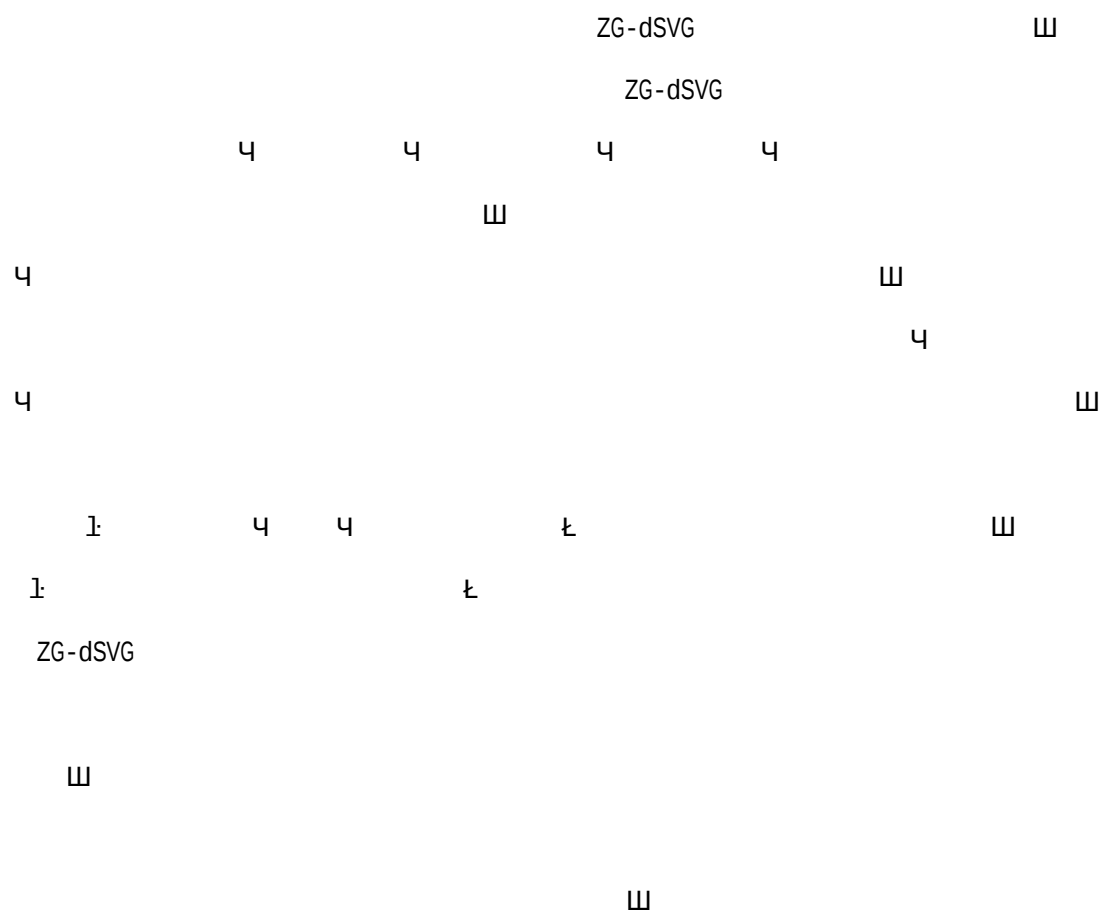


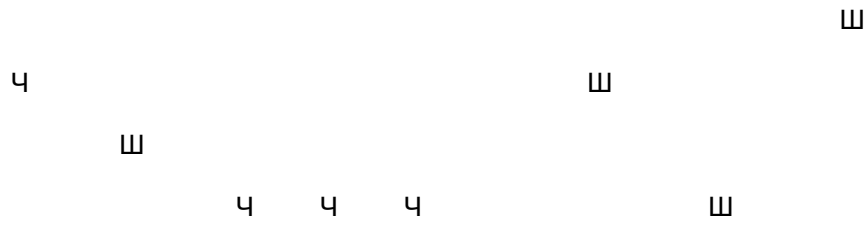




1	.....	1
1.1	.....	1
2	.....	4
2.1	.....	4
2.2	.....	4
2.3	.....	5
2.4	.....	6
3	.....	7
3.1	.....	7
3.2	.....	10
4	.....	15
4.1	.....	15
4.2	.....	15
4.3	.....	17
5	.....	19
5.1		19
5.2		19
5.3		19
5.4		20
6		21
6.1		21
6.2		22
6.3		23
6.4		24
7		25
8		28
8.1		28
8.2		28
8.3		28
8.4		28
8.5		29

