

# Regulatory Information Report

**RIRF24144**

**Fire resistance test for penetrations through a  
vertical separating element**

Client:	Agnitek Pty Ltd
Test method:	AS1530.4-2014
Report Date:	14/01/2025
Test number:	PF24144




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## 1.1 Document revision schedule

Revision #	Date	Description
1	14/01/2025	Issued to Client

## 1.2 Signatories

Report	Name	Signature	Date
Prepared by:	Alexey Kokorin		14/01/2025
Authorised by:	Andrew Bain (Authorized signatory)		14/01/2025



All tests reported herein  
have been performed in  
accordance with the  
laboratory's scope of  
accreditation

## 2 Report Summary

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Service penetrations were tested passing through two layers of 13mm FR Plasterboard on each side of a 64mm (nominal) steel frame.

Specimen #	Service	Actual Integrity (min)	Actual Insulation (min)	FRL
1	DN16 PEX PIPE	123NF	123NF	-/120/120
2	DN25 PEX PIPE	123NF	123NF	-/120/120
3	DN32 PEX PIPE	123NF	123NF	-/120/120
4	16mm PEX/AL/PEX PIPE	123NF	123NF	-/120/120
5	25mm PEX/AL/PEX PIPE	123NF	123NF	-/120/120
6	32mm PEX/AL/PEX PIPE	123NF	123NF	-/120/120
7	PE PAIR COIL	123NF	75	-/120/60
8	FR PAIR COIL	123NF	123NF	-/120/120
9	FR PAIR COIL + 25mm PVC PIPE + TPS CABLE	123NF	123NF	-/120/120

**NF – No failure during the test**

## 3 General Information

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### 3.1 Testing Scope

**Applicable Standards:**

AS 1530.4-2014 Section 10: Service penetrations and control joints

AS 4072.1-2005 (r. 2016) Components for the protection of openings in fire-resistant separating elements. Part 1: Service penetrations and control joints

**Departures from Testing Method:**

No departures from the testing method

**Test conditions:**

Conditions complied with the Standard

### 3.2 Contact Details

**Accredited Testing Laboratory**

Fire TS Lab - Passive Fire Inspection and Test Services Ltd

Accreditation Number - 1335

1/113 Pavilion Drive, Mangere, Auckland, 2022

New Zealand

Contact e-mail: [tests@firelab.co.nz](mailto:tests@firelab.co.nz)

**Client/Applicant:**

Agnitek Pty Ltd

8 Clare St, Bayswater, VIC, 3153

Australia

Contact e-mail: [info@agnitek.com.au](mailto:info@agnitek.com.au)

**Manufacturer:**

Same as Client/Applicant

### 3.3 Specimen Preparation, Conditioning and Timeline

#### **Specimens conditioning and delivery to Laboratory:**

Separating element was built by the Laboratory in line with Client instructions. Installation of fire stopping system was performed by the Laboratory in line with Client instructions. The Laboratory was not involved in sampling of the materials. The Laboratory checked materials during construction of the specimen. The services were capped on the fire side only.

#### **Testing date:**

07/01/2025

#### **Installation completion date:**

04/12/2024

#### **Termination of The Test:**

The test was discontinued at 123 minutes.

### 3.4 Use of the Report

This report shall not be reproduced, except in full.

A regulatory information report was issued in addition to the full test report PF24144. This provides the minimum information required for regulatory compliance.

This report details the methods of construction, test conditions and the results obtained when the specific element of construction described herein was tested following the procedure outlined in AS 1530.4. Any significant variation with respect to size, constructional details, loads, stresses, edge or end conditions, other than that allowed under the field of direct application in the relevant test method, is not covered by this report.

Because of the nature of fire resistance testing and the consequent difficulty in quantifying the uncertainty of measurement of fire resistance, it is not possible to provide a stated degree of accuracy of the result.

The test results relate to the specimens of the product in the form in which they were tested. Differences in the composition or thickness of the product may significantly affect the performance during the test and may therefore invalidate the test results. Care should be taken to ensure that any product, which is supplied or used, is fully represented by the specimens, which were tested.

The specimens were supplied by the sponsor and the Laboratory was not involved in any of selection or sampling procedures.

The results of these fire tests may be used to directly assess fire hazard, but it should be recognised that a single test method will not provide a full assessment of fire hazard under all fire conditions.

