

3M COLDSHRINK™ QS III SPLICING KIT

94-AC642-1/C

WITH COLDSHRINK JACKETING TUBE SUITABLE FOR
POLYMERIC SINGLE CORE CABLES, COPPER TAPE SCREENED,
WITH LEAD ALLOY SHEATH AND ALUMINIUM WIRE ARMOUR TO
COPPER SCREENED AND ALUMINIUM WIRE ARMOUR 19 / 33 KV
ACCORDING TO IEC 60502

KIT No.	DIAMETER OVER CABLE SHEATH MAX. (mm)	DIAMETER OVER INSULATION (mm)	CROSS SECTION (mm ²)	DIAMETER OVER CONNECTOR (mm)	CONNECTOR LENGTH MAX. (mm)
94-AC642-1/C	69	31.5 – 52.6	300 – 630	32.0 – 52.6	210

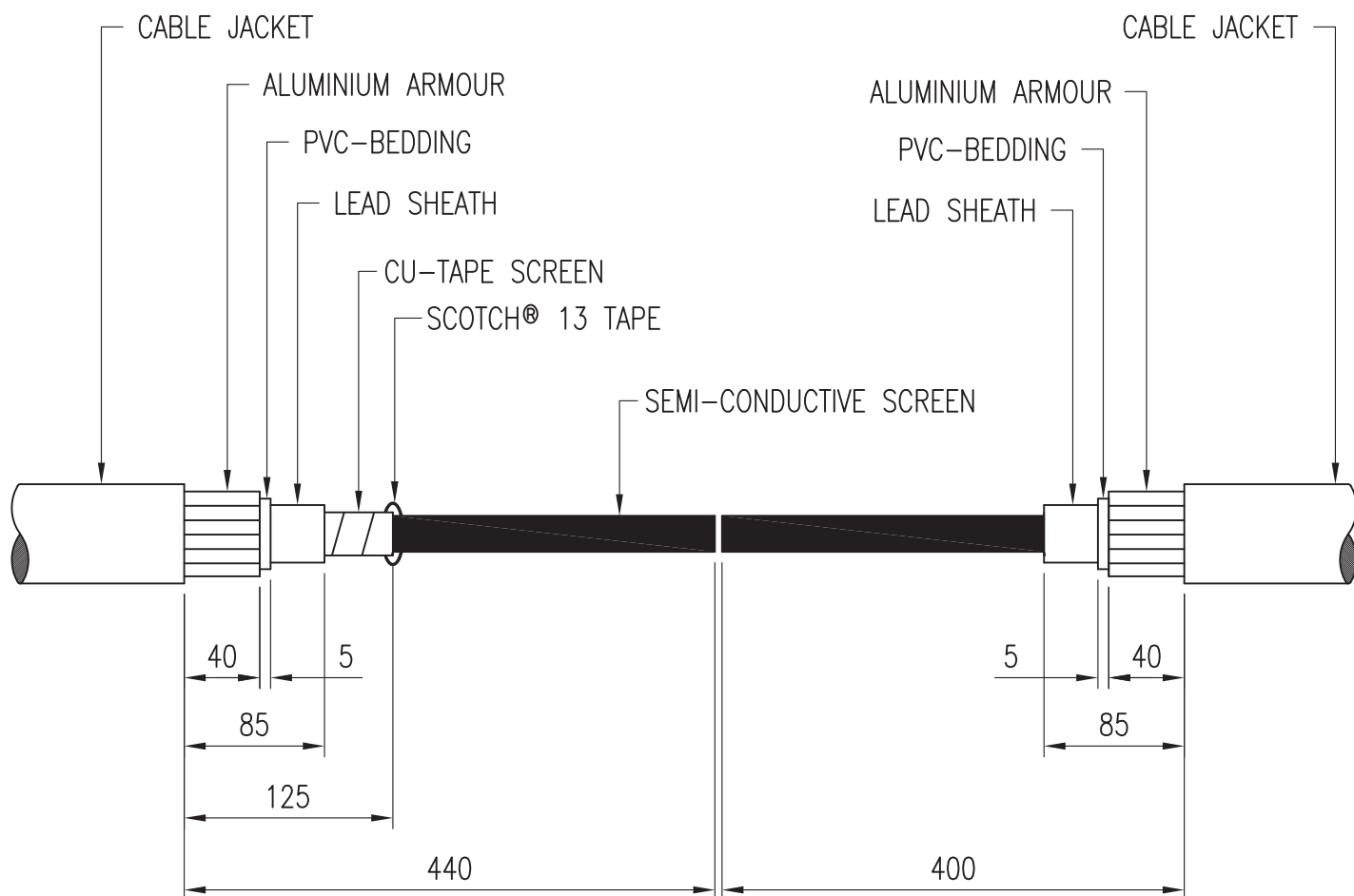
TECHNICAL INSTRUCTION

THIS INSTRUCTION IS SUPPLEMENTARY TO INSTALLATION INSTRUCTION XE-0091-3631-0

WHERE ARMOUR CONTINUITY BRAIDS ARE BEING USED, THE BRAIDS ARE TO BE INSULATED
USING A SUITABLE HEATSHRINK TUBE PRIOR TO INSTALLATION. ENSURE THAT THE
HEATSHRINK INSULATION IS REMOVED FROM THE BRAID AT THE CONNECTION TO THE
ARMOUR/LEAD AT EACH END.

