

## DÉCLARATION DES PERFORMANCES

### DoP-FS-1009

pour fischer FiP Intumescent Pillows (Produits coupe-feu et résistants au feu: calfeutrement de pénétrations)

FR

1. Code d'identification unique du type de produit: DoP-FS-1009
2. Usage(s) prévu(s): Maintien de la résistance au feu d'un élément de séparation à l'endroit où passent les services, voir annexes, en particulier les annexes, 1.
3. Fabricant: fischerwerke GmbH & Co. KG, Klaus-Fischer-Str. 1, 72178 Waldachtal, Allemagne
4. Mandataire: -
5. Système(s) d'évaluation et de vérification de la constance des performances: 1
6. Document d'évaluation européen: EAD 350454-00-1104  
Evaluation Technique Européenne: ETA-20/1063; 2020-12-11  
Organisme d'évaluation technique: ETA-Danmark A/S  
Organisme(s) notifié(s): 2531 - DBI Certification A/S
7. Performance(s) déclarée(s):  
**Sécurité en cas d'incendie (BWR 2)**  
Réaction au feu: NPD  
Résistance au feu: Annexes 2, 7-11  
  
**Hygiène, santé et environnement (BWR 3)**  
Perméabilité à l'air (propriété du matériau): Annexe 3  
Perméabilité à l'eau (propriété du matériau): NPD  
Contenu, émission et/ou rejet de substances dangereuses: Annexe 3  
  
**Sécurité d'utilisation (BWR 4)**  
Résistance mécanique et stabilité: NPD  
Résistance aux chocs/mouvement: NPD  
Adhérence: NPD  
Durabilité: Annexe 3  
  
**Protection contre le bruit (BWR 5)**  
Isolation aux bruits aériens: Annexe 3  
  
**Économie d'énergie et isolation thermique (BWR 6)**  
Propriétés thermiques: NPD  
Perméabilité à la vapeur d'eau: NPD
8. Documentation technique appropriée et/ou documentation technique spécifique: -

Les performances du produit identifié ci-dessus sont conformes aux performances déclarées. Conformément au règlement (UE) no 305/2011, la présente déclaration des performances est établie sous la seule responsabilité du fabricant mentionné ci-dessus.

Signé pour le fabricant et en son nom par:



Dr.-Ing. Oliver Geibig, Directeur Général Business Units & Ingénierie  
Tumlingen, 2020-12-18



Jürgen Grün, Directeur Général Chimie & Qualité

Cette DoP a été préparée en plusieurs langues. En cas de différend relatif à l'interprétation, la version anglaise prévaudra.

L'annexe comprend des informations volontaires et complémentaires en langue anglaise dépassant les exigences légales (spécifiées de manière neutre).

## 1 Technical Description of the Product

- 1) fischer FiP Intumescent Pillows are a compressible combination of reactive and non-reactive components, encased in a thin woven glass fibre casing used to reinstate the fire resistance performance of wall constructions where they have been provided with apertures for the penetration of single or multiple services.
- 2) fischer FiP Intumescent Pillows is a dry system and does not require the use of any sealant or sealing products
- 3) The fischer FiP Intumescent Pillows are supplied in three different sizes referenced Large (330mm x 200mm x 45mm), Medium (330mm x 200mm x 25mm) and Small (330mm x 50mm x 20mm), a mixture of which may be utilized to obtain a tight compression
- 4) Installation of the fischer FiP Intumescent Pillows – See 6.2

## 2 Specification of the intended use(s) in accordance with the applicable European Assessment Document (hereinafter EAD)

The intended use of fischer FiP Intumescent Pillows is to reinstate the fire resistance performance of rigid wall constructions where they are penetrated by various cables and metallic pipes

The specific elements of construction that the system fischer FiP Intumescent Pillows may be used to provide a penetration seal in, are as follows:

Rigid walls: The wall must have a minimum thickness of 150 mm and comprise concrete, aerated concrete or masonry, with a minimum density of 650 kg/m<sup>3</sup>.

The supporting construction must be classified in accordance with EN 13501-2 for the required fire resistance period.