## 4 Specimen Description

### 4.1 Supporting Construction

Separating element		
1.1	Item	64mm (nominal) steel stud frame with two layers of 13mm FR Plasterboard fitted to each side of the steel stud frame
	Dimensions	Width / Height (W/H): 1200mm x 1200mm

Materials		
1.3	Item	Steel Stud 0.50bmt
	Dimensions	Width / Height (W/H): 64mm x 1200mm
	Installation	Used to construct studs and nogs in steel frame
1.4	Item	Steel Track 0.50bmt
	Dimensions	Width / Height (W/H): 64mm x 1200mm
	Installation	Used to construct top and bottom plates
1.5	Item	Self-Tapping Screw
	Dimensions	10g x 16mm
	Installation	Used to construct steel stud frame
1.6	Item	FR Plasterboard
	Dimensions	Width / Height (W/H): 1200mm x 1200mm
		Thickness (T): 13mm
Installation	2 layers applied to each face of separating element	
1.7	Item	Self Tapping Screw
	Dimensions	41mm
	Installation	Used to secure GIB Fyreline to frame
1.8	Item	Plaster
	Dimensions	15L Pail
	Installation	Used to cover screw heads on plasterboard
1.10	Item / Product Name	AGNI-Seal
	Installation	Used to seal around edge of separating element

## 4.2 Specimens

Services		
2.1	Item	DN16 PE-X Pipe
	Dimensions	Diameter (ID): 11.75mm
		Diameter (OD): 16.15mm
		Wall Thickness (T): 2.2mm
2.2	Item	DN25 PE-Xb Pipe
	Dimensions	Diameter (ID): 19.2mm
		Diameter (OD): 25.1mm
		Wall Thickness (T): 2.95mm
2.3	Item	DN32 PE-Xb Pipe
	Dimensions	Diameter (ID): 22.1mm
		Diameter (OD): 32.1mm
		Wall Thickness (T): 5mm
2.4	Item	DN16 PEX/AL/PEX Pipe
	Dimensions	Diameter (ID): 11.15mm
		Diameter (OD): 16.05mm
		Wall Thickness (T): 2.45mm
2.5	Item	DN25 PEX/AL/PEX Pipe
	Dimensions	Diameter (ID): 18.4mm
		Diameter (OD): 25.2mm
		Wall Thickness (T): 3.4mm
2.6	Item	DN32 PEX/AL/PEX Pipe
	Dimensions	Diameter (ID): 23.3mm
		Diameter (OD): 32.3mm
		Wall Thickness (T): 4.5mm
2.7	Item	Polyethylene Pair Coil Insulated Refrigeration Tube – Annealed Copper Tube
	Copper Tube 1	Diameter (ID): 16.77mm
		Diameter (OD): 19.05mm
		Wall Thickness (T): 1.14mm



	Copper Tube 2	Diameter (ID): 7.9mm	
		Diameter (OD): 9.52mm	
		Wall Thickness (T): 0.81mm	
	Insulation	Thickness (T): 6.8mm	
		Material: Polyethylene	
2.8	Item	Super Pair FR Rubber Insulated Fire Retardant Pair Coil	
	Copper Tube 1	Diameter (ID): 16.84mm	
		Diameter (OD): 19.88mm	
		Wall Thickness (T): 1.02mm	
	Copper Tube 2	Diameter (ID): 7.9mm	
		Diameter (OD): 9.52mm	
		Wall Thickness (T): 0.81mm	
	Insulation	Thickness (T): 16mm	
	2.9	Item	uPVC 25mm pipe
		Dimensions	Diameter (ID): 23.0mm
Diameter (OD): 26.9mm			
Wall Thickness (T): 1.95mm			
2.10	Item	Electrical Cable 450/750V 2C + E	
	Cable	Width x Depth (W/D): 14mm x 6.5mm	
		Sheath Material: 3V-90 PVC	
		Sheath Thickness (T): 1.24mm	
	Core	Number of Cores: 2 (circular shaped)	
		Overall Diameter (OD): 4mm	
		Conductor Diameter: 0.85mm	
		Conductor Material: Copper	
		Insulation Material: V-90 PVC	
		Insulation Thickness (T): 1.15mm	
	Earth	Overall Diameter (OD): 3.2mm	
Wire Diameter: 0.64mm			

