

Regulatory Information Report

RIRF24123

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

Client: Agnitek Pty Ltd

Test method: AS1530.4-2014

Report Date: 09/01/2025

Test number: PF24123



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1.1 Document revision schedule

Revision #	Date	Description
1	09/01/2025	Issued to Client

1.2 Signatories

Report	Name	Signature	Date
Prepared by:	Alexey Kokorin		09/01/2025
Authorised by:	Andrew Bain (Authorized signatory)		09/01/2025



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

2. Report Summary

Service penetrations were tested passing through a 130mm thick concrete horizontal separating element (Composite floor 60). Services were capped on the fire side.

SP #	Service	On Peak (P) / In Valley (V)	Actual Integrity (min)	Actual Insulation (min)	FRL
1	DN100 PVC-U DWV PIPE	V	68NF	68NF	-/60/60
2	DN100 PVC-U DWV PIPE	P/V	68NF	68NF	-/60/60
3	DN80 PVC-U DWV PIPE	P/V	68NF	68NF	-/60/60
4	DN32 PVC-U DWV PIPE	P/V	68NF	68NF	-/60/60
5	DN50 PVC-U DWV PIPE	P/V	68NF	68NF	-/60/60
6	DN65 PVC-U DWV PIPE	P/V	68NF	68NF	-/60/60
7	50mm FLEXIBLE CONDUIT (empty)	P/V	68NF	68NF	-/60/60
8	50mm FLEXIBLE CONDUIT (filled)	P/V	68NF	68NF	-/60/60
9	90mm PPR GREEN PIPE	P/V	68NF	68NF	-/60/60

NF – No Failure

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

Client/Applicant:

Agnitek Pty Ltd

8 Clare St, Bayswater, VIC, 3153

Australia

Contact e-mail: 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. Pipes were capped from exposed side only.

Testing date:

25/11/2024

Installation completion date:

21/11/2024

Termination of The Test:

The test was discontinued at 68 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 PF24123. 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 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	Concrete Slab (Comflor 60)
	Dimensions	Width / Height (W/H): 1400mm x 1410mm
		Slab Thickness (T): Peak - 130mm Topping – 70mm

4.2 Specimens

Services		
2.1	Item / Product Name	DN100 PVC-U DWV PIPE
	Dimensions	Diameter (ID): 104mm
		Diameter (OD): 111mm
		Thickness (T): 3.5mm
2.2	Item / Product Name	DN80 PVC-U DWV PIPE
	Dimensions	Inner Diameter (ID): 75mm
		Outer Diameter (OD): 82mm
		Thickness (T): 3.5mm
2.3	Item / Product Name	DN32 PVC-U DWV PIPE
	Dimensions	Inner Diameter (ID): 31.8mm
		Outer Diameter (OD): 36.8mm
		Thickness (T): 2.5mm
2.4	Item / Product Name	DN50 PVC-U DWV PIPE
	Dimensions	Inner Diameter (ID): 50.6mm
		Outer Diameter (OD): 55.7mm
		Thickness (T): 2.5mm
2.5	Item / Product Name	DN65 PVC-U DWV PIPE
	Dimensions	Diameter (ID): 63mm

		Diameter (OD): 69mm
		Thickness (T): 3mm
2.6	Item / Product Name	FLEXIBLE CONDUIT
	Dimensions	Inner Diameter (ID): 40mm
		Outer Diameter (OD): 50mm
	Thickness (T): 5mm (rib thickness)	
2.7	Item / Product Name	ELECTRICAL CABLE 450/750V 2C + E
	Cable Dimensions	Width x Depth (W/D): 14mm x 6.5mm
	Core Dimensions	Overall Diameter (OD): 4mm
		Wire Diameter: 0.85mm
	Earth Dimensions	Overall Diameter (OD): 3.2mm
Wire Diameter: 0.64mm		
2.8	Item / Product Name	SDR11 S 90mm PPR PIPE
	Dimensions	Inner Diameter (ID): 73.6mm
		Outer Diameter (OD): 90mm
	Thickness (T): 8.2mm	

Intumescent

4.1	Item / Product Name	AGNI-Sleeve
	Dimensions	Width (W): 110mm
		Thickness (T): 3.5mm
	Installation	Installed around services from exposed side
4.	Item / Product Name	AGNI-Board
	Dimensions	Width (W): 20mm
	Installation	Rigid batt pieces installed from exposed side to fill annular gap around services

