

TC-308-IP
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Wraparound sleeve for cable repair

Application

1 The CWST wraparound repair sleeve may be used for repair and maintenance of lead jacketed, polyethylene jacketed or double jacketed cables.

2 The product is used on non-pressurised, air core or jelly filled cables in aerial, buried or underground applications.

3 The CWST wraparound repair sleeve will provide corrosion protection and cable sheath repair, 90° cable bend repairs, double jacket sealing and repair of long lengths.

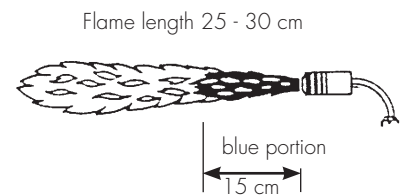
Safety rules

- 1 Check the environment for presence of gas.
- 2 Use safety glasses and safety gloves when working with open flame.
- 3 Local safety rules should be strictly followed.

Kit components

- CWST sleeve + channel(s)
- Underclip(s) (for 2 or 3 channels)
- Cleaning tissue
- Abrasive strip
- Aluminium cable tape
- Installation instruction

Flame description



Use a RAYCHEM torch FH-T001-0020 or equivalent.

Selection table

CWST size	Useful cable diameter range (mm)	
	from	to
CWST 43/8	8	43
CWST 55/12	12	55
CWST 75/15	15	75
CWST 100/25	25	100
CWST 125/30	30	125
CWST 164/42	42	164
CWST 200/50	50	200

The range of seven diameter sizes of CWST are available is 250, 500, 750, 1000 and 1500 mm lengths. Special lengths available on request.

Cable preparation

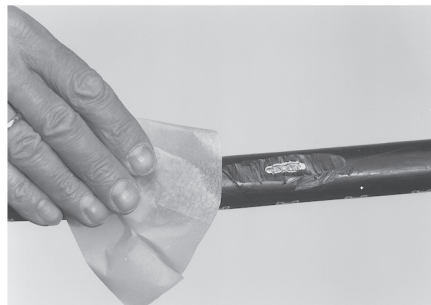
Polyethylene sheathed cables:
 Trim any badly distorted jacket from the repair area.

Lead sheathed cable:
 Smooth the lead sheath in the damaged area free of sharp edges with a blunt tool.

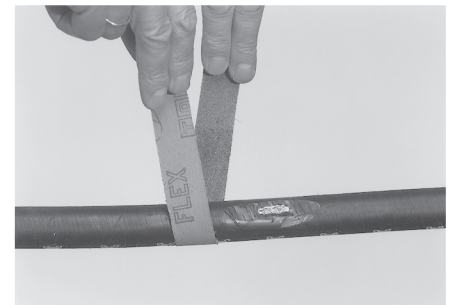
Installation procedure



1 Select the proper size of cable repair sleeve. The sleeve length selection is defined by damaged area length + 25 cm.



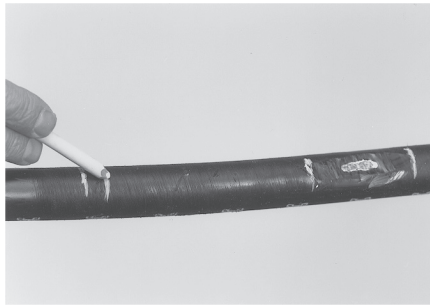
2 Clean and degrease the cable sheath for a distance of sleeve length + 25 cm.



3 Abrade the cable sheath circumferentially over the same length. Use local practice to abrade lead sheathed cable.



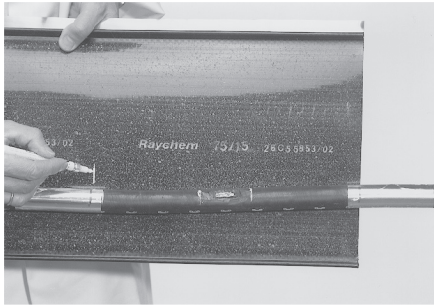
4 Measure 12,5 cm out from the repair area on each side and place mark on the cable sheath.



5 Make second mark at 1 cm from the first mark towards the repair area. (Not applicable for lead sheathed cable).



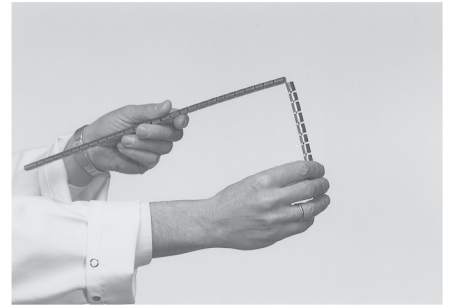
6 Apply aluminium cable tape on the PE-cable sheath away from the repair area starting from the inner mark. (Not applicable for lead jacketed cable). Smooth the aluminium tape with a blunt tool.



