HI-SPEED INDUSTRIAL SERVICE QualiTest® Diagnostics

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August 15th, 2025

Atlantic Dry Ice
Brandon, MS

The following is a summary of findings from the 3rd quarter vibration survey on the Ammonia Compressors that was performed on August 14th, 2025, at the Brandon, MS plant.

QualiTest® uses a four step rating system for defects.

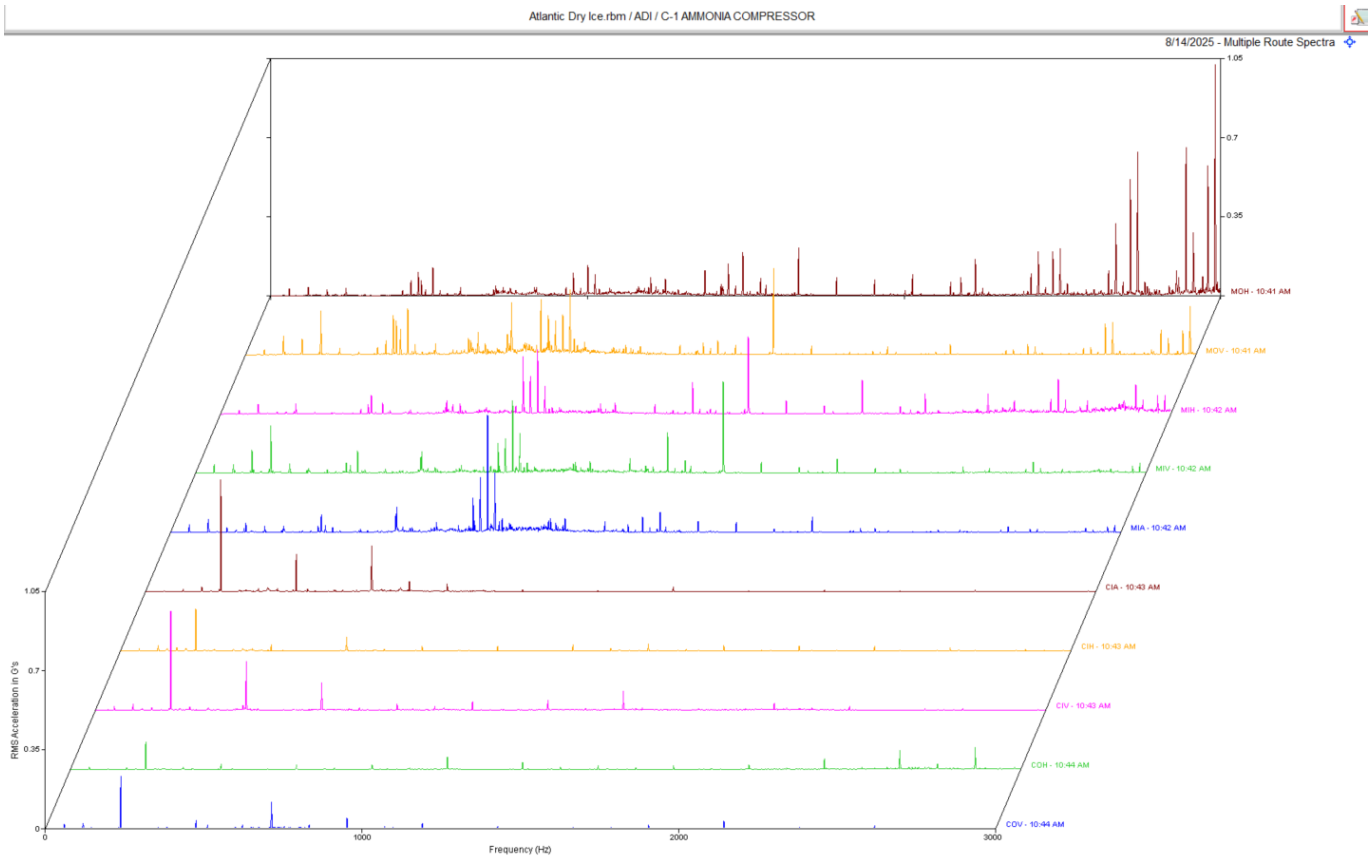
Class I: Defect is present, but effect on reliability is not clear; no immediate action is required. Continue to normally monitor.