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ZG-dSVG

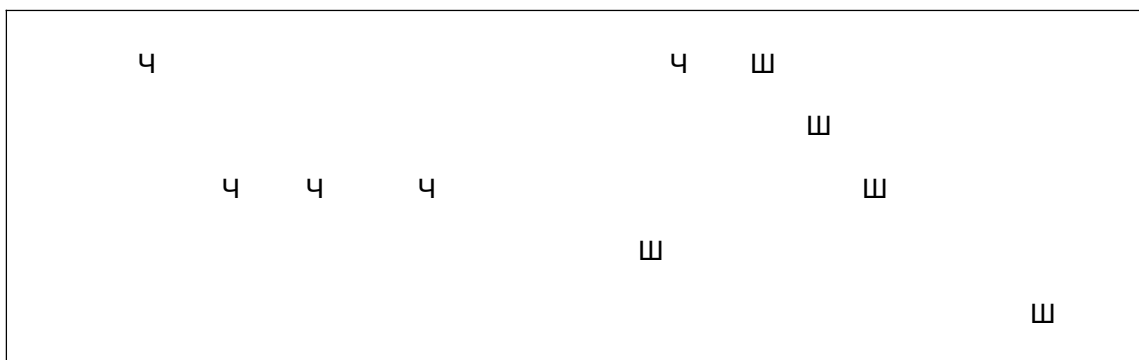
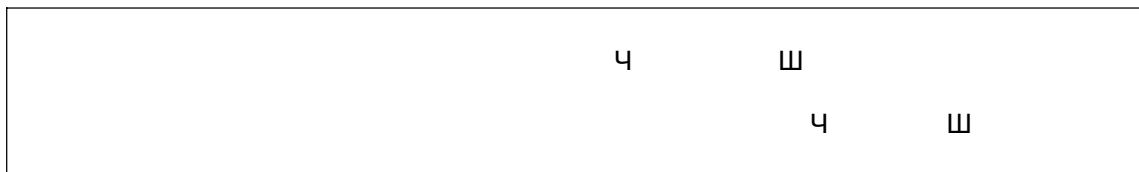


