

# Regulatory Information Report

**RIRF24069**

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

Client:	Agnitek Pty Ltd
Test method:	AS1530.4-2014
Report Date:	26/07/2024
Test number:	PF24069

# Table of Contents

1.1	Document revision schedule .....	3
1.2	Signatories .....	3
2.	Report Summary.....	4
3.	General Information .....	5
3.1	Testing Scope .....	5
3.2	Contact Details.....	5
3.3	Specimen Preparation, Conditioning and Timeline .....	6
3.4	Use of the Report.....	7
4.	Specimen Description.....	8
4.1	Supporting Construction.....	8
4.2	Specimens .....	8
5.	Test Results.....	11
5.1	Specimen 1 .....	11
5.2	Specimen 2 .....	12
5.3	Specimen 3 .....	13
5.4	Specimen 4 .....	14
5.5	Specimen 5 .....	15
5.6	Specimen 6 .....	16
5.7	Specimen 7 .....	17
5.8	Specimen 8 .....	18
5.9	Specimen 9 .....	19
6.	Observations during the test.....	20
7.	Photos .....	21
7.1	Photos before and after the test.....	21

## 1.1 Document revision schedule

Revision #	Date	Description
1	15/07/2024	Issued to Client
2	26/07/2024	Drawings for specimens 4 and 5 are amended

## 1.2 Signatories

Report	Name	Signature	Date
Prepared by:	Alexey Kokorin		26/07/2024
Authorised by:	Andrew Bain (Authorized signatory)		26/07/2024



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

## 2. Report Summary

---

Service penetration was tested passing through a 90mm stud wall with one layer of 13mm FR plasterboard each side.

Specimen #	Service	Actual Integrity (min)	Actual Insulation (min)	FRL
1	DN40 PVC-U DWV Pipe	70 NF	70 NF	-/60/60
2	DN50 PVC-U DWV Pipe	70 NF	70 NF	-/60/60
3	DN65 PVC-U DWV Pipe	70 NF	68	-/60/60
4	DN80 PVC-U DWV Pipe	70 NF	70 NF	-/60/60
5	DN80 PVC-U DWV Pipe	70 NF	62	-/60/60
6	DN100 PVC-U DWV Pipe	70 NF	54	-/60/45
7	DN100 PVC-U DWV Pipe	70 NF	70 NF	-/60/60
8	16mm PE-Xb100 Pipe	70 NF	69	-/60/60
9	25mm PE-Xb100 Pipe	70 NF	70 NF	-/60/60

**NF – No failure during the test**

## 3. General Information

---

### 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. All specimens were capped in fire side only.

#### **Testing date:**

04/07/2024

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

02/07/2024

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

The test was discontinued at 70 minutes.

### 3.4 Use of the Report

A regulatory information report was issued in addition to the full test report PF24069. This provides the minimum information required for regulatory compliance.

This report shall not be reproduced, except in full.

The specimen was a symmetrical construction.

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 recognized 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	90mm Timber frame with one layer of 13mm FR plasterboard each side
	Dimensions	Width / Height (W/H): 1200mm x 1200mm
		Wall Thickness (T): 116mm
		Cavity: 90mm

Materials		
1.1	Item / Product Name	SG8 Timber Stud
	Dimensions	Width / Height (W/H): 90mm x 45mm
	Installation	Used to construct timber frame
1.3	Item / Product Name	41mm GIB Grabber Self Tapping Screw
	Dimensions	6g x 41mm
	Installation	Used to fix plasterboard to timber frame, steel studs to plasterboard

### 4.2 Specimens

Services		
2.1	Item / Product Name	DN40 PVC-U DWV Pipe
	Dimensions	Inner Diameter (ID):38mm
		Outer Diameter (OD):43mm
		Thickness (T):2.5mm
2.2	Item / Product Name	DN50 PVC-U DWV Pipe
	Dimensions	Inner Diameter (ID):50mm
		Outer Diameter (OD):56mm
		Thickness (T):3mm
	Item / Product Name	DN65 PVC-U DWV Pipe