**Sealants**

3.1	Item / Product Name	AGNI-Black
	Dimensions	310mL Cartridge

## 5 Test Results

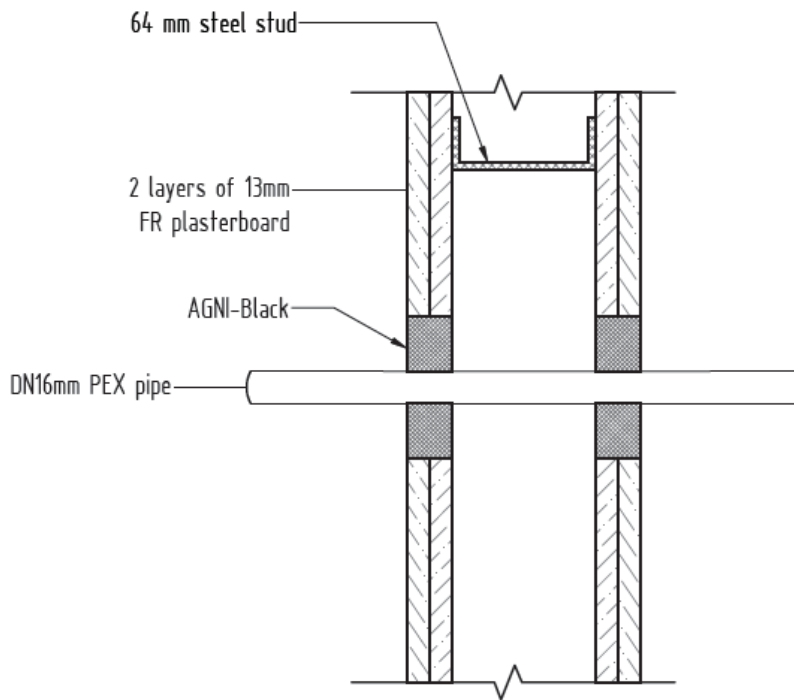
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### 5.1 Observations during the test

Time min	Test face	SP#	OBSERVATIONS/REMARKS
			No significant observations during the test
123			<b>TEST DISCONTINUED</b>

**NOTE:** E - Exposed Face (inside furnace)  
U - Unexposed Face (outside furnace)  
SE - Separating element

## 5.2 Specimen 1



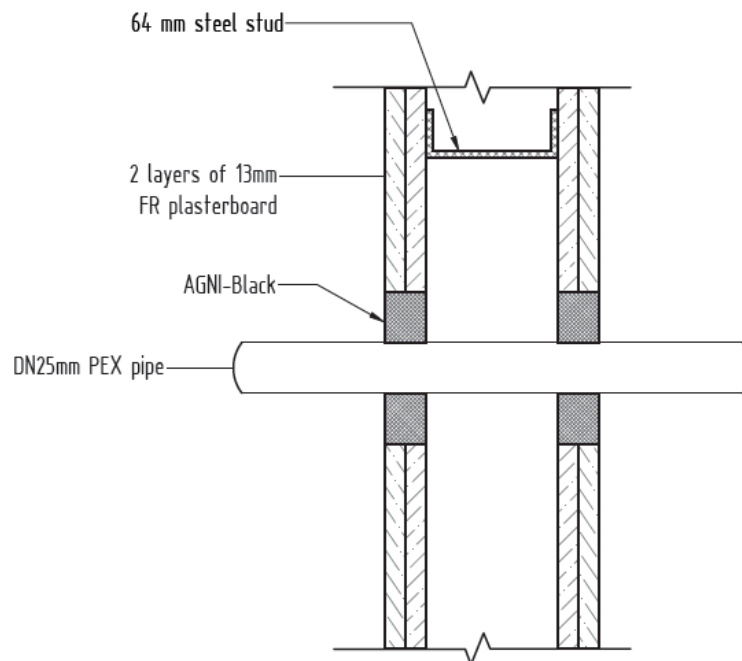
Service penetration details	
Service	DN16 Pex pipe
Aperture Size	61.4mm
Annular Spacing	Min: 21.2mm, Max: 23.8mm

Local Fire-stopping system	
Application	Symmetrical – applied to both faces of separating element
Products	AGNI-Black
Procedure	1. AGNI-Black applied into annular gap to the depth of the lining, 26mm (nominal).

