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LABORATORY REPORT

Date September 10, 2008

Purpose

To determine the pull-out force of cable in conduit sealed with FST Foam Sealant.

Procedure:

In this test, three wires are sealed into a clear, 2-inch schedule 40 PVC conduit using American Polywater's FST Foam Sealant. The FST Foam is injected according to standard manufacturer's instructions:

Conduit and cables are cleaned with a CD-1 Preparation Wipe. A foam strip dam is wrapped in and around the three cables and inserted 5 inches into the conduit. Another dam is placed at the end of the conduit, leaving a 3-inch space between the dams. Using a static mixer, the two-part FST Foam sealant is injected into the open space and allowed cure and set for two hours.

Each conduit section is then clamped into an Instron tensile testing machine. The cables are pulled out of the foam individually. Maximum pull-out force is recorded using a pull speed of 2 inches/minute. Results are the average of three tests each on 2 AWG THHN copper cable and 4/0 XHHW aluminum cable.

Cable	Conduit	Average Pulling Tension lb_f
2 AWG THHN	PVC	171
4/0 XHHW	PVC	320

Discussion:

FST Foam Sealant will act as a theft deterrent, increasing the force required to remove sealed cables. Actual pull-out force is dependent on the details of the specific installation.

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