

# INSTALLATION INSTRUCTION

for

25kV STRAIGHT JOINT FOR 1 X 120/185SQmm AL/CU XLPE CABLE

# Installation Instructions

## ONE CORE SPLICE JOINT

The straight joint is a permanent, fully screened, submersible joint rated for the voltage class indicated on the joint housing and having a current carrying equal to the cable, for extruded solid dielectric (XLPE or EPR) cable with copper or aluminum conductor and an extruded insulation shield.

### DANGER

All apparatus must be de-energized during installation or remove of part(s).

Do not touch or move energized products by hand.

Excess distortion of the assembled product may result in its failure.

Inspect parts for damage, rating and compatibility with mating parts.

This product should be installed only by competent personnel trained in good safety practices involving high voltage electrical equipment.

These instructions are not intended as a substitute for adequate training or experience in such safety practices. These instructions do not attempt to provide for every possible contingency.

Failure to follow these instructions will result in damage to the product and serious or fatal injury.

FOR MORE INFORMATION ON PARTS, INSTALLATION RATINGS AND COMPATIBILITY, CALL THE NEAREST PYUNG-IL OFFICE

### IMPORTANT

1. Check contents of package to insure they are complete and undamaged.
2. Check all components to insure proper fit with cable and/or mating products.

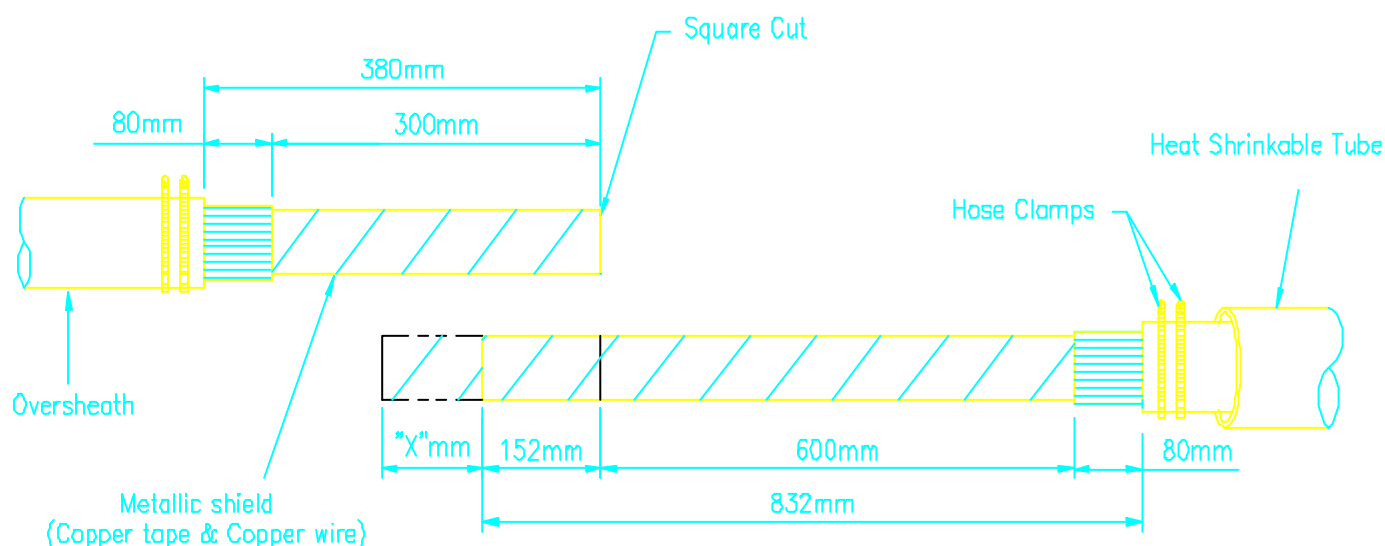
3. Read entire installation instructions before starting.

4. Have all required tools at hand and maintain cleanliness throughout the procedure.

### STEP A - CABLE PREPARATION

1. Overlap cable 2 to be joined by minimum 152mm (152mm + Xmm).
2. Store two hose clamps over cable 1. Store one heat-shrinkable tube and two hose clamps over cable 2.
3. Remove the oversheath, armour wires, armour bedding and binding tape to dimension shown.

