3M COLDSHRINK QS III INLINE SPLICING KIT
95-AC 645-1-JCN

WITH COLDSHRINK RE–JACKETING TUBES
SUITABLE FOR 120 TO 400 $mm.^2$
POLYMERIC SINGLE CORE CABLE WITH
COPPER WIRE JACKETED CONCENTRIC NEUTRAL
ACC. TO IEEE STD 404, 52 kV CLASS, 250kV BIL

KIT REF.	95-AC 645-1-JCN
DIAMETER OVER PRIMARY INSULATION E (mm.)	31.5 – 52.6
CROSS SECTION ($mm.^2$)	120 – 400
DIAMETER OVER CONNECTOR (mm.)	22.1 – 52.6
CONNECTOR LENGTH MAX. (mm.)	210

PLEASE NOTE:
CABLES TO BE JOINED MUST BE STRAIGHTENED BEFORE INSTALLATION

ISSUE	DESCRIPTION / ECO	BY	DATE
E	PART NUMBER CHANGE	RS	08.11.23
D	PART NUMBER CHANGE FOR SCREEN CONNS	RS	03.10.23
6	PART NUMBER CHANGE	RS	23.08.22
5	LATEST REQUIREMENT	MJE	16.10.17
4	LATEST REQUIREMENT	ERH	05.04.12
3	LATEST REQUIREMENT.	ERH	17.05.10
2	LATEST REQUIREMENT.	ERH	17.08.06
1	RELEASED.	ERH	15.06.06

3M COLDSHRINK QSIII INLINE SPLICING KIT
95-AC 645-1-JCN
COLD SHRINK RE–JACKETING TUBES SUITABLE FOR 120–400mm2 POLYMERIC SINGLE CORE WITH Cu WIRE JACKETED CONC. NEUTRAL–INSTALLATION INSTRUCTIONS

Drawn : E.REES–HAYWARD 15/06/06	Des.Eng: A.RUSSELL
Cad File: XE–0091–3131–1	Checked:

BEFORE STARTING:-

CHECK TO ENSURE THAT THE KIT YOU ARE GOING TO USE FITS THE CABLE.

REFER TO THE KIT LABEL AND THE TITLE OF THE INSTALLATION INSTRUCTION.

COMPONENTS OR WORKING STEPS MAY HAVE BEEN UPDATED SINCE YOU LAST INSTALLED THIS PRODUCT. CHECK KIT CONTENTS FOR ANY MISSING COMPONENTS. REPORT ALL MISSING ITEMS. DO NOT START WITH INCOMPLETE MATERIALS.

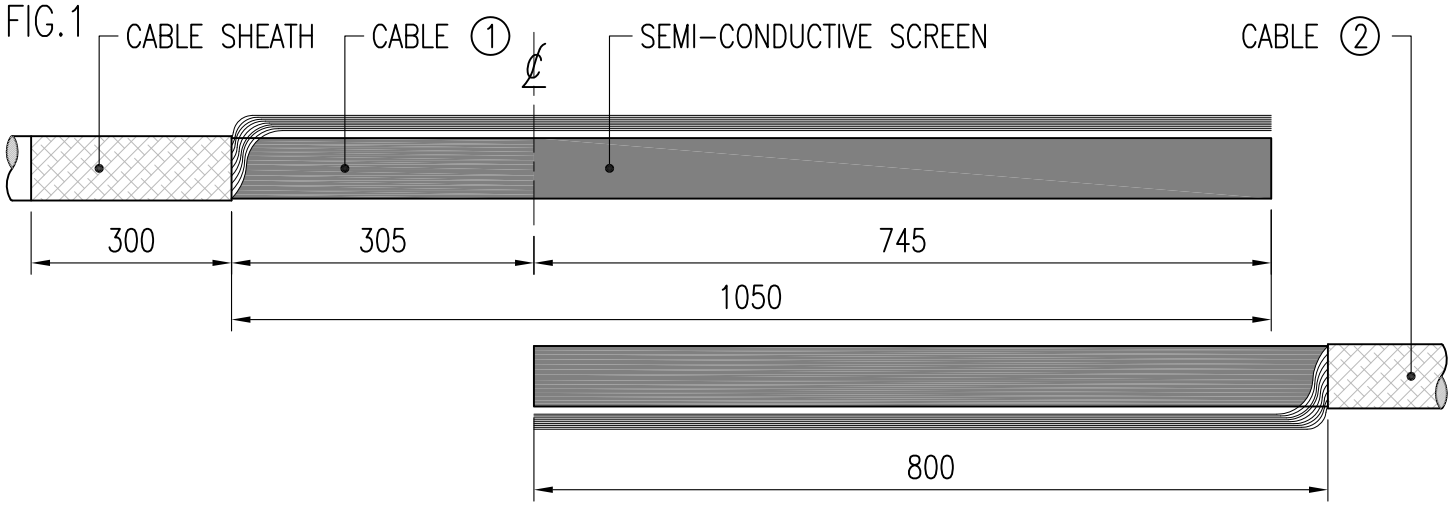
CAREFULLY READ AND FOLLOW THE STEPS IN THE INSTALLATION INSTRUCTION.

