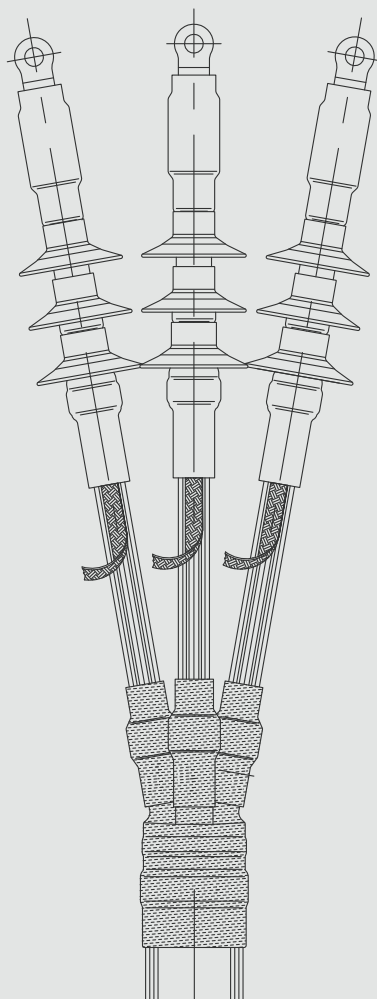


HEAT SHRINK INDOOR TERMINATIONS HITP1.24
HEAT SHRINK OUTDOOR TERMINATIONS HOTP1.24

ENGLISH

GENERAL INFORMATION

- Check that the kit is suitable for the cable type.
- Check the materials listed in the bill of materials for completeness.
- Read the installation instructions carefully before starting the installation.
- Install carefully and make sure the materials are clean during the installation.
- Clean the working place after the installation.

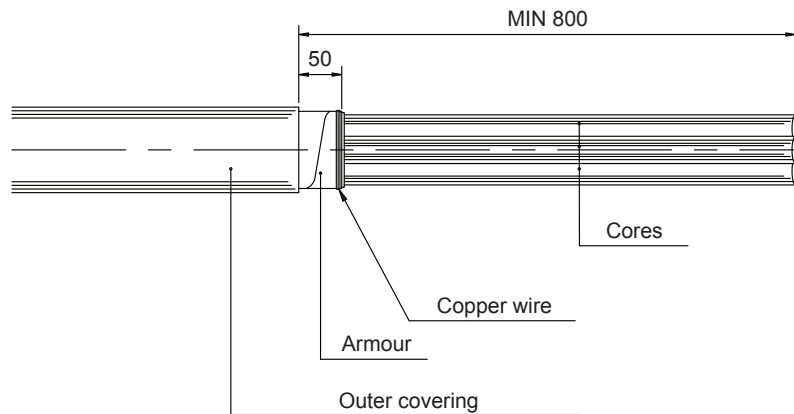
GENERAL INSTRUCTIONS FOR HEAT SHRINKING

- Please note that in some working places a hot work permit is needed.
- Use a propane burner with a flame length of approx. 20-30 cm. Do not use too large or sharp flame.
- Move the flame all around the cable on the shrinking direction. Move the flame continuously to avoid overheating.
- Make sure that the ventilation is good and there are no flammable materials around.
- Clean the cable surfaces before shrinking.
- When shrinking, always follow the installation instructions and the relevant sequence to avoid trapped air.
- Check that the tube has shrunk evenly around the cable before you continue shrinking.
- If the tube turns around at the end of shrinking, straighten the tube by directing the flame inside the tube from the opposite direction.
- After shrinking the tubes should be smooth and even following the shape inside.

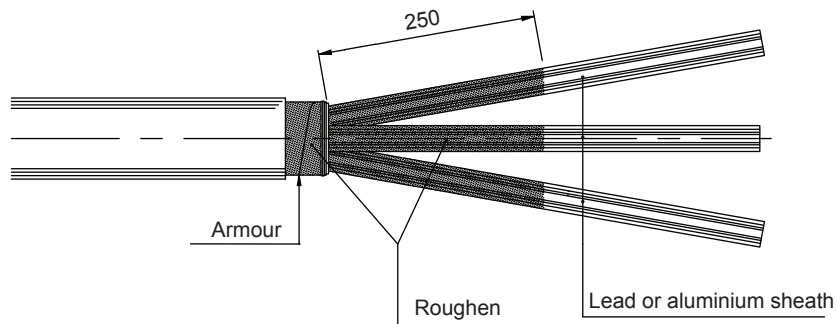
LEGAL NOTICE

- The product must be installed only by a competent person with sufficient training in installation practices and with sufficient knowledge of good safety and installation practices in respect of electrical equipment. If local legislation contains provisions in respect of such training or sufficient knowledge in respect of installation of electrical equipment such provisions shall be fulfilled by the said person.
- Ensto accepts no liability concerning claims resulting from misuse, incorrect installation or ignored national safety regulations or other national provisions.
- **WARNING:** Failure to follow the installation instructions may result in damage to the product and serious or fatal injury.