1.1

1.1.1

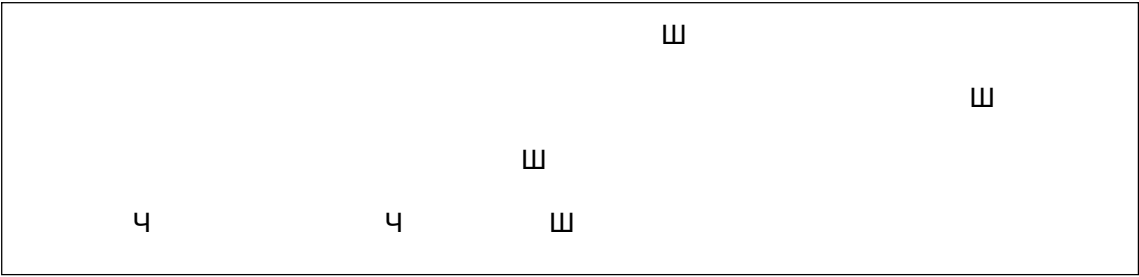


1.1.2

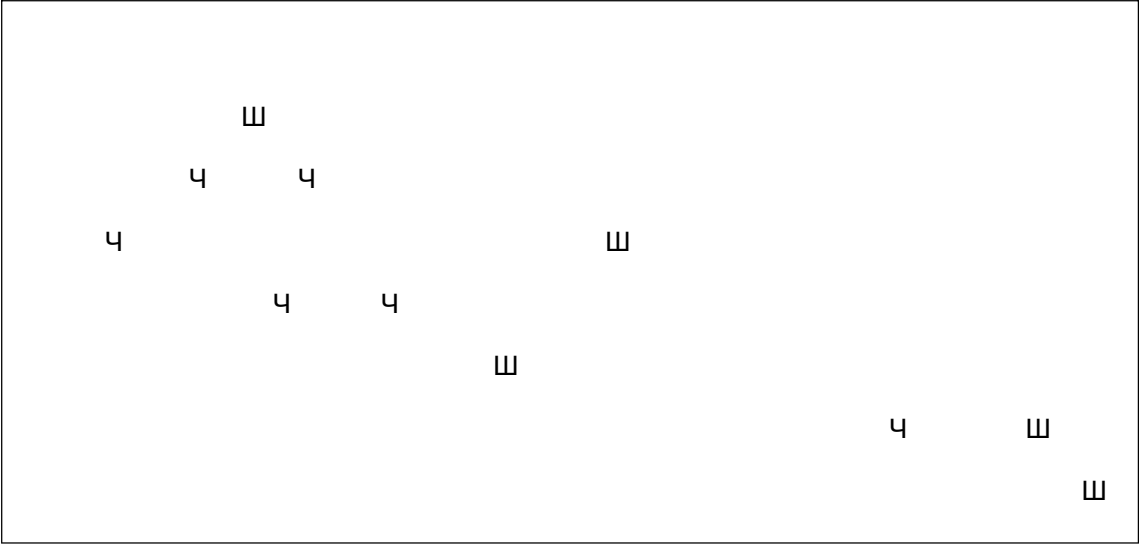


1.1.3

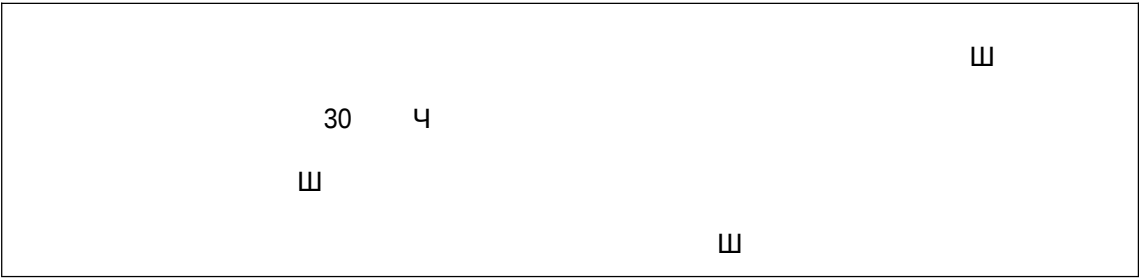


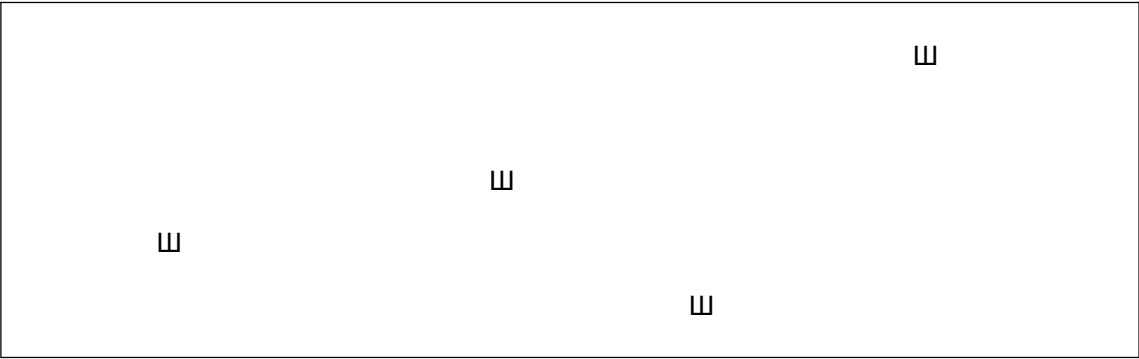


1.1.4



1.1.5





1.1.6



1.1.7



ZG-dSVG

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\omega

\omega

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2

4		<5ms
5		<3%
6	SVG	>99%
7		<1000m

2.3

SVG

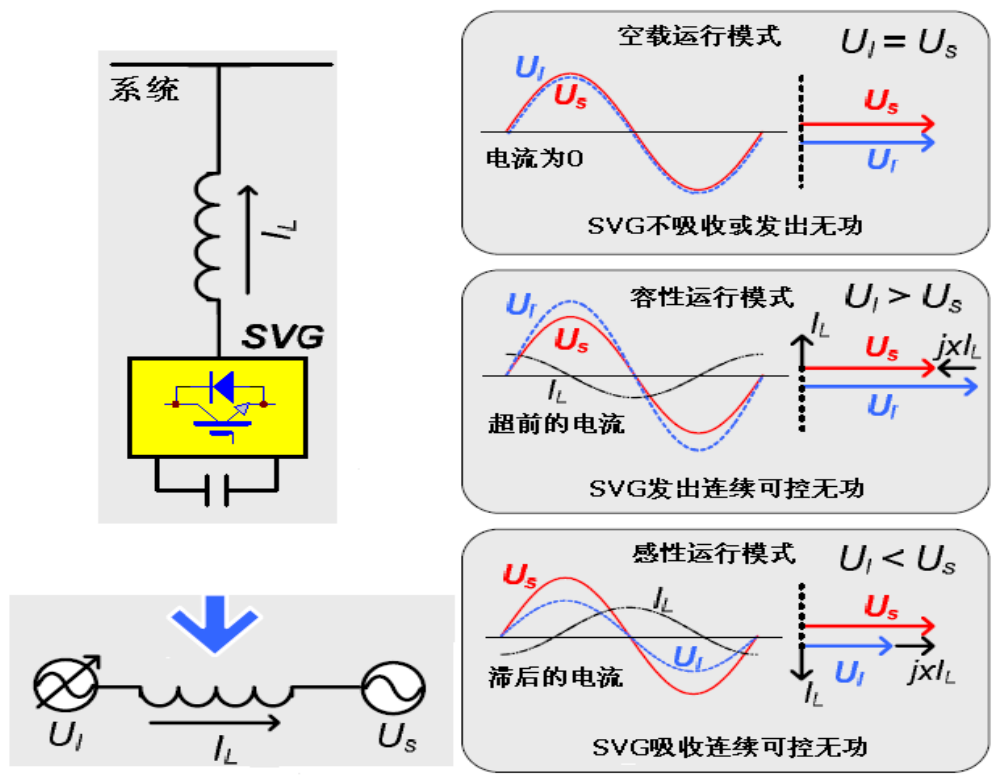
STATCOM

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SVG

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2-1SVG

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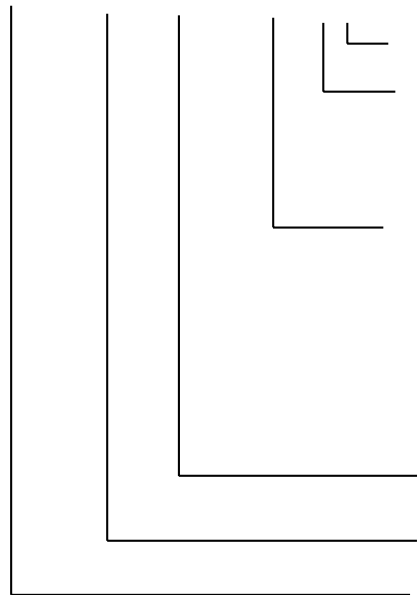
$$I_1 = (U_s - U_1) \div jX_L$$

