

AUSTIN ENERGY
Purchase Specification
For
SPLICE KIT, 15KV, EPR
INSULATED SHIELDED POWER CABLE

<u>Date</u>	<u>Prepared By</u>	<u>Issuance</u>	<u>Approval</u>
7/26/89	Steven Booher	Initial	

AUSTIN ENERGY

Purchase Specification

For

15 KV, EPR Insulated Shielded Power Cable Splice Kit

1.0 Scope

This specification covers classification, applicable standards, functional requirements ratings, test requirement and packaging for ethylene-propylene insulated 15,000 volt, single conductor, shielded power cable straight splice.

1.1 Classification

1.1.1 Only approved manufactures whose qualification tests meet this specification shall be considered for use in the City of Austin Electric System.

1.1.2 Heat-shrinkable polymeric construction utilizing linear stress relief, high dielectric strength insulating layers and a heavy walled water proofing jacket.

1.1.3 Splice kits shall be applied to 250,500 and 1000 MCM single conductor 15KV EPR power cable.

2.0 Applicable Standards

2.1 Material supplied in accordance with this specification shall comply with applicable provisions of the latest ANSI, IEEE standards relating to cable joints.

3.0 Functional Requirements

The straight splice furnished under this specification shall be designed for use under the following service conditions.

3.1 In air, including exposure to direct sunlight (UV).

3.2 Direct buried in earth.

3.3 Environmental temperatures within the range of -30 degrees C to + 50 degrees C.

3.4 The outer most shrink tube shall be compatible with fireproofing tape per EL-301. Application of fireproofing tape shall in no way hinder the performance of the splice under normal and emergency cable loading.

3.5 All splicing components shall be compatible with Unishield and Okonite EPR wire shielded cable with hypalon jacket.

- 3.6 The compatible cable joint shall meet or exceed the current capacity ratings of the cable/connector for which it is applied.
- 3.7 No special installation tools shall be required.
- 3.8 Each shrink tube shall be applied through the use of a heat gun or propane torch.
- 3.9 Penciling of the cable insulation shall not be required for installation.
- 3.10 The outer most insulating layer shall be bonded to a conducting insulation shield.
- 3.11 The splice shall be jacketed with a heavy-wall, heat-shrinkable, sealant lined sleeve with mastic to provide a waterproof hot melt adhesive seal.
- 3.12 Shelf life shall be indefinite under normal storage conditions.

4.0 Voltage Ratings:

Alternating-Current Withstand Voltages

Voltage Rating(L-L) (KV)	BIL (KV)	1 min (KV-RMS)	1 hour (KV-RMS)	5 hour (KV-RMS)	Direct Current withstand Voltage (KV)	Partial Discharge Voltage Level at 13.0
					KV-RMS	
15	110	35	52.5	35	70	<3 pc

5.0 Kit Description (Approved Manufacturers)

5.1 Raychem HVS-1520 series splice kit.

<u>Item</u>	<u>Quantity</u>	<u>Component Description</u>
1	1	Stress control sleeve
2	1	Splice insulation sleeve
3	1	Splice insulating/conducting sleeve
4	1	(Dual Wall) Abrasion-resistant outer jacketing sleeve
5	1	Shielding ground braid (Tinned copper mesh 2 1/2" x 10' spool.)
6	1	Stress relief mastic which includes: 2-small angle pieces for termination simicon 2-long pieces to cover mechanical splice
7	2	Auxiliary crimps for wire shielded cable
8	1	Outer sealing mastic
9	2	Solderless ground clamp (constant force spring type)
10	1 set	Installation instructions

5.2 Sigmaform SSK series splice kit:

<u>Item</u>	<u>Quantity</u>	<u>Component Description</u>
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1	4	Stress relief mastic which contains: 4-Brown control tape sealant
2	1	Stress control sleeve with sealant
3	1	Splice insulation sleeve (yellow)
4	1	Splice insulating/conducting sleeve (Dual Wall)
5	1	Abrasion-resistant outer jacketing
6	2	Solderless ground clamp (Constant force spring type)
7	1	12" copper foil tape with adhesive
8	1	Shielding ground braid (Tinned copper mesh 2 1/2" x 10' spool.)
9	6	Outer sealing mastic
10	6	Paper wipes
11	1 set	Installation instructions

6.0 Test Requirements

- 6.1 All heat-shrinkable splice kits supplied under this specification shall meet or exceed standard IEEE-404--Latest Edition for cable joints.
- 6.2 The cable joint shall be capable of meeting water submersion test per ANSI-C119.2 1974, section 6.14.

7.0 Packaging

- 7.1 The heat-shrinkable tubing shall be packed in sealed plastic bags.
- 7.2 All splice accessories shall be packed in sealed plastic bags.
- 7.3 Mastic and stress relief materials shall be packed on wax backed carrier papers.
- 7.4 The cable joint kit shall be packed in a sturdy cardboard box with instructions for long term storage.