CMS

编制单位负责人：

编制单位技术负责人：

技术审定人：

设计负责人：

目　　录

1.概述

2.编制依据

GB 50016-2014 2018
GB 55037-2022
GB 50574-2010
GB 50176-2016
JGJ 144-2019
GB 50189-2015

GB 55015-2021

GB 50118-2010
DB13(J) 81-2016
75%

DB13(J) 185-2020

GB 50009-2012
GB 50011-2010 2016
GB 50010-2010 2015
GB 50017-2017
JGJ 339-2015
GB 50300-2013
GB 50411-2019

3.编制内容

:

4.适用范围

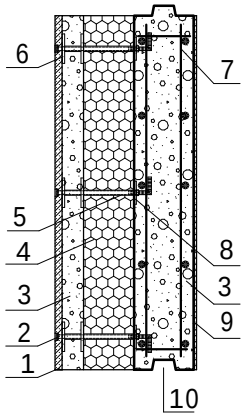
4.1 8
≤100

4.2 :

1
2
3 80

5.聪明山自保温墙板的构造及性能指标

5.1 5.1



1	10mm
2	φ6
3	
4	
5	PVC φ10×1.5
6	pvc φ40×60
7	φ6
8	PVC φ50
9	5mm
10	

5.1

5.2 5.2

5.2 mm

	610	200	240	300	340

5.3
5.3.1

5.3.2 5.3.2

5.3.2 mm

	± 10
	± 2.0
	± 1.0
	≤ 6.0
	≤ 2.0
	≤ L/1000

L

5.3.3 5.3.3

5.3.3

		200	240	300	340
kg/m²		≤ 95	≤ 105	≤ 125	≤ 150
MPa		≥ 0.10			
		≥ 0.10			
		≥ 0.10			
		≥ 10			
/		≥ 2			
/dB		≥ 50			
		24h			
[g/ m² · h]	B	≥ 0.85			
		≥ 1.67			
		>			

5.3.4

5.3.4

5.3.4

/MPa	≥ 3.5
	≥ 0.8
/%	≤ 8
/N	1000N 24 0.5mm
/h	≥ 3
	A
	≤ 1.0
	≤ 1.0

5.4

5.4.1 5.4.1

5.4.1

	g/cm³	≥ 1.4
	W/ m · K	≤ 0.35
	%	≤ 10
	%	≤ 0.25
	——	A
	——	24h
	——	25 ≥ 0.80
	——	50
	——	60 56d ≥ 0.80
	——	50 ≥ 0.75

5.4.2

5.4.2-1 5.4.2-2

5.4.2-1 B

	(XPS)	XEPS)	EPS
kg/m³	30~35	18~22	18~22
MPa	≥ 0.20	≥ 0.10	
[W/ m · K]	≤ 0.030	≤ 0.033	≤ 0.039
(%)	≤ 1.5	≤ 3	
MPa	≥ 0.20	≥ 0.10	
(%)	≤ 1.0	≤ 0.3	
(mm)	≥ 20		
[ng/ Pa · m · s]	3.5~1.5		
(%)	≥ 30		
	B1		

5.4.2-2 A

		AEPS
kg/m³	150~180	70~100
MPa	≥ 0.06	≥ 0.15
[W/ m · K]	≤ 0.040	≤ 0.040
MPa	≥ 0.08	≥ 0.1
%	≤ 1.0	≤ 0.3
%	≤ 5.0	≤ 6.0
[ng/ Pa · m · s]	——	3.5~1.5
	A	A

5.4.3

5.4.3

5.4.3

		mm
	g/m²	
	>90	≥ 1

5.4.4

	Q235-B
mm	φ6
N/mm²	215
	≥20 /m²
mm	≤100

5.4.5

	≤5%
	≥1.0MPa

5.4.7 5.4.7

5.4.7

		MPa	≥0.60
			≥0.40
			≥0.40
			≥0.10
			≥0.10
			≥0.10
		——	≤3.0
		h	1.5~4.0
		——	10J

5.4.8 5.4.8

5.4.8

	g/m²	≥160
	N/50mm	≥1200
	%	≥75
	%	≤4.0

5.4.9 5.4.9

5.4.9

mm		0
mL/min		≥80
%		75
/MPa	23	≤0.3
	-20	≤0.5
min		≥40
%		±50
-		

5.4.10 :

1 .

GB/T 9755 JG/T 26

GB/T 9779 ;

2 .

JC/T 1024 ;

3 . GB/T

25181

5.4.11

JG/T 157

5.4.12

GB/T 14683

6.设计、防火及热工计算

6.1

6.1.1

GB 50176

GB 50189

GB 55015

DB13(J) 81-2016 75%

DB13(J) 185-2020

1 . 0

2 .

3 .

6.1.2

6.1.2

6.1.2

		W/m · K	
XPS	B1	0.030	1.10
SEPS	B1	0.033	
EPS	B1	0.039	
	A	0.040	
AEPS	A	0.040	
	A	0.120	

6.1.3

GB 50009 GB 55001

GB 50011

6.1.4

GB 55030

JGJ/T 235

1 .

2 .

3 .

4 .

6.1.5

6.1.6

6.1.7

50016

6.1.8

GB 50118

GB 55016

6.1.9

6.1.10

7d

2/5

1/2

6.1.11

1KN

300mm

6.1.12

2/5

6.1.13

1 .

GB

2 .

3 .

6.1.14

3

6.2

GB 55037 GB 50016

B1

GB 55037 6.6.2

GB 50016 6.7.3

6.3

6.3.1

a.3mm

b.

c.

6.3.2

6.3.3

7. 施工及验收

GB 50300

GB 0411

GB 50210

GB/T 51350

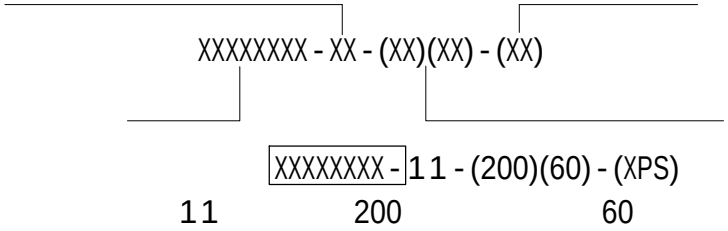
GB 50205 GB

50204

Q/HBMS01 - 2022

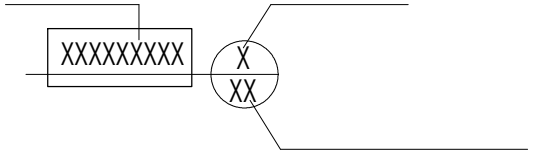
8.本图集索引方法

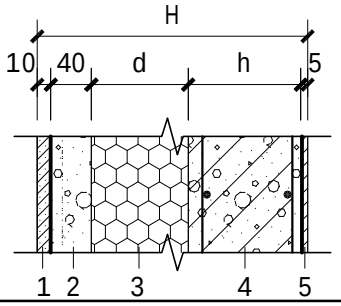
8.1



XPS

8.2





		mm	Kg/m³	[W/ m · K]	α	[m² · K /W]	R_0 [m² · K /W]
1.		10	1600	0.35	1.1	0.026	$R_0=0.492+R_d+R_h$
2.		40	550~600	0.12		0.303	
3.	d	d	——	——		R_d	
4.	h	h	550~600	0.12		R_h	
5.		5	1600	0.35		0.013	

1.

2. :0.11 m² · K /W] :0.04 m² · K /W]

( )

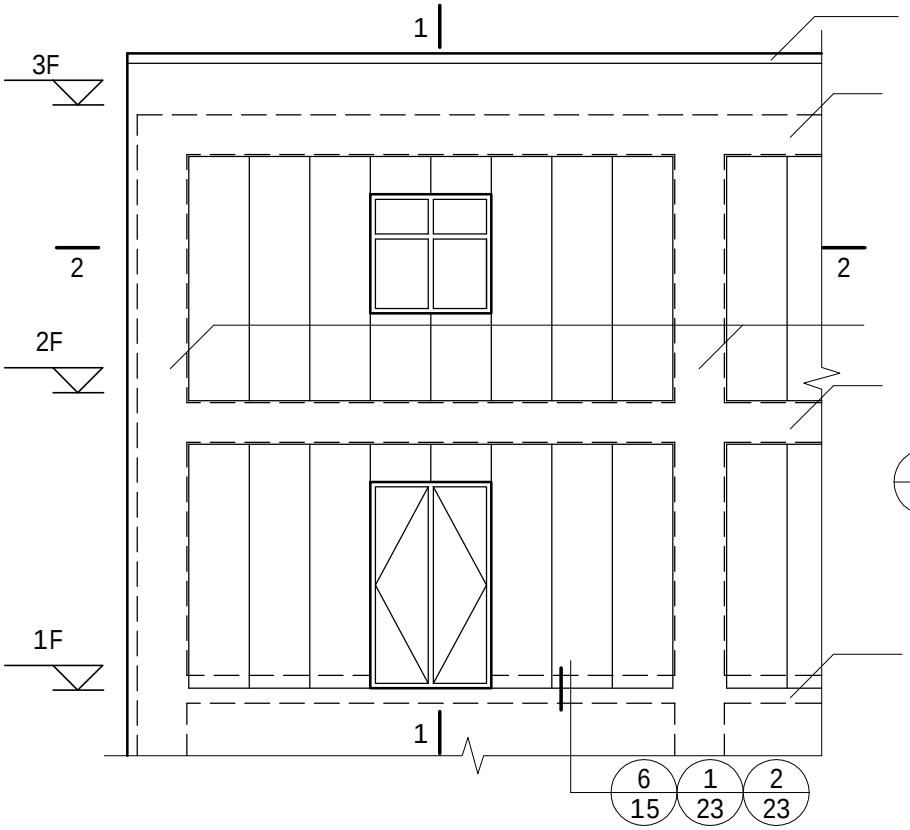
	200mm				240mm			
	d mm	h mm	R_0 [m² · K /W]	W/m² · K	d mm	h mm	R_0 [m² · K /W]	W/m² · K
EPS	40	105	2.220	0.45	50	135	2.680	0.37
	50	95	2.377	0.42	60	125	2.838	0.35
18 22Kg/m³	——	——	——	——	70	115	2.995	0.33
	——	——	——	——	80	105	3.152	0.32
0.039[W/ m · K]	——	——	——	——	90	95	3.310	0.30
SEPS	40	105	2.389	0.42	50	135	2.892	0.35
	50	95	2.589	0.39	60	125	3.092	0.32
18 22Kg/m³	——	——	——	——	70	115	3.292	0.30
	——	——	——	——	80	105	3.491	0.29
0.033[W/ m · K]	——	——	——	——	90	95	3.691	0.27

( )