2-1

2.4

ZG-dSVG

ZG-dSVG- / /



A-Z 0-9

1. Y 2. 1. 2.

I. W. Ł.

03 3kV

06 6kV

10 10kV

35 35kV

kVar

$$n \text{ H} \quad n \text{ H}$$

10kV

± 2000kvar

12 H

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A10

ZG-dSVG-12H 2000/10Y/A10山

ZG-dSVG

10kV

600A

600A

35kV

W

Θ ZG-dSVG

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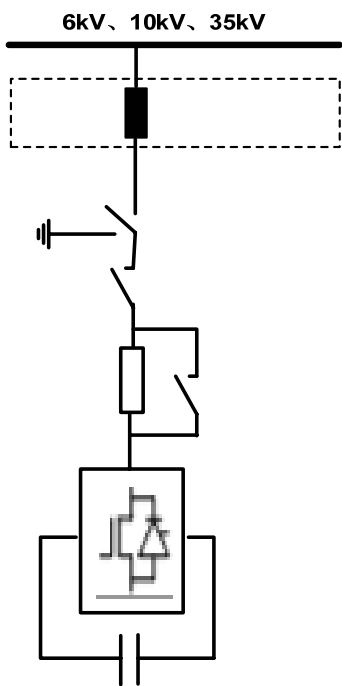
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3

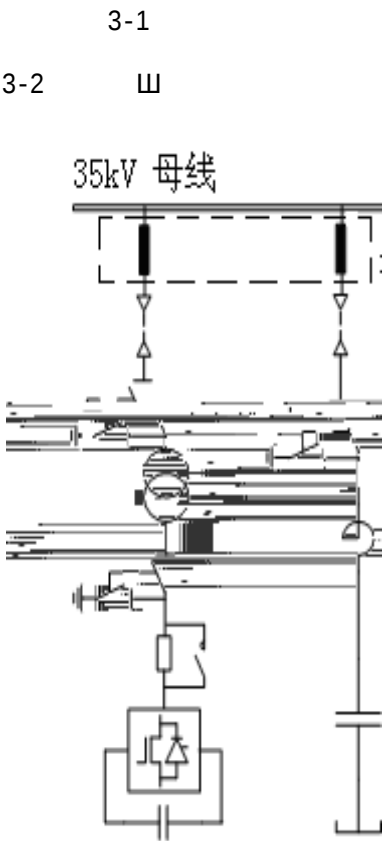
3.1

ZG-dSVG

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3-2

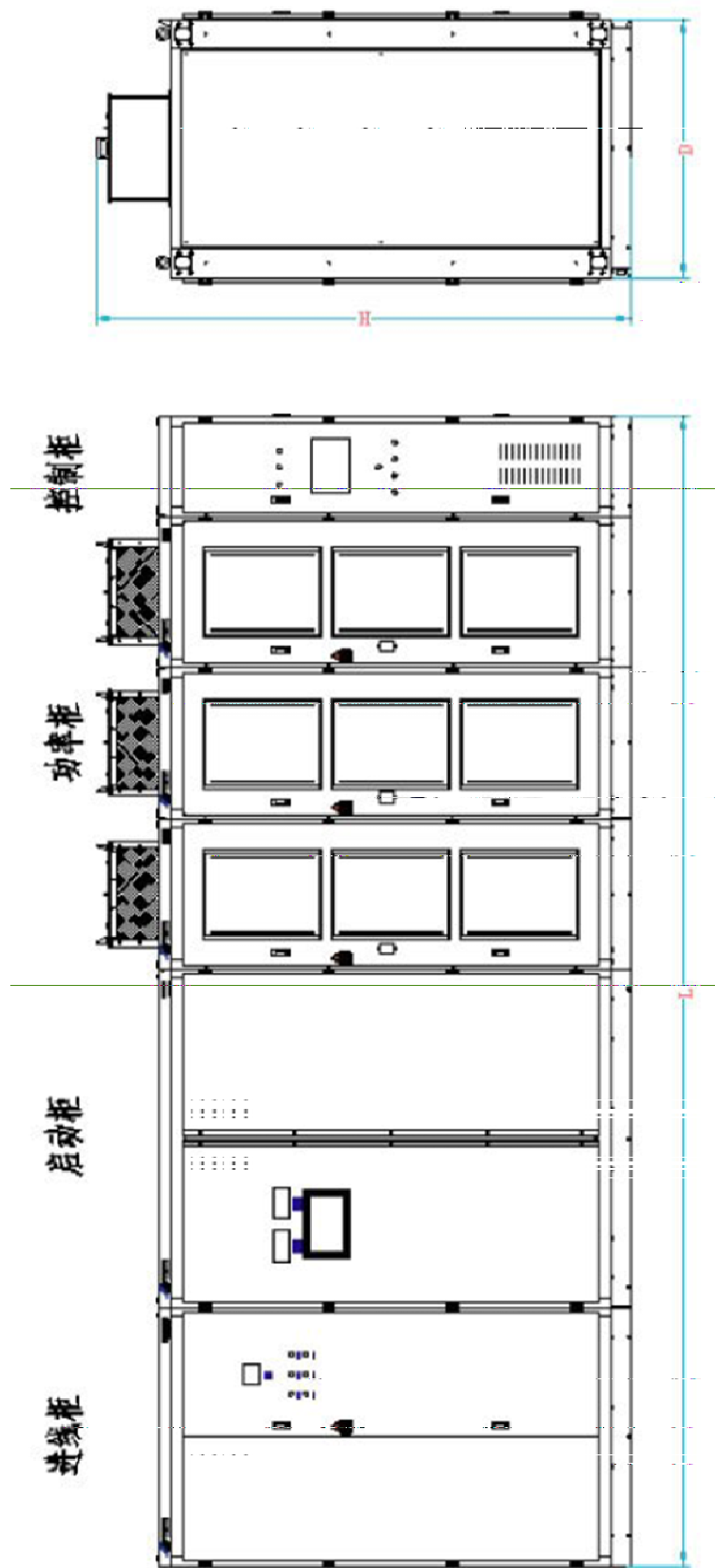
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3-2