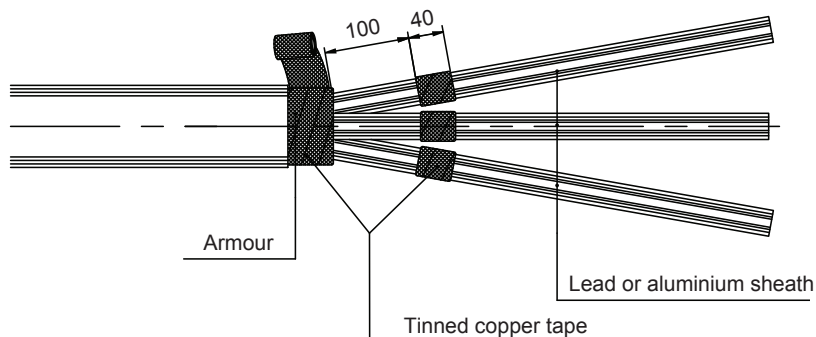
ARMoured PAPER INSULATED CABLE



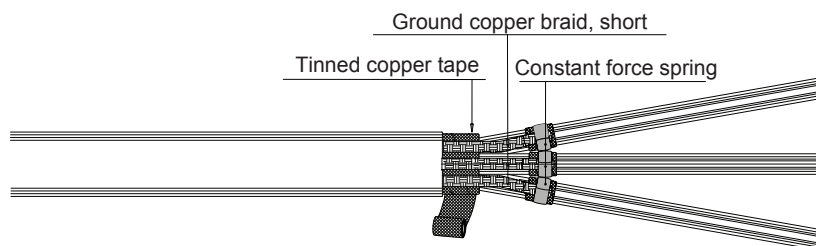
1. Check the length of each core according to the final installed position. Cut and remove the outer covering or sheath for the desired length, but min. 800 mm. Cut and remove the armour up to 50 mm from the outer covering or sheath. Fix it with the copper wire. Cut and remove the possible inner covering or sheath.



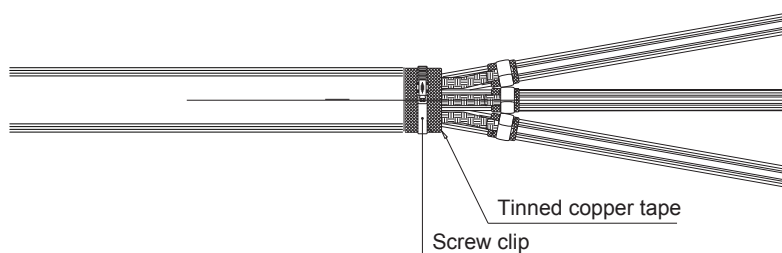
2. Spread the cores. Clean the armour for its length and the lead or aluminium sheaths up to at least 500 mm distance from the outer covering or sheath by using a suitable solvent. Roughen the outer covering for a distance of 100 mm, the armour for its length and the lead or aluminium sheath for the distance of 250 mm with grinding paper.



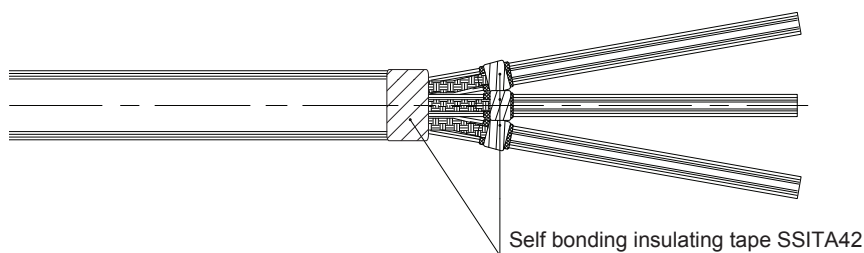
3. Wrap two layers of tinned copper tape with 50 % overlap on the lead or aluminium sheath, for 40 mm distance starting 100 mm from the armour edge. Wrap two layers of tinned copper tape with 50 % overlap on the armour.



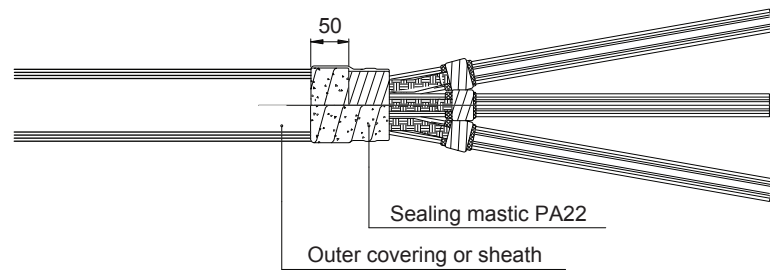
- 4.** Place a short ground copper braid on each core. Put the end of the braid on the tinned copper tape wrapping on the lead or aluminium sheath and the other end on the armour.
- Fix each braid end on the tinned copper tape wrapping with two turns of the constant force spring. Fold the braid end over the spring and wrap the rest of the constant force spring on the folded braid end.



