



QualiTest® Diagnostics

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August 7, 2023

Tim Busby
Mark Busby
Atlantic Dry Ice
Brandon, MS

Tim/Mark,

The following is a summary of findings from the quarterly vibration survey on the Ammonia Compressors that was performed on 08/04/23 at the Brandon, MS plant. Please let us know if there are any questions or comments.

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.

Summary

C-1 Ammonia Compressor

Motor vibration has decreased quite a bit since the last survey. No issues to report this survey.

C-2 Ammonia Compressor

Compressor data still shows some signs of internal wear of the compressor. The compressor verticals show a dominant vibration at lobe pass (4 x rpm) with harmonics. We will continue to monitor this closely. Rated as a **CLASS I** defect.

C-3 Ammonia Compressor

NO issues to note at this time.

Abbreviated Last Measurement Summary

Database: Atlantic Dry Ice.rbm
Area: Brandon MS Plant

MEASUREMENT POINT	OVERALL LEVEL	HFD / VHFD
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C-1	- C-1 AMMONIA COMPRESSOR	(04-Aug-23)
	OVERALL LEVEL	1K-20KHz
MOH	.102 In/Sec	1.362 G-s
MOV	.064 In/Sec	.353 G-s
MIH	.060 In/Sec	.496 G-s
MIV	.099 In/Sec	.419 G-s
MIA	.068 In/Sec	.430 G-s
CIA	.120 In/Sec	.408 G-s
CIH	.093 In/Sec	.313 G-s
CIV	.132 In/Sec	.311 G-s
COH	.032 In/Sec	.439 G-s
COV	.080 In/Sec	.204 G-s

C-2	- C-2 AMMONIA COMPRESSOR	(04-Aug-23)
	OVERALL LEVEL	1K-20KHz
MOH	.126 In/Sec	1.022 G-s
MOV	.136 In/Sec	.465 G-s
MIH	.127 In/Sec	.971 G-s
MIV	.072 In/Sec	.248 G-s
MIA	.080 In/Sec	.211 G-s
CIA	.221 In/Sec	.315 G-s
CIH	.055 In/Sec	.596 G-s
CIV	.367 In/Sec	.419 G-s
COH	.073 In/Sec	.556 G-s
COV	.104 In/Sec	.649 G-s

C-3	- C-3 AMMONIA COMPRESSOR	(04-Aug-23)
	OVERALL LEVEL	1K-20KHz
MOH	.141 In/Sec	1.948 G-s
MOV	.117 In/Sec	.400 G-s
MIH	.088 In/Sec	1.041 G-s
MIV	.127 In/Sec	.628 G-s
MIA	.072 In/Sec	.325 G-s
CIA	.152 In/Sec	.127 G-s
CIH	.072 In/Sec	.413 G-s

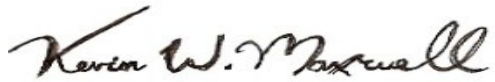
CIV	.124 In/Sec	.308 G-s
COH	.053 In/Sec	.548 G-s
COV	.081 In/Sec	.585 G-s

Clarification Of Vibration Units:

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

As always, it has been a pleasure to serve Atlantic Dry Ice. If there are any comments or questions, do not hesitate to contact us.

Sincerely,



ISO Certified Vibration Analyst, Category III



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