Fixings

5.1	Item / Product Name	Concrete Screw
	Dimensions	Width / Height (W/H): 6mm x 50mm
	Installation	Used to secure AGNI-Sleeve to concrete slab on exposed face



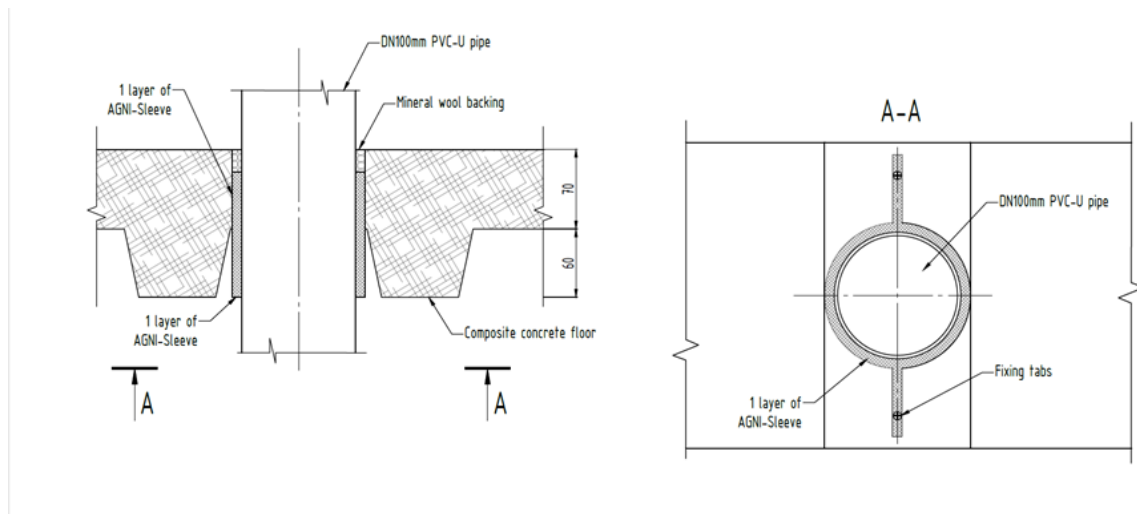
5. Test Results

5.1 Observations during the test

Time min	Test face	SP#	OBSERVATIONS/REMARKS
	U/E		No major observations during the test
68			TEST DISCONTINUED

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

5.2 Specimen 1



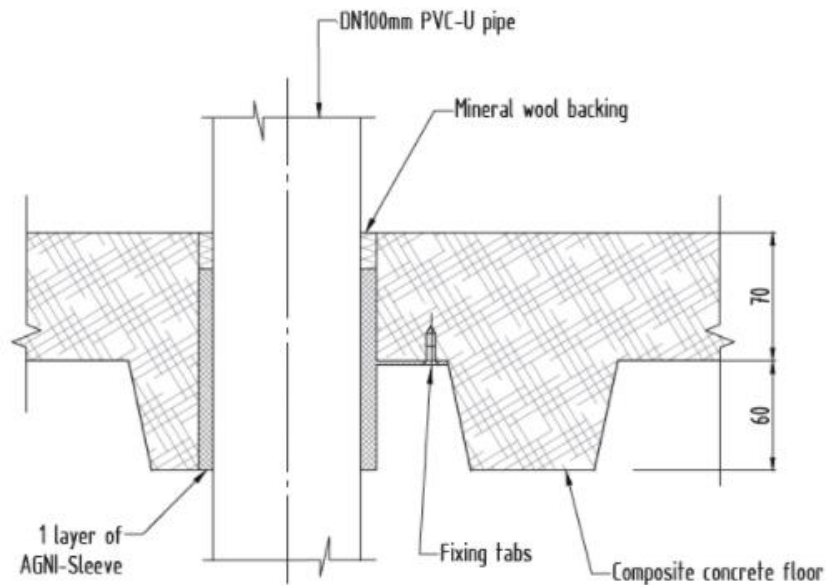
Service penetration details	
Service	DN100 PVC-U DWV PIPE
Aperture Diameter	127.2mm
Annular Spacing	Min: 8.4mm Max: 8.8mm

Local Fire-stopping system	
Application	Asymmetrical – installed from the exposed side only
System description	<ol style="list-style-type: none"> 20mm (nominal) thick AGNI-Board was pushed up into the annular gap around the pipe. 110mm wide AGNI-Sleeve is cut to fit one revolution of the aperture (nominal 50mm within the slab). Two 10mm (wide) x 40mm (high) tabs are cut from the top of the AGNI-Sleeve. The AGNI-Sleeve tabs are bent over as the AGNI-Sleeve is pushed into the annular gap. The AGNI-Sleeve was fixed with masonry screws.