3-3

ZG-dSVG

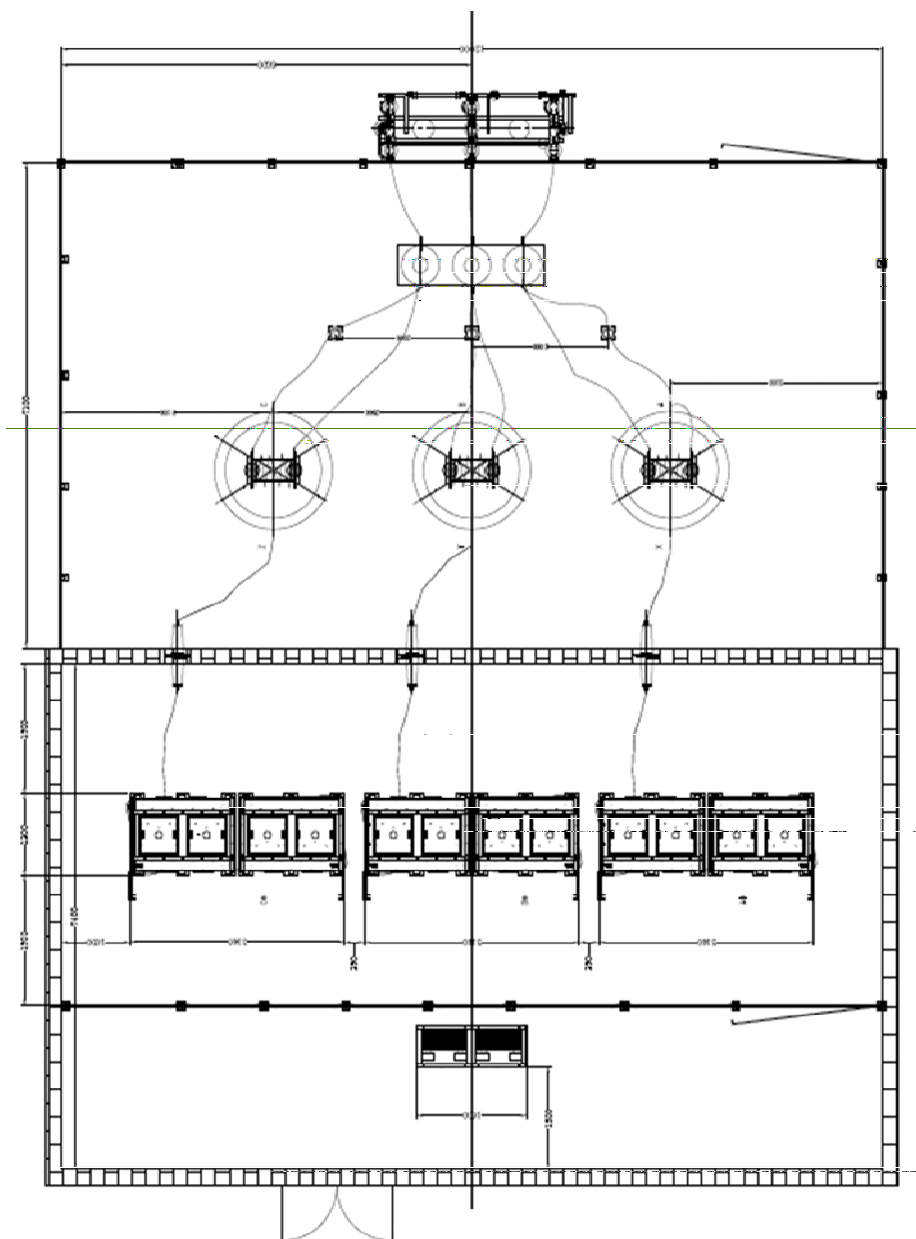
1	4	4	Ш
2	4	Ш	
3	4	Ш	
4	4 UPS 4	4	Ш



3-3 6kV 410kV ZG-dSVG

1	10kV	35kV	Ш
2			Ш
3	FC		Ш
4	FC		Ш
	35kV	ZG-dSVG	
3-4			

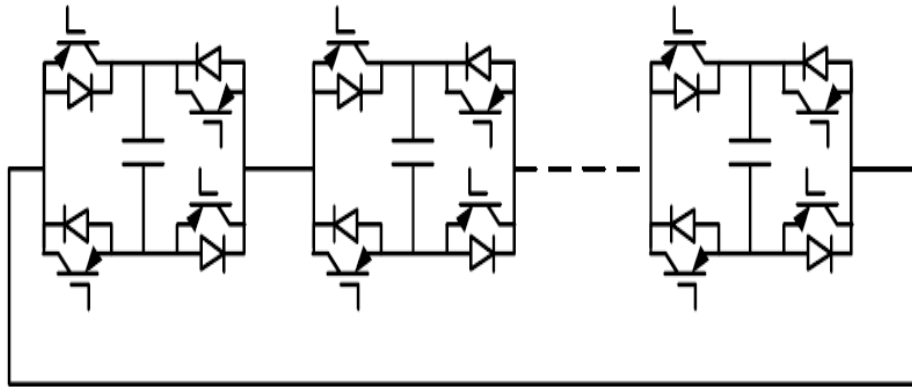
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3-4 35kV ZG-dSVG

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1. ZG-dSVG