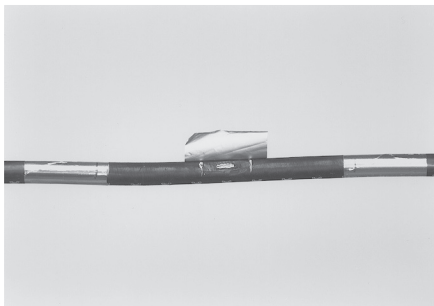
7 Align one end of the CWST sleeve 1 cm over the aluminium tape. At the opposite end, mark the sleeve length at 1 cm further the aluminium tape.



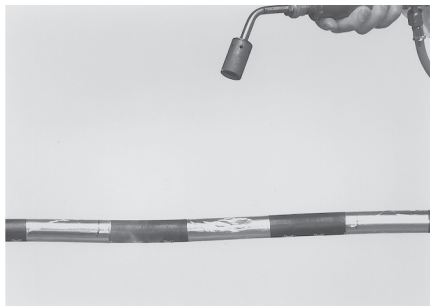
8 Cut the CWST to length with cutter, knife or with scissors. The cut must be perpendicular to the axis of the sleeve.



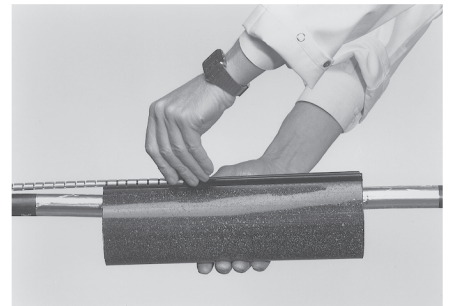
9 The channel may be cut by flexing at the desired location until it breaks. Debur the sharp edges.



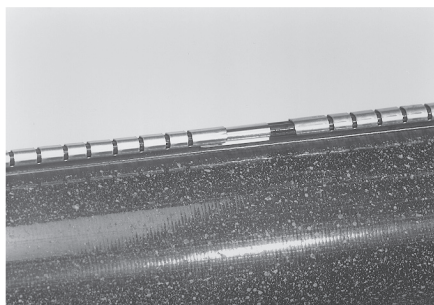
10 Important! In case the cable sheath is damaged down to the aluminium layer of the cable sheath, protect the repair area with an aluminium tape or similar. This avoids the hot melt adhesive flowing down to the cable wrap.



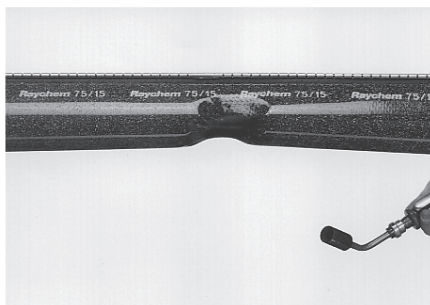
11 Flame heat each cable between the repair area and the aluminium tape for about 10 seconds for the PE-jacketed cable. For lead sheathed cable: preheat the lead sheath till handwarm ($\pm 60^{\circ}\text{C}$).



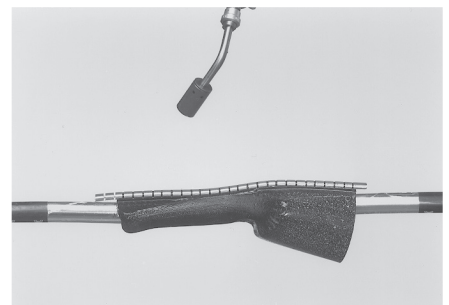
12 Remove the release foil from the inner side of the wraparound, assemble the wraparound sleeve over the cable and slide on the metal channel. If two channels are needed press the retention clip over the rail at the center.



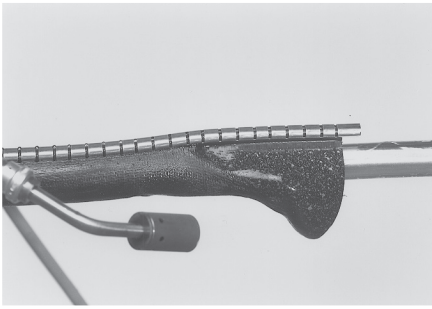
13 Pull the flexible channels over the sleeve rails until they butt on the top of the retention clip.



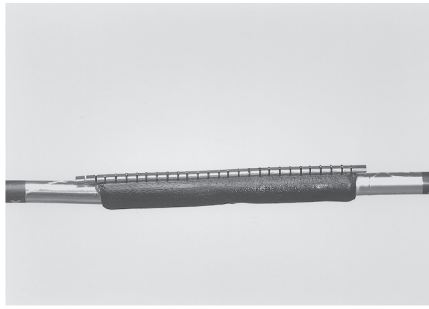
14 Start heating in the centre of the sleeve 180 degrees from the channel area. Continuously heating circumferentially (heating equally on both sides) until arrival at the channel area. The recovery in the channel area should take place towards the end of the installation. Continue heating until the thermo-indicating paint has changed colour from green to black.



15 When the green colour has completely changed to black, gradually and progressively move towards the end turning the flame around the cable repair sleeve.



16 When the temperature sensitive paint has been changed on the first half of the sleeve length, two separate white lines should be visible in the slots of the channels. If the lines are not visible apply more heat at that point until they appear.