Test results

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

5.3 Specimen 2



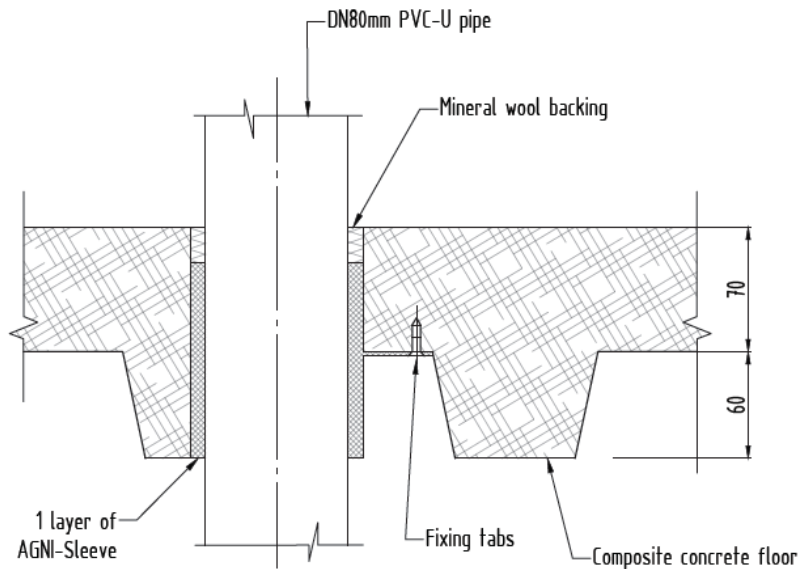
Service	DN100 PVC-U DWV PIPE
Aperture Diameter	127.8mm
Annular Spacing	Min: 5.6mm Max: 11.2mm

Local Fire-stopping system	
Application	Asymmetrical – installed from the exposed side only
System description	<ol style="list-style-type: none"> 1. 20mm (nominal) thick AGNI-Board were pushed up into the annular gap around the pipe. 2. 110mm wide AGNI-Sleeve is cut to fit one revolution of the aperture (nominal 50mm within the slab). 3. Two 10mm (wide) x 40mm (high) tabs are cut from the top of the AGNI-Sleeve. 4. The AGNI-Sleeve tabs are bent over as the AGNI-Sleeve is pushed into the annular gap. 5. The AGNI-Sleeve was fixed with masonry screws.

Test results

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

5.4 Specimen 3



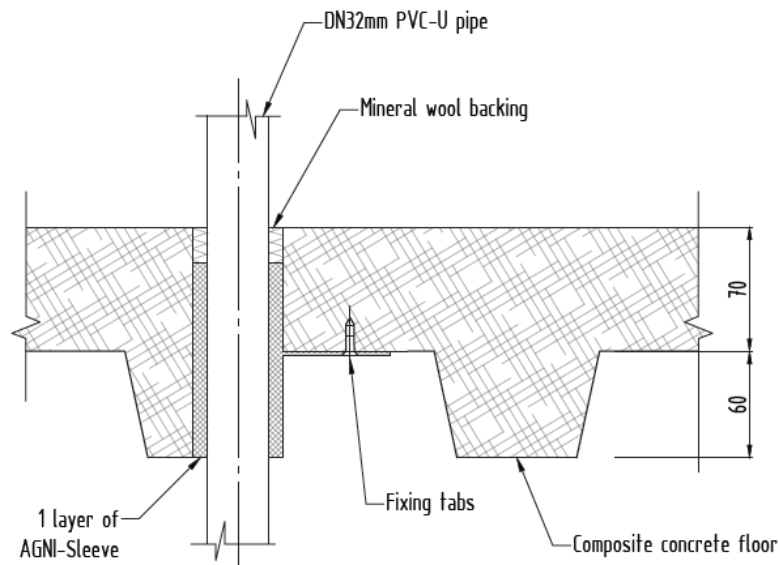
Service penetration details	
Service	DN80 PVC-U DWV PIPE
Aperture Diameter	102.6mm
Annular Spacing	Min: 8.9mm Max: 11.7mm

Local Fire-stopping system	
Application	Asymmetrical – installed from the exposed side only
System description	<ol style="list-style-type: none"> 20mm (nominal) thick AGNI-Board were pushed up into the annular gap around the pipe. 110mm wide AGNI-Sleeve is cut to fit one revolution of the aperture (nominal 50mm within the slab). Two 10mm (wide) x 40mm (high) tabs are cut from the top of the AGNI-Sleeve. The AGNI-Sleeve tabs are bent over as the AGNI-Sleeve is pushed into the annular gap. The AGNI-Sleeve was fixed with masonry screws.