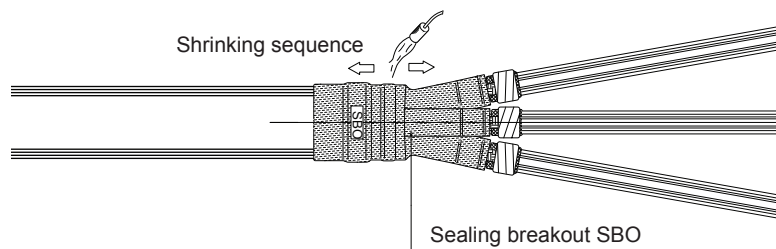
- 5.** Wrap the rest of the tinned copper tape roll on the ground copper braids on the armour area and fix them with the screw clip.



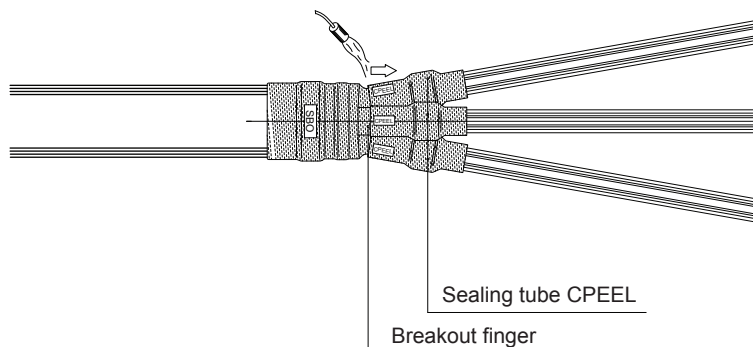
- 6.** Cover the constant force springs and the screw clip with some layers of self bonding insulating tape SSITA42. On constant force springs, wrap the tape to the direction, which tightens up the constant force spring.



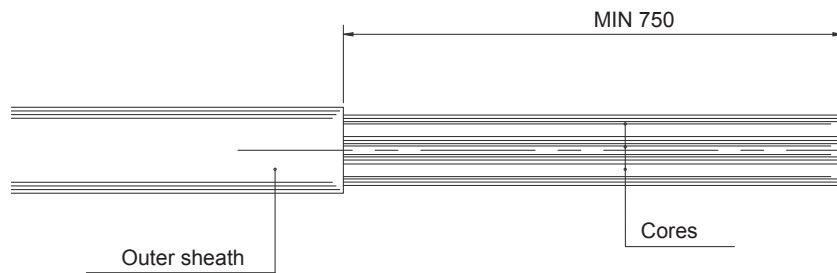
7. Wrap sealing mastic PA22 on the armour and continue to cover 50 mm of the outer covering or sheath.



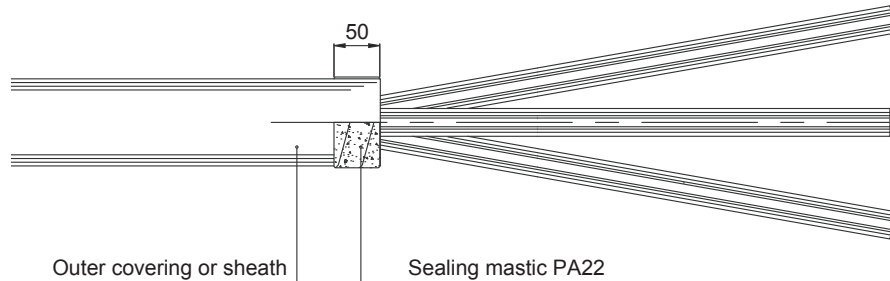
8. Push the sealing breakout SBO into the crutch as far as possible. Shrink the breakout starting from the middle.



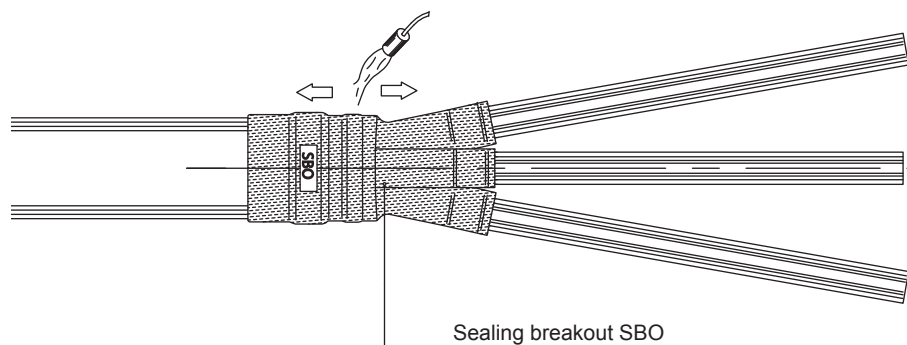
9. Place the CPEEL sealing tubes on the cores. Push them on the breakout fingers up to about 20 mm from the crutch. Shrink the tubes one by one starting from the crutch.