	200mm				240mm			
	d mm	h mm	R_0 [$m^2 \cdot K$ /W]	W/$m^2 \cdot K$	d mm	h mm	R_0 [$m^2 \cdot K$ /W]	W/$m^2 \cdot K$
XPS	40	105	2.500	0.40	50	135	3.030	0.33
	50	95	2.727	0.37	60	125	3.257	0.31
30 35Kg/m^3	——	——	——	——	70	115	3.484	0.29
	——	——	——	——	80	105	3.712	0.27
0.030[W/ m · K]	——	——	——	——	90	95	3.939	0.25
AEPS	40	105	2.197	0.46	50	135	2.651	0.38
	50	95	2.348	0.43	60	125	2.803	0.36
70 100Kg/m^3	——	——	——	——	70	115	2.954	0.34
	——	——	——	——	80	105	3.106	0.32
0.040[W/ m · K]	——	——	——	——	90	95	3.257	0.31
	40	105	2.197	0.46	50	135	2.651	0.38
	50	95	2.348	0.43	60	125	2.803	0.36
150 180Kg/m^3	——	——	——	——	70	115	2.954	0.34
	——	——	——	——	80	105	3.106	0.32
0.040[W/ m · K]	——	——	——	——	90	95	3.257	0.31

	300mm				340mm			
	d mm	h mm	R_0 [$m^2 \cdot K$ /W]	W/$m^2 \cdot K$	d mm	h mm	R_0 [$m^2 \cdot K$ /W]	W/$m^2 \cdot K$
EPS	60	185	3.292	0.30	100	185	4.225	0.24
	80	165	3.607	0.28	120	165	4.539	0.22
18 22Kg/m^3	100	145	3.922	0.25	140	145	4.854	0.21
	120	125	4.237	0.24	160	125	5.169	0.19
0.039[W/ m · K]	140	105	4.551	0.22	180	105	5.483	0.18
SEPS	60	185	3.546	0.28	100	185	4.648	0.22
	80	165	3.946	0.25	120	165	5.048	0.20
18 22Kg/m^3	100	145	4.346	0.23	140	145	5.447	0.18
	120	125	4.745	0.21	160	125	5.847	0.17
0.033[W/ m · K]	140	105	5.145	0.19	180	105	6.246	0.16
XPS	60	185	3.712	0.27	100	185	4.924	0.20
	80	165	4.167	0.24	120	165	5.378	0.19
30 35Kg/m^3	100	145	4.621	0.22	140	145	5.833	0.17
	120	125	5.076	0.20	160	125	6.287	0.16
0.030[W/ m · K]	140	105	5.530	0.18	180	105	6.742	0.15
AEPS	60	185	3.257	0.31	100	185	4.166	0.24
	80	165	3.561	0.28	120	165	4.469	0.22
70 100Kg/m^3	100	145	3.864	0.26	140	145	4.772	0.21
	120	125	4.167	0.24	160	125	5.075	0.20
0.040[W/ m · K]	140	105	4.470	0.22	180	105	5.378	0.19

	300mm				340mm			
	d mm	h mm	R_0 [$m^2 \cdot K$ /W]	$W/m^2 \cdot K$	d mm	h mm	R_0 [$m^2 \cdot K$ /W]	$W/m^2 \cdot K$
150 180Kg/m^3	60	185	3.257	0.31	100	185	4.166	0.24
	80	165	3.561	0.28	120	165	4.469	0.22
	100	145	3.864	0.26	140	145	4.772	0.21
	120	125	4.167	0.24	160	125	5.075	0.20
0.040[W/ m · K]	140	105	4.470	0.22	180	105	5.378	0.19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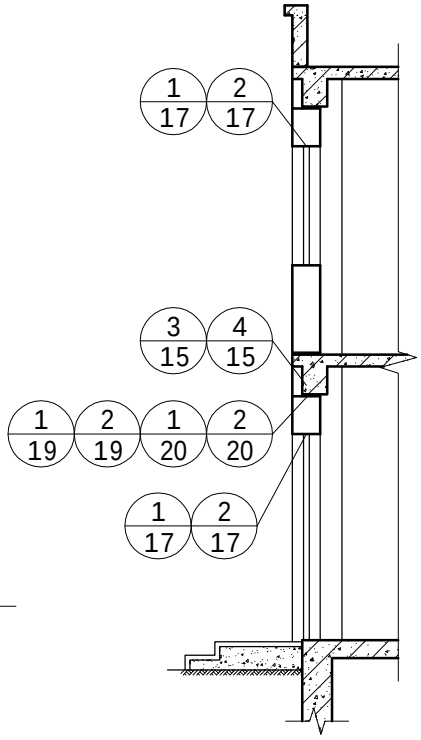
2
2
2F
1F
1
6
15
1
23
2
23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17
2
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4
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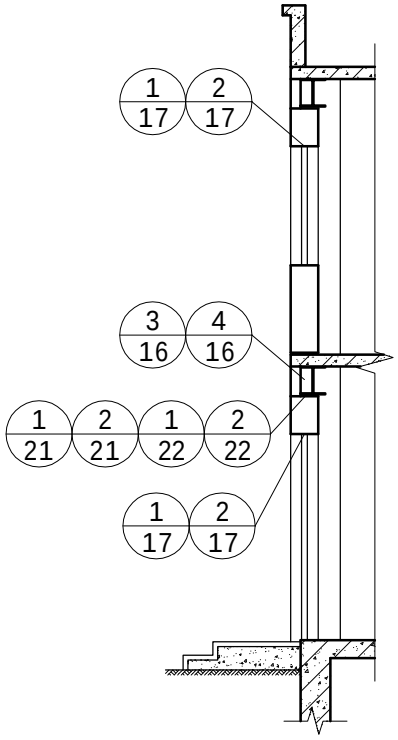
1
20
2
20
1
17
2
17

1-1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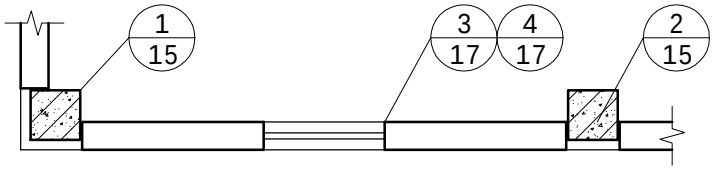
22
1
17
2
17

1-1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4
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15

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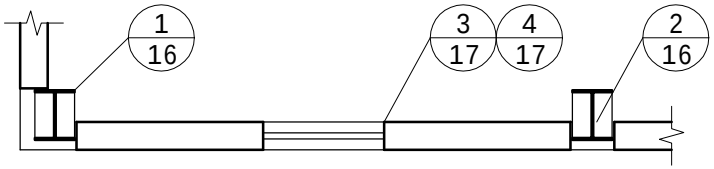
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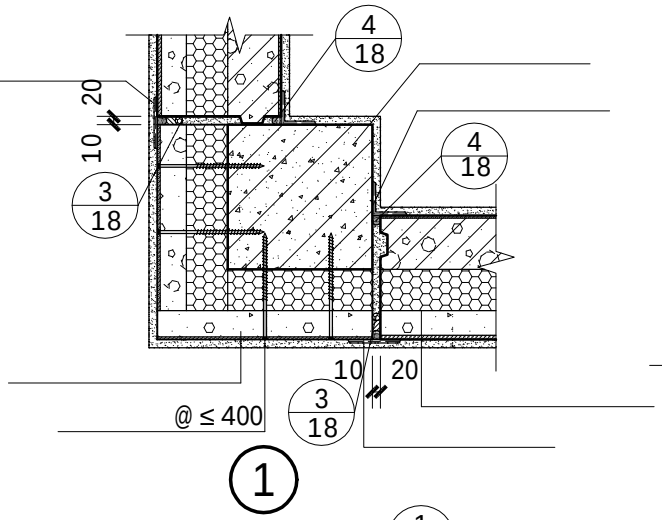
2
16

2-2



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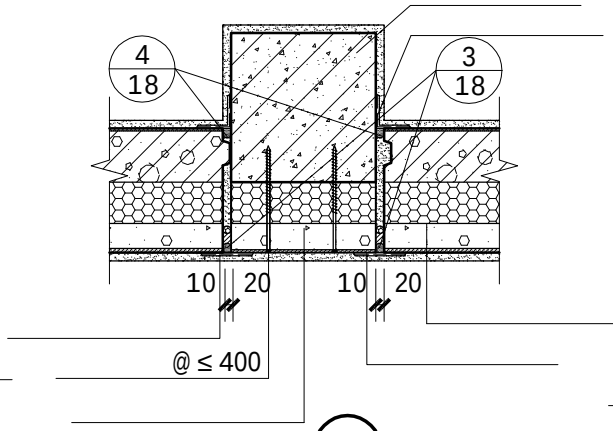

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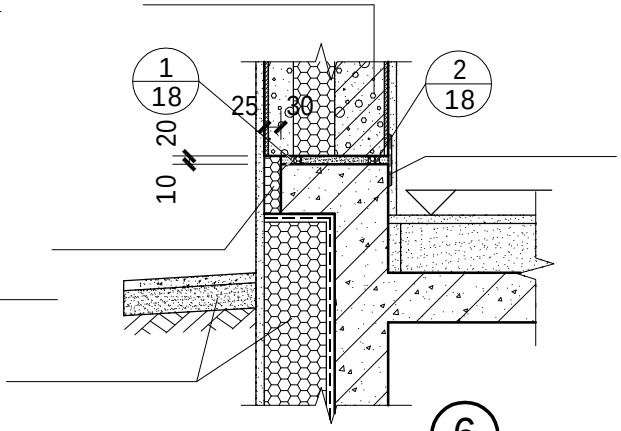

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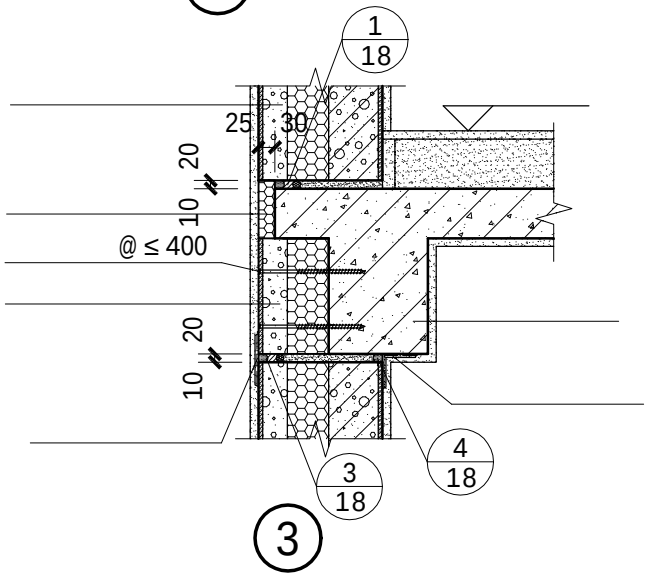