- Remove oversheath for a distance of 380mm from the end of cable 1.
- Remove armour wires and armour bedding and binding tape for a distance of 300mm from the end of cable 1.
- Remove oversheath for a distance of 832mm + Xmm from the end of cable 2.
- Remove armour wires and armour bedding and binding tape for a distance of 752mm + Xmm from the end of cable 2.



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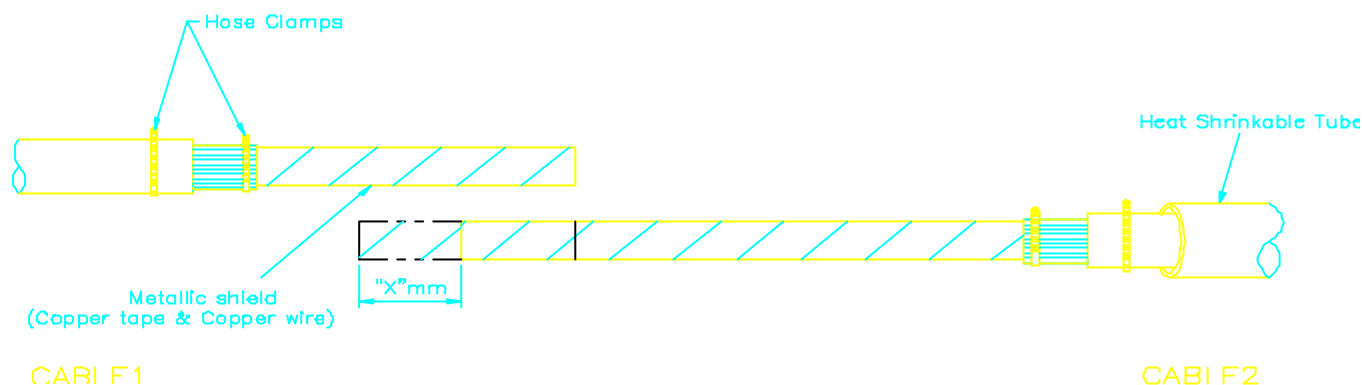
CABI F2



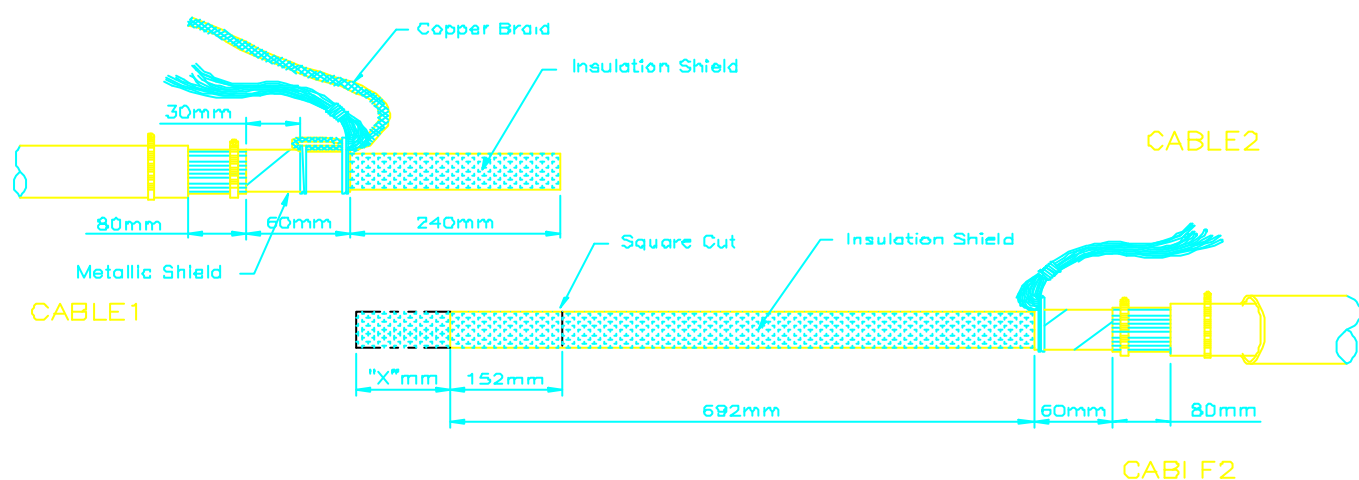
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**STEP B - WRAPPING ARMOUR WIRES**

