BUILDING TRUST

SikaSeal-632 Fire Putty+

DECLARATION OF PERFORMANCE
No. 30816702

1	**UNIQUE IDENTIFICATION CODE OF THE PRODUCT-TYPE:**	30816702
2	**INTENDED USE/S**	EAD 350454-00-1104:2017 Fire Stopping and Sealing Product: Penetration Seals
3	**MANUFACTURER:**	Sika Services AG Tüffenwies 16-22 8064 Zürich
4	**AUTHORISED REPRESENTATIVE:**	-
5	**SYSTEM/S OF AVCP:**	System 1
6b	**EUROPEAN ASSESSMENT DOCUMENT:**	EAD 350454-00-1104:2017
	European Technical Assessment:	ETA-21/1029 of 2021/11/25
	Technical Assessment Body:	ETA-DANMARK A/S
	Notified body/ies:	2531

7 DECLARED PERFORMANCE/S

Essential Characteristics	Performance	AVCP	Harmonised Technical Specification
Reaction to fire	NPD	System 1	EAD 350454-00-1104:2017
Resistance to fire	Annex A	System 1	
Air permeability	Annex B	System 1	
Water permeability	NPD	System 1	
Content, emission and/or release of dangerous substances	NPD	System 1	
Mechanical resistance and stability	NPD	System 1	
Resistance to impact/movement	NPD	System 1	
Adhesion	NPD	System 1	
Durability	Z_2	System 1	
Airborne sound insulation at 25 mm depth	Rw (C;Ctr)= 67 (-2;-7) dB*	System 1	
Thermal properties	NPD	System 1	
Water vapour permeability	NPD	System 1	

*Applicable only for SikaSeal-632 Fire Putty+ Pads in socket boxes

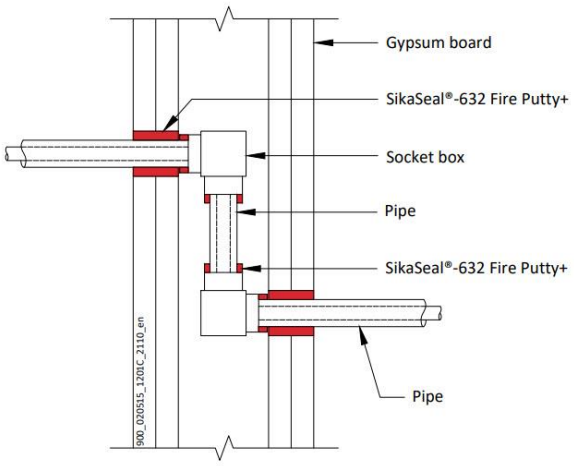
ANNEX A – RESISTANCE TO FIRE CLASSIFICATION – SIKASEAL-632 FIRE PUTTY+

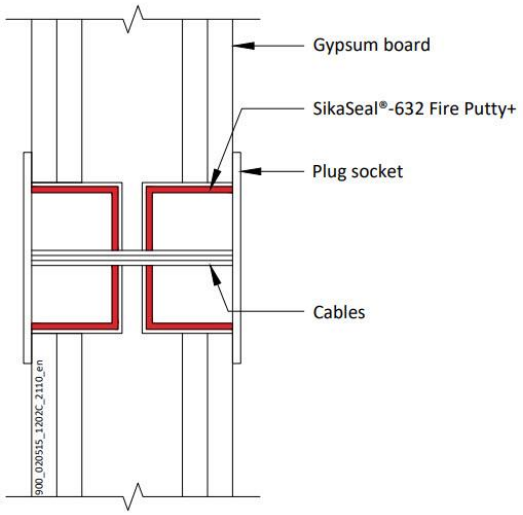
A.1 Flexible wall constructions with wall thickness of minimum 100 mm

A.1.1 Pipe and cable penetration seals with 4 mm thick SikaSeal-632 Fire Putty+ in socket box

Penetration Seal: Socket boxes with 15 mm long SikaSeal-632 Fire Putty+ wrapped around the pipe protrusion from the socket box. Min. 30 mm between cable penetrations.

Construction details:





A.1.1.1 Double side penetration seal with pipes in socket boxes

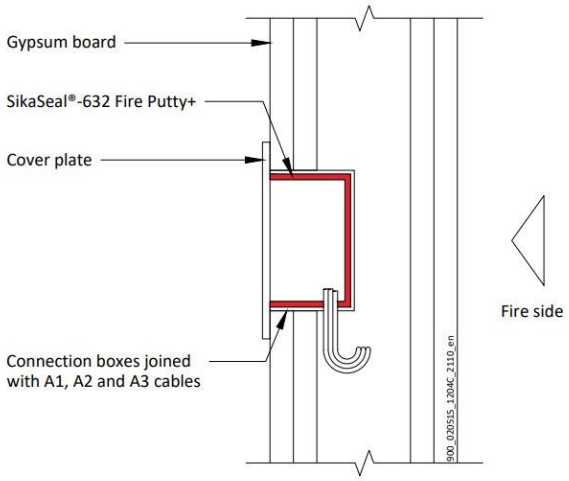
Services	Socket box	SikaSeal-632 Fire Putty+ - mm	Aperture mm	Classification
Høiax 25mm PEX pipe in pipe hose	Single or double Høiax Push Wallbox 15mm*	174 x 64 x 4 mm pad around pipe / 50 Ø x 25 mm at back of the box	63 Ø	**EI 90**
Cables up to 14 mm diameter	UK standard double socket box, maximum 130mm wide x 70mm high x 47mm deep, each with up to 22mm hole cut to accept the cables	Interior of box fully lined with pad	Maximum 135 wide x 75 high	**EI 60**

*Fixed directly to studs or with steel plate between studs.

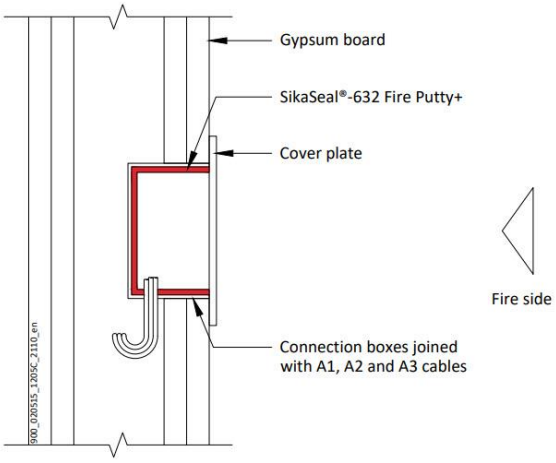
A.1.2 Cable penetration seals with 4 mm thick SikaSeal-632 Fire Putty+ in socket box

Penetration Seal: Socket boxes with SikaSeal-632 Fire Putty+ wrapped around the cable protrusion from the socket box.

Construction details:



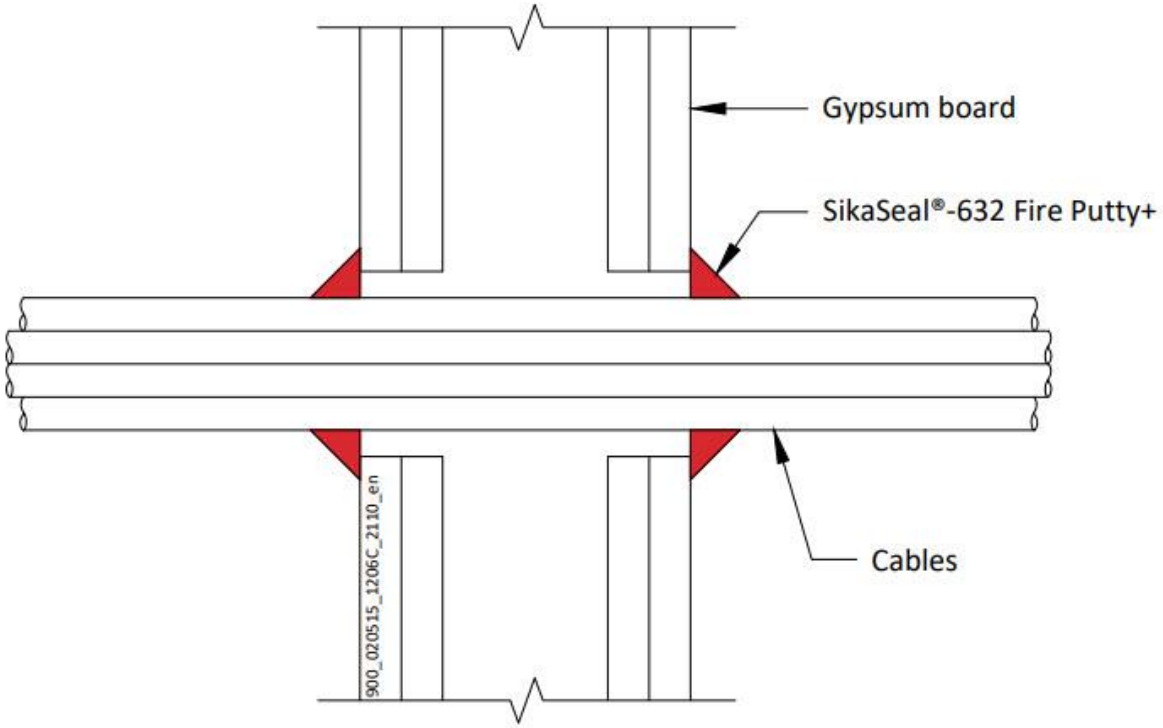
Construction details:



A.1.2.1 Single side penetration seal with cables in socket boxes

Services	Socket box	SikaSeal-632 Fire Putty+	Position	Aperture mm	Classification
Cables up to 14 mm diameter	Schneider Electric Ref. IMT 36026 connection box, 72mm wide x 90mm high x 50mm deep	Fitted lining the back of the back box	Side by side – 1 fitted to each face, or separated	73 wide x 91 High x 51 deep	**E 60, EI 45**
Cables up to 14 mm diameter	Elko 4189 1223720 connection box, 72mm wide x 90mm high x 58mm deep	Interior of box fully lined with pad	Adjacent – 1 fitted to each face, or separated	92 wide x 112 High	**EI 90**
Cables up to 14 mm diameter	ELKO 5421 123740 connection box, 73mm wide x 73mm high x 55mm deep	Interior of box fully lined with pad	Side by side – 1 fitted to each face, or separated	74 wide x 74 High	**EI 90**

A.1.3 Double sided penetration seal with cables

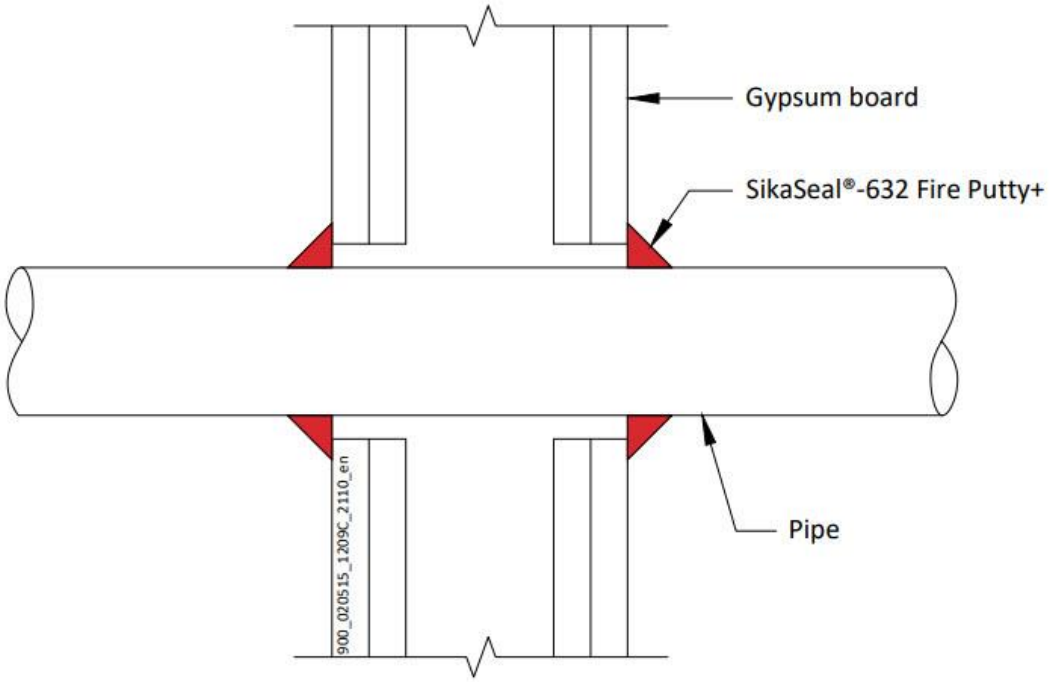
Penetration Seal: Cables (single or bundled up to 50 mm Ø) penetrating through a flexible or rigid wall construction and fitted at any position within the aperture, sealed with a 15mm diameter cord of SikaSeal-632 Fire Putty+ on both sides of the wall. Maximum annular space 10 mm (A1) and minimum separation between penetration seals 30 mm (A2).
Construction details: 

A.1.3.1

Services	Classification
Blank seal with a 15 mm deep cord of SikaSeal-632 Fire Putty+ on both sides of the wall	**EI 120**
Cables up to 21 mm diameter, single or in a bundle up to 50 mm diameter*	**EI 120**
Cables up to 80 mm diameter, single or in a bundle up to 50 mm diameter*	**EI 60**

* Cable specification from EN 1366-3 standard cable configuration

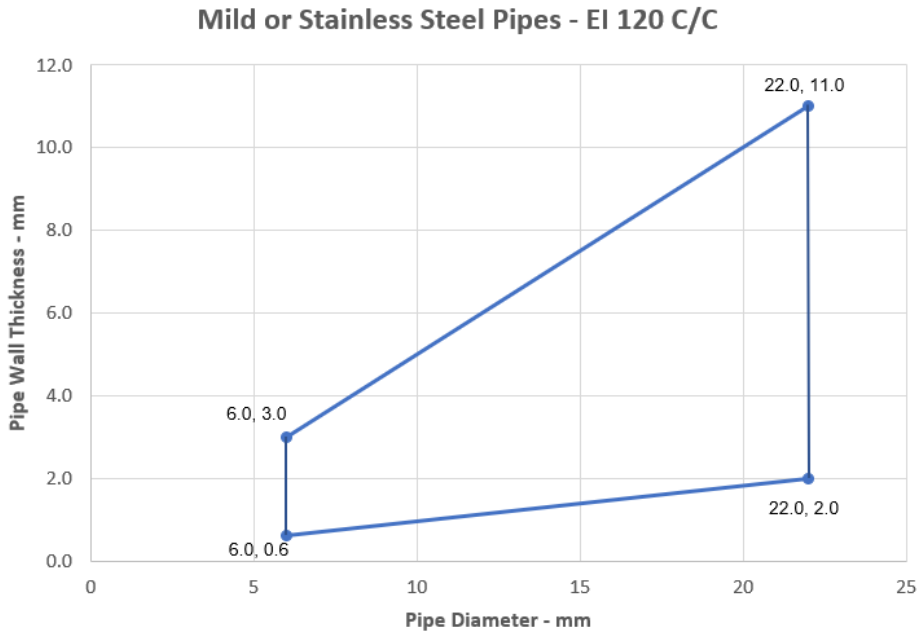
A.1.4 Double sided penetration seal with metallic pipes

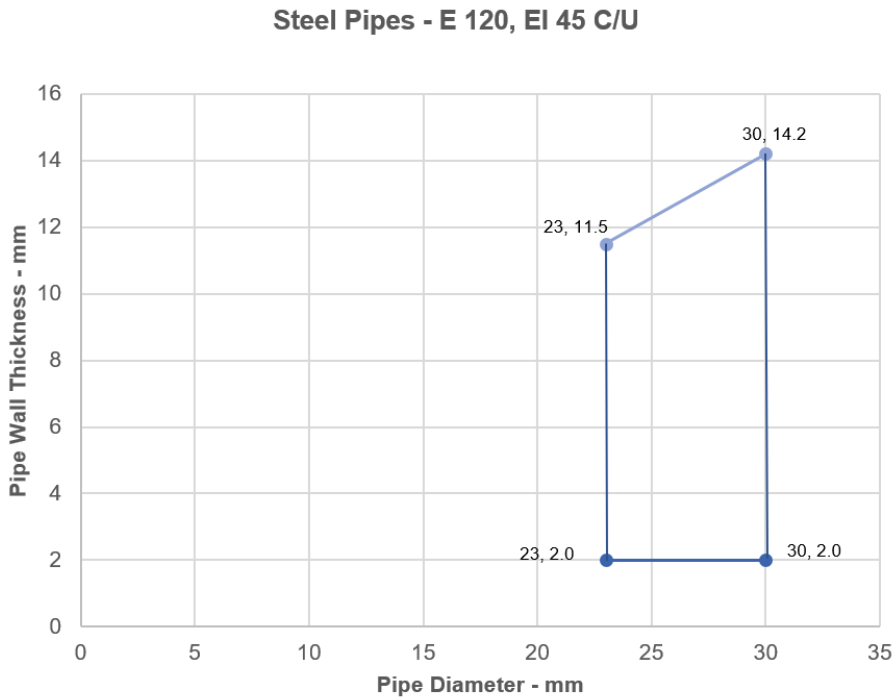
Penetration Seal: Metallic pipes penetrating through a flexible or rigid wall construction and fitted at any position within the aperture, sealed with a 15mm diameter cord of SikaSeal-632 Fire Putty+ on both sides of the wall. Maximum annular space 10 mm (A1) and minimum separation between penetration seals 30 mm (A2).
Construction details: 

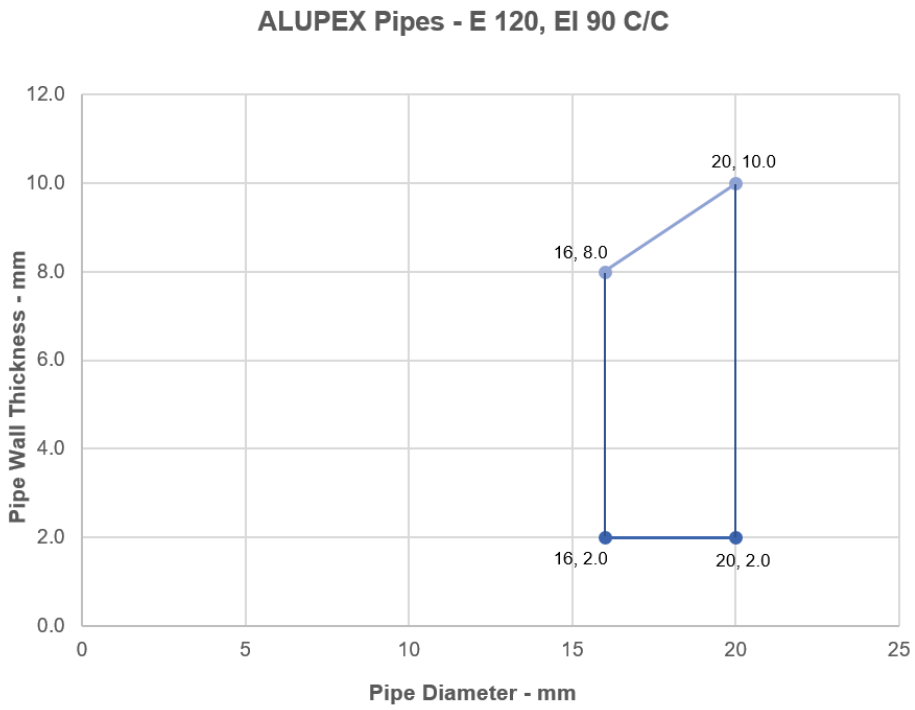
A.1.4.1

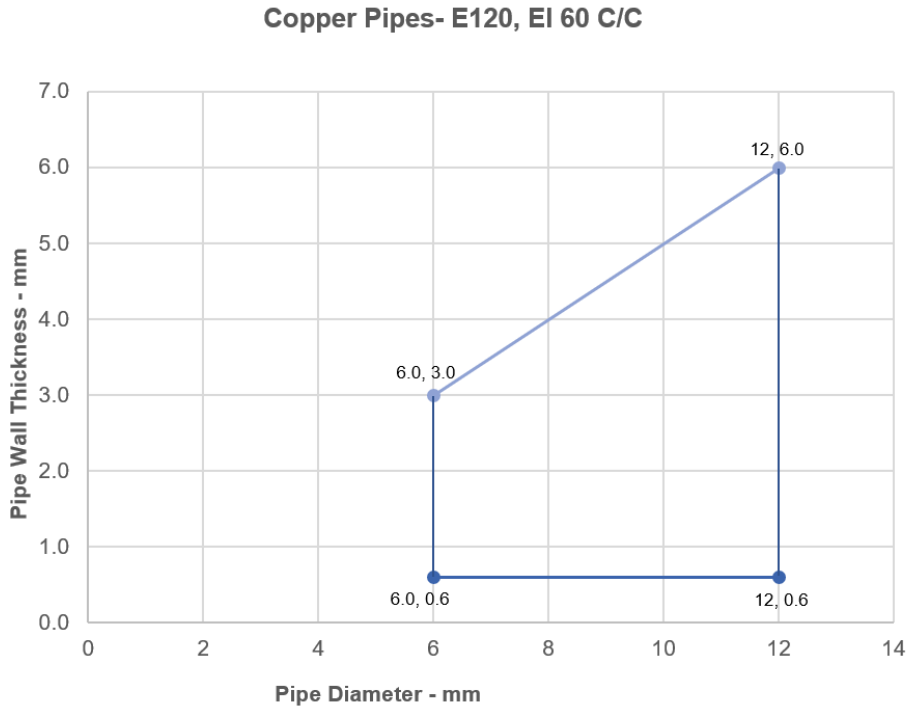
Services	Insulation	Classification
Mild or stainless steel pipe		
Maximum 22 mm diameter*	None needed	**EI 120 C/U**
23-30 mm diameter*	None needed	**E 120, EI 45 C/U**
ALUPEX pipe		
16 mm diameter*	None needed	**EI 120 C/C**
17-20 mm diameter*	None needed	**E 120, EI 90 C/C**
Copper or steel pipe		
6 mm diameter*	None needed	**EI 120 C/C**
7-12 mm diameter*	None needed	**E 120, EI 60 C/C**

*See below graphs for interpolation pipe sizes


Mild or Stainless Steel Pipes - EI 120 C/C
Pipe Wall Thickness - mm
Pipe Diameter - mm
12.0
10.0
8.0
6.0
4.0
2.0
0.0
0
5
10
15
20
25
22.0, 11.0
6.0, 3.0
22.0, 2.0
6.0, 0.6


Steel Pipes - E 120, EI 45 C/U
Pipe Wall Thickness - mm
Pipe Diameter - mm
16
14
12
10
8
6
4
2
0
0
5
10
15
20
25
30
35
30, 14.2
23, 11.5
23, 2.0
30, 2.0

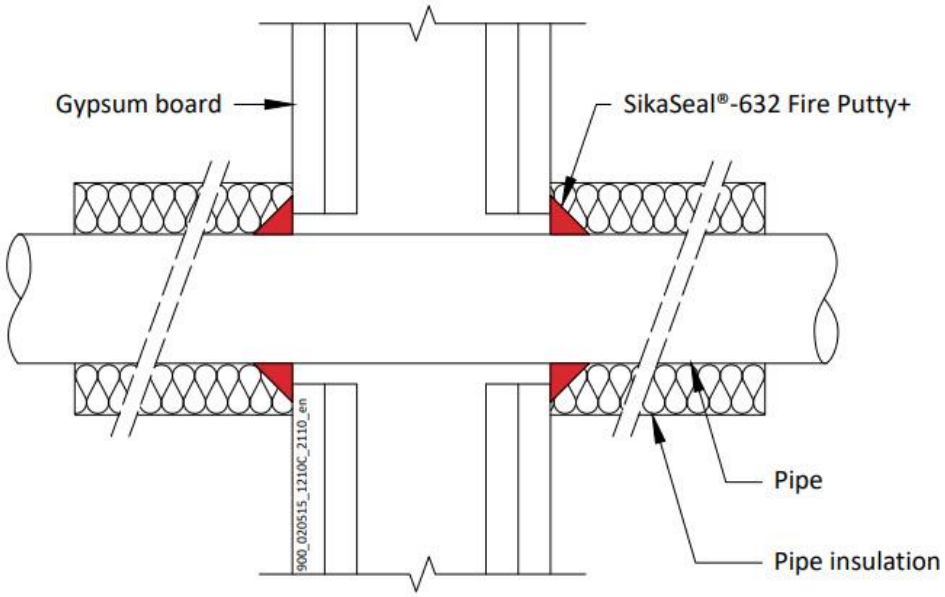

ALUPEX Pipes - E 120, EI 90 C/C
Pipe Wall Thickness - mm
Pipe Diameter - mm
12.0
10.0
8.0
6.0
4.0
2.0
0.0
0
5
10
15
20
25
20, 10.0
16, 8.0
16, 2.0
20, 2.0


Copper Pipes- E120, EI 60 C/C
Pipe Wall Thickness - mm
Pipe Diameter - mm
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
0
2
4
6
8
10
12
14
12, 6.0
6.0, 3.0
6.0, 0.6
12, 0.6

A.1.5 Double sided penetration seal with insulated metallic pipes, Local Interrupted (LI)

Penetration Seal: Metallic pipes insulated with minimum 80 kg/m³ density mineral wool insulation, Local Interrupted (LI), penetrating through a flexible or rigid wall construction, fitted at any position within the aperture, sealed with a 15mm diameter cord of SikaSeal-632 Fire Putty+ on both sides of the wall. Maximum annular space 10 mm (A1) and minimum separation between penetration seals 30 mm (A2).

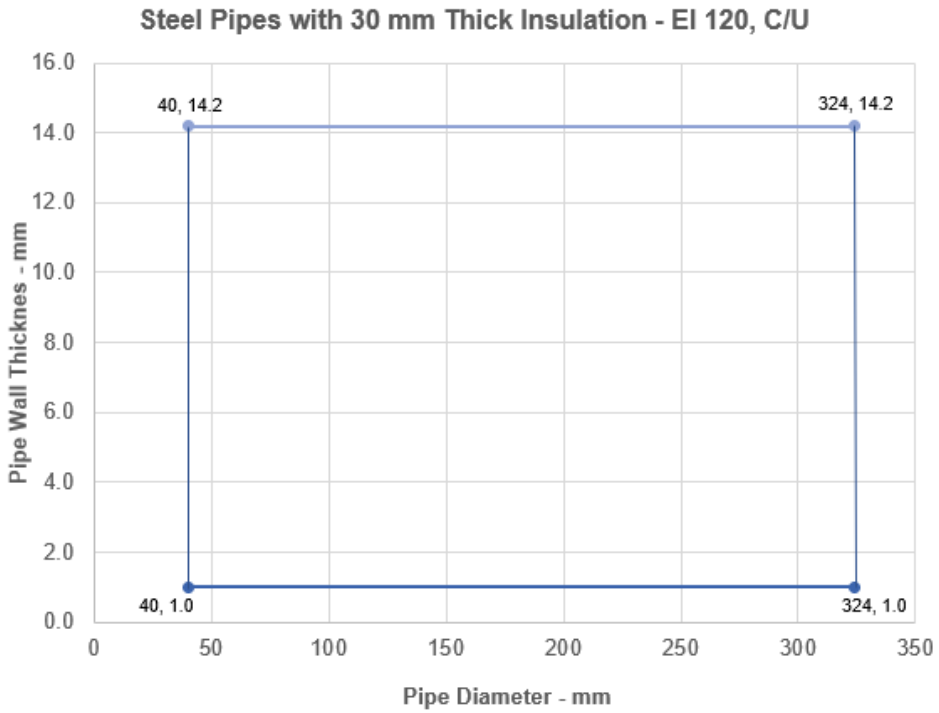
Construction details:

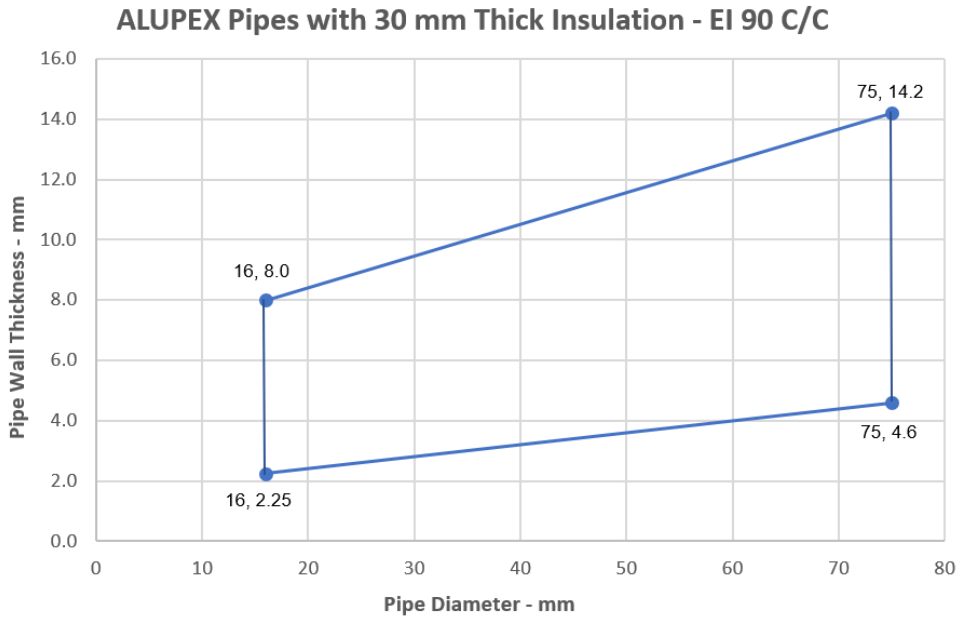


A.1.5.1

Services	Insulation	Classification
Mild or stainless steel pipe, with minimum 80 kg/m³ density mineral wool insulation		
Maximum 40 mm diameter*	Minimum 20 mm thick insulation, 500 mm long butted up to the wall on both faces	**EI 120 C/U**
40-324 mm diameter*	Minimum 30 mm thick insulation, 500 mm long butted up to the wall on both faces	**EI 120 C/U**
Copper or steel pipe with minimum 80 kg/m³ density mineral wool insulation		
Maximum 54 mm diameter/1.2-14.2 mm wall	Minimum 20 mm thick insulation, 500 mm long butted up to the wall on both faces	**E 90, EI 60 C/C**
ALUPEX pipe with minimum 80 kg/m³ density mineral wool insulation		
Maximum 16 mm diameter*	Minimum 20 mm thick insulation, 500 mm long butted up to the wall on both faces	**EI 90 C/C**
Maximum 75 mm diameter*	Minimum 30 mm thick insulation, 500 mm long butted up to the wall on both faces	**EI 90 C/C**

*See below graphs for interpolation pipe sizes

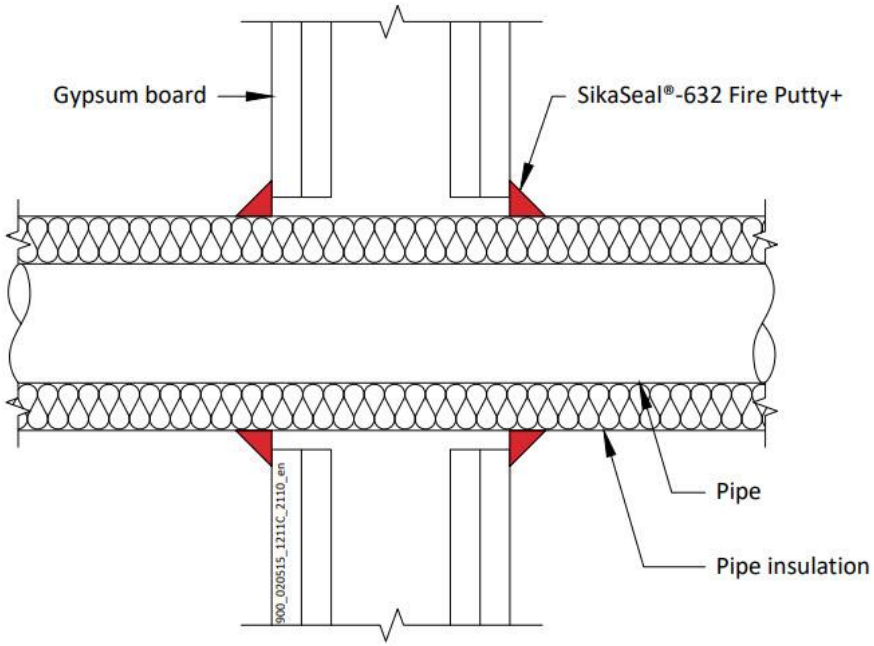

Steel Pipes with 30 mm Thick Insulation - EI 120, C/U
Pipe Wall Thicknes - mm
Pipe Diameter - mm
40, 14.2
324, 14.2
40, 1.0
324, 1.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
0
50
100
150
200
250
300
350


ALUPEX Pipes with 30 mm Thick Insulation - EI 90 C/C
Pipe Wall Thickness - mm
Pipe Diameter - mm
75, 14.2
16, 8.0
75, 4.6
16, 2.25
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
0
10
20
30
40
50
60
70
80

A.1.6 Double sided penetration seal with insulated metallic pipes, Continuous Sustained (CS)

Penetration Seal: Metallic pipes insulated with minimum 80 kg/m³ density mineral wool insulation, Continuous Sustained (CS), penetrating through a flexible or rigid wall construction, fitted at any position within the aperture, sealed with a 15mm diameter cord of SikaSeal-632 Fire Putty+ on both sides of the wall. Maximum annular space 10 mm (A1) and minimum separation between penetration seals 30 mm (A2).