GENERAL INSTRUCTIONS:-

IF A SOLVENT IS USED FOLLOW THE MANUFACTURER'S INSTRUCTIONS.

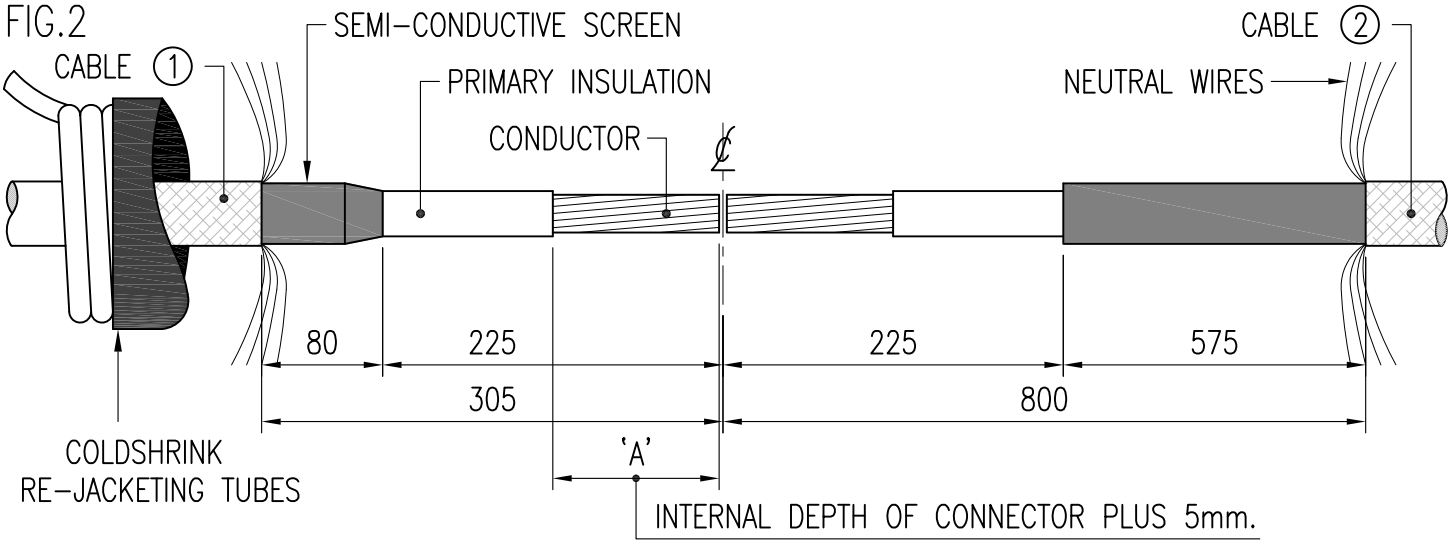
KEEP THE WORK AREA CLEAN AND TIDY.

FIG.1



1.1 SET CABLES INTO POSITION AND ENSURE OVERLAP. REMOVE CABLE SHEATHS AS FIG.1.
1.2 ABRADE, CLEAN AND DEGREASE CABLE SHEATH FOR 300mm, ENSURING ALL CONDUCTIVE GRAPHITE COATING IS REMOVED.