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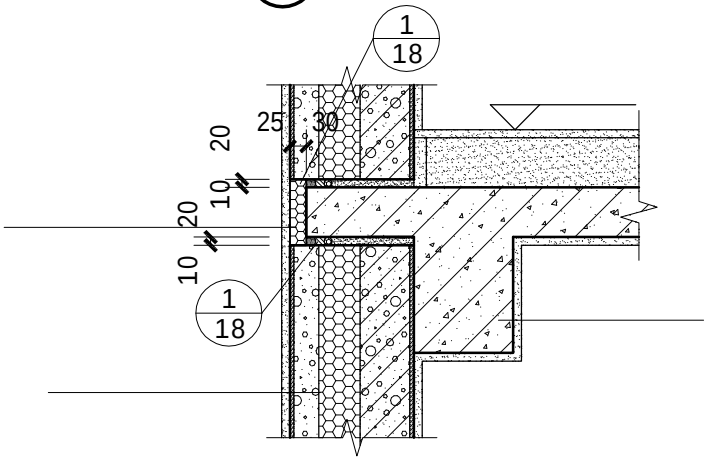

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23BJZ253

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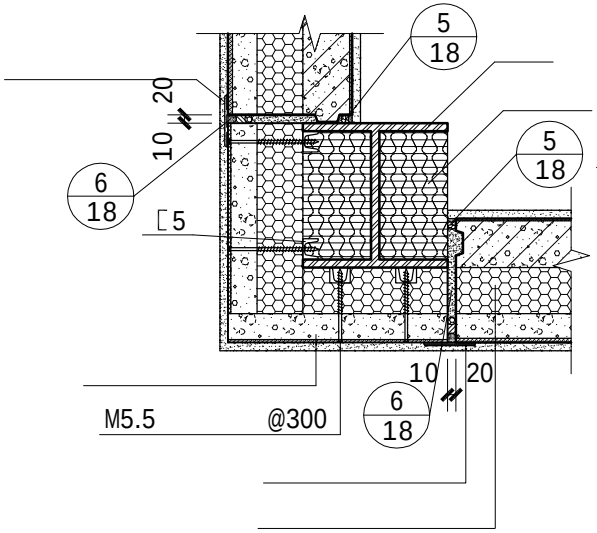
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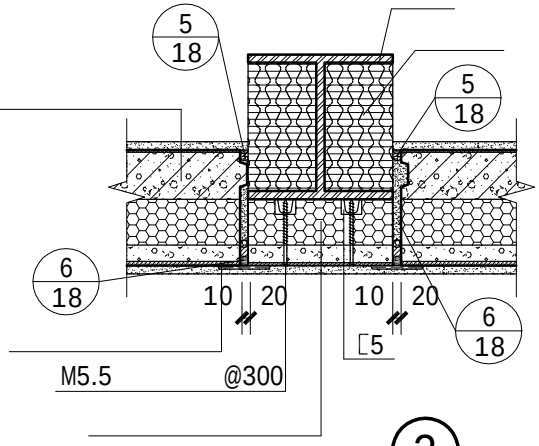
20
10
6
18
5
10
20
6
18
M5.5
@300

1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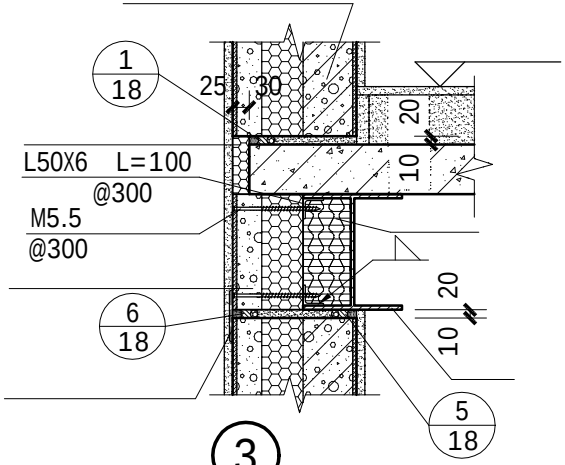
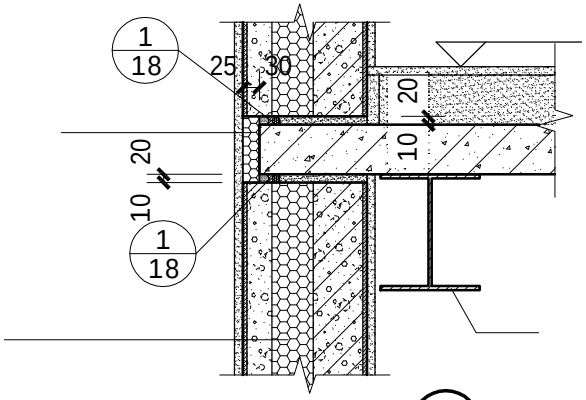
6
18
5
M5.5
@300

2


1
18
25
30
20
10
L50X6
L=100
@300
M5.5
@300
20
10
6
18
5
18

3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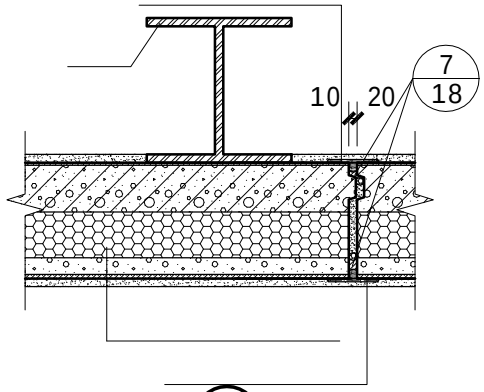
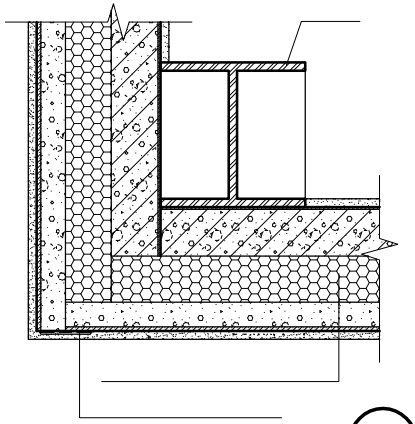
10
1
18

4


10
20
7
18

5



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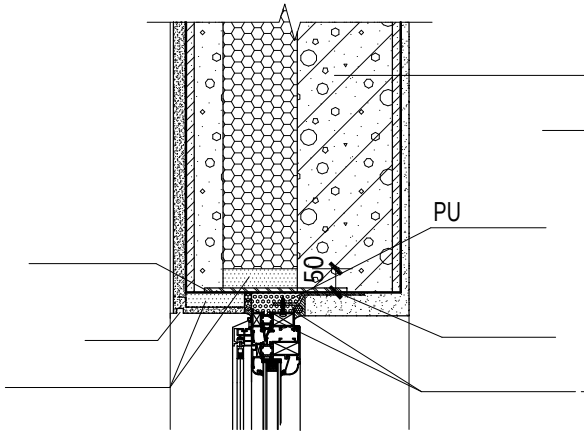

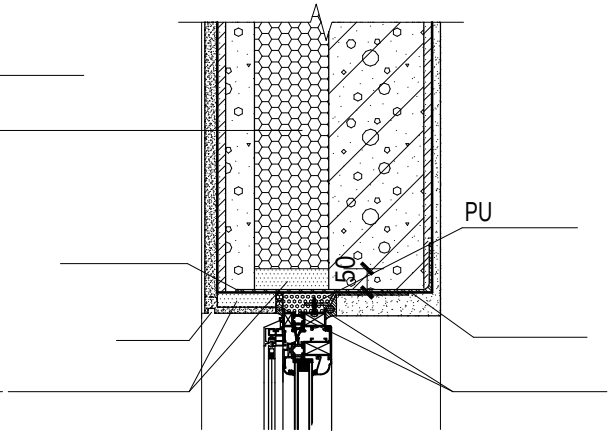

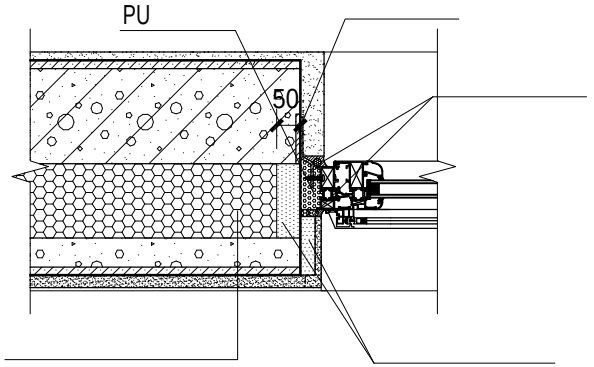

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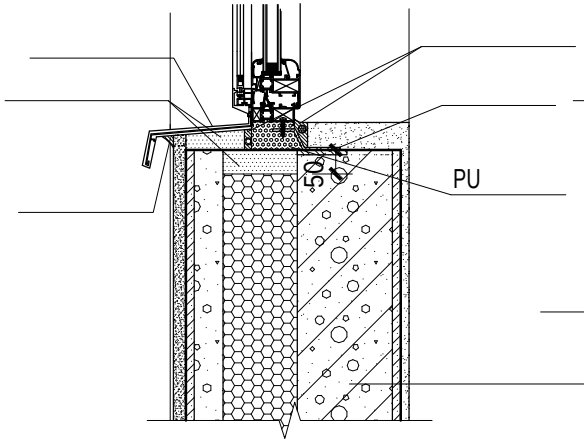

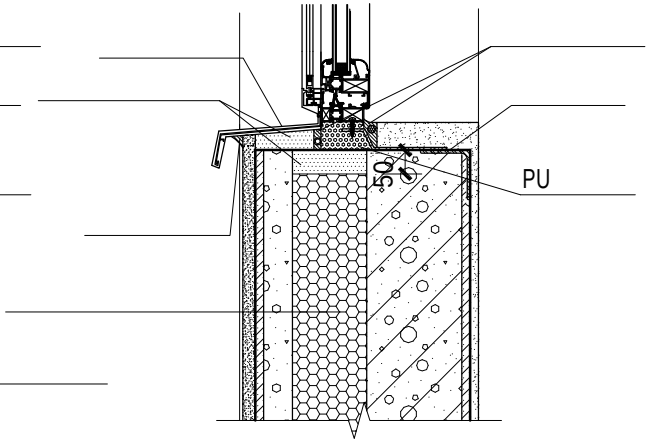

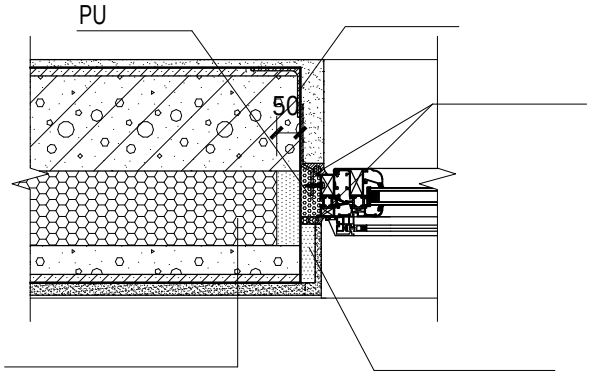

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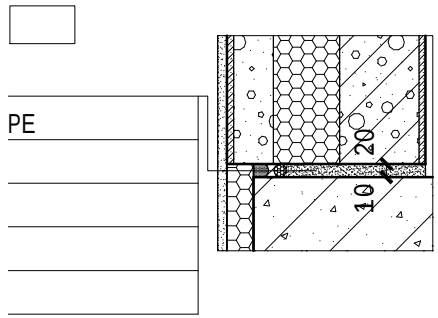
: 1. ② ;

2.