NON-ARMoured PAPER INSULATED CABLE WITH CORE SHEATHS

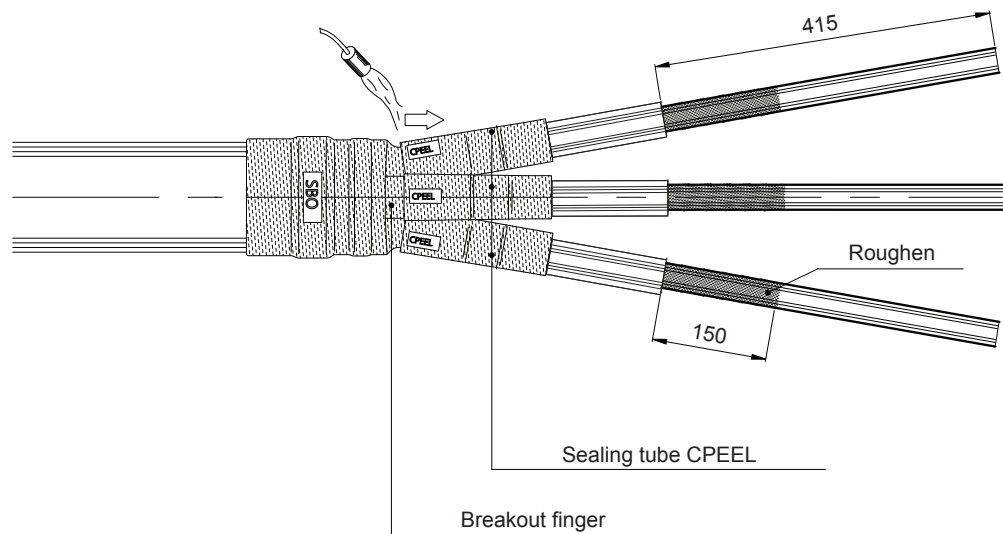
- 10.** Check the length of each core according to the final installed position. Cut and remove the outer covering or sheath for the desired length, but min. 750 mm. Cut and remove the possible inner covering or sheath. Roughen the outer sheath for 100 mm length.



- 11.** Spread the cores. Wrap one layer of sealing mastic for the length of 50 mm on the outer sheath.

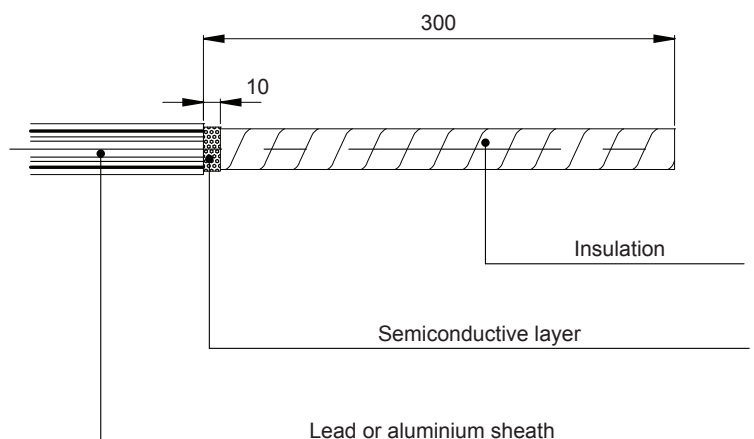


- 12.** Push the sealing breakout SBO into the crutch as far as possible. Shrink the breakout starting from the middle.

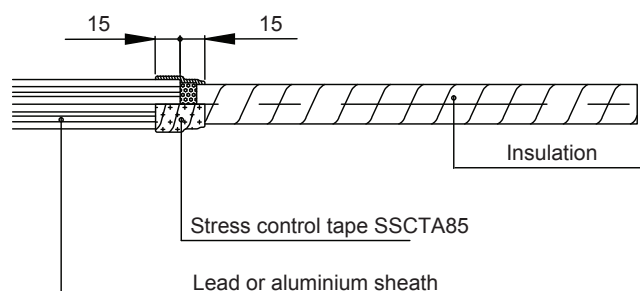


- 13.** Place the CPEEL sealing tubes on the cores. Push them on the breakout fingers up to about 20 mm from the crutch. Shrink the tubes one by one starting from the crutch. Peel the core sheaths for 415 mm distance. Clean the lead or aluminium sheaths with a suitable solvent and roughen them for 150 mm length from the core sheath edges.