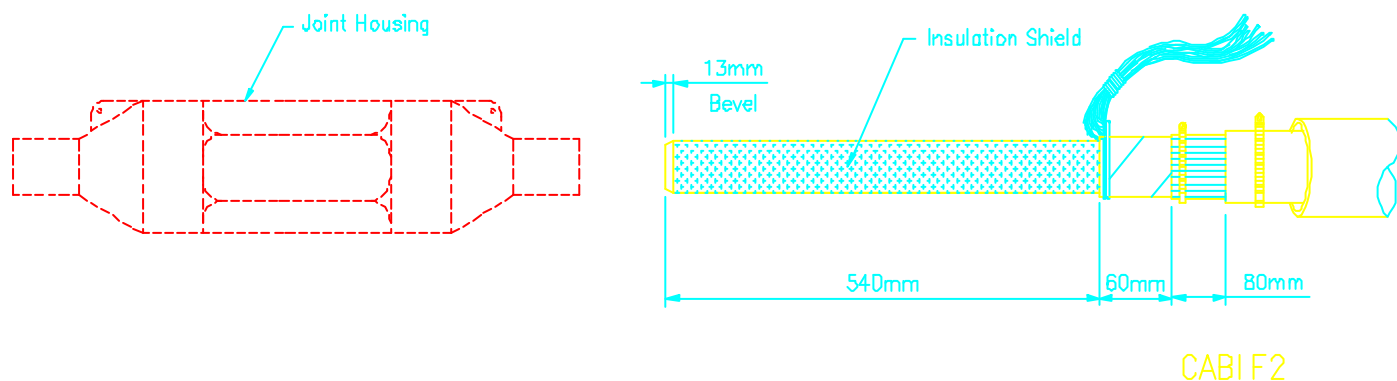
1. Fasten each one hose clamp around end of armour wires of cable 1 and 2 as shown.

**STEP C - COPPER BRAID**

1. Bind the copper braid onto cable 1 by the given copper wire to a point of 270mm from the end of cable 1, leaving 30mm length of the copper braid, and fold back the copper braid and bind it (30mm overlapped) twice again with the remainder of the copper wire to a point of 240mm from the end of cable 1.
2. Remove the copper tape only by 240mm from the end of cable 1, not cutting any copper wires, and pigtail copper wires with a copper wire from the copper wires and fold back pigtailed copper wires to a point of 240mm from the end of cable 1.
3. Wrap two layers of the given copper wire around the copper tape to a point of 692mm + Xmm from the end of cable 2.
4. Remove the copper tape only by 692mm + Xmm from the end of cable 2, not cutting any copper wires, and pigtail copper wires with a copper wire from the copper wires and fold back the pigtailed copper wires to a point of 692mm + Xmm from the end of cable 2.
5. Cut (square cut) cable 2 for a distance of 152mm + Xmm from the end of cable 2