### Test results

Structural adequacy	Not applicable
Integrity	No failure at 123 minutes
Insulation	No failure at 123 minutes

## 5.3 Specimen 2



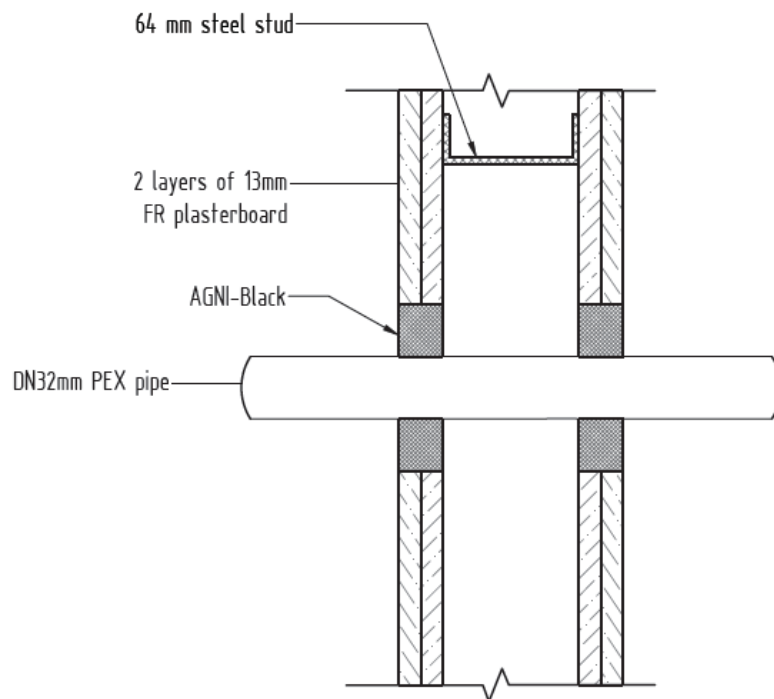
Service penetration details	
Service	DN25 Pex pipe
Aperture Size	68.7mm
Annular Spacing	Min: 18.4mm, Max: 25.1mm

Local Fire-stopping system	
Application	Symmetrical – applied to both faces of separating element
Products	AGNI-Black
Procedure	1. AGNI-Black applied into annular gap to the depth of the lining, 26mm (nominal).

### Test results

Structural adequacy	Not applicable
Integrity	No failure at 123 minutes
Insulation	No failure at 123 minutes

## 5.4 Specimen 3



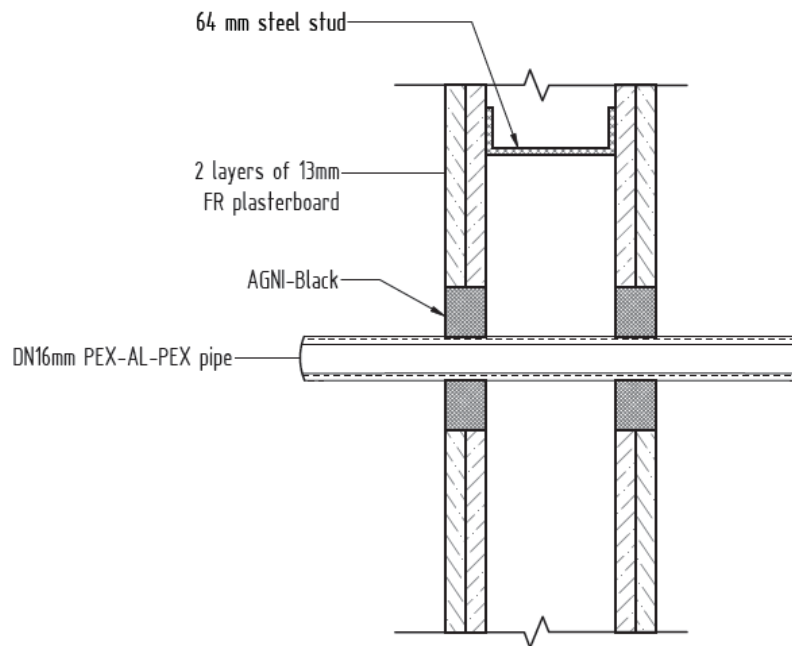
Service penetration details	
Service	DN32 Pex pipe
Aperture Size	66.8mm
Annular Spacing	Min: 13.0mm, Max: 21.6mm

Local Fire-stopping system	
Application	Symmetrical – applied to both faces of separating element
Products	AGNI-Black
Procedure	1. AGNI-Black applied into annular gap to the depth of the lining, 26mm (nominal).