<div>3M UNITED KINGDOM PLC © 2010</div> <div>3M CENTRE, CAIN ROAD, BRACKNELL</div> <div>BERKS. RG12 8HT, ENGLAND</div>	D	ADD ALU FOIL PATCHES	RS	17.04.24
	3	LATEST REVISION	RS	30.08.22
	2	LATEST REQUIREMENT.	ERH	06.10.11
	1	RELEASED.	MJE	21.05.10
	ISSUE	DESCRIPTION / ECO		BY
ALL STATEMENTS, TECHNICAL INFORMATION AND RECOMMENDATIONS CONTAINED HEREIN ARE BASED ON TESTS WE BELIEVE TO BE RELIABLE. HOWEVER, SINCE THE CONDITIONS OF USE AND THE APPLICATION ARE BEYOND OUR CONTROL, THE PURCHASER IS RESPONSIBLE FOR THE PERFORMANCE OF THE JOINTS AND TERMINATIONS MADE IN CONNECTION WITH THE USE OF DATA OR SUGGESTIONS STATED HEREIN.		3M COLDSHRINK QSIII INLINE SPLICING KIT 94-AC642-1/C WITH COLDSHRINK JACKETING TUBE FOR POLYMERIC SINGLE CORE CABLES, COPPER TAPE SCREENED WTH LEAD ALLOY SHEATH & ALUM. WIRE WIRE ARMOUR 19/33kv-INSTALLATION INSTRUCTIONS		
Drawn : M.J.EDE <div>21/05/10</div>		Des.Eng:		
Cad File: XE-0091-3628-6		Checked:		
<div>3M</div> ELECTRICAL PRODUCTS	AA-BBCC-7820-6		XE-0091-3628-6	SHEET 1 of 6
				A4