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.

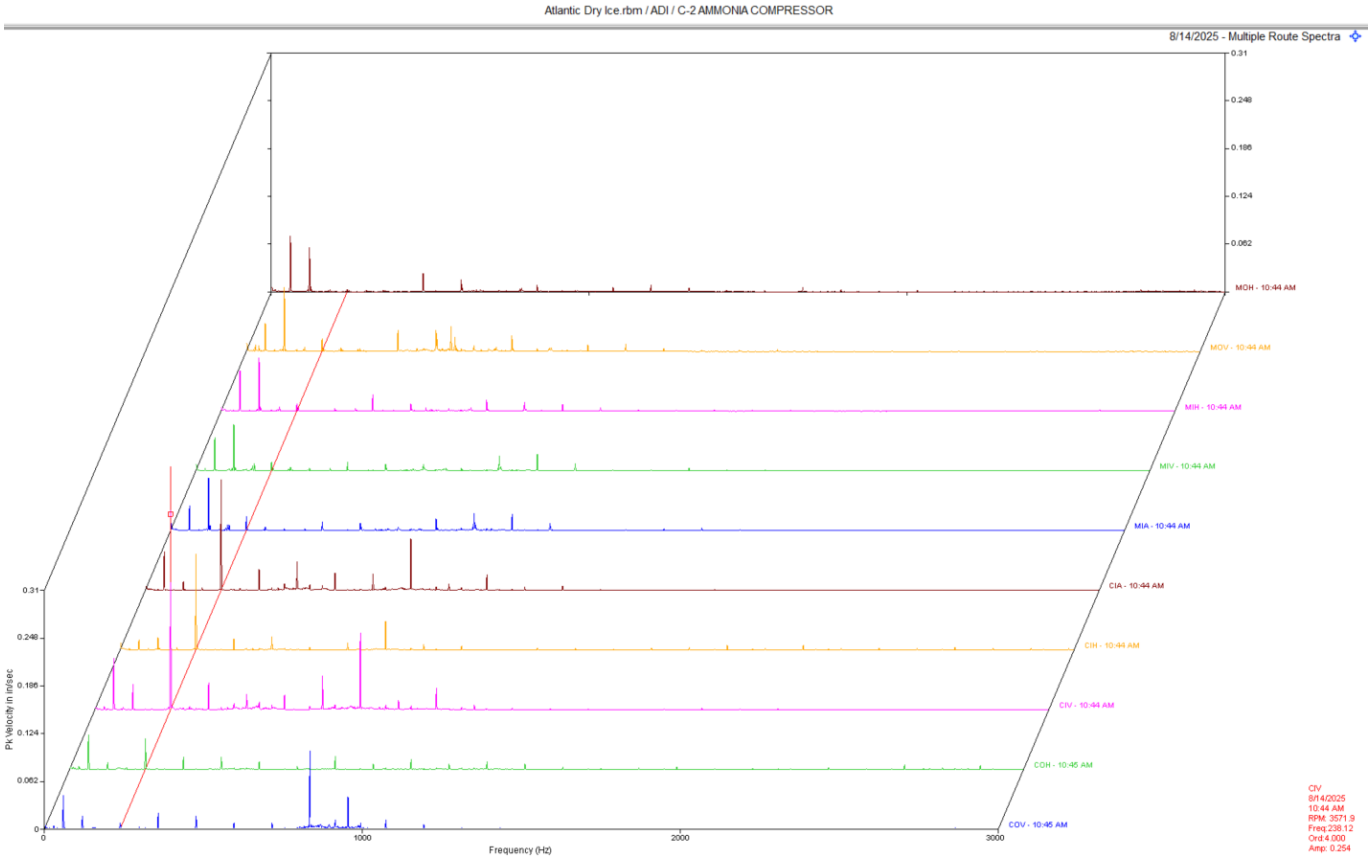
Class IV; Defect (s) present that makes continued reliability unpredictable, and possibility of secondary damage is high. Repairs should be made ASAP. An unscheduled shutdown should be considered for repairs