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IGBT

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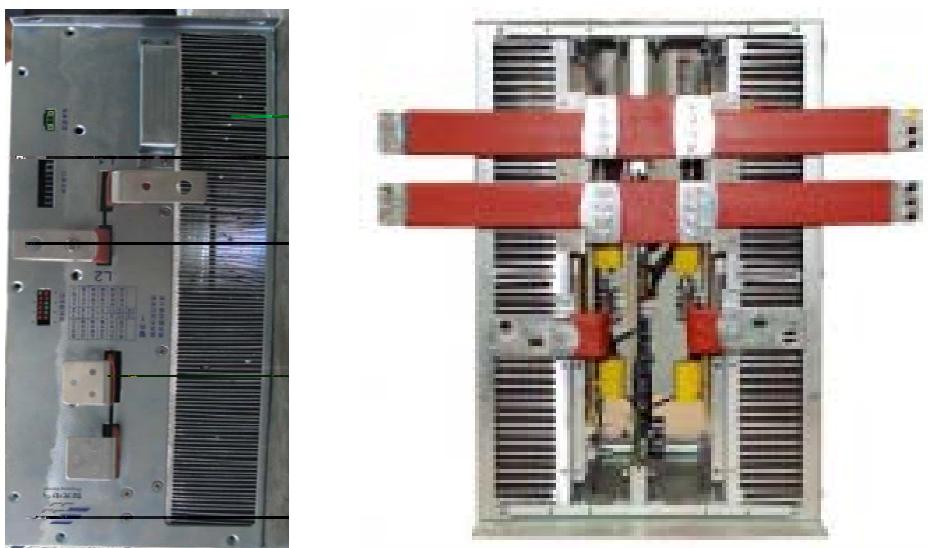
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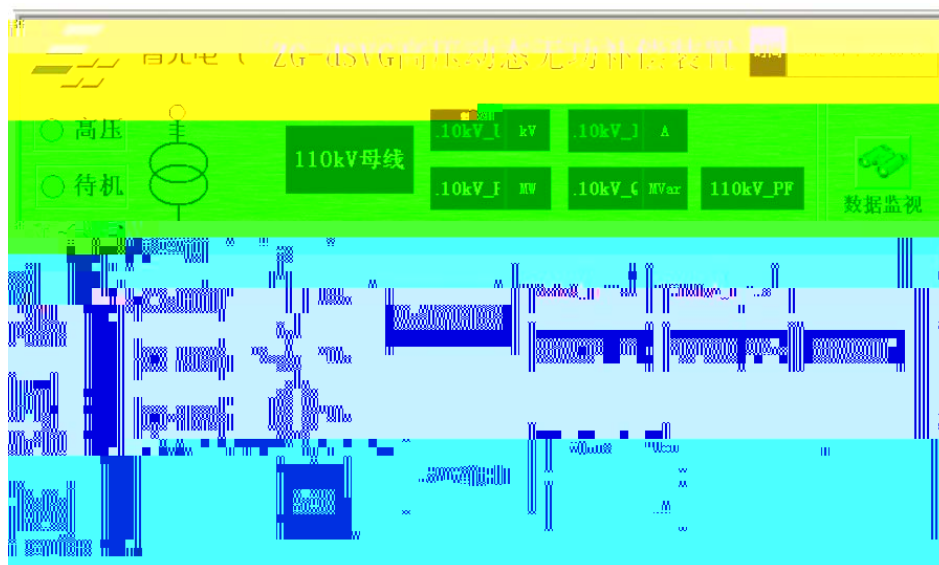


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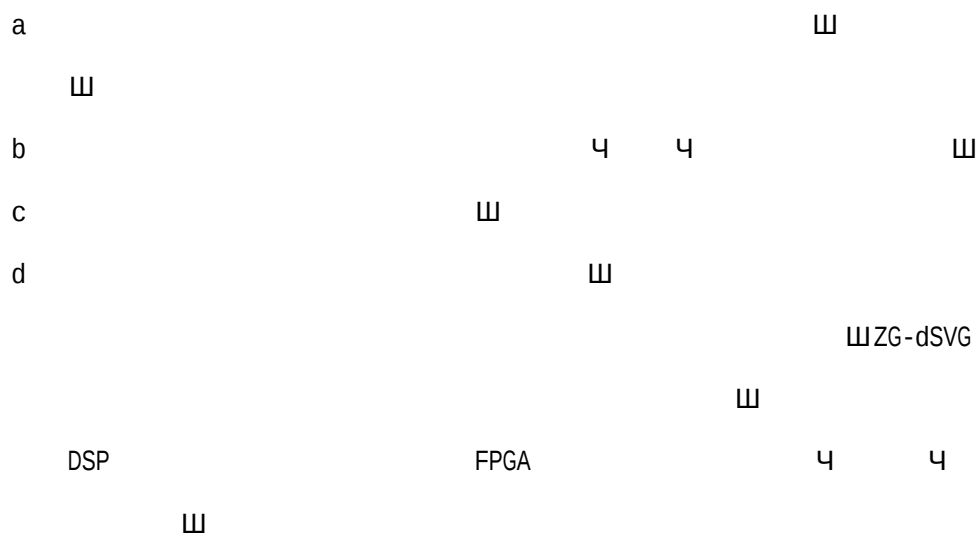
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3-9



