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TEST REPORT

THERMAL CHAMBER

DATE: 9/20/2013

Applicable standards

ANSI C29.11-1989(R1996) Composite Suspension Insulators for Overhead Transmission Lines – Tests (modified)

Description of test

Aim: To assess the adhesion and longevity of a coating to the substrate by subjecting the sample to a thermal cycle. This will mimic some outdoors environmental conditions and will assess if the coating and the substrates have different coefficients of thermal expansion.

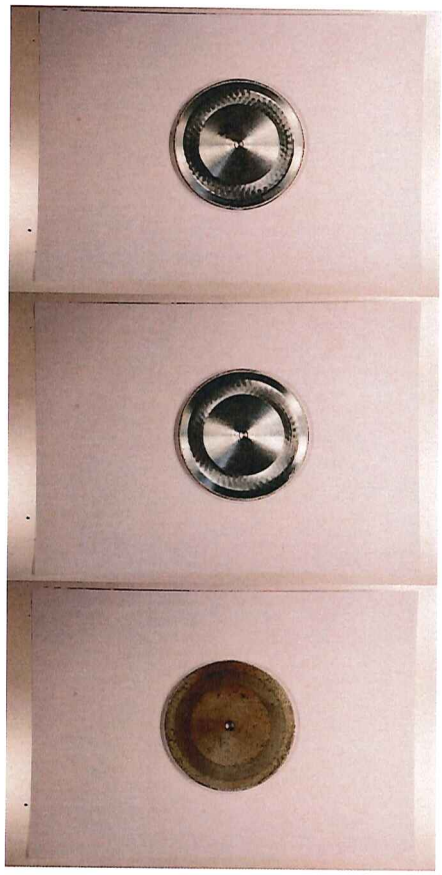
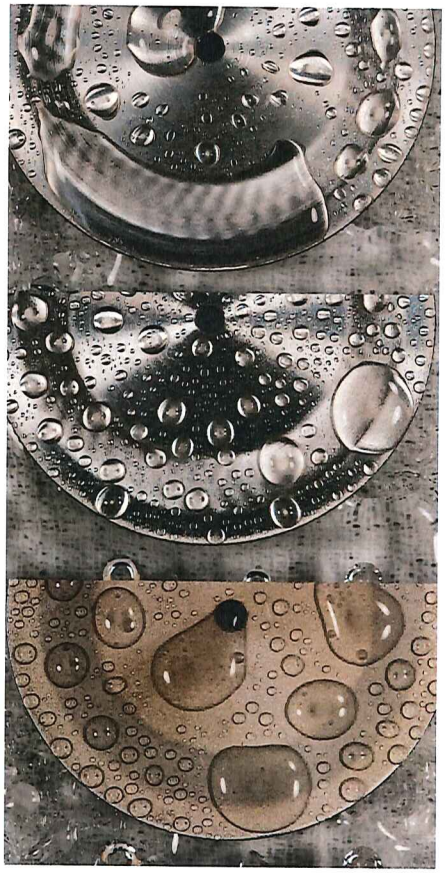
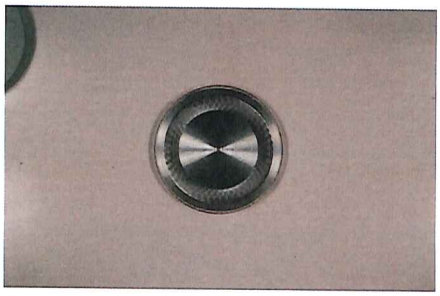
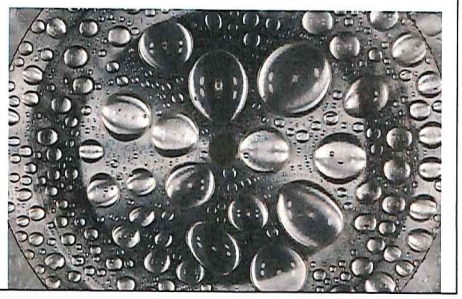
Description: The coated samples were placed in a thermal chamber for 96 hours. The thermal chamber is programmed to have a soak time of 8 hours and a rise/fall time of 4 hours. The chamber first falls in temperature from ambient to -35*F, soaks at -35*F, then rises to +50*F, soaks at +50*F (completing 1 cycle), falls to -35*F, etc for a total of 4 cycles.

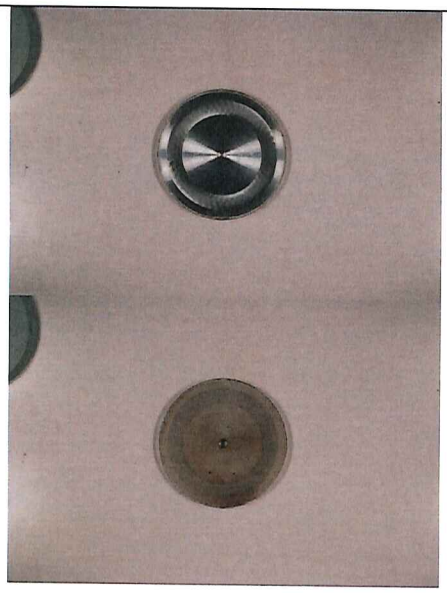
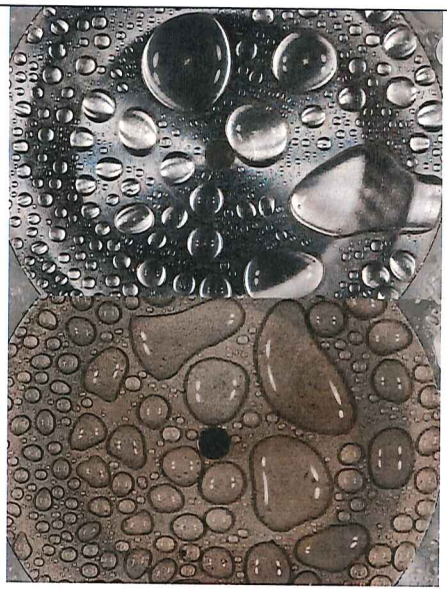
Rating: The rating for this test is visual. When the samples were removed from the chamber, photographs were taken to compare before & after testing.

Sample(s)

Coating	Substrate	Size	No of samples
D7	Aluminum	4" Round	3
Uncoated (control)	Aluminum	4" Round	3

Test Results

Sample ID: D7		
	Dry	Wet
Before		
After		

		
Control(Before)	Not Available	Not Available
Control (After)	Not Available	Not Available

Observations

The following observations can be made:

- No visual damage to samples
- Hydrophobicity appears to remain the same or get better