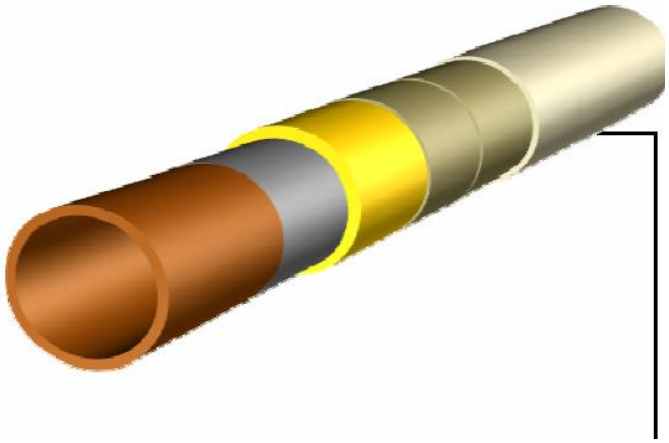
The thermal insulation of pipelines with operating temperature of heat-transfer agent 250 – 1000^{0}C under the Russian Federation standard SNiP 2.04.14-88*, pp 4.5. It is prohibited to employ one-layer insulation construction when surfaces temperature is 250^{0}C or more. Objective (an example).

Objective (an example).

Region	Omsk(Siberian Federal District), Russian Federation
Object	The thermal insulation of steam line
Average temterature of heating season	- 8.4^{0}C SNIP(Russian federal standard for construction) 23-01-99 table1
Average max temperature of air	25^{0}C SNIP 23-01-99 table2
Temperature of the heating agent	300 – 600 ^{0}C

The construction and thermal insulation of the steam line.



- Temp-Coat layer
- Protective coat
- FireLoc layer
- Cleaning of heat line (Q2 laeyr)
- Metal pipe

Fig.1

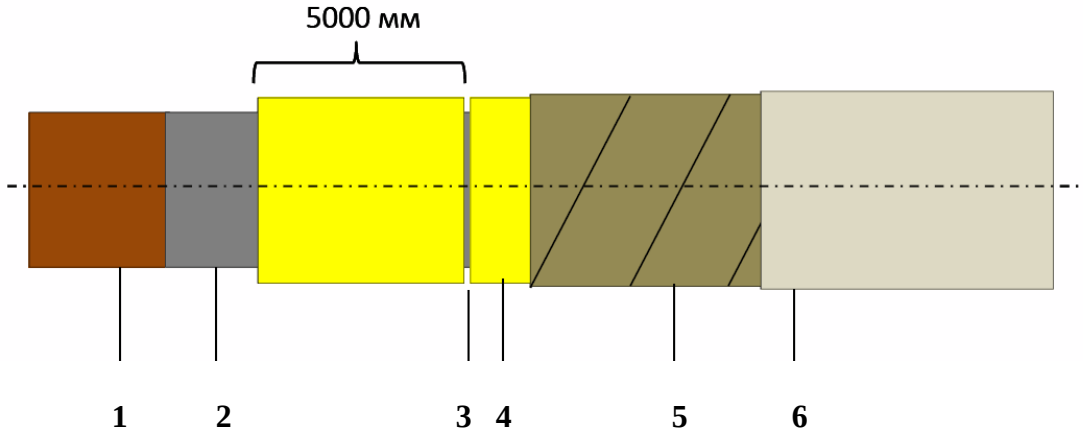
1. Cleaning and primering. Temp-Coat Q2 - surface conditioner and primer converts rust into a protective polymeric coating. This is a necessary product to be used anywhere rust has appeared or is a problem. Q2 converts iron oxide to a black ferro-organic coating that incorporates the rust as part of the coating. Apply with brush, roller or spray. For extremely bad rust or rust in cracks or crevasse, two coats may be needed to assure the complete conversion. A top coat will be needed where surface is dry and tack free. Apply an appropriate primer if your top coat is a latex based product to prevent bleed through. Q2 is not corrosive to human tissue and is very safe to use. Remove all rust scale or heavy rust before applications.
2. The first insulation layer – FireLoc coating.
The FireLoc coating is a ready to use clay based high temperature industrial insulation and filler for temperatures up to + 1093^{0}C. Fire-Loc must be covered with a top coat and protected from dampness and moisture. This is usually protected with a fiberglass cloth coated with TEMP-COAT.
This is a refractory type product that can withstand very high temperatures once dry. Fire-Loc is used in conjunction with repairs to high heat process and steam lines in industry. When conventional insulation has failed, Fire-Loc can safely take its place following the manufacturers written instructions.
FireLoc coating become brittle when dry out. For bulk strenth improvement we offer an additional reinforcement by basalt fiber or basalt fiber net.

