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Authorised and notified according
to Article 29 of the Regulation
(EU)
No 305/2011 of the European
Parliament and of the Council of 9
March 2011



European Technical Assessment ETA-21/0010 of 2021/01/01

I General Part

Technical Assessment Body issuing the ETA and designated according to Article 29 of the Regulation (EU) No 305/2011: ETA-Danmark A/S

Trade name of the construction product:

Nullifire FS702

Product family to which the above construction product belongs:

Fire Stopping and Sealing Product:
• Penetration Seals

Manufacturer:

Tremco CPG UK Limited
Torrington Avenue
Coventry
CV4 9TJ
United Kingdom

Manufacturing plant:

A/017

This European Technical Assessment contains:

17 pages including 3 annexes which form an integral part of the document

This European Technical Assessment is issued in accordance with Regulation (EU) No 305/2011, on the basis of:

EAD 350454-00-1104 for Fire stopping and fire sealing products - Penetration seals, September 2017

This version replaces:

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I. SPECIFIC PARTS OF THE EUROPEAN TECHNICAL ASSESSMENT

1 Technical description of the product

- 1) Nullifire FS702 is a sealant used to form a penetration seal around metallic pipes and electrical cables to reinstate the fire resistance performance of wall constructions, where they have been provided with apertures for the penetration of services.
- 2) The Nullifire FS702 is supplied in liquid form contained within 310 cartridges. The sealant is gunned into the aperture in the separating element/elements and around the service or services, to a specified depth utilising mineral fibre insulation backing material, as specified in Annex A.
- 3) The applicant submitted a written declaration that Nullifire FS702 does not contain substances which have to be classified as dangerous according to Directive 67/548/EEC and Regulation (EC) No 1272/2008 and listed in the "Indicative list on dangerous substances" of the EGDS - taking into account the installation conditions of the construction product and the release scenarios resulting from there. An emission report has also been provided.

In addition to the specific clauses relating to dangerous substances contained in this European technical Assessment, 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.

- 4) The use category of Nullifire FS702 in relation to BWR 3 (Hygiene, health and environment) is IA1.

2 Specification of the intended uses of the product in accordance with the applicable European Assessment Document (Hereinafter EAD): EAD 350454-00-1104

Detailed information and data is given in Annex A.

- 1) The intended use of system Nullifire FS702 is to reinstate the fire resistance performance of flexible wall constructions and rigid wall constructions where they are penetrated by various metal pipe services with and without non-combustible insulation and electrical cables with and without non-combustible insulation.
- 2) The specific elements of construction that the system Nullifire FS702 may be used to provide a penetration seal in, are as follows:
 - a. Flexible walls: The wall must have a minimum thickness of 100 mm and comprise steel studs or timber studs* lined on both faces with minimum 2 layers of 12.5 mm thick boards.
 - b. Rigid walls: The wall must have a minimum thickness of 100 mm and comprise concrete, aerated concrete or masonry, with a minimum density of 650 kg/m³.

* no part of the penetration seal may be closer than 100 mm to a stud, the cavity must be closed between the penetration seal and the stud, and minimum 100 mm of insulation of class A1 or A2 according to EN 13501-1 must be provided within the cavity between the penetration seal and the stud.

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

- 3) The system Nullifire FS702 may be used to provide a penetration seal with specific single insulated metal pipes, uninsulated metal pipes and with specific electrical cables, single or in a bundle (for details see Annex A).
- 4) Apertures in the separating element shall be maximum \varnothing 300 mm, 266 x 266 mm or 500 mm wide x 100 mm high. The annular space/gap around the services shall be infilled with Nullifire FS702 sealant and a mineral fibre insulation backing material. Blank seals are not permitted. For full details, see Annex A.
- 5) Services shall be supported at maximum 250 mm away from both faces of the wall constructions.
- 6) The provisions made in this European Technical Approval are based on an assumed working life of the Nullifire FS702 of 10 years, provided that the conditions laid down in the product datasheet 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.
- 7) Type Z₁: intended for use at internal conditions with high humidity, excluding temperatures below 0°C. Includes lower categories i.e. Type Z₂.

3 Performance of the product and references to the methods used for its assessment

Product-type: Sealant		Intended use: Penetration Seal
	Essential characteristic	Product Performance
BWR 2 Safety in case of fire		
	Reaction to fire	Class E
	Resistance to fire	Annex A
BWR 3 Hygiene, health and environment		
	Air permeability	Annex B
	Water permeability	No performance assessed
	Content, emission and/or release of dangerous substances	Use categories: IA1 Declaration of manufacturer
BWR 4 Safety in use		
	Mechanical resistance and stability	No performance assessed
	Resistance to impact/movement	No performance assessed
	Adhesion	No performance assessed
	Durability	Z ₁
BWR 5 Protection against noise		
	Airborne sound insulation	Annex C
BWR 6 Energy economy and heat retention		
	Thermal properties	No performance assessed
	Water vapour permeability	No performance assessed