Test results

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

5.5 Specimen 4



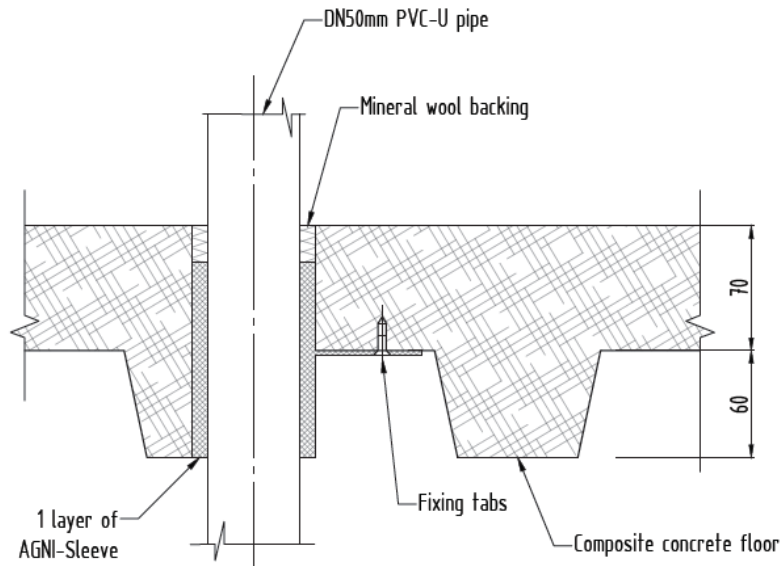
Service penetration details	
Service	DN32 PVC-U DWV PIPE
Aperture Diameter	57.7mm
Annular Spacing	Min: 8.3mm Max: 12.7mm

Local Fire-stopping system	
Application	Asymmetrical – installed from the exposed side only
System description	<ol style="list-style-type: none"> 1. 20mm (nominal) thick AGNI-Board were pushed up into the annular gap around the pipe. 2. 110mm wide AGNI-Sleeve is cut to fit one revolution of the aperture (nominal 50mm within the slab). 3. Two 10mm (wide) x 40mm (high) tabs are cut from the top of the AGNI-Sleeve. 4. The AGNI-Sleeve tabs are bent over as the AGNI-Sleeve is pushed into the annular gap. 5. The AGNI-Sleeve was fixed with masonry screws.

Test results

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

5.6 Specimen 5



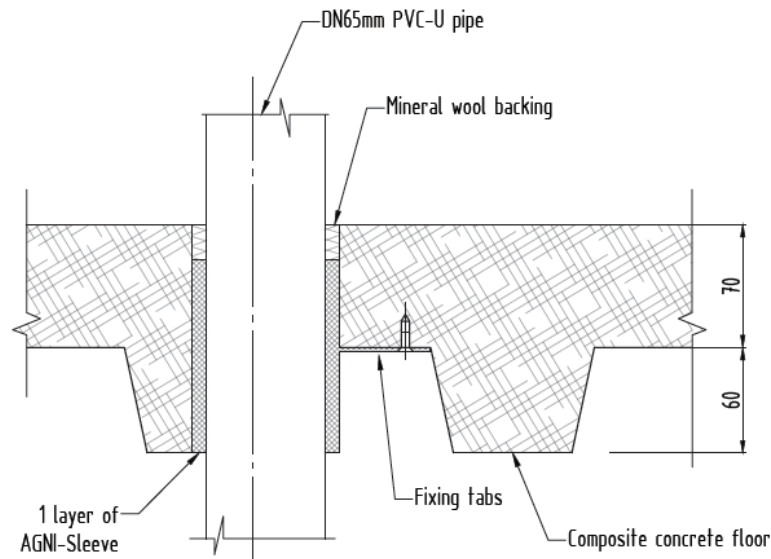
Service penetration details	
Service	DN50 PVC-U PIPE
Aperture Diameter	66.9mm
Annular Spacing	Min: 4.6mm Max: 6.3mm