3-9



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LLSVG

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RS232/RS485

CAN

RJ45

Modbus 4

Profibus 4TCP/IP IEC61850

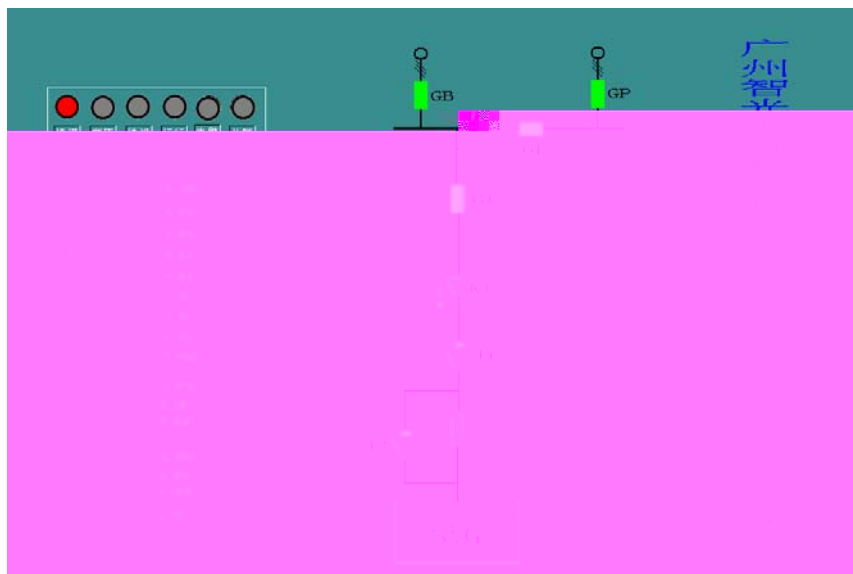
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6					Ш		
7						Ш	
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		Ч			Ш		
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	Ш						
11			Ч				Ш

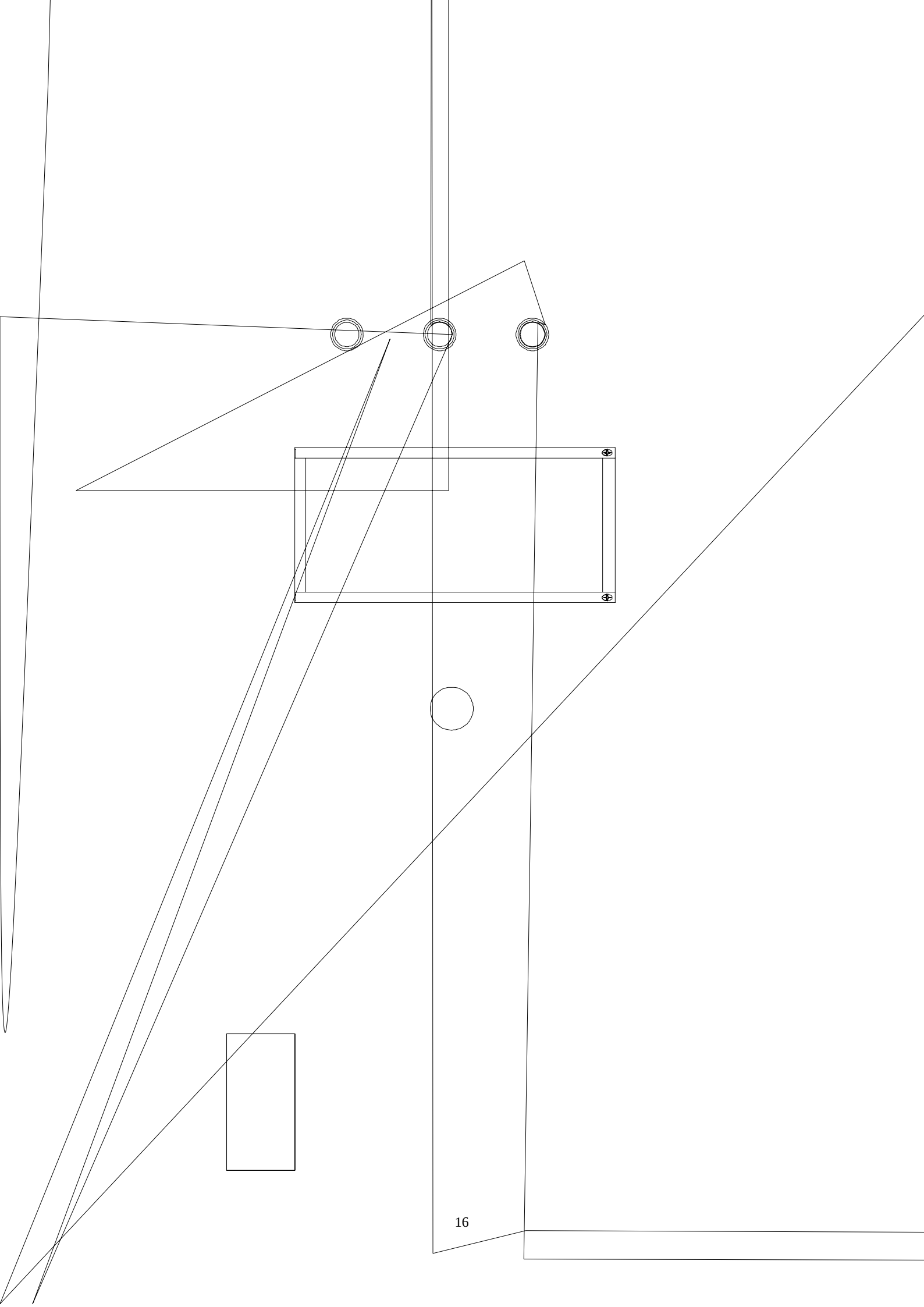
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RS485