3. Fiberglass protective coating.
Fiberglass EZ-200 (or analog)

4. The second insulation layer (52).
The ultrathin thermal insulation coating Temp-Coat. Temp-Coat 101 is a thermal insulation coating for

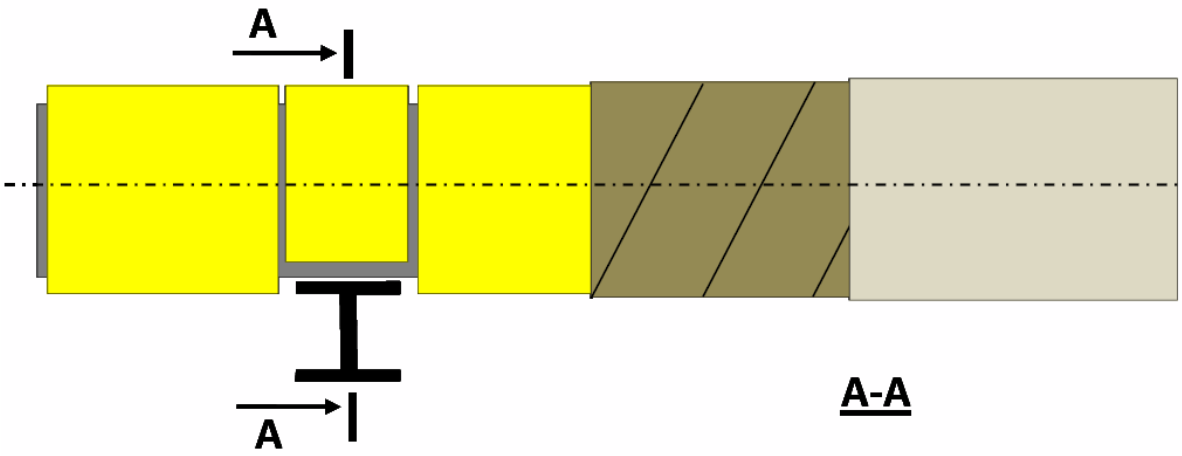
general purpose.
This is liquid acrylic-latex composition created for industrial use. It works good on air ducts, pipelines, tanks, steam lines and on cooling equipment. Operation temperature from – 62^0C up to + 205^0C. The coating would work up to +260^0C if special recomendations of Temp-Coat will be observed.

Dilatation joints



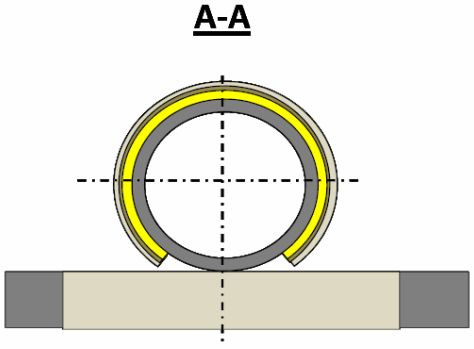
1 – metal pipe
2 – cleaning and antycorrosive protection
3 – dilatation joint 2 mm
4 – FireLoc layer
5 – fiberglass protective cover
6 – Temp-Coat layer

Expansion pedestal



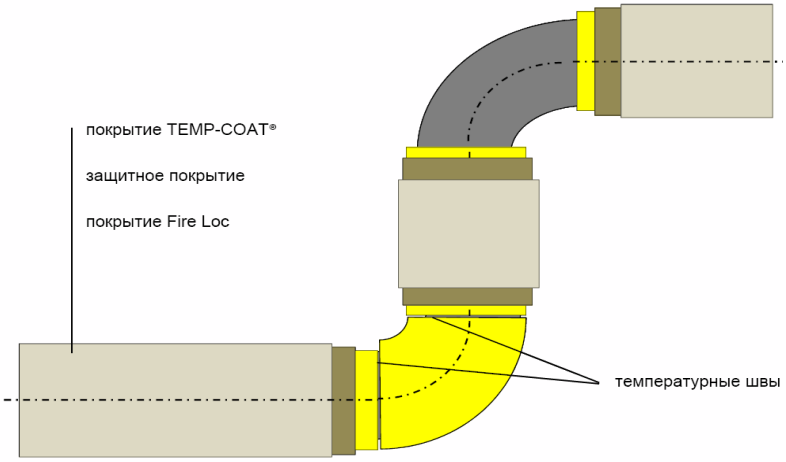
Points of contact of pipe and pedestals do not have to be insulated

Parts of pedestal to be insulated by 1 mm of Temp-Coat



Temperature compensator

Temp-Coat layer
Protective layer
FireLoc layer



Dilatation join