



5% SALT SPRAY (FOG) CORROSION RESISTANCE TEST REPORT

Sherry Laboratories



Comments on Sherry Laboratories Test Report

HVAC equipment installed on the exterior or rooftop of a building can be exposed to extreme ambient conditions. Depending on the location the installed equipment, it can experience everything from hot and humid periods to cold and dry periods. AAON recognized there is a need to provide an attractive, corrosion resistant paint finish that will last the lifetime of the equipment.

Typically the industry acceptability for HVAC equipment paint has been to surpass a 500 hour salt spray corrosion resistance test.

The ASTM B 117-95 testing procedure is the HVAC industry standard method of testing the acceptability and longevity of a paint finish. For the test, panels are placed in a 5% salt spray and fog atmosphere for measured periods of time. The test is usually terminated, and the hours recorded, when the surface of the sample has been penetrated by the corrosive effects of the salt environment.

After extensive testing and research, AAON made the change in 1996 to a new paint finishing system, with polyurethane paint and a catalytic dryer, which surpasses a 2,500 hour salt spray corrosion resistance test. This finish is applied to the G90 galvanized steel exterior of AAON equipment. As an option, the paint finish can be applied to interior of AAON equipment to provide corrosion protection to the complete unit.

The following pages of this document are a reproduction of the entire report received from an independent testing laboratory of the current paint finish applied to AAON equipment. Notice that paint bond galvanized panels were included in the test. Photos were taken at the start of the test, every 500 hours and at the termination of the test.

Results:

- No visible deterioration of the finish until 2,500 hours of exposure.
- Panels retained their color and gloss throughout the entire 2,696 hours of the salt spray test exposure.
- The galvanized panels performed as well as the paint bond galvanized panels.



6825 East 38th Street
Tulsa, OK 74145-3241
Telephone 918-664-7767

SHERRY LABORATORIES
INDIANA LOUISIANA OKLAHOMA
Metlab Testing Services, Inc.

Fax 918-627-3062
800-324-8378

LABORATORY REPORT

Attn: Richard Davis
AAON, Inc.
2425 S. Yukon
Tulsa, OK 74107

Report No: 1998070126-1
Date Received: 07/09/98
Date Reported: 11/12/98

P.O. No: Verbal

Sample description: S/N-1, Galvanized panels (set of 3);
S/N-2, Paint bond panels w/ clipped corner (set of 3).

5% SALT SPRAY (FOG) CORROSION RESISTANCE TEST REPORT

Test Method: ASTM B 117-95

Tested for Conformance to: Internal requirements

Number of specimens tested: 2 sets (3 each)

Exposure in Salt Spray Cabinet, Hours: 2696

Evaluation Requirements: Observe and photograph at 500 hour intervals.

CORROSION RESISTANCE TEST RESULTS

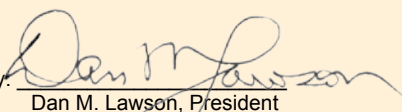
S/N-1, Galvanized	
HOURS	OBSERVATIONS / TEST NOTES
0	Panels submitted for testing with edges waxed.
500	No visible effects.
1000	No visible effects.
1500	No visible effects.
2000	No visible effects. Continued salt spray with two panels.
2512	Panel #1 exhibited 2 small red rust spots <.025" diameter. Panel #3 exhibited blistering around a hole in the panel.
2696	Test ended per customer request. Panel #1 exhibited 2 small red rust spots <.030" diameter. Panel #3 exhibited blistering around a hole in the panel and 5 to 7 red rust spots barely visible to the naked eye.