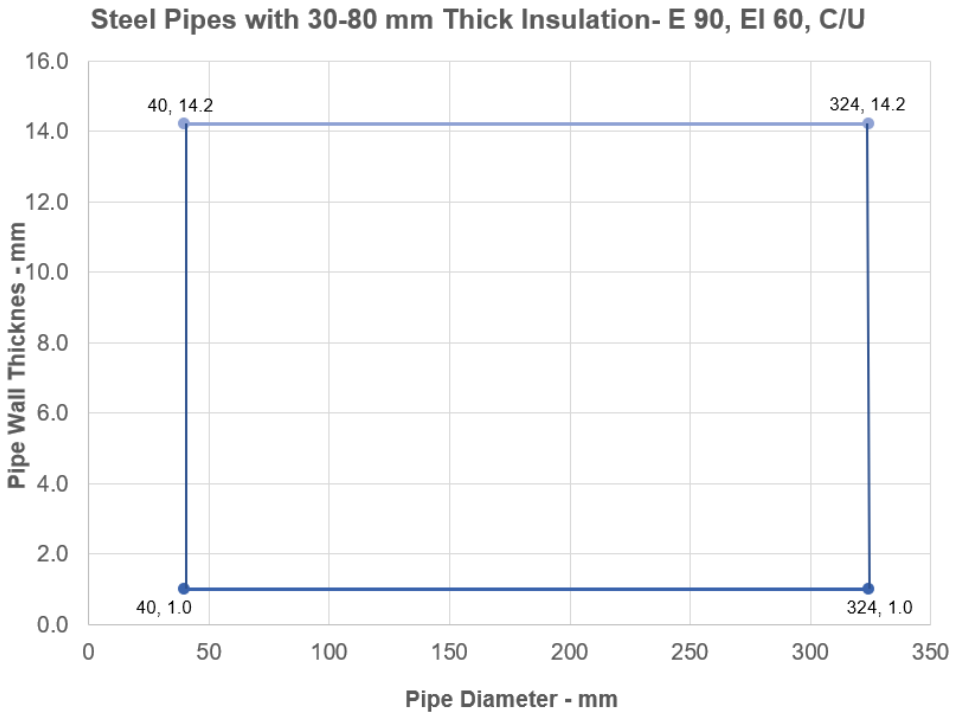
Construction details:

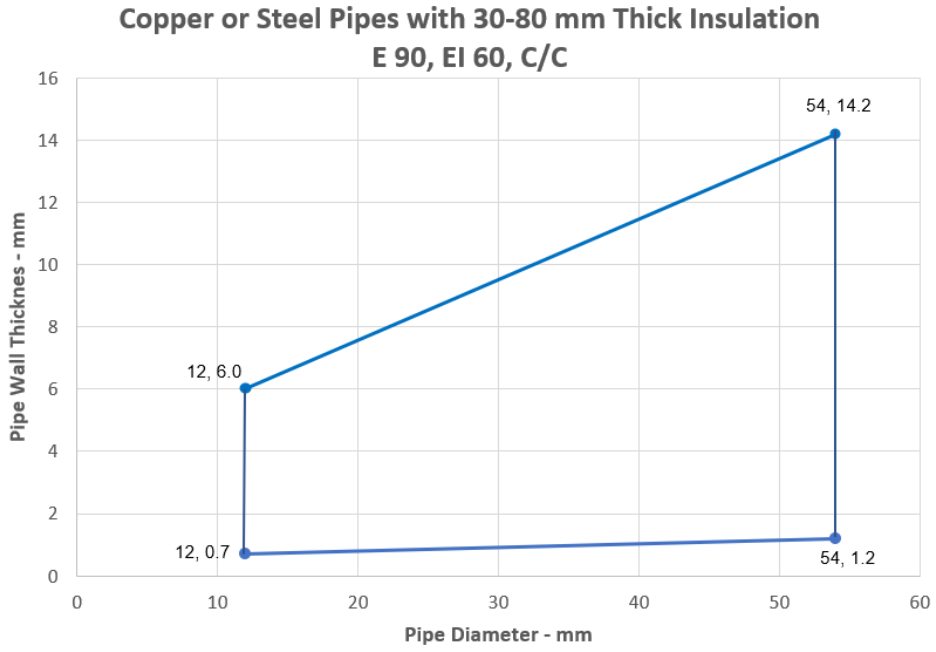


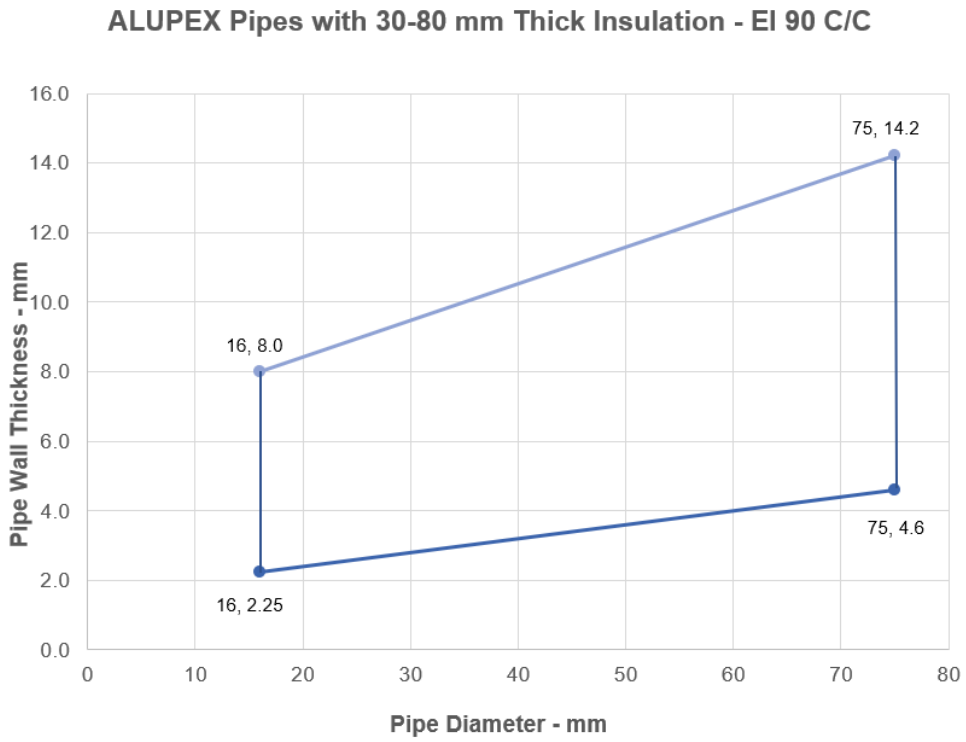
A.1.6.1

Services	Insulation	Classification
Mild or stainless steel pipe, with minimum 80 kg/m³ density mineral wool insulation		
Maximum 40 mm diameter*	20 mm thick	**EI 120 C/U**
40-324 mm diameter*	30-80 mm thick	**E 90, EI 60 C/U**
Copper or steel pipe with minimum 80 kg/m³ density mineral wool insulation		
Maximum 12 mm diameter/0.7-6.0 mm wall*	20 mm thick	**E90, EI 60 C/C**
Maximum 54 mm diameter/1.2-14.2 mm wall,	30-80 mm thick	**E 90, EI 60 C/C**
ALUPEX pipe with minimum 80 kg/m³ density mineral wool insulation		
Maximum 16 mm diameter*	20 mm thick	**EI 90 C/C**
Maximum 75 mm diameter*	30-80 mm thick	**EI 90 C/C**

*See below graphs for interpolation pipe sizes


Steel Pipes with 30-80 mm Thick Insulation- E 90, EI 60, C/U
Pipe Wall Thicknes - mm
Pipe Diameter - mm
40, 14.2
324, 14.2
40, 1.0
324, 1.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
0
50
100
150
200
250
300
350


Copper or Steel Pipes with 30-80 mm Thick Insulation
E 90, EI 60, C/C
Pipe Wall Thicknes - mm
Pipe Diameter - mm
54, 14.2
12, 6.0
12, 0.7
54, 1.2
16
14
12
10
8
6
4
2
0
0
10
20
30
40
50
60

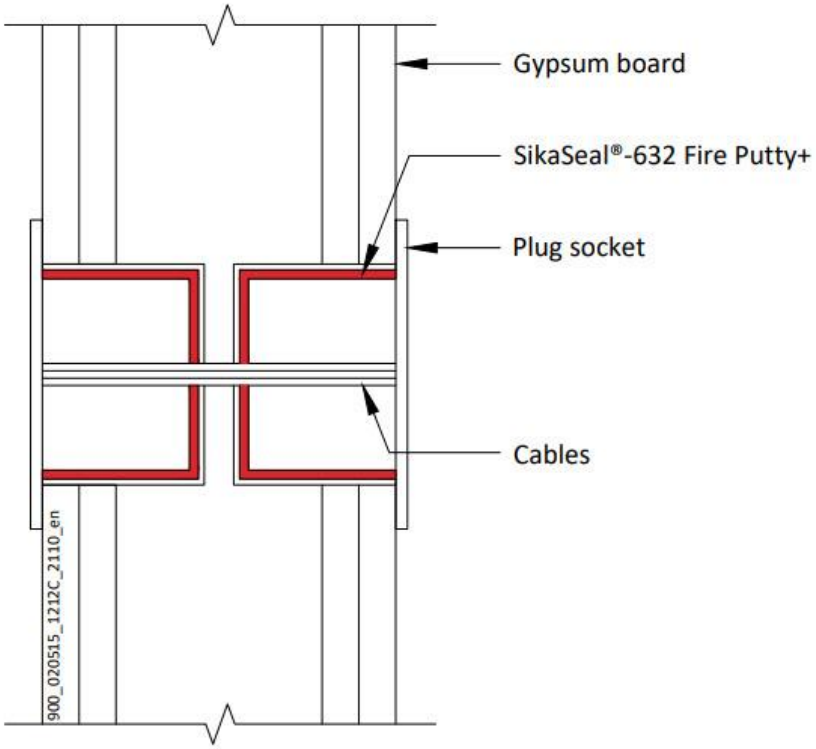

ALUPEX Pipes with 30-80 mm Thick Insulation - EI 90 C/C
Pipe Wall Thickness - mm
Pipe Diameter - mm
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
0
10
20
30
40
50
60
70
80
75, 14.2
16, 8.0
75, 4.6
16, 2.25

A.2 Flexible wall constructions with wall thickness of minimum 120 mm

A.2.1 Cable penetration seals with 4 mm thick SikaSeal-632 Fire Putty+ in socket box

Penetration Seal: Socket boxes with SikaSeal-632 Fire Putty+ wrapped around the cable protrusion from the socket box.

Construction details:



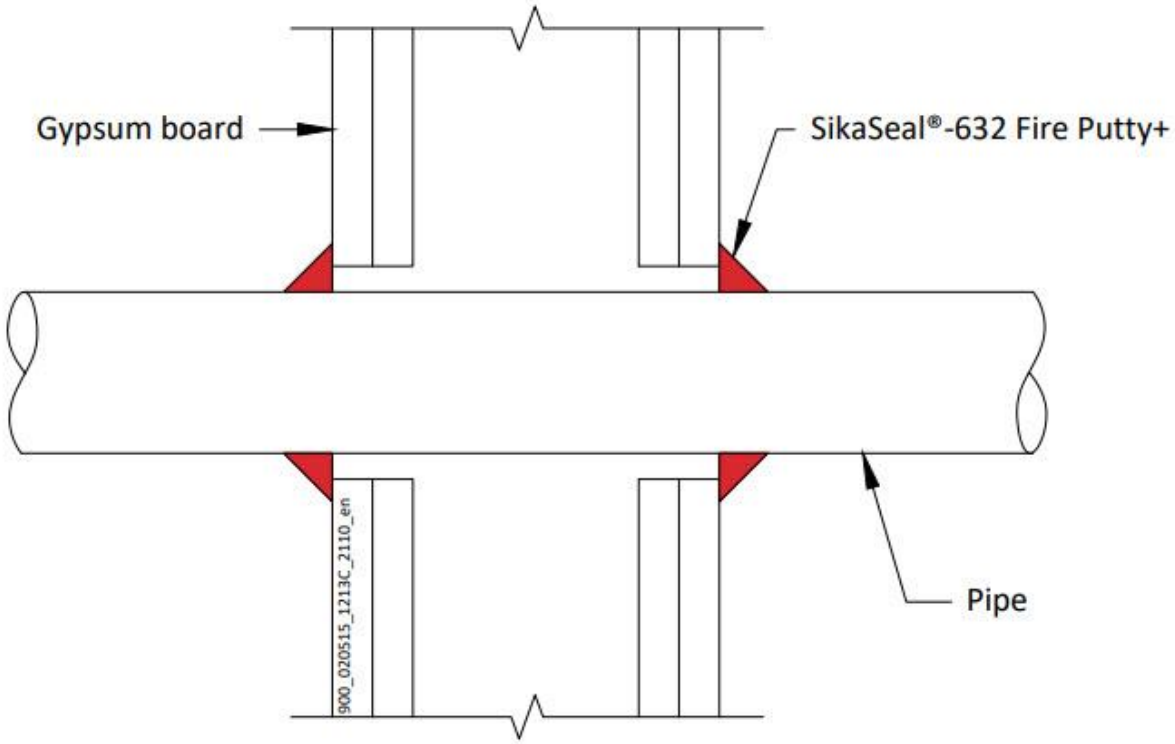
A.2.1.1 Double side penetration seal with cables in socket boxes

Services	Socket box	SikaSeal-632 Fire Putty+	Position	Aperture mm	Classification
Cables up to 14 mm diameter	UK standard double socket box, maximum 130mm wide x 70mm high x 48mm deep, each with a 25mm wide x 14mm high knock out section centrally located at the bottom back angle of the box to accept the cables	Interior of box fully lined with pad	Back to back – 1 fitted to each face, or separated	Maximum 135 wide x 72 High	**EI 120**
2.5 mm twin and earth cables					

A.2.2 Double sided penetration seal with metallic pipes

Penetration Seal: Metallic pipes penetrating through a flexible or rigid wall construction and fitted at any position within the aperture, sealed with a 15mm diameter cord of SikaSeal-632 Fire Putty+ on both sides of the wall. Maximum annular space 10 mm (A1) and minimum separation between penetration seals 30 mm (A2).

Construction details:



A.2.2.1

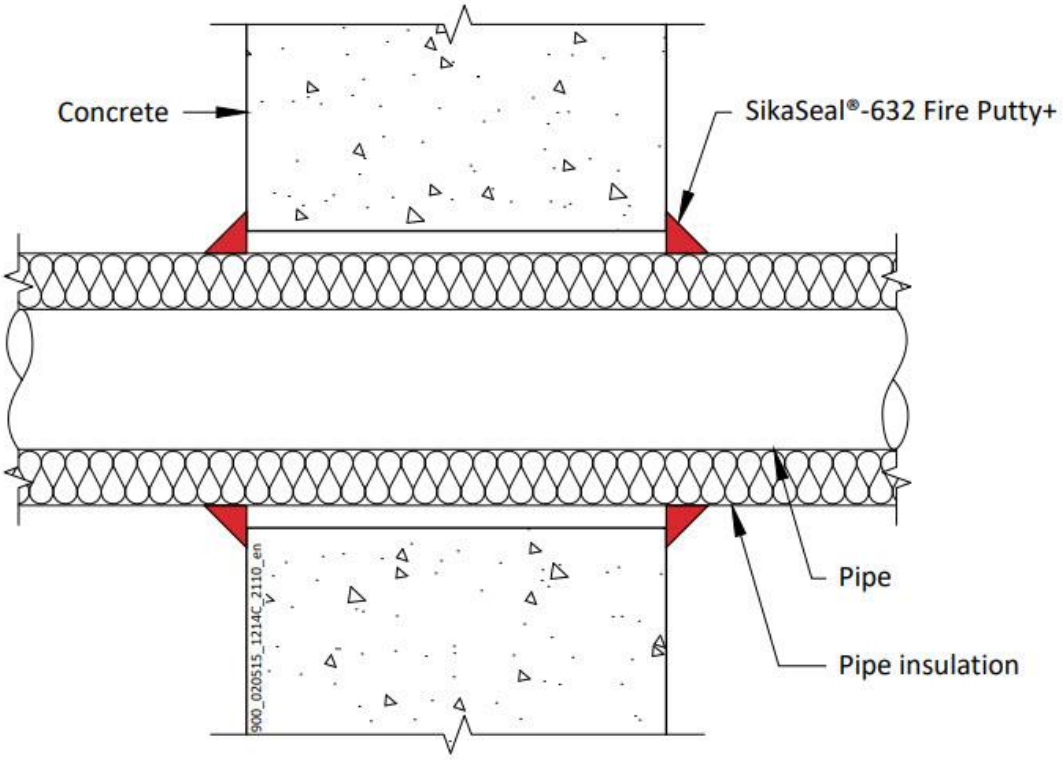
Services	Insulation	Classification
Mild or stainless steel pipe		
Maximum 324 mm diameter/6.35-14.2 mm wall	None needed	**E 90, EI 20 C/U**
ALUPEX pipe		
Maximum 75 mm diameter/4.6-14.2 mm wall	None needed	**EI 90 C/C**
Copper or steel pipe		
Maximum 54 mm diameter/1.2-14.2 mm wall	None needed	**E 90, EI 15 C/C**

A.3 Rigid wall constructions with wall thickness of minimum 150 mm

A.3.1 Double sided penetration seal with insulated metallic pipes, Continuous Sustained (CS)

Penetration Seal: Metallic pipes insulated with minimum 80 kg/m^3 density mineral wool insulation, Continuous Sustained (CS), penetrating through a rigid wall construction, fitted at any position within the aperture, sealed with a 15mm diameter cord of SikaSeal-632 Fire Putty+ on both sides of the wall. Maximum annular space 10 mm (A1) and minimum separation between penetration seals 30 mm (A2).

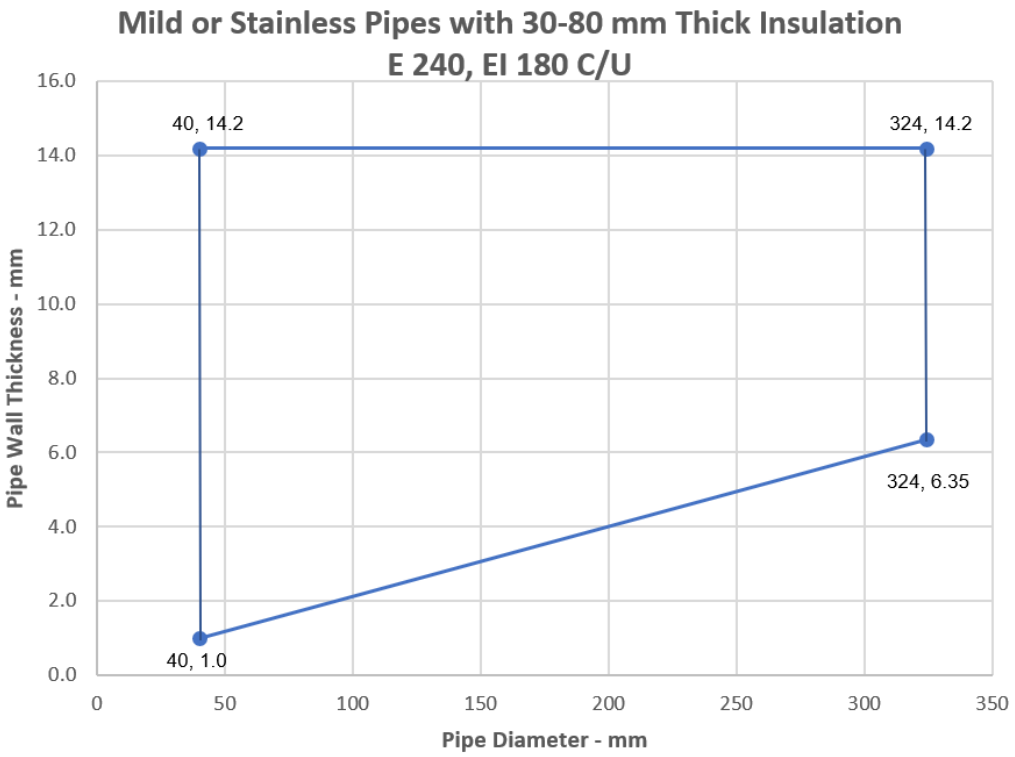
Construction details:

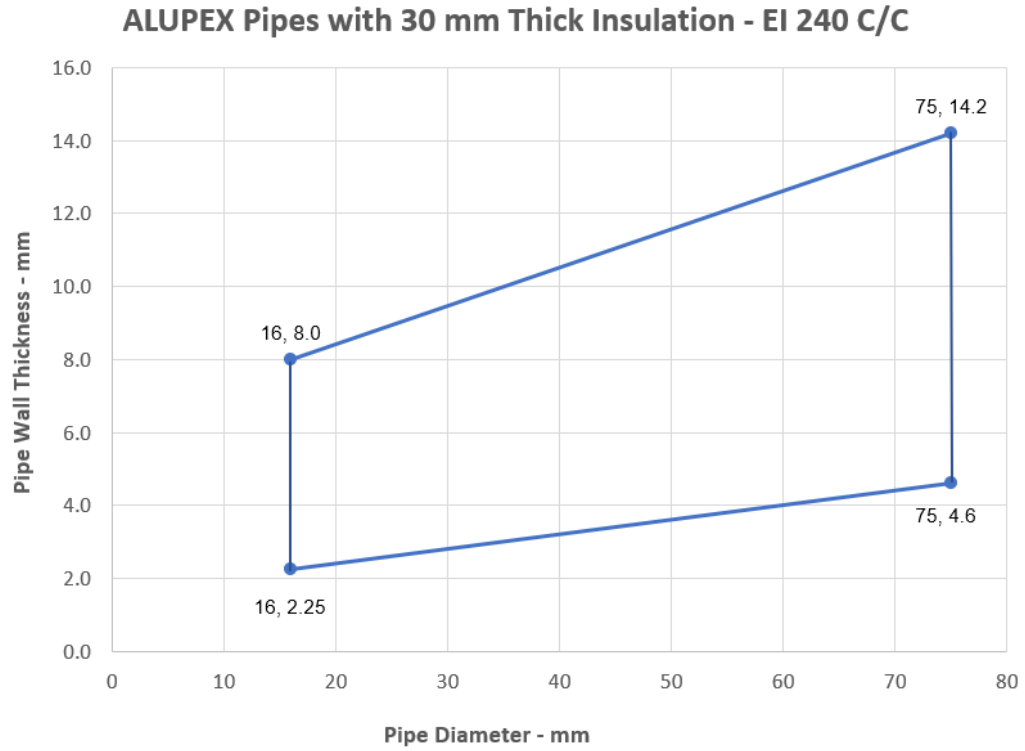


A.3.1.1

Services	Insulation	Classification
Mild or stainless steel pipe, with minimum 80 kg/m^3 density mineral wool insulation		
Maximum 40 mm diameter*	20 mm thick	**EI 120 C/U**
Maximum 324 mm diameter*	30-80 mm thick	**E 240, EI 180 C/U**
Copper or steel pipe with minimum 80 kg/m^3 density mineral wool insulation		
Maximum 54 mm diameter/1.2-14.2 mm wall	20 mm thick	**E 240, EI 120 C/C**
ALUPEX pipe with minimum 80 kg/m^3 density mineral wool insulation		
Maximum 16 mm diameter*	20 mm thick	**EI 240 C/C**
Maximum 75 mm diameter*	30 mm thick	**EI 240 C/C**

*See below graphs for interpolation pipe sizes


Mild or Stainless Pipes with 30-80 mm Thick Insulation
E 240, EI 180 C/U
Pipe Wall Thickness - mm
Pipe Diameter - mm
40, 14.2
324, 14.2
324, 6.35
40, 1.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
0
50
100
150
200
250
300
350

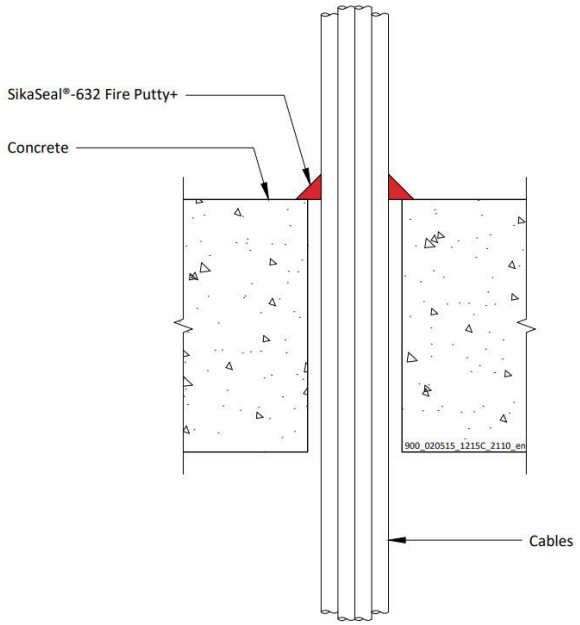

ALUPEX Pipes with 30 mm Thick Insulation - EI 240 C/C
Pipe Wall Thickness - mm
Pipe Diameter - mm
75, 14.2
16, 8.0
75, 4.6
16, 2.25
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
0
10
20
30
40
50
60
70
80

A.4 Rigid floor constructions with floor thickness of minimum 150 mm

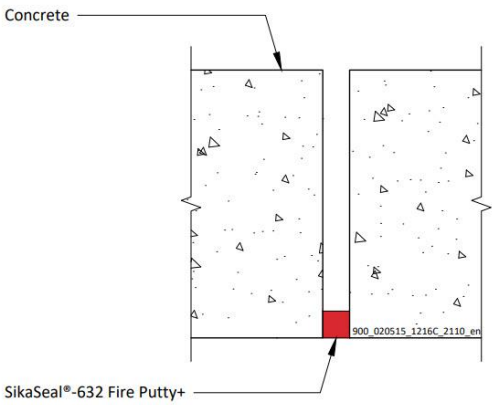
A.4.1 Single sided penetration seal with cables

Penetration Seal: Cables (single or bundled up to 50 mm Ø) penetrating through a rigid floor construction and fitted at any position within the aperture, sealed with a 15mm diameter cord of SikaSeal-632 Fire Putty+ on the top face of the floor. Maximum annular space 10 mm (A1) and minimum separation between penetration seals 30 mm (A2). When incorporating blank penetration seals, the aperture is sealed with 15mm wide by 15mm thick cord of SikaSeal-632 Fire Putty+, applied flush with the bottom face of the floor.

Construction details:



Construction details:



A.4.1.1

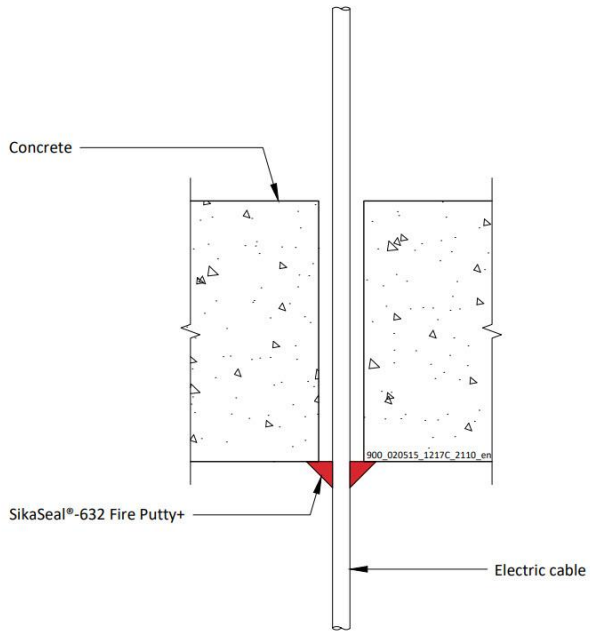
Services	Classification
None (blank)	**E 120, EI 30**
Cables up to 21 mm diameter in tied bundles up to 50 mm diameter*	**E 120, EI 60**
Cables up to 21 mm diameter*	**EI 120**
Cables 22-50 mm diameter*	**E 120, EI 90**
Cables 51-80 mm diameter*	**E 120, EI 60**
Single ‘A1’ type cable*	**EI 240**
Single ‘C3’ type cable*	**EI 240**
Single ‘E’ type cable*	**EI 120**
Single ‘D1’ type cable*	**EI 120**
Single ‘D2’ type cable*	**EI 120**
Single ‘D3’ type cable*	**E 240, EI 60**

* Cable specification from EN 1366-3 standard cable configuration

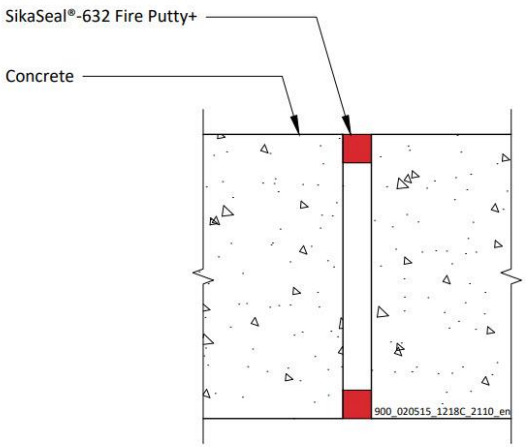
A.4.2 Single sided penetration seal with cables

Penetration Seal: Cables (single or bundled up to 75 mm Ø) penetrating through a rigid floor construction and fitted at any position within the aperture, sealed with a 15mm diameter cord of SikaSeal-632 Fire Putty+ on the bottom face of the floor. Maximum annular space 10 mm (A1) and minimum separation between penetration seals 30 mm (A2). When incorporating blank penetration seals, the aperture is sealed with 15mm wide by 15mm thick cord of SikaSeal-632 Fire Putty+, applied flush with both faces of the floor.