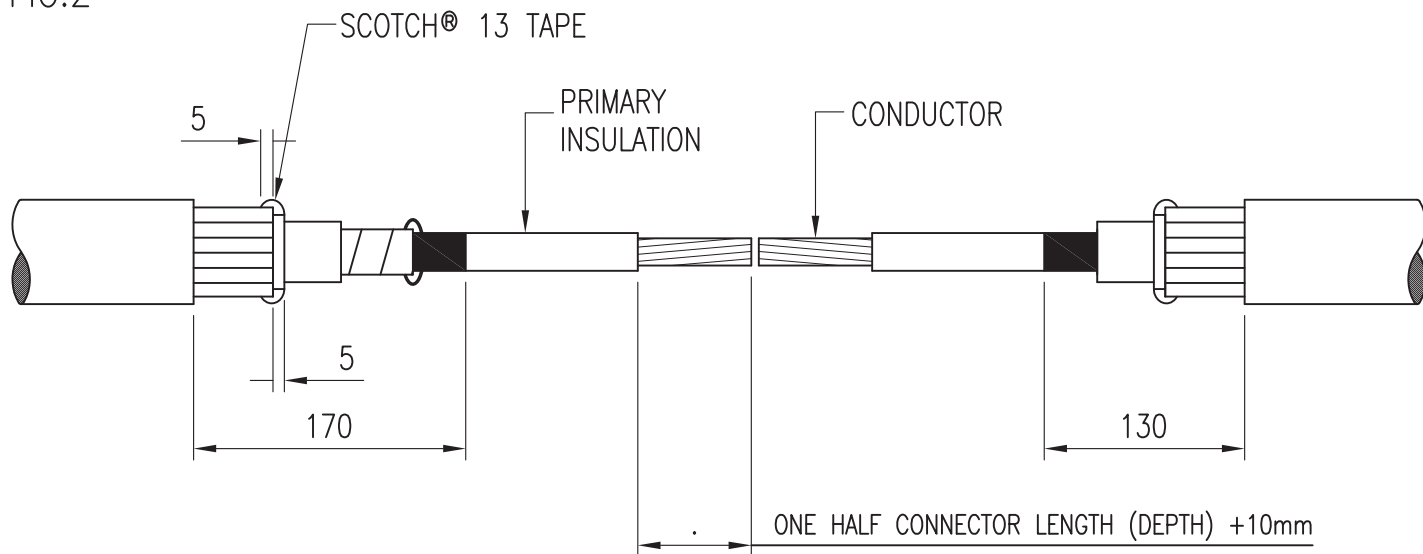
FIG.1



1.1 FIX THE END OF CU-TAPE SCREEN WITH SCOTCH® 13 TAPE

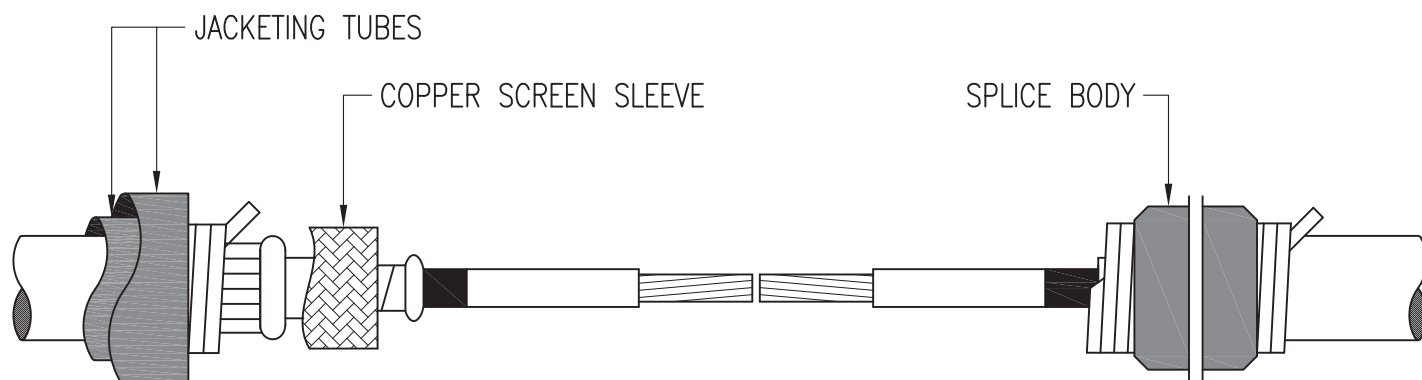
N.B FOR 500mm² CABLE AND 630mm² CABLE, ON THE RIGHT HAND SIDE OF THE JOINT REMOVE A FURTHER 70mm OF OVERSHEATH, THEREFORE EXPOSING 110mm OF ARMOUR.