2.3	Dimensions	Inner Diameter (ID):63.5mm
		Outer Diameter (OD):69mm
		Thickness (T):2.5mm – 3mm
2.4	Item / Product Name	DN80 PVC-U DWV Pipe
	Dimensions	Inner Diameter (ID):76.5mm
		Outer Diameter (OD):82.5mm
Thickness (T):3mm		
2.5	Item / Product Name	DN100 PVC-U DWV Pipe
	Dimensions	Inner Diameter (ID):103mm
		Outer Diameter (OD):110mm
Thickness (T):3.5mm		
2.6	Item / Product Name	16mm PEX Pipe
	Dimensions	Inner Diameter (ID):12mm
		Outer Diameter (OD):16mm
Thickness (T):2mm		
2.7	Item / Product Name	25mm PEX Pipe
	Dimensions	Inner Diameter (ID):19mm
		Outer Diameter (OD):25mm
Thickness (T):3mm		

### Sealants

3.1	Item / Product Name	AGNI-Seal
	Dimensions	600mL Sausage
	Installation	Installed between separating element, AGNI-Sleeve, AGIN-Wrap and pipes

### Fixings

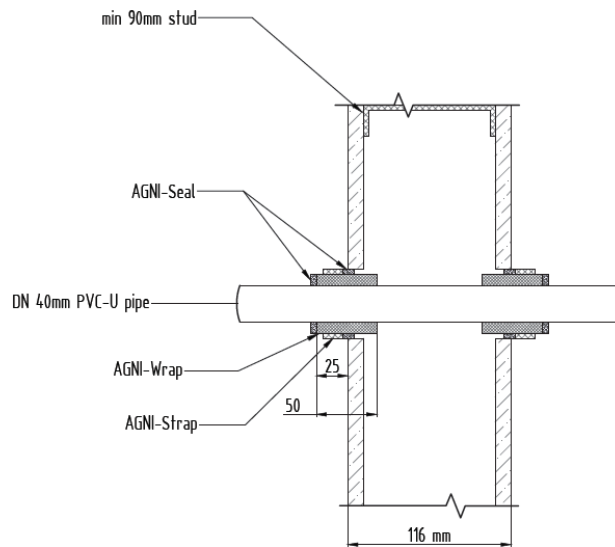
4.1	Item / Product Name	AGNI-Strap - Stainless Steel Tie
	Dimensions	Width / Length (W/L): 4.6mm x 450mm
	Installation	Used to fix AGNI-Sleeve/AGNI-Wrap around pipe



<b>Intumescent</b>		
9.1	Item / Product Name	AGNI-Sleeve
	Dimensions	Width (W): 166mm
		Thickness (T): 3.5mm
	Installation	Installed around service
9.2	Item / Product Name	AGNI-Wrap
	Dimensions	Width (W): 50mm
		Thickness (T): 3.5mm
	Installation	Installed around service

## 5. Test Results

### 5.1 Specimen 1



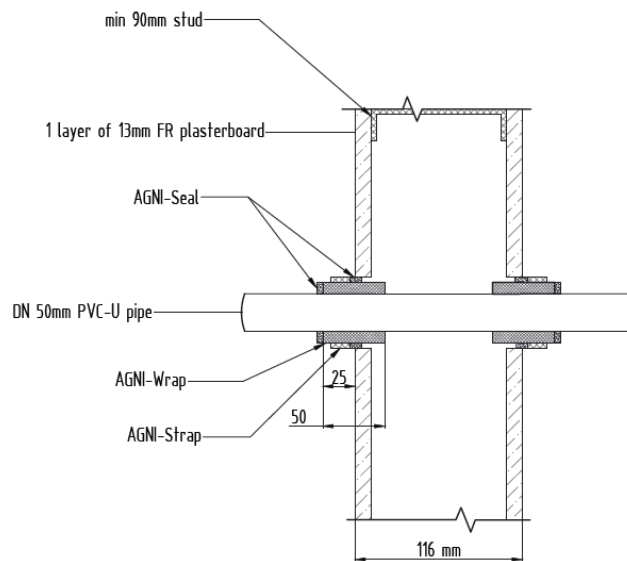
Service penetration details	
Service	DN40 PVC-U DWV Pipe
Service Support	Unistrut structure at 530mm and 1515mm on non-fire side
Aperture Diameter	55mm
Annular Spacing	Min: 5.5mm, Max: 6.5mm