Construction details:



Construction details:



A.4.2.1

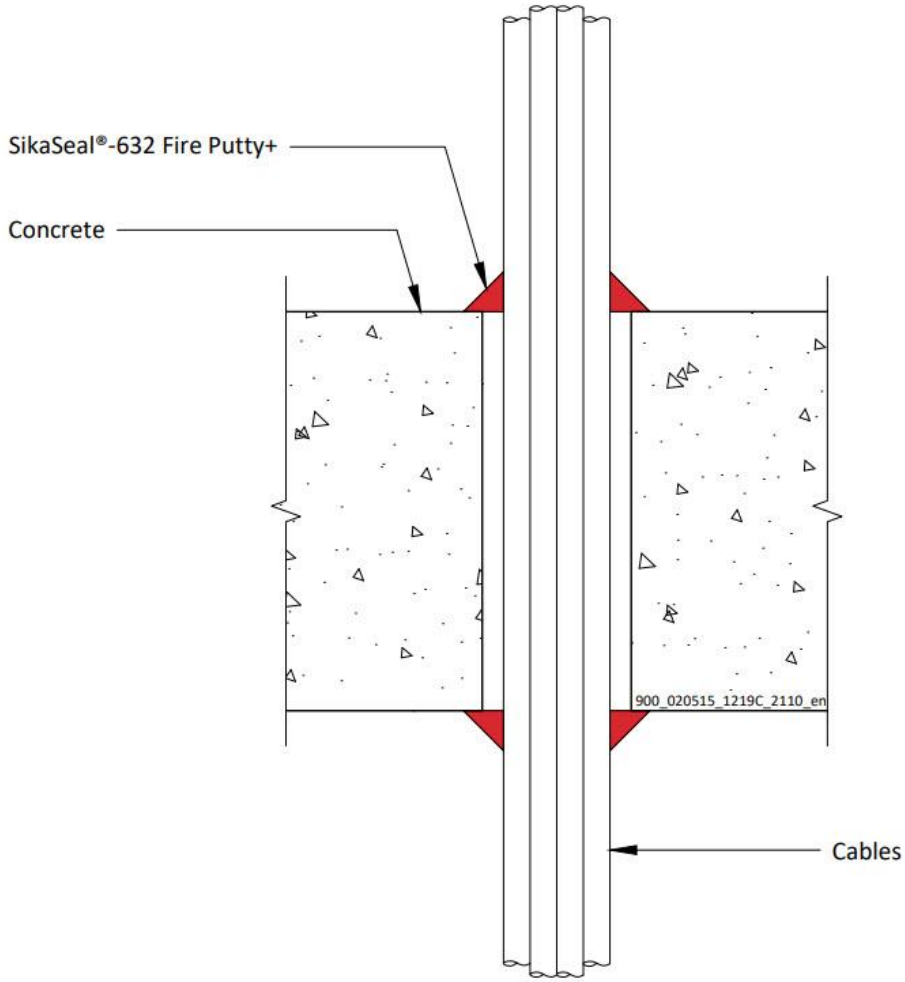
Services	Seal size	Classification
None (blank)	15mm deep	**EI 120**
Cables up to 21 mm diameter in tied bundles up to 75mm diameter*	15 mm diameter cord	**E 60, EI 45**
Cables up to 21 mm diameter*		**E 120, EI 60**
Cables 22-80 mm diameter*		**E 90, EI 45**

* Cable specification from EN 1366-3 standard cable configuration

A.4.3 Double sided penetration seal with cables

Penetration Seal: Cables (single or bundled up to 50 mm Ø) penetrating through a rigid floor construction and fitted at any position within the aperture, sealed with a 15mm diameter cord of SikaSeal-632 Fire Putty+ on both sides of the floor. Maximum annular space 10 mm (A1) and minimum separation between penetration seals 30 mm (A2).

Construction details:

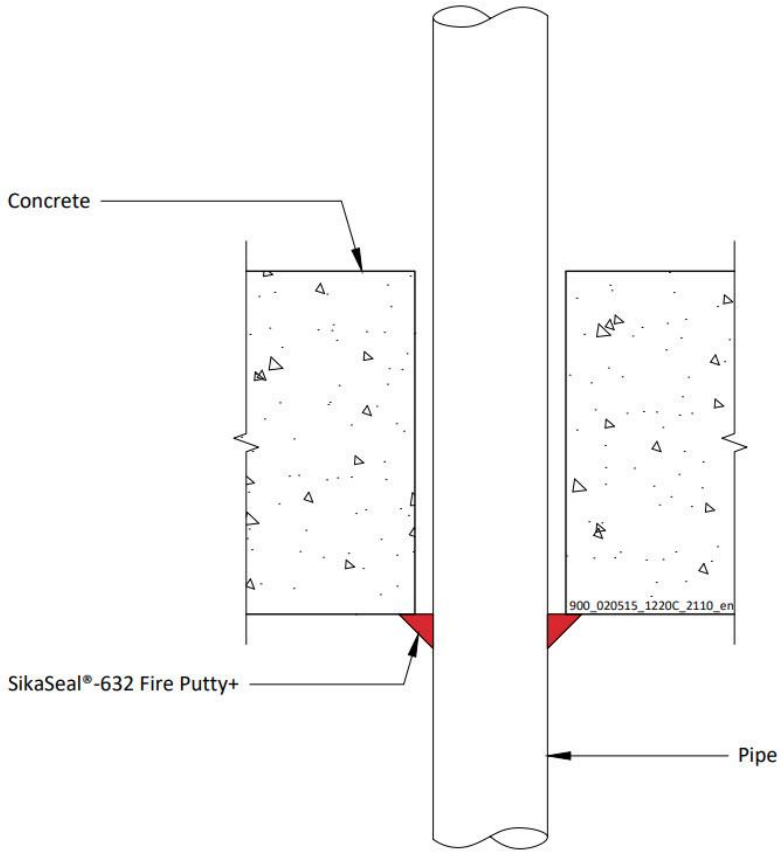


A.4.3.1

Services	Seal size	Classification
Cables up to 21 mm diameter in tied bundles up to 50 mm diameter*	15 mm diameter cord	**EI 240**

* Cable specification from EN 1366-3 standard cable configuration

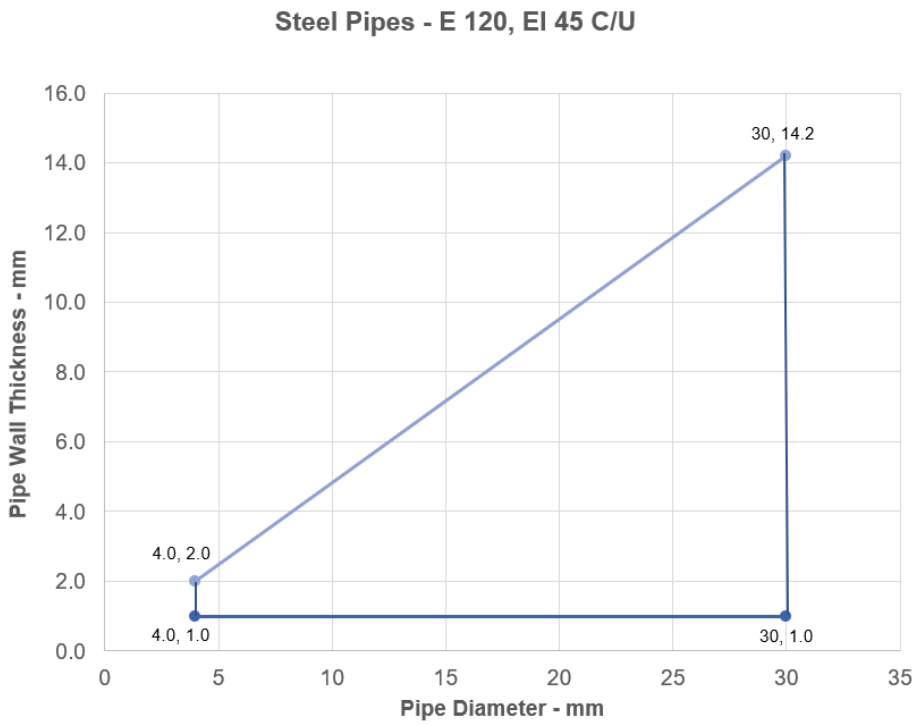
A.4.4 Single sided penetration seal with metallic pipes

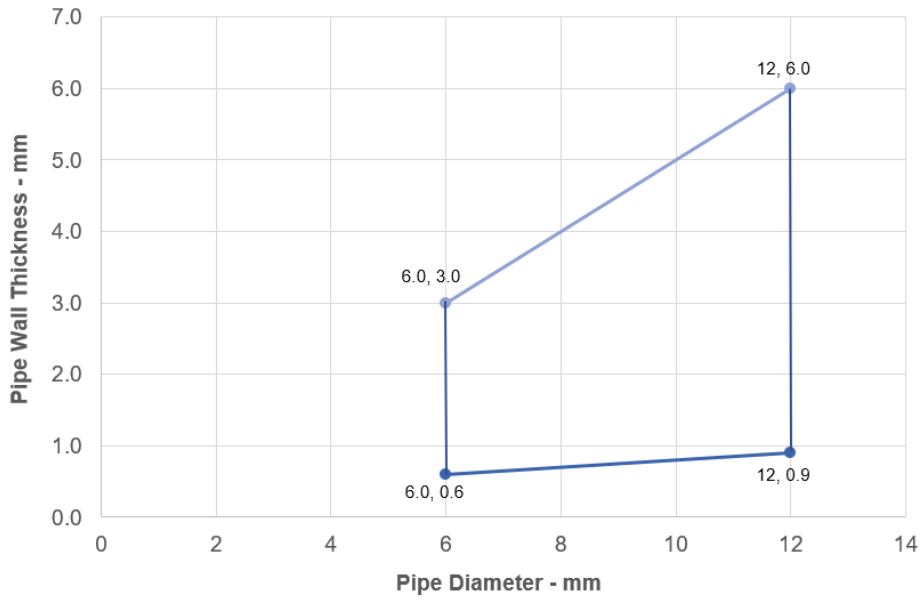
Penetration Seal: Metallic pipes penetrating through a rigid floor construction and fitted at any position within the aperture, sealed with a 15mm diameter cord of SikaSeal-632 Fire Putty+ on the bottom face of the floor. Maximum annular space 10 mm (A1) and minimum separation between penetration seals 30 mm (A2).
Construction details: 

A.4.4.1

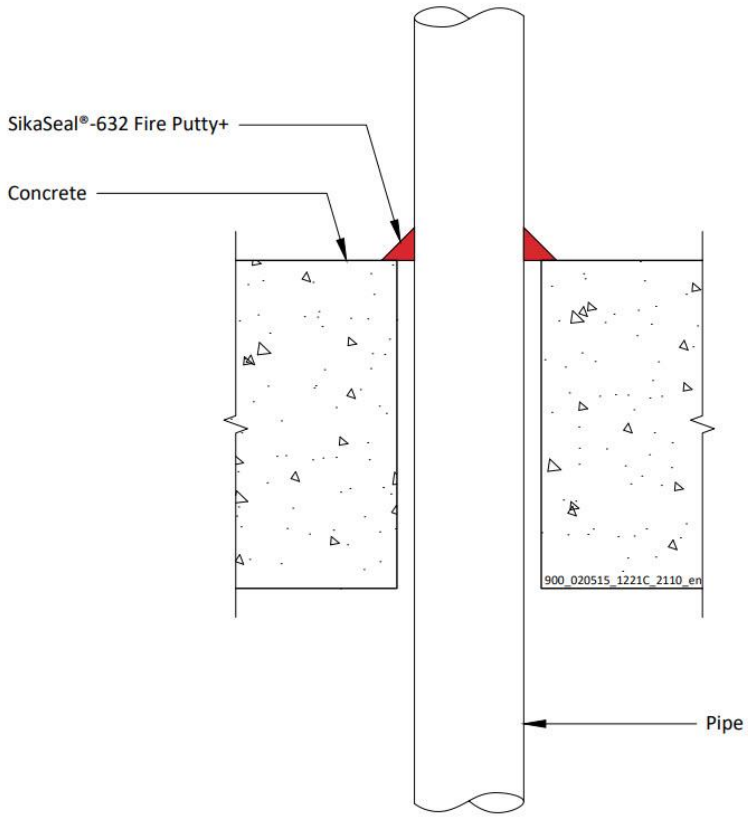
Services	Insulation	Classification
Mild or stainless steel pipe		
4 mm diameter*	None needed	**EI 120 C/U**
5-30 mm diameter*	None needed	**E 120, EI 45 C/U**
Copper or steel pipe		
6 mm diameter*	None needed	**E 120, EI 90 C/C**
7-12 mm diameter*	None needed	**E 120, EI 30 C/C**

*See below graphs for interpolation pipe sizes


Steel Pipes - E 120, EI 45 C/U
Pipe Wall Thickness - mm
Pipe Diameter - mm
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
0
5
10
15
20
25
30
35
30, 14.2
4.0, 2.0
4.0, 1.0
30, 1.0


Copper Pipes - E 120, EI 30 C/C
Pipe Wall Thickness - mm
Pipe Diameter - mm
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
0
2
4
6
8
10
12
14
12, 6.0
6.0, 3.0
6.0, 0.6
12, 0.9

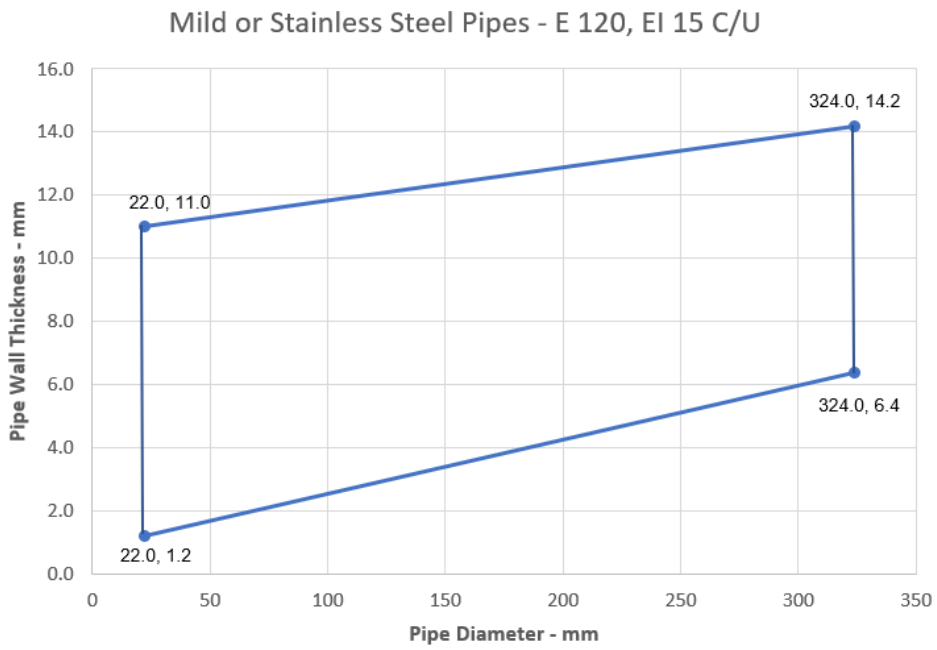
A.4.5 Single sided penetration seal with metallic pipes

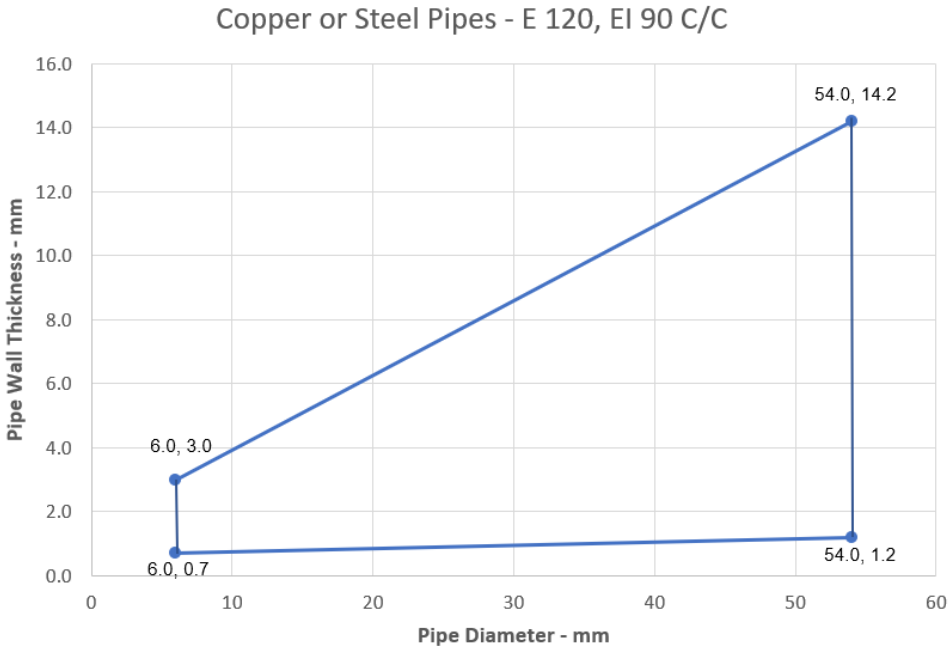
Penetration Seal: Metallic pipes penetrating through a rigid floor construction and fitted at any position within the aperture, sealed with a 15mm diameter cord of SikaSeal-632 Fire Putty+ on the top face of the floor. Maximum annular space 10 mm (A1) and minimum separation between penetration seals 30 mm (A2).
Construction details: 

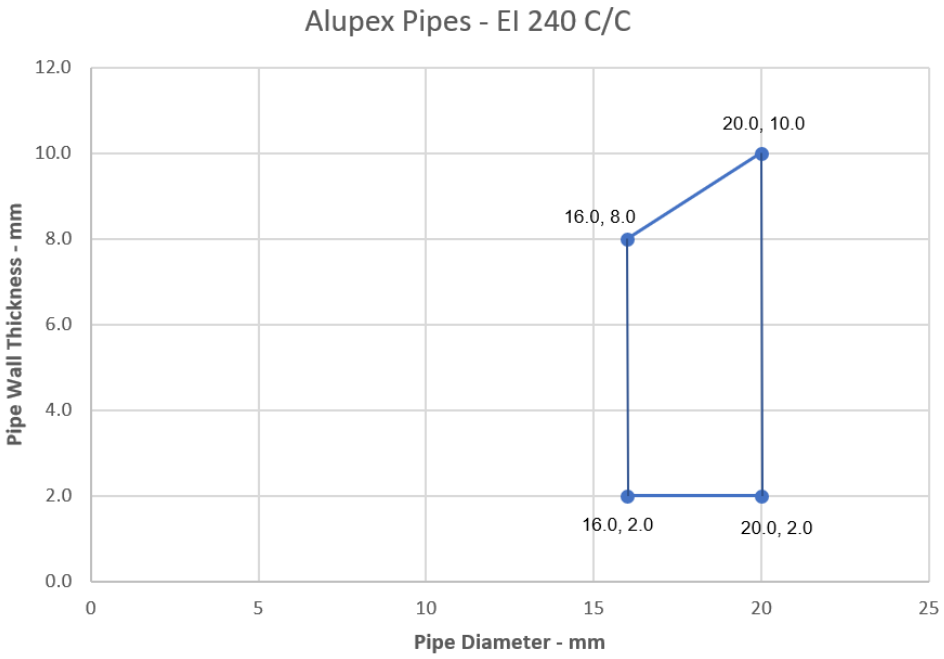
A.4.5.1

Services	Insulation	Classification
Mild or stainless steel pipe		
Maximum 22 mm diameter/1.2-11.0 mm wall*	None needed	**EI 120 C/U**
Maximum 324 mm diameter/6.35-14.2 mm wall*	None needed	**E 240, EI 15 C/U**
Copper or steel pipe		
6 mm diameter*	None needed	**EI 120 C/C**
7-10 mm diameter*	None needed	**E 120, EI 90 C/C**
Maximum 54 mm diameter/1.2-14.2 mm wall	None needed	**E 120 C/C**
ALUPEX pipe		
16-20 mm diameter*	None needed	**EI 240 C/C**
Maximum 75 mm diameter/4.6-14.2 mm wall	None needed	**E 45, EI 30 C/C**

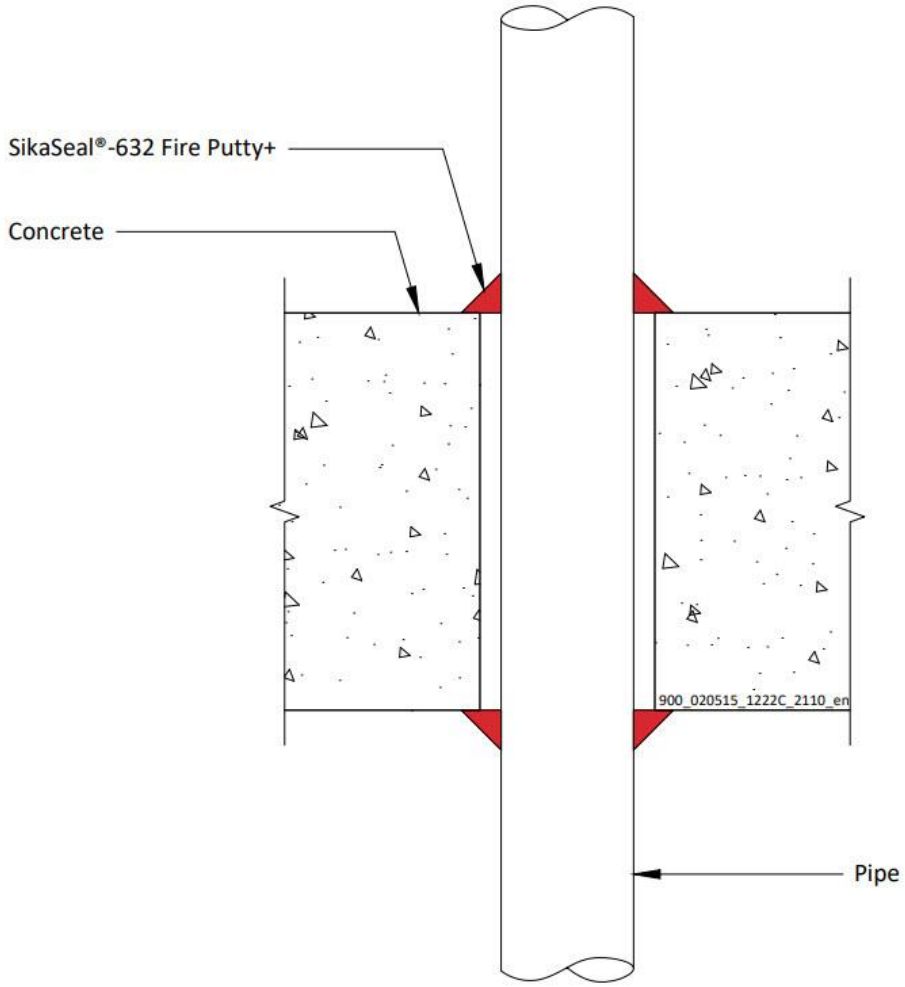
*See below graphs for interpolation pipe sizes


Mild or Stainless Steel Pipes - E 120, EI 15 C/U
Pipe Wall Thickness - mm
Pipe Diameter - mm
324.0, 14.2
22.0, 11.0
324.0, 6.4
22.0, 1.2
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
0
50
100
150
200
250
300
350


Copper or Steel Pipes - E 120, EI 90 C/C
Pipe Wall Thickness - mm
Pipe Diameter - mm
54.0, 14.2
6.0, 3.0
6.0, 0.7
54.0, 1.2
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
0
10
20
30
40
50
60


Alupex Pipes - EI 240 C/C
12.0
10.0
8.0
6.0
4.0
2.0
0.0
Pipe Wall Thickness - mm
0
5
10
15
20
25
Pipe Diameter - mm
20.0, 10.0
16.0, 8.0
16.0, 2.0
20.0, 2.0

A.4.6 Double sided penetration seal with metallic pipes

Penetration Seal: Metallic pipes penetrating through a rigid floor construction and fitted at any position within the aperture, sealed with a 15mm diameter cord of SikaSeal-632 Fire Putty+ on both sides of the floor. Maximum annular space 10 mm (A1) and minimum separation between penetration seals 30 mm (A2).
Construction details: 

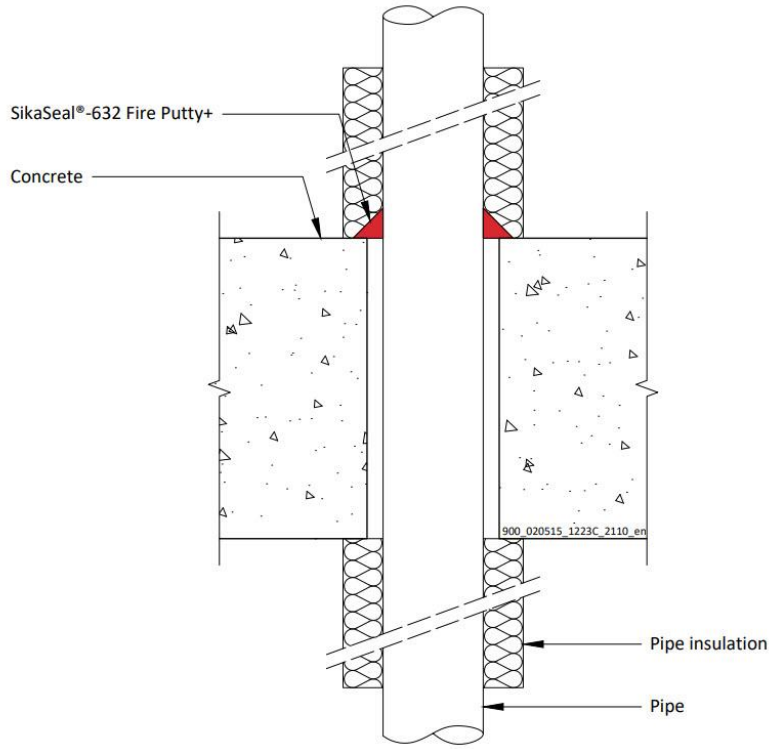
A.4.6.1

Services	Insulation	Classification
Copper or steel pipe		
Maximum 10 mm diameter/0.7-14.2 mm wall	None needed	**E 240, EI 180 C/C**

A.4.7 Single sided penetration seal with insulated metallic pipes, Local Interrupted (LI)

Penetration Seal: Metallic pipes insulated with minimum 80 kg/m³ density mineral wool insulation, Local Interrupted (LI), penetrating through a rigid floor construction, fitted at any position within the aperture, sealed with a 15 mm diameter cord of SikaSeal-632 Fire Putty+ on the top face of the floor. Maximum annular space 10 mm (A1) and minimum separation between penetration seals 30 mm (A2).