**STEP D - STORAGE OF SPLICE HOUSING**

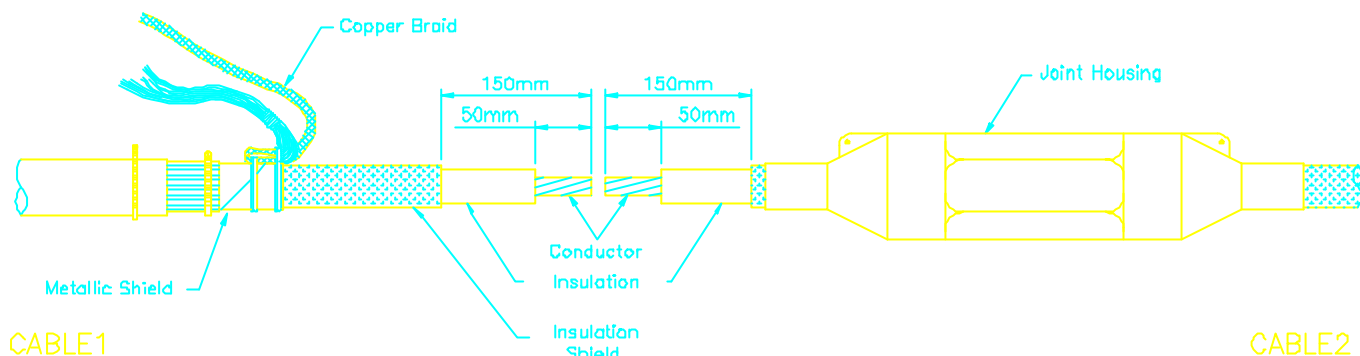
1. Bevel edge of cable 2 only, by 13mm (1/2")
2. Lubricate the insulation shield of cable 2.
3. Slide joint housing onto the cable 2 upto 540mm from the end of cable 2.



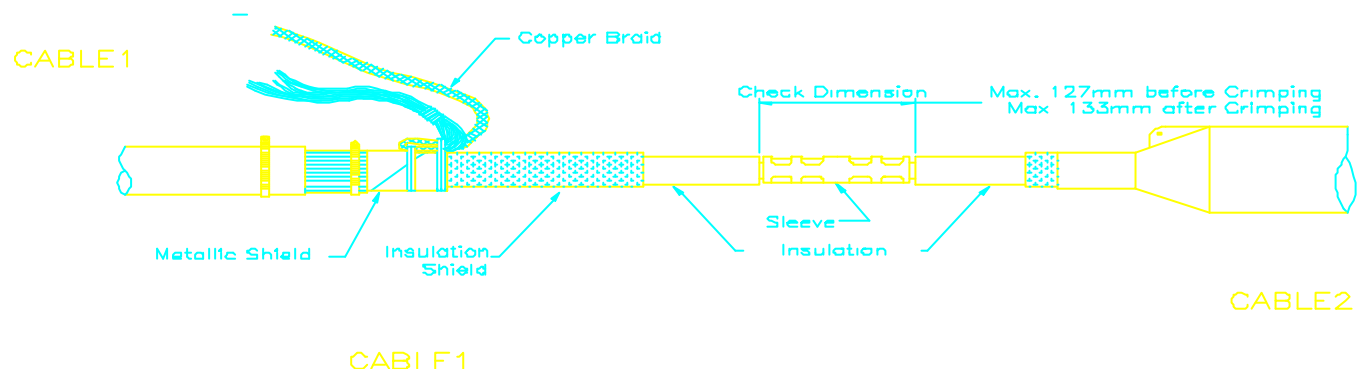
**STEP E - CORE PREPARATION**

**WARNING: DO NOT NICK, CUT, OR IN ANYWAY DAMAGE THE INSULATION SURFACE OR CONDUCTOR STRANDS. DAMAGE TO EITHER AREA COULD RESULT IN FAILURE OF THE CABLE/Joint.**

1. Clean the applied lubricant from insulation shield on cable 2 by cleaning paper.
2. Carefully remove insulation shield by 150mm from the ends of cable 1 and cable 2.
3. Carefully remove insulation by 50mm from the ends of cable 1 and cable 2.