FIG.2



2.1 FIX THE ALUMINIUM ARMOUR WITH A BINDING OF SCOTCH® 13 TAPE.

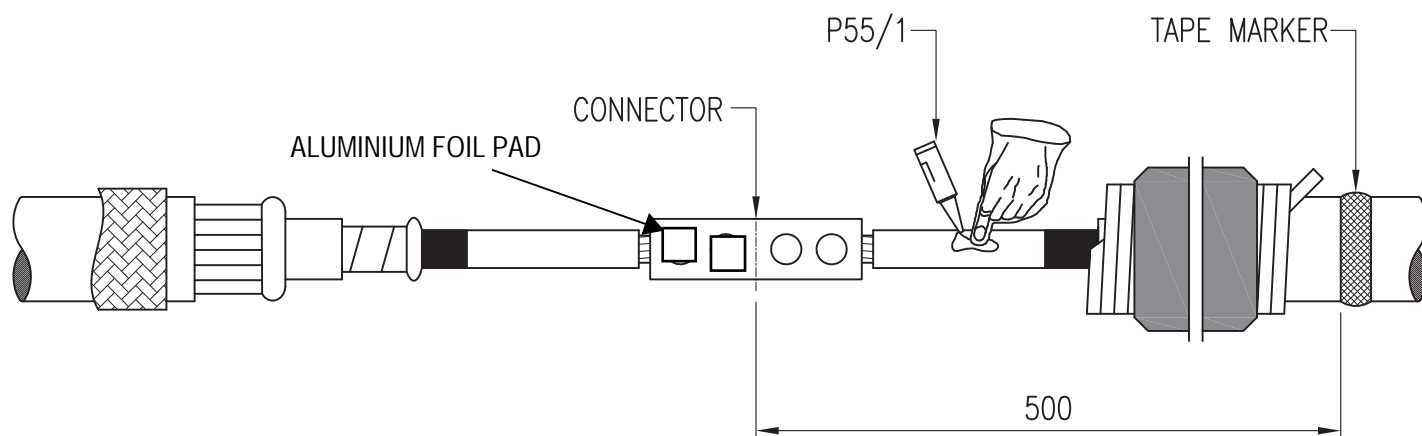
FIG.3



3.1 SLIDE THE JACKETING TUBES, COPPER SCREEN SLEEVE AND THE SPLICE BODY ON TO THE CABLE ENDS.

N.B ENSURE THAT THE SPLICE BODY IS PARKED ON THE SIDE OF THE JOINT WITH ADDITIONAL ARMOUR WIRES EXPOSED, THE RIGHT HAND SIDE.