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5. Ё Ё Ш
6. Ё Ё Ш

5.2

1. 380V Ш
2. Ш
3. Ё Ё
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4. Ё Ё Ш
- 5.
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5.3

1. Ш

2. 380V

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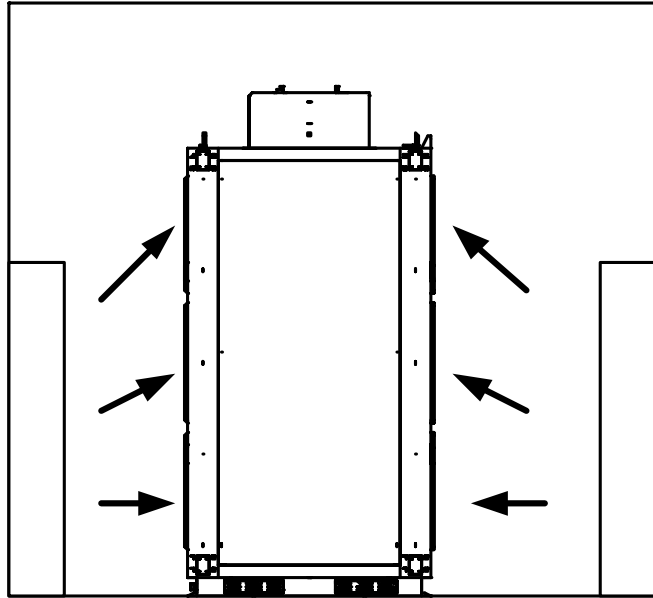
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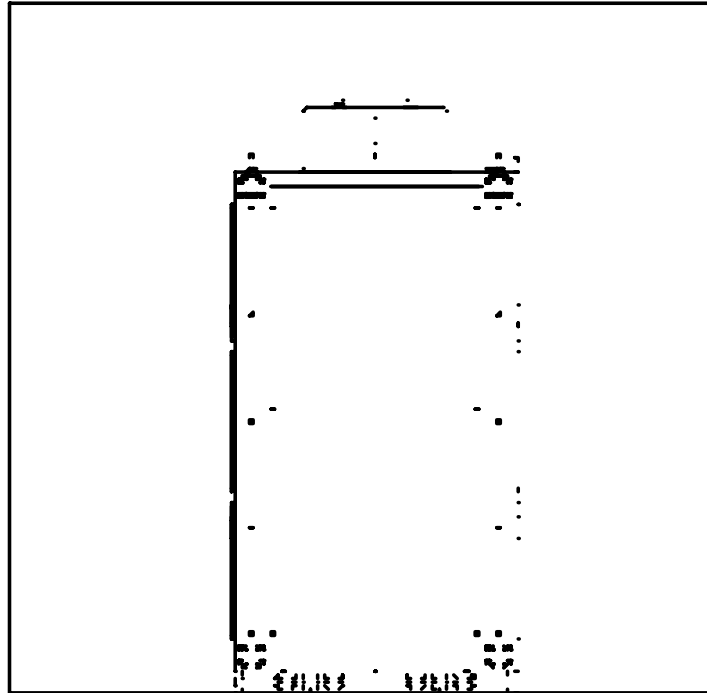


6-1

6.2

6.3

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6-4

6.4

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$$S = 3300 \text{ m}^3/\text{s} \times A_1 + 7100 \text{ m}^3/\text{s} \times A_2 \div V \quad 6-1$$

S m^2

A1 450 1.1 т

A2 560 1.1 т

V 2 м/с

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Ч

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7

ZG-dSVG

Ш

7-1

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7-1 ZG-dSVG

1		1.IGBT 2. 3. 4. Ч 5.	1. 2. 3. 4.
2		1. 2. 3. 4.	1. 2. 3. 4.
3		1. Ч PT 2. 3. 4. 5. 6. 7.	1. Ч SVG PT Ш 2. 3. 4. 5. 6.
4		1. 2. 3. 4. 