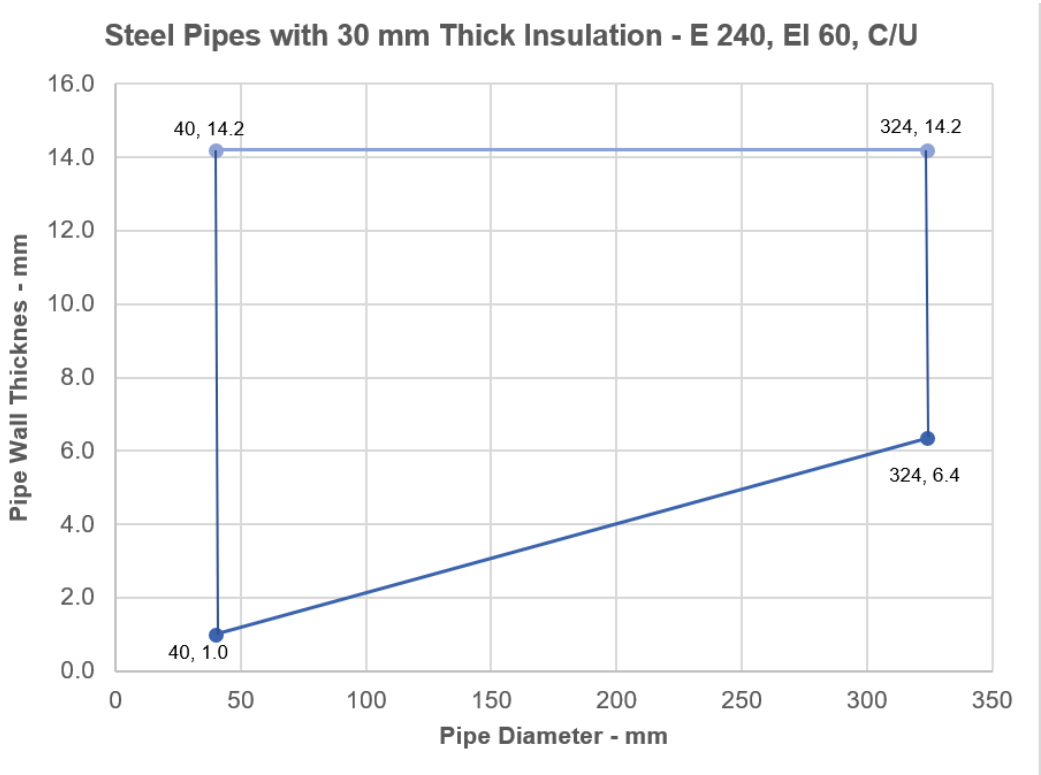
Construction details:

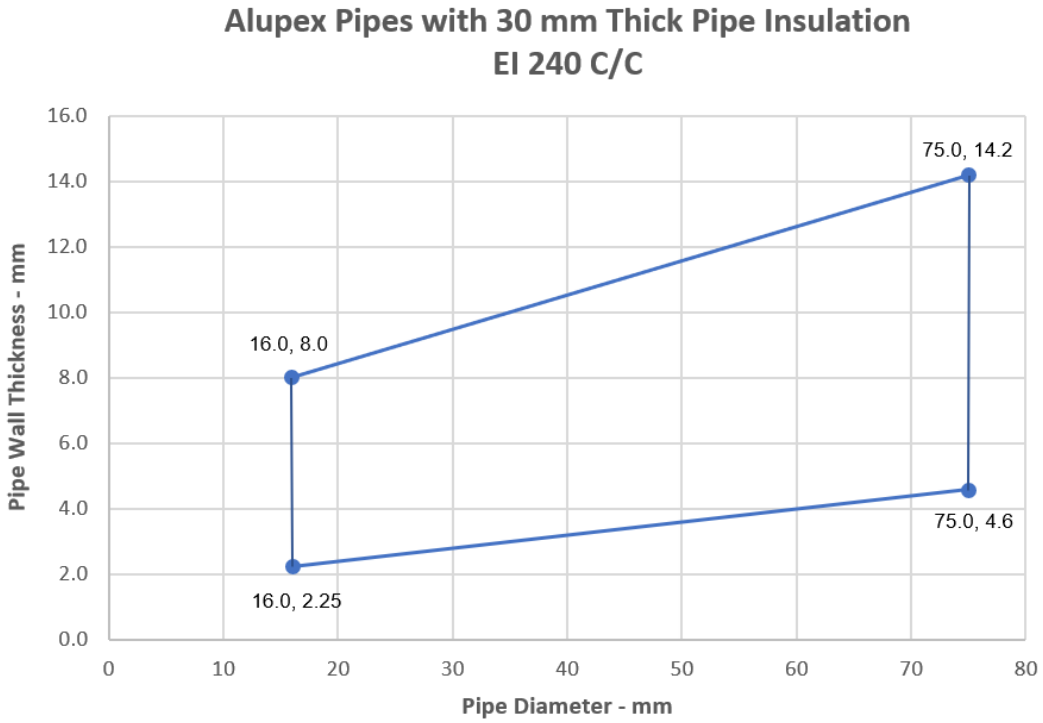


A.4.7.1 Single sided penetration seal with partially insulated metallic pipes

Services	Insulation	Classification
Mild or stainless steel pipe, with minimum 80 kg/m³ density mineral wool insulation		
Maximum 40 mm diameter*	Minimum 20 mm thick insulation, 500 mm long butted up to each face of the floor	**EI 240 C/U**
41-324 mm diameter*	Minimum 30 mm thick insulation, 500 mm long butted up to each face of the floor	**E 240, EI 60 C/U**
ALUPEX pipe with minimum 80 kg/m³ density mineral wool insulation		
Maximum 16 mm diameter/2.25-8.0 mm wall*	Minimum 20 mm thick insulation, 500 mm long butted up to each face of the floor	**EI 240 C/C**
Maximum 75 mm diameter/4.6-14.2 mm wall*	Minimum 30 mm thick insulation, 500 mm long butted up to each face of the floor	**EI 240 C/C**

*See below graphs for interpolation pipe sizes

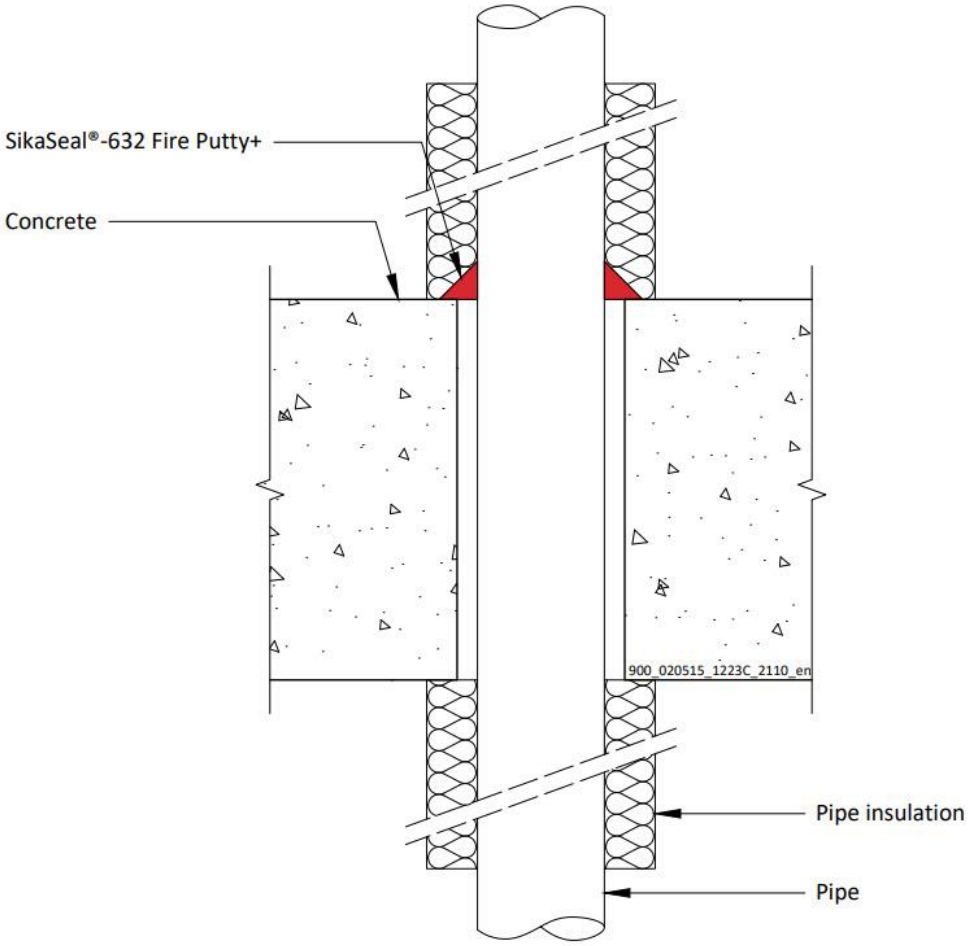

Steel Pipes with 30 mm Thick Insulation - E 240, EI 60, C/U
Pipe Wall Thicknes - mm
Pipe Diameter - mm
40, 14.2
324, 14.2
324, 6.4
40, 1.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
0
50
100
150
200
250
300
350


Alupex Pipes with 30 mm Thick Pipe Insulation
EI 240 C/C
Pipe Wall Thickness - mm
Pipe Diameter - mm
75.0, 14.2
16.0, 8.0
75.0, 4.6
16.0, 2.25
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
0
10
20
30
40
50
60
70
80

A.4.8 Single sided penetration seal with insulated metallic pipes, Local Interrupted (LI)

Penetration Seal: Metallic pipes insulated with minimum 75 kg/m^3 density glass or mineral wool insulation, Local Interrupted (LI), penetrating through a rigid floor construction, fitted at any position within the aperture, sealed with a 15 mm diameter cord of SikaSeal-632 Fire Putty+ on the top face of the floor. Maximum annular space 10 mm (A1) and minimum separation between penetration seals 30 mm (A2).

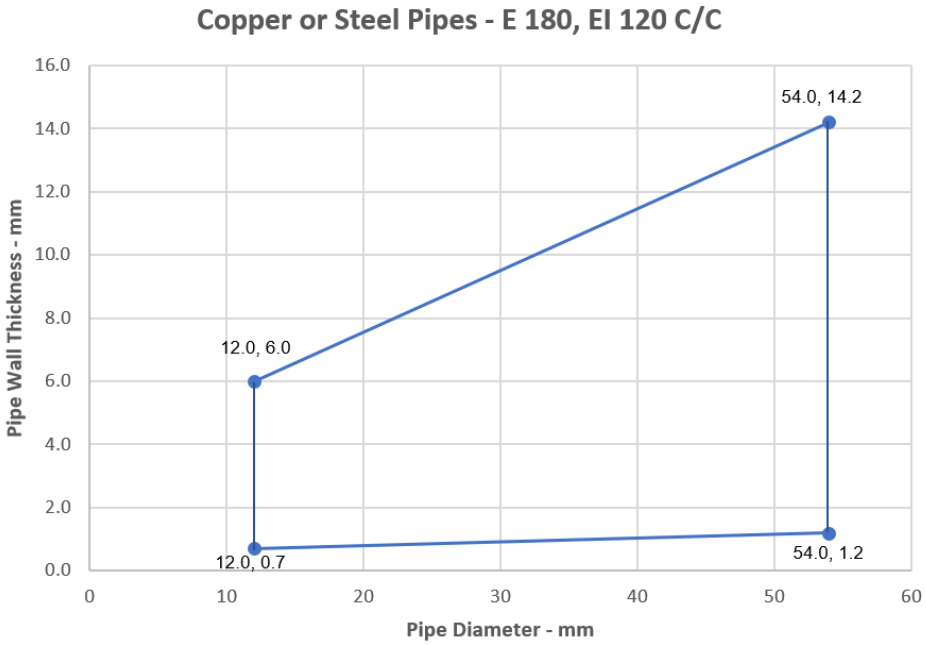
Construction details:



A.4.8.1

Services	Insulation	Classification
Copper or steel pipe with minimum 75 kg/m^3 density glass or mineral wool insulation		
Maximum 12 mm diameter/0.7-14.2 mm wall*	Minimum 20 mm thick insulation, 500 mm long butted up to each face of the floor	**EI 240 C/C**
Maximum 54 mm diameter/1.2-14.2 mm wall*		**E 180, EI 120 C/C**

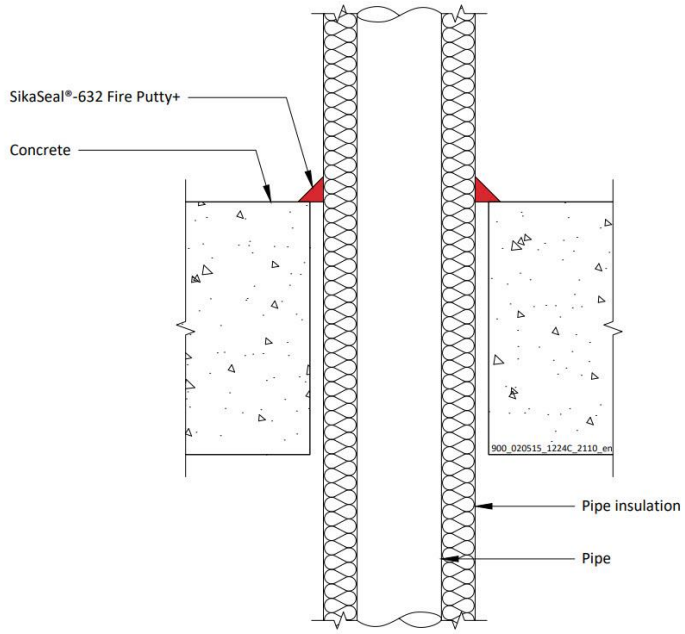
*See below graphs for interpolation pipe sizes


Copper or Steel Pipes - E 180, EI 120 C/C
Pipe Wall Thickness - mm
Pipe Diameter - mm
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
0
10
20
30
40
50
60
54.0, 14.2
12.0, 6.0
12.0, 0.7
54.0, 1.2

A.4.9 Single sided penetration seal with insulated metallic pipes, Continuous Sustained (CS)

Penetration Seal: Metallic pipes insulated with minimum 80 kg/m³ density mineral wool insulation, Continuous Sustained (CS), penetrating through a rigid floor construction, fitted at any position within the aperture, sealed with a 15mm diameter cord of SikaSeal-632 Fire Putty+ on the top face of the floor. Maximum annular space 10 mm (A1) and minimum separation between penetration seals 30 mm (A2).

Construction details:

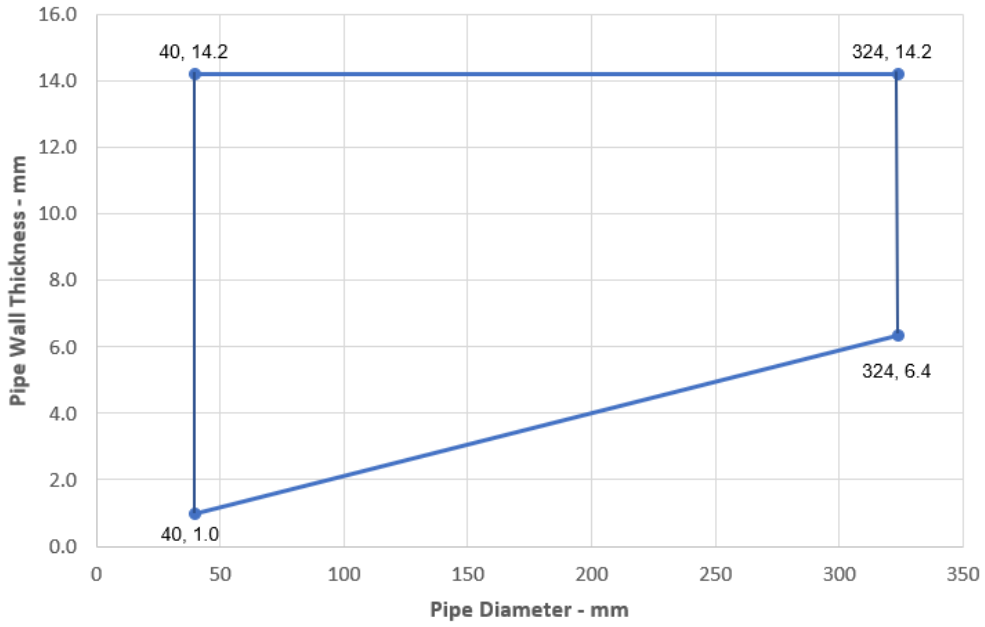


A.4.9.1

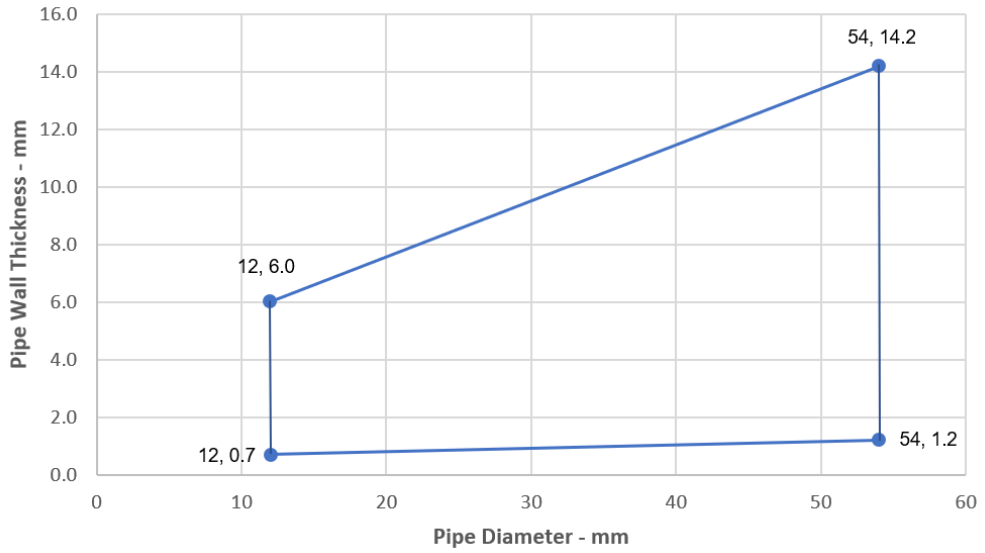
Services	Insulation	Classification
Mild or stainless steel pipe, with minimum 80 kg/m³ density mineral wool insulation		
Maximum 40 mm diameter/1.0-14.2 mm wall	20 mm thick	**EI 240 C/U**
Maximum 324 mm diameter*	30-80mm thick	**EI 240 C/U**
Copper or steel pipe with minimum 80 kg/m³ density mineral wool insulation		
Maximum 12 mm diameter/0.7-6.0 mm wall*	20 mm thick	**EI 240 C/C**
Maximum 54 mm diameter/1.2-14.2 mm wall*	30-80mm thick	**EI 240 C/C**
ALUPEX pipe with minimum 80 kg/m³ density mineral wool insulation		
Maximum 16 mm diameter/2.25-8.0 mm wall*	20 mm thick	**EI 240 C/C**
Maximum 75 mm diameter/4.6-14.2 mm wall*	30-80mm thick	**EI 240 C/C**

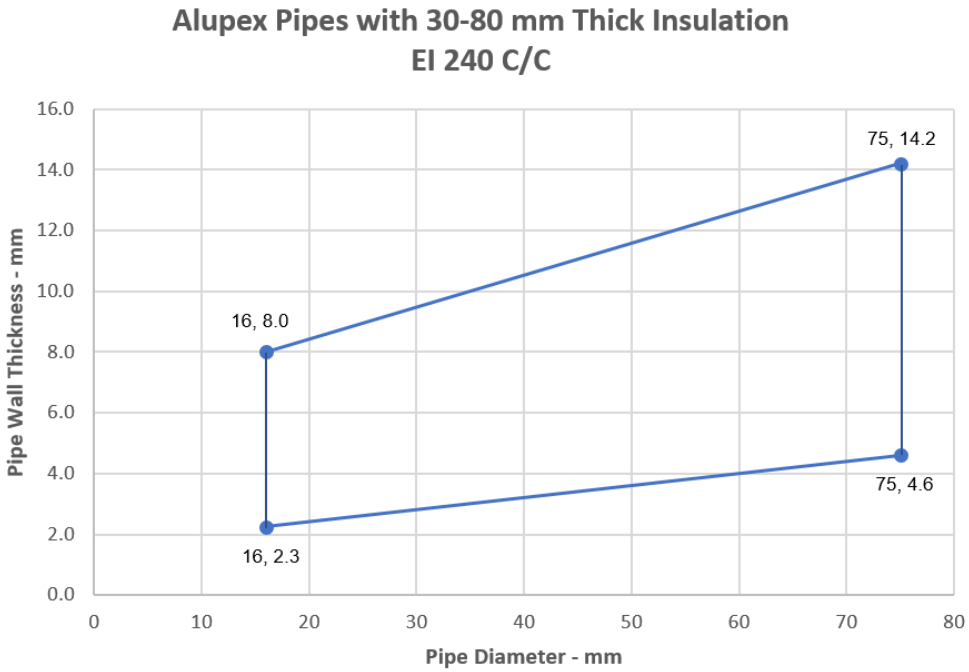
*See below graphs for interpolation pipe sizes

Steel Pipes with 30-80 mm Thick Insulation - EI 240 C/U



Copper or Steel Pipes with 30-80 mm Thick Insulation EI 240 C/C

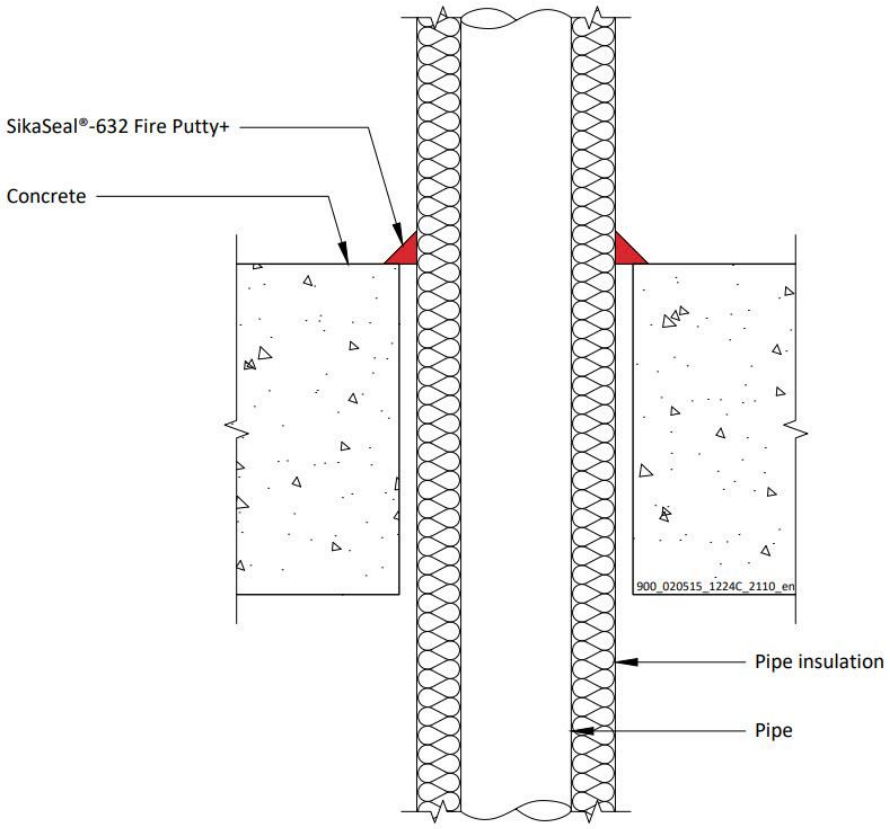



Alupex Pipes with 30-80 mm Thick Insulation
EI 240 C/C
Pipe Wall Thickness - mm
Pipe Diameter - mm
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
0
10
20
30
40
50
60
70
80
75, 14.2
16, 8.0
75, 4.6
16, 2.3

A.4.10 Single sided penetration seal with insulated metallic pipes, Continuous Sustained (CS)

Penetration Seal: Metallic pipes insulated with minimum 75 kg/m^3 density glass wool insulation, Continuous Sustained (CS), penetrating through a rigid floor construction, fitted at any position within the aperture, sealed with a 15mm diameter cord of SikaSeal-632 Fire Putty+ on the top face of the floor. Maximum annular space 10 mm (A1) and minimum separation between penetration seals 30 mm (A2).

Construction details:

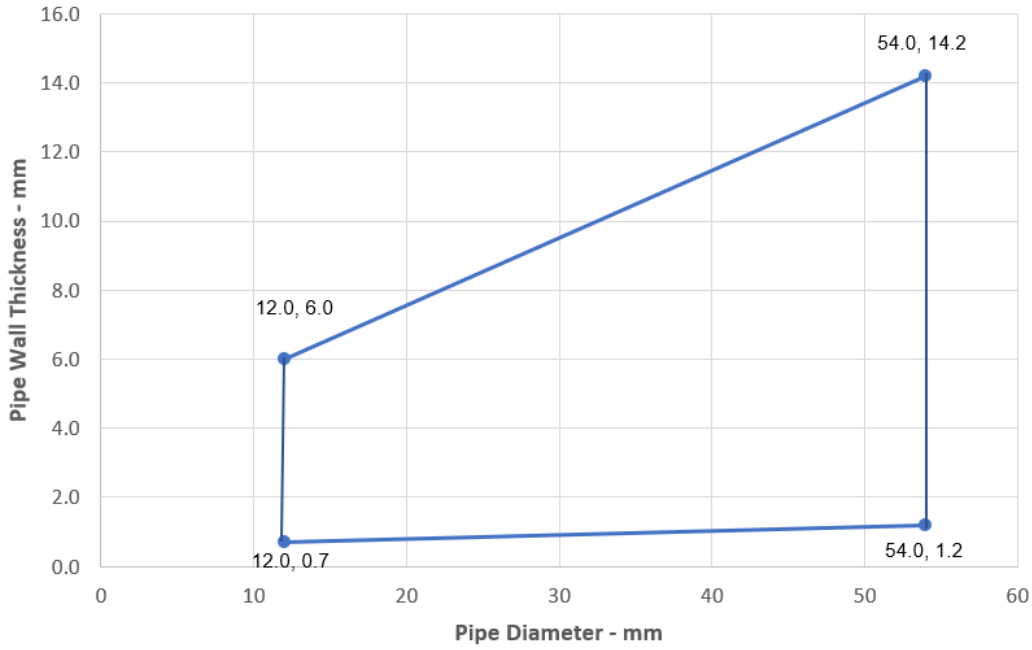


A.4.10.1

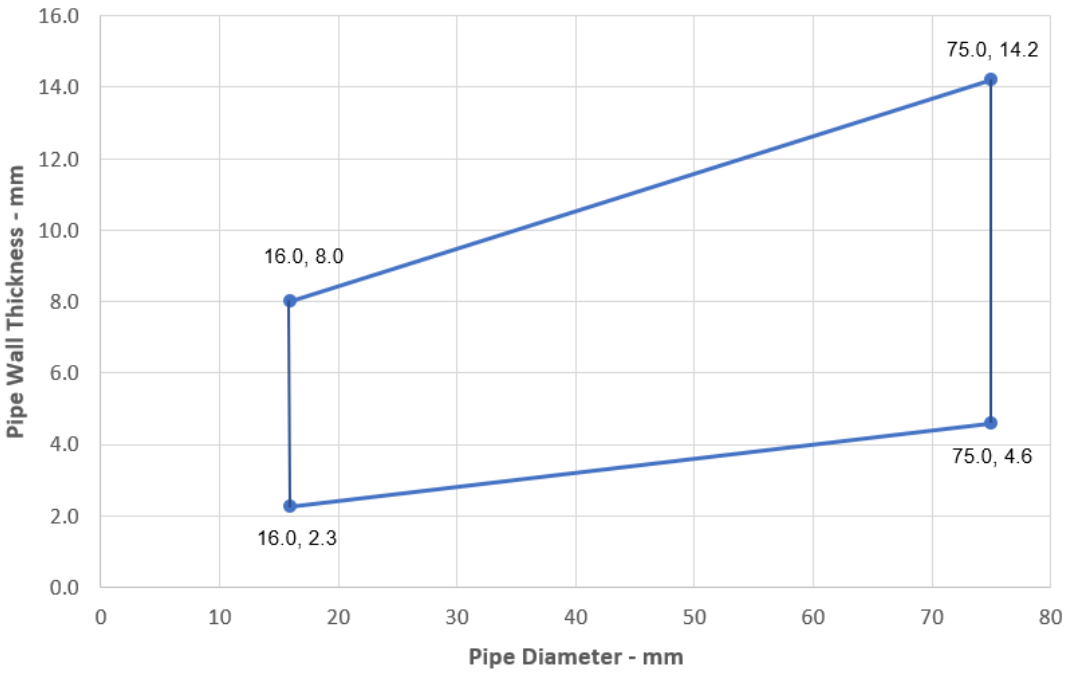
Services	Insulation	Classification
Copper or steel pipe with minimum 75 kg/m^3 density glass wool insulation		
Maximum 12 mm diameter/0.7-6.0 mm wall*	20 mm thick	**EI 240, EI 90 C/C**
Maximum 54 mm diameter/1.2-14.2 mm wall*	20-40mm thick	**EI 90 C/C**
ALUPEX pipe with minimum 75 kg/m^3 density glass wool insulation		
Maximum 16 mm diameter/2.25-8.0 mm wall*	20 mm thick	**EI 120 C/C**
Maximum 75 mm diameter/4.6-14.2 mm wall*	20-50mm thick	**EI 120 C/C**

*See below graphs for interpolation pipe sizes

Copper or Steel Pipes - EI 90 C/C

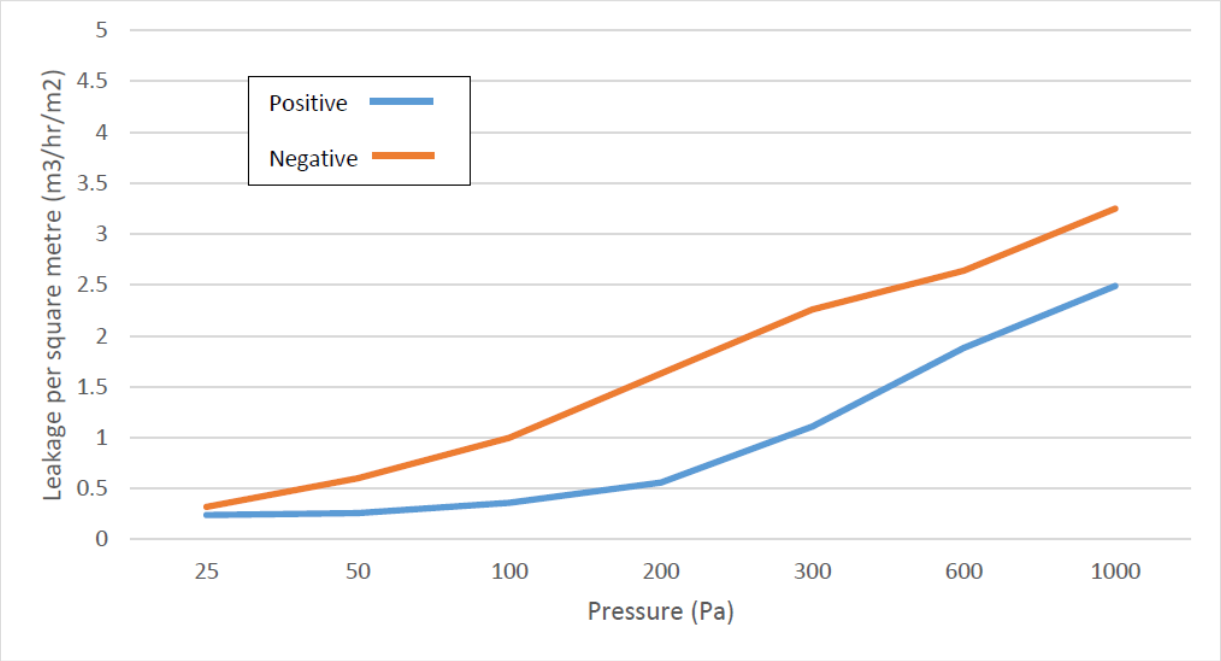


Alupex Pipes - EI 120 C/C



ANNEX B – AIR PERMEABILITY – SIKASEAL-632 FIRE PUTTY+

Product tested	SikaSeal-632 Fire Putty+ Cord around 48mm electrical cable in 58mm hole		
Summary of testing procedure			Result
	Pressure (Pa)	Leakage (m^3/h)	Leakage ($m^3/m^2/h$)
Results under negative chamber pressure	25	0.32	N/A
	50	0.60	N/A
	100	1.00	N/A
	200	1.63	N/A
	300	2.26	N/A
	600	2.64	N/A
	1000	3.25	N/A
Results under positive chamber pressure	25	0.24	N/A
	50	0.26	N/A
	100	0.36	N/A
	200	0.56	N/A
	300	1.11	N/A
	600	1.88	N/A
	1000	2.49	N/A



8 APPROPRIATE TECHNICAL DOCUMENTATION AND/OR - SPECIFIC TECHNICAL DOCUMENTATION

The performance of the product identified above is in conformity with the set of declared performance/s. This declaration of performance is issued, in accordance with Regulation (EU) No 305/2011, under the sole responsibility of the manufacturer identified above.

Signed for and on behalf of the manufacturer by:

Name : Tomasz Gutowski
Function: Corporate Standardization and Approvals
At Warsaw on 08 December 2021

. . . . . .

Name : Maciej Michalewski
Function: Standardization and Approvals
At Warsaw on 08 December 2021

. . . . . .

