

7030 Ryburn Dr. Millington, TN

Phone: (901) 873-5300

Fax: (901) 873-5301

www.gohispeed.com

June 6, 2025

Joshua Lyle Owens Corning Memphis, TN

The following is a summary of findings from the vibration survey that was performed on May 5<sup>th</sup>, 2025.

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.

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.

# Hot Oil Heater

Data of the motor and pump showed no issues to note at this time.

### Hot Oil Combustion Blower

Outboard end of the motor shows some high 1 x rpm vibration. This is likely a combination of blower imbalance and flexible structure. Blower likely needs to be trim balanced. Rated as a **CLASS II** defect.

## Main Boiler Fan

Data of the motor showed no issues to note at this time.

## Process Fan

Data of the motor and pump showed no issues to note at this time.

#### **Combustion Blower**

Motor data shows signs of motor bearing defects. Motor should be inspected for bearing defects as scheduling allows. Rated as a **CLASS II** defect.

#### Stack Blower

Data of the motor and blower showed no issues to note at this time.

#### **Blower 3**

Data shows some mechanical looseness of the jackshaft bearings. Blower data also shows some rpm harmonics indicative of internal wear. This is our baseline data, so severity is unclear at this time. For now, check bearing clearances on jack shaft bearings. Rated as a **CLASS II** defect.

#### Blower 2

The highest vibration in this unit is at the drive end of the jackshaft. Data shows several rpm harmonics indicating excessive axial clearances. Jackshaft may have shaft wear. Check jackshaft and bearings for looseness/wear and ensure one the bearings is fixed, and one is floating. Rated as a **CLASS II** defect.

#### **Blower 1**

Jackshaft bearings may have some slight looseness and also may have some lube issues. Check bearing clearances and ensure bearings have clean adequate amounts of grease. Rated as a **CLASS II** defect.

#### 

Database: Analysis1.rbm Area: OWENS CORNING		
MEASUREMENT POINT	OVERALL LEVEL	HFD / VHFD
HOT OIL HEATER	(05-May-25) OVERALL LEVEL	18-20847
MOH		654 G-S
MOV	.082 In/Sec	1.222 G-s
MIH	.033 In/Sec	.303 G-s
MIV	.031 In/Sec	.238 G-s
MIA	.049 In/Sec	.395 G-s
PIH	.105 In/Sec	.337 G-s
PIV	.110 In/Sec	.391 G-s
POH	.080 In/Sec	.286 G-s
POV	.046 In/Sec	.936 G-s
HOT OIL COMBUSTION BLOWER	(05-May-25)	18-2084-
MOH	520 In/Sec	476 G-S
MOV	.557 In/Sec	.313 G-s
MIH	.184 In/Sec	.263 G-s
MIV	.202 In/Sec	.293 G-s
MAIN BOILER FAN	(05-May-25)	
	OVERALL LEVEL	1K-20KHz
MOH	.159 In/Sec	.208 G-s
MOV	.251 In/Sec	.0/2 G-s
MIH	.141 In/Sec	.362 G-S
MIN	.124 In/Sec	.142 G-s
PROCESS FAN	(05-May-25)	
	OVERALL LEVEL	1K-20KHz
MOH	.086 In/Sec	.368 G-s
MOV	.064 In/Sec	./28 G-S
MIH	.100 In/Sec	.387 G-S
MIV	286 In/Sec	.313 G-S
MIN	.200 117,500	.255 6 5
COMBUSTION BLOWER	(05-May-25)	18 0080-
MOH	047 TR/Soc	
MOH	052 In/Sec	.992 G-S
MTH	052 In/Sec	951 G-s
MIV	.064 In/Sec	1.334 G-s
MIA	.075 In/Sec	.439 G-s
STACK BLOWER	(05-May-25)	4 0.0
Non	OVERALL LEVEL	1K-20KHz
MOH	.038 In/Sec	.184 G-s
MOV	.02/ In/Sec	.211 G-S
MTV	.034 IN/Sec	206 C-8
MTA	.067 In/Sec	.109 G-S
BIH	.063 In/Sec	.403 G-s
вон	.032 In/Sec	.402 G-s
BIH	.076 In/Sec	.674 G-s
ВОН	.054 In/Sec	.572 G-s
BLOWER 3	(05-May-25)	
	OVERALL LEVEL	1K-20KHz
MOH	.140 In/Sec	.557 G-s

MOV	.131 In/Sec	.127 G-s
MIH	.132 In/Sec	.269 G-s
MIV	.169 In/Sec	.430 G-s
MIA	.169 In/Sec	.412 G-s
JIA	.358 In/Sec	1.631 G-s
JIH	.285 In/Sec	1.896 G-s
JIV	.165 In/Sec	1.654 G-s
JOH	.299 In/Sec	1.097 G-s
JOV	.312 In/Sec	1.109 G-s
BOH	.219 In/Sec	1.773 G-s
BOV	.234 In/Sec	1.998 G-s
BIH	.264 In/Sec	1.824 G-s
BIV	.325 In/Sec	1.925 G-s
BIA	.237 In/Sec	1.281 G-s
BLOWER 2	(US-MAY-25)	18-2088-
MOH	125 Tp/Soc	105 C-2
MON	105 Jn/Sec	1 241 C-s
MTH	116 In/Sec	690 G-s
MTV	163 Tn/Sec	492 G-s
MTA	140 Tn/Sec	498 G-s
JTA	600 In/Sec	844 G-s
.TTH	189 Tn/Sec	853 G-s
JIV	.265 In/Sec	1.531 G-s
JOH	277 In/Sec	488 G-s
VOL	.209 In/Sec	.467 G-s
BOH	.148 In/Sec	.842 G-s
BOV	.192 In/Sec	.617 G-s
BIH	.147 In/Sec	.833 G-s
BIV	.130 In/Sec	.741 G-s
BLOWER 1	(05-May-25)	
	OVERALL LEVEL	1K-20KHz
MOH	.181 In/Sec	.413 G-s
MOV	.100 In/Sec	2.332 G-s
MIH	.274 In/Sec	.397 G-s
MIV	.232 In/Sec	.703 G-s
MIA	.197 In/Sec	.568 G-s
JIA	.192 In/Sec	2.229 G-s
JIH	.209 In/Sec	1.714 G-s
JIV	.124 In/Sec	2.328 G-s
JOH	.261 In/Sec	2.111 G-S
10V	.231 In/Sec	.908 G-S
BOH	.139 In/Sec	./89 G-S
BUV	.303 IN/Sec	.31/ G-S
BIN	.19/ IN/Sec	.934 G-S
BIV	.322 IN/Sec	./J/ G-S
BIA	.239 IN/Sec	1.032 G-S

\_\_\_\_\_

Clarification Of Vibration Units:

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

As always, it has been a pleasure to serve Owens Corning Memphis. If there are any comments or questions, do not hesitate to contact us.

Sincerely,

Kevin W. Maxwell

ISO Certified Vibration Analyst, Category III



Cell: 901-486-4565 Email: <u>kwilliam@gohispeed.com</u>