4 ASSESSMENT AND VERIFICATION OF CONSTANCY OF PERFORMANCE (HEREINAFTER AVCP) SYSTEM APPLIED, WITH REFERENCE TO ITS LEGAL BASE

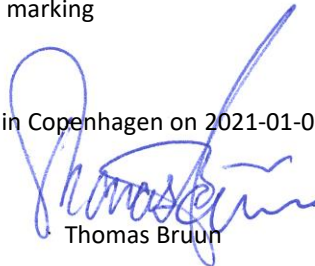
According to the decision 1999/454/EC – Commission Decision of date 22nd June 1999 on the procedure for attesting the conformity of construction products pursuant to Article 20(2) of Council Directive 89/106/EEC as regards fire stopping, fire sealing and fire protective products, published in the Official Journal of the European Union (OJEU) L178/52 of 14/07/1999, see <http://eur-lex.europa.eu>) of the European Commission¹, as amended, the system(s) of assessment and verification of constancy of performance (see Annex V to Regulation (EU) No 305/2011) given in the following table(s) applies (apply).

Product(s)	Intended use(s)	Level(s) or class(es)	System(s)
Fire stopping and Fire Sealing Products	For fire compartmentation and/or fire protection or fire performance	Any	1

5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited at ETA-Danmark A/S prior to CE marking

Issued in Copenhagen on 2021-01-01 by



Thomas Bruun

Managing Director, ETA-Danmark

¹ Official Journal of the European Communities L178/52 of 14/7/1999

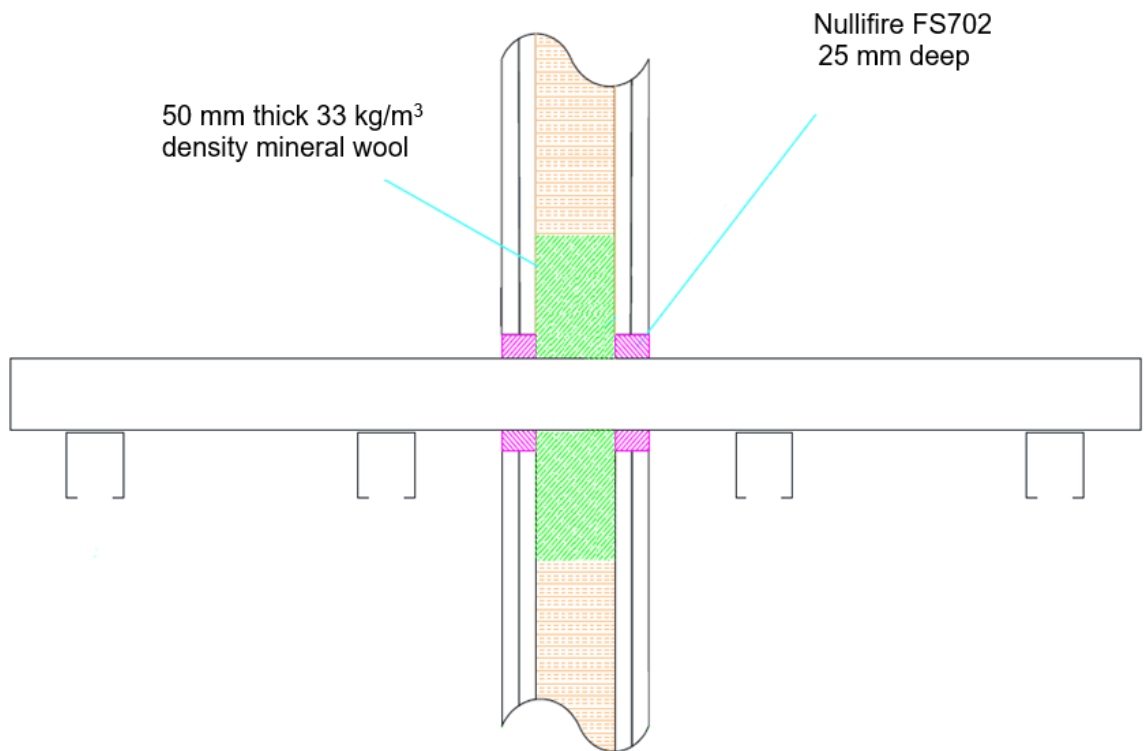
ANNEX A – Resistance to Fire Classification – Nullifire FS702

A.1 Flexible and Rigid wall constructions with wall thickness of minimum 100 mm

A.1.1 Double side penetration seal with non-insulated metal pipes

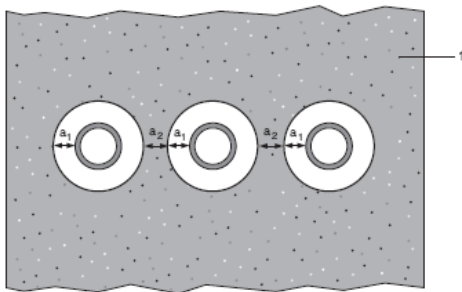
Penetration Seal: Metal pipes (single) fitted at any position within the aperture, with 25 mm Nullifire FS702 to both sides of the wall, backed with 50 mm deep stone wool insulation minimum 33 kg/m³. Minimum annular space 6 mm, maximum annular space 152 mm (A1) and minimum separation between penetration seals 100 mm (A2). Maximum distance of first service support ≤ 250 mm. Maximum seal size 266 x 266 mm / 300 mm Ø

