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Evaluation of Daubert Film

To: Mike Gabor

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Project #: 12-115-1125(bis)

Test conducted by:

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Approved by:

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Laboratory Director

Date: May 23, 2012



Background: Mike Gabor requested that the submitted Daubert film sample be evaluated and compared to VpCI-126

Sample Received: 4 mil Premium Metal Guard VCI bags, received 05-14-12, good condition, labeled Daubert Cromwell 4 mil Premium Metal guard VCI bags

Method:

- 1) VIA Test CC-027
 - 2) Razor Blade Test CC-004*
 - 3) FTIR Test CC-006
 - 4) Nitrite Test*
- *Cortec Laboratory is not accredited for the test marked

Materials:

- 1) VIA test kit
- 2) Razor Blade test kit
- 3) Paragon 1000 FTIR
- 4) Nitrite/Nitrate Test Strips
- 5) VpCI-126 4 mil, Batch# 31957

Procedure:

- 1) The above tests were performed according to standard procedures.

Results:

Razor Blade Carbon Steel

Sample	Panel 1	Panel 2	Panel 3
Daubert Cromwell Premium Metal Guard	Pass	Pass	Pass
VpCI-126	Pass	Pass	Pass
Control	Fail	-	-

Razor Blade Copper

Sample	Panel 1	Panel 2	Panel 3
Daubert Cromwell Premium Metal Guard	Fail	Fail	Pass
VpCI-126	Pass	Pass	Pass
Control	Fail	-	-

VIA Test Results

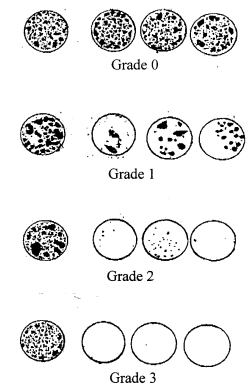
Sample	Plug #1	Plug#2	Plug#3	Pass/Fail
Daubert Cromwell Premium Metal Guard	Grade 1	Grade 1	Grade 3	Fail
VpCI-126	Grade 2	Grade 2	Grade 3	Pass
Control	Grade 0	-	-	-

Note: The VIA grading system is attached to the end of the report

Interpretations:

- 1) Based on the test results, the Daubert Cromwell Premium Metal Guard provides contact-phase corrosion protection for carbon steel, but not for copper. The VIA test results determined that the film did not provide vapor-phase corrosion inhibition. The film was found to contain nitrite.
- 2) The test results determined that the VpCI-126 provided good contact and vapor-phase corrosion protection.

VIA Test Grades (Grade 2 or 3 are passing)

<p>Grade 0: Blind test No corrosion inhibiting effect</p> <p>Grade 1: Blind test Minute corrosion inhibiting effect</p> <p>Grade 2: Blind test Medium corrosion inhibiting effect</p> <p>Grade 3: Blind test Good corrosion inhibiting effect</p>	 <p style="text-align: center;">Grade 0</p> <p style="text-align: center;">Grade 1</p> <p style="text-align: center;">Grade 2</p> <p style="text-align: center;">Grade 3</p>
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