Shrink Polymer Systems

Cable Installation Materials – 24 volts to 36 kV

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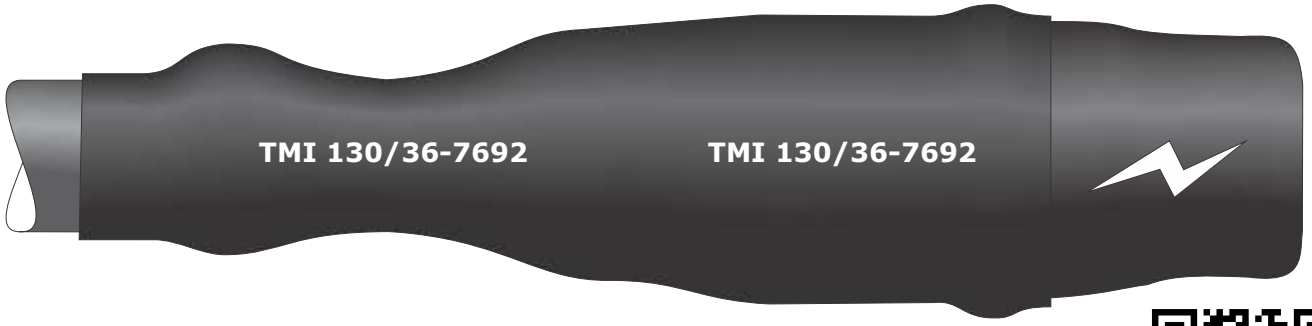
INSTALLATION INSTRUCTION
HEATSHRINK LIVE POT END TO SUIT 3 CORE 6.35/11(12kV) XLPE ARMOURED CABLE REFERENCE TYPE: POT 12X-3C



Scan the QR code on your smartphone to see a training video on this product

- THESE INSTRUCTIONS SHOULD BE FOLLOWED BY A TRAINED COMPETENT JOINTER
- A PROPANE GAS TORCH IS THE PREFERRED METHOD FOR SHRINKING THESE MATERIALS
- ENSURE THAT THE MATERIALS ARE KEPT CLEAN AND DRY AND ARE FREE FROM DUST, SAND AND GREASE
- PLEASE CALL SHRINK POLYMER SYSTEMS FOR ANY ADVICE

