

Electrical heating cable for the heating of long pipelines.

- Circuit lengths up to 24km
- Power Outputs up to 160 W/m
- Operating temperatures up to 200°C
- For process temperature maintenance, freeze protection or heat raising.
- Single supply point - minimises supply cabling costs.

DESCRIPTION

APPLICATIONS

SkinTrace heating is a series resistance, single phase constant power heating tape used in conjunction with carbon steel tubes used for freeze protection or process temperature maintenance of long pipelines, eg. up to 24km.

A typical application is the freeze protection of above ground water pipelines.

MINIMAL SUPPLY / DISTRIBUTION COSTS

SkinTrace minimises the number of electrical supplies needed and so minimises supply cabling / distribution equipment costs. Circuits are often fed at the pipe ends only.

FEATURES

Construction

The fluoropolymer insulated copper conductors are sheathed for flexibility and high dielectric protection. A further fluoropolymer over jacket is provided for additional mechanical protection.

The Design

Supply voltage and steel tube are sized to produce the desired heat output for the circuit length required. The heaters are connected directly to a single phase mains voltage or, when required, to a step-up/down transformer.

Installation

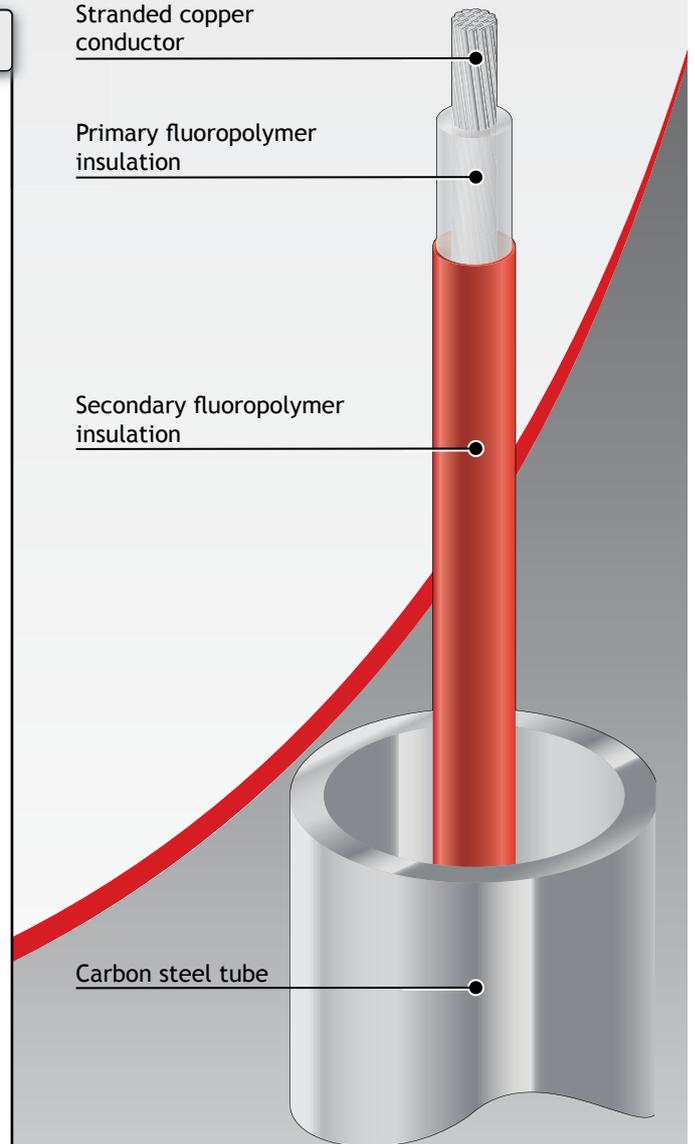
SkinTrace tubing is attached to the production pipe either by strapping or by welding. The SkinTrace cable is pulled through the tubes via pull boxes and spliced together at convenient points along the route of the pipe.

Stranded copper conductor

Primary fluoropolymer insulation

Secondary fluoropolymer insulation

Carbon steel tube



SPECIFICATION

MAXIMUM EXPOSURE TEMPERATURE:
(ENERGISED OR SWITCHED OFF) 200°C (392°F)

MINIMUM INSTALLATION TEMPERATURE: -40°C (-40°F)

POWER SUPPLY: Up to 5000V/300A
according to design requirements

POWER OUTPUT: Up to 160W/m
according to application requirements

DIMENSIONS: Cable OD 10.8mm
Carbon steel tube
½", 1" or 1 ½"

MINIMUM BEND RADIUS: 65mm

CONSTRUCTION:
Conductor 19.3mm² stranded copper
Option of bare/nickel/tin plated
Primary insulation Fluoropolymer
Secondary insulation Fluoropolymer

ORDERING INFORMATION:

Example:

Skin Trace Cable **ST C-FF/19.3**

C - Bare Copper
S - Tin plated Copper
N - Nickel plated Copper
F - Fluoropolymer Insulation
F - Secondary Scuff jacket
Conductor C.S.A. (mm²)

APPROVAL DETAILS:

ATEX - Sira 02ATEX3075
IECEX - SIR 11.0128
EAC - TC RU C-GB.MIO62.B.06044

MAXIMUM PIPE/WORKPIECE TEMPERATURES:

The surface of the heater must not exceed the maximum withstand temperature of its constructional materials or the Temperature Classification (if installed in a hazardous area). This is ensured by limiting the pipe or workpiece temperature to a safe level either by design calculation (a Stabilised Design) or by means of temperature controls.

For worst case conditions, the temperature of steel pipes should be limited to the following levels.

Workpiece temperatures (°C)

Output (W/M)	T6 (85°C)	T5 (100°C)	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
20	69	84	119	184	189	189
40	58	73	108	173	178	178
60	47	62	97	162	167	167
80	38	53	88	153	158	158
100	30	45	80	145	150	150
120	24	39	74	139	144	144
140	19	34	69	134	139	139
160	15	30	65	130	135	135

For conditions other than worst case, or pipes of other materials eg. Plastic, Stainless Steel, etc. consult Heat Trace Ltd

Tolerances: Voltage +10%
Resistance ±10%

CIRCUIT PROTECTION:

Circuit breakers, switch gear and supply cabling should be sized to cater for cold start-up conditions. Heat Trace Ltd will advise operating and start-up loads.

ACCESSORIES:

Heat Trace supply and complete range of accessories including termination/splice kits, end seals, junction boxes, controls and fixing tape. When used in hazardous areas, only use approved components.

HEAT TRACETM
SETTING THE STANDARDS LEADING THE WAY

Heat Trace Ltd, Mere's Edge, Chester Road, Helsby, Frodsham, Cheshire, WA6 0DJ, England.
Tel: +44 (0)1928 726451 Fax: +44 (0)1928 727846
www.heat-trace.com email: info@heat-trace.com

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