### Test results

Structural adequacy	Not applicable
Integrity	No failure at 123 minutes
Insulation	No failure at 123 minutes

## 5.5 Specimen 4



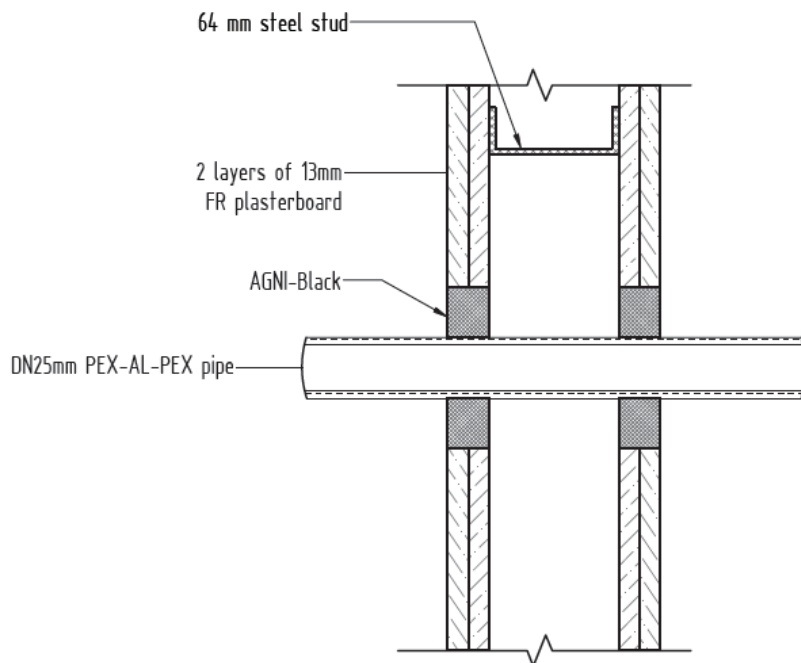
Service penetration details	
Service	DN16 PEX/AL/PEX Pipe
Aperture Size	62.0mm
Annular Spacing	Min: 15.4mm, Max: 30.4mm

Local Fire-stopping system	
Application	Symmetrical – applied to both faces of separating element
Products	AGNI-Black
Procedure	1. AGNI-Black applied into annular gap to the depth of the lining, 26mm (nominal).

### Test results

Structural adequacy	Not applicable
Integrity	No failure at 123 minutes
Insulation	No failure at 123 minutes

## 5.6 Specimen 5



Service penetration details	
Service	DN25 PEX/AL/PEX Pipe
Aperture Size	68.5mm
Annular Spacing	Min: 19.0mm, Max: 23.5mm

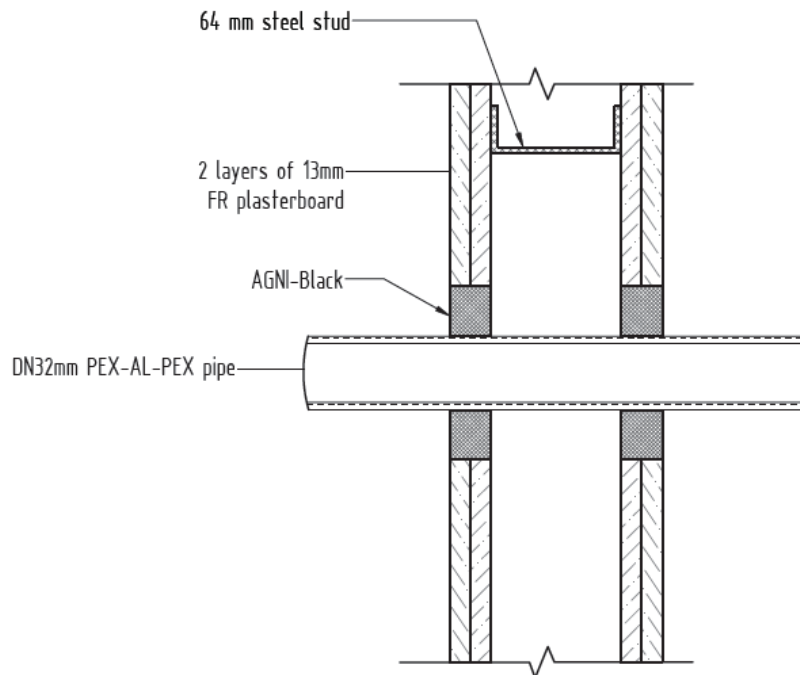
Local Fire-stopping system	
Application	Symmetrical – applied to both faces of separating element
Products	AGNI-Black
Procedure	1. AGNI-Black applied into annular gap to the depth of the lining, 26mm (nominal).