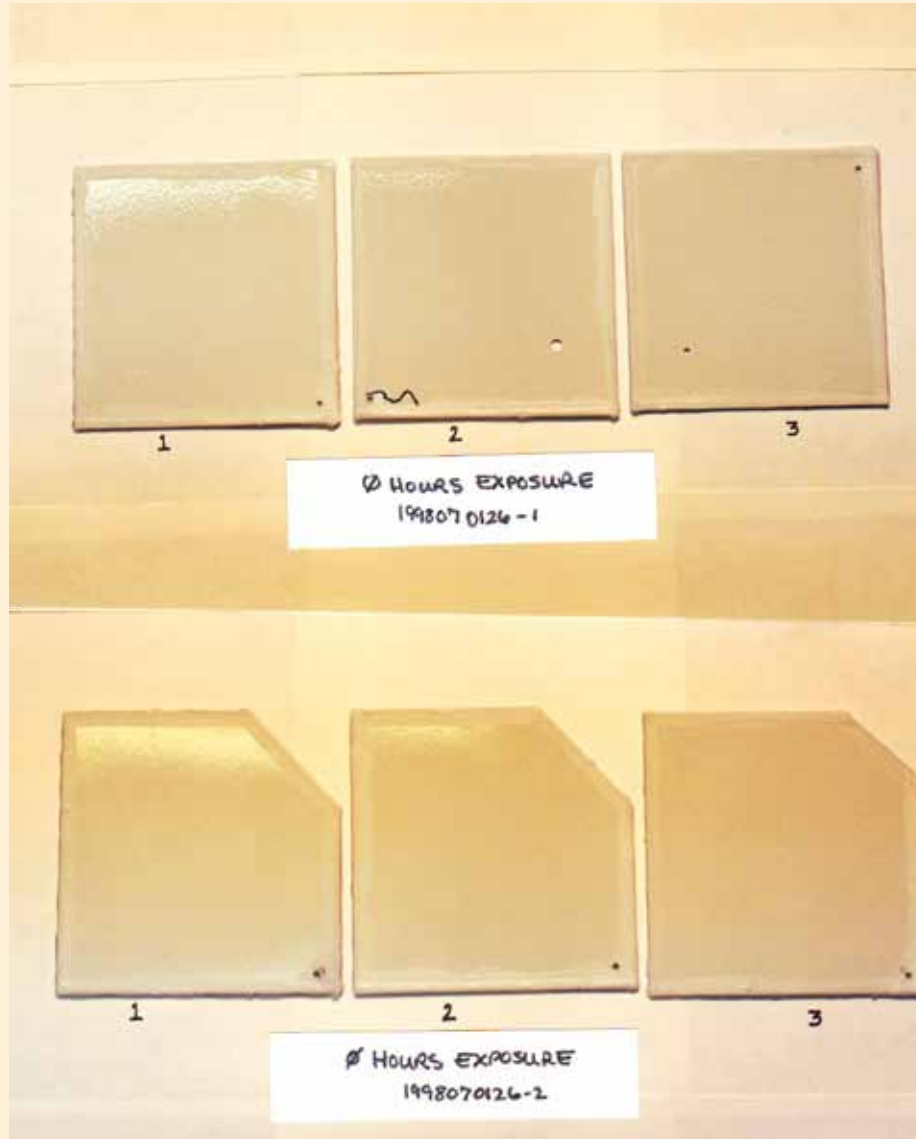


AAON, Inc.

