

ASTM D-7038 (L-33-1) MOISTURE CORROSION TEST
SURVEILLANCE PANEL MEETING

For LRI #147
August 8, 2007
PRI Headquarters
Warrendale , PA

AGENDA

I. Call to Order

II. Approval of Minutes

04/11/07 Last Meeting

III. Business

Rating results from calibration workshop (Don Lind TMC).

Rating Exercise Results

Rating Comparison results from July workshop (Don Lind TMC).

Motion: Don Lind (volunteered) to create a list of rating rules and definitions that define the exercise. The idea is raters will rate first the parts as they normally do and document the results using additional samples and allowing an additional ½ day in the calibration. The raters will then use the method of rating that includes the use of magnification to determine all spots of color in question and count any spots with depth or texture found within the range of the magnification. The exercise will be defined and outlined quickly and sent to the committee for review and a conference call including only voting members to review the process so the results of the first group can be obtained at the July workshop.

Warm-up / Foaming issues found in some labs (Don Lind TMC).

Current severity of the L-33-1 Test

IV. New Business?

V. Summary of Action Items

VI. Summary of Motions and Votes

VII. Adjourn Motion

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Unconfirmed Minutes

I. Call to Order

II. Approval of Minutes

Waved as because of the late timing for review

04/11/07

08/08/07 Last Meeting

III. Business

Rating results from calibration workshop (Don Lind TMC). See attached Rating Cal-Exercise results files

Rating Exercise Results: See attached Rating Cal-Exercise results files.

The committee reviewed the results with varied interpretation.

Comments were the severity is slightly more severe and there may be a need for definition change to institute this procedure with a test that is already slightly severe.

The idea of minimum rust size was mentioned again.

Rater comments relayed to the committee is that the procedure seems better. Some asked to try the exercise one more time.

The overall response is that the exercise was to be used in more than one workshop and that the committee is agreed to continue on the same path to determine better the severity and results across all L33-1 raters.

Rating Comparison results from July workshop (Don Lind TMC).

Motion: Don Lind (volunteered) to create a list of rating rules and definitions that define the exercise. The idea is raters will rate first the parts as they normally do and document the results using additional samples and allowing an additional ½ day in the calibration. The raters will then use the method of rating that includes the use of magnification to determine all spots of color in question and count any spots with depth or texture found within the range of the magnification. The exercise will be defined and outlined quickly and sent to the

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committee for review and a conference call including only voting members to review the process so the results of the first group can be obtained at the July workshop.

L33-1 Workshop Rating Exercise

1. Wipe the part with a soft lint free material to remove any excess Mobil Arma, sludge, or stain residue. Only wipe the part once.
2. Rate each area and identify any colored spot which could be rust.
3. Rate each colored spot with 10X magnification to determine if texture, depth, or both are present to determine the presence of rust.
4. If additional rust or subdivision of the predetermined spot of rust is identified using the 10X magnification it shall be counted in the overall evaluation of rust.
5. Do not use magnification to search the entire area for rust
6. If after using 10X magnification on the suspicious spot and it is still inconclusive, the evaluation should be that the condition is not rust.

Warm-up / Foaming issues found in some labs (Don Lind TMC).

The foaming issues will continue to be ongoing until the differences are found. One lab indicated that they use a ramp to speed to run their motor to speed during the warm-up.

Intertek PARC volunteered to install a variable frequency drive to ramp their motors to speed because they are the lab that reports foaming the most. They will continue this on two stands only until at least 6 reference tests are returned to the TMC. The special run instructions are below.

Special Instructions Stand 3 Only Variable Motoring

- 11.1.1.1 Make certain the motoring stand is unplugged at the wall twist lock plug prior to this operation.
- 11.1.1.2 Locate the speed controller. Verify the power switch is off and the control knob is set to 0 (zero).
- 11.1.1.3 Locate the motor plug on the stand contactor bracket. Unplug the motor from its output plug and plug it into the speed controller's output connection. The plug will only fit the output side of the controller.
- 11.1.1.4 Plug the speed controller into the outlet on the contactor bracket.
- 11.1.1.5 Plug in the motoring stand power-cord into the wall outlet.

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- 11.1.1.6 Push the motor start button. This will provide power to the speed controller and the fan/heat circuit.
- 11.1.1.7 Switch the motor speed controller into the ON position.
- 11.1.1.8 Assure that the water is ready for injection.
This entire operation of injection and motor control shall not exceed 5 minutes total time.
- 11.1.1.9 Turn the motor controller until 500 RPM is reached (about 20% on).
- 11.1.2 The axle will begin to spin and the computer should begin logging. Record time and the initial oil temperature. Record in the Operator's Log and ASTM Forms. The axle must rise to $180 \pm 1^{\circ} \text{F}$ ($83 \pm 0.6^{\circ} \text{C}$) in less than one hour.
 - 11.1.2.1 As quickly as possible or within two minutes of motor start slowly inject $1.00 \pm .02$ fl oz. ($29.6 \pm 0.6\text{mL}$) of specified water through the open full port valve hose fitting.
 - 11.1.2.2 Install the pressure control a connection on the valve assembly water was just placed in.
 - 11.1.2.3 Slowly increase the speed on the motor using the speed controller until $2500 \pm 25\text{rpm}$ is reached (about 100% on). Run the warm-up per procedure after the motor reaches speed.

Current severity of the L-33-1 Test: The industry severity is being drive by Lab E and the TMC has selected their 2 most repeatable stands to be used for all referencing until the severity is shown to be a stand issue or some other possible problem.

IV. New Business?

V. Summary of Action Items

VI. Summary of Motions and Votes: Parc to run motor ramp experiments to determine if foaming can be controlled. Next 6 reference tests at least.

VII. Adjourn Motion: Cory Koglin
Second: Don Bartlett
Vote: Unanimous