- 1) The fischer FiP Intumescent Pillows may be used to provide a penetration seal with pipes and cables (for details see Annex C).
- 2) The total amount of cross sections of services (including insulation) should not exceed 60% of the penetration area.
- 3) The system fischer FiP Intumescent Pillows may be used to seal apertures in the separating element up to 1100mm wide by 1100mm high dependant on the configuration. The minimum permitted separation between adjacent seals/apertures is 200mm.
- 4) Pipes must be installed singular, cables require no minimum separation.
- 5) Services in walls shall be supported at maximum 250mm from the face of the separating element.

The provisions made in this European Technical Assessment are based on an assumed working life of the fischer FiP Intumescent Pillows of 10 years, provided that the conditions laid down in sections 4.2/5.1/5.2 for the packaging/transport/ storage/installation/use/repair are met. The indications given on the working life cannot be interpreted as a guarantee given by the producer or the Technical Assessment Body, but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works

### Use Category

Type Z<sub>1</sub>: Intended for use in internal conditions with humidity equal to or higher than 85% RH excluding temperatures below 0°C, without exposure to rain or UV.

### 3 Performance of The Product And References To The Methods Used For Its Assessment

| <b>BWR</b> | <b>Characteristic</b>                       | <b>Assessment of characteristic</b> |
|------------|---|-------------------------------------|
| <b>2</b>   | <b>Safety in case of fire</b>               |                                     |
|            | Reaction to fire                            | See Clause 1.1                      |
|            | Resistance to fire                          | See clause 1.2                      |
| <b>3</b>   | <b>Hygiene, Health and the Environment</b>  |                                     |
|            | Air permeability                            | See clause 2.1                      |
|            | Content and Release of Dangerous substances | See clause 2.2                      |
| <b>4</b>   | <b>Safety and applicability in use</b>      |                                     |
|            | Durability                                  | See clause 3.1                      |
| <b>5</b>   | <b>Protection against noise</b>             |                                     |
|            | Airborne sound insulation                   | See Clause 4.1                      |

#### 3.1 Safety in case of fire

##### 3.1.1 Reaction to fire

No performance assessed

##### 3.1.2 Resistance to fire

fischer FiP Intumescent Pillows has been tested in accordance with BS EN 1366-3: 2009 based upon the test results and the field of direct application specified within EN 1366-3: 2009, the fischer FiP Intumescent Pillows has been classified in accordance with EN 13501-2, as given in Annex C:

The seals may only be penetrated by the services described in Annex C; other parts or support constructions must not penetrate the seal.

The service support construction must be fixed to the building element containing the penetration seal or a suitable adjacent building element, in such a manner that in the case of fire, no additional load is imposed on the seal. Furthermore it is assumed that the unexposed face support is maintained for the required period of fire resistance.

Certain pipe and cable configurations should be insulated with minimum 300mm long, 6mm thick Thermal Defence Wrap, or fischer FiP Intumescent Pillows to provide additional insulation to the pipes. See Annex C

Pipes must be perpendicular to the seal surface.

It is assumed that compressed air systems are switched off by other means in the case of fire.

## 3.2 Hygiene, Health and the environment.

### 3.1.1 Air permeability

fischer FiP Intumescent Pillows has been tested in accordance with BS EN 1314-1 to provide the following results:

| Product tested |   |   |   |   |
|----------------|---|---|---|---|
| Pressure (Pa)  | Results under positive chamber pressure |   | Results under negative chamber pressure |   |
|                | Leakage (m <sup>3</sup> /h)             | Leakage (m <sup>3</sup> /m <sup>2</sup> /h) | Leakage (m <sup>3</sup> /h)             | Leakage (m <sup>3</sup> /m <sup>2</sup> /h) |
| 50             | 2.5                                     | 13.9  | 3.1                                     | 17.2  |
| 100            | 4.1                                     | 22.8  | 5.6                                     | 31.1  |
| 150            | 5.8                                     | 32.2  | 7.4                                     | 41.1  |
| 200            | 7.2                                     | 40.0  | 8.9                                     | 49.4  |
| 250            | 8.7                                     | 48.3  | 10.3                                    | 57.2  |
| 300            | 9.8                                     | 54.4  | 11.1                                    | 61.7  |
| 450            | 13.4                                    | 74.4  | 15.3                                    | 85.0  |
| 600            | 17.5                                    | 97.2  | 18.6                                    | 103.3                                       |