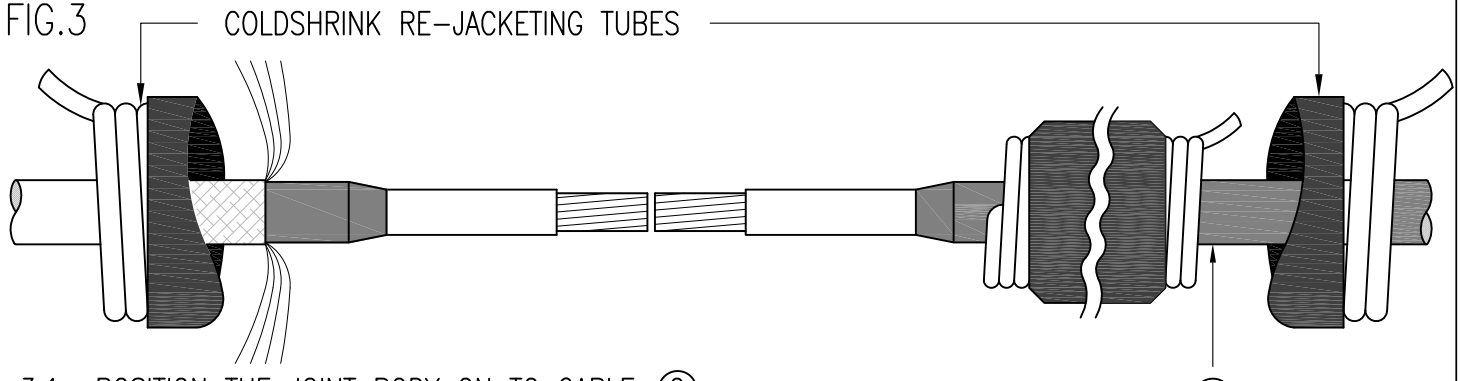
FIG.2



2.1 CUT CORES TO LENGTH AS PER FIG.2.
2.2 PARK THE OUTER PST TUBES ON THE CABLE. STACK ONE OF THE SMALLER TUBES INSIDE THE LARGER ON ONE SIDE, AND THE OTHER SMALLER TUBE ON THE OTHER SIDE.
2.3 CAREFULLY BEND BACK COPPER NEUTRAL WIRES TO ALLOW CABLE PREPARATION.
2.4 REMOVE BONDED SEMI-CONDUCTING LAYER TO DIMENSIONS AS PER FIG.2.
2.5 REMOVE PRIMARY INSULATION FOR INTERNAL DEPTH OF CONNECTOR PLUS 5mm.

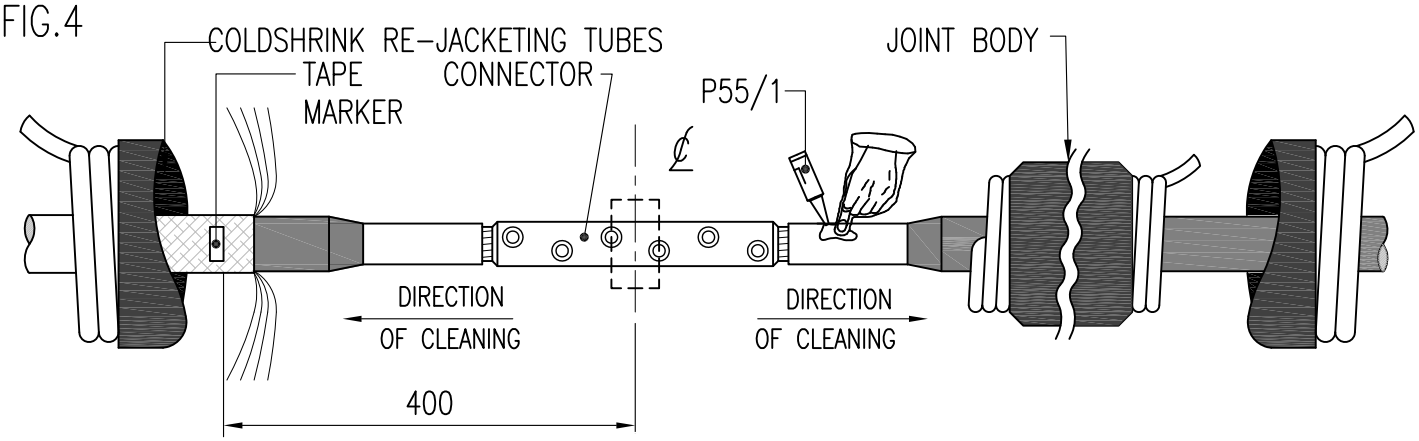
NOTE: ALL DIMENSIONS ARE TO THE 'CENTRE OF THE JOINT'. WHERE SPLIT AND/OR BLOCKED CONNECTORS ARE USED, THE DIMENSIONS OF THE BLOCK IN THE CONNECTOR MUST BE TAKEN INTO ACCOUNT