Report No: 1998070126-1

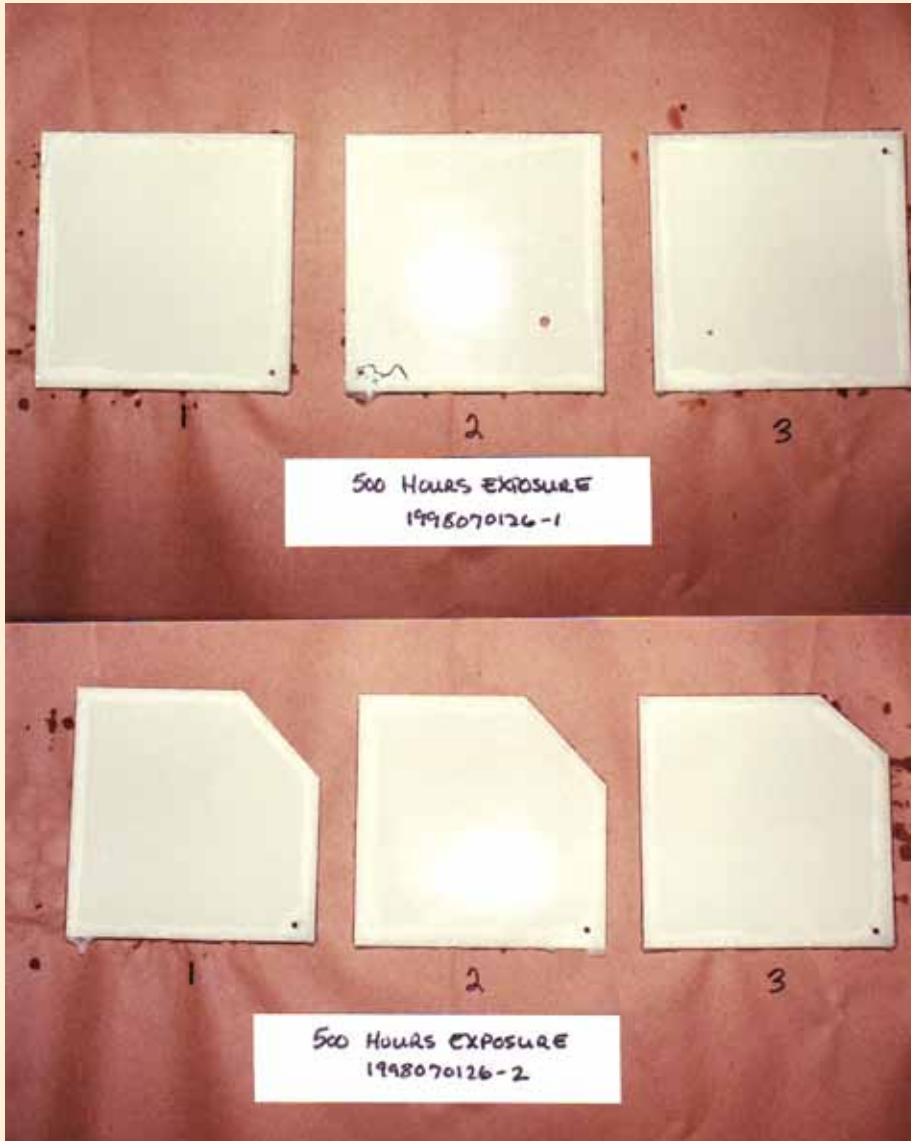
S/N-2, Paint bond	
HOURS	OBSERVATIONS / TEST NOTES
0	Panels submitted for testing with edges waxed.
500	No visible effects.
1000	No visible effects.
1500	No visible effects.
2000	No visible effects. Continued salt spray with two panels.
2512	Panel #1 exhibited small blisters, some in clusters, throughout the panel (<.05" dia.). Panel #2 exhibited blisters around a hole near a corner in the panel, which was not considered a significant evaluation area.
2696	Test ended per customer request. Panel #1 exhibited small blisters, with many in clusters. Panel #2 exhibited blisters around a hole in the panel.