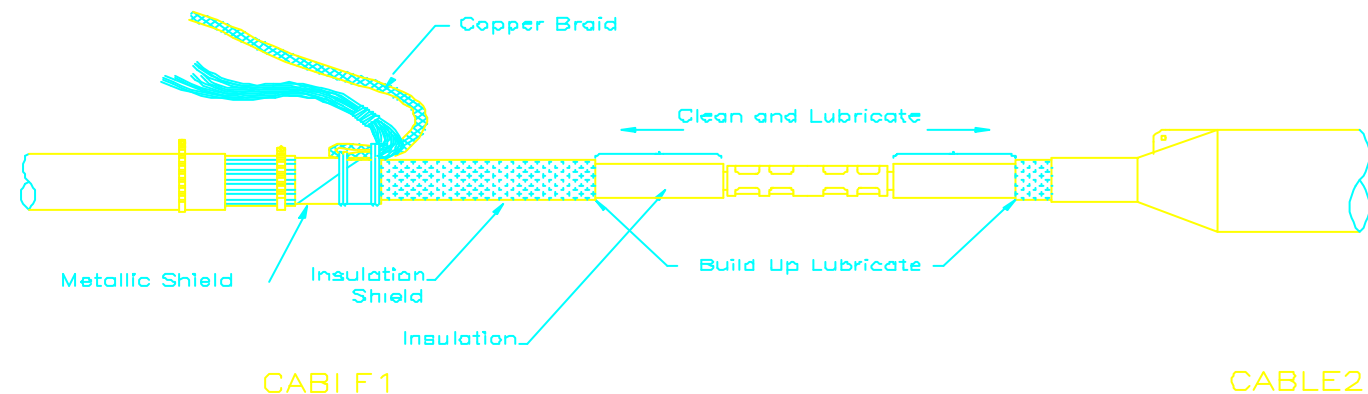
**STEP F - SLEEVE INSTALLATION**

1. Wire-brush exposed conductors of cable 1 and cable 2 and immediately insert both conductors into the sleeve.
2. Insure that both conductors are fully seated in the sleeve. (DO NOT CRIMP YET).
3. Be sure the "check dimension"(before crimping) after inserting into the sleeve, does not exceed 127mm (5"), otherwise redo assembly.
4. Crimp the sleeve following the recommendations in the crimp chart provided.  
**IMPORTANT** : do not forget to **FILE OR ABRASE sharp edge of the convex part of the sleeve after crimping**, to avoid the damage of inside of joint housing later.