FIG.3



3.1 POSITION THE JOINT BODY ON TO CABLE ②.

FIG.4



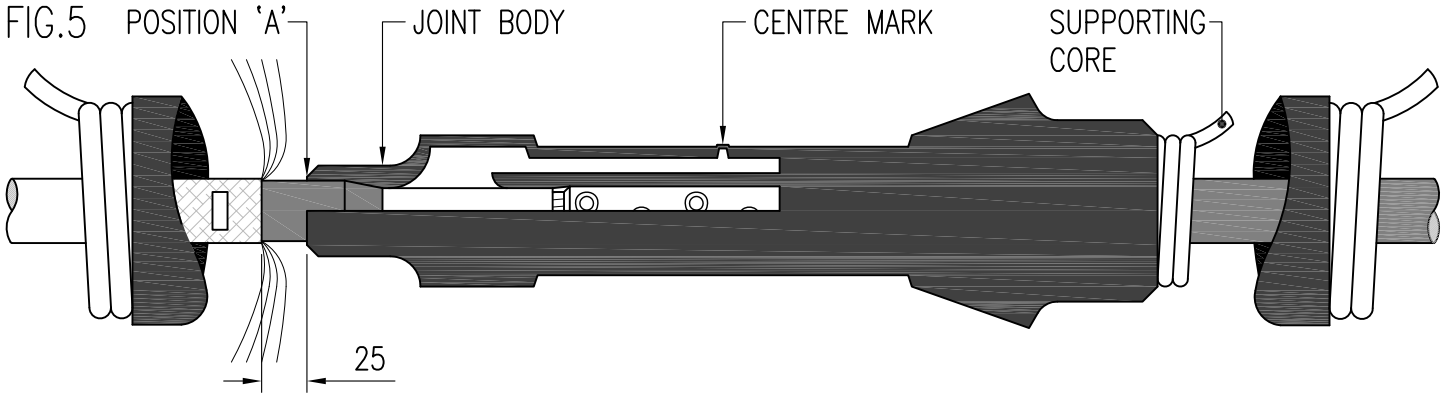
4.1 CLEAN ALL INSULATION ONLY IN THE DIRECTION SHOWN.

4.2 INSTALL THE CONNECTOR ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS. CLEAN, DEBURR AND DEGREASE THE CONNECTOR. ADD THE ALUMIUM FOIL PATCHES OVER THE SHEARBOLT HOLES.

4.3 APPLY A MARKING TAPE ON THE CABLE SHEATH 400mm. FROM THE CENTRE OF THE CONNECTOR.

4.4 APPLY P55/1 GREASE OVER THE SEMI-CONDUCTIVE SCREENS, THE PRIMARY INSULATION AND THE CONNECTOR USING THE PLASTIC GLOVE PROVIDED.

FIG.5



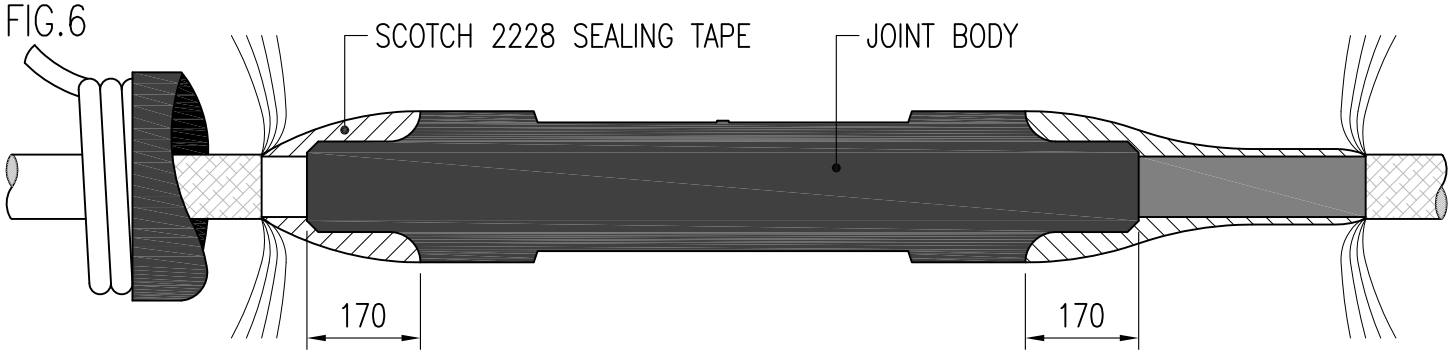
5.1 SLIDE THE JOINT BODY OVER THE CONNECTION UNTIL POSITION 'A'.