#### 3.2.1. Content and release of Dangerous Substances

The applicant has presented a declaration that fischer FiP Intumescent Pillows does not contain any substance of high concern with regards to REACH Regulations and are compliant with the requirements reference to <http://ec.europa.eu/enterprise/construction/cpd-ds/index.cfm>

Confirmation has further been declared that all dangerous chemical substances  $\geq 1.0$  % w/w as well as all toxic, carcinogenic, toxic for reproduction and mutagenic chemical substances  $\geq 0.1$  % w/w (Status: 29. adaption – 2004/73/EG – of the EU directive 67/548/EEC - classification, packaging and labelling of dangerous substances) are stated in the fischer FiP Intumescent Pillows safety data sheets (according to 91/155/EEC including amendments) and have been considered for the classification of the products according to the directive 1999/45/EG (classification of preparations, including amendments).

All dangerous chemical substances are below the classification limits of 67/548/EEC.

In addition to the specific clauses relating to dangerous substances contained in this European technical approval, there may be other requirements applicable to the products falling within its scope (e.g. transposed European legislation and national laws, regulations and administrative provisions). In order to meet the provisions of the Construction Products Regulation, these requirements need also to be complied with, when and where they apply.

## 3.3 Safety and accessibility in use

### 3.3.1 Durability

fischer FiP Intumescent Pillows has been tested in accordance with EOTA Technical Report - TR024 – Edition November 2006, for the type Z<sub>1</sub> use category specified in EAD 350454-00-1104 , and the results of the tests have demonstrated suitability for penetration seals intended for use in internal conditions with humidity equal to or higher than 85% RH excluding temperatures below 0°C, without exposure to rain or UV.

## 3.4 Protection against noise

### 3.4.1 Airborne sound insulation

The results of the test provided the following single number rating:  $R_w (C;Ctr) = 33(0;-2)$

#### **4 Assessment and verification of constancy of performance (hereinafter AVCP) system applied, with reference to its legal base**

According to the decision 1999/454/EC of the European Commission the system of assessment and verification of constancy of performance (see Annex V to the Regulation (EU) No 305/2011) given in the following table apply:

| <b>Products</b>                         | <b>Intended use/s</b>  | <b>AVCP System</b> |
|---|--|--------------------|
| Fire stopping and fire sealing products | For fire compartmentation and/or fire protection or fire performance | System 1           |

## **Annex A**

### **Reference Documents**


|             |   |
|-------------|---|
| EN 13501-1  | Fire classification of construction products and building elements – Part 1: Classification using test data from reaction to fire tests |
| EN 13501-2  | Fire classification of construction products and building elements – Part 2: Classification using test data from fire resistance tests  |
| EOTA TR 024 | Characterisation, Aspects of Durability and Factory Production Control for Reactive Materials, Components and Products                  |

# Annex B

## Description of Product and Product Literature

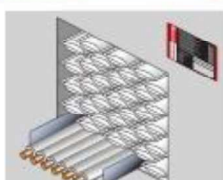
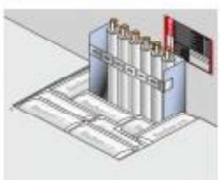
### fischer FiP Intumescent Pillows

A detailed specification of the product is contained in document "Evaluation Report" relating to the European Technical Assessment ETA – 14/0380 issued on 7/10/14, of fischer FiP Intumescent Pillows which is a non-public part of this ETA.



Intumescent Pillows - FiP

**Overview**

**Application examples:**  
Service penetrations like steel pipes, copper pipes, cable bundles, cable trays and electrical trunking through fire rated walls / floors.