5. Wipe-off all excess inhibitor. **BE SURE** "check dimension" (after crimping) should not exceed 133mm (5¼").  
If it does DO NOT PROCEED. Review the instructions and redo assembly.

**STEP G - CORE CLEANING AND LUBRICATING**

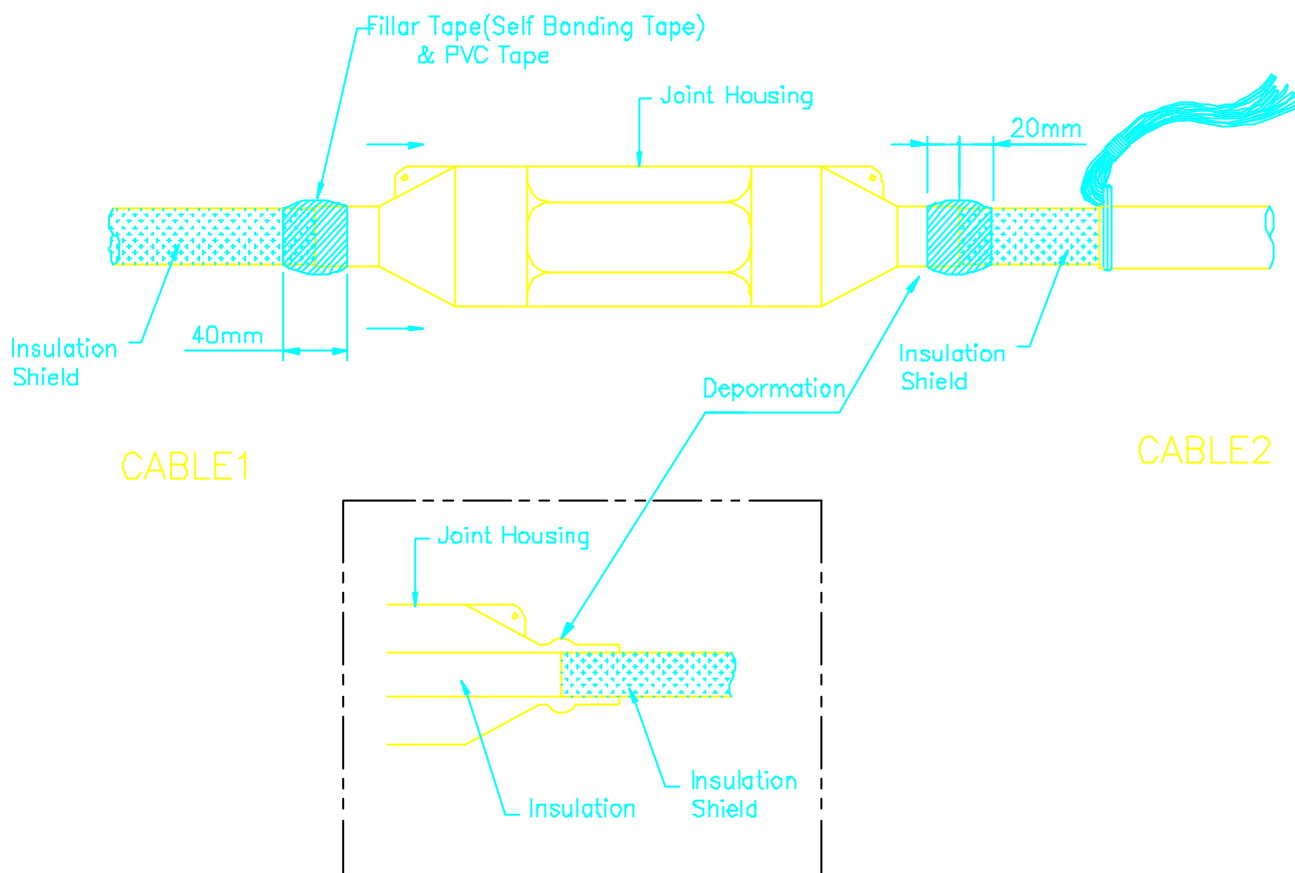
**WARNING: NO CONTAMINANTS SHOULD BE LEFT ON THE SURFACE OF THE INSULATION. CONTAMINANTS ON THE INSULATION CAN AVERSELY AFFECT THE JOINT PERFORMANCE AND SHOULD BE REMOVED BY RE-CLEANING AND RE-GREASING CONTAMINATED AREA.**