					17

1



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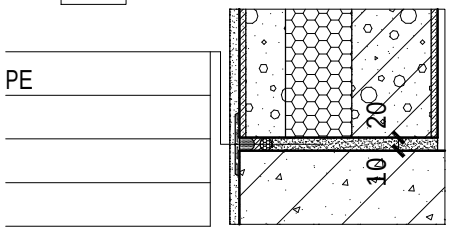

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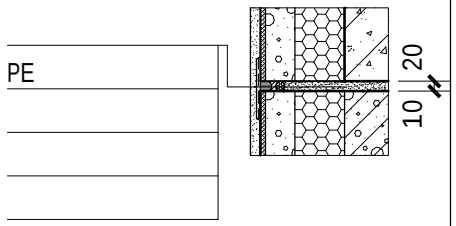

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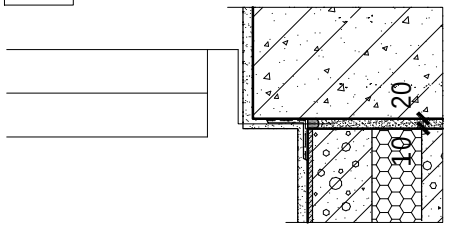

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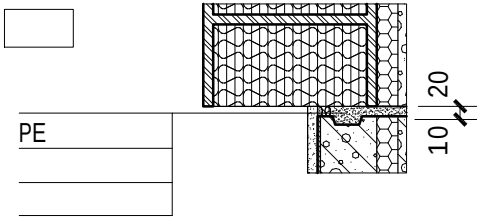

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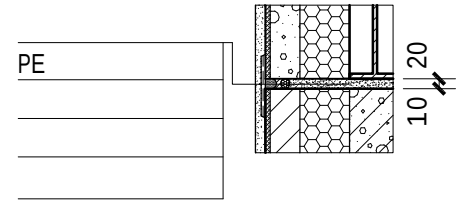

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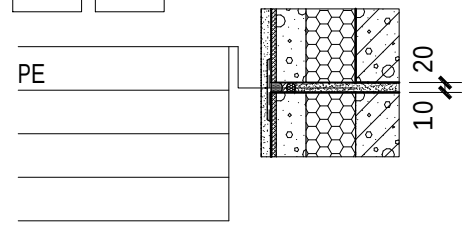

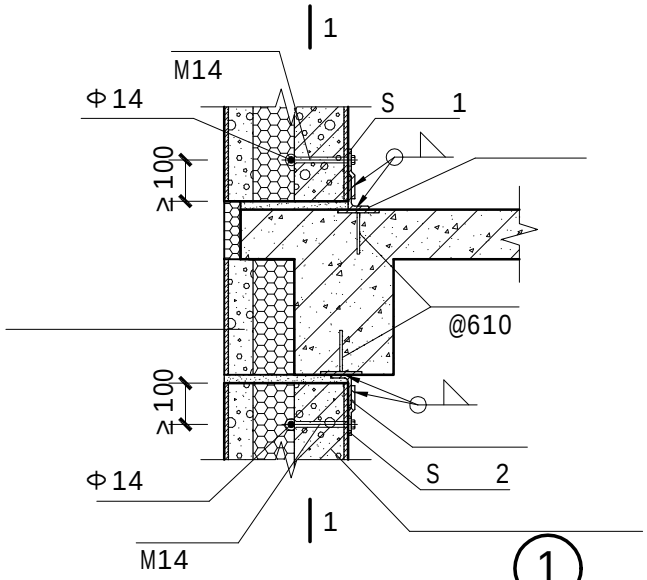

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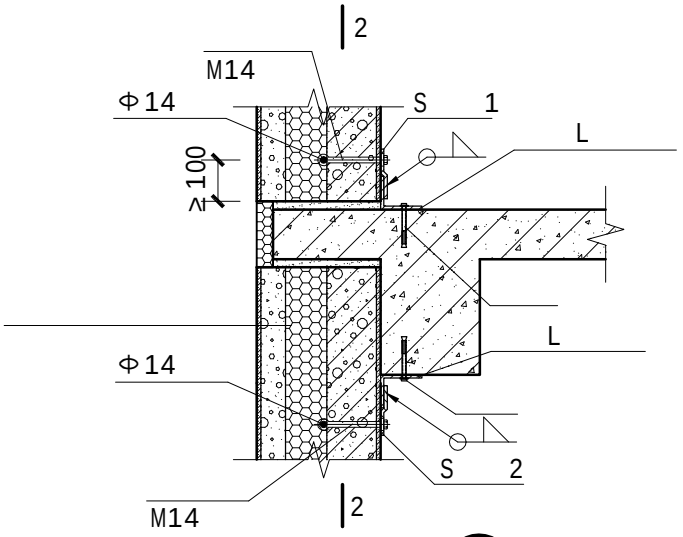

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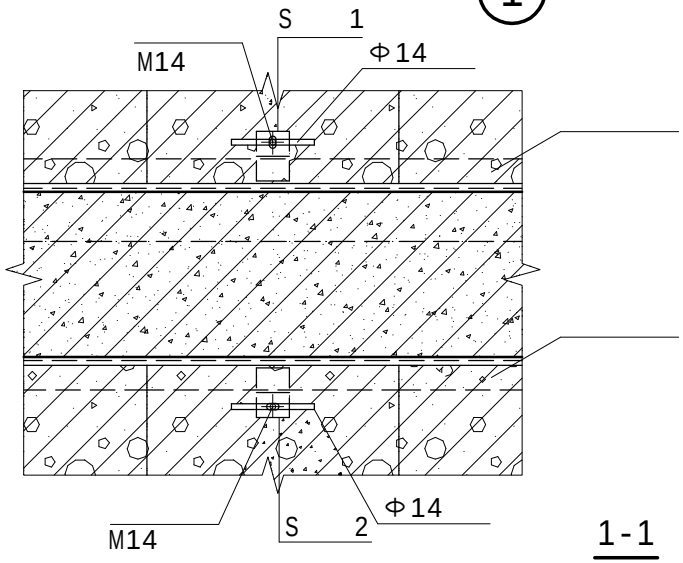
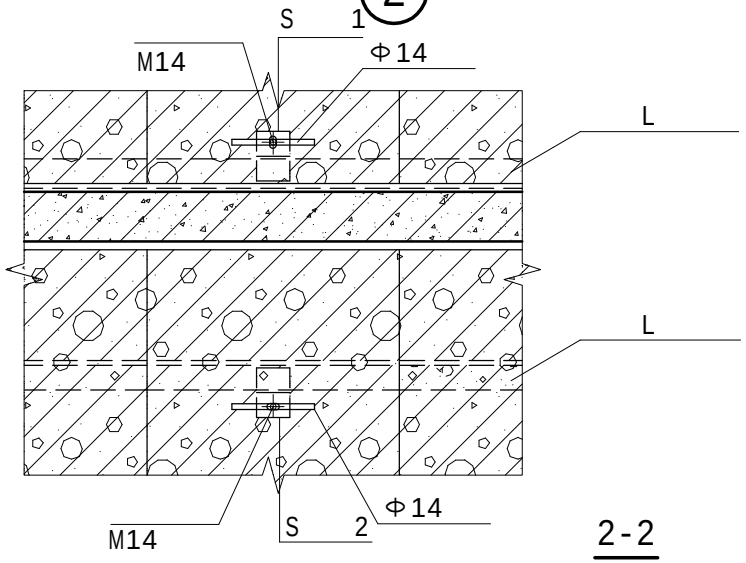


1-1



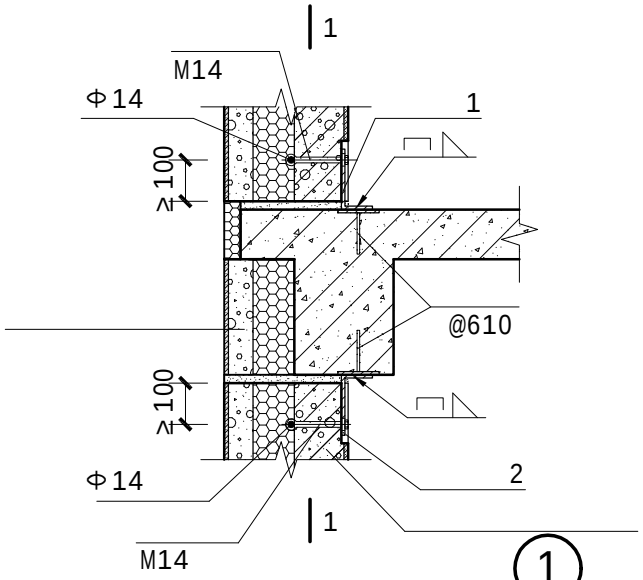
2-2

1.

0.7

2. L L=220@610

	钢筋混凝土结构外墙板钢管锚节点				
					19



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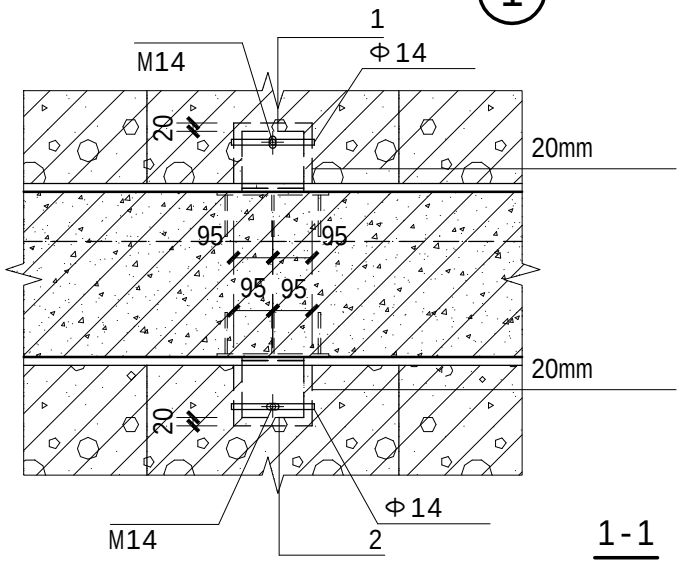
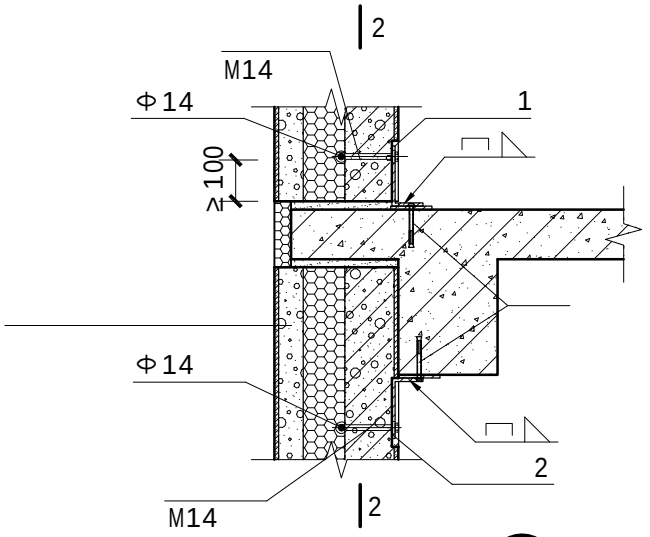
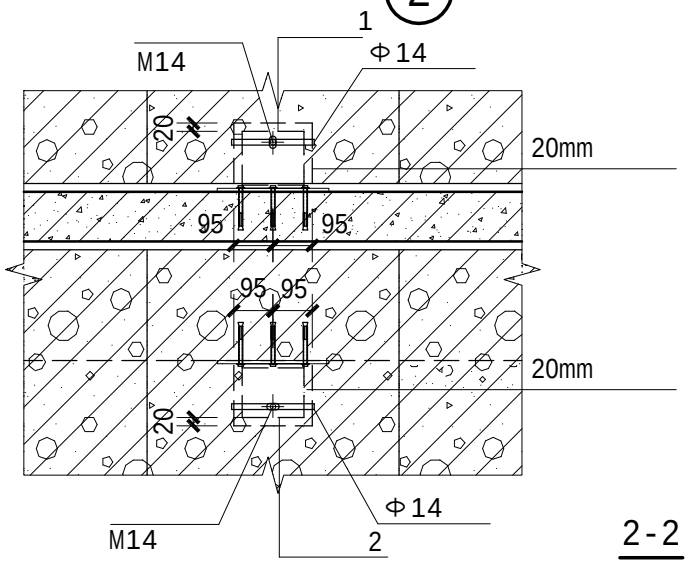