DATE OF ISSUE: 13.11.17

CABLE PREPARATION

ALL DIMENSIONS SHOWN IN mm

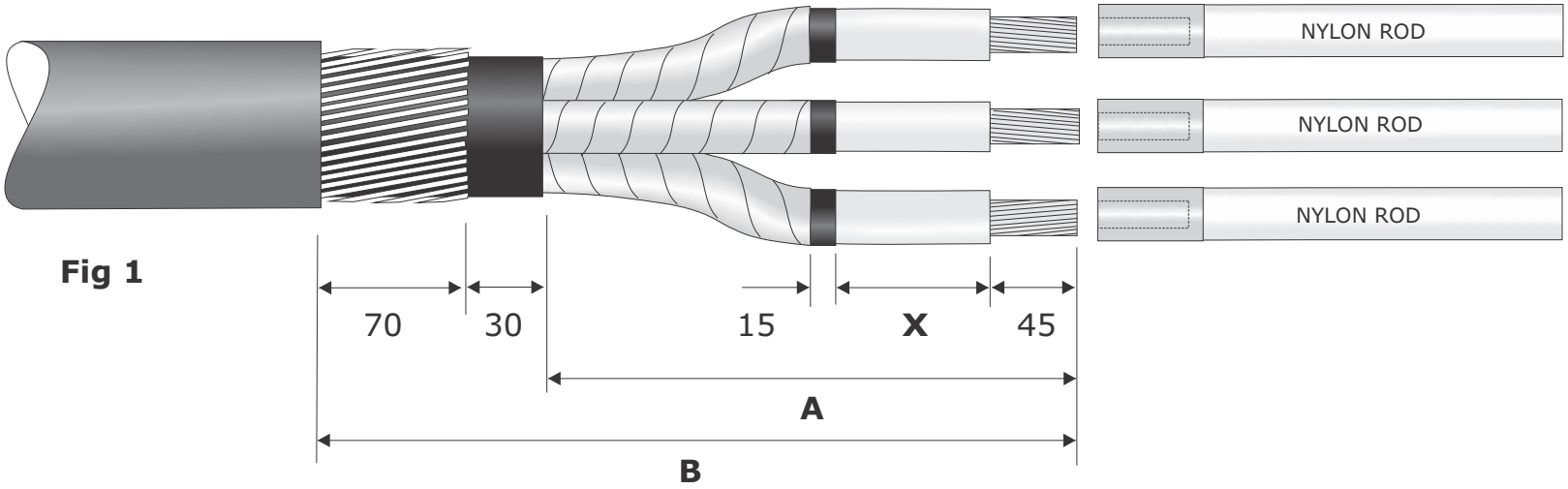


Fig 1

1. Prepare the cable to the dimensions shown above in Fig 1 and Table 1 below according to the conductor size.

Cable Size mm^2	A	B	X
35-95	350	450	110
120-185	400	500	110
240-300	450	550	110

Table 1

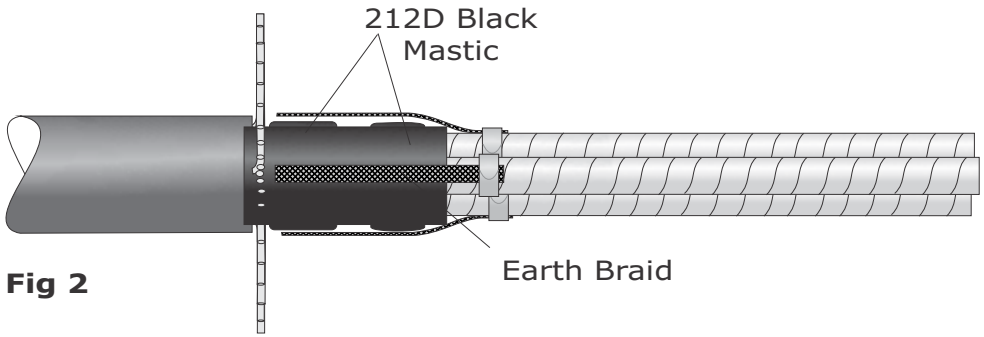


Fig 2

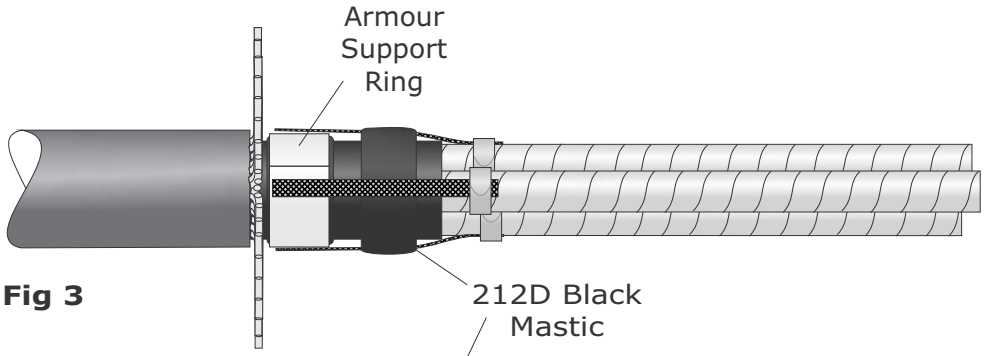


Fig 3

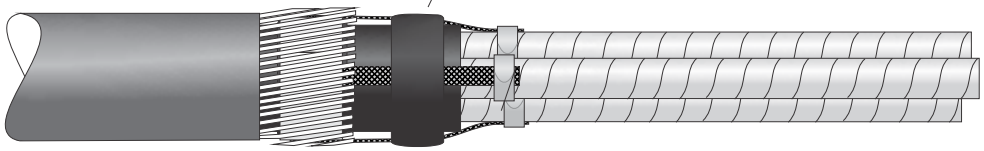


Fig 4

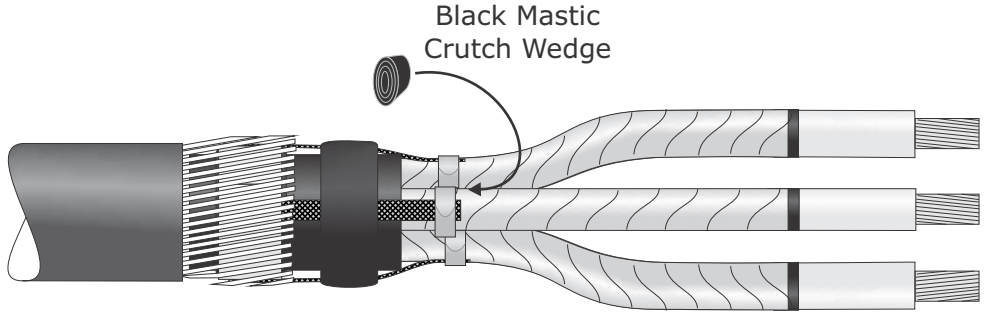


Fig 5

2. Lift the armour wires and apply two bands of the 212D black mastic tape as shown in Fig 2.

3. Secure the three earth braids to the copper tape screens using the constant force springs supplied. Repeat with the other cable end.

4. Fit the under armour support ring and fold down the armours as shown in Fig 3+4.

Note: Under armour support ring not required if cable is double steel tape armoured (DSTA)

5. Remove the backing papers from the piece of black mastic tape labelled crutch wedge and form into a wedge. Open up the cores and insert the these as far as possible into the crutch of the cable.

6. Apply a band of black mastic tape(212D) over the crutch wedge area.

7. Prepare the cores to the dimensions given in Fig 1 and Table 1.

8. Using a suitable tool, remove the semi-conductive layer, taking care not to damage the primary insulation, particularly at the screen ends.

Thoroughly de-grease the exposed insulation using the cleaning tissues provided.

It may be advisable to secure the copper tape screens to prevent them from unwinding.

Note:- Screen removal tools can be provided. See website for screen removal advice/videos.