Approved By: 
Dan M. Lawson, President
Sherry Laboratories/OK



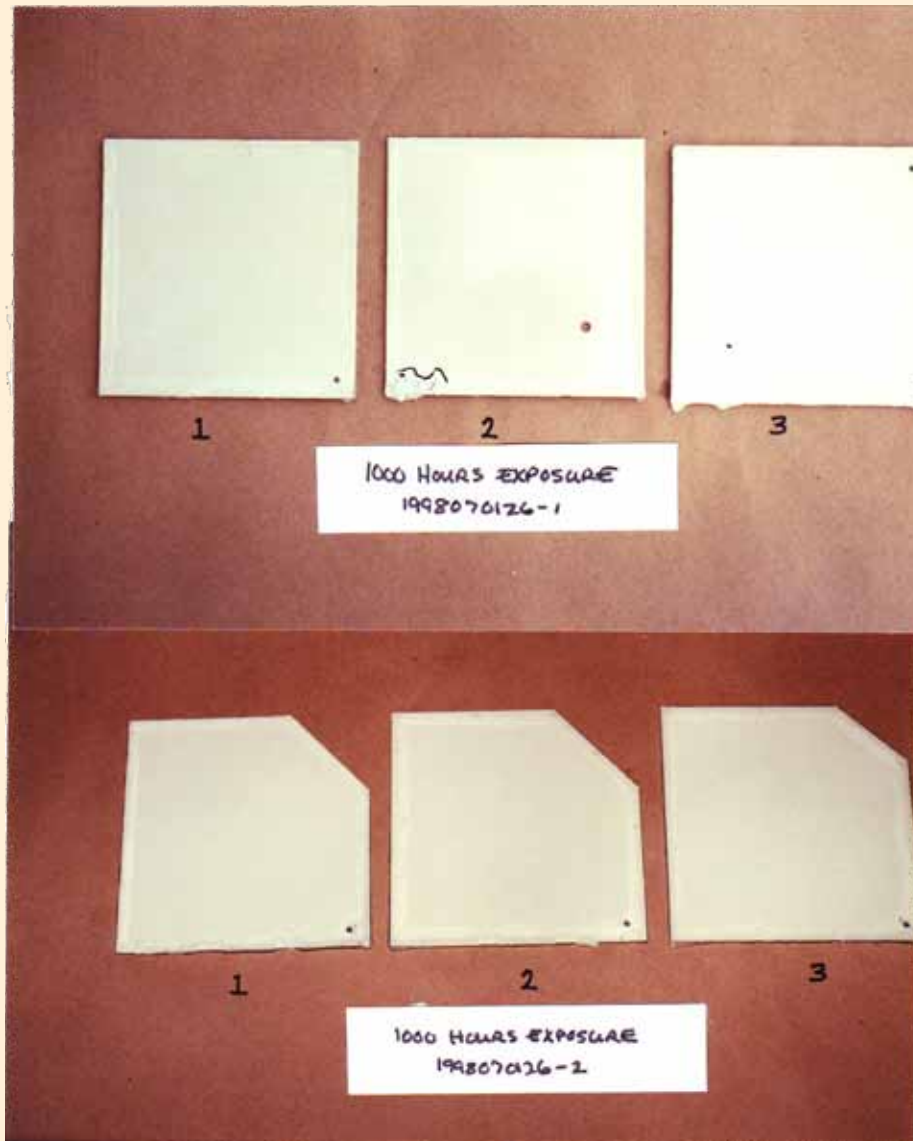
Top: S/N - 1

Bottom: S/N - 2