1-1



②



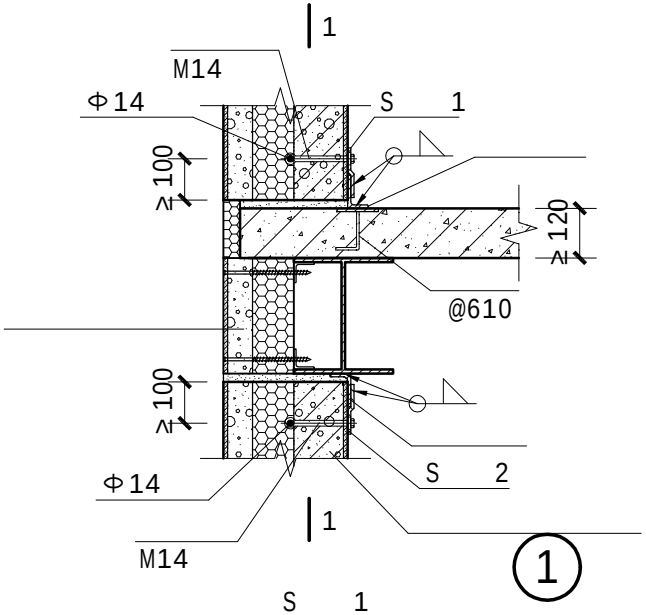
2-2

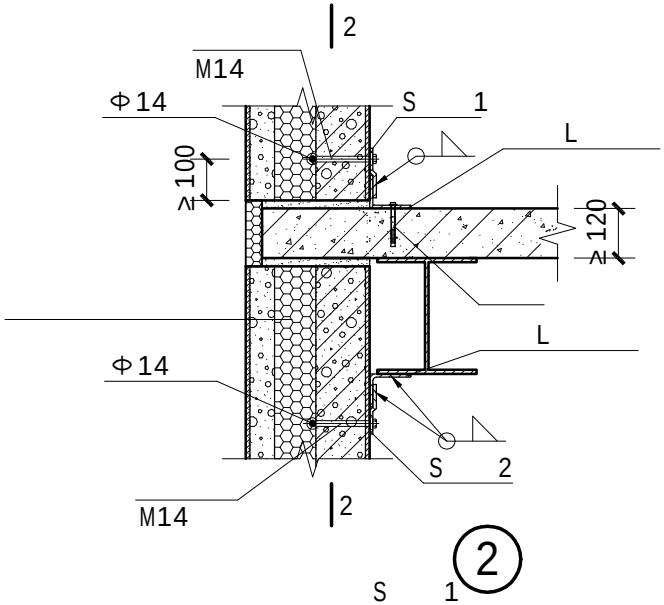
1.

0.7

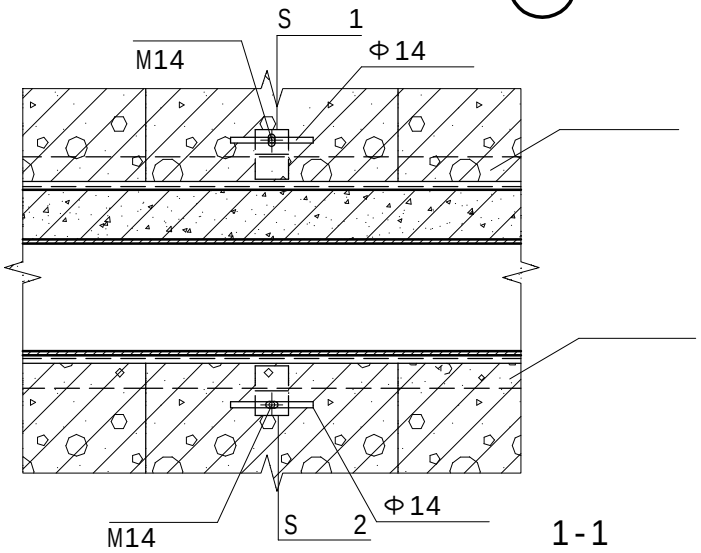
2.

	钢筋混凝土结构外墙板钢管锚节点				
					20

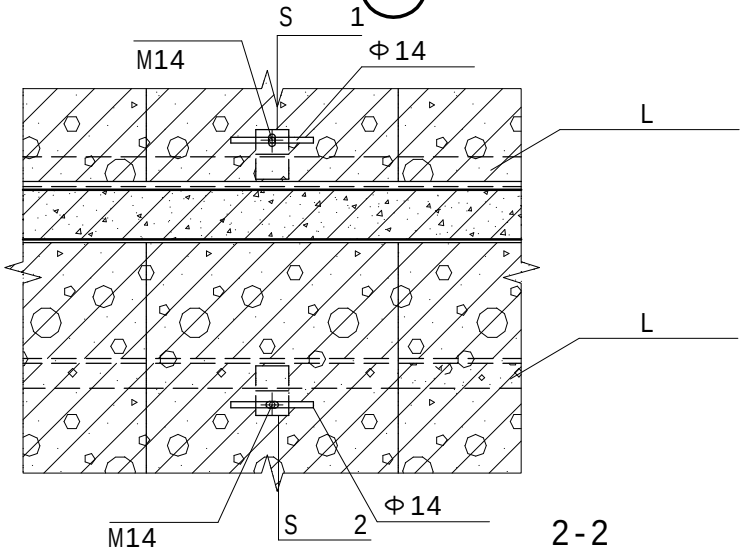




1



1-1



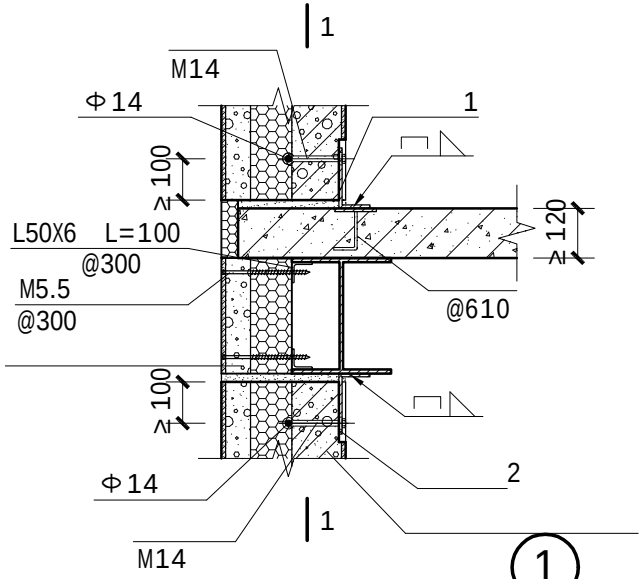
2-2

1.

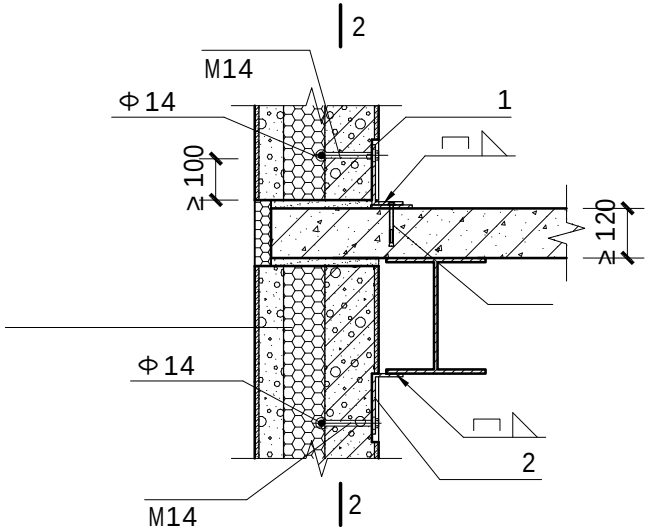
0.7

2. L L=220@610

					21



1



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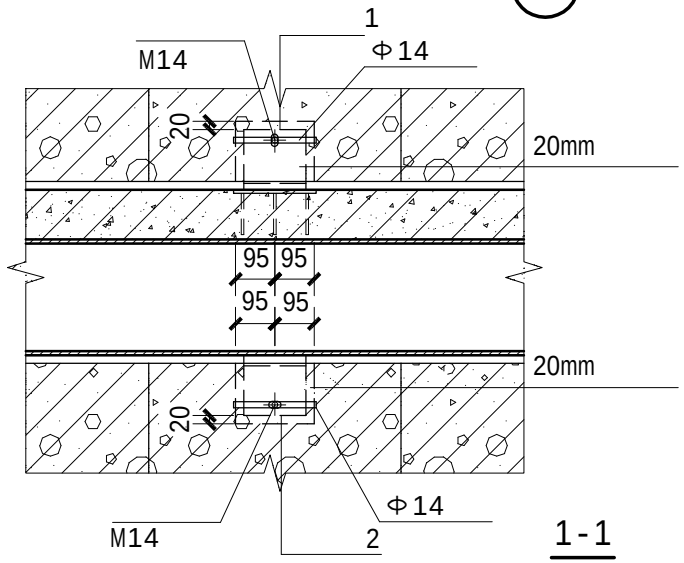
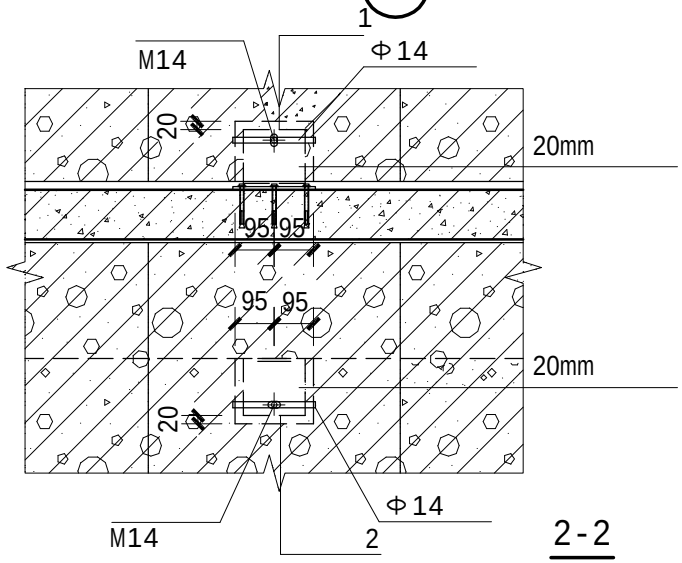