FIG.4



4.1 INSTALL CONNECTOR TO MANUFACTURER'S INSTRUCTIONS. REMOVE EXCESS GREASE, SMOOTH AND CLEAN THE CONNECTOR.

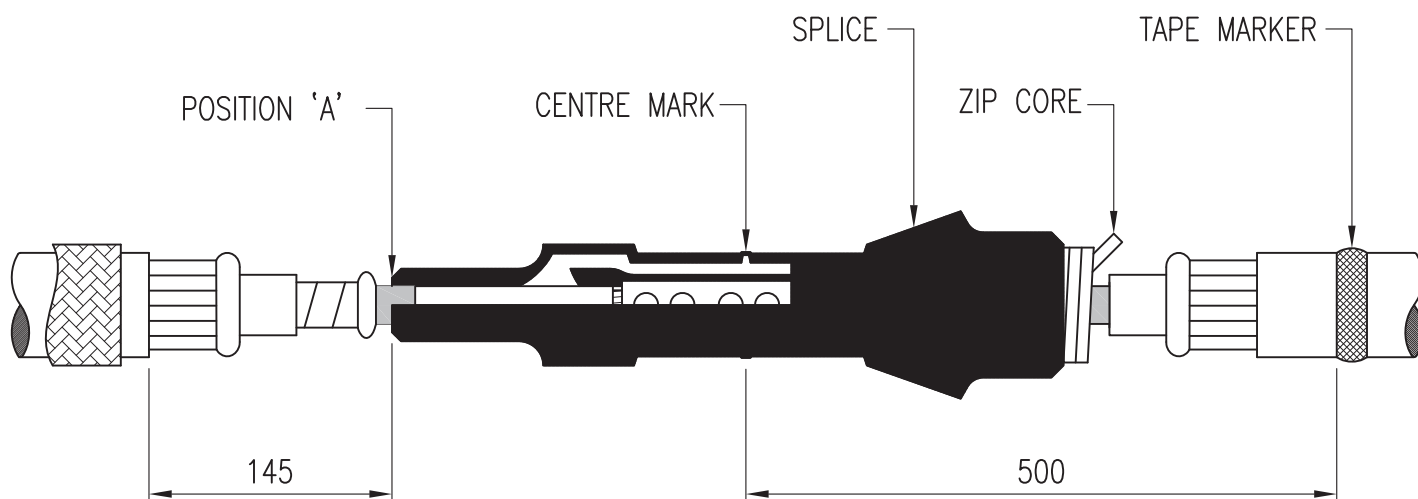
APPLY ALUMINIUM FOIL PADS OVER THE SHEAR BOLT HOLES TO ENSURE A SMOOTH PROFILE.

4.2 APPLY A TAPE MARKER TO CABLE JACKET BY MEASURING 500mm FROM CENTRE OF CONNECTOR.

4.3 ENSURE THE MIN. DIAMETER OVER THE CONNECTOR. IF NECESSARY OVERWRAP THE CONNECTOR WITH CONDUCTIVE SCOTCH® 13 TAPE UP TO THE GIVEN DIAMETER.

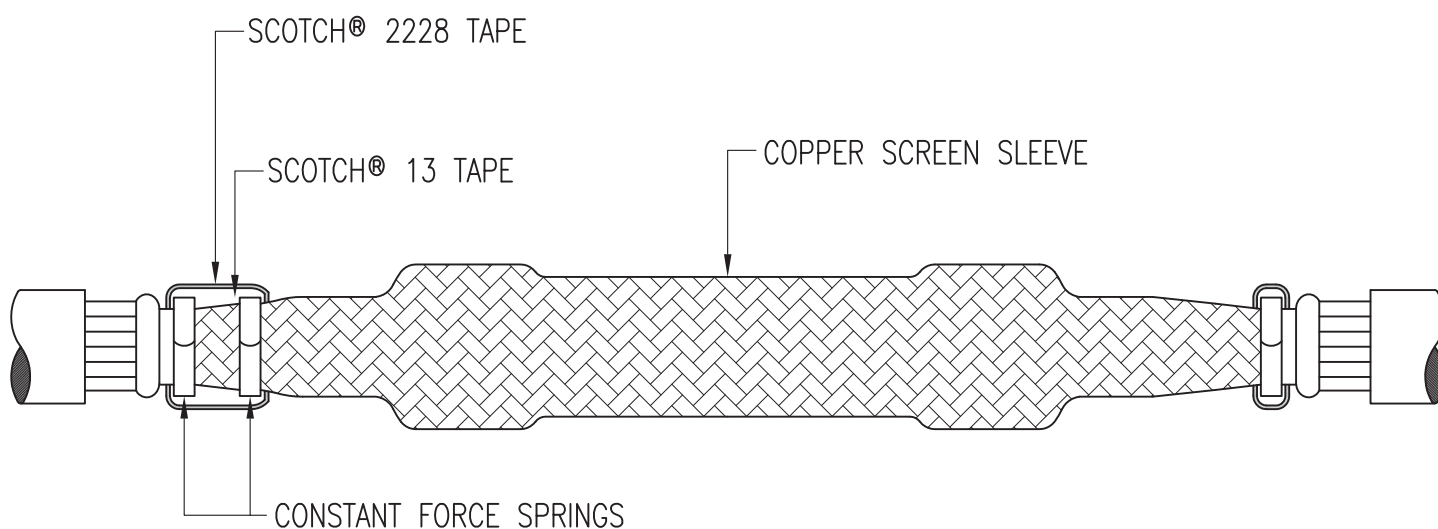
4.4 APPLY A LIBERAL AMOUNT OF P55/1 LUBRICANT ON THE CABLE INSULATIONS AND CONNECTORS SURFACE, MAKING CERTAIN TO FILL IN EDGE OF THE CABLE SEMI-CONDUCTIVE LAYERS USING THE PLASTIC GLOVE PROVIDED.