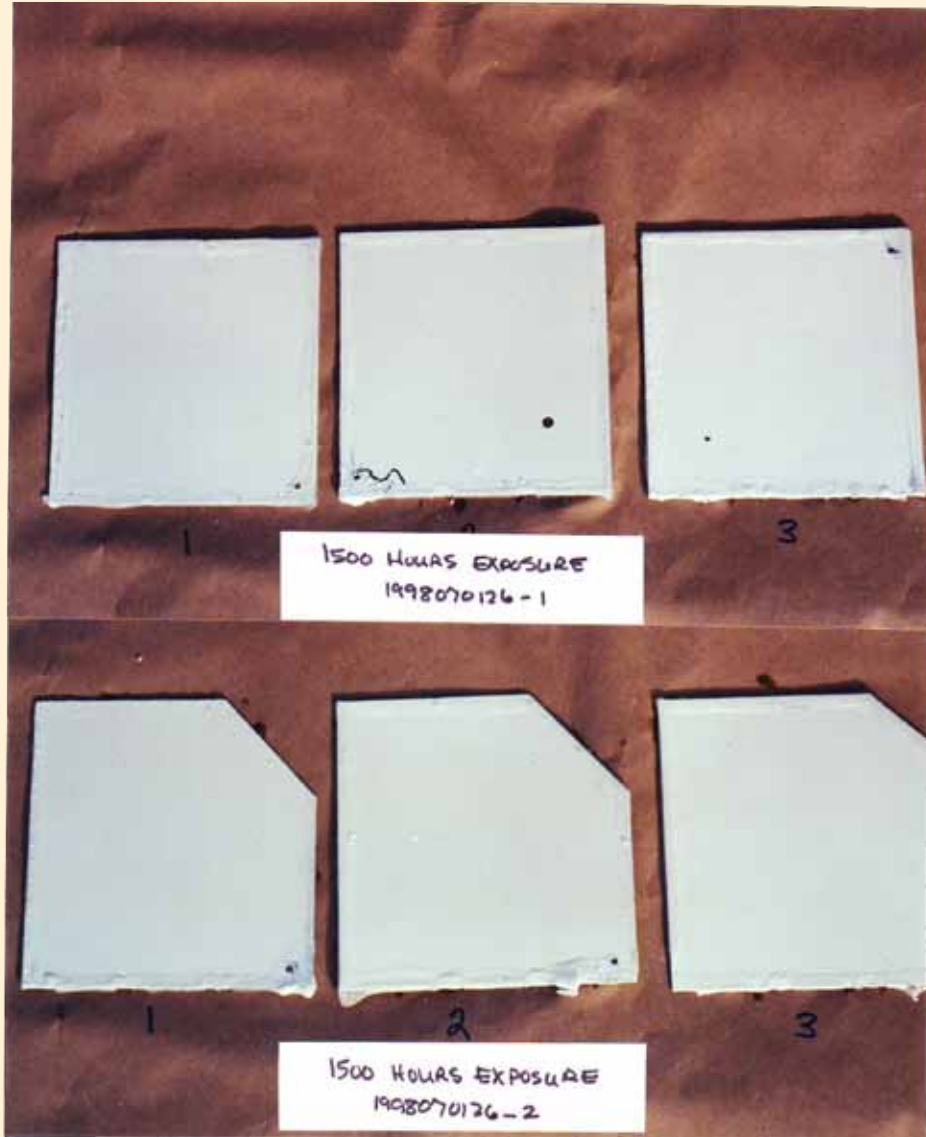
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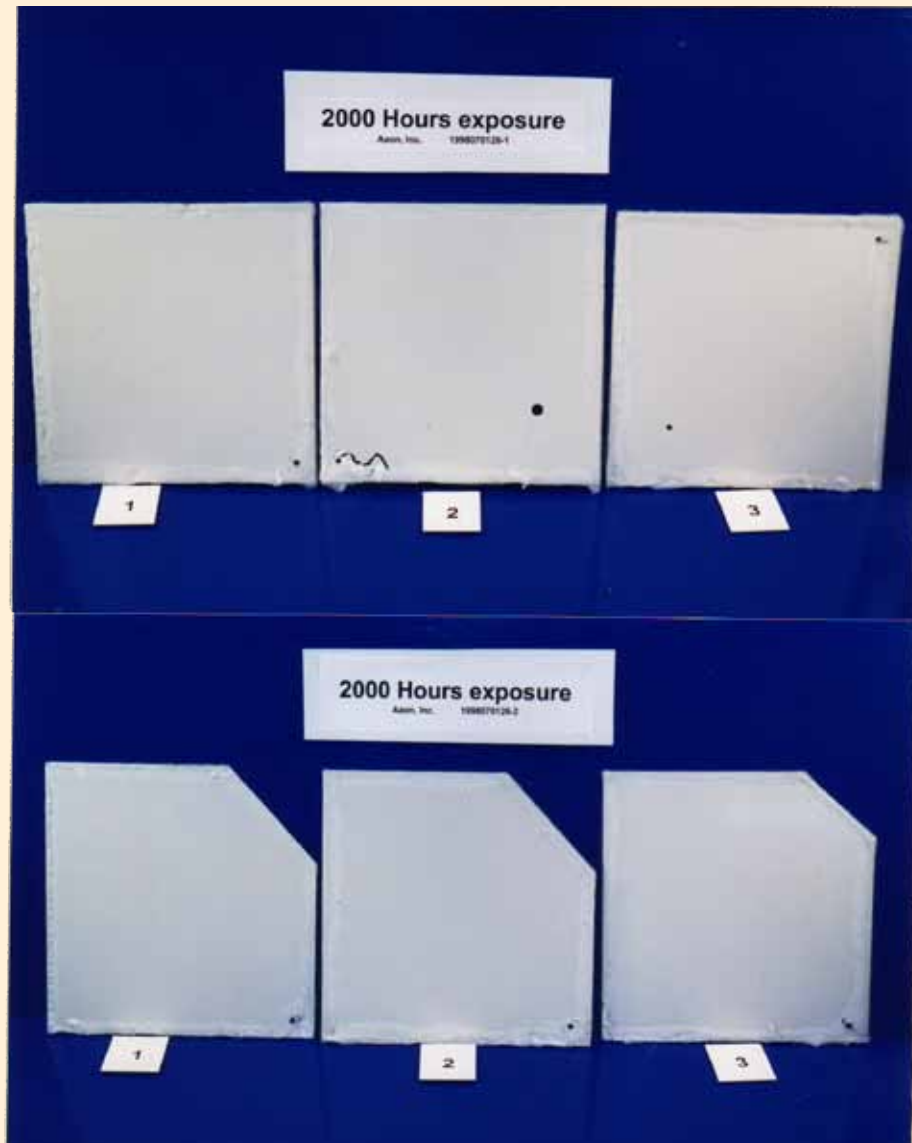
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