1-1



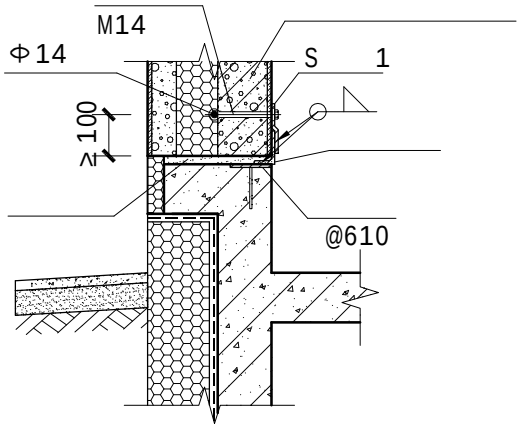
2-2

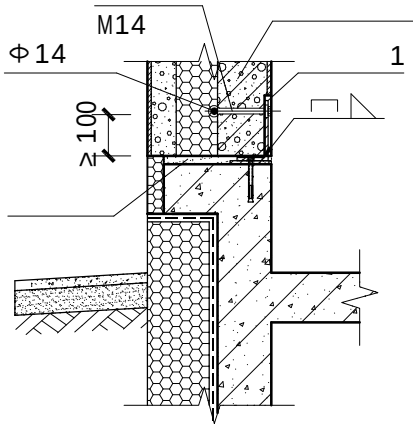
1.

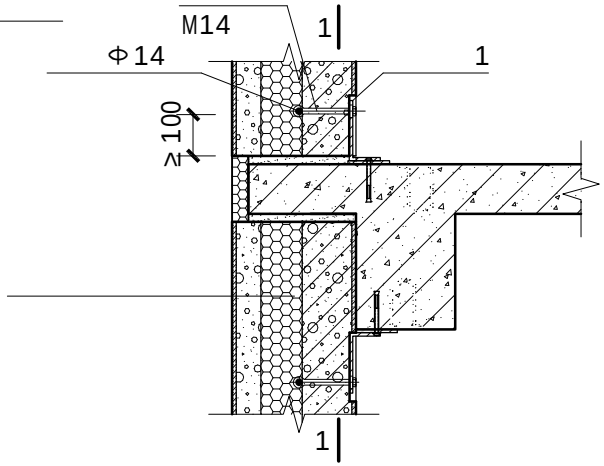
0.7

2.

			22

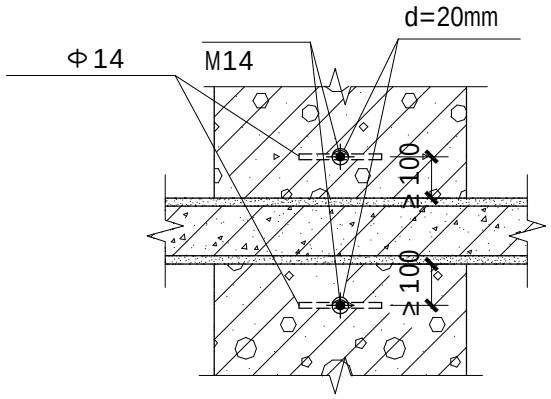






① ( )

② ( )



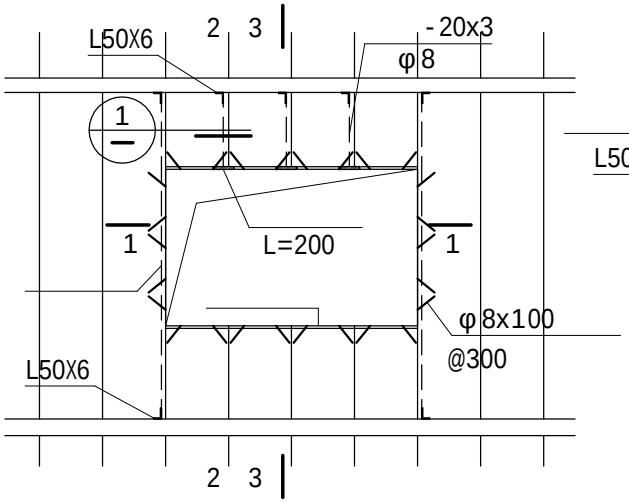
1-1

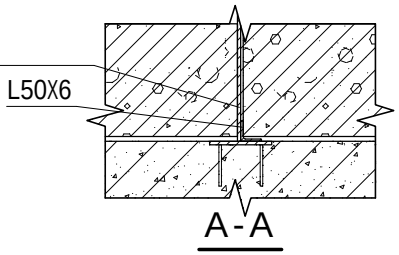
:1.

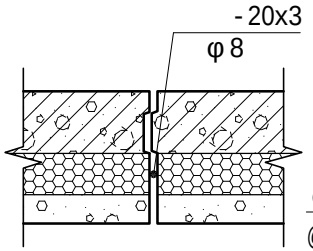
0.7

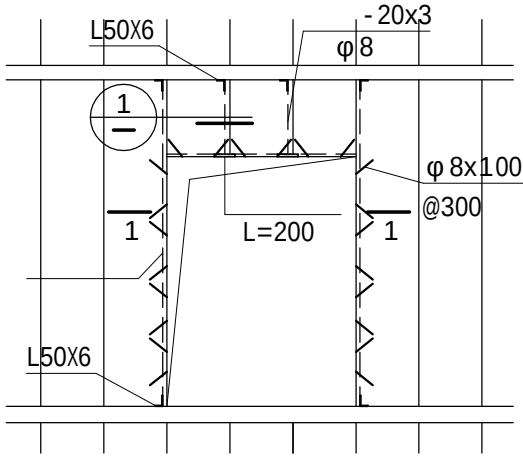
2. M14 d=20mm

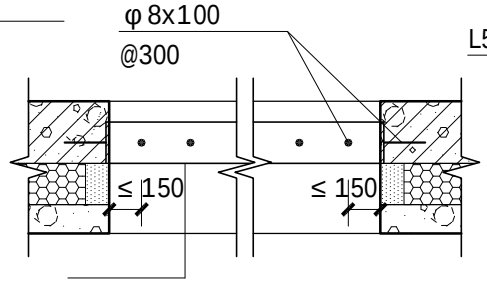
3.

