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February 11, 2021

Milwaukee Tools Greenwood, MS

The following is a summary of findings from the February 2021 monthly vibration survey of the Heat Treat Quench Motors. Please let us know if there are any questions or comments.

**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.

<u>Class IV</u>; 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 quaranty or warranty of the matters discussed herein.

## **Heat Treat Motors**

## **Heat Treat Motor 1**

This unit was down during this survey.

## **Heat Treat Motor 2**

Vibration appeared to be within acceptable limits this survey. No actions necessary at this time.

## Abbreviated Last Measurement Summary

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Database: Milwaukee Tools.rbm Area: HEAT TREAT SYSTEMS

| MEASUREMENT POINT | OVERALL LEVEL | HFD / VHFD |
|-------------------|---------------|------------|
|                   |               |            |

| MOTOR #2 | - HEAT TREAT MOTOR | #2 (08-Feb-21) |          |
|----------|--------------------|----------------|----------|
|          |                    | OVERALL LEVEL  | 1K-20KHz |
| MOH      |                    | .107 In/Sec    | .100 G-s |
| VOM      |                    | .084 In/Sec    | .115 G-s |
| MIH      |                    | .015 In/Sec    | .337 G-s |
| MIV      |                    | .016 In/Sec    | .166 G-s |
| MIA      |                    | .022 In/Sec    | .115 G-s |

Clarification Of Vibration Units:
Acc --> G-s RMS

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As always, it has been a pleasure to serve Milwaukee Tools Greenwood, MS. If there are any comments or questions, do not hesitate to contact us.

Sincerely,

ISO Certified Vibration Analyst, Category III

Kevin W. Maxwell

HI-SPEED INDUSTRIAL SERVICE

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