Local Fire-stopping system	
Application	Asymmetrical – installed from the exposed side only
System description	<ol style="list-style-type: none"> 1. 20mm (nominal) thick AGNI-Board were pushed up into the annular gap around the pipe. 2. 110mm wide AGNI-Sleeve is cut to fit one revolution of the aperture (nominal 50mm within the slab). 3. Two 10mm (wide) x 40mm (high) tabs are cut from the top of the AGNI-Sleeve. 4. The AGNI-Sleeve tabs are bent over as the AGNI-Sleeve is pushed into the annular gap. 5. The AGNI-Sleeve was fixed with masonry screws.

Test results

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

5.7 Specimen 6



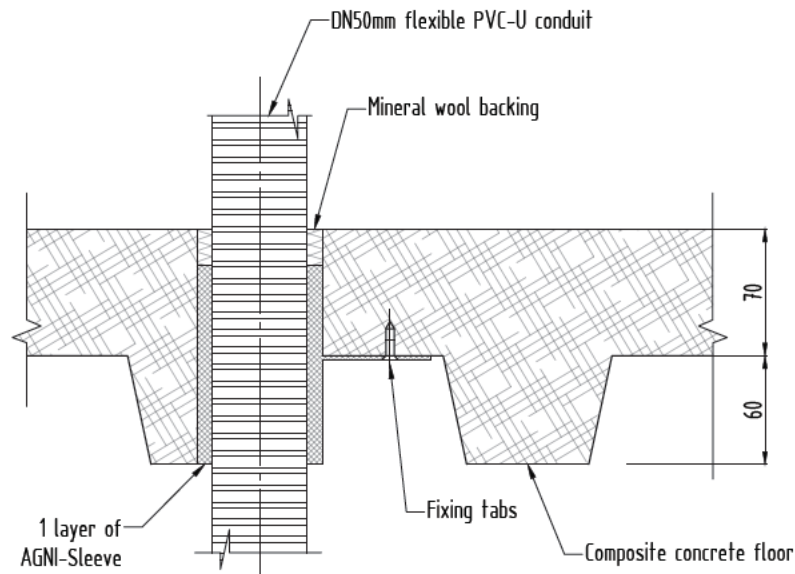
Service penetration details	
Service	DN65 PVC-U PIPE
Aperture Diameter	87mm
Annular Spacing	Min: 7.5mm Max: 10.5mm

Local Fire-stopping system	
Application	Asymmetrical – installed from the exposed side only
System description	<ol style="list-style-type: none"> 1. 20mm (nominal) thick AGNI-Board were pushed up into the annular gap around the pipe. 2. 110mm wide AGNI-Sleeve is cut to fit one revolution of the aperture (nominal 50mm within the slab). 3. Two 10mm (wide) x 40mm (high) tabs are cut from the top of the AGNI-Sleeve. 4. The AGNI-Sleeve tabs are bent over as the AGNI-Sleeve is pushed into the annular gap. 5. The AGNI-Sleeve was fixed with masonry screws.

Test results

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

5.8 Specimen 7



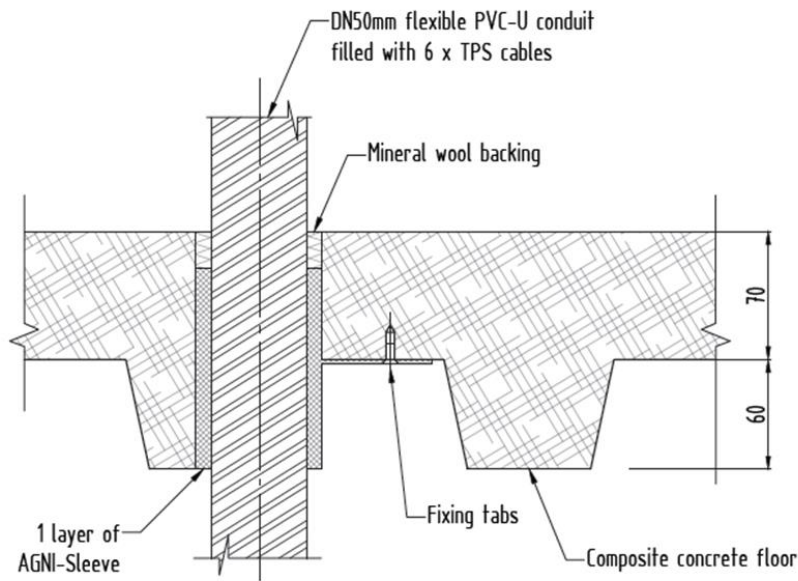
Service penetration details	
Service	50mm FLEXIBLE CONDUIT (empty)
Aperture Diameter	67.7mm
Annular Spacing	Min: 6.5mm Max: 11.2mm