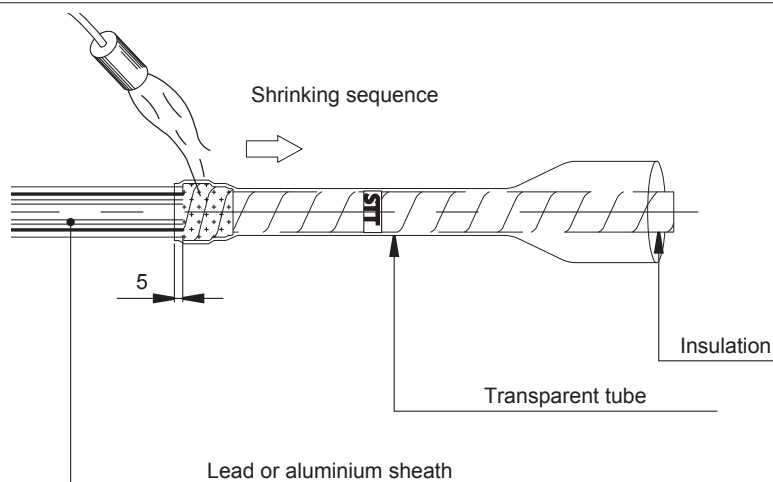
ALL PAPER INSULATED CABLES



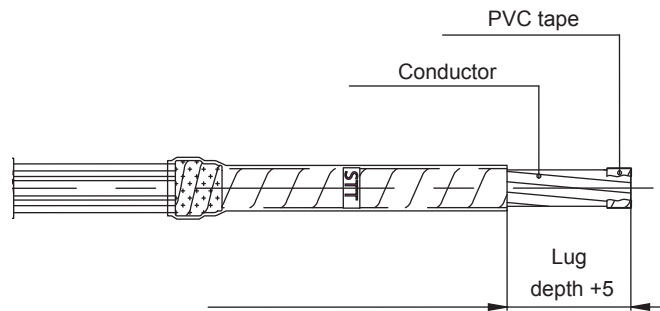
- 14.** Cut and remove the lead or aluminium sheath for 300 mm from the core end. Remove the semiconductive paper leaving 10 mm at the lead or aluminium sheath edge. Remove the first layer of the paper insulation up to the semiconductive paper edge. Tear the paper against the peeling rope.



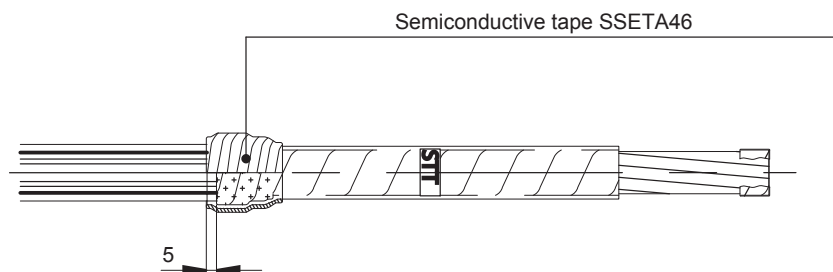
- 15.** Wrap one layer of stress control tape SSCTA85 on the edge of the lead or aluminium sheath. Cover 15 mm of the lead or aluminium sheath and continue 15 mm to the insulation side so that the semiconductive paper remains under the taping. The tape must be applied with 50 % overlap and by stretching it to half of its original width.



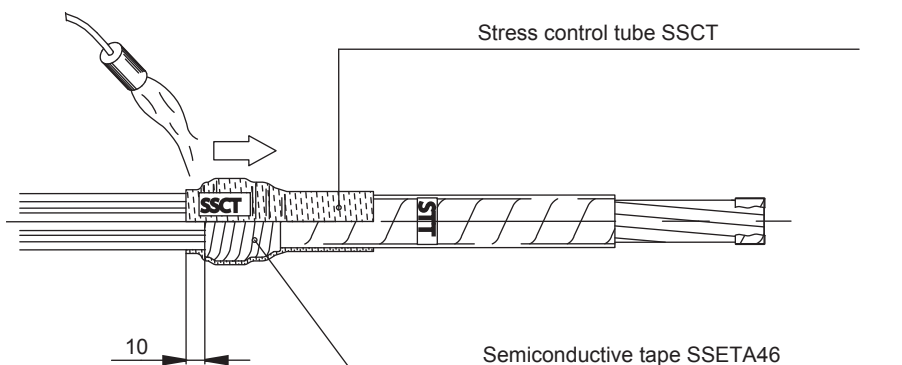
- 16.** Place the transparent tube on the core down to 5 mm on the lead or aluminium sheath. Shrink the tube starting from the lead or aluminium sheath end.



