14 STD15 STD16 SOUTH	COH COH COH AC MOH MIH CIA COH C MOH MIA CIA CIA CIA	-	Stand Stand Stand SOUTH	14 15 16 AIR	OVERALL LEVEL .201 In/Sec OVERALL LEVEL .226 In/Sec OVERALL LEVEL .169 In/Sec COMPRESSOR QUINCY OVERALL LEVEL .085 In/Sec .090 In/Sec .352 In/Sec OVERALL LEVEL .407 In/Sec .193 In/Sec .214 In/Sec .185 In/Sec .322 In/Sec OVERALL LEVEL .314 In/Sec .382 In/Sec	(30-Nov-22) 1K-20KHz .296 G-s (30-Nov-22) 1K-20KHz .129 G-s (30-Nov-22) 1K-20KHz .096 G-s (30-Nov-22) 1 - 20 KHz .206 G-s .327 G-s .130 G-s 1K-20KHz .402 G-s .383 G-s .202 G-s (30-Nov-22) 1 - 20 KHz .57 G-s .187 G-s .187 G-s .057 G-s 1K-20KHz .458 G-s .454 G-s

Station: Roll Mill Utilities

MEASUREMENT	POINT	OVERALL LEVEL	HFD / VHFD
HYDPMP1	- Hydraulic Pump	East	(29 - Nov - 22)
		OVERALL LEVEL	1K-20KHz
MOH		.080 In/Sec	.252 G-s
MTH		.236 In/Sec	.426 G-s
PIV		.392 In/Sec	3.775 G-s
HYDPMP2	- Hydraulic Pump	Center	(29-Nov-22)
		OVERALL LEVEL	1K-20KHz
MOH		.054 In/Sec	.246 G-s
MIH		.227 In/Sec	.163 G-s
PIV		.324 In/Sec	2.194 G-s
DESFAN	- Desolution Fan		(29-Nov-22)
		OVERALL LEVEL	IK-20KHz
MOH		.052 In/Sec	.026 G-s
MIH		.052 In/Sec	.033 G-s
COMFAN	- Combustion Air	Fan OVERALL LEVEL	(29-Nov-22) 1K-20KH7
MOH		000 Tr/Soc	131 C-c
мтн		.030 IN/Sec	154 G-s
мта		055 Tr/Sec	127 G-s
FTU		.035 IN/Sec	.127 G-S
FIN		.037 IN/Sec	.143 G-S
FOR		.005 11/560	.330 G-S
EJCFAN	- Ejector Air Far	1	(29-Nov-22)
		OVERALL LEVEL	1K-20KHz
MOH		.090 In/Sec	.212 G-s
MIH		.091 In/Sec	.249 G-s
MIA		.072 In/Sec	.144 G-s
FIA		.077 In/Sec	.775 G-s
FIH		.084 In/Sec	1.337 G-s
FOH		.136 In/Sec	.393 G-s
COLPMP2	- Furnace Cooling	g Pump center	(29-Nov-22)
		OVERALL LEVEL	1K-20KHz
MOH		.144 In/Sec	.123 G-s
MIH		.157 In/Sec	.339 G-s
MIA		.185 In/Sec	.167 G-s
FCTSOUTH	- Furnace CT Driv	ve South	(29-Nov-22)
		OVERALL LEVEL	1K-20KHz
MOH		.562 In/Sec	.116 G-s
MIH		.278 In/Sec	.098 G-s
MIA		.395 In/Sec	.076 G-s
FCTNORTH	- Furnace CT Driv	ve North	(29-Nov-22)
Nou		E10 TR /Coor	IK-ZUKHZ
MOH		.510 In/Sec	.115 G-s
MIH MIA		.111 In/Sec	.146 G-S .074 G-S
SCI DMD2	- Scalo Dit Dump	North	(29 - Nov - 22)
SCLPMPZ	- Scale Pit Pump	OVEDALL LEVEL	(29-NOV-22) 1K-20KH-
MOU		ASU IP/GOC	260 C-C
мти		152 Th/Sec	362 6-5
MIA		.173 In/Sec	.078 G-s
CTWTR1	- CT Pump East/Mi	Ladle Pump	(29-Nov-22)
		OVERALL LEVEL	IK-20KHz
MOH		.08/ In/Sec	.218 G-s
MIH		110 Tr/Sec	.∠34 G-S
MIA		o in/sec	.120 G-S

CTWTR2 -	CT PI	ump We	st			(29-Nov-22)	
				OVERA	LL LEVEI	1K-20KHz	
MOH				.136	In/Sec	.222 G-s	
MIH				.125	In/Sec	.220 G-s	
MIA				.095	In/Sec	.089 G-s	
MILWTR3 -	Mill	Water	Pump	West		(29-Nov-22)	
				OVERA	LL LEVEI	1K-20KHz	
MOH				.092	In/Sec	.479 G-s	
MIH				.049	In/Sec	.355 G-s	
MIA				.049	In/Sec	.205 G-s	
MILWTR1 -	Mill	Water	Pump	East		(29-Nov-22)	
				OVERA	LL LEVEI	1K-20KHz	
MOH				.071	In/Sec	.199 G-s	
MIH				.047	In/Sec	.208 G-s	
MIA				.049	In/Sec	.114 G-s	
Larification C	t Vib	ration	Unit	s:			
Acc>	G-s		RMS				
	_ /	-					