Single core shown for clarity

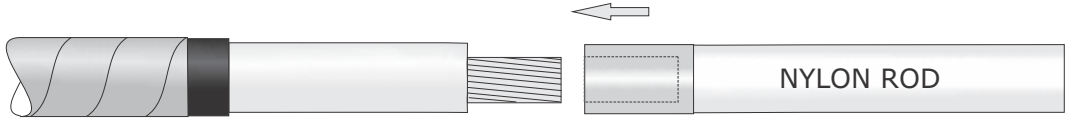


Fig 6

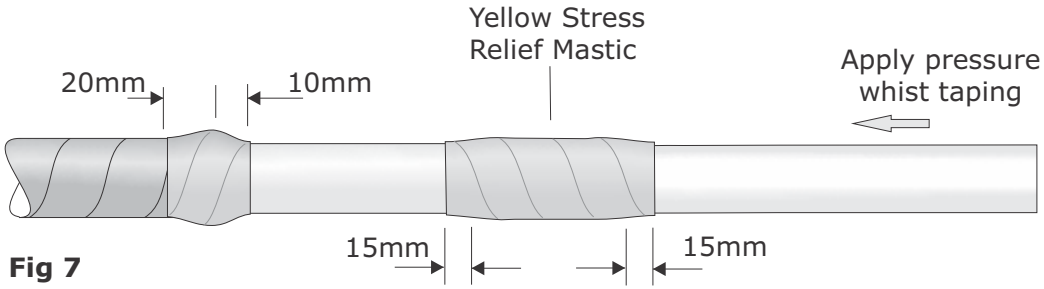


Fig 7

Fig 8

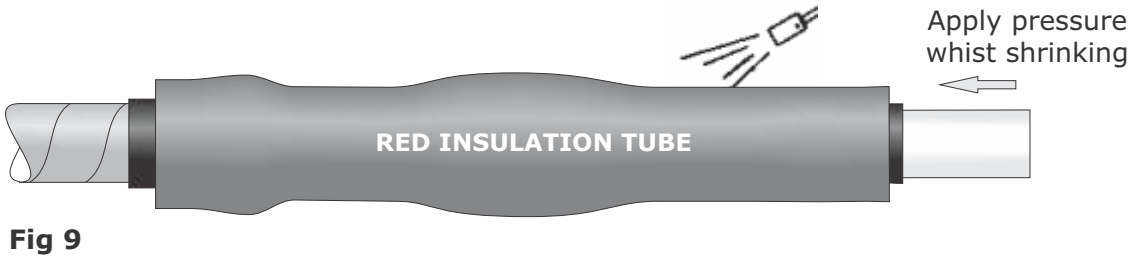


Fig 9

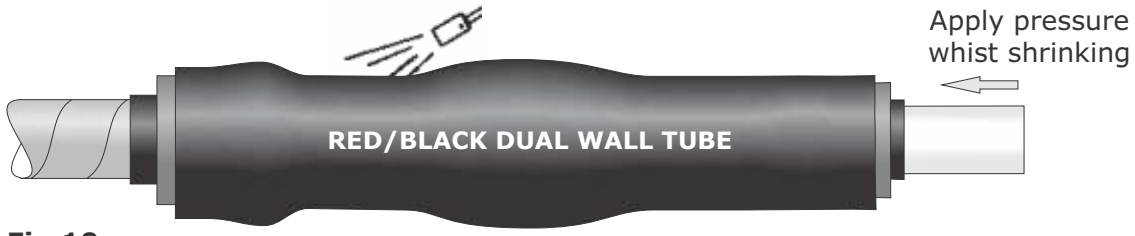


Fig 10

9. Position the nylon insulated rod so that the exposed conductors insert into the pre-drilled ends.

Important:- If the conductor will not enter the insulating rod or is too tight, user should compact the conductor before fitting to prevent scraping the inner metallic coating. If too loose, semi-conductive tape should be used to build up the diameter.

10. Stretch the yellow stress relief tape and apply over the screen cut area, extending onto the primary insulation by 10mm and catching the copper tape screens.

11. Apply the yellow stress relief mastic over the coated area of the insulated rod under tension and with a 50% overlap. Extend onto the primary insulation by 15mm, as shown in Fig 7.

Important:- Fill any gap between primary insulation and nylon rod. It is advisable to apply a little pressure whilst applying the yellow stress relief tape to prevent the rod being forced off.

12. Position the 3 x black stress control tubes ensuring they overlap the core screens. Starting from the middle, using a soft flame torch, apply heat all around the tubes until fully recovered. Pressure should be applied to the insulating rod, to prevent it being forced off.

13. Now position the red insulation tubes and shrink as previous. **Note:** Red insulation build up tubes not required at 7.2-17.5kV.

For 24kV = one tube For 36kV = two tubes

14. Finally position the red/black dual wall tubes and starting in the middle and working towards the ends, shrink them, keeping the flame moving all around the tubes to ensure an even recovery and wall thickness.