End of information as required by Regulation (EU) No 305/2011

FULL CE MARK

CE 21
Sika Services AG, Zurich, Switzerland
30816702
Resistance to fire - Annex A
Air permeability – Annex B
Durability Z_2
Airborne sound insulation - Rw (C;C_{tr})= 67 (-2;-7) dB

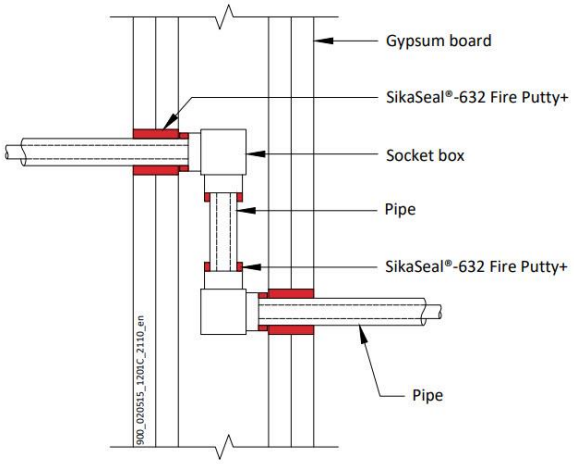
ANNEX A – RESISTANCE TO FIRE CLASSIFICATION – SIKASEAL-632 FIRE PUTTY+

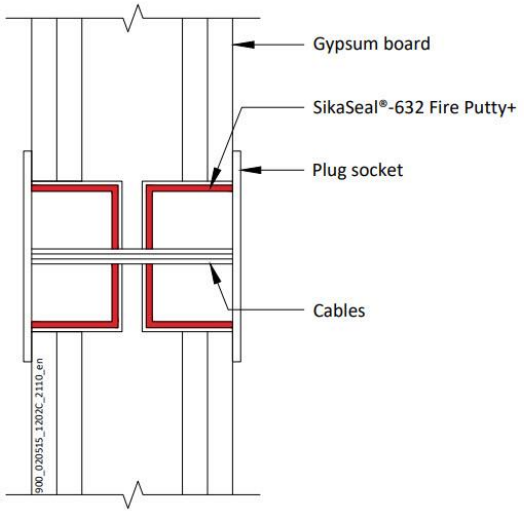
A.1 Flexible wall constructions with wall thickness of minimum 100 mm

A.1.1 Pipe and cable penetration seals with 4 mm thick SikaSeal-632 Fire Putty+ in socket box

Penetration Seal: Socket boxes with 15 mm long SikaSeal-632 Fire Putty+ wrapped around the pipe protrusion from the socket box. Min. 30 mm between cable penetrations.

Construction details:





A.1.1.1 Double side penetration seal with pipes in socket boxes

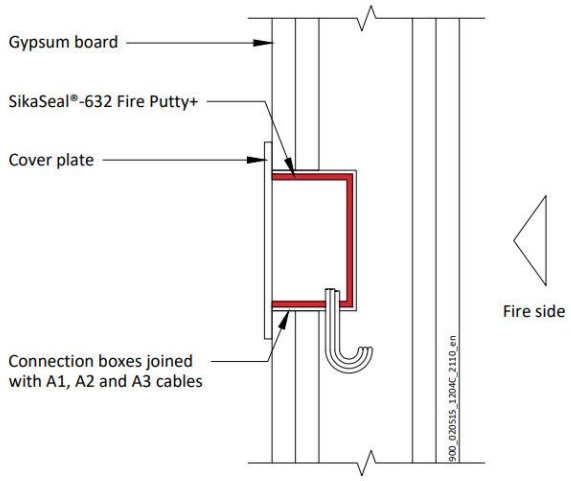
Services	Socket box	SikaSeal-632 Fire Putty+ - mm	Aperture mm	Classification
Høiax 25mm PEX pipe in pipe hose	Single or double Høiax Push Wallbox 15mm*	174 x 64 x 4 mm pad around pipe / 50 Ø x 25 mm at back of the box	63 Ø	**EI 90**
Cables up to 14 mm diameter	UK standard double socket box, maximum 130mm wide x 70mm high x 47mm deep, each with up to 22mm hole cut to accept the cables	Interior of box fully lined with pad	Maximum 135 wide x 75 high	**EI 60**

*Fixed directly to studs or with steel plate between studs.

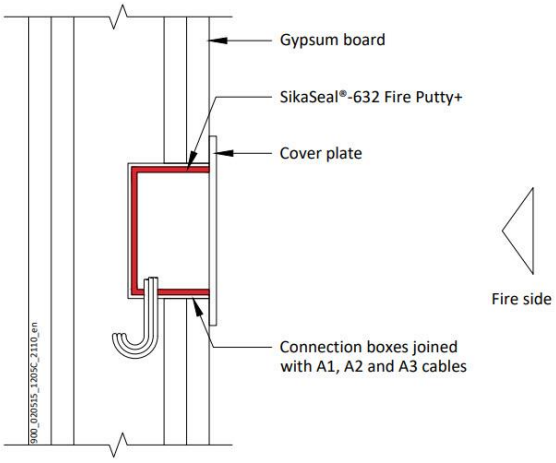
A.1.2 Cable penetration seals with 4 mm thick SikaSeal-632 Fire Putty+ in socket box

Penetration Seal: Socket boxes with SikaSeal-632 Fire Putty+ wrapped around the cable protrusion from the socket box.

Construction details:



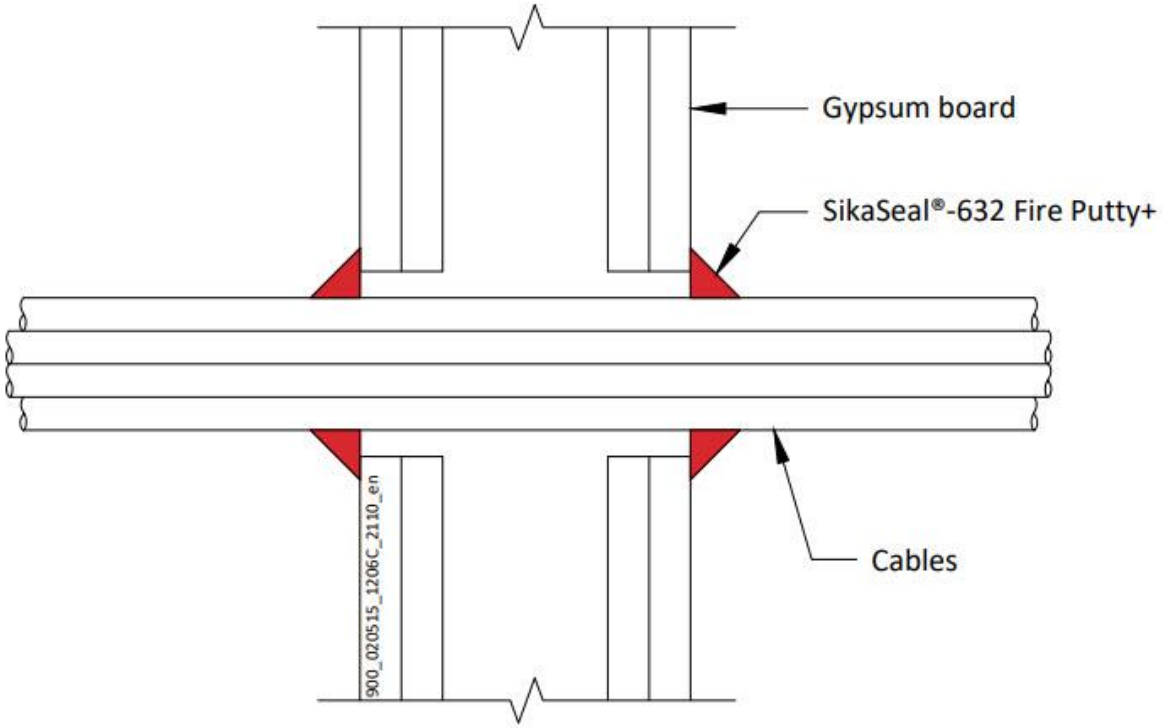
Construction details:



A.1.2.1 Single side penetration seal with cables in socket boxes

Services	Socket box	SikaSeal-632 Fire Putty+	Position	Aperture mm	Classification
Cables up to 14 mm diameter	Schneider Electric Ref. IMT 36026 connection box, 72mm wide x 90mm high x 50mm deep	Fitted lining the back of the back box	Side by side – 1 fitted to each face, or separated	73 wide x 91 High x 51 deep	**E 60, EI 45**
Cables up to 14 mm diameter	Elko 4189 1223720 connection box, 72mm wide x 90mm high x 58mm deep	Interior of box fully lined with pad	Adjacent – 1 fitted to each face, or separated	92 wide x 112 High	**EI 90**
Cables up to 14 mm diameter	ELKO 5421 123740 connection box, 73mm wide x 73mm high x 55mm deep	Interior of box fully lined with pad	Side by side – 1 fitted to each face, or separated	74 wide x 74 High	**EI 90**

A.1.3 Double sided penetration seal with cables

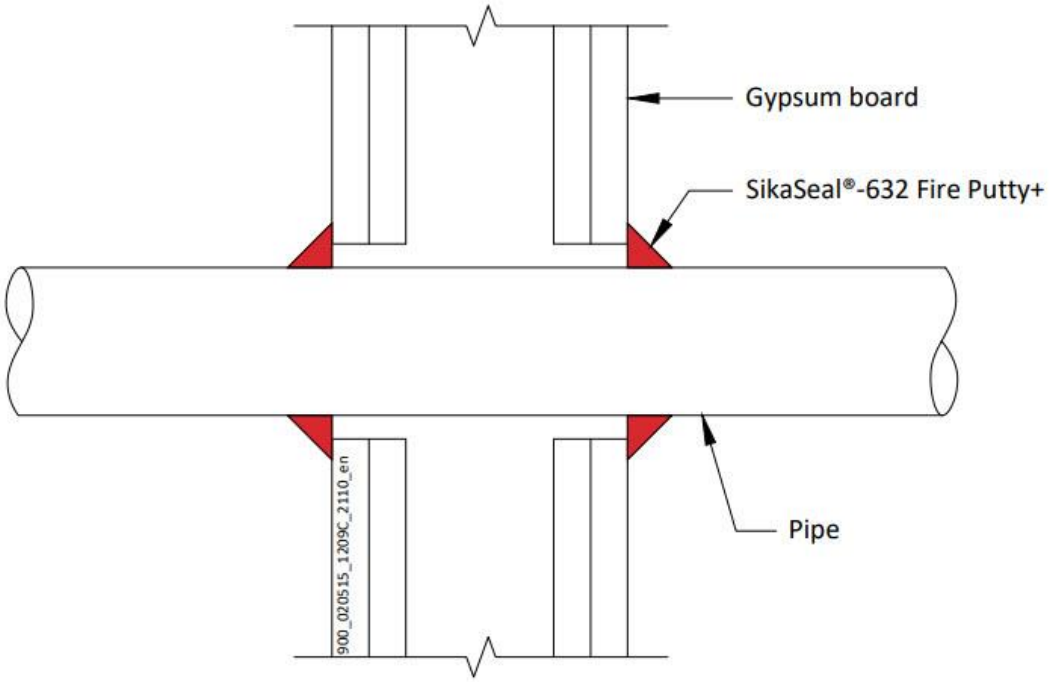
Penetration Seal: Cables (single or bundled up to 50 mm Ø) penetrating through a flexible or rigid wall construction and fitted at any position within the aperture, sealed with a 15mm diameter cord of SikaSeal-632 Fire Putty+ on both sides of the wall. Maximum annular space 10 mm (A1) and minimum separation between penetration seals 30 mm (A2).
Construction details: 

A.1.3.1

Services	Classification
Blank seal with a 15 mm deep cord of SikaSeal-632 Fire Putty+ on both sides of the wall	**EI 120**
Cables up to 21 mm diameter, single or in a bundle up to 50 mm diameter*	**EI 120**
Cables up to 80 mm diameter, single or in a bundle up to 50 mm diameter*	**EI 60**

* Cable specification from EN 1366-3 standard cable configuration

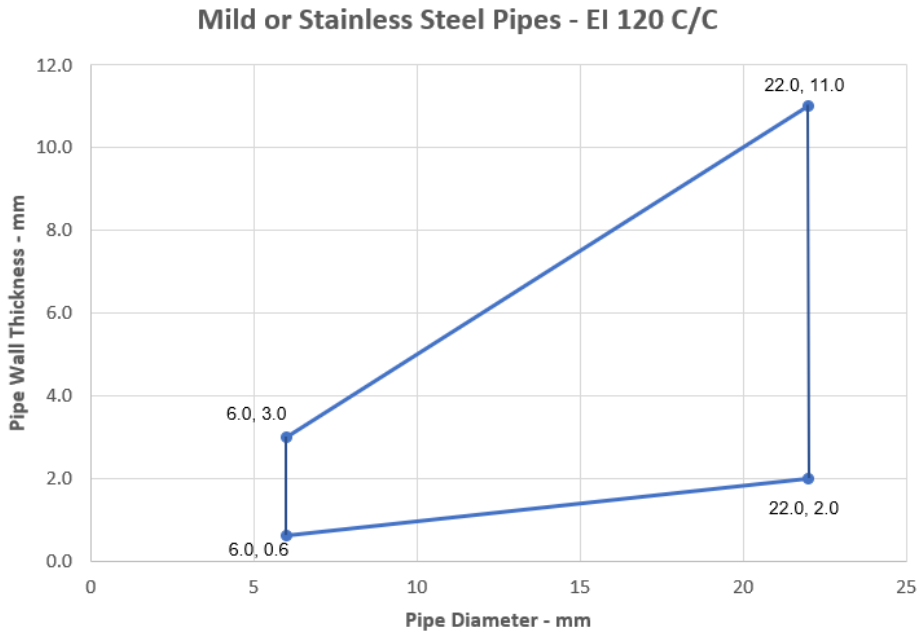
A.1.4 Double sided penetration seal with metallic pipes

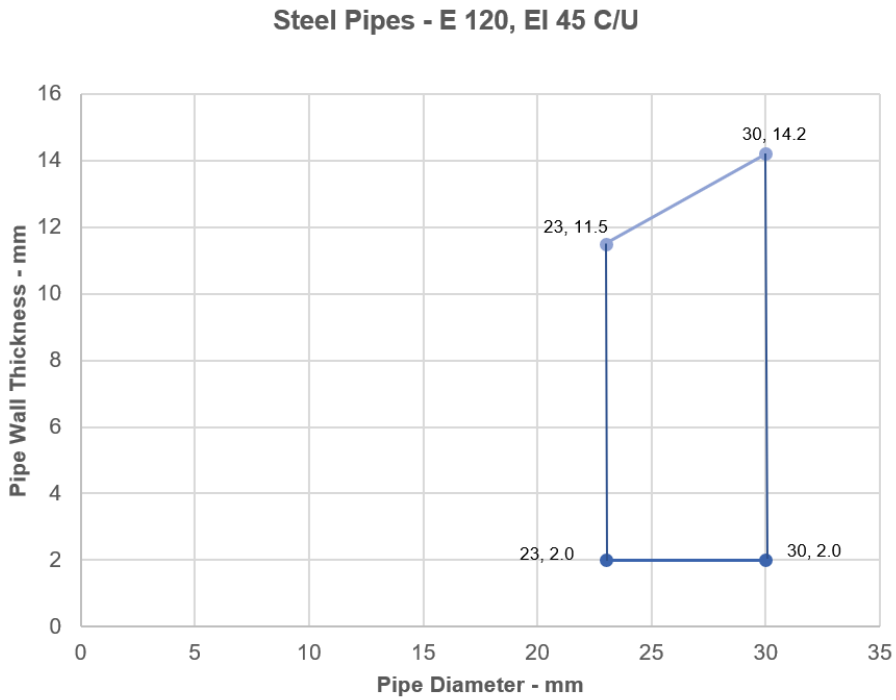
Penetration Seal: Metallic pipes penetrating through a flexible or rigid wall construction and fitted at any position within the aperture, sealed with a 15mm diameter cord of SikaSeal-632 Fire Putty+ on both sides of the wall. Maximum annular space 10 mm (A1) and minimum separation between penetration seals 30 mm (A2).
Construction details: 

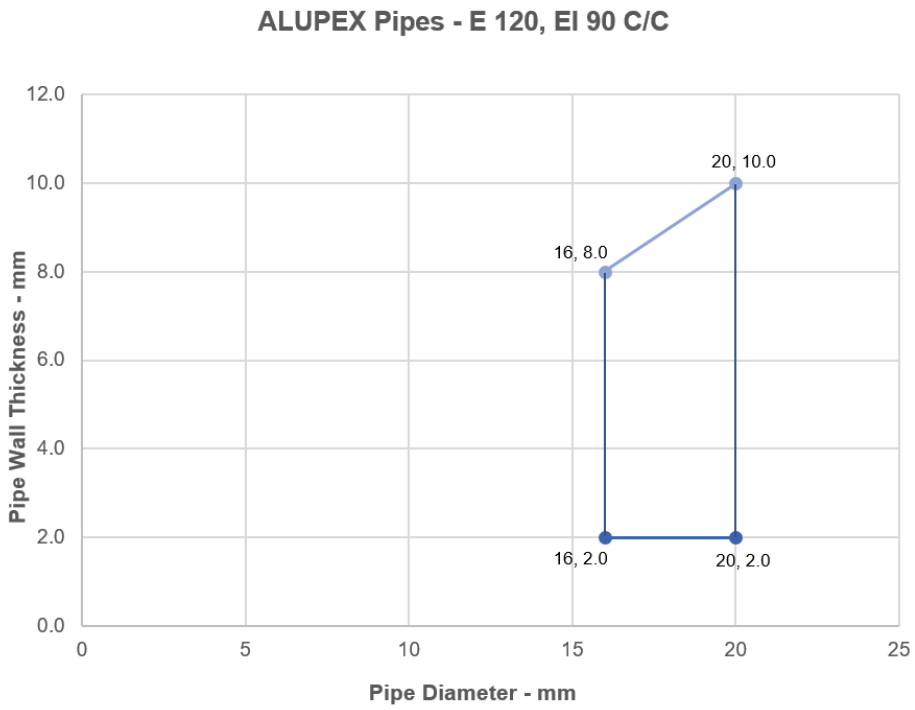
A.1.4.1

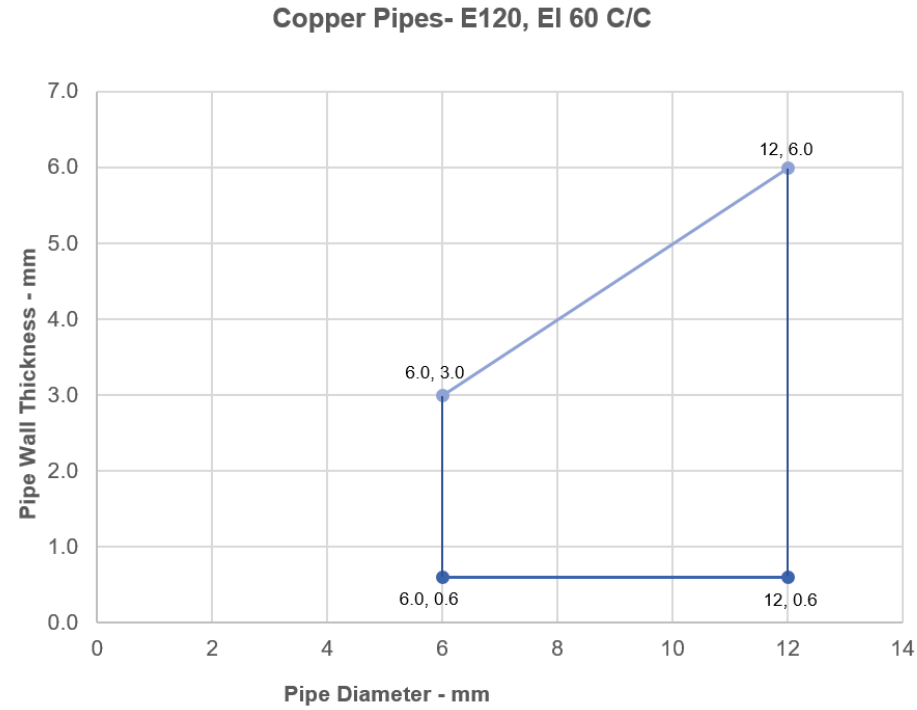
Services	Insulation	Classification
Mild or stainless steel pipe		
Maximum 22 mm diameter*	None needed	**EI 120 C/U**
23-30 mm diameter*	None needed	**E 120, EI 45 C/U**
ALUPEX pipe		
16 mm diameter*	None needed	**EI 120 C/C**
17-20 mm diameter*	None needed	**E 120, EI 90 C/C**
Copper or steel pipe		
6 mm diameter*	None needed	**EI 120 C/C**
7-12 mm diameter*	None needed	**E 120, EI 60 C/C**

*See below graphs for interpolation pipe sizes


Mild or Stainless Steel Pipes - EI 120 C/C
Pipe Wall Thickness - mm
Pipe Diameter - mm
12.0
10.0
8.0
6.0
4.0
2.0
0.0
0
5
10
15
20
25
22.0, 11.0
6.0, 3.0
22.0, 2.0
6.0, 0.6


Steel Pipes - E 120, EI 45 C/U
Pipe Wall Thickness - mm
Pipe Diameter - mm
16
14
12
10
8
6
4
2
0
0
5
10
15
20
25
30
35
30, 14.2
23, 11.5
23, 2.0
30, 2.0

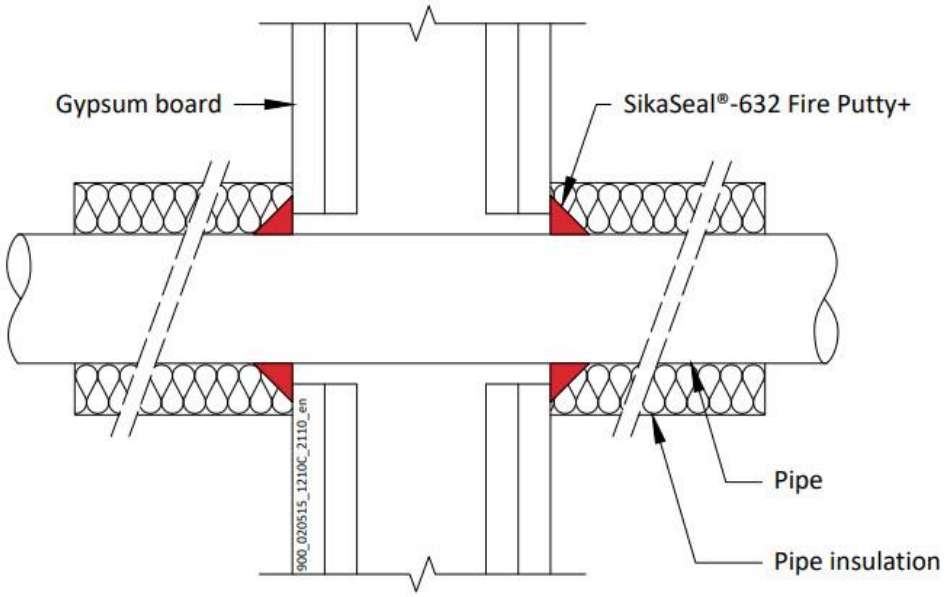

ALUPEX Pipes - E 120, EI 90 C/C
Pipe Wall Thickness - mm
Pipe Diameter - mm
12.0
10.0
8.0
6.0
4.0
2.0
0.0
0
5
10
15
20
25
20, 10.0
16, 8.0
16, 2.0
20, 2.0


Copper Pipes- E120, EI 60 C/C
Pipe Wall Thickness - mm
Pipe Diameter - mm
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
0
2
4
6
8
10
12
14
12, 6.0
6.0, 3.0
6.0, 0.6
12, 0.6

A.1.5 Double sided penetration seal with insulated metallic pipes, Local Interrupted (LI)

Penetration Seal: Metallic pipes insulated with minimum 80 kg/m³ density mineral wool insulation, Local Interrupted (LI), penetrating through a flexible or rigid wall construction, fitted at any position within the aperture, sealed with a 15mm diameter cord of SikaSeal-632 Fire Putty+ on both sides of the wall. Maximum annular space 10 mm (A1) and minimum separation between penetration seals 30 mm (A2).

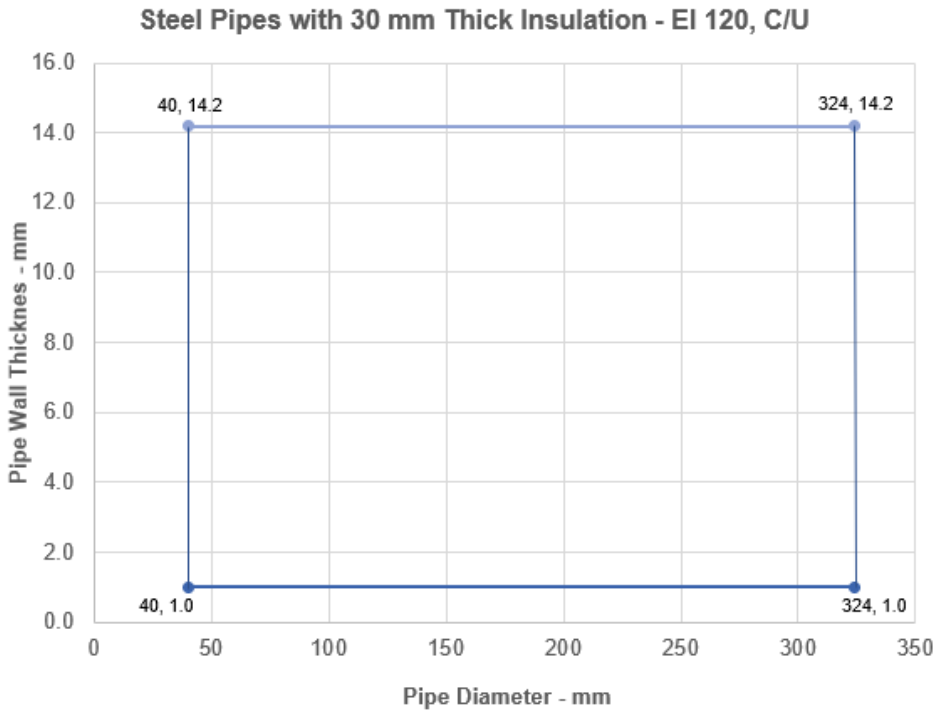
Construction details:

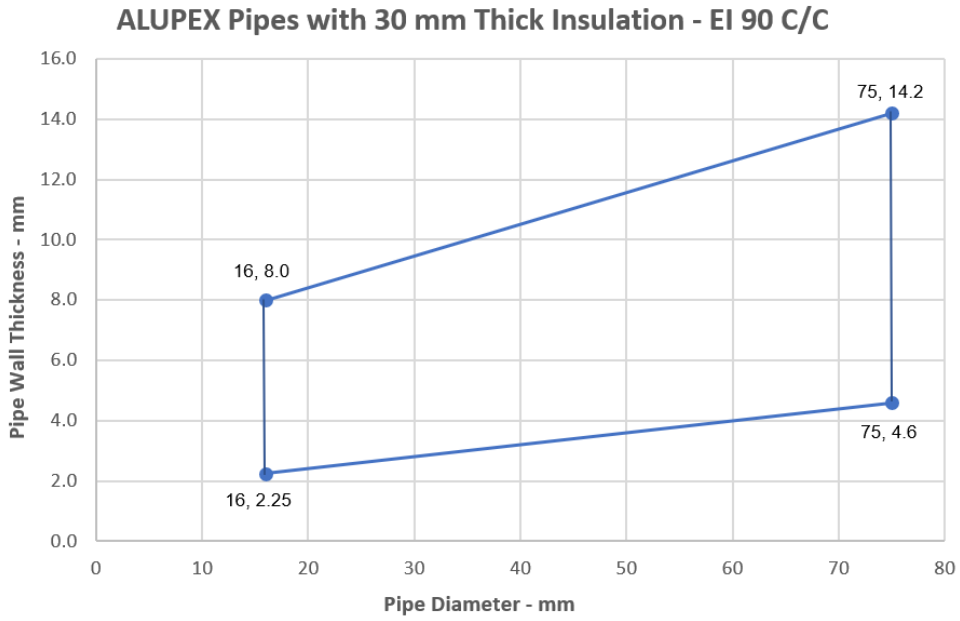


A.1.5.1

Services	Insulation	Classification
Mild or stainless steel pipe, with minimum 80 kg/m³ density mineral wool insulation		
Maximum 40 mm diameter*	Minimum 20 mm thick insulation, 500 mm long butted up to the wall on both faces	**EI 120 C/U**
40-324 mm diameter*	Minimum 30 mm thick insulation, 500 mm long butted up to the wall on both faces	**EI 120 C/U**
Copper or steel pipe with minimum 80 kg/m³ density mineral wool insulation		
Maximum 54 mm diameter/1.2-14.2 mm wall	Minimum 20 mm thick insulation, 500 mm long butted up to the wall on both faces	**E 90, EI 60 C/C**
ALUPEX pipe with minimum 80 kg/m³ density mineral wool insulation		
Maximum 16 mm diameter*	Minimum 20 mm thick insulation, 500 mm long butted up to the wall on both faces	**EI 90 C/C**
Maximum 75 mm diameter*	Minimum 30 mm thick insulation, 500 mm long butted up to the wall on both faces	**EI 90 C/C**

*See below graphs for interpolation pipe sizes

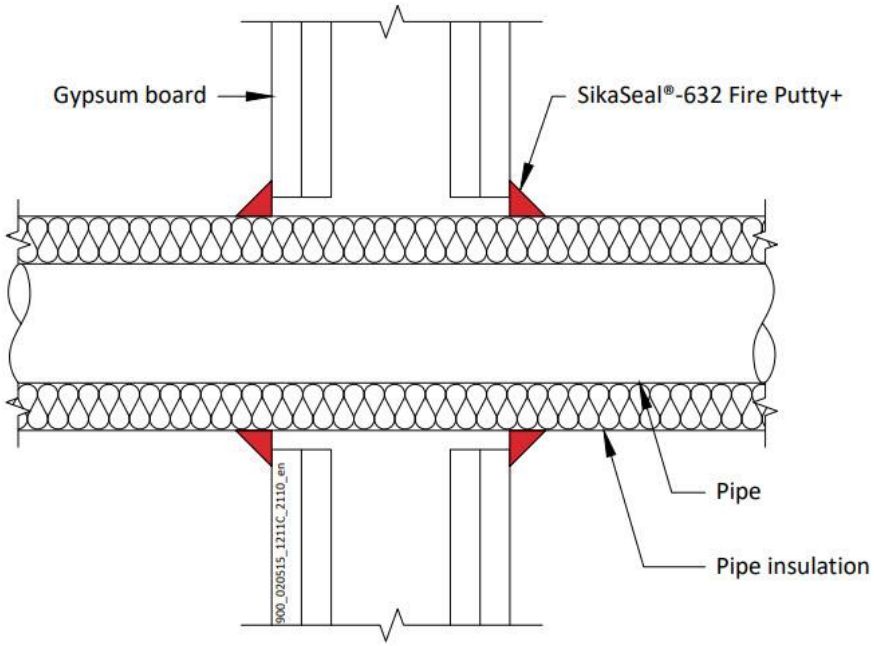

Steel Pipes with 30 mm Thick Insulation - EI 120, C/U
Pipe Wall Thicknes - mm
Pipe Diameter - mm
40, 14.2
324, 14.2
40, 1.0
324, 1.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
0
50
100
150
200
250
300
350


ALUPEX Pipes with 30 mm Thick Insulation - EI 90 C/C
Pipe Wall Thickness - mm
Pipe Diameter - mm
75, 14.2
16, 8.0
75, 4.6
16, 2.25
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
0
10
20
30
40
50
60
70
80

A.1.6 Double sided penetration seal with insulated metallic pipes, Continuous Sustained (CS)

Penetration Seal: Metallic pipes insulated with minimum 80 kg/m³ density mineral wool insulation, Continuous Sustained (CS), penetrating through a flexible or rigid wall construction, fitted at any position within the aperture, sealed with a 15mm diameter cord of SikaSeal-632 Fire Putty+ on both sides of the wall. Maximum annular space 10 mm (A1) and minimum separation between penetration seals 30 mm (A2).