Local Fire-stopping system	
Application	Symmetrical – installed on both faces of separating element
System description	50mm AGNI-Wrap secured around pipe with no overlap, using a cable tie. AGNI-Wrap inserted in annular space, extending 25mm (nominal) into aperture. AGNI-Seal sealed AGNI-Wrap and separating element joint. 5mm (nominal) AGNI-Seal installed between AGNI-Wrap and pipe.

### Test results

Structural adequacy	Not applicable
Integrity	No failure at 70 minutes
Insulation	No failure at 70 minutes

## 5.2 Specimen 2



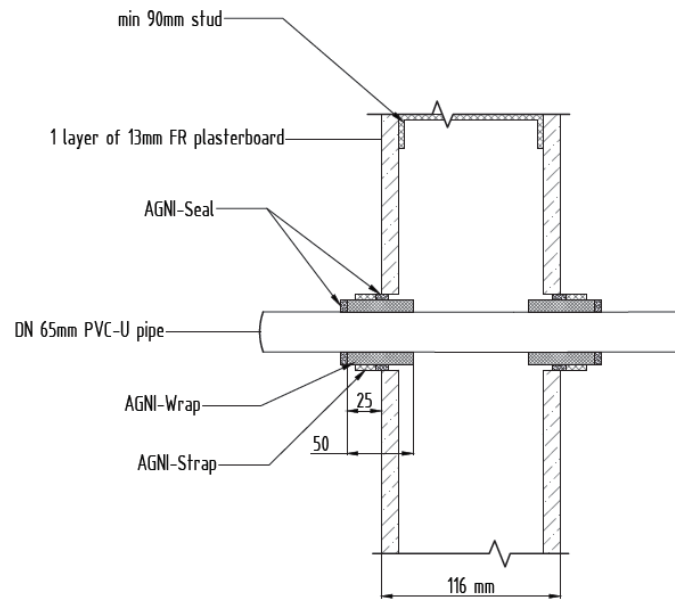
Service penetration details	
Service	DN50 PVC-U DWV Pipe
Service Support	Unistrut structure at 530mm and 1515mm on non-fire side Steel Track at 300mm on fire side
Aperture Diameter	65mm
Annular Spacing	4.5mm

Local Fire-stopping system	
Application	Symmetrical – installed on both faces of separating element
System description	50mm AGNI-Wrap secured around pipe with no overlap, using a cable tie. AGNI-Wrap inserted in annular space, extending 25mm (nominal) into aperture. AGNI-Seal sealed AGNI-Wrap and separating element joint. 5mm (nominal) AGNI-Seal installed between AGNI-Wrap and pipe.

### Test results

Structural adequacy	Not applicable
Integrity	No failure at 70 minutes
Insulation	No failure at 70 minutes

### 5.3 Specimen 3



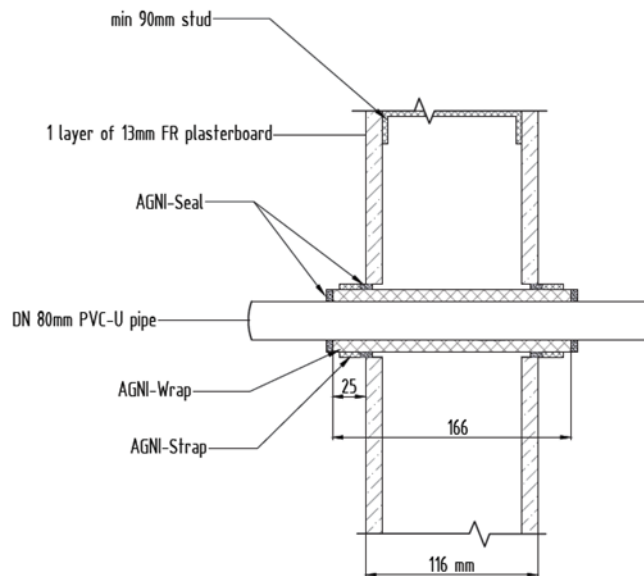
Service penetration details	
Service	DN65 PVC-U DWV Pipe
Service Support	Unistrut structure at 530mm and 1515mm on non-fire side Steel Track at 300mm on fire side
Aperture Diameter	86mm
Annular Spacing	Min: 8mm, Max: 9mm