Approved to:


**British Standard**

**BS 476 - 20**

**BS EN 1366: 3**

**BS EN ISO 140-3:1997**

The laboratory measurement of airborne sound insulation of building elements


Approved CF 5037


**Application area:**

- Metal Pipes
- Cables / Cable trays
- Electrical trunking

**Product Description**

**Features / uses**

- Approved as permanent fireproof barrier
- Reusable
- Dry installation
- Quick and easy installation
- No shelf life
- Moisture resistant
- Eyelet for installation



fischer intumescent pillows - FiP is an intumescent graphite and mineral fibre blend covered in a glass fibre PVC coated cloth bag. FiP is suitable for applications where temporary and permanent fire barriers are required.

Tested to BS 476: Part 20 and BS EN 1366-3, FiP can provide up to 2 hours of fire protection in both vertical and horizontal, multi or mixed service penetrations.

**Technical Data**

|   |                |
|---|----------------|
| State                                       | Solid          |
| Colour                                      | Black          |
| Odour                                       | Odourless      |
| Relative density                            | 0.15           |
| Volumetric expansion                        | 3 times        |
| Significant expansion occurs at temperature | > 140°C        |
| Remain flexible between                     | -20°C to 130°C |

**Estimation Quantities**

| Width mm | Size U    | Length mm |        |       |        |       |        |       |        |       |        |       |        |
|----------|-----------|-----------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|
|          |           | 100       |        | 300   |        | 500   |        | 700   |        | 900   |        | 1000  |        |
|          | Seal type | Large     | Medium | Large | Medium | Large | Medium | Large | Medium | Large | Medium | Large | Medium |
| 200      | Wall      | 3         | 5      | 7     | 13     | 12    | 22     | 17    | 31     | 21    | 39     | 24    | 47     |
|          | Floor     | 2         | 3      | 4     | 7      | 6     | 12     | 9     | 17     | 11    | 22     | 12    | 27     |
| 400      | Wall      | 5         | 9      | 14    | 26     | 24    | 44     | 33    | 61     | 42    | 78     | 47    | 95     |
|          | Floor     | 3         | 5      | 7     | 15     | 12    | 24     | 17    | 34     | 22    | 43     | 24    | 52     |
| 600      | Wall      | 7         | 13     | 21    | 39     | 35    | 65     | 49    | 91     | 63    | 117    | 70    | 143    |
|          | Floor     | 4         | 7      | 11    | 22     | 18    | 36     | 25    | 51     | 33    | 65     | 36    | 79     |
| 800      | Wall      | 9         | 18     | 28    | 52     | 47    | 87     | 66    | 122    | 84    | 157    | 94    | 192    |
|          | Floor     | 5         | 10     | 15    | 29     | 24    | 48     | 34    | 67     | 33    | 87     | 48    | 107    |
| 1000     | Wall      | 10        | 22     | 35    | 65     | 59    | 109    | 82    | 152    | 105   | 196    | 117   | 217    |
|          | Floor     | 6         | 12     | 18    | 36     | 30    | 60     | 42    | 84     | 54    | 108    | 60    | 120    |