Construction details:



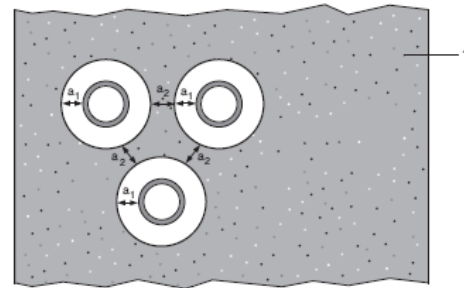
Configuration 1

Option 1



Configuration 2

Option 2

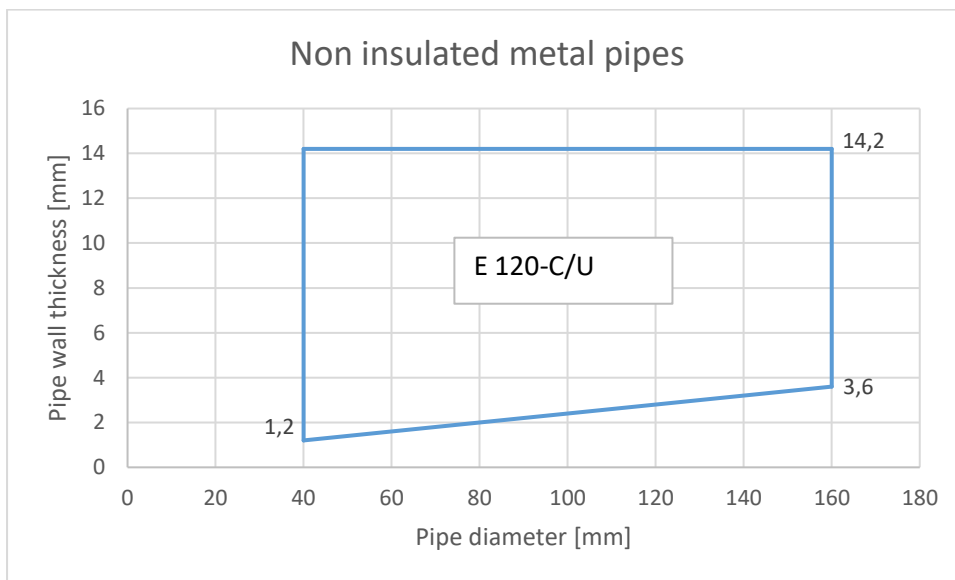


Key

- 1 Supporting construction
- a1 Pipe / top edge of seal separation
- a2 Pipe / side edge of seal separation

Services	Sealant depth	Backing	Classification
copper, steel, cast iron*			
Up to 14 mm diameter / 0,9 – 7 mm wall thickness	25 mm	Stone wool 50mm deep min. 33 kg/m ³	E 120-C/U, EI 30-C/U
Up to 40 mm diameter / 1,2 – 14,2 mm wall thickness	25 mm	Stone wool 50mm deep min. 33 kg/m ³	E 120-C/U, EI 15-C/U
Up to 160 mm diameter / 3,2 – 14,2 mm wall thickness	25 mm	Stone wool 50mm deep min. 33 kg/m ³	E 120-C/U

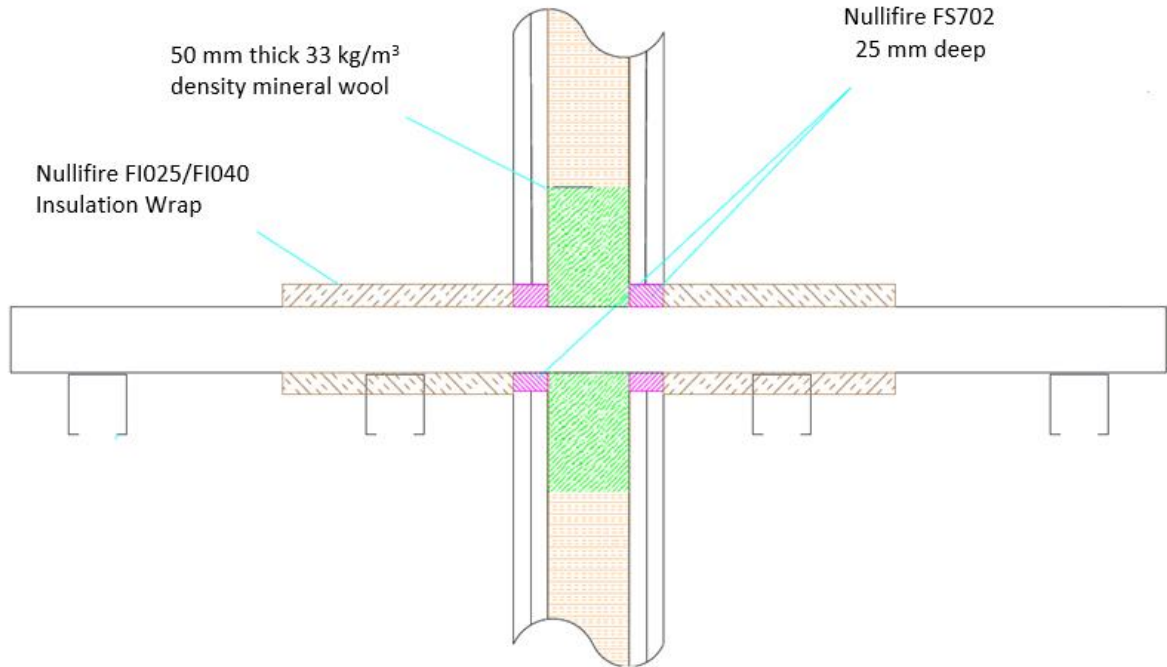
*See below graphs for interpolated pipe sizes