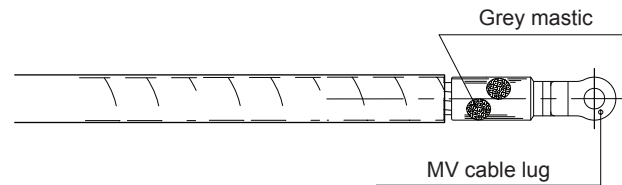
- 17.** Cut the transparent tube and remove the insulation for the length equivalent to the bolt cable lug length + 5 mm. If you use compression lugs, remove the insulation following the lug manufacturer's instructions. Be careful not to nick the conductor when removing the last paper layers. Clean the conductor and wrap some layers of PVC tape on it.



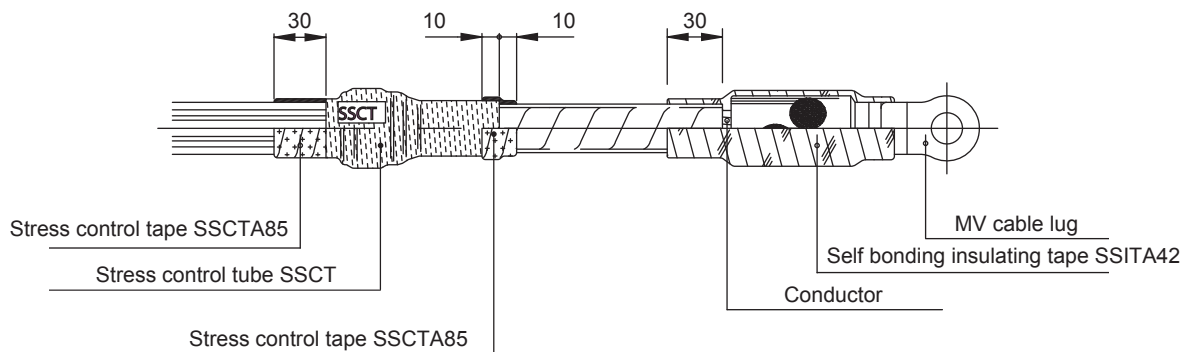
- 18.** Wrap one layer of semiconductive tape SSETA46 on the transparent tube. Cover the stress control tape area and continue 5 mm across the transparent tube edge on the lead or aluminium sheath. The tape must be applied with 50 % overlap and by stretching it to half of its original width.



- 19.** Place the stress control tube SSCT on the core so that it overlaps 10 mm of the lead or aluminium sheath. Shrink the tube starting from the lead or aluminium sheath end.

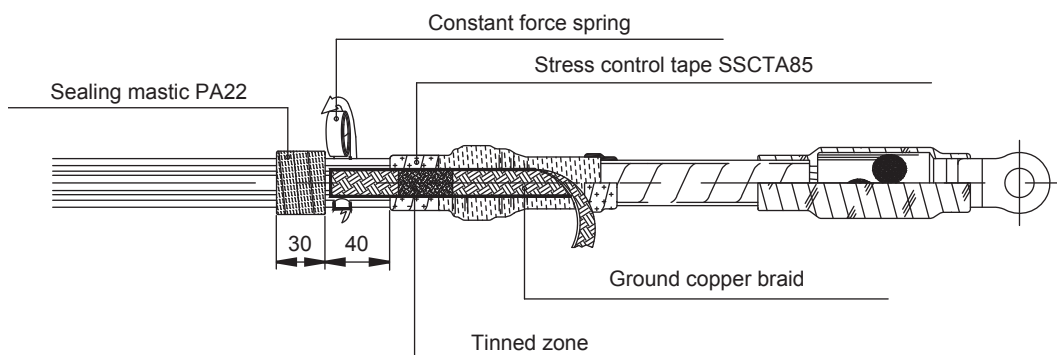


- 20.** Remove the PVC tape from the conductor end. Install a suitable cable lug following the manufacturer's instructions. Remember to orient it correctly and remove any sharp edges. Fill the holes with grey mastic.



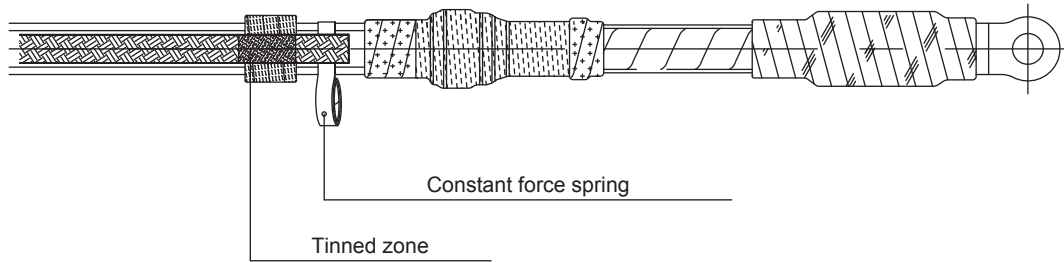
- 21.** Fill the gap between the end of the cable lug and the insulation with self bonding insulating tape SSITA42. Then wrap two layers of SSITA42 to cover 30 mm of the transparent tube (insulation) and the barrel of the cable lug. The tape must be applied with 50 % overlap and by stretching it a bit.