5.2 USING POSITION 'A' AS A STARTING POINT, SHRINK THE BODY ON TO THE CORE BY UNWINDING THE SPIRAL. ONCE THE BODY HAS BEEN SHRUNK PAST ITS CENTRE MARK, AND BEFORE IT HAS BEEN SHRUNK FULLY ACROSS THE CONNECTOR, ENSURE THE BODY IS IN POSITION USING THE PVC TAPE AND CENTRE MARK. IF NOT CORRECTLY POSITIONED, MAKE CORRECTION BY DISPLACEMENT.

** PLEASE NOTE: THE SYMMETRICAL POSITION OF THE JOINT BODY IS CRITICAL. **

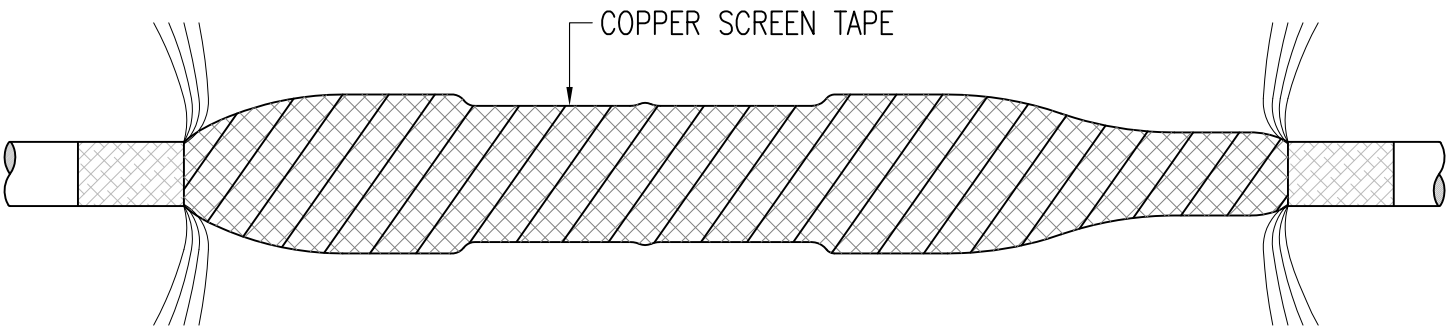
5.3 REMOVE MARKING TAPE.

FIG.6



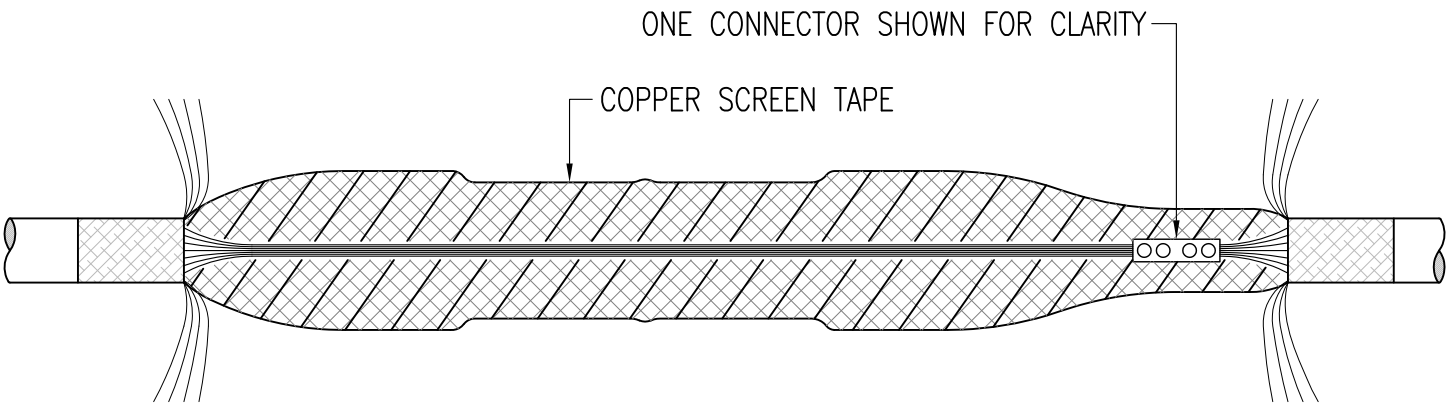
6.1 WRAP SCOTCH 2228 SEALING TAPE OVER THE EXPOSED SEMI CON AND UP ON TO THE JOINT BODY BY 170mm. WRAP ONE HALF-LAPPED LAYER AND SMOOTH OUT PROFILES ON THE ENDS OF THE JOINT BODY.