### Test results

Structural adequacy	Not applicable
Integrity	No failure at 123 minutes
Insulation	No failure at 123 minutes



## 5.7 Specimen 6



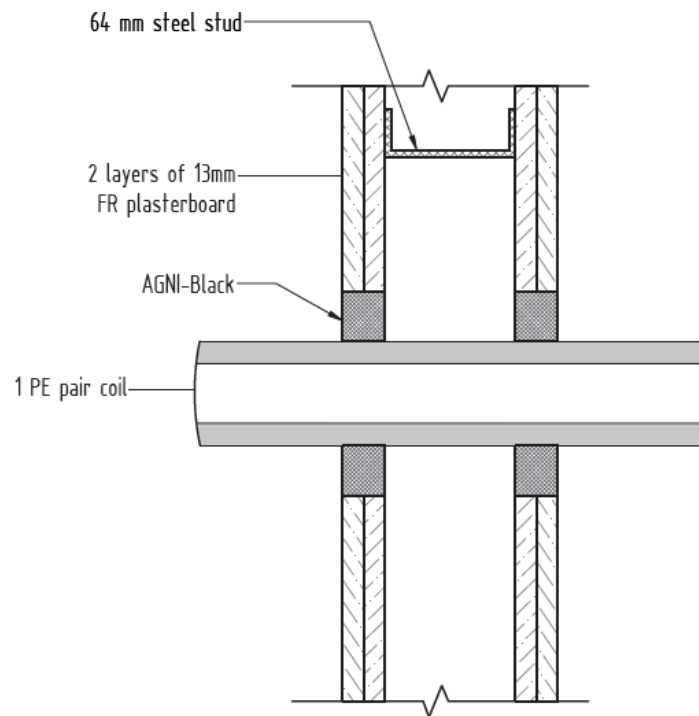
Service penetration details	
Service	DN32 PEX/AL/PEX Pipe
Aperture Size	67.2mm
Annular Spacing	Min: 14.1mm, Max: 20.8mm

Local Fire-stopping system	
Application	Symmetrical – applied to both faces of separating element
Products	AGNI-Black
Procedure	1. AGNI-Black applied into annular gap to the depth of the lining, 26mm (nominal).

### Test results

Structural adequacy	Not applicable
Integrity	No failure at 123 minutes
Insulation	No failure at 123 minutes

## 5.8 Specimen 7



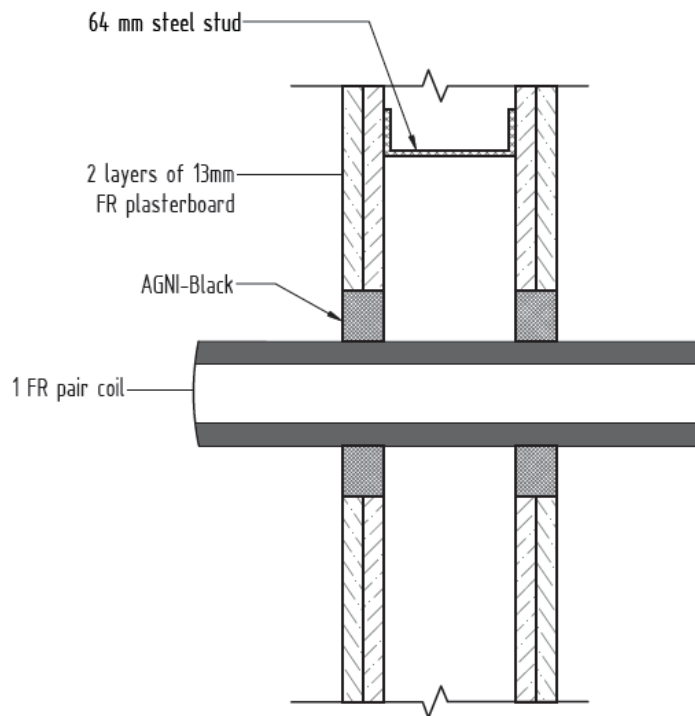
Service penetration details	
Service	Polyethylene Pair Coil Insulated Refrigeration Tube – Annealed Copper Tube
Aperture Size	103.2mm
Annular Spacing	Min: 18.0mm, Max: 46.5mm