A.1.2 Double side penetration seal with Nullifire FI025/FI040 Insulation Wrap insulated metal pipes

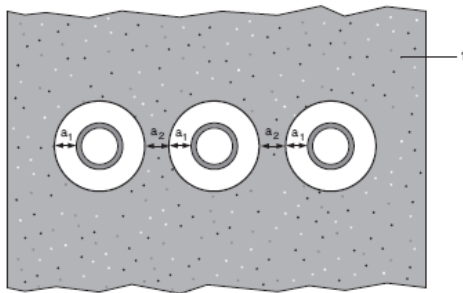
Penetration Seal: LI (Local Interrupted) or CI (Continuous Interrupted) insulated metal pipes (single) fitted at any position within the aperture, with 25 mm Nullifire FS702 to both sides of the wall, backed with 50 mm deep stone wool insulation minimum 33 kg/m³. Minimum annular space 10 mm, maximum annular space 152 mm (A1) and minimum separation between penetration seals 100 mm (A2). Maximum distance of first service support ≤ 250 mm. Maximum seal size 266 x 266 mm / 300 mm Ø

Construction details:



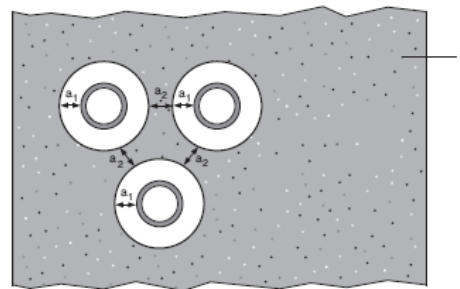
Configuration 1

Option 1



Configuration 2

Option 2



Key

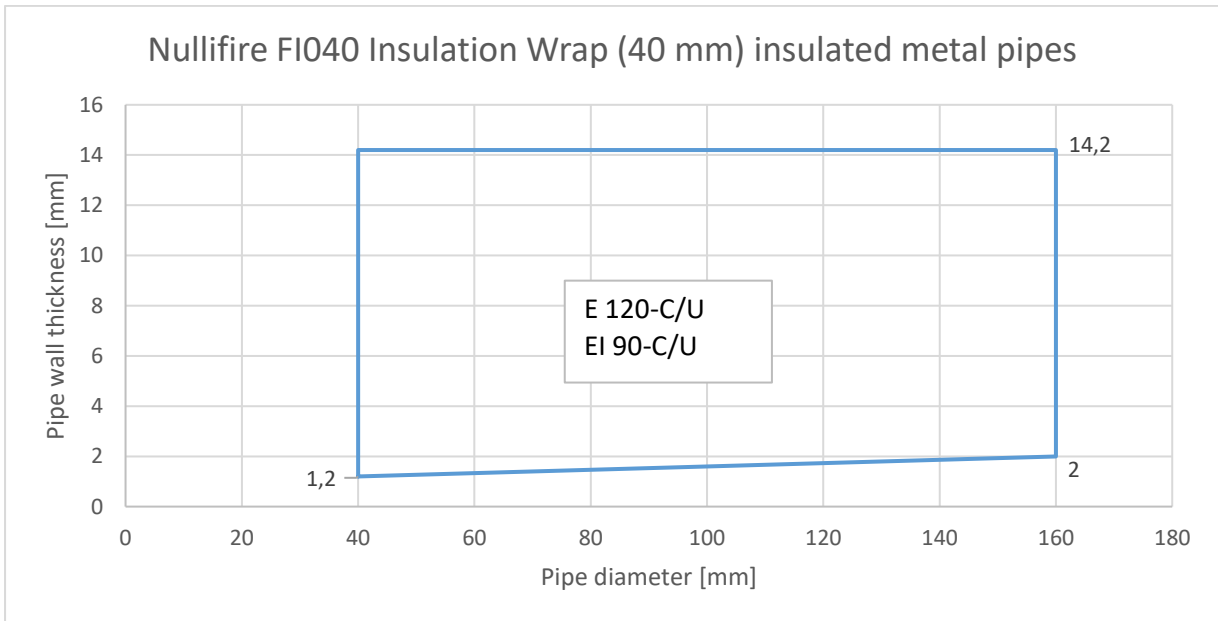
1 Supporting construction

a1 Pipe / top edge of seal separation

a2 Pipe / side edge of seal separation

Services	Sealant depth	Backing	Insulation	Classification
copper, steel, cast iron*				