Summary



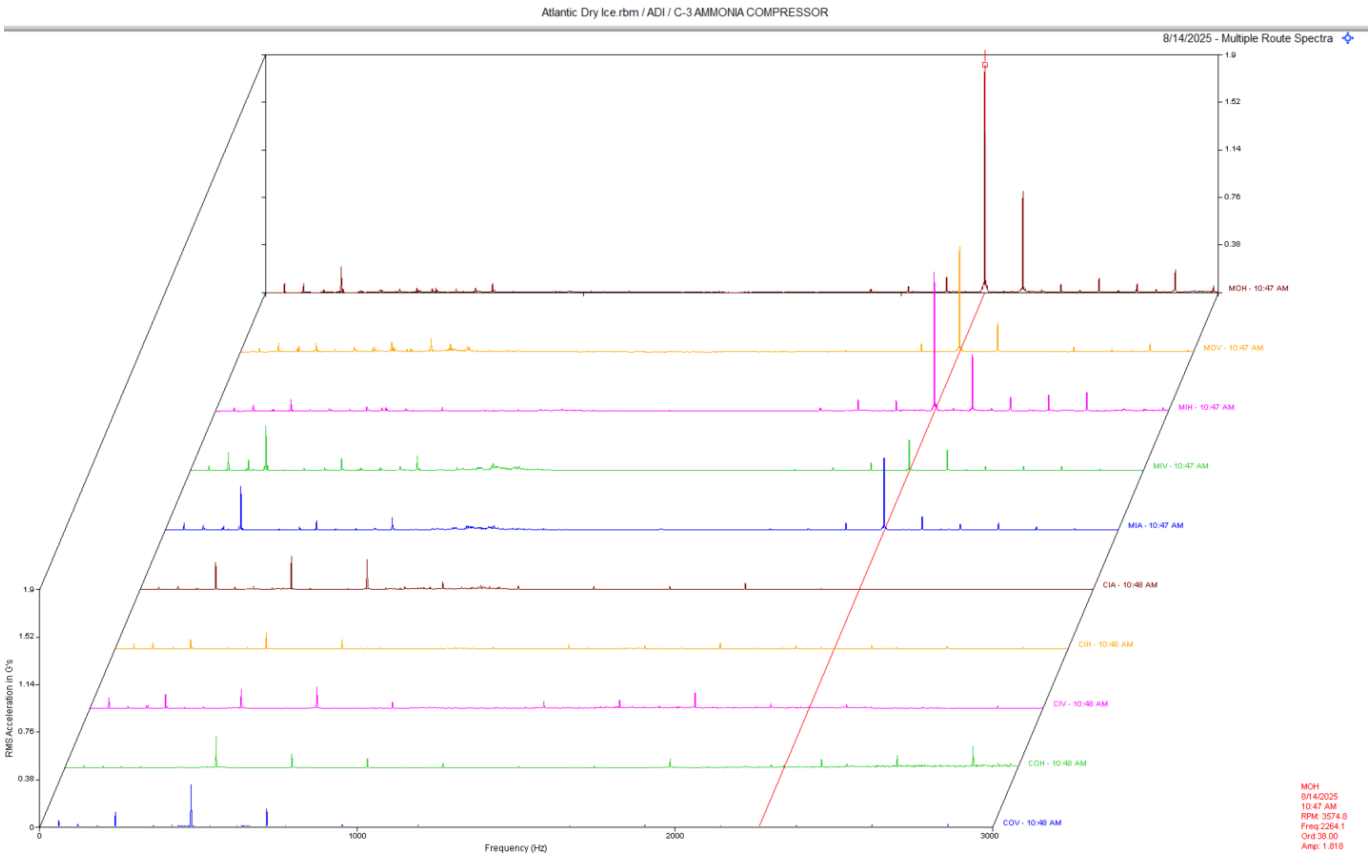
C-1 Ammonia Compressor

Multi-point spectra of the motor and compressor shows non-synchronous peaks in motor spectra that indicate bearing defects are present in the motor bearings. This may be a bearing cage issue and needs attention asap. Inspect motor bearings for defects/wear as scheduling allows. Rated as a **CLASS III** defect.



C-2 Ammonia Compressor

Compressor data (CIA-COV) shows some possible signs of internal wear of the compressor. Heavy load on the compressor can also be a factor. The compressor verticals show a dominant vibration at lobe pass (4 x rpm) with harmonics. Compressor may need attention in the coming months. We will continue to monitor this closely. Rated as a **CLASS II** defect.



C-3 Ammonia Compressor

Motor data (MOH-MIA) shows electrical vibration associated with possible rotor bar bass frequency and 2 x electrical line frequency. This may be due to rotor bar issues but could also be cause by soft foot of the motor causing an air gap issue in the motor. There is an increase in high frequency amplitude this survey. For now, it is recommended to inspect motor for soft foot condition and realign motor if soft foot is found. We are monitoring this closely. Rated as a **CLASS II** defect.