FIG.5



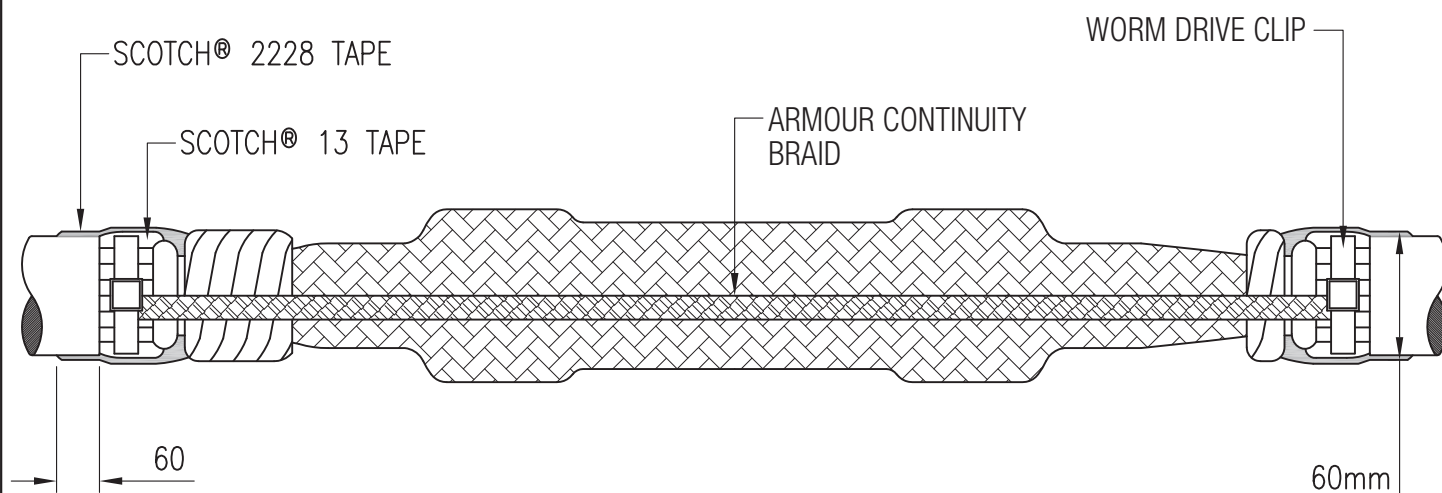
- 5.1 POSITION THE SPLICE BODY OVER THE CONNECTOR AREA.
- 5.2 INSTALL THE SPLICE BY PULLING AND UNWINDING THE CORE COUNTER-CLOCKWISE. START SHRINKING AT POSITION 'A'.
- 5.3 ONCE THE SPLICE BODY HAS BEEN SHRUNK PAST ITS CENTRE MARK, AND BEFORE IT HAS BEEN SHRUNK FULLY ACROSS THE CONNECTOR, ENSURE THAT THE CENTRE MARK OF THE BODY IS CORRECTLY POSITIONED USING THE PVC TAPE MARKER AT 500mm. IF NOT CORRECTLY POSITIONED, MAKE CORRECTION BY DISPLACEMENT.
** PLEASE NOTE THAT THE SYMMETRICAL POSITION OF THE SPLICE BODY IS CRITICAL **
- 5.4 REMOVE THE TAPE MARKER.