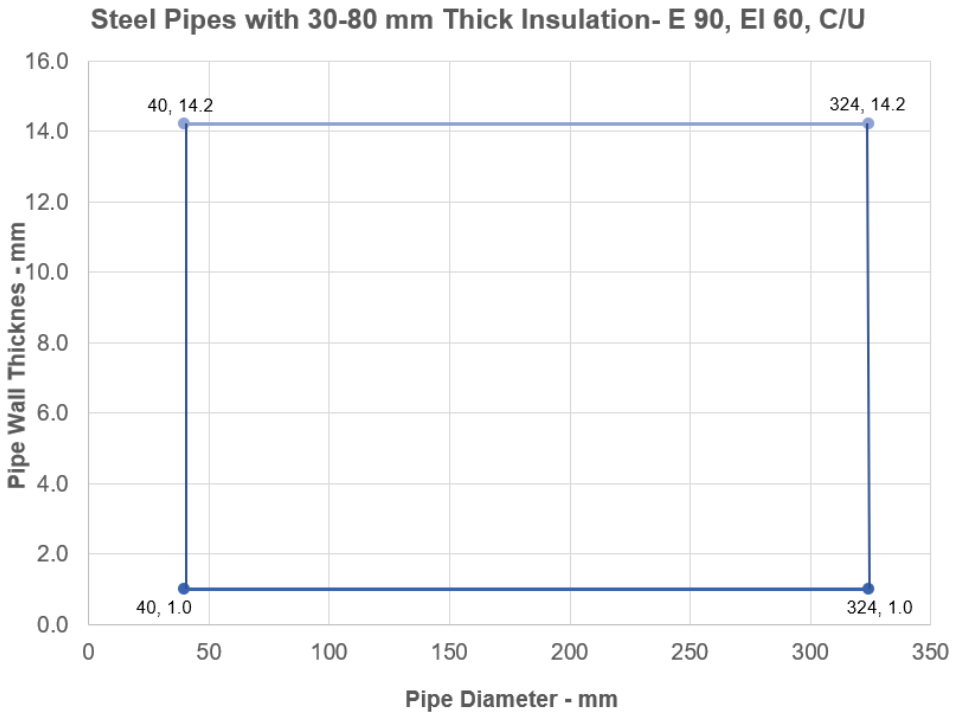
Construction details:

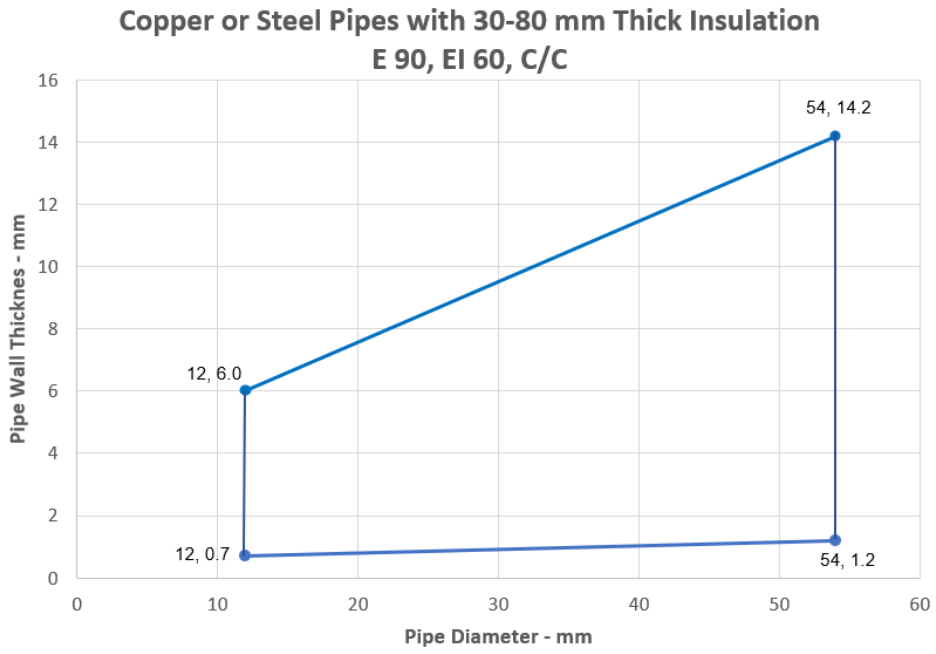


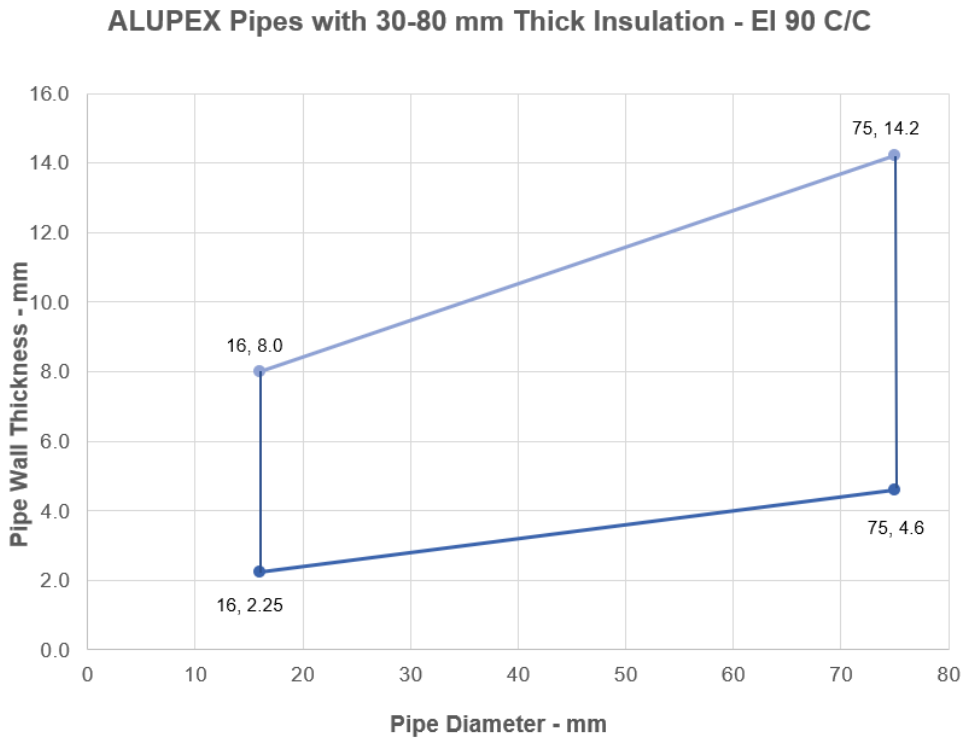
A.1.6.1

Services	Insulation	Classification
Mild or stainless steel pipe, with minimum 80 kg/m³ density mineral wool insulation		
Maximum 40 mm diameter*	20 mm thick	**EI 120 C/U**
40-324 mm diameter*	30-80 mm thick	**E 90, EI 60 C/U**
Copper or steel pipe with minimum 80 kg/m³ density mineral wool insulation		
Maximum 12 mm diameter/0.7-6.0 mm wall*	20 mm thick	**E90, EI 60 C/C**
Maximum 54 mm diameter/1.2-14.2 mm wall,	30-80 mm thick	**E 90, EI 60 C/C**
ALUPEX pipe with minimum 80 kg/m³ density mineral wool insulation		
Maximum 16 mm diameter*	20 mm thick	**EI 90 C/C**
Maximum 75 mm diameter*	30-80 mm thick	**EI 90 C/C**

*See below graphs for interpolation pipe sizes


Steel Pipes with 30-80 mm Thick Insulation- E 90, EI 60, C/U
Pipe Wall Thicknes - mm
Pipe Diameter - mm
40, 14.2
324, 14.2
40, 1.0
324, 1.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
0
50
100
150
200
250
300
350


Copper or Steel Pipes with 30-80 mm Thick Insulation
E 90, EI 60, C/C
Pipe Wall Thicknes - mm
Pipe Diameter - mm
54, 14.2
12, 6.0
12, 0.7
54, 1.2
16
14
12
10
8
6
4
2
0
0
10
20
30
40
50
60

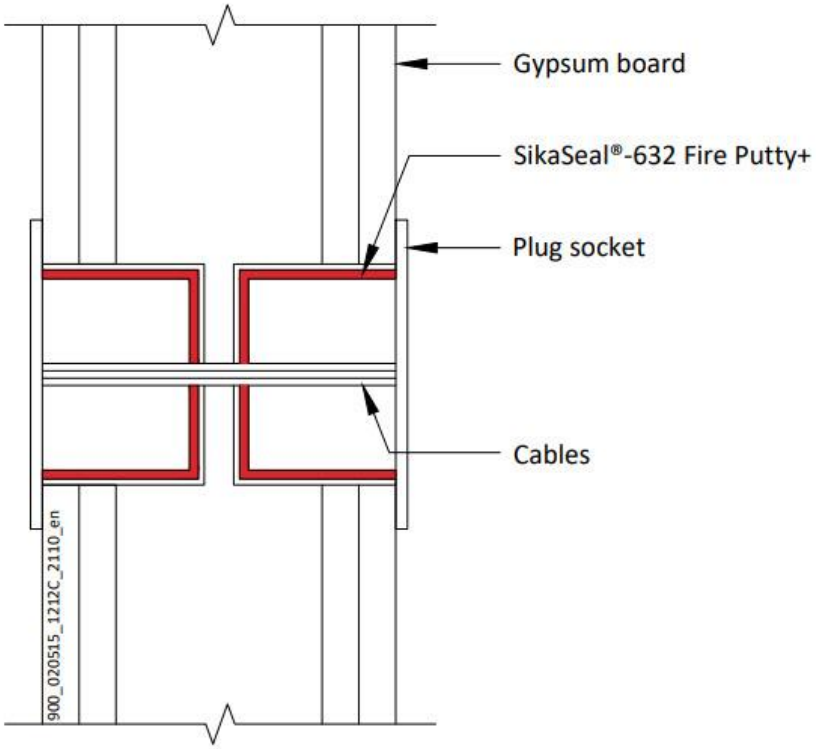

ALUPEX Pipes with 30-80 mm Thick Insulation - EI 90 C/C
Pipe Wall Thickness - mm
Pipe Diameter - mm
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
0
10
20
30
40
50
60
70
80
75, 14.2
16, 8.0
75, 4.6
16, 2.25

A.2 Flexible wall constructions with wall thickness of minimum 120 mm

A.2.1 Cable penetration seals with 4 mm thick SikaSeal-632 Fire Putty+ in socket box

Penetration Seal: Socket boxes with SikaSeal-632 Fire Putty+ wrapped around the cable protrusion from the socket box.

Construction details:



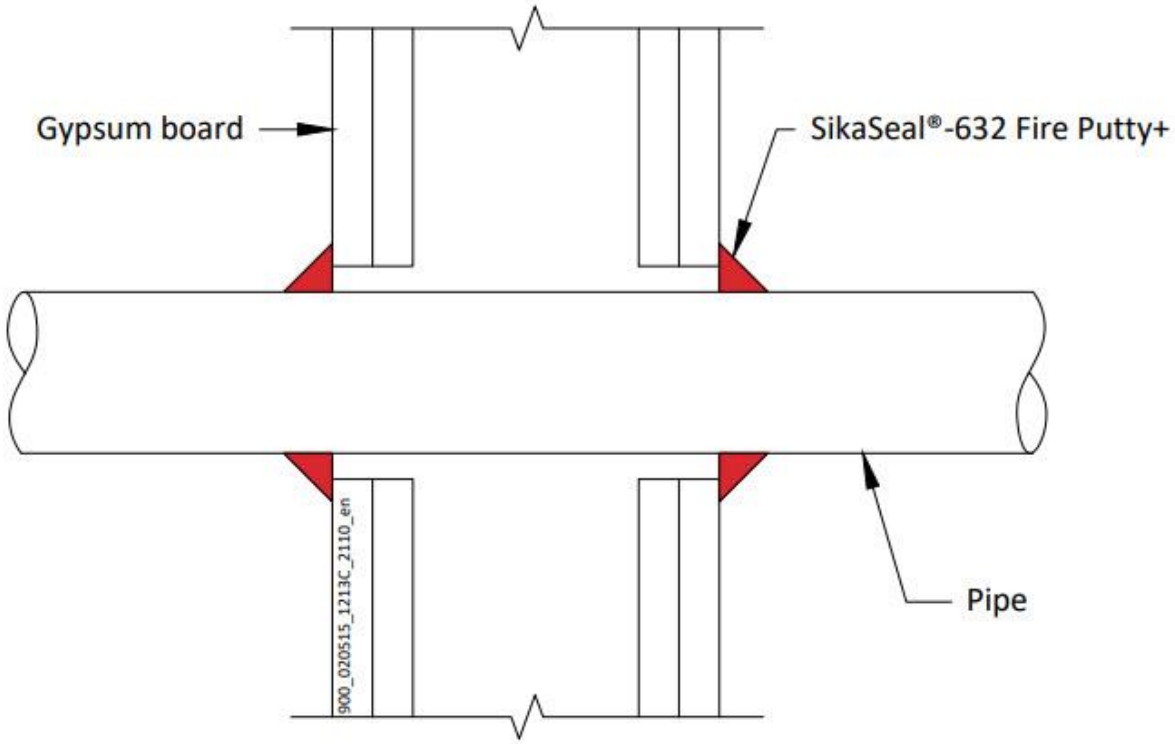
A.2.1.1 Double side penetration seal with cables in socket boxes

Services	Socket box	SikaSeal-632 Fire Putty+	Position	Aperture mm	Classification
Cables up to 14 mm diameter	UK standard double socket box, maximum 130mm wide x 70mm high x 48mm deep, each with a 25mm wide x 14mm high knock out section centrally located at the bottom back angle of the box to accept the cables	Interior of box fully lined with pad	Back to back – 1 fitted to each face, or separated	Maximum 135 wide x 72 High	**EI 120**
2.5 mm twin and earth cables					

A.2.2 Double sided penetration seal with metallic pipes

Penetration Seal: Metallic pipes penetrating through a flexible or rigid wall construction and fitted at any position within the aperture, sealed with a 15mm diameter cord of SikaSeal-632 Fire Putty+ on both sides of the wall. Maximum annular space 10 mm (A1) and minimum separation between penetration seals 30 mm (A2).

Construction details:



A.2.2.1

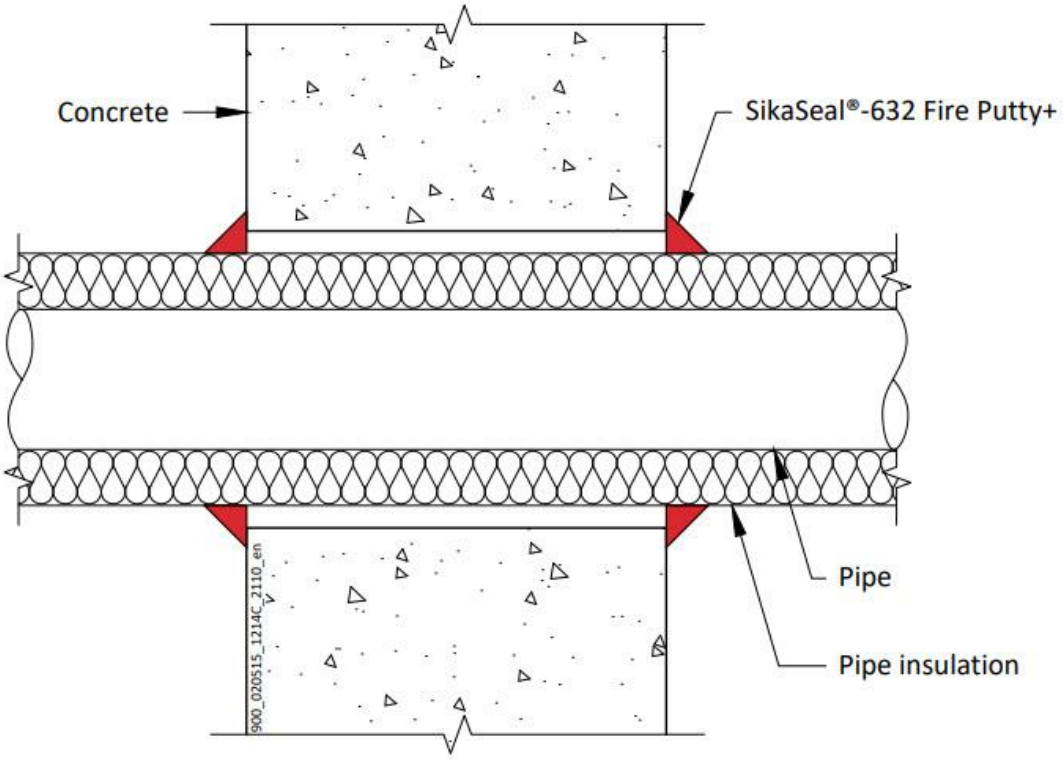
Services	Insulation	Classification
Mild or stainless steel pipe		
Maximum 324 mm diameter/6.35-14.2 mm wall	None needed	**E 90, EI 20 C/U**
ALUPEX pipe		
Maximum 75 mm diameter/4.6-14.2 mm wall	None needed	**EI 90 C/C**
Copper or steel pipe		
Maximum 54 mm diameter/1.2-14.2 mm wall	None needed	**E 90, EI 15 C/C**

A.3 Rigid wall constructions with wall thickness of minimum 150 mm

A.3.1 Double sided penetration seal with insulated metallic pipes, Continuous Sustained (CS)

Penetration Seal: Metallic pipes insulated with minimum 80 kg/m^3 density mineral wool insulation, Continuous Sustained (CS), penetrating through a rigid wall construction, fitted at any position within the aperture, sealed with a 15mm diameter cord of SikaSeal-632 Fire Putty+ on both sides of the wall. Maximum annular space 10 mm (A1) and minimum separation between penetration seals 30 mm (A2).

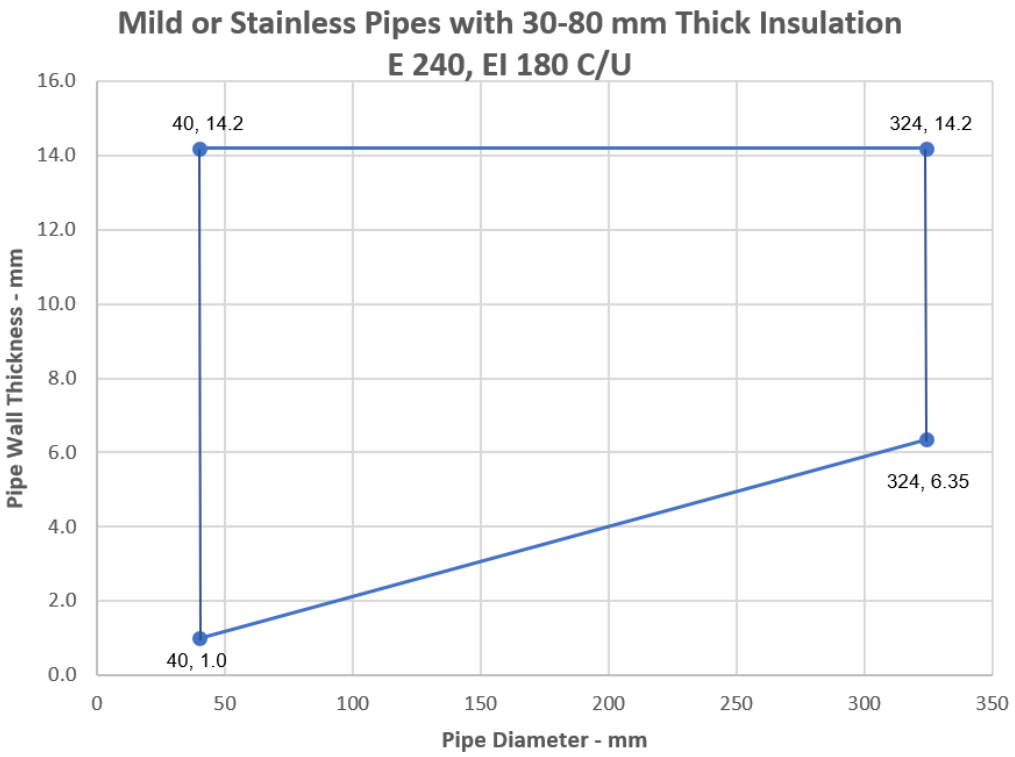
Construction details:

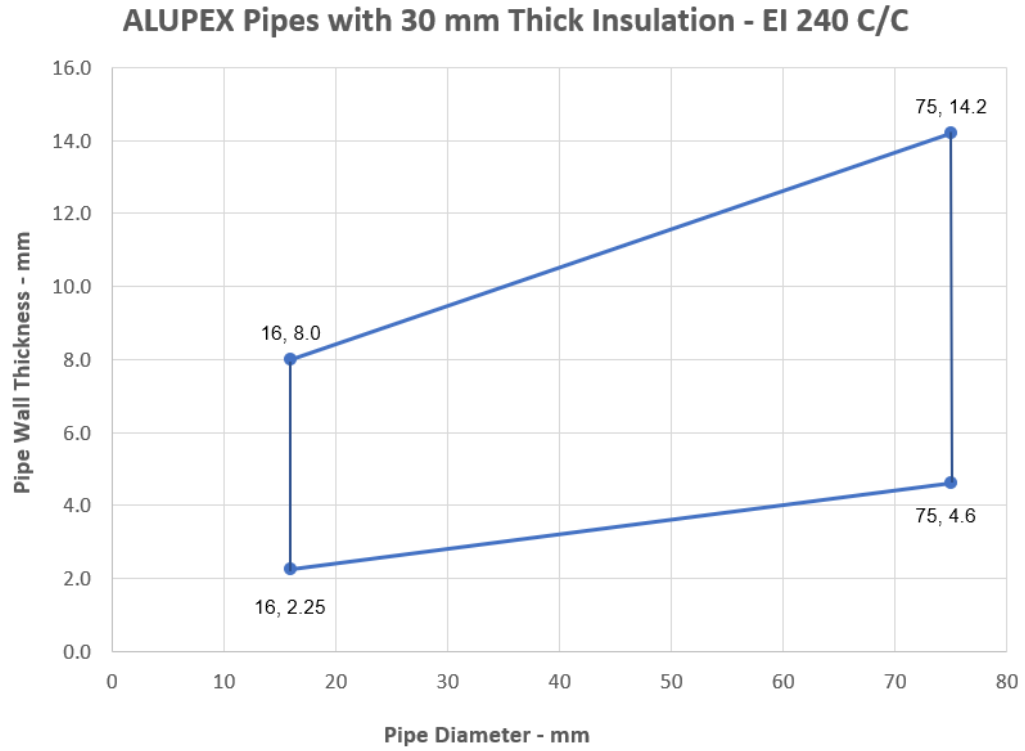


A.3.1.1

Services	Insulation	Classification
Mild or stainless steel pipe, with minimum 80 kg/m^3 density mineral wool insulation		
Maximum 40 mm diameter*	20 mm thick	**EI 120 C/U**
Maximum 324 mm diameter*	30-80 mm thick	**E 240, EI 180 C/U**
Copper or steel pipe with minimum 80 kg/m^3 density mineral wool insulation		
Maximum 54 mm diameter/1.2-14.2 mm wall	20 mm thick	**E 240, EI 120 C/C**
ALUPEX pipe with minimum 80 kg/m^3 density mineral wool insulation		
Maximum 16 mm diameter*	20 mm thick	**EI 240 C/C**
Maximum 75 mm diameter*	30 mm thick	**EI 240 C/C**

*See below graphs for interpolation pipe sizes


Mild or Stainless Pipes with 30-80 mm Thick Insulation
E 240, EI 180 C/U
Pipe Wall Thickness - mm
Pipe Diameter - mm
40, 14.2
324, 14.2
324, 6.35
40, 1.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
0
50
100
150
200
250
300
350

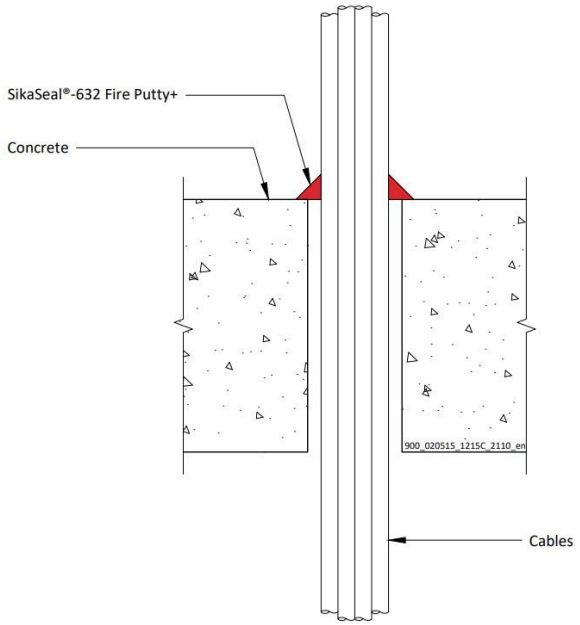

ALUPEX Pipes with 30 mm Thick Insulation - EI 240 C/C
Pipe Wall Thickness - mm
Pipe Diameter - mm
75, 14.2
16, 8.0
75, 4.6
16, 2.25
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
0
10
20
30
40
50
60
70
80

A.4 Rigid floor constructions with floor thickness of minimum 150 mm

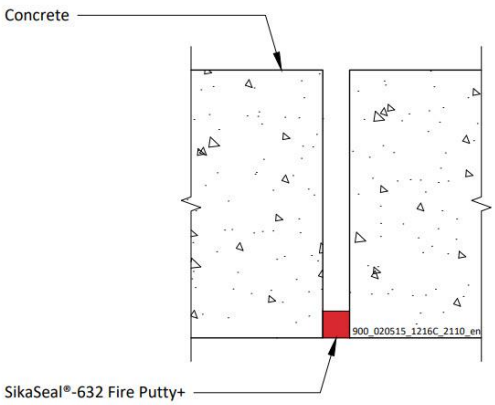
A.4.1 Single sided penetration seal with cables

Penetration Seal: Cables (single or bundled up to 50 mm Ø) penetrating through a rigid floor construction and fitted at any position within the aperture, sealed with a 15mm diameter cord of SikaSeal-632 Fire Putty+ on the top face of the floor. Maximum annular space 10 mm (A1) and minimum separation between penetration seals 30 mm (A2). When incorporating blank penetration seals, the aperture is sealed with 15mm wide by 15mm thick cord of SikaSeal-632 Fire Putty+, applied flush with the bottom face of the floor.

Construction details:



Construction details:



A.4.1.1

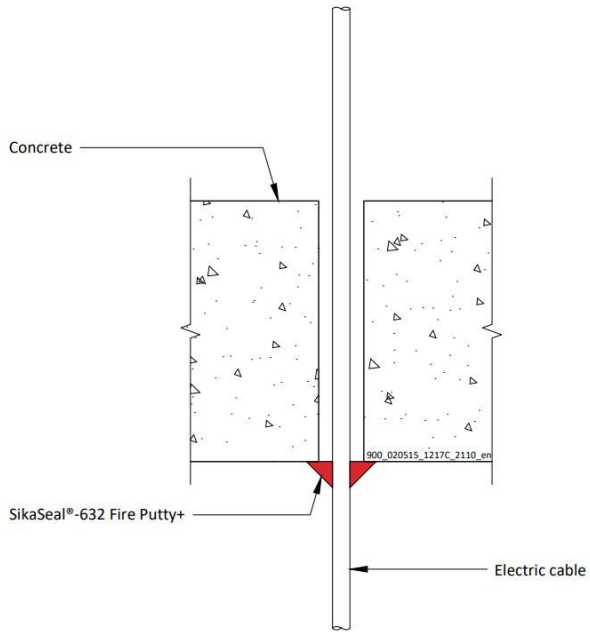
Services	Classification
None (blank)	**E 120, EI 30**
Cables up to 21 mm diameter in tied bundles up to 50 mm diameter*	**E 120, EI 60**
Cables up to 21 mm diameter*	**EI 120**
Cables 22-50 mm diameter*	**E 120, EI 90**
Cables 51-80 mm diameter*	**E 120, EI 60**
Single ‘A1’ type cable*	**EI 240**
Single ‘C3’ type cable*	**EI 240**
Single ‘E’ type cable*	**EI 120**
Single ‘D1’ type cable*	**EI 120**
Single ‘D2’ type cable*	**EI 120**
Single ‘D3’ type cable*	**E 240, EI 60**

* Cable specification from EN 1366-3 standard cable configuration

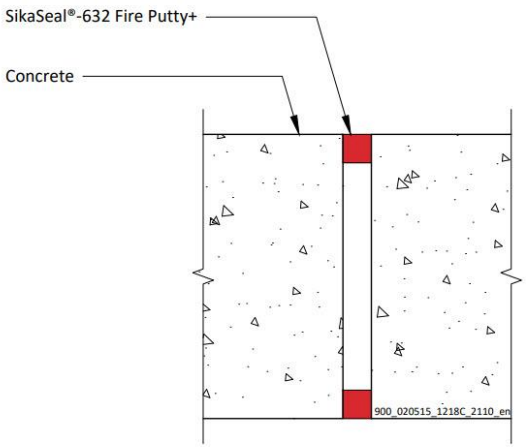
A.4.2 Single sided penetration seal with cables

Penetration Seal: Cables (single or bundled up to 75 mm Ø) penetrating through a rigid floor construction and fitted at any position within the aperture, sealed with a 15mm diameter cord of SikaSeal-632 Fire Putty+ on the bottom face of the floor. Maximum annular space 10 mm (A1) and minimum separation between penetration seals 30 mm (A2). When incorporating blank penetration seals, the aperture is sealed with 15mm wide by 15mm thick cord of SikaSeal-632 Fire Putty+, applied flush with both faces of the floor.