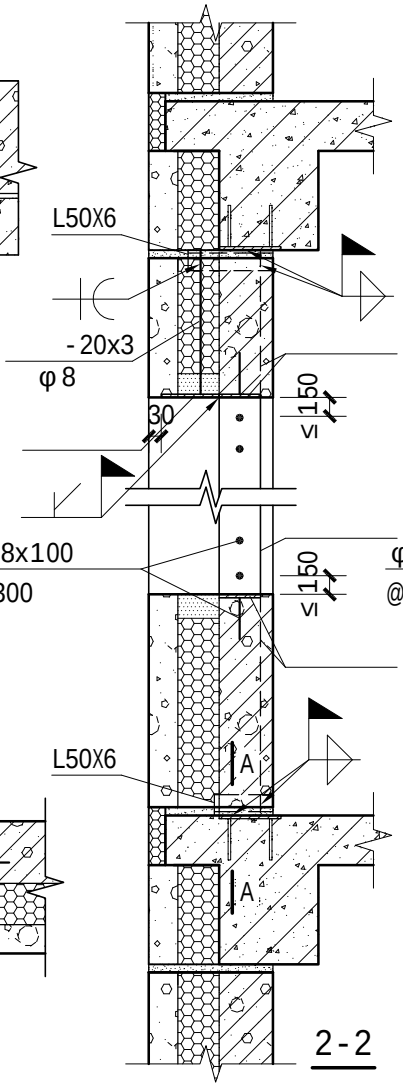


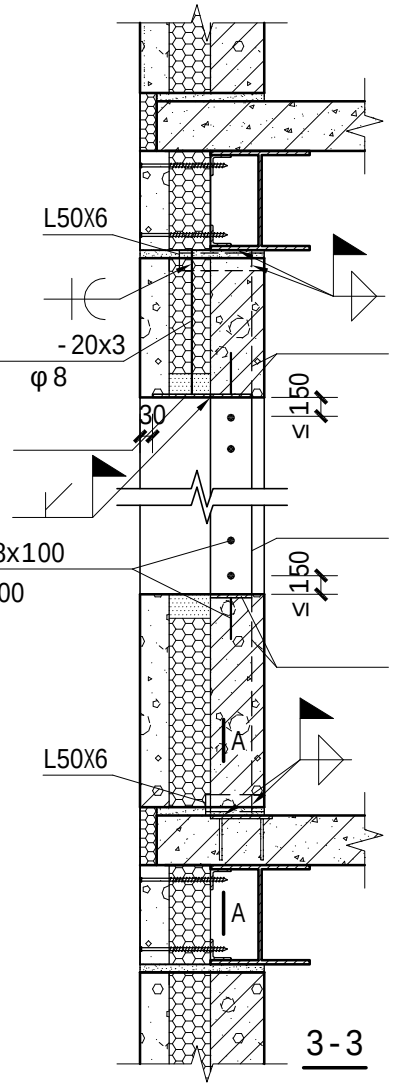




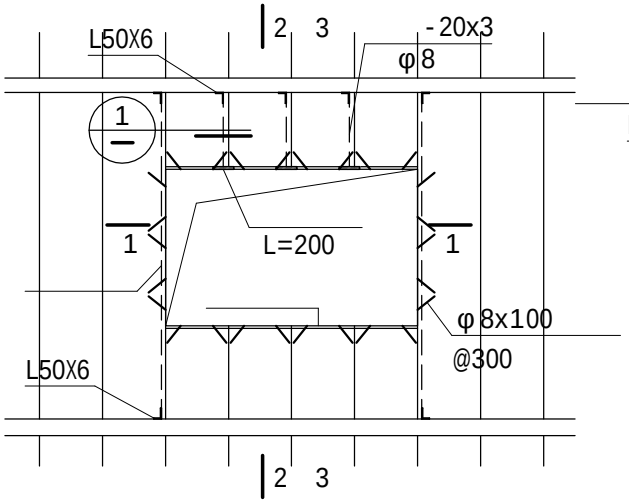


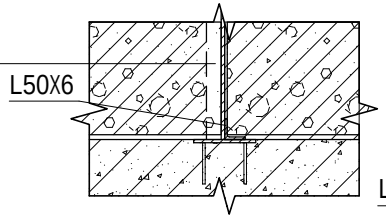




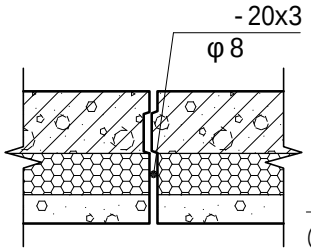


:1. Q235B φ 8 8mm HPB300 6.
2. 0.7
3. 26 27
4.
5. φ 8

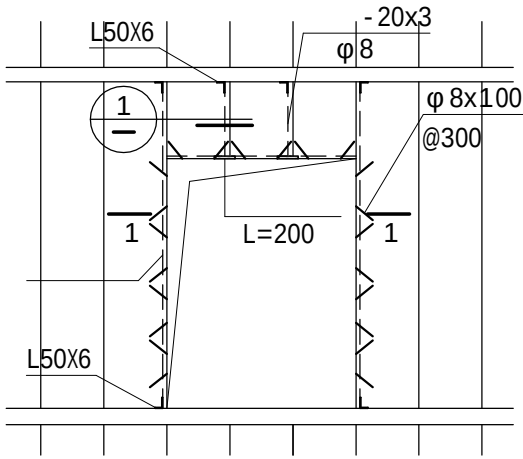


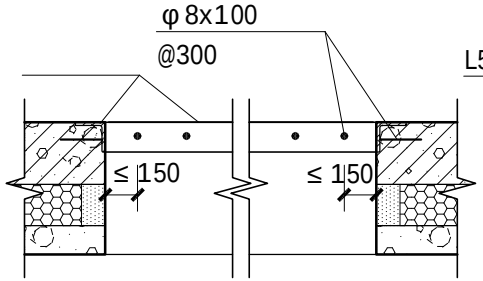


A-A

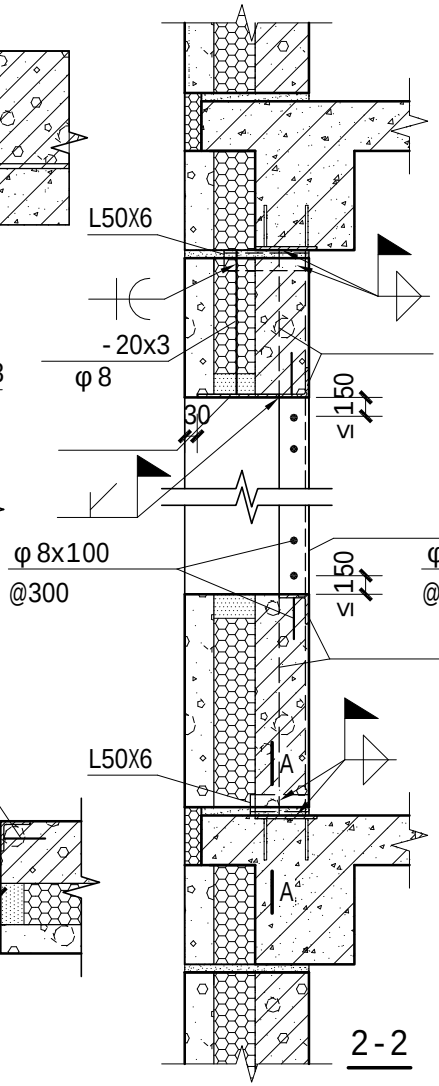


1

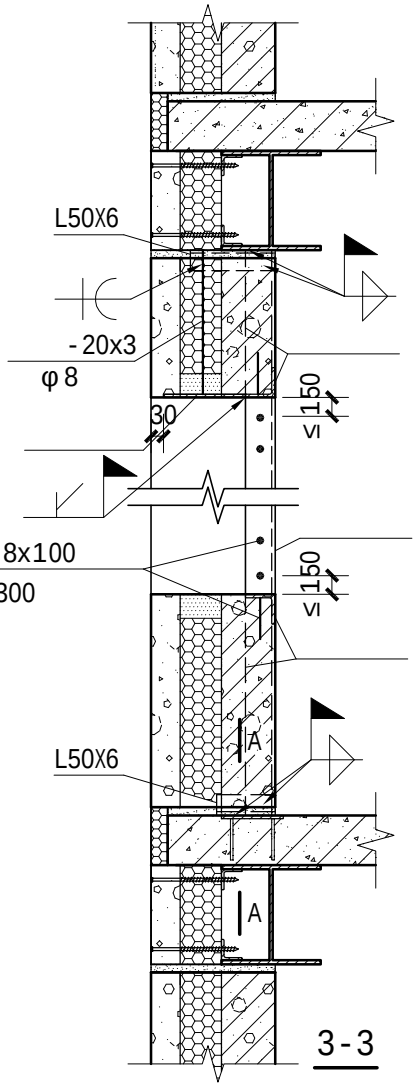




1-1



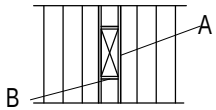
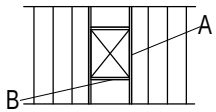
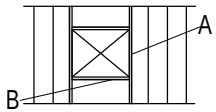
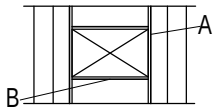
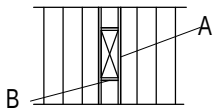
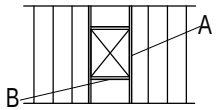
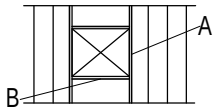
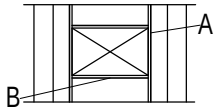
2-2



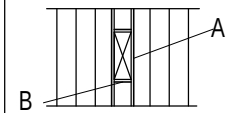
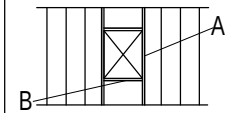
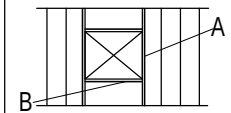
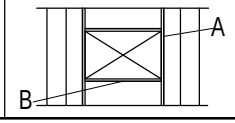
3-3

:1. Q235B φ 8 8mm HPB300 6.
2. 0.7
3. 28 29
4.
5. φ 8

1

m		mm		kN/m²		
				1	1.6	2.3
≤ 3.0		600	A	-70x6	-70x6	-75x8
			B	-70x6	-70x6	-70x6
		1200	A	-75x8	-75x8	-80x10
			B	-70x6	-70x6	-70x6
		1800	A	-75x8	-80x10	-100x10
			B	-70x6	-75x8	-80x10
		2400	A	-80x10	-100x10	-120x10
			B	-75x8	-80x10	-100x10
≤ 3.6		600	A	-70x6	-75x8	-75x8
			B	-70x6	-70x6	-70x6
		1200	A	-75x8	-80x10	-100x10
			B	-70x6	-70x6	-70x6
		1800	A	-80x10	-100x10	-120x10
			B	-70x6	-75x8	-80x10
		2400	A	-100x10	-120x10	-140x10
			B	-80x10	-100x10	-120x10

1

m		mm		kN/m²		
				1	1.6	2.3
≤ 3.9		600	A	-75x8	-80x10	-80x10
			B	-70x6	-70x6	-70x6
		1200	A	-80x10	-100x10	-120x10
			B	-70x6	-70x6	-75x8
		1800	A	-100x10	-120x10	-140x10
			B	-75x8	-80x10	-100x10
		2400	A	-100x10	-140x10	-140x12
			B	-80x10	-100x10	-120x10

: 1. 19CJ85-1

2. Q235B

3.

4.

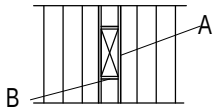
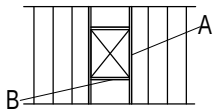
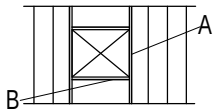
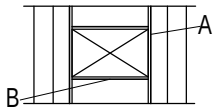
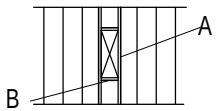
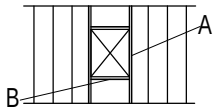
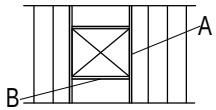
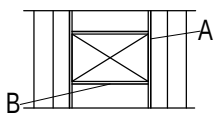
5. 600

6.

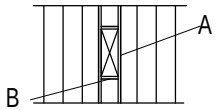
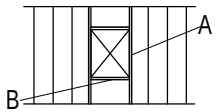
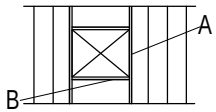
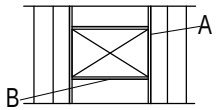
7.