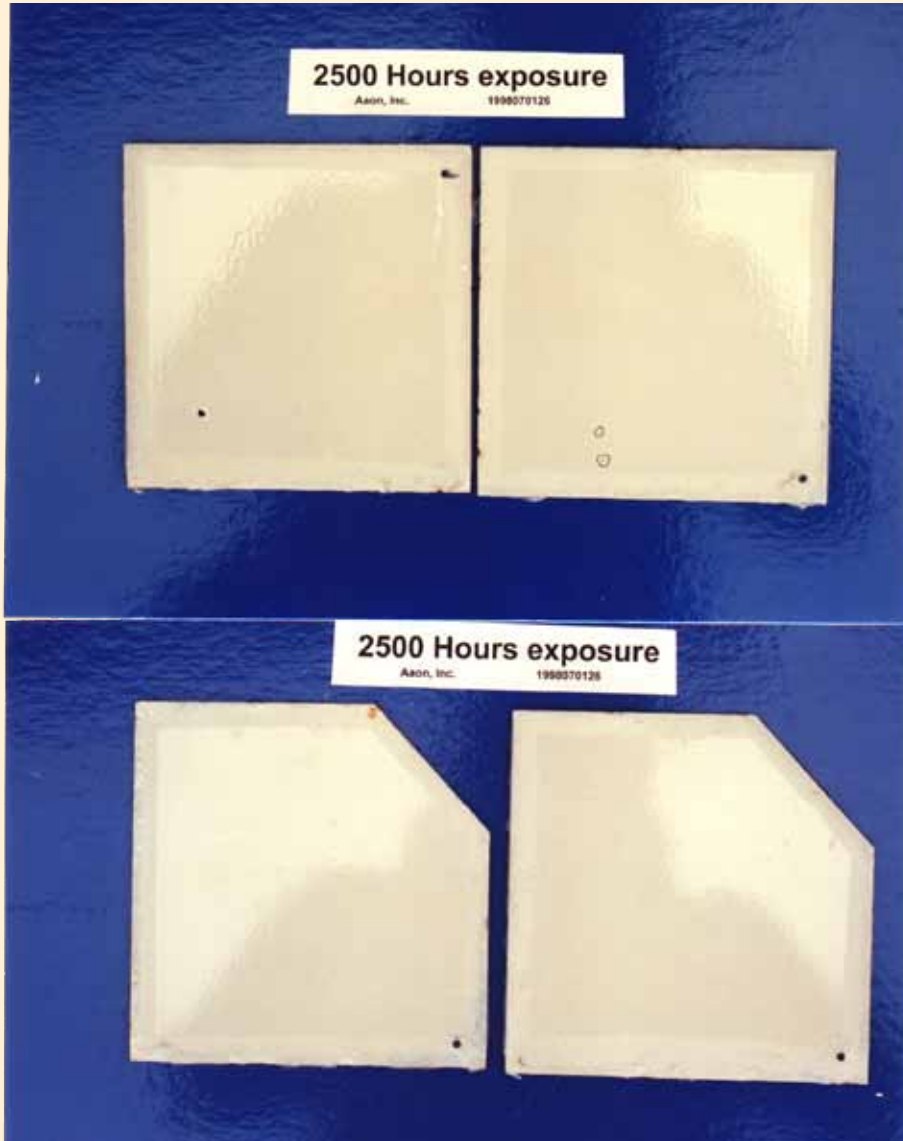
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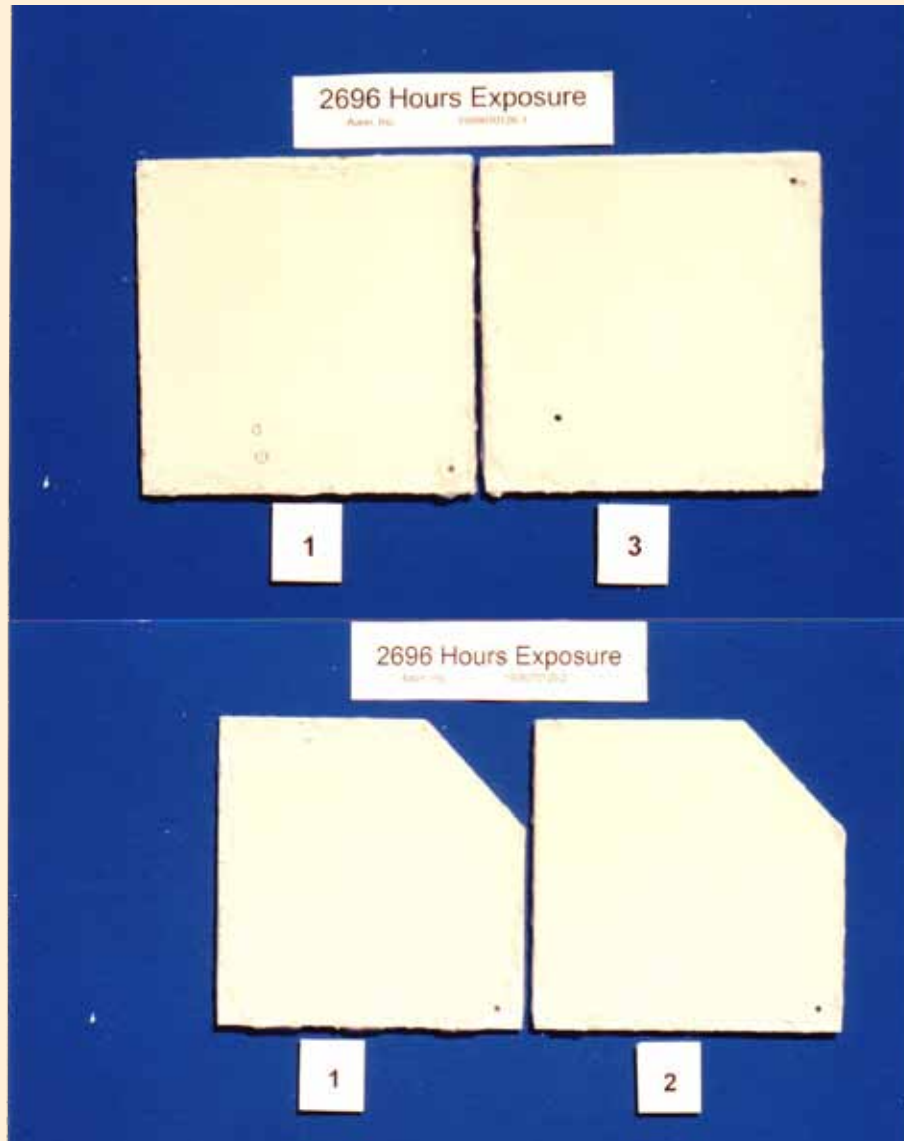
Top: S/N - 1

Bottom: S/N - 2



Top: S/N - 1

Bottom: S/N - 2



Top: S/N - 1

Bottom: S/N - 2



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