Construction details:



Construction details:



A.4.2.1

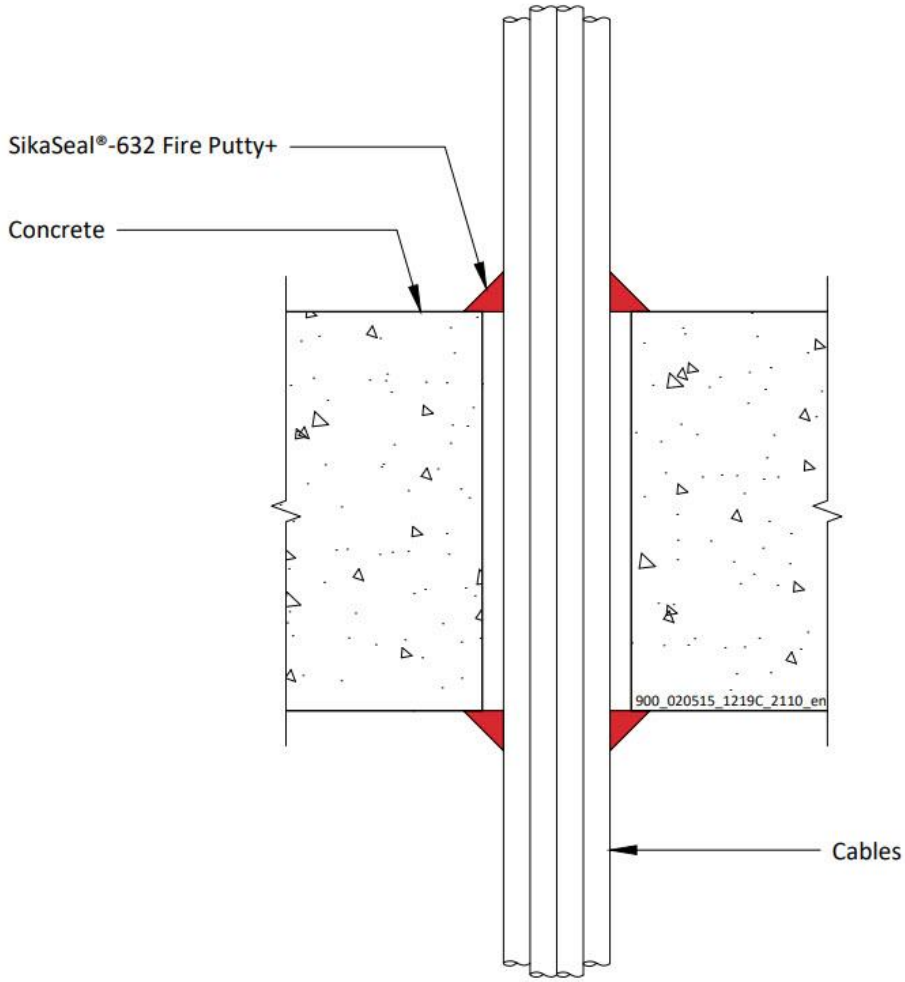
Services	Seal size	Classification
None (blank)	15mm deep	**EI 120**
Cables up to 21 mm diameter in tied bundles up to 75mm diameter*	15 mm diameter cord	**E 60, EI 45**
Cables up to 21 mm diameter*		**E 120, EI 60**
Cables 22-80 mm diameter*		**E 90, EI 45**

* Cable specification from EN 1366-3 standard cable configuration

A.4.3 Double sided penetration seal with cables

Penetration Seal: Cables (single or bundled up to 50 mm Ø) penetrating through a rigid floor construction and fitted at any position within the aperture, sealed with a 15mm diameter cord of SikaSeal-632 Fire Putty+ on both sides of the floor. Maximum annular space 10 mm (A1) and minimum separation between penetration seals 30 mm (A2).

Construction details:

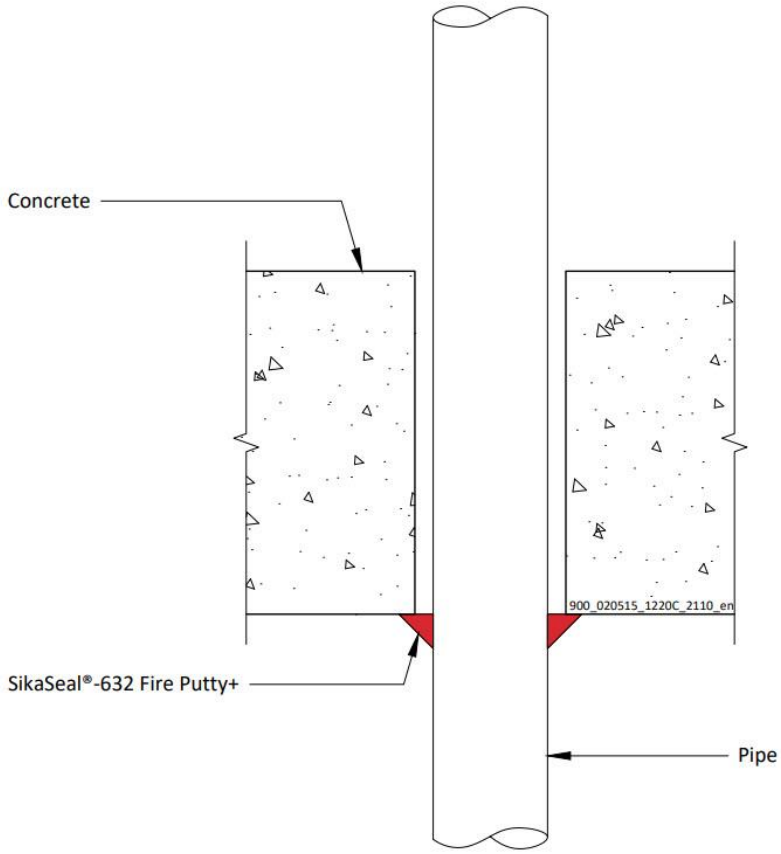


A.4.3.1

Services	Seal size	Classification
Cables up to 21 mm diameter in tied bundles up to 50 mm diameter*	15 mm diameter cord	**EI 240**

* Cable specification from EN 1366-3 standard cable configuration

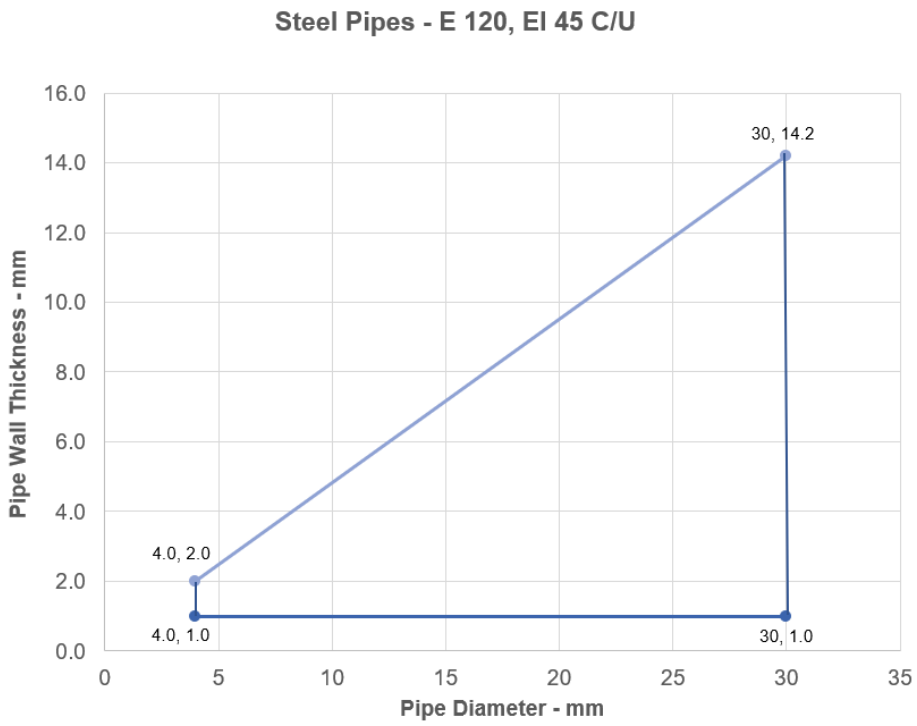
A.4.4 Single sided penetration seal with metallic pipes

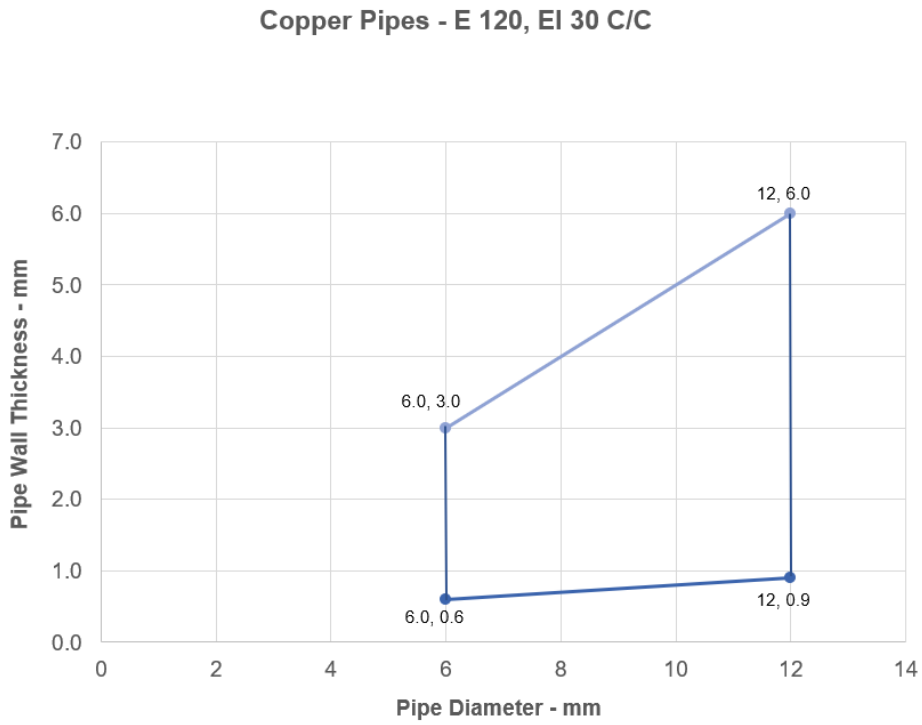
Penetration Seal: Metallic pipes penetrating through a rigid floor construction and fitted at any position within the aperture, sealed with a 15mm diameter cord of SikaSeal-632 Fire Putty+ on the bottom face of the floor. Maximum annular space 10 mm (A1) and minimum separation between penetration seals 30 mm (A2).
Construction details: 

A.4.4.1

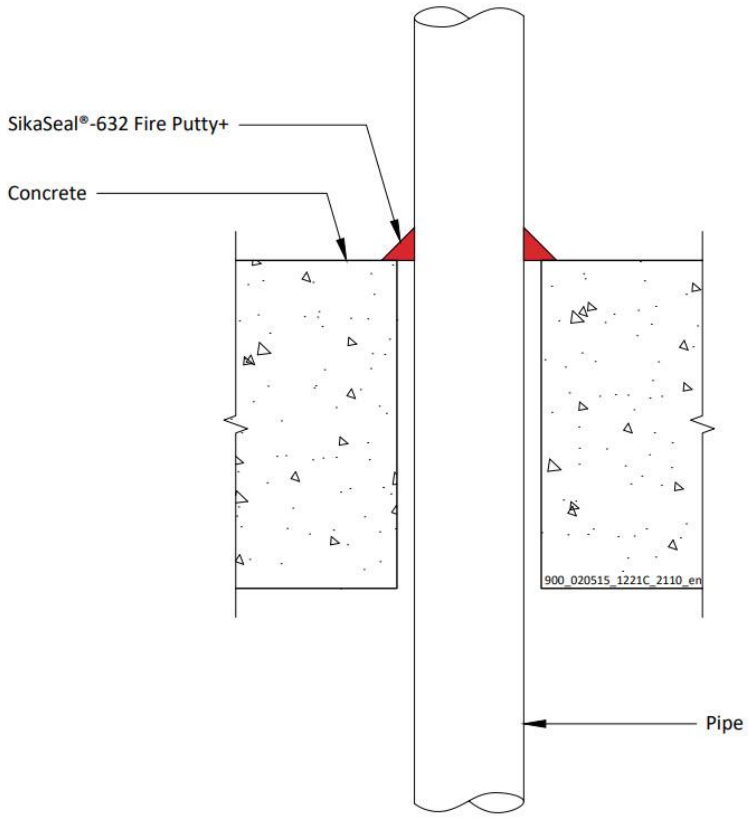
Services	Insulation	Classification
Mild or stainless steel pipe		
4 mm diameter*	None needed	**EI 120 C/U**
5-30 mm diameter*	None needed	**E 120, EI 45 C/U**
Copper or steel pipe		
6 mm diameter*	None needed	**E 120, EI 90 C/C**
7-12 mm diameter*	None needed	**E 120, EI 30 C/C**

*See below graphs for interpolation pipe sizes


Steel Pipes - E 120, EI 45 C/U
Pipe Wall Thickness - mm
Pipe Diameter - mm
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
0
5
10
15
20
25
30
35
30, 14.2
4.0, 2.0
4.0, 1.0
30, 1.0


Copper Pipes - E 120, EI 30 C/C
Pipe Wall Thickness - mm
Pipe Diameter - mm
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
0
2
4
6
8
10
12
14
12, 6.0
6.0, 3.0
6.0, 0.6
12, 0.9

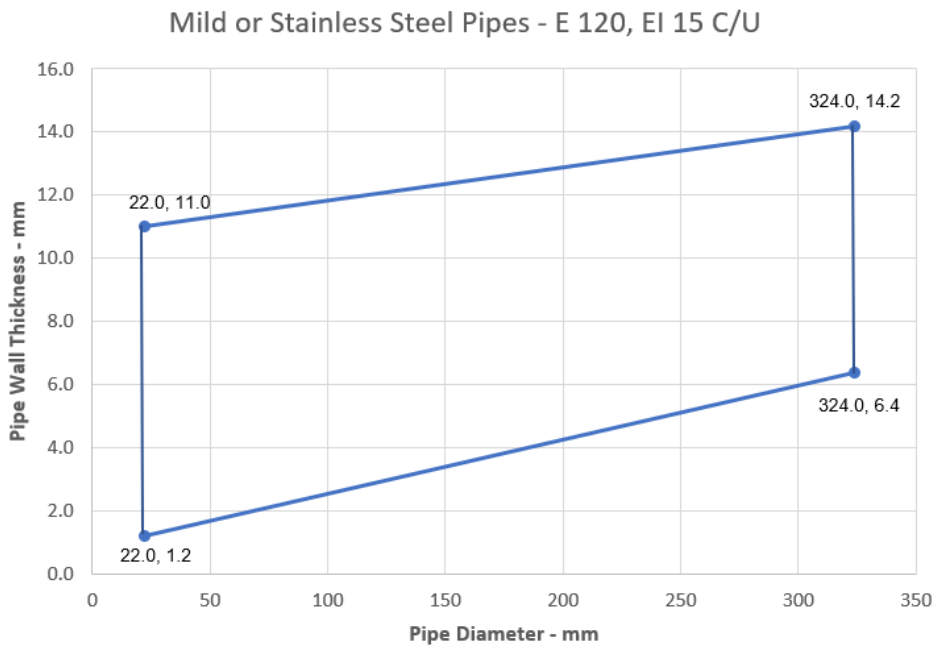
A.4.5 Single sided penetration seal with metallic pipes

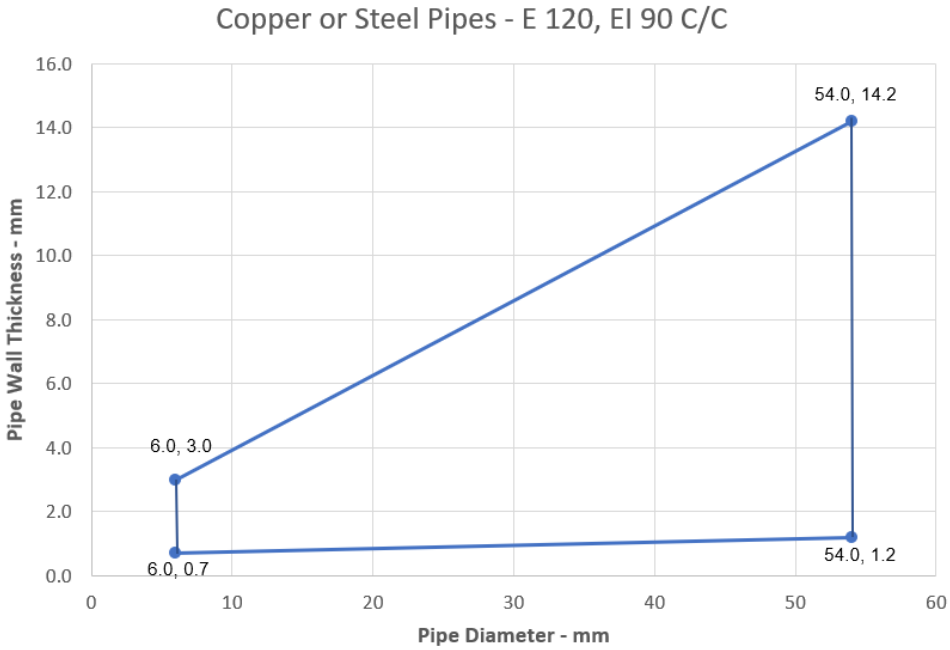
Penetration Seal: Metallic pipes penetrating through a rigid floor construction and fitted at any position within the aperture, sealed with a 15mm diameter cord of SikaSeal-632 Fire Putty+ on the top face of the floor. Maximum annular space 10 mm (A1) and minimum separation between penetration seals 30 mm (A2).
Construction details: 

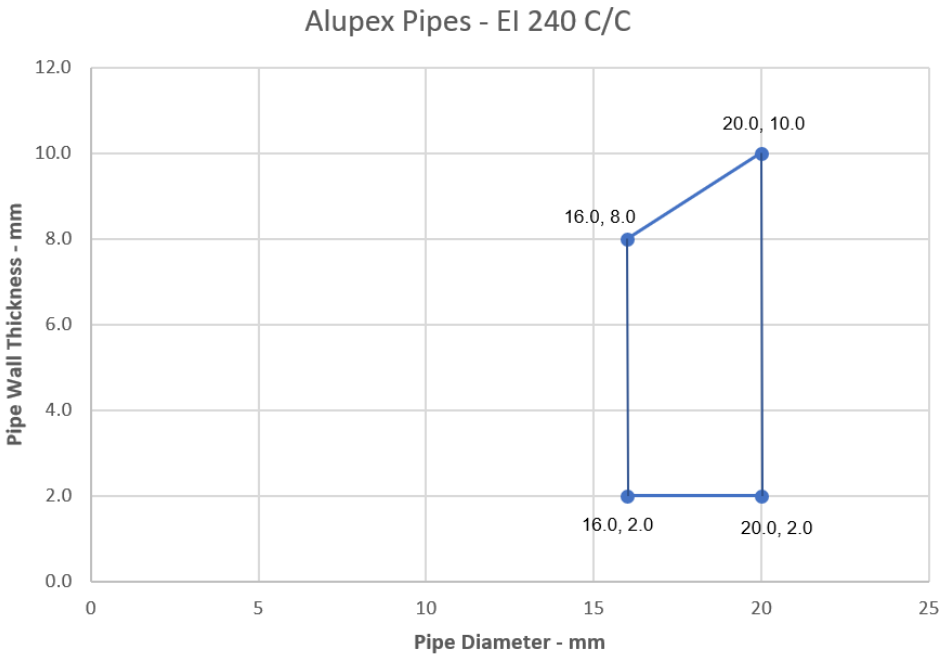
A.4.5.1

Services	Insulation	Classification
Mild or stainless steel pipe		
Maximum 22 mm diameter/1.2-11.0 mm wall*	None needed	**EI 120 C/U**
Maximum 324 mm diameter/6.35-14.2 mm wall*	None needed	**E 240, EI 15 C/U**
Copper or steel pipe		
6 mm diameter*	None needed	**EI 120 C/C**
7-10 mm diameter*	None needed	**E 120, EI 90 C/C**
Maximum 54 mm diameter/1.2-14.2 mm wall	None needed	**E 120 C/C**
ALUPEX pipe		
16-20 mm diameter*	None needed	**EI 240 C/C**
Maximum 75 mm diameter/4.6-14.2 mm wall	None needed	**E 45, EI 30 C/C**

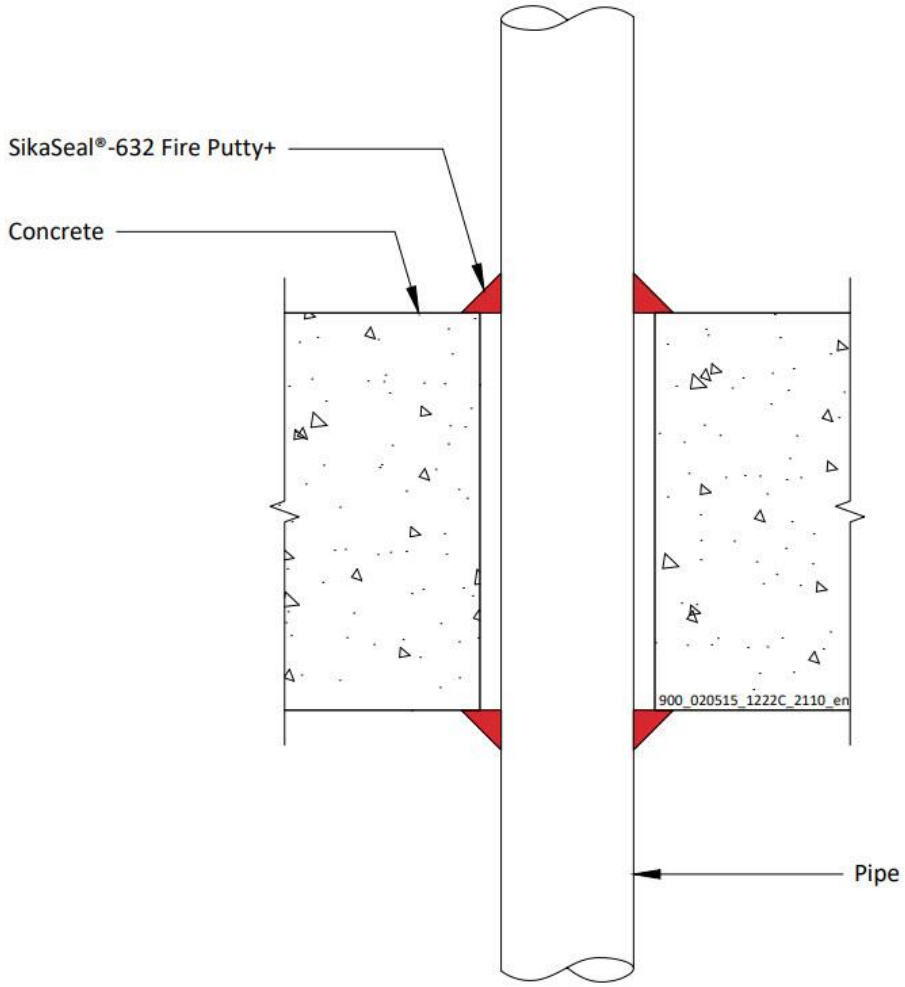
*See below graphs for interpolation pipe sizes


Mild or Stainless Steel Pipes - E 120, EI 15 C/U
Pipe Wall Thickness - mm
Pipe Diameter - mm
324.0, 14.2
22.0, 11.0
324.0, 6.4
22.0, 1.2
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
0
50
100
150
200
250
300
350


Copper or Steel Pipes - E 120, EI 90 C/C
Pipe Wall Thickness - mm
Pipe Diameter - mm
54.0, 14.2
6.0, 3.0
6.0, 0.7
54.0, 1.2
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
0
10
20
30
40
50
60


Alupex Pipes - EI 240 C/C
12.0
10.0
8.0
6.0
4.0
2.0
0.0
Pipe Wall Thickness - mm
0
5
10
15
20
25
Pipe Diameter - mm
20.0, 10.0
16.0, 8.0
16.0, 2.0
20.0, 2.0

A.4.6 Double sided penetration seal with metallic pipes

Penetration Seal: Metallic pipes penetrating through a rigid floor construction and fitted at any position within the aperture, sealed with a 15mm diameter cord of SikaSeal-632 Fire Putty+ on both sides of the floor. Maximum annular space 10 mm (A1) and minimum separation between penetration seals 30 mm (A2).
Construction details: 

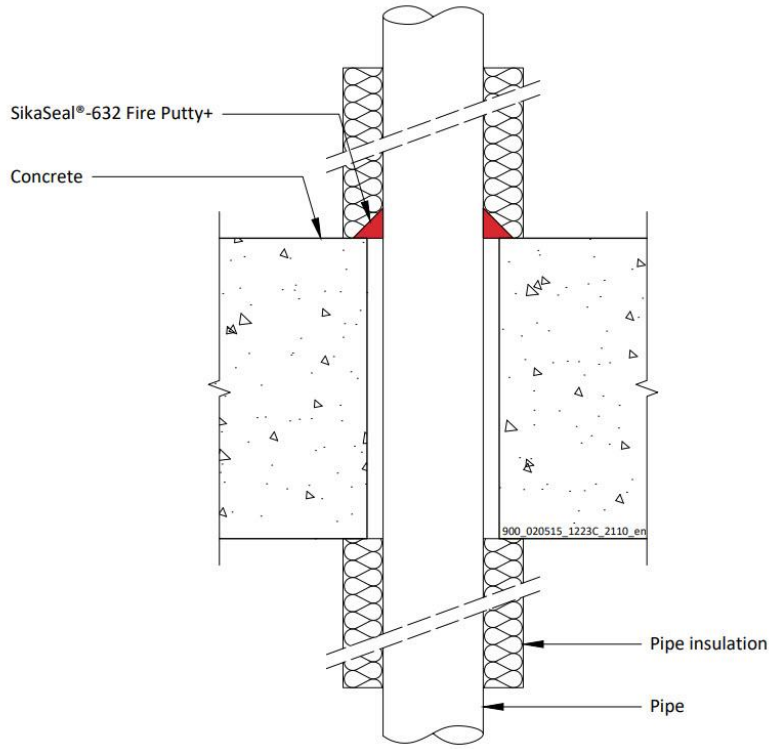
A.4.6.1

Services	Insulation	Classification
Copper or steel pipe		
Maximum 10 mm diameter/0.7-14.2 mm wall	None needed	**E 240, EI 180 C/C**

A.4.7 Single sided penetration seal with insulated metallic pipes, Local Interrupted (LI)

Penetration Seal: Metallic pipes insulated with minimum 80 kg/m³ density mineral wool insulation, Local Interrupted (LI), penetrating through a rigid floor construction, fitted at any position within the aperture, sealed with a 15 mm diameter cord of SikaSeal-632 Fire Putty+ on the top face of the floor. Maximum annular space 10 mm (A1) and minimum separation between penetration seals 30 mm (A2).