6

2

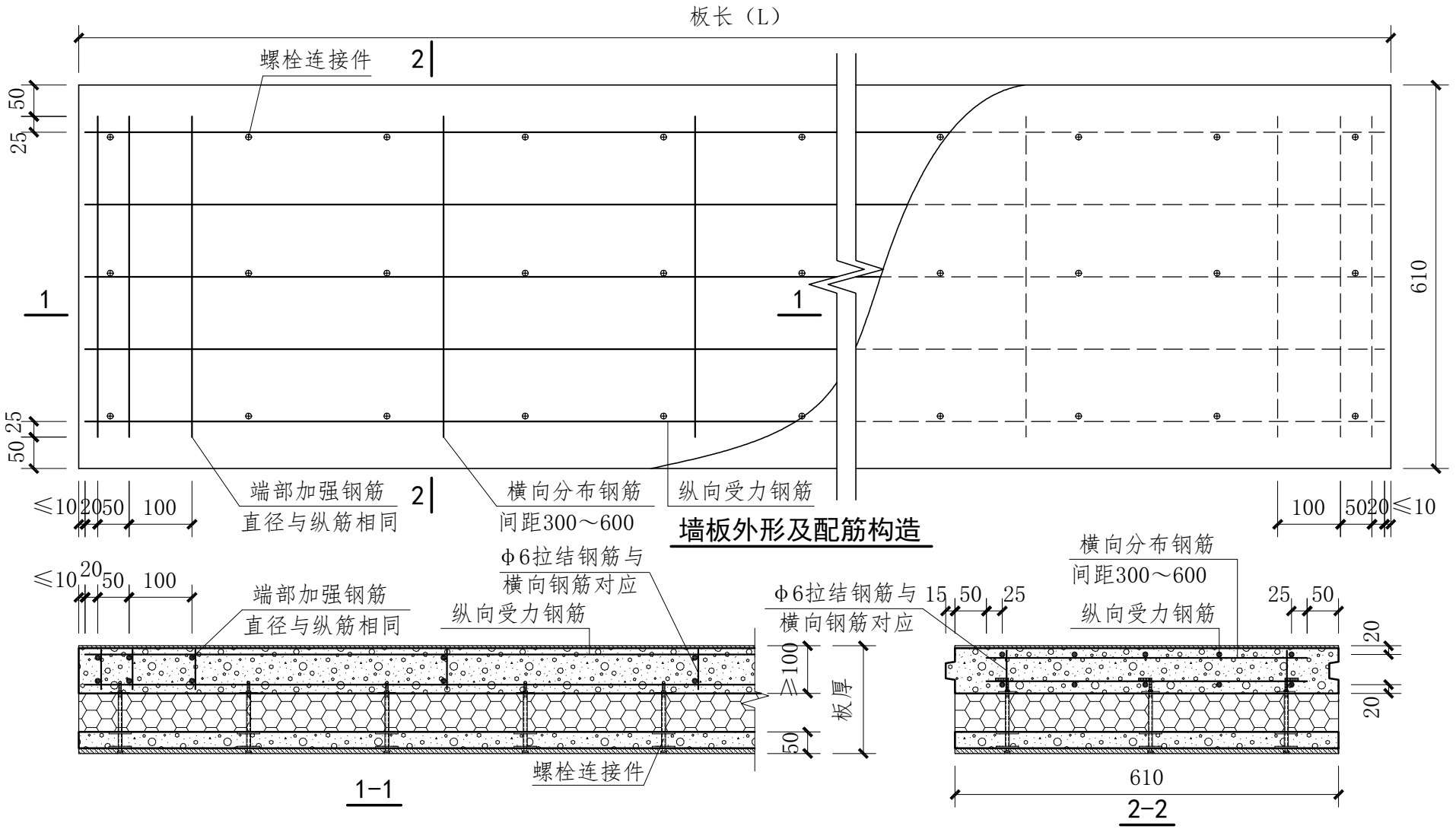
m		mm		kN/m²				
				1	1.6	2.3	2.9	3.5
≤ 3.0		600	A	L50x6	L50x6	L63x6	L63x6	L63x6
			B	L50x6	L50x6	L50x6	L50x6	L50x6
		1200	A	L63x6	L63x6	L75x6	L90x6	L90x6
			B	L50x6	L50x6	L50x6	L50x6	L63x6
		1800	A	L63x6	L75x6	L90x6	L100x6	L110x8
			B	L50x6	L63x6	L75x6	L75x6	L90x6
		2400	A	L75x6	L90x6	L100x6	L110x8	L110x8
			B	L63x6	L75x6	L90x6	L100x6	L110x8
≤ 3.6		600	A	L50x6	L63x6	L63x6	L75x6	L75x6
			B	L50x6	L50x6	L50x6	L50x6	L50x6
		1200	A	L63x6	L75x6	L90x6	L100x6	L100x6
			B	L50x6	L50x6	L50x6	L63x6	L63x6
		1800	A	L75x6	L90x6	L100x6	L110x8	L110x8
			B	L50x6	L63x6	L75x6	L90x6	L90x6
		2400	A	L90x6	L100x6	L110x8	L125x8	L125x8
			B	L75x6	L90x6	L100x6	L110x8	L110x8

1

m		mm		kN/m²				
				1	1.6	2.3	2.9	3.5
≤ 3.9		600	A	L63x6	L75x6	L75x6	L90x6	L90x6
			B	L50x6	L50x6	L50x6	L50x6	L50x6
		1200	A	L75x6	L90x6	L100x6	L110x8	L110x8
			B	L50x6	L50x6	L63x6	L63x6	L75x6
		1800	A	L90x6	L100x6	L110x8	L125x8	L125x8
			B	L63x6	L75x6	L90x6	L90x6	L100x6
		2400	A	L90x6	L110x8	L125x8	L140x10	L140x10
			B	L75x6	L90x6	L100x6	L110x8	L110x8

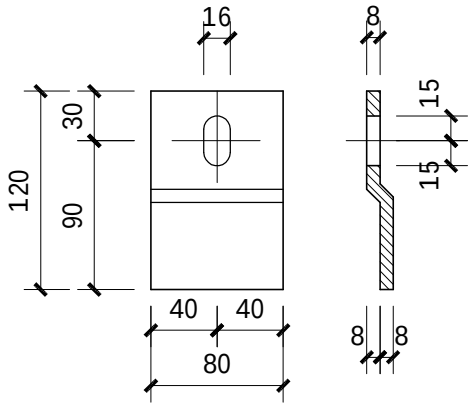
: 1. 19CJ85 - 1
2. Q235B
3.
4.
5. 600
6.
7.

6

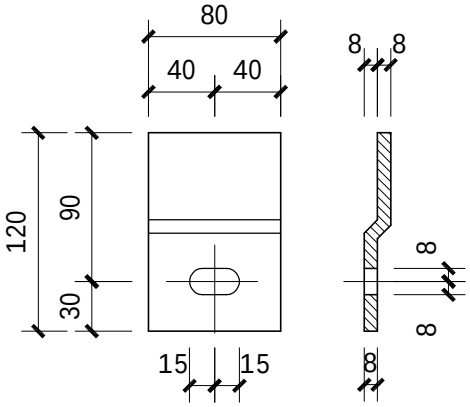

板长（L）
螺栓连接件
2
50
25
1
1
610
50
25
2
端部加强钢筋
直径与纵筋相同
横向分布钢筋
间距300～600
纵向受力钢筋
≤10
20
50
100
100
50
20
≤10
墙板外形及配筋构造
Φ6拉结钢筋与
横向钢筋对应
纵向受力钢筋
≥100
板厚
50
螺栓连接件
1-1
Φ6拉结钢筋与
横向钢筋对应
15
50
25
横向分布钢筋
间距300～600
纵向受力钢筋
25
50
20
20
610
2-2

kN/m² \ mm	100	125	150	175	200
As mm²	141	141	141	141	141
2.4	3.46	4.91	6.35	7.80	9.24
2.7	2.74	3.88	5.02	6.16	7.30
3.0	2.21	3.14	4.06	4.99	5.91
3.3	1.83	2.59	3.36	4.12	4.89
3.6	—	2.18	2.82	3.46	4.10
3.9	—	1.86	2.40	2.95	3.50
4.2	—	—	2.07	2.54	3.01
4.5	—	—	1.80	2.21	2.62
4.8	—	—	—	1.95	2.31
5.1	—	—	—	1.72	2.04
5.4	—	—	—	1.54	1.82
5.7	—	—	—	1.38	1.63
6.0	—	—	—	1.24	1.47

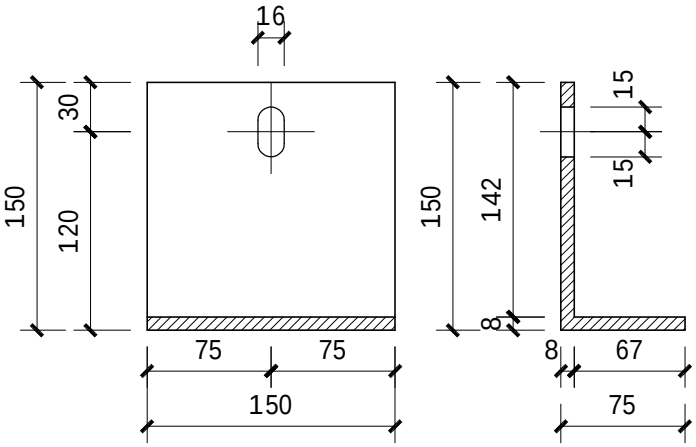
1. JGJ/T 17-2020
2. HPB300 A3.5
3.
4. 5φ6
5. 610mm



S 1



S 2



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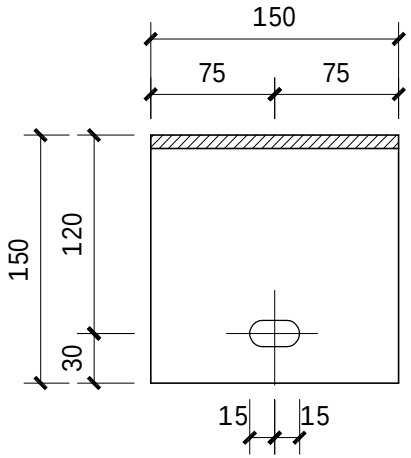
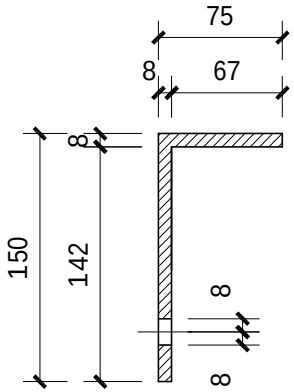
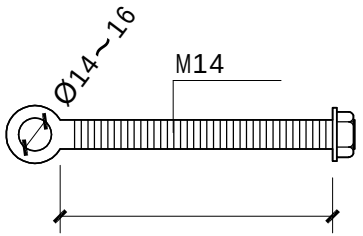
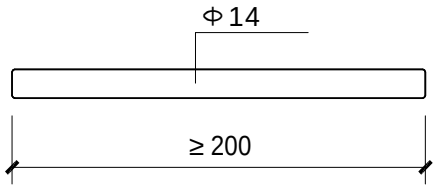


2





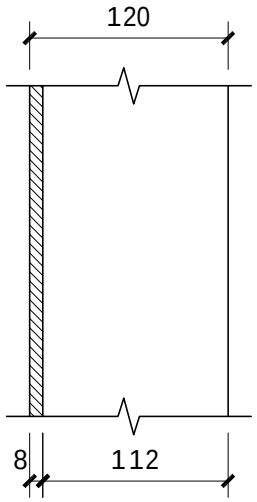
S



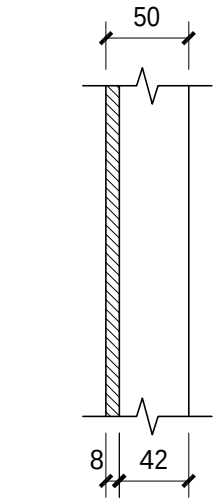
Φ14

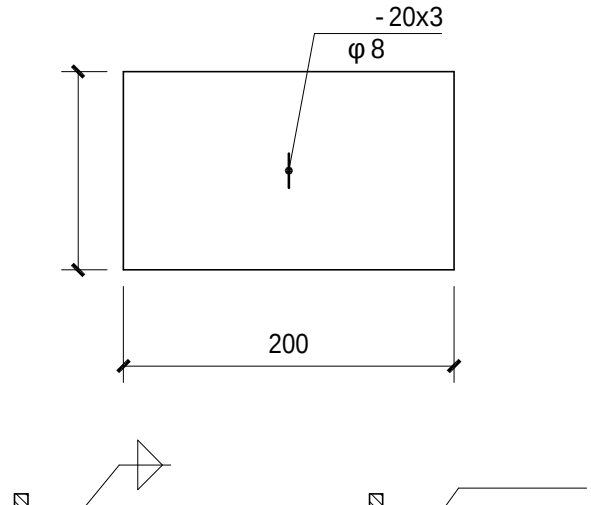
Q235B

					32



L





d

1. L80X50X8 L L120X80X8
2. L Q235B
3.