FIG.7



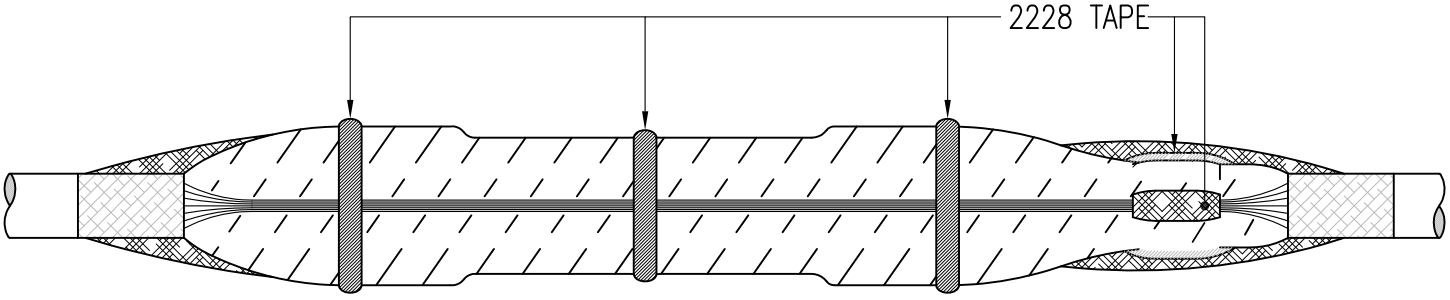
7.1 APPLY ONE HALF-LAPPED LAYER OF 50mm WIDE COPPER SCREEN TAPE OVER THE 2228 TAPE AND JOINT BODY.

FIG.8



8.1 SPLIT THE COPPER NEUTRAL WIRES INTO 3 EQUAL GROUPS.
8.2 LAY THE GROUPS OF WIRES NEATLY ACROSS THE JOINT AND CONNECT IN THE OVERSTRIP AREA USING THE 332-607-012 SCREEN CONNECTORS - STAGGER THE CONNECTORS ALONG THIS AREA
8.2 APPLY A HALF LAPPED LAYER OF 2228 TAPE OVER EACH CONNECTOR.

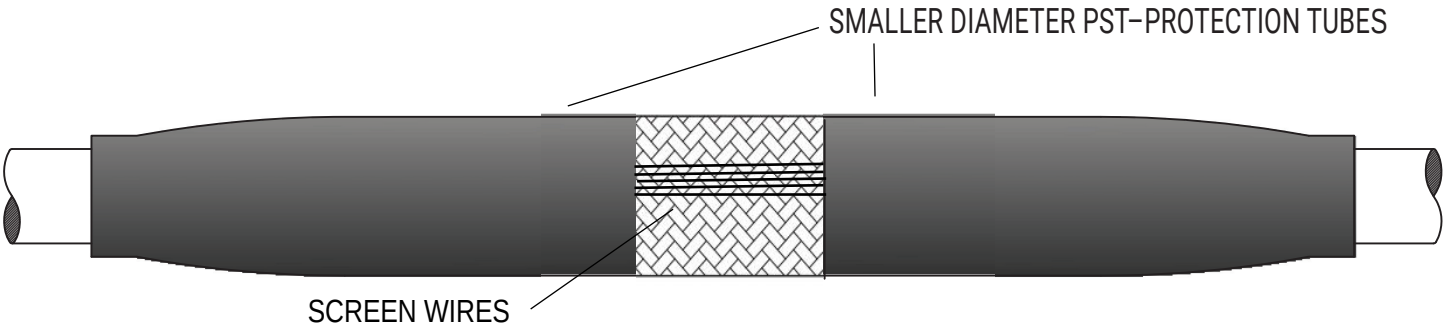
FIG.9



9.1 AFTER LAYING ALL THE NEUTRAL WIRES ACROSS THE JOINT SECURE THEM IN PLACE USING 2228 TAPE.
9.2 USING ONE HALF-LAPPED LAYER OF 2228 TAPE, COVER THE AREA OVER THE CONNECTORS