Wrap two layers of stress control tape SSCTA85 on the lead or aluminium sheath for 30 mm starting from the stress control tube edge. Wrap one layer of stress control tape on the other end of the stress control tube 10 mm on the stress control tube and 10 mm on the transparent tube (insulation). The tape must be applied with 50 % overlap and by stretching it to half of its original width.

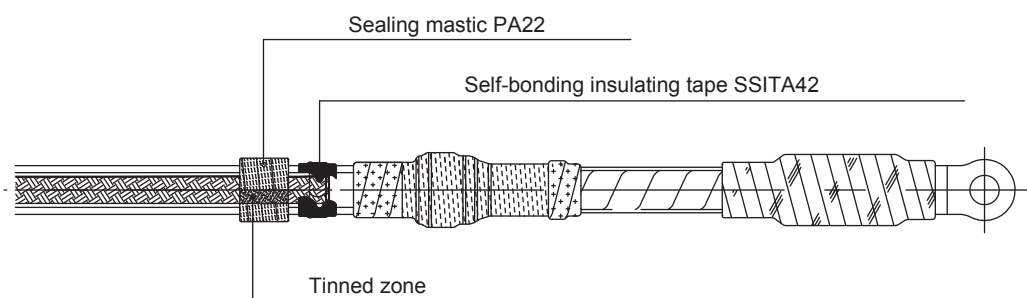


- 22.** Wrap one layer of sealing mastic PA22, for 30 mm length on the lead or aluminium sheath. Leave 40 mm of the lead or aluminium sheath exposed between the sealing mastic and the stress control mastic.

Place the end of the ground copper braid closest to the tinned zone (water block) on top of the exposed lead or aluminium sheath and fix it with one turn of the constant force spring. The cable lug end of the braid should now be pointing towards the end of the core.

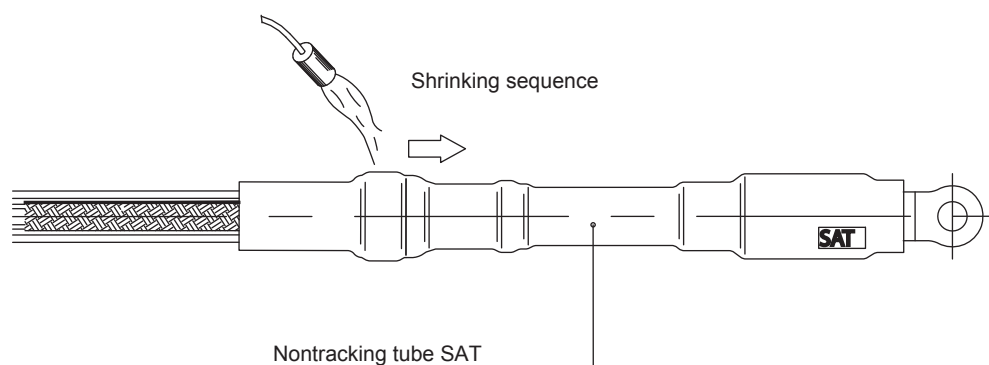


- 23.** Fold the ground copper braid over the constant force spring so that the tinned zone remains on the sealing mastic. Wrap the rest of the spring.

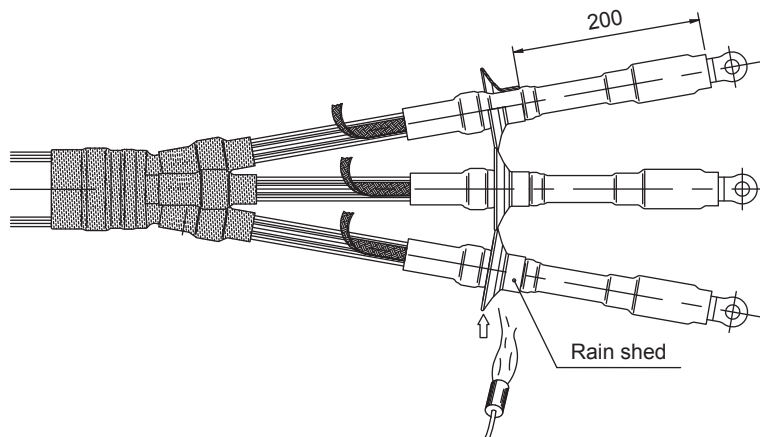


- 24.** Wrap some self-bonding insulating tape SSITA42 on the constant force spring to smooth the sharp edges. Self bonding insulating tape must be wrapped by stretching it a bit. Wrap the tape to the direction, which tightens up the constant force spring.