Local Fire-stopping system	
Application	Symmetrical – installed on both faces of separating element
System description	50mm AGNI-Wrap secured around pipe with no overlap, using a cable tie. AGNI-Wrap inserted in annular space, extending 25mm (nominal) into aperture. AGNI-Seal sealed AGNI-Wrap and separating element joint. 5mm (nominal) AGNI-Seal installed between AGNI-Wrap and pipe.

#### Test results

Structural adequacy	Not applicable
Integrity	No failure at 70 minutes
Insulation	68 minutes

## 5.4 Specimen 4



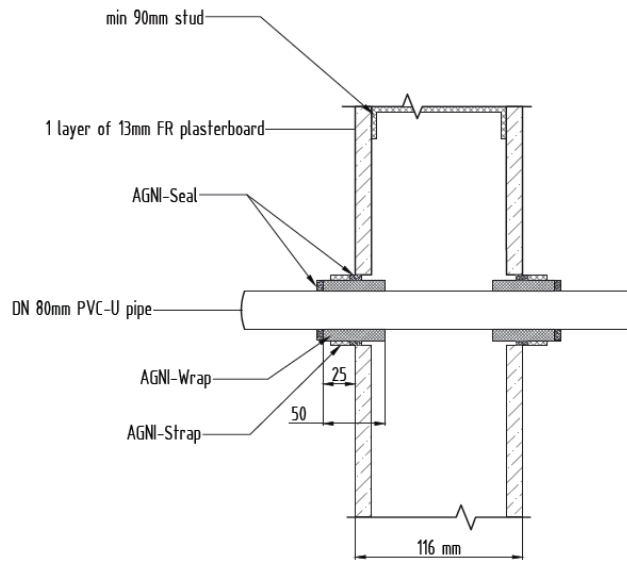
Service penetration details	
Service	DN80 PVC-U DWV Pipe
Service Support	Unistrut structure at 530mm and 1515mm on non-fire side Steel Track at 300mm on fire side
Aperture Diameter	94mm
Annular Spacing	Min: 3.5mm, Max: 8mm

Local Fire-stopping system	
Application	Symmetrical – installed passing through separating element
System description	166mm AGNI-Sleeve inserted through aperture, extending 25mm (nominal) from both sides of separating element, secured around pipe using a cable tie from each side. AGNI-Seal sealed AGNI-Sleeve and separating element joint. 5mm (nominal) AGNI-Seal installed between AGNI-Sleeve and pipe.

### Test results

Structural adequacy	Not applicable
Integrity	No failure at 70 minutes
Insulation	No failure at 70 minutes

## 5.5 Specimen 5



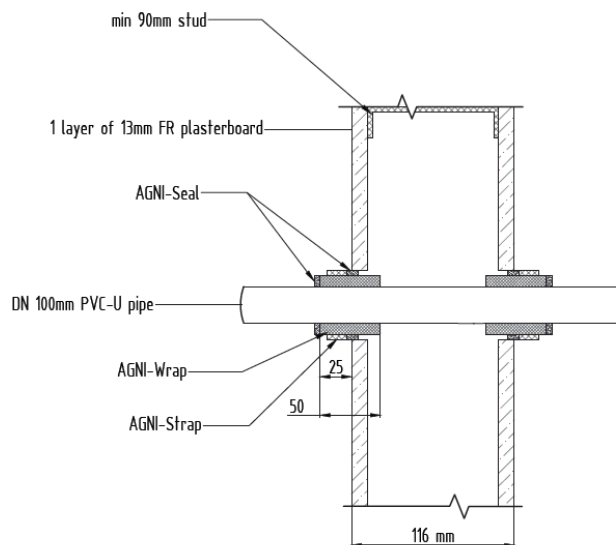
Service penetration details	
Service	DN80 PVC-U DWV Pipe
Service Support	Unistrut structure at 530mm and 1515mm on non-fire side Steel Track at 300mm on fire side
Aperture Diameter	94mm
Annular Spacing	Min: 3.5mm, Max: 8mm