Local Fire-stopping system	
Application	Asymmetrical – installed from the exposed side only
System description	<ol style="list-style-type: none"> 20mm (nominal) thick AGNI-Board were pushed up into the annular gap around the pipe. 110mm wide AGNI-Sleeve is cut to fit one revolution of the aperture (nominal 50mm within the slab). Two 10mm (wide) x 40mm (high) tabs are cut from the top of the AGNI-Sleeve. The AGNI-Sleeve tabs are bent over as the AGNI-Sleeve is pushed into the annular gap. The AGNI-Sleeve was fixed with masonry screws.

Test results

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

5.9 Specimen 8



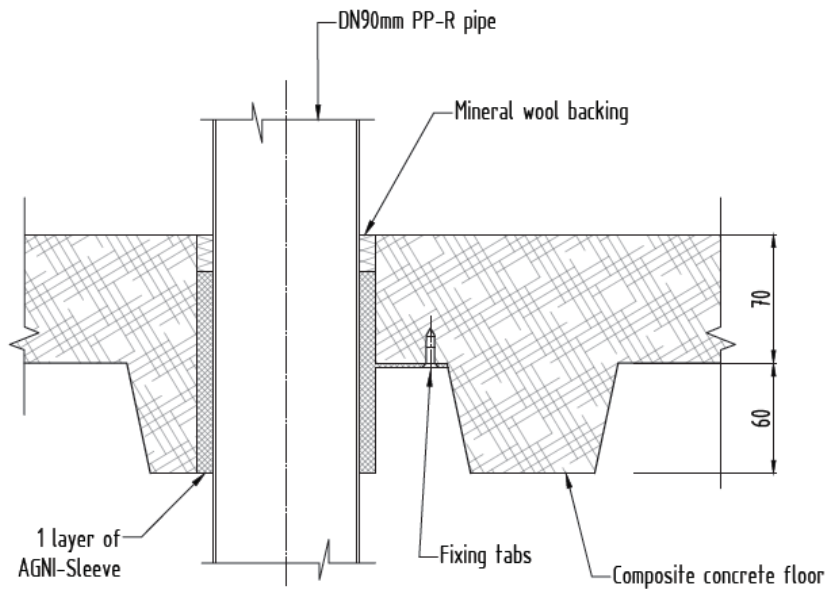
Service penetration details	
Service	50mm FLEXIBLE CONDUIT (filled 6 x TPS Cables)
Aperture Diameter	67.5mm
Annular Spacing	Min: 8.6mm Max: 8.9mm

Local Fire-stopping system	
Application	Asymmetrical – installed from the exposed side only
System description	<ol style="list-style-type: none"> 1. 20mm (nominal) thick AGNI-Board were pushed up into the annular gap around the pipe. 2. 110mm wide AGNI-Sleeve is cut to fit one revolution of the aperture (nominal 50mm within the slab). 3. Two 10mm (wide) x 40mm (high) tabs are cut from the top of the AGNI-Sleeve. 4. The AGNI-Sleeve tabs are bent over as the AGNI-Sleeve is pushed into the annular gap. 5. The AGNI-Sleeve was fixed with masonry screws.

Test results

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

5.10 Specimen 9



Service penetration details	
Service	90mm PPR PIPE
Aperture Diameter	128.7mm
Annular Spacing	Min: 17.3mm Max: 21.4mm

Local Fire-stopping system	
Application	Asymmetrical – installed from the exposed side only
System description	<ol style="list-style-type: none"> 1. 20mm (nominal) thick AGNI-Board were pushed up into the annular gap around the pipe. 2. 110mm wide AGNI-Sleeve is cut to fit one revolution of the aperture (nominal 50mm within the slab). 3. Two 10mm (wide) x 40mm (high) tabs are cut from the top of the AGNI-Sleeve. 4. The AGNI-Sleeve tabs are bent over as the AGNI-Sleeve is pushed into the annular gap. 5. The AGNI-Sleeve was fixed with masonry screws.

Test results

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