Up to 40 mm diameter / 1,2 – 14,2 mm wall thickness	25 mm	Stone wool 50mm deep min. 33 kg/m ³	25 mm thick x 200 mm long Nullifire FI025 Insulation Wrap - LI or CI	E 120-C/U, EI 90-C/U
Up to 160 mm diameter / 2,0 – 14,2 mm wall thickness	25 mm	Stone wool 50mm deep min. 33 kg/m ³	40 mm thick Nullifire FI040 Insulation Wrap - CI	E 120-C/U, EI 120-C/U

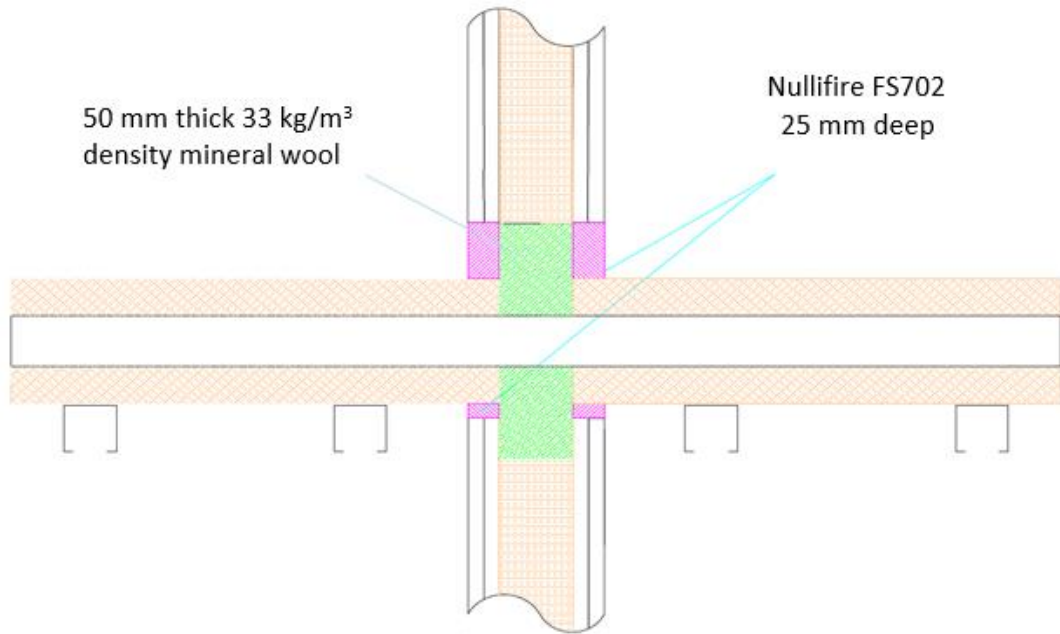
*See below graphs for interpolated pipe sizes



A.1.3 Double side penetration seal with mineral stone wool (class A1 or A2 according to EN 13501-1) insulated metal pipes

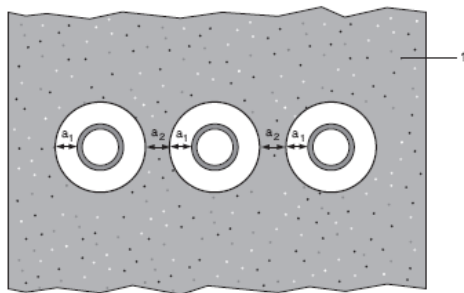
Penetration Seal: CI (Continuous Interrupted) or CS (Continuous Sustained) insulated metal pipes (single) fitted at any position within the aperture, with 25 mm Nullifire FS702 to both sides of the wall, backed with 50 mm deep stone wool insulation minimum 33 kg/m³. Minimum annular space 10 mm, maximum annular space 152 mm (A1) and minimum separation between penetration seals 100 mm (A2). Maximum distance of first service support ≤ 250 mm. Maximum seal size 266 x 266 mm / 300 mm ∅

Construction details:



