



Monitoring system > Ni-Cr wires

Type : BRANDES

Standard : EN 14419

Electrical resistance : 5.7 Ω /meter

Maximum wire length : 1000 m

Connection : loop

Boîtier : DELFIN 8000

The monitoring system is composed of:

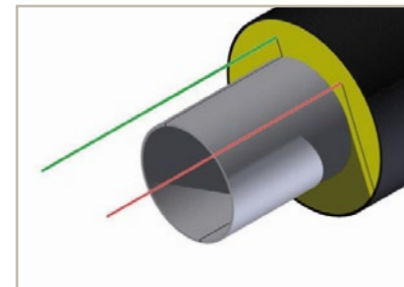
→ 1 red insulated nickel chromium "**sensor**" wire, stripped every 1.5 cm

→ 1 green insulated copper "**ground**" wire

The system is based on the quantity of electricity conducted by the insulation which varies according to the amount of moisture.

When the moisture in the polyurethane foam increases, the electrical resistance between the service pipe and the PUR foam decreases.

Humidity can be located by measuring the resistance.

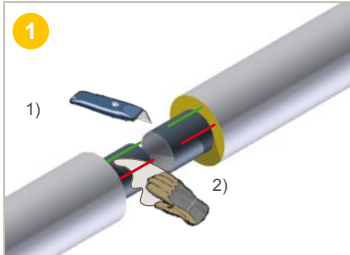


System composition

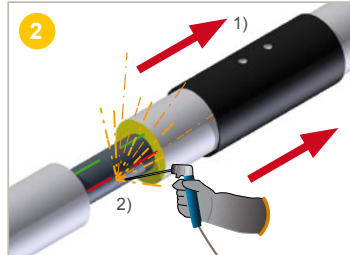
1 Ni-Cr wire with Teflon casing (red)		1 copper wire with Teflon casing (green)	
Ø Inner	Ø Outer	Ø Inner	Ø Outer
mm	mm	mm	mm
0,6	1,1	0,9	1,4



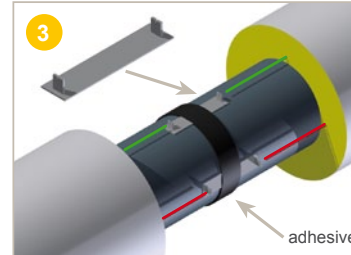
Implementation of the monitoring system > Ni-Cr wires



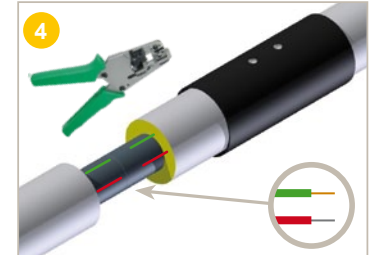
- 1) **Scrape** the PUR foam off the front (all signs of damp PUR foam must be removed from the ends).
- 2) **Clean** the ends of the pipes or parts with a cloth to remove any water, mud or sand.



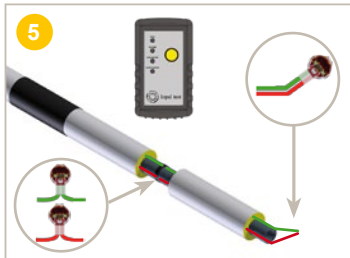
- 1) **Slide** along the HDPE muff.
 ⚠ Make sure not to remove the protective film, which prevents accidental shrinkage of the muff.
- 2) Align the pipes and **weld** the two steel pipes together according to professional standards.



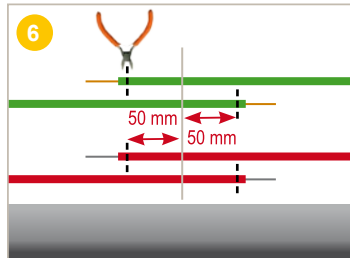
- 1) **Position** the spacers on the service pipe.
- 2) **Hold** the spacers in position with sellotape.



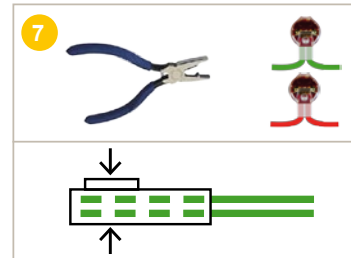
- 4) **Strip** the wires in order to check the connections.



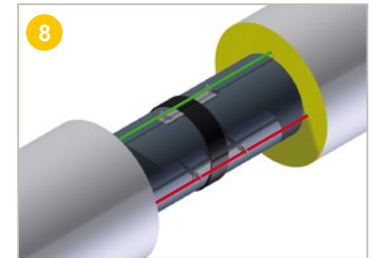
- For each junction:
- **Check** that the detection wires are in good condition.
 - **Check** that the detection wires are correctly connected using an INPAL TEST meter or an ohmmeter.
- ⚠ The wires are checked at each junction



- After operation 6, **cut** the wires to length. Cut the wires to obtain an extra length of 50 mm and so that the cut ends can be inserted easily into the connectors.
- ⚠ The wires do not have to be stripped to be inserted into the connectors.



- 1) **Insert** the conductor wires fully into the connector (lug)
 ⚠ Join the **red wire to the red wire** and the **green wire to the green wire**. Conductor length inside the connector: 10 mm
- 2) Crimp the connectors using the crimping pliers.



- 1) Test the connected wires by pulling them by hand.
- 2) Now **position** the wires on the spacers already fitted. After assembly, check the electrical continuity of the wires.