



QualiTest® Diagnostics

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July 6, 2021

Mark Busby
Atlantic Dry Ice
Brandon, MS

Mark,

The following is a summary of findings from the quarterly vibration survey on the Ammonia Compressors 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.

C-1 Ammonia Compressor

An electrically related vibration is present in the motor. This peak of vibration in the spectral data appears to be at 28 orders with may be related to rotor bar or could be a harmonic of compressor lobe pass frequency. 120 Hz. sidebands are also present. This vibration appears to vary with load. We will continue to monitor this closely. Rated as a **CLASS I** defect.

C-2 Ammonia Compressor

Compressor data still shows some signs of internal wear of the compressor, although overall vibration has decreased this survey. We will continue to monitor this closely. Rated as a **CLASS I** defect for now.

C-3 Ammonia Compressor

Vibration data showed no issues were present during this survey. No actions recommended at this time.

Abbreviated Last Measurement Summary

Database: Atlantic Dry Ice.rbm
Area: Brandon MS Plant
Route No. 1: ADI BRANDON MS

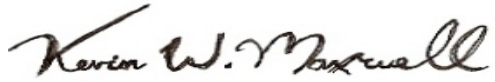
MEASUREMENT POINT	OVERALL LEVEL	HFD / VHFD
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C-1	- C-1 AMMONIA COMPRESSOR	(30-Jun-21)
	OVERALL LEVEL	1K-20KHz
MOH	.171 In/Sec	.999 G-s
MOV	.108 In/Sec	1.043 G-s
MIH	.096 In/Sec	1.320 G-s
MIV	.116 In/Sec	.942 G-s
MIA	.115 In/Sec	1.349 G-s
CIA	.121 In/Sec	.199 G-s
CIH	.102 In/Sec	.147 G-s
CIV	.136 In/Sec	.215 G-s
COH	.037 In/Sec	.212 G-s
COV	.048 In/Sec	.160 G-s
C-2	- C-2 AMMONIA COMPRESSOR	(30-Jun-21)
	OVERALL LEVEL	1K-20KHz
MOH	.234 In/Sec	.531 G-s
MOV	.224 In/Sec	.418 G-s
MIH	.171 In/Sec	.579 G-s
MIV	.181 In/Sec	.374 G-s
MIA	.092 In/Sec	.500 G-s
CIA	.125 In/Sec	.507 G-s
CIH	.097 In/Sec	.290 G-s
CIV	.326 In/Sec	.488 G-s
COH	.096 In/Sec	.203 G-s
COV	.073 In/Sec	.537 G-s
C-3	- C-3 AMMONIA COMPRESSOR	(30-Jun-21)
	OVERALL LEVEL	1K-20KHz
MOH	.058 In/Sec	.360 G-s
MOV	.090 In/Sec	.211 G-s
MIH	.060 In/Sec	.160 G-s
MIV	.059 In/Sec	.194 G-s
MIA	.078 In/Sec	.361 G-s
CIA	.101 In/Sec	.372 G-s
CIH	.080 In/Sec	.255 G-s
CIV	.081 In/Sec	.274 G-s
COH	.064 In/Sec	.470 G-s
COV	.053 In/Sec	.327 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



QualiTest® Diagnostics

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