Wrap one layer of the sealing mastic PA22 to cover the ground copper braid tinned zone completely.

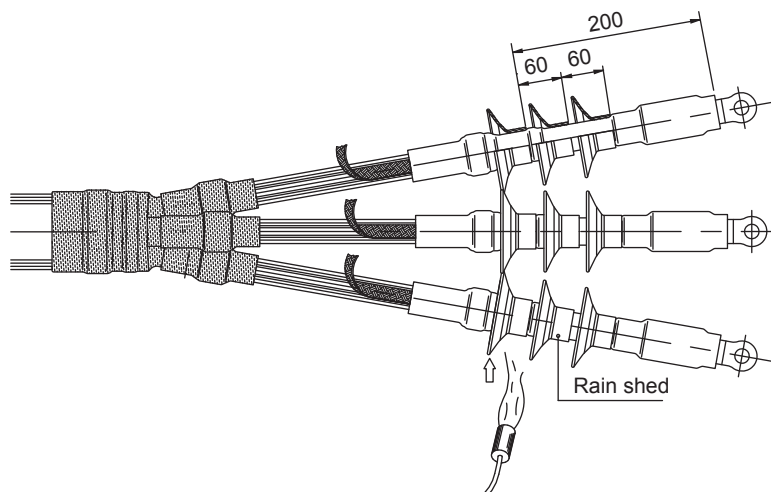


- 25.** Place the SAT nontracking tube so that it covers the cable the cable lug barrel completely. Shrink the tube starting from the ground copper braid end.

INDOOR TERMINATION HITP1.24

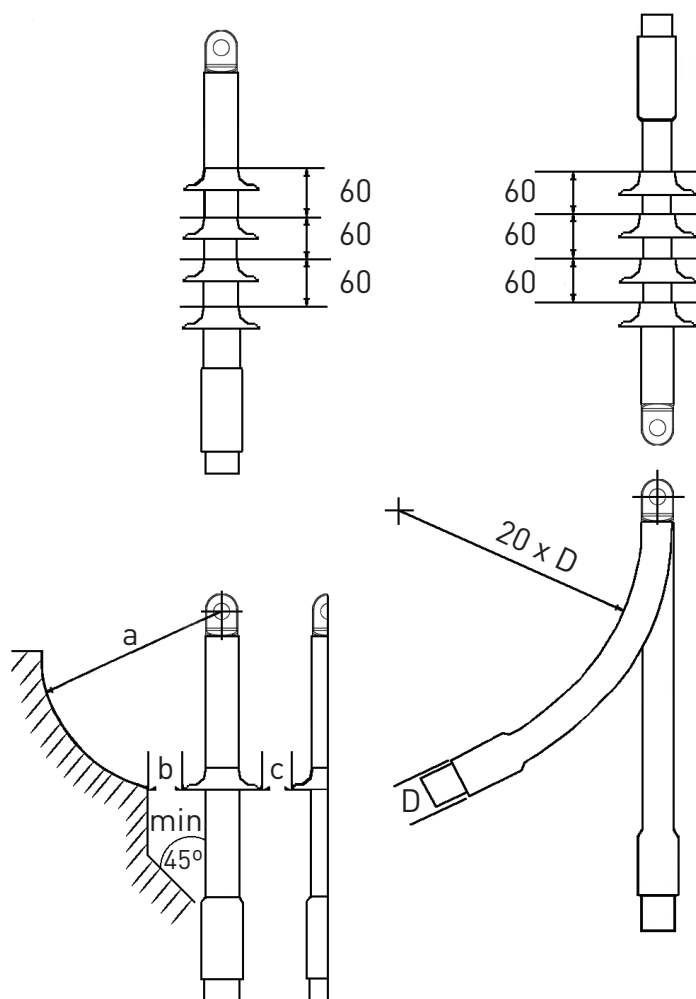
- 26.** Place the rain shed so that the shed neck edge is at 200 mm from the nontracking tube end. Shrink each rain shed directing the heat only to its neck.

- 27.** The indoor termination HITP1.24 is now ready to use!

OUTDOOR TERMINATION HITP1.24

- 28.** Place the rain shed so that the shed neck edge is at 200 mm from the nontracking tube end. Shrink each rain shed directing the heat only to its neck. Shrink the two other rain sheds so that they are spaced 60 mm towards the cable lug.

- 29.** The outdoor termination HOTP1.24 is now ready to use!



a = according to local requirements

Um kV	b min mm	c min mm
12	15	10
17,5	20	15
24	25	20
36	30	25



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