Local Fire-stopping system	
Application	Symmetrical – installed on both faces of separating element
System description	50mm AGNI-Wrap secured around pipe with no overlap, using a cable tie. AGNI-Wrap inserted in annular space, extending 25mm (nominal) into aperture. AGNI-Seal sealed AGNI-Wrap and separating element joint. 5mm (nominal) AGNI-Seal installed between AGNI-Wrap and pipe.

### Test results

Structural adequacy	Not applicable
Integrity	No failure at 70 minutes
Insulation	62 minutes

## 5.6 Specimen 6



Service penetration details	
Service	DN100 PVC-U DWV Pipe
Service Support	Unistrut structure at 530mm and 1515mm on non-fire side Steel Track at 300mm on fire side
Aperture Diameter	120mm
Annular Spacing	Min: 4mm, Max: 6mm

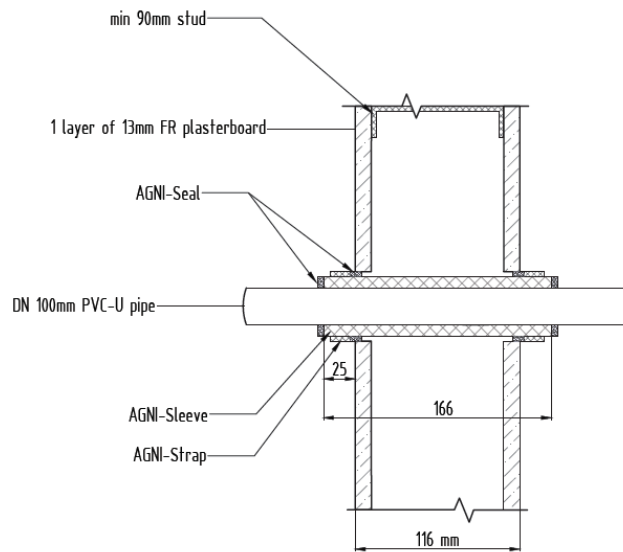
Local Fire-stopping system	
Application	Symmetrical – installed on both faces of separating element
System description	50mm AGNI-Wrap secured around pipe with no overlap, using a cable tie. AGNI-Wrap inserted in annular space, extending 25mm (nominal) into aperture. AGNI-Seal sealed AGNI-Wrap and separating element joint. 5mm (nominal) AGNI-Seal installed between AGNI-Wrap and pipe.

### Test results

Structural adequacy	Not applicable
Integrity	No failure at 70 minutes
Insulation	54 minutes



## 5.7 Specimen 7



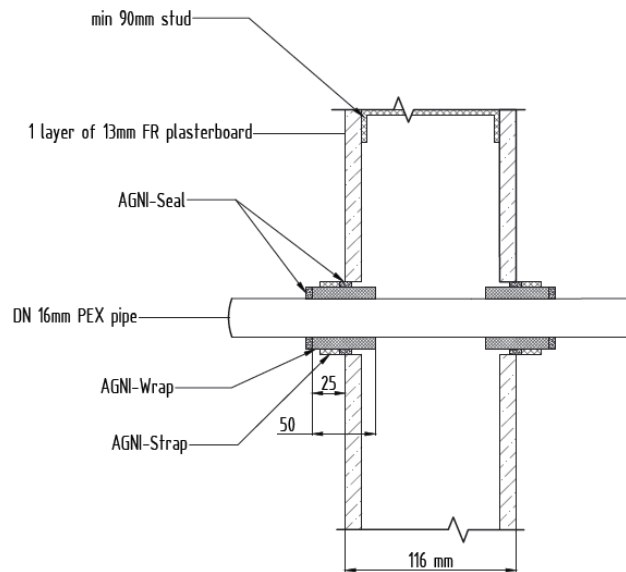
Service penetration details	
Service	DN100 PVC-U DWV Pipe
Service Support	Unistrut structure at 530mm and 1515mm on non-fire side Steel Track at 300mm on fire side
Aperture Diameter	120mm
Annular Spacing	Min: 4.5mm, Max: 5.5mm