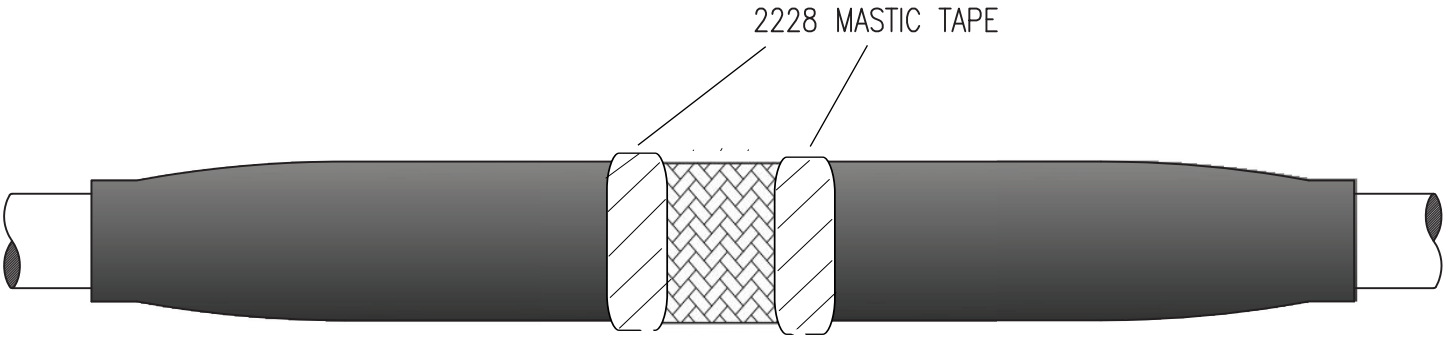
9.3 APPLY 2228 TAPE OVER THE ENDS OF THE JOINT AREA, 150mm ONTO THE CABLE JACKET AT BOTH ENDS. ENSURE A DIAMETER OF 70mm OVER THE 2228 TAPE.

FIG.10



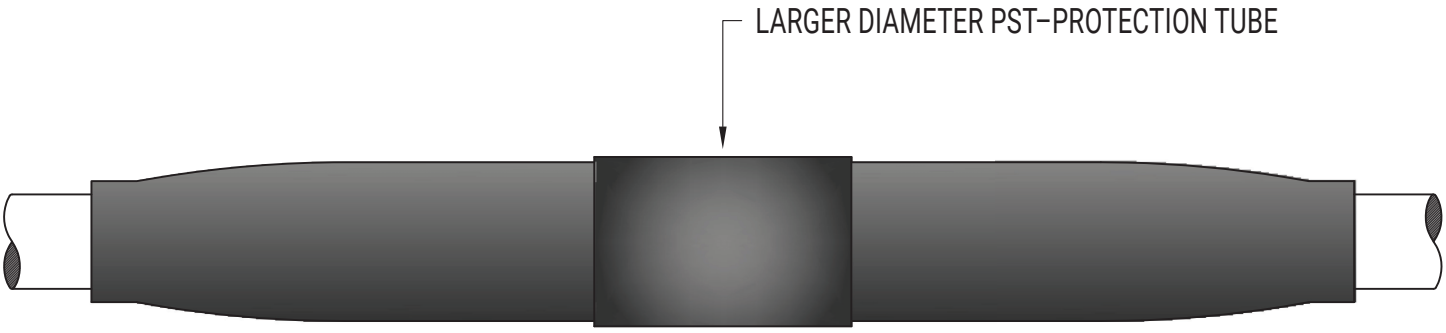
10.1 SHRINK DOWN THE TWO SMALLER DIAMETER OUTER PROTECTION TUBES, BEGINNING APPROX. 10MM PAST THE 2228 TAPE SEALS AT EACH END.

FIG.11



11.1 APPLY TWO LAYERS OF 2228 MASTIC TAPE OVER THE CENTRE EDGES OF THE TUBES, CREATING A 25mm OVERLAP ONTO EACH TUBE, AND 50mm TOWARD THE CENTRE ON EACH SIDE.

FIG.12



12.1 INSTALL THE LARGER DIAMETER PST STARTING 20mm PAST THE EDGE OF THE 2228 TAPE, ACROSS THE CENTRE AREA OF THE JOINT