Abbreviated Last Measurement Summary

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

MEASUREMENT POINT		OVERALL LEVEL	HFD / VHFD
C-1	- C-1 AMMONIA COMPRESSOR	(14-Aug-25)	
		OVERALL LEVEL	1K-20KHz
	MOH	.104 In/Sec	2.601 G-s
	MOV	.151 In/Sec	.710 G-s
	MIH	.078 In/Sec	1.056 G-s
	MIV	.138 In/Sec	.614 G-s
	MIA	.108 In/Sec	.454 G-s
	CIA	.188 In/Sec	.058 G-s
	CIH	.078 In/Sec	.269 G-s
	CIV	.172 In/Sec	.149 G-s
	COH	.052 In/Sec	.432 G-s
	COV	.098 In/Sec	.068 G-s
C-2	- C-2 AMMONIA COMPRESSOR	(14-Aug-25)	
		OVERALL LEVEL	1K-20KHz
	MOH	.108 In/Sec	.722 G-s
	MOV	.123 In/Sec	.241 G-s
	MIH	.101 In/Sec	1.133 G-s
	MIV	.092 In/Sec	.367 G-s
	MIA	.096 In/Sec	.351 G-s
	CIA	.195 In/Sec	.289 G-s
	CIH	.148 In/Sec	.450 G-s
	CIV	.365 In/Sec	.379 G-s
	COH	.081 In/Sec	.557 G-s
	COV	.139 In/Sec	.228 G-s
C-3	- C-3 AMMONIA COMPRESSOR	(14-Aug-25)	
		OVERALL LEVEL	1K-20KHz
	MOH	.181 In/Sec	2.329 G-s
	MOV	.102 In/Sec	1.020 G-s
	MIH	.092 In/Sec	1.448 G-s
	MIV	.197 In/Sec	.372 G-s
	MIA	.172 In/Sec	.646 G-s
	CIA	.111 In/Sec	.151 G-s
	CIH	.099 In/Sec	.494 G-s
	CIV	.161 In/Sec	.279 G-s
	COH	.067 In/Sec	.476 G-s
	COV	.134 In/Sec	.114 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

HI-SPEED INDUSTRIAL SERVICE

QualiTest® Diagnostics

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