

Test 6 & 7

Wet Arc Tracking

Bundle: Seven wires (6 over 1) of BMS 42A/8/1-20 specification, 15 inches in length.

Electrolyte: Lavatory Waste Water @ 100mg/minute

Circuit Resistance: 1 Ohm

Generator: 3 phase, 400Hz, 120 line to neutral (208 line to line), 10 kVA.

Length of test: 10 to 16 Minutes

Observation	Test 6	Test 7
Visible scintillation	00:10	00:25
Flash	5:17	7:28
Strong Arcing	No	No
Circuit Breakers Tripped	0	0
Damage Length	1/4"	3/8"
Number of Wires Failing Wet Dielectric Test	2 of 5 [C] & [B2]	0 of 5

The results in Tests 6 & 7 were similar to those in Tests 1 & 2 but the accumulated damage was less because the test were not run as long. Visible scintillations began almost immediately after the start of the test. After several minutes a char path began to develop and soon after the first flash event was observed. Like the earlier test the single flash events (Figure 30) soon turned into a rapid series of flash pop events and chemical combustion flames were also observed.



Figure 30. Test 6: Flash event during wet arc track testing with lavatory waste water.