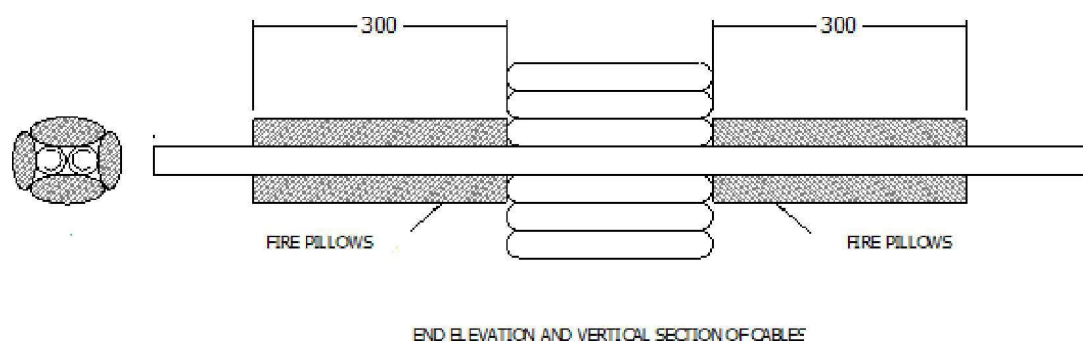
## Annex C

### Resistance to Fire Classification of fischer FiP Intumescent Pillows

#### C.1.1 Rigid wall constructions according to 1.2.1 with wall thickness of minimum 150 mm

#### C.1.2 Penetration seal with fischer FiP Intumescent Pillows installed 75mm projection from each face of the wall

Construction details: Electrical cables. Additional fischer FiP Intumescent Pillows to be sewn to provide additional protection to the cable to minimum distance of 300mm either face of the seal



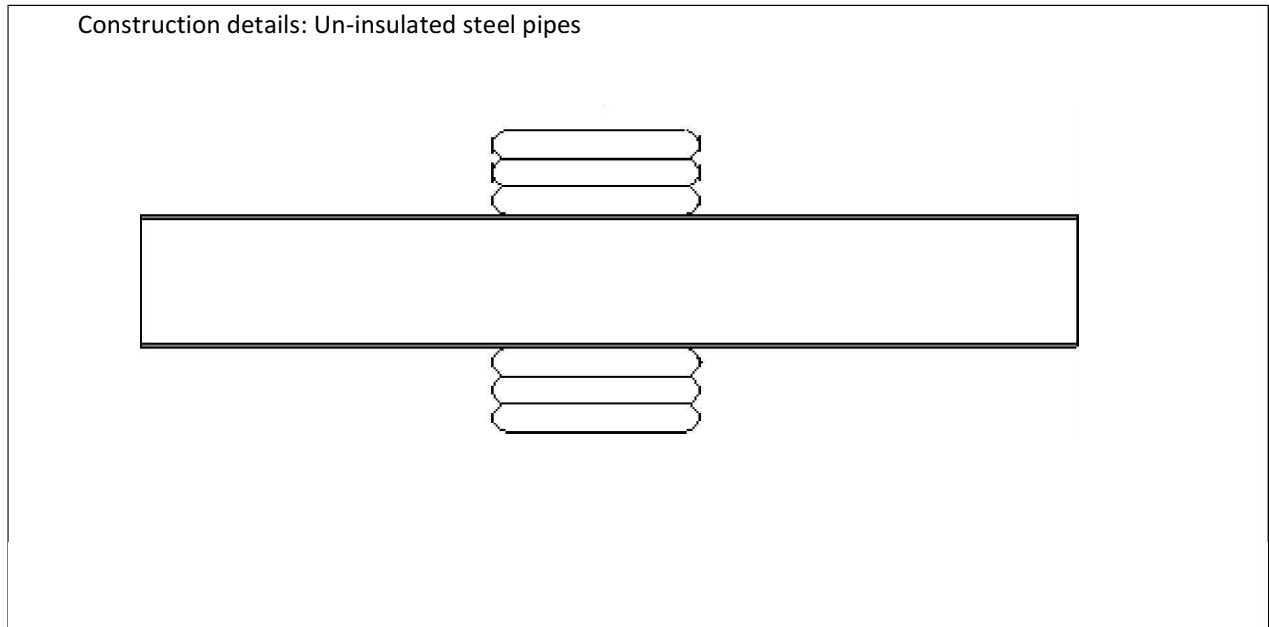
#### C.1.3

| <b>fischer FiP Intumescent Pillows Penetration Seals 300 mm deep, in Rigid Walls 150 mm thick (min.)</b> |                       |
|--|-----------------------|
| <b>Services</b>  | <b>Classification</b> |
| Telecom cables up to 21mm Ø (single or bundles up 100 mm Ø)  | <b>EI 120</b>         |
| Electrical cables up to 21 mm Ø  | <b>EI 120</b>         |
| Electrical cables up to 50 mm Ø  | <b>E 120, EI90</b>    |
| Electrical cables up to 80 mm Ø  | <b>E120, EI 90</b>    |
| Unsheathed wires up to 24 mm Ø   | <b>EI 120</b>         |
| Steel or Copper conduits and tubes up to 16 mm Ø   | <b>EI 120</b>         |
| Plastic (any) conduits and tubes up to 16 mm Ø   | <b>EI 120</b>         |
| Cable trays or ladders up to 300 mm wide   | <b>E 120, EI 60</b>   |