1. Clean core insulation surfaces with clearing tissue. Always wipe in the direction of the arrows.
2. Lubricate core cable insulation surfaces using lubricant supplied. Always apply by wiping in the direction of the arrows to provide build-up or ramp of lubricant at the edge of the insulation shield.

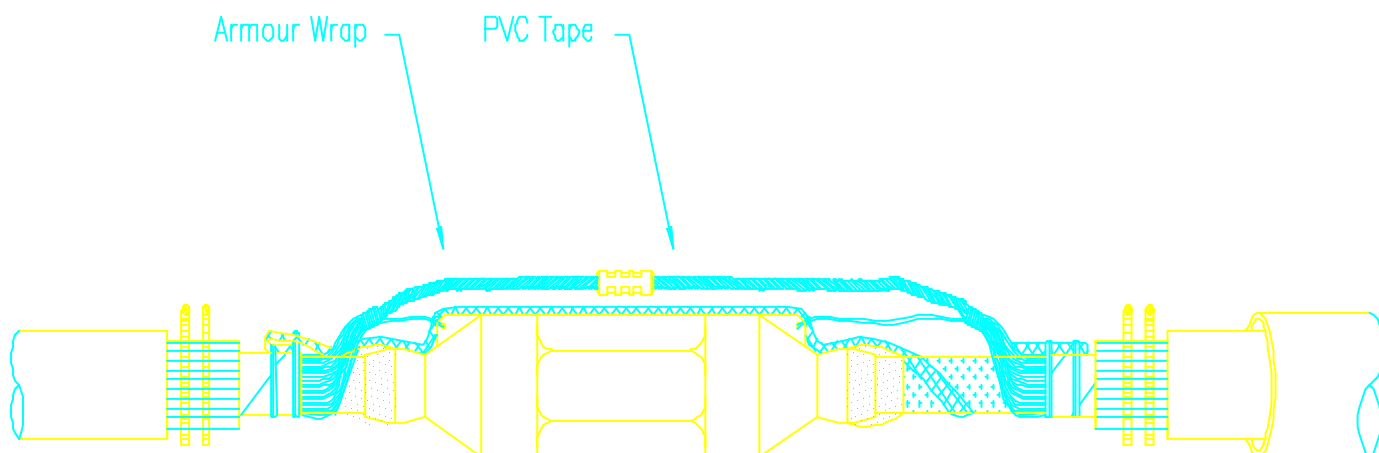


**STEP H - INSTALLATION OF JOINT HOUSING**

1. Slide housing into final position. Proper positioning is insured by observing and equalizing the deformation of the joint housing ends caused by the underlying core insulation shield.
2. Clean lubricants on insulation shield and both sides of joint housing by use of the given cleaning paper before applying filler tape.
3. Apply two half-overlapped layers of filler tape (electrical adhesive sealing compound tape) beginning at 20mm from each end of joint housing up to 20mm onto cable 1 and cable 2. When applying filler tape, remove interleaving, stretch to about 50% elongation and apply under tension. For additional protection, over-wrap filler tape with PVC adhesive tape without stretch force.

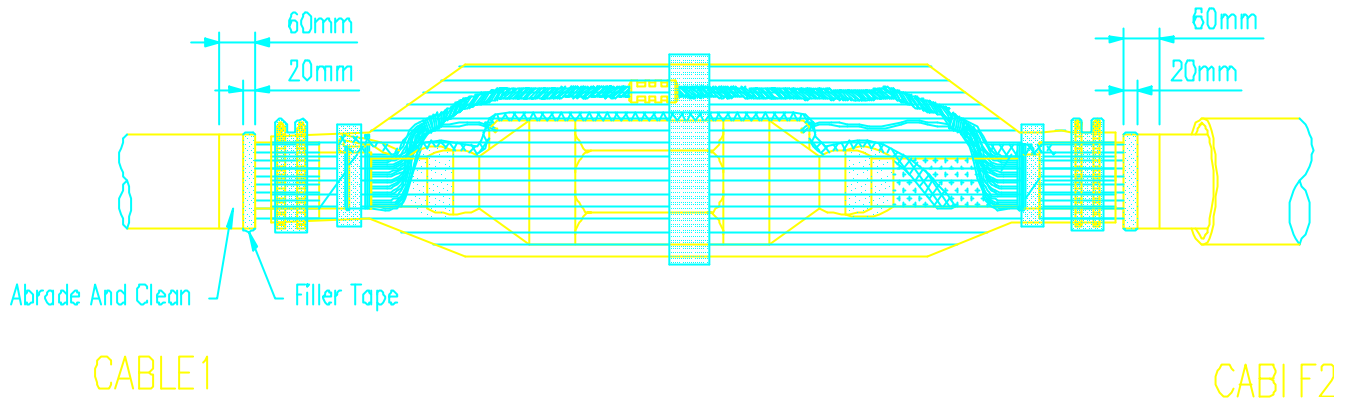
**STEP I - METALIC SHIELD RESTORATION**

1. Extend the copper braid from cable 1 to cable 2, and bind it onto the copper tape (metallic shield) of cable 2 with two layers of the given copper wire at two places as shown.
2. Connect each one copper wire from the pigtailed copper wires to each earthing eye of the joint housing and the copper braid.
3. Connect the pigtailed copper wires together by crimping clamp as shown in the figure.



**STEP J - ARMOUR RESTORATION**

1. Unfasten each hose clamp previously tightened over armour wires and move back each of them over cable 1 and cable 2.
2. Place the armour wrap around the joint housing and secure with two layers of PVC tape in three areas, as shown.
3. Place two hose clamps on each side of armour wires and tighten them as shown.
4. Tape over hose clamps and all sharp points by use of PVC tape to prevent puncture of heat-shrinkable tube.
5. Abrade cable oversheath by abrasive paper for a distance of 60mm from each end of cable oversheath and clean abraded part by cleaning tissue.
6. Apply one half-overlapped layer of filler tape (electrical adhesive sealing compound tape) around oversheath for a distance of about 20mm from each end of oversheath, with stretching force of 50% elongation.

**STEP K - OVERSHEATH RESTORATION**

1. Position the heatshrinkable tube to be overlapped with cable 1 and cable 2 as shown.
2. Heatshrink the tube from the center towards ends.