FIG.6



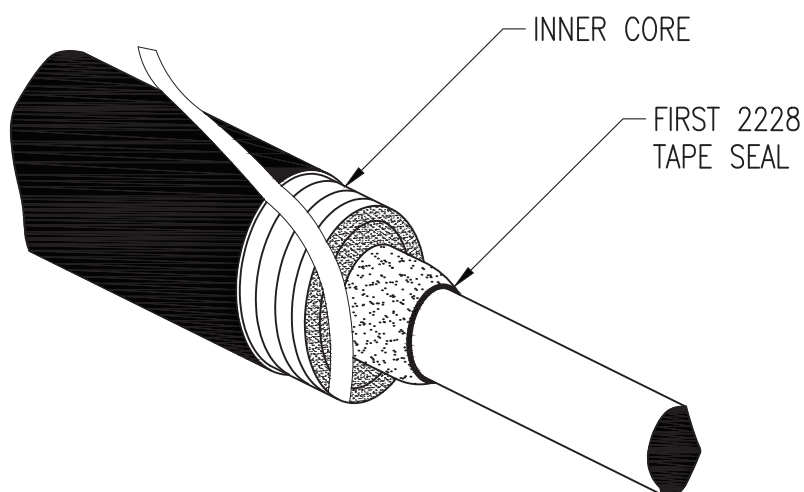
- 6.1 CLEAN THE CABLE JACKET FOR APPROX. 150mm. THOROUGHLY CLEAN AND DEGREASE THE LEAD SHEATH AND ARMOUR.
- 6.2 CENTRE THE COPPER SCREEN SLEEVE OVER THE SPLICE AND FIX IT BY MEANS OF CONSTANT FORCE SPRING ON THE LEAD SHEATH. CUT OFF THE REMAINING WIRES OF THE SLEEVE.
- 6.3 OVERWRAP THE CONSTANT FORCE SPRINGS WITH TWO HALF-LAPPED LAYERS OF SCOTCH® 13 TAPE AS SHOWN.
- 6.4 WRAP TWO HALF-LAPPED LAYERS OF SCOTCH® 2228 TAPE OVER THE SCOTCH® 13 TAPE.