Local Fire-stopping system	
Application	Symmetrical – installed passing through separating element
System description	166mm AGNI-Sleeve inserted through aperture, extending 25mm (nominal) from both sides of separating element, secured around pipe using a cable tie from each side. AGNI-Seal sealed AGNI-Sleeve and separating element joint. 5mm (nominal) AGNI-Seal installed between AGNI-Sleeve and pipe.

### Test results

Structural adequacy	Not applicable
Integrity	No failure at 70 minutes
Insulation	No failure at 70 minutes

## 5.8 Specimen 8



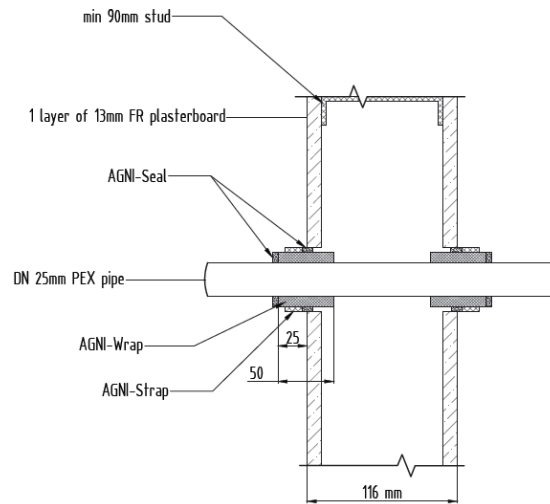
Service penetration details	
Service	16mm PEX Pipe
Service Support	Unistrut structure at 530mm and 1515mm on non-fire side Steel Track at 300mm on fire side
Aperture Diameter	26mm
Annular Spacing	Min: 3.5mm, Max: 6.5mm

Local Fire-stopping system	
Application	Symmetrical – installed on both faces of separating element
System description	50mm AGNI-Wrap secured around pipe with no overlap, using a cable tie. AGNI-Wrap inserted in annular space, extending 25mm (nominal) into aperture. AGNI-Seal sealed AGNI-Wrap and separating element joint. 5mm (nominal) AGNI-Seal installed between AGNI-Wrap and pipe.

### Test results

Structural adequacy	Not applicable
Integrity	No failure at 70 minutes
Insulation	69 minutes

## 5.9 Specimen 9



Service penetration details	
Service	25mm PEX Pipe
Service Support	Unistrut structure at 530mm and 1515mm on non-fire side Steel Track at 300mm on fire side
Aperture Diameter	35mm
Annular Spacing	Min: 4.5mm, Max: 5.5mm

Local Fire-stopping system	
Application	Symmetrical – installed on both faces of separating element
System description	50mm AGNI-Wrap secured around pipe with no overlap, using a cable tie. AGNI-Wrap inserted in annular space, extending 25mm (nominal) into aperture. AGNI-Seal sealed AGNI-Wrap and separating element joint. 5mm (nominal) AGNI-Seal installed between AGNI-Wrap and pipe.

### Test results

Structural adequacy	Not applicable
Integrity	No failure at 70 minutes
Insulation	No failure at 70 minutes

## 6. Observations during the test

---

Time min	Test face	SP#	OBSERVATIONS/REMARKS
53	U	5	Cotton pad test applied for 30 seconds over the red glowing in aperture – PASS
55	U	5	Cotton pad test applied for 30 seconds over the red glowing in aperture – PASS
59	U	5	Cotton pad test applied for 30 seconds over the red glowing in aperture – PASS
70			Test Discontinued

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

## 7. Photos

---

### 7.1 Photos before and after the test



**Figure 12 – Exposed face prior to test commencement**



**Figure 13 – Unexposed face prior to test commencement**





**Figure 21 – Exposed face after the test**