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Type Test Report for CableMate Series JST Cold Shrink Jacket Sealing Tube

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Product Description:

The CableMate® JST series are designed for jacket resealing of shielded cables by using cold shrink EPMD rubber tubing with mastic tape and/or additional grounding to prevent moisture ingress and provide for effective cable jacket integrity. Three different kits are offered to provide jacket sealing for all styles of shielded cable. JSTW is for use on cable with a concentric neutral wire metallic shield. JSTD is for use on cable with a drain wire metallic shield. JSTT is for use on cable with copper tape metallic shield. Each type has two different sizes to fit a wide range of cable O.D's.

Objective and test level:

To verify and confirm the type JSTW re-jacketing cold shrink tube will meet the requirements stated in IEEE std. 386-2006, Section 7.12, Accelerated Sealing Life Test (excluding impulse testing).

Test descriptions:

A total of eight (8) sets of samples were tested. Four (4) CableMate® JSTW2 and a CableMate® 25kV, 200A loadbreak elbow 2LBEH03C06 were installed on one (1) meter length 25kV, Cu #1 AWG concentric neutral wire cable. Four (4) JSTW6 and a CableMate 25kV, 600A T body TDD1H06C16 were installed on one (1) meter length 25kV, Cu 500 MCM concentric neutral wire cable.

All eight (8) samples were placed in an oven at 121° C for 21 days of continuous heating. After 21 days the samples were removed from the oven to cool to room temperature. Once the samples were cooled to room temperature, the four (4) JSTW2 samples and their associated loadbreak elbow assemblies were operated by a hot stick on 25kV, 200A loadbreak bushing inserts. Similarly, the four (4) JSTW6 samples and their associated 25kV 600A T body assemblies were operated by hand on a 25kV, 600A bushing. All eight (8) samples were operated to the axis of the interface of bushing insert or bushing.

After the above operation, all eight (8) samples were then subjected to 50 cycles of the following heat cycle sequences:

1. The assemblies were heated in air using sufficient current to raise the temperature of the conductor of the control cable to 90 °C ± 5 °C for the following time period:
   a. JSTW2 assembles: 1 hour
   b. JSTW6 assemblies: 4 hours

2. The assemblies were then de-energized and within 3 minutes were submerged in 25 °C ± 10 °C conductive water (5000 Ω-cm maximum) to a depth of 30 cm (1 ft) for the following time periods:
   a. 200 A connectors: 1 hour
   b. 600 A connectors: 2 hours

After the above 50 cycles of heat cycling operations, all eight (8) assemblies were dissected to examine for traces of moisture under the JSTW. Then the cable jackets were removed to examine for traces of moisture under the cable jacket. No moisture was found under any of the JSTW samples or the cable jackets.

Conclusion:

All eight (8) samples passed the test required in Section 7.12 of IEEE std. 386-2006.