FIG.7



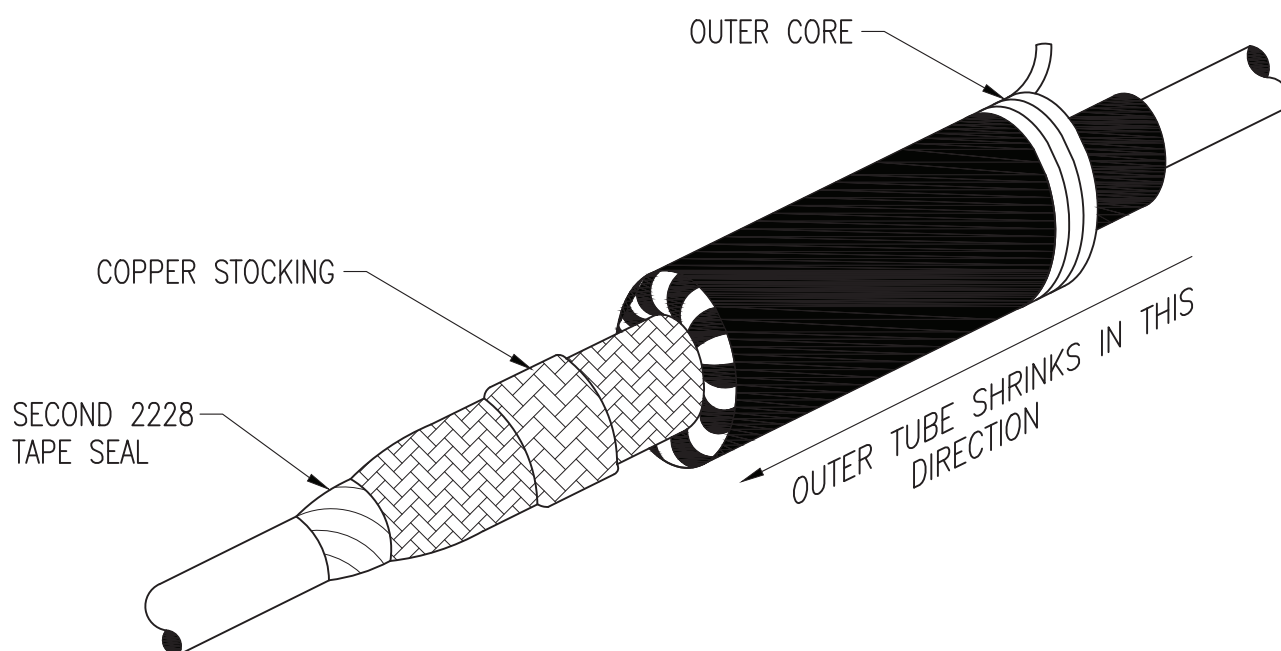
- 7.1 LAY THE ARMOUR CONTINUITY BRAIDS/BRAID OVER THE SPLICE AND FIT IT TO THE ALUMINIUM WIRE ARMOUR WITH THE WORM DRIVE CLIPS.
- 7.2 OVERWRAP THE WORM DRIVE CLIPS WITH TWO HALF LAPPED LAYERS OF SCOTCH® 13 TAPE, AS SHOWN.
- 7.3 WRAP SCOTCH® 2228 TAPE OVER THE CABLE JACKET AND THE SCOTCH® 13 TAPE, ENSURE MINIMUM DIAMETER OF 60mm OVER THIS AREA. ENSURE THAT ANY EXPOSED ARMOUR WIRES ARE FULLY PROTECTED WITH SCOTCH® 2228 TAPE.

FIG.8



- 8.1 BEGIN TO INSTALL THE OUTER PROTECTION COLD SHRINK TUBE BY COMPLETELY COVERING THE FIRST 2228 TAPE AND SLOWLY PULLING AND UNWINDING THE INNER CORE COUNTERCLOCKWISE TOWARD THE SPLICE BODY. THE OUTER CORE SHOULD REMAIN RELATIVELY STATIONARY WHILE UNWINDING THE INNER CORE. IF THE OUTER CORE BEGINS TO MOVE TOWARDS THE FIRST 2228 TAPE SEAL, GENTLY PULL THE OUTER CORE AND PROTECTION TUBE TOWARDS THE SECOND 2228 TAPE AND CONTINUE UNWINDING THE INNER CORE.

FIG.9



- 9.1 CONTINUE TO INSTALL THE COLD SHRINK TUBE OVER THE SECOND 2228 TAPE SEAL ON THE OTHER SIDE OF THE JOINT BY SLOWLY PULLING AND UNWINDING THE OUTER CORE COUNTER CLOCKWISE. THIS PORTION OF THE COLDSHRINK TUBE INSTALLS DIFFERENTLY THAN TYPICAL COLDSHRINK PRODUCTS IN THAT AS THE TUBE SHRINKS, THE END ROLLS UNDER. THE TUBE MIGHT NEED A SLIGHT PUSH TO GET OVER THE SECOND 2228 TAPE SEAL.

NOTE: FOR AREAS WHERE PROTECTION AGAINST HYDROCARBONS/CHEMICALS IS REQUIRED A SUPPLEMENTARY KIT CONSISTING OF A SPECIAL MOULD AND RESIN MUST BE INSTALLED AROUND THE JOINT.