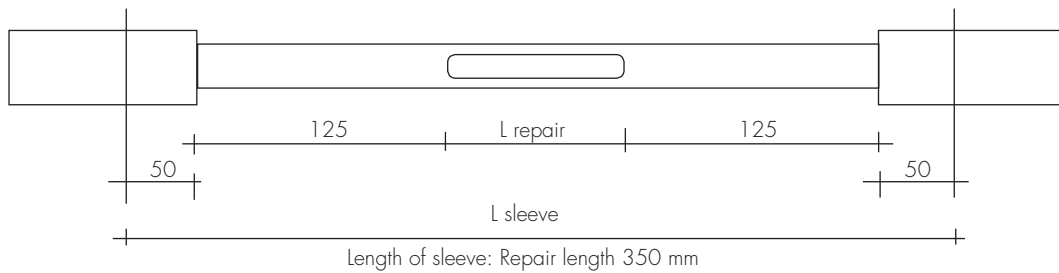


17 Repeat operation from the center to the other end of the cable repair sleeve. The visual control for proper installation should be done now:

- White lines are visible in the slots of the closure
- Green paint is completely converted to black.
- On either end of the sleeve a ring of adhesive should be seen.

Wait now 15 minutes (cooling) before cable handling.

Cable repair for double jacketed cable



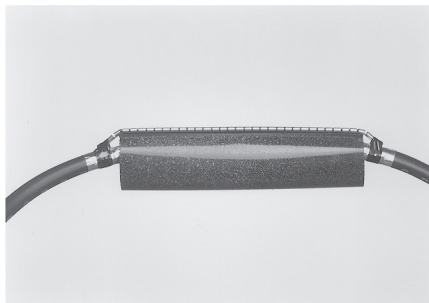
- 1 Ring cut and remove outer sheath as described in fig. 1.
- 2 Measure cable diameter and select sleeve and length as shown in fig. 1.
- 3 Install CWST sleeve as described in installation procedure.

Note: if a shield continuity wire needs to be installed on outer cable sheath, contact the Raychem representative for advice.

Cable Bend



1 Prepare cable jacket as outlined in the CWST standard installation procedure.



2 Select the correct size of CWST and assemble over the cable. The rail and channel should be outside the bend.

3 Preshape the sleeve and channel conforming the cable bend.

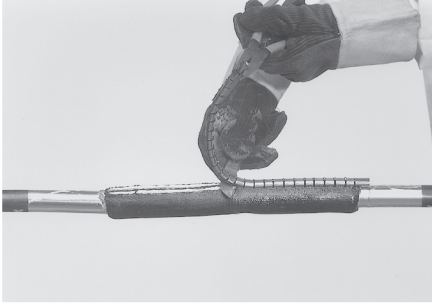


4 Shrink the CWST-sleeve starting from the center towards one end. Following the different steps as described in the standard procedure.

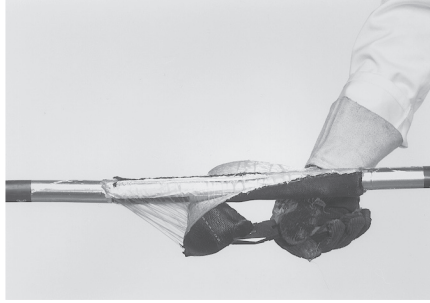
Long length repair

- Two or more sleeves may be installed obtaining a very long distance repair. In this case please advise the local Raychem representative.

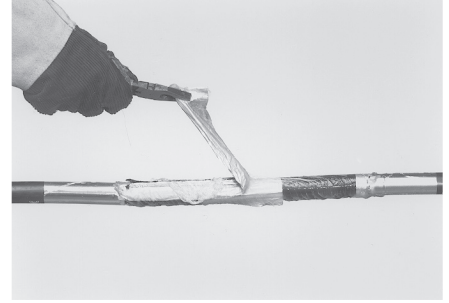
Removal of CWST repair sleeve



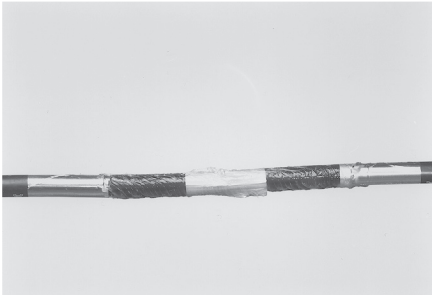
1 Preheat the CWST channel area until the sleeve becomes soft. Cut away the channel over its entire length.



2 Heat the sleeve uniformly till it opens at the channel area. Grip the edges of the sleeve with pair of pliers and peel the CWST off the cable.



3 Remove the aluminium flap of the sleeve with pair of pliers. If necessary reheat the aluminium flap gently.



4 When the CWST is removed, the remaining adhesive may be left on. However, protect the adhesive from contamination (grease, mud, dust, etc...) with cotton tape or similar.

5 For reclosing, remove the protective layer around the adhesive left on the cable and shrink down the new shrinkable sleeve.

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