**C2 Rigid wall constructions according to 1.2.1 with wall thickness of minimum 150 mm**

**C.2.2 Penetration seal with fischer FiP Intumescent Pillows installed 75mm projection from each face of the wall**

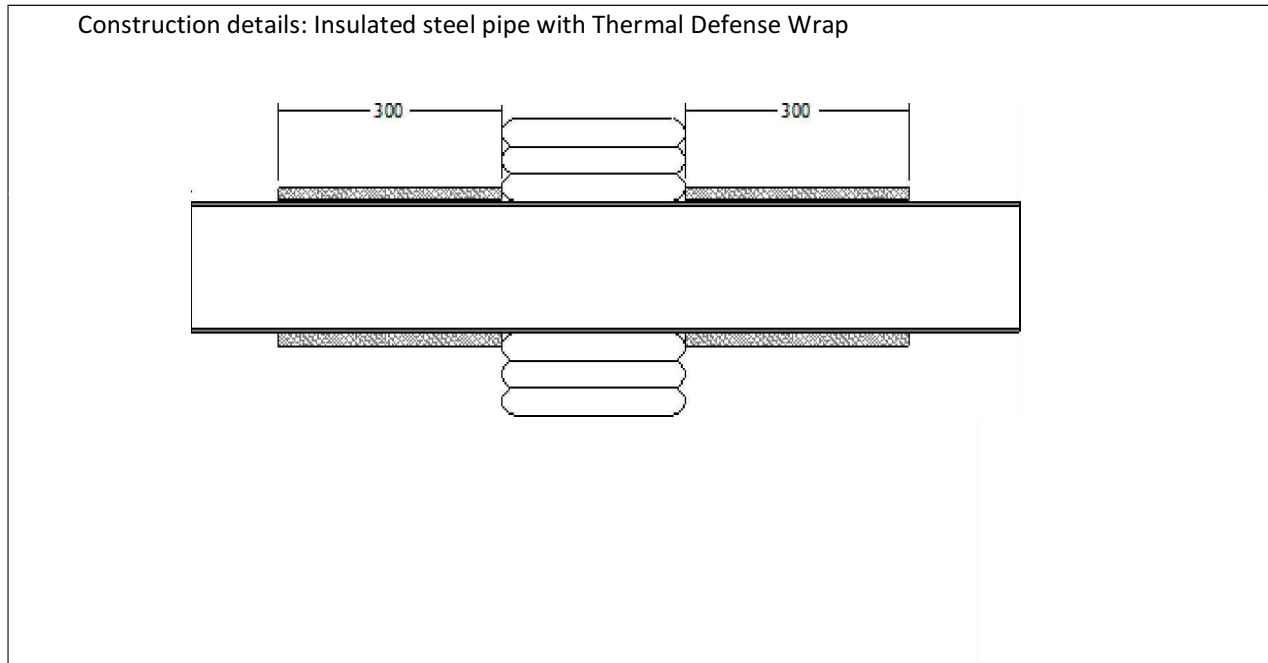


**C.2.3**

| <b>fischer FiP Intumescent Pillows Penetration Seals 300 mm deep, in Rigid Walls 150 mm thick (min.)</b> |                       |
|--|-----------------------|
| <b>Services</b>  | <b>Classification</b> |
| 165 mm Ø x 5.6-14.2 mm thick mild steel pipe   | <b>E 120 C/U</b>      |