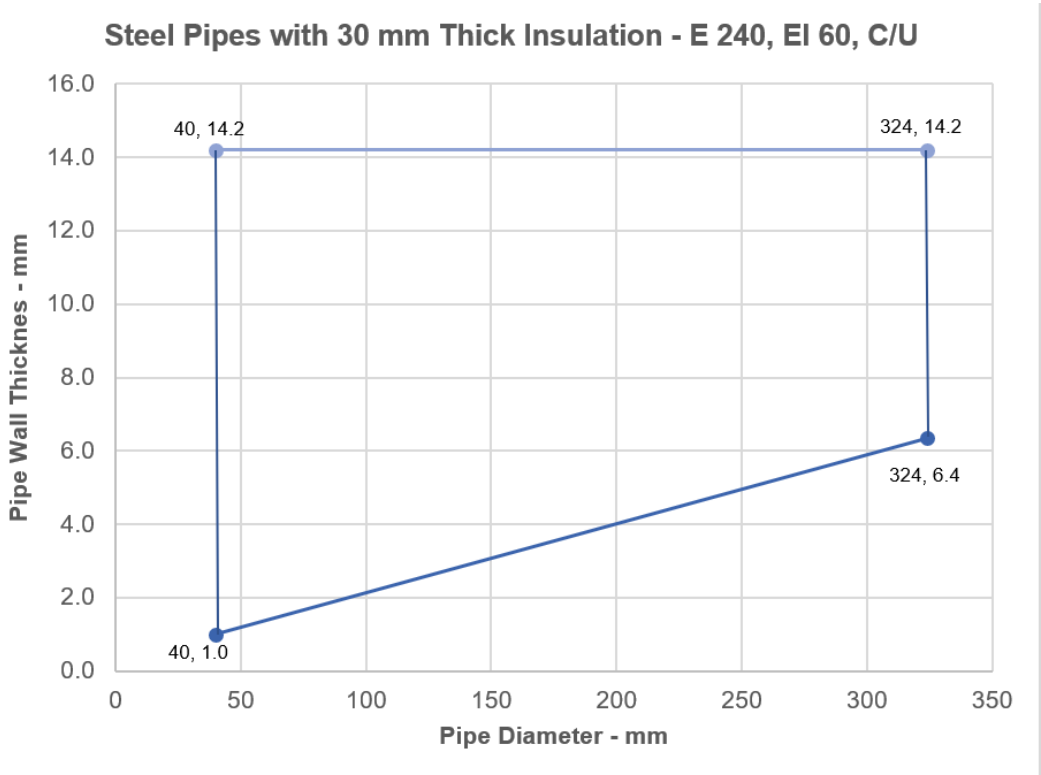
Construction details:

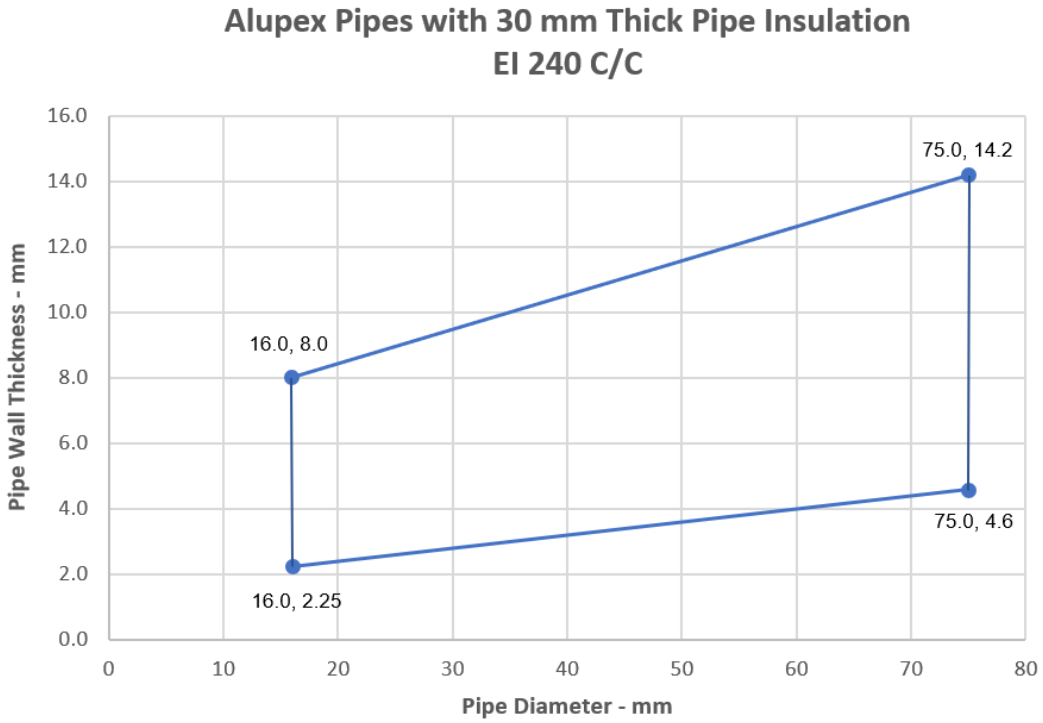


A.4.7.1 Single sided penetration seal with partially insulated metallic pipes

Services	Insulation	Classification
Mild or stainless steel pipe, with minimum 80 kg/m³ density mineral wool insulation		
Maximum 40 mm diameter*	Minimum 20 mm thick insulation, 500 mm long butted up to each face of the floor	**EI 240 C/U**
41-324 mm diameter*	Minimum 30 mm thick insulation, 500 mm long butted up to each face of the floor	**E 240, EI 60 C/U**
ALUPEX pipe with minimum 80 kg/m³ density mineral wool insulation		
Maximum 16 mm diameter/2.25-8.0 mm wall*	Minimum 20 mm thick insulation, 500 mm long butted up to each face of the floor	**EI 240 C/C**
Maximum 75 mm diameter/4.6-14.2 mm wall*	Minimum 30 mm thick insulation, 500 mm long butted up to each face of the floor	**EI 240 C/C**

*See below graphs for interpolation pipe sizes

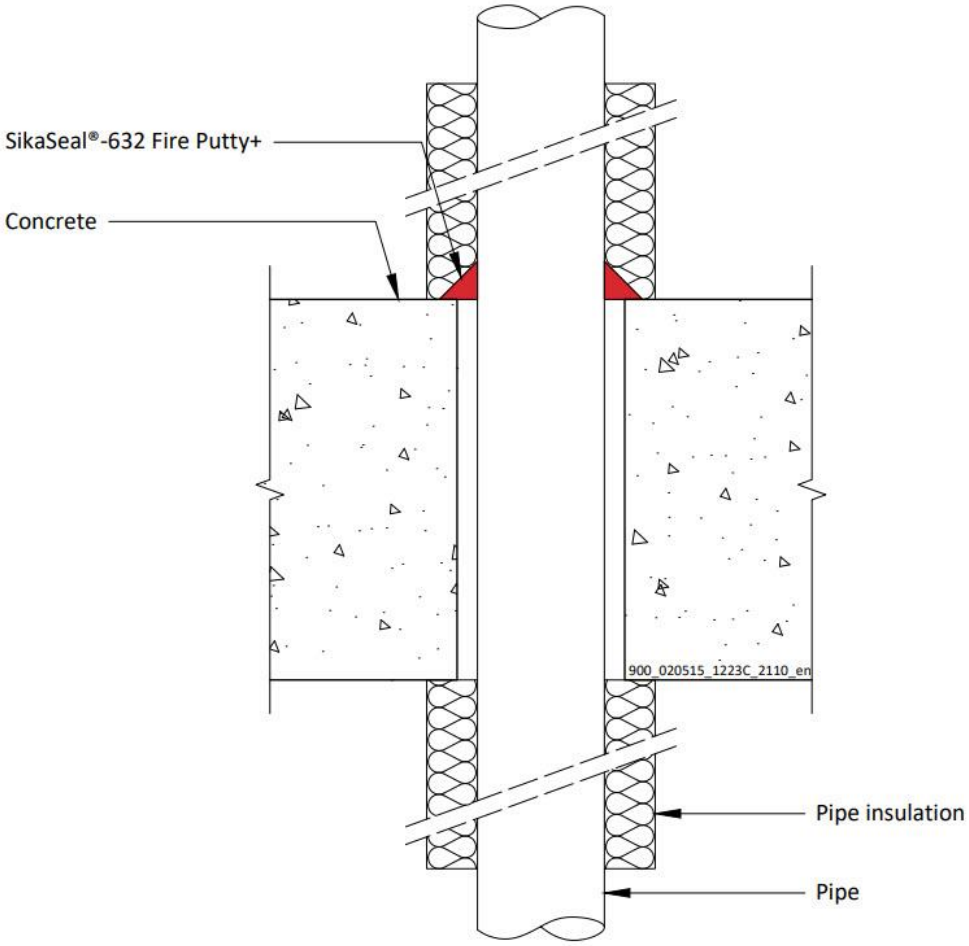

Steel Pipes with 30 mm Thick Insulation - E 240, EI 60, C/U
Pipe Wall Thicknes - mm
Pipe Diameter - mm
40, 14.2
324, 14.2
324, 6.4
40, 1.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
0
50
100
150
200
250
300
350


Alupex Pipes with 30 mm Thick Pipe Insulation
EI 240 C/C
Pipe Wall Thickness - mm
Pipe Diameter - mm
75.0, 14.2
16.0, 8.0
75.0, 4.6
16.0, 2.25
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
0
10
20
30
40
50
60
70
80

A.4.8 Single sided penetration seal with insulated metallic pipes, Local Interrupted (LI)

Penetration Seal: Metallic pipes insulated with minimum 75 kg/m^3 density glass or mineral wool insulation, Local Interrupted (LI), penetrating through a rigid floor construction, fitted at any position within the aperture, sealed with a 15 mm diameter cord of SikaSeal-632 Fire Putty+ on the top face of the floor. Maximum annular space 10 mm (A1) and minimum separation between penetration seals 30 mm (A2).

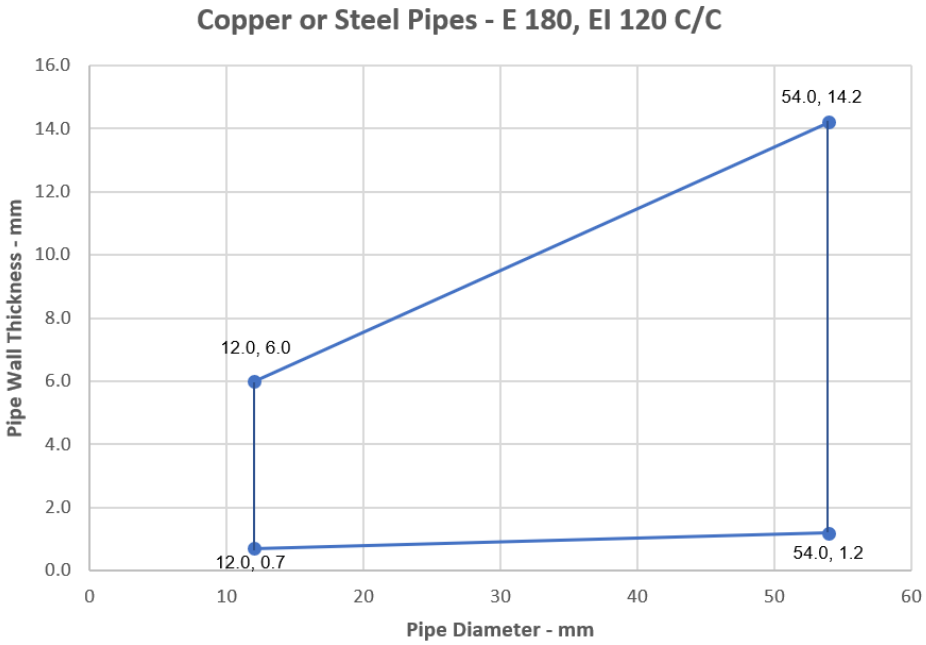
Construction details:



A.4.8.1

Services	Insulation	Classification
Copper or steel pipe with minimum 75 kg/m^3 density glass or mineral wool insulation		
Maximum 12 mm diameter/0.7-14.2 mm wall*	Minimum 20 mm thick insulation, 500 mm long butted up to each face of the floor	**EI 240 C/C**
Maximum 54 mm diameter/1.2-14.2 mm wall*		**E 180, EI 120 C/C**

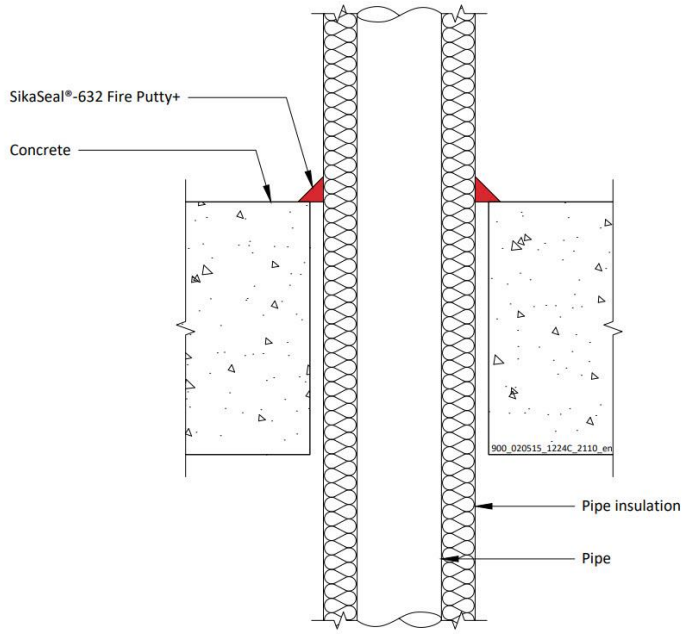
*See below graphs for interpolation pipe sizes


Copper or Steel Pipes - E 180, EI 120 C/C
Pipe Wall Thickness - mm
Pipe Diameter - mm
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
0
10
20
30
40
50
60
54.0, 14.2
12.0, 6.0
12.0, 0.7
54.0, 1.2

A.4.9 Single sided penetration seal with insulated metallic pipes, Continuous Sustained (CS)

Penetration Seal: Metallic pipes insulated with minimum 80 kg/m³ density mineral wool insulation, Continuous Sustained (CS), penetrating through a rigid floor construction, fitted at any position within the aperture, sealed with a 15mm diameter cord of SikaSeal-632 Fire Putty+ on the top face of the floor. Maximum annular space 10 mm (A1) and minimum separation between penetration seals 30 mm (A2).

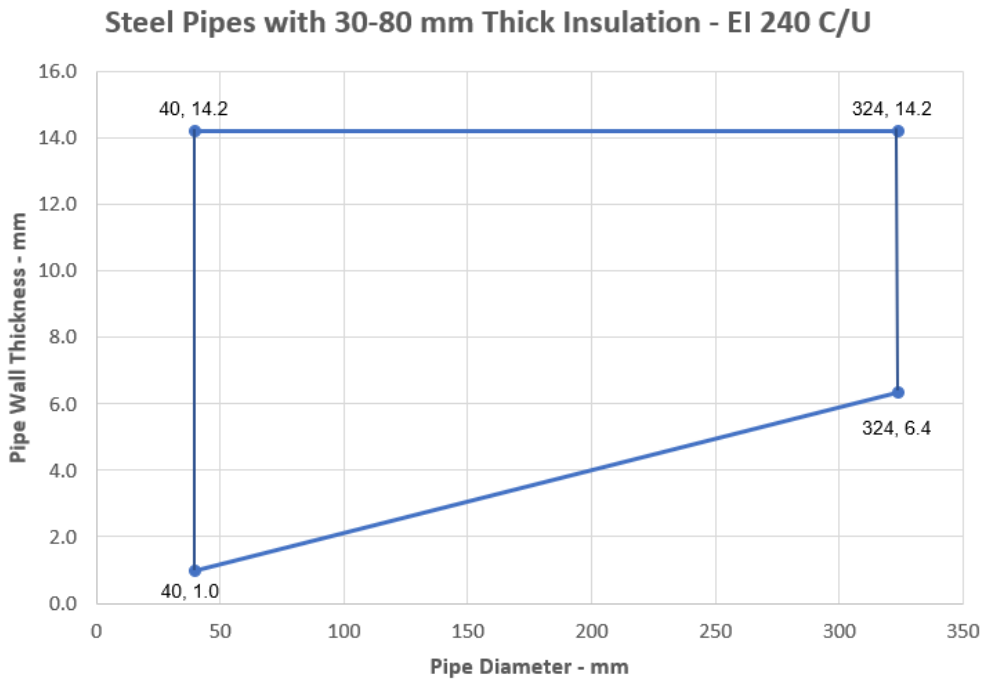
Construction details:

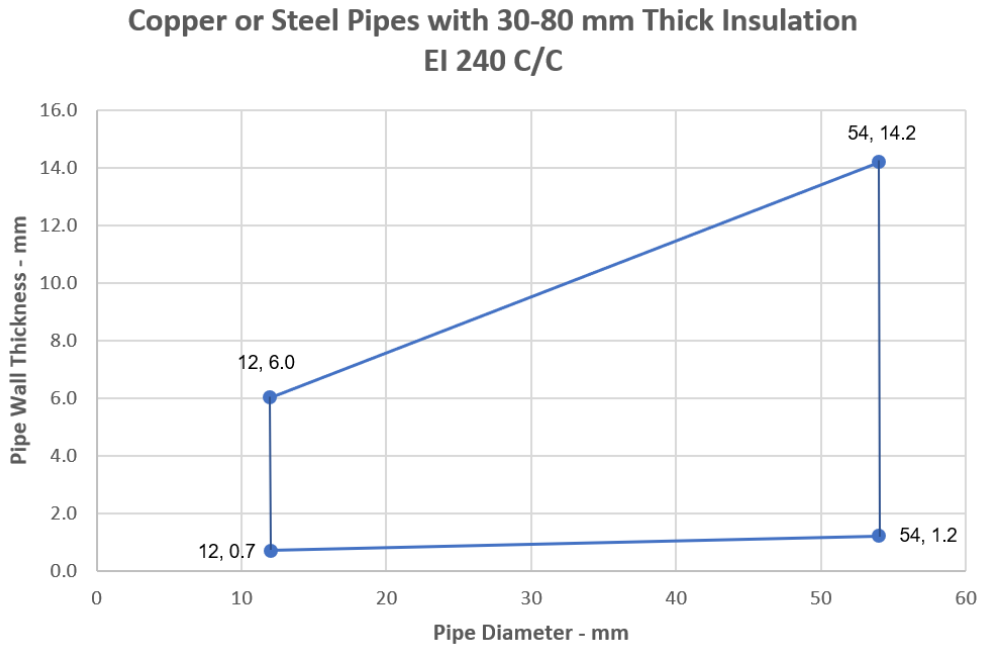


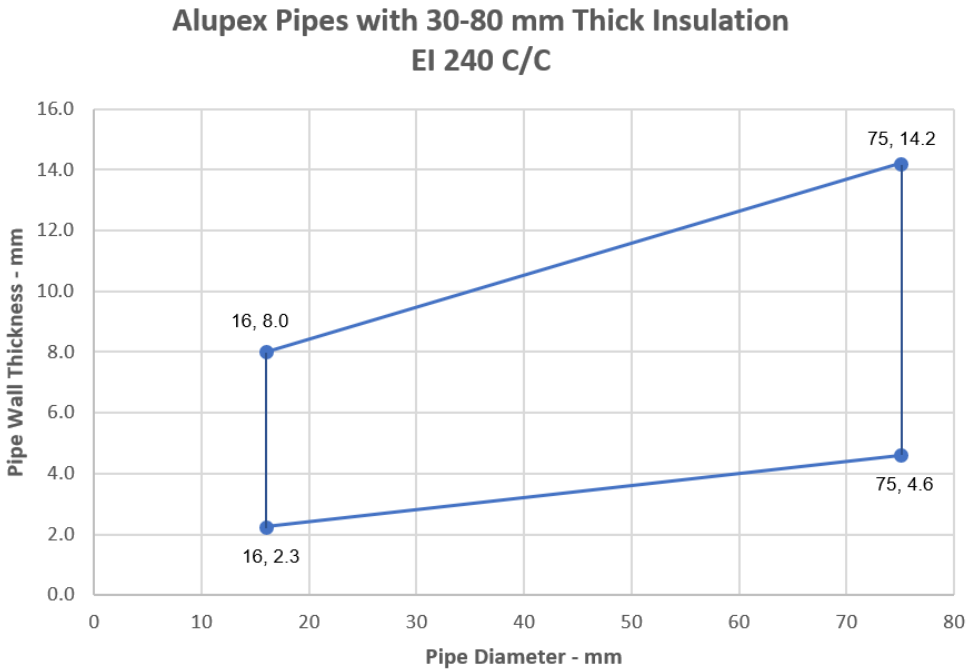
A.4.9.1

Services	Insulation	Classification
Mild or stainless steel pipe, with minimum 80 kg/m³ density mineral wool insulation		
Maximum 40 mm diameter/1.0-14.2 mm wall	20 mm thick	**EI 240 C/U**
Maximum 324 mm diameter*	30-80mm thick	**EI 240 C/U**
Copper or steel pipe with minimum 80 kg/m³ density mineral wool insulation		
Maximum 12 mm diameter/0.7-6.0 mm wall*	20 mm thick	**EI 240 C/C**
Maximum 54 mm diameter/1.2-14.2 mm wall*	30-80mm thick	**EI 240 C/C**
ALUPEX pipe with minimum 80 kg/m³ density mineral wool insulation		
Maximum 16 mm diameter/2.25-8.0 mm wall*	20 mm thick	**EI 240 C/C**
Maximum 75 mm diameter/4.6-14.2 mm wall*	30-80mm thick	**EI 240 C/C**

*See below graphs for interpolation pipe sizes


Steel Pipes with 30-80 mm Thick Insulation - EI 240 C/U
Pipe Wall Thickness - mm
Pipe Diameter - mm
40, 14.2
324, 14.2
324, 6.4
40, 1.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
0
50
100
150
200
250
300
350

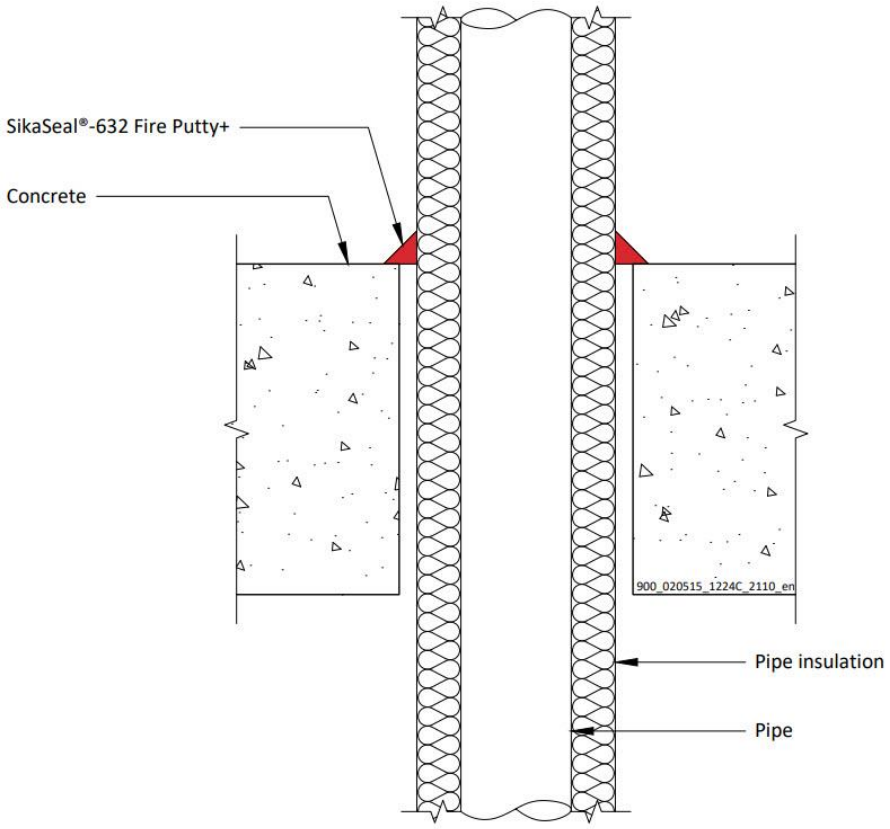

Copper or Steel Pipes with 30-80 mm Thick Insulation
EI 240 C/C
Pipe Wall Thickness - mm
Pipe Diameter - mm
54, 14.2
12, 6.0
12, 0.7
54, 1.2
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
0
10
20
30
40
50
60


Alupex Pipes with 30-80 mm Thick Insulation
EI 240 C/C
Pipe Wall Thickness - mm
Pipe Diameter - mm
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
0
10
20
30
40
50
60
70
80
75, 14.2
16, 8.0
75, 4.6
16, 2.3

A.4.10 Single sided penetration seal with insulated metallic pipes, Continuous Sustained (CS)

Penetration Seal: Metallic pipes insulated with minimum 75 kg/m^3 density glass wool insulation, Continuous Sustained (CS), penetrating through a rigid floor construction, fitted at any position within the aperture, sealed with a 15mm diameter cord of SikaSeal-632 Fire Putty+ on the top face of the floor. Maximum annular space 10 mm (A1) and minimum separation between penetration seals 30 mm (A2).

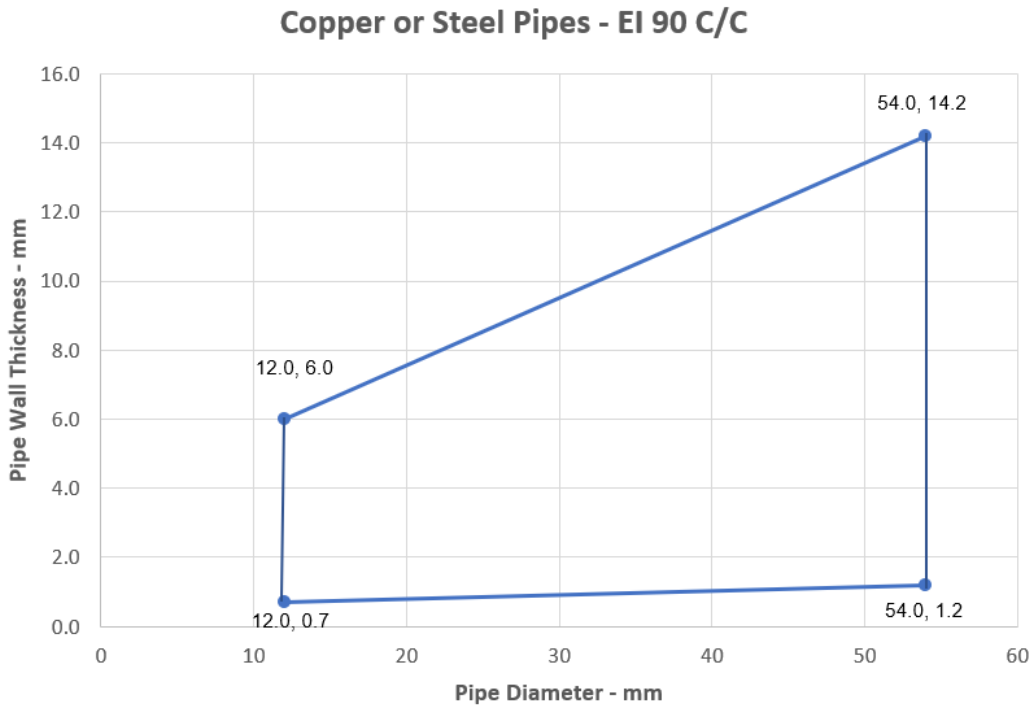
Construction details:

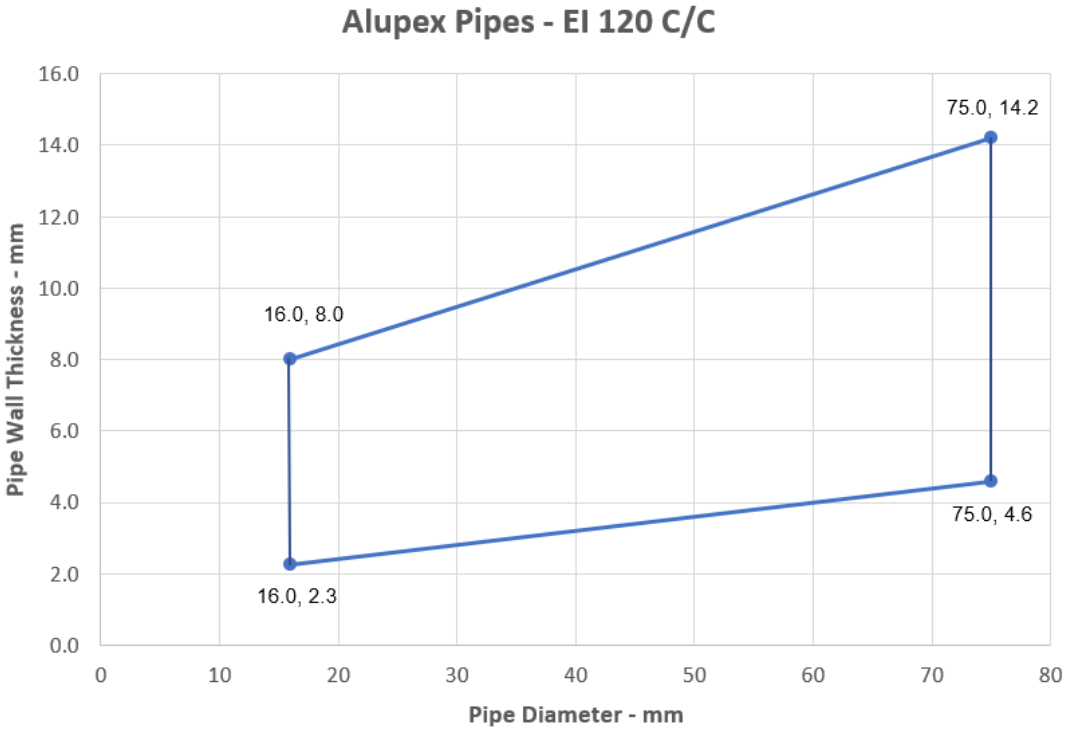


A.4.10.1

Services	Insulation	Classification
Copper or steel pipe with minimum 75 kg/m^3 density glass wool insulation		
Maximum 12 mm diameter/0.7-6.0 mm wall*	20 mm thick	**EI 240, EI 90 C/C**
Maximum 54 mm diameter/1.2-14.2 mm wall*	20-40mm thick	**EI 90 C/C**
ALUPEX pipe with minimum 75 kg/m^3 density glass wool insulation		
Maximum 16 mm diameter/2.25-8.0 mm wall*	20 mm thick	**EI 120 C/C**
Maximum 75 mm diameter/4.6-14.2 mm wall*	20-50mm thick	**EI 120 C/C**

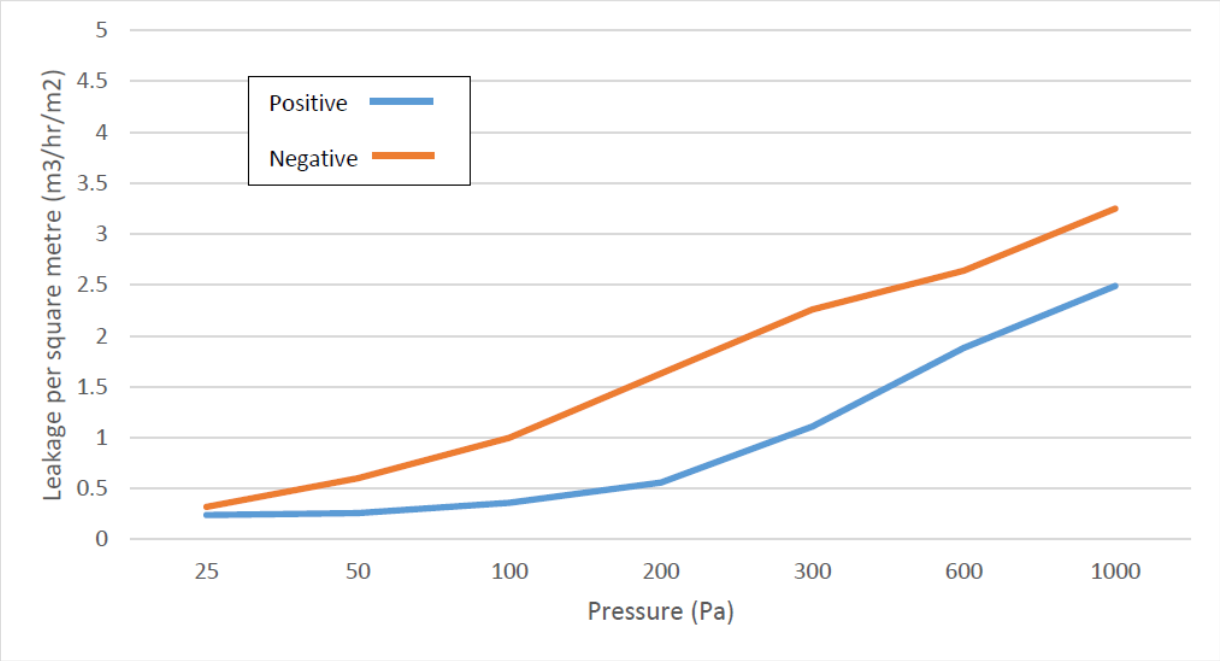
*See below graphs for interpolation pipe sizes


Copper or Steel Pipes - EI 90 C/C
Pipe Wall Thickness - mm
Pipe Diameter - mm
54.0, 14.2
12.0, 6.0
12.0, 0.7
54.0, 1.2
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
0
10
20
30
40
50
60


Alupex Pipes - EI 120 C/C
Pipe Wall Thickness - mm
Pipe Diameter - mm
75.0, 14.2
16.0, 8.0
75.0, 4.6
16.0, 2.3
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
0
10
20
30
40
50
60
70
80

ANNEX B – AIR PERMEABILITY – SIKASEAL-632 FIRE PUTTY+

Product tested	SikaSeal-632 Fire Putty+ Cord around 48mm electrical cable in 58mm hole		
Summary of testing procedure			Result
	Pressure (Pa)	Leakage (m^3/h)	Leakage ($m^3/m^2/h$)
Results under negative chamber pressure	25	0.32	N/A
	50	0.60	N/A
	100	1.00	N/A
	200	1.63	N/A
	300	2.26	N/A
	600	2.64	N/A
	1000	3.25	N/A
Results under positive chamber pressure	25	0.24	N/A
	50	0.26	N/A
	100	0.36	N/A
	200	0.56	N/A
	300	1.11	N/A
	600	1.88	N/A
	1000	2.49	N/A



EAD 350454-00-1104:2017
Notified Body 2531
Fire Stopping and Sealing Product: Penetration Seals

http://dop.sika.com

CE MARK TO BE PLACED ON THE LABEL

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21
Sika Services AG, Zurich, Switzerland
30816702
For details see accompanying documents
EAD 350454-00-1104:2017
Notified Body 2531
Fire Stopping and Sealing Product: Penetration Seals

http://dop.sika.com

ECOLOGY, HEALTH AND SAFETY INFORMATION (REACH)

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety related data.

LEGAL NOTE

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