Fig 11

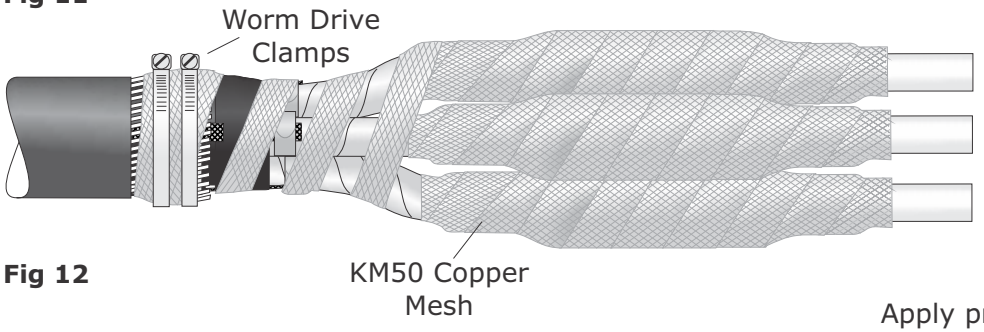


Fig 12

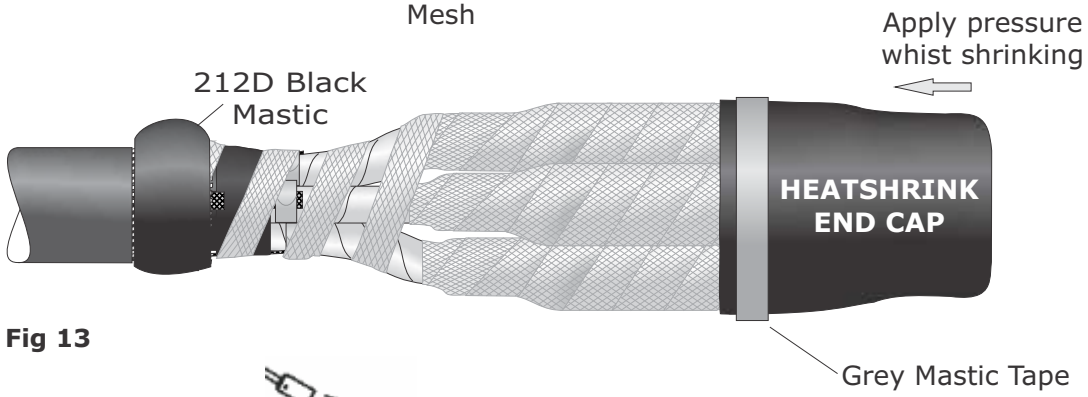


Fig 13

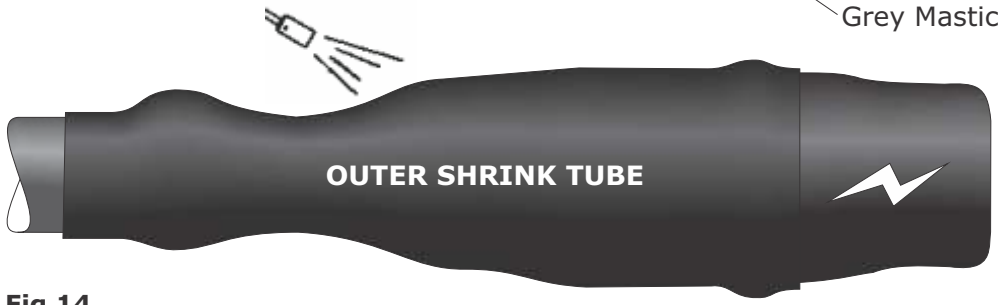


Fig 14

15. Allow the core insulation tubes to cool slightly, then apply a band of grey mastic to each end as shown in Fig 11.

16. Using the tinned copper mesh applied with a 50% overlap, apply around each core as shown in fig 11. Extend over the copper screens to the armours as shown in Fig 12.

17.Abrade the outer sheath for approximately 100mm and apply a band of the 212D black mastic tape over the worm drive clamps.

18. Position large cable end cap as shown (Fig 13).

Using a suitable heat source, start shrinking from the closed end keeping the flame moving at all times to ensure an even recovery.

19. Apply a band of the grey mastic tape approx 50mm from the end of the tube as shown in Fig 13.

20. Now position the outer shrink tube so that it overlaps onto the heatshrink cap by approx 50%. Starting from the middle and using a suitable heat source shrink the tube in place, keeping the flame moving around the tube to ensure an even recovery.

Once fully recovered sealant should be visible at the ends of the tube. Allow the joint to completely cool before applying any mechanical strain and support if necessary to avoid flexing.