**C3 Rigid wall constructions according to 1.2.1 with wall thickness of minimum 150 mm**

**C.3.2 Penetration seal with fischer FiP Intumescent Pillows installed 75mm projection from each face of the wall**

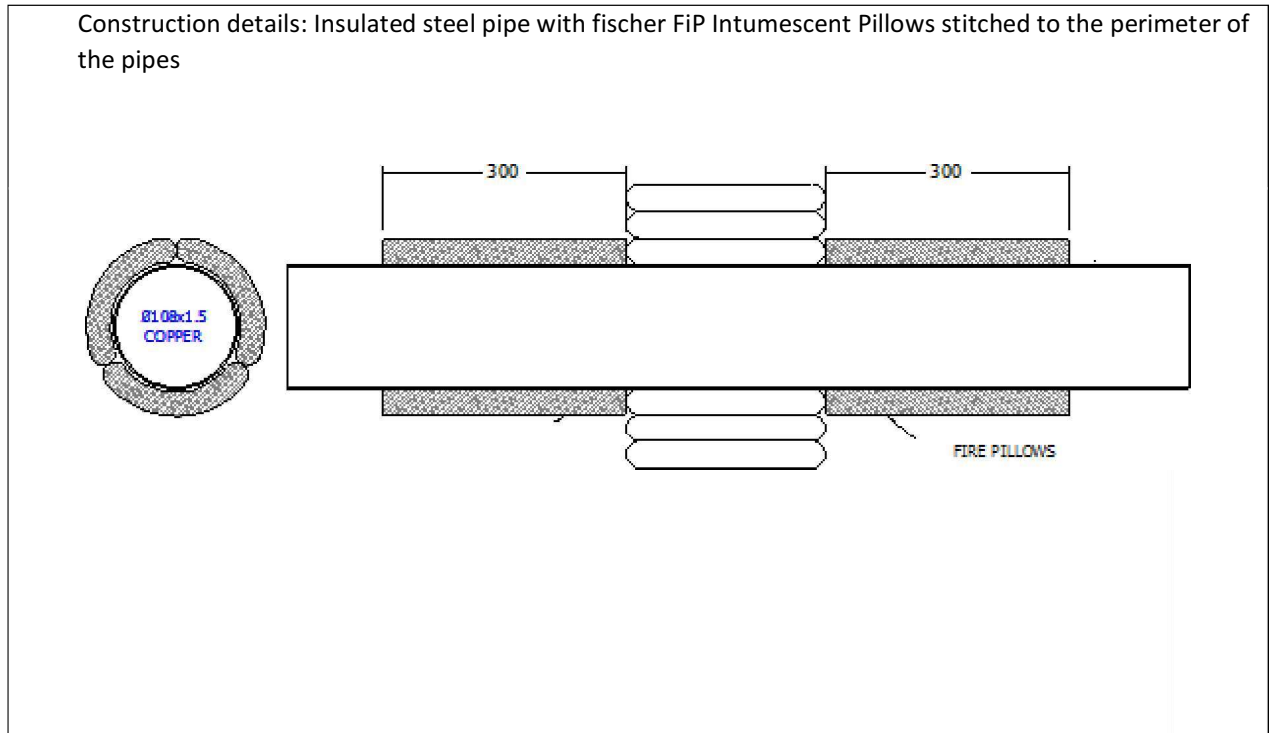


**C.3.3**

| <b>fischer FiP Intumescent Pillows Penetration Seals 300 mm deep, in Rigid Walls 150 mm thick (min.)</b> |                       |
|--|-----------------------|
| <b>Services</b>  | <b>Classification</b> |
| 48mmØ x 3.5-14.2mm thick steel pipe with 300 mm Local Interrupted (LI) Thermal Defence Wrap 7mm thick    | <b>EI 120 C/U</b>     |
| 113mmØ x 4.5-14.2mm thick steel pipe with 300 mm Local Interrupted (LI) Thermal Defence Wrap 10mm thick  | <b>EI 120 C/U</b>     |