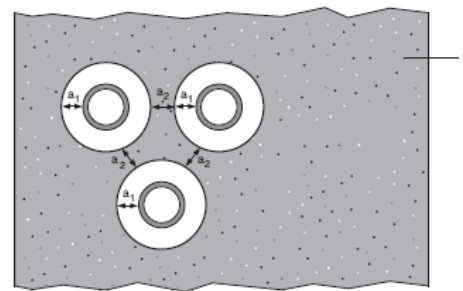
Configuration 1

Option 1



Configuration 2

Option 2



Key

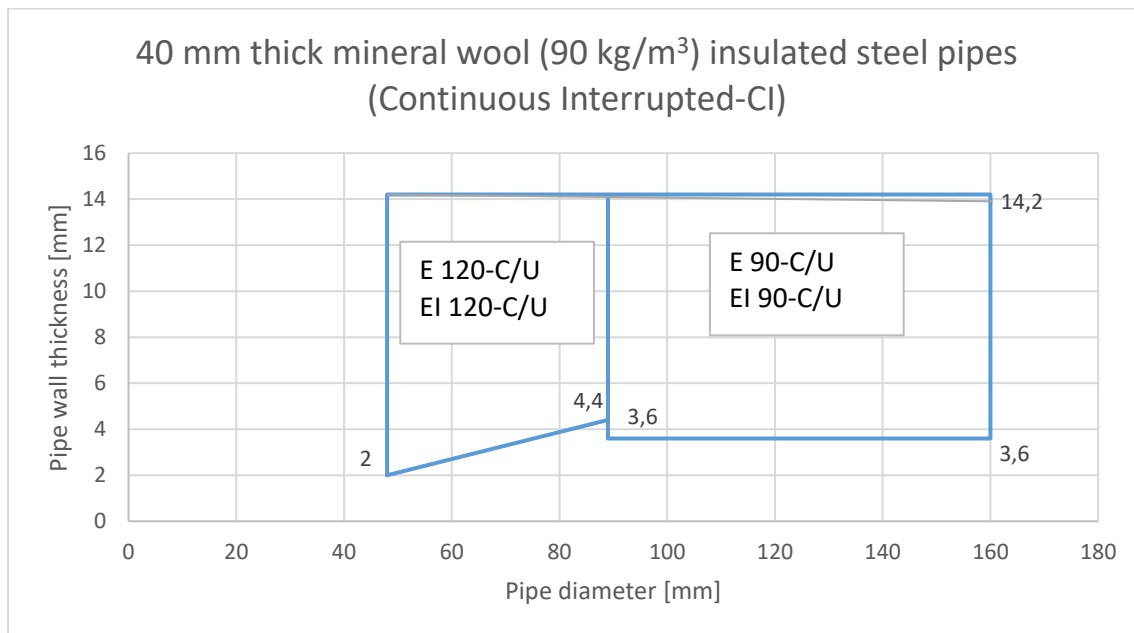
1 Supporting construction

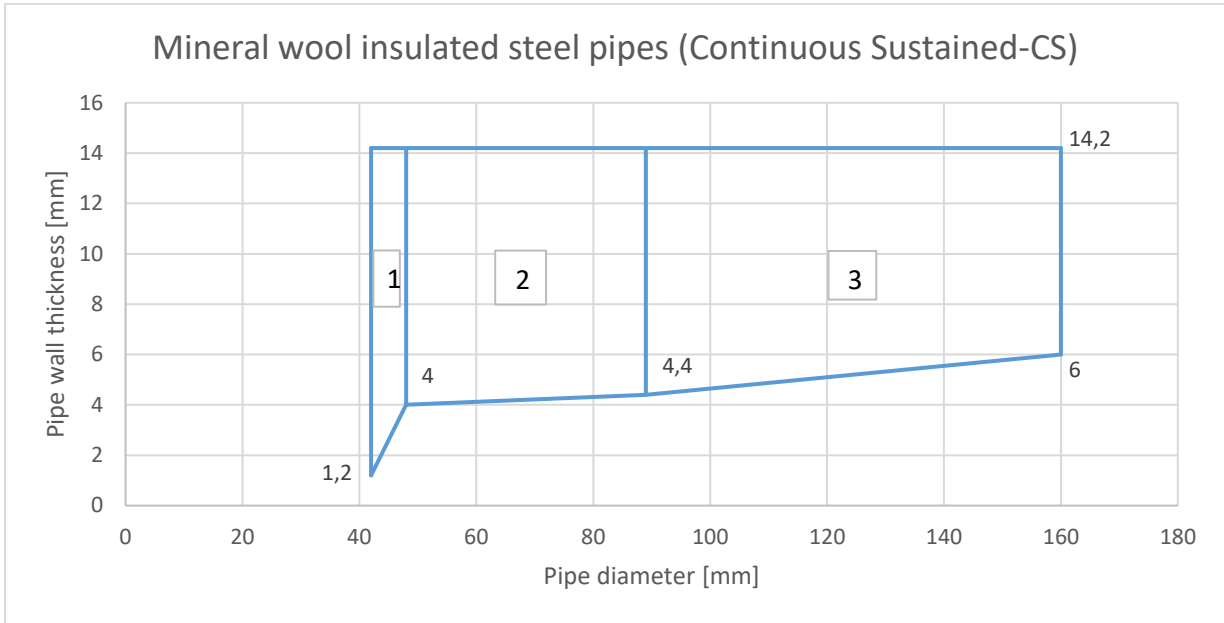
a1 Pipe / top edge of seal separation

a2 Pipe / side edge of seal separation

Services	Sealant depth	Backing	Insulation	Classification
copper, steel, cast iron*				
Up to 42 mm diameter / 1,2 – 14,2 mm wall thickness	25 mm	Stone wool 50mm deep min. 33 kg/m ³	20 mm (45 kg/m ³) - CS	E 90-C/U, EI 90-C/U
steel, cast iron*				
Up to 48 mm diameter / 2,0 – 14,2 mm wall thickness	25 mm	Stone wool 50mm deep min. 33 kg/m ³	20 mm (45 kg/m ³) - CI	E 120-C/U, EI 120-C/U
Up to 48 mm diameter / 4,0 – 14,2 mm wall thickness	25 mm	Stone wool 50mm deep min. 33 kg/m ³	20 mm (45 kg/m ³) - CS	E 90-C/U, EI 90-C/U
Up to 89 mm diameter / 4,4 – 14,2 mm wall thickness	25 mm	Stone wool 50mm deep min. 33 kg/m ³	40 mm (90 kg/m ³) – CS or CI	E 120-C/U, EI 120-C/U
Up to 160 mm diameter / 3,6 – 14,2 mm wall thickness	25 mm	Stone wool 50mm deep min. 33 kg/m ³	40 mm (90 kg/m ³) – CI	E 90-C/U, EI 90-C/U