Local Fire-stopping system	
Application	Symmetrical – applied to both faces of separating element
Products	AGNI-Black
Procedure	1. AGNI-Black applied into annular gap to the depth of the lining, 26mm (nominal).

### Test results

Structural adequacy	Not applicable
Integrity	No failure at 123 minutes
Insulation	75 minutes

## 5.9 Specimen 8



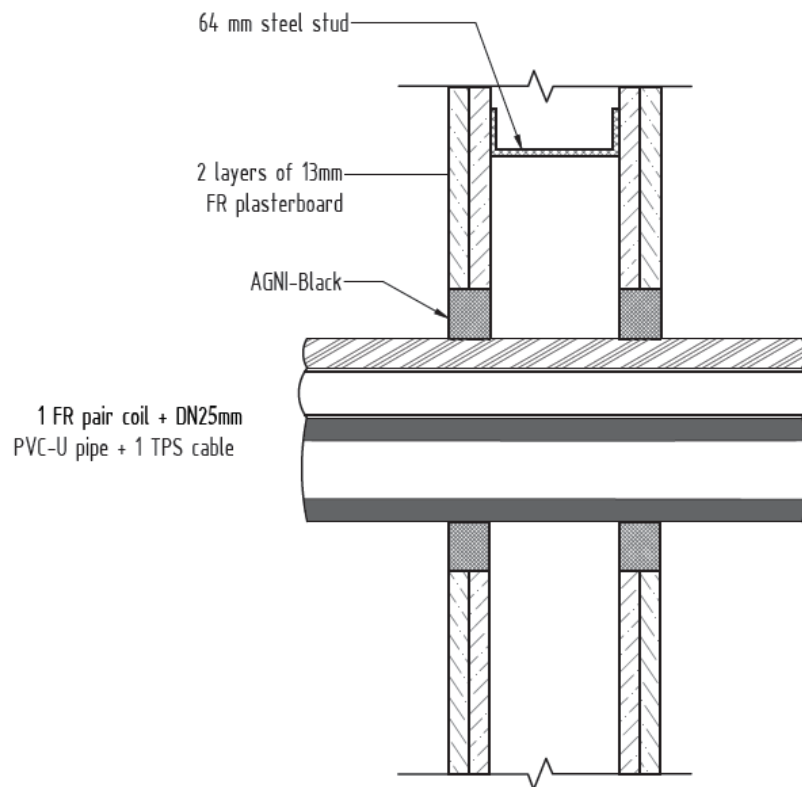
Service penetration details	
Service	Super Pair FR Rubber Insulated Fire Retardant Pair Coil
Aperture Size	138.3mm
Annular Spacing	Min: 16.7mm, Max: 44.7mm

Local Fire-stopping system	
Application	Symmetrical – applied to both faces of separating element
Products	AGNI-Black
Procedure	1. AGNI-Black applied into annular gap to the depth of the lining, 26mm (nominal).

### Test results

Structural adequacy	Not applicable
Integrity	No failure at 123 minutes
Insulation	No failure at 123 minutes

## 5.10 Specimen 9



Service penetration details	
Service	Super Pair FR Rubber Insulated Fire Retardant Pair Coil + Electrical Cable 450/750V 2C + E + uPVC 25mm
Aperture Size	141.5mm
Annular Spacing	Min: 18.3mm, Max: 45.1mm

Local Fire-stopping system	
Application	Symmetrical – applied to both faces of separating element
Products	AGNI-Black
Procedure	1. AGNI-Black applied into annular gap to the depth of the lining, 26mm (nominal).

### Test results

Structural adequacy	Not applicable
Integrity	No failure at 123 minutes
Insulation	No failure at 123 minutes

## 6 Photos

### 6.1 Photos before the test



Figure 1 - Unexposed face prior to test commencement



Figure 2 - Exposed face prior to test commencement