**C4 Rigid wall constructions according to 1.2.1 with wall thickness of minimum 150 mm**

**C.4.2 Penetration seal with fischer FiP Intumescent Pillows installed 75mm projection from each face of the wall**

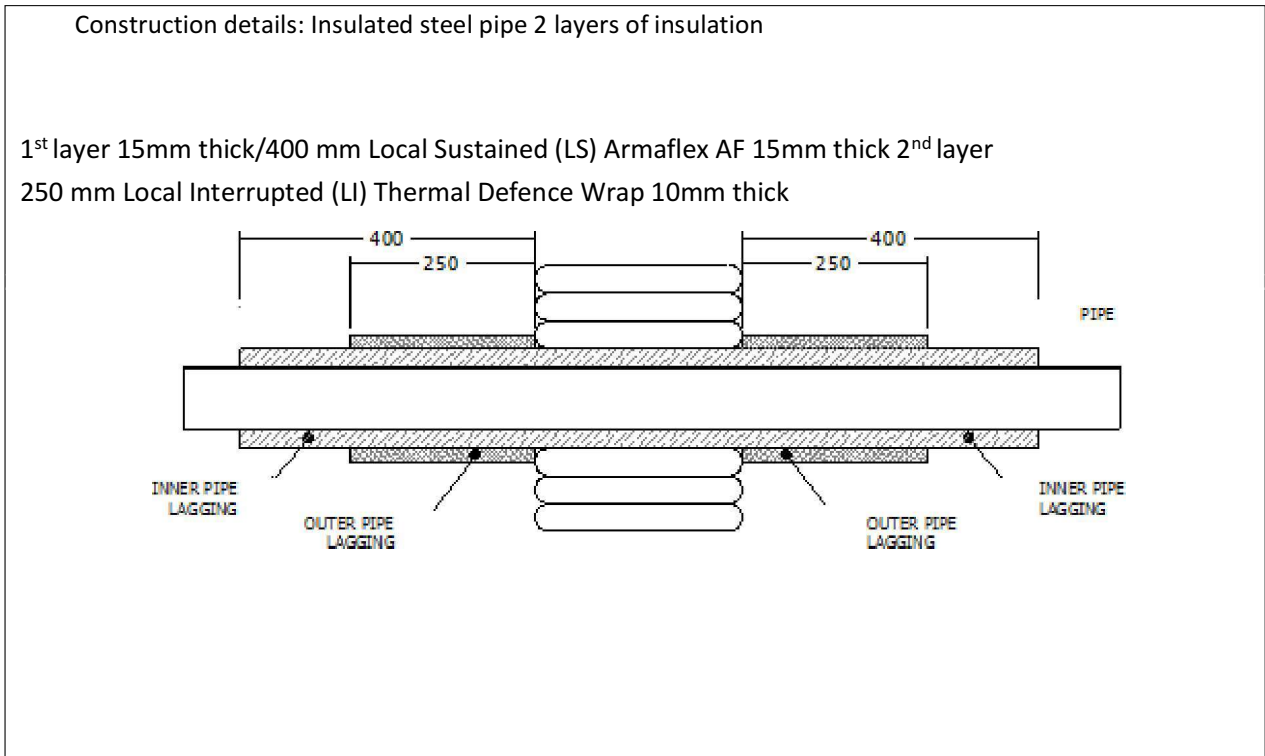


**C.4.3**

| <b>fischer FiP Intumescent Pillows Penetration Seals 300 mm deep, in Rigid Walls 150 mm thick (min.)</b> |                             |
|--|-----------------------------|
| <b>Services</b>  | <b>Classification</b>       |
| 108 mm Ø x 1.5-14.2 mm thick copper pipe   | <b>E 120 C/U, EI 90 C/U</b> |

**C5 Rigid wall constructions according to 1.2.1 with wall thickness of minimum 150 mm**

**C.5.2 Penetration seal with fischer FiP Intumescent Pillows installed 75mm projection from each face of the wall**



**C.5.3**

| <b>fischer FiP Intumescent Pillows Penetration Seals 300 mm deep, in Rigid Walls 150 mm thick (min.)</b> |                       |
|--|-----------------------|
| <b>Services</b>  | <b>Classification</b> |
| 54mmØ x 1.0-14.2mm thick copper pipe with 2 layers of insulation   | <b>EI 120</b>         |