Up to 168 mm diameter / 6,0 – 14,2 mm wall thickness	25 mm	Stone wool 50mm deep min. 33 kg/m ³	40 mm (90 kg/m ³) – CS	E 120-C/U, EI 120-C/U

*See below graphs for interpolated pipe sizes





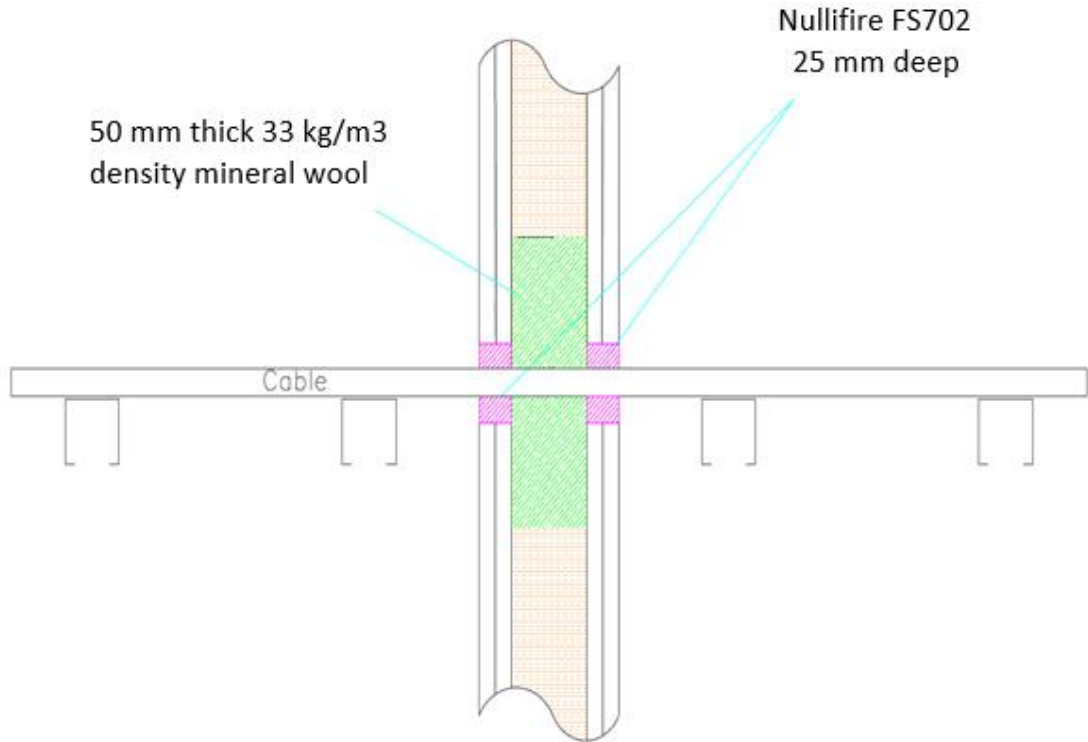
Interpolation area	Mineral wool insulation	Classification
1	20 mm thick (45 kg / m ³)	E 90-C/U, EI 90-C/U
2	40 mm thick (90 kg / m ³)	E 90-C/U, EI 90-C/U
3	40 mm thick (90 kg / m ³)	E 120-C/U, EI 120-C/U

A.2 Flexible and rigid wall constructions with wall thickness of minimum 100 mm

A.2.1 Double side penetration seal with cables

Penetration Seal: Cables (single or bundles up to 100 mm \varnothing) fitted at any position within the aperture, with 25 mm Nullifire FS702 to both sides of the wall, backed with 50 mm deep stone wool insulation minimum 33 kg/m³. Minimum annular space 10 mm between cables/cable tray and edge of the opening and minimum separation between penetration seals 100 mm. Maximum distance of first service support \leq 250 mm. Maximum seal size 500 mm wide x 100 mm high.

Construction details:



Services	Sealant depth	Backing	Insulation	Classification
Cable bundle consisting of max. 2 no. C2 + 2 no. B cable (B cable: E-YY-J 1x95RM or E-YY-O 1x95RM, NYY-J 1x95RM or NYY-O 1x95RM, VV 1x95, TT 1x95 RM 0,6/1 kV / C2 cable: H07RN-F 4G95)	25 mm	Stone wool 50 mm deep min. 33 kg/m ³	-	E 60, EI 60
Cable bundle consisting of max. 2 no. D1 + 2 no. B cable (B cable: E-YY-J 1x95RM or E-YY-O 1x95RM, NYY-J 1x95RM or NYY-O 1x95RM, VV 1x95, TT 1x95 RM 0,6/1 kV / D1 cable: E-YCWY 4x185SM/95, MCMK 4x185/95 NYCWY 4x185SM/95 PFSP CU 4x185/95 FKKJ 4x185/95 S)	25 mm	Stone wool 50 mm deep min. 33 kg/m ³	25 mm thick x 200 mm long, Nullifire FI025 Insulation Wrap - LI	E 120, EI 120

Services	Sealant depth	Backing	Insulation	Classification
Max. 10 no. B cables with/without max. 450 mm wide cable tray or cable ladder (B cable: E-YY-J 1x95RM or E-YY-O 1x95RM, NYY-J 1x95RM or NYY-O 1x95RM, VV 1x95, TT 1x95 RM 0,6/1 kV)	25 mm	Stone wool 50 mm deep min. 33 kg/m ³	-	E 120, EI 45
Max. 10 no. B cables with/without max. 450 mm wide cable tray or cable ladder (B cable: E-YY-J 1x95RM or E-YY-O 1x95RM, NYY-J 1x95RM or NYY-O 1x95RM, VV 1x95, TT 1x95 RM 0,6/1 kV)	25 mm	Stone wool 50 mm deep min. 33 kg/m ³	25 mm thick x 200 mm long, Nullifire FI025 Insulation Wrap - LI	E 120, EI 60
Max. 28 no. F (telecommunication cable), bundle up to Ø 100 mm	25 mm	Stone wool 50 mm deep min. 33 kg/m ³	25 mm thick x 200 mm long, Nullifire FI025 Insulation Wrap - LI	E 120, EI 120

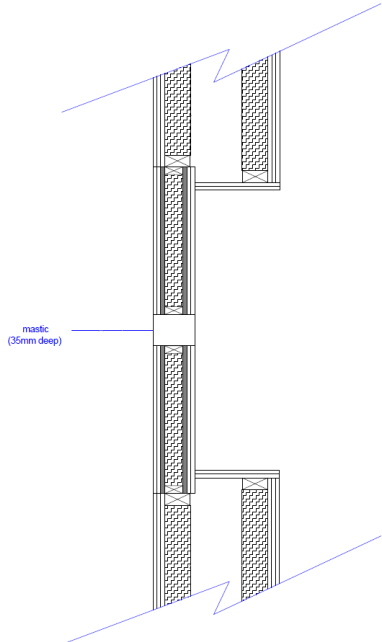
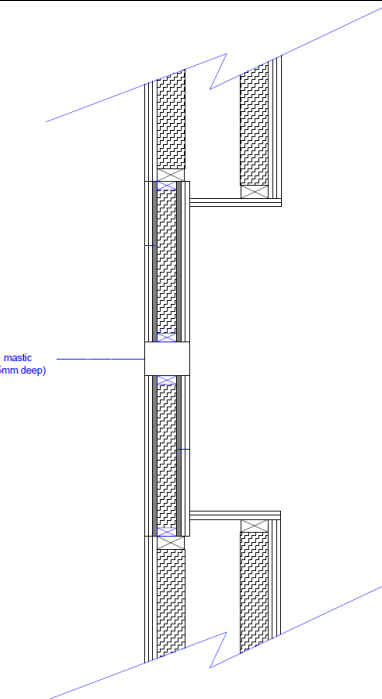
ANNEX B – Air Permeability– Nullifire FS702

Nullifire FS702 (35 mm thick) installed in 100 mm wide x 1800 mm high and 150 mm deep softwood frame.

Product Tested	Linear mastic sealant panel		
Summary of testing procedure			Result
	Test Standard	Classification Standard	
Air permeability	BS EN 1026: 2000	BS EN 12207: 2000	600 Pa (Class 4)

Air leakage at 50 Pa was 0,02 m³/h positive pressure and 0,00 m³/h negative pressure.

ANNEX C – Airborne sound insulation– Nullifire FS702

Configuration	Performance
	<p>Dnew - 59 (-1;-5) dB Rw (1.87m2) - 52 (-1;-6) dB Rw (14.2m2) - 61 (-1;-6) dB</p>
	<p>Dnew - 58 (-1;-5) dB Rw (1.87m2) - 50 (-0;-4) dB Rw (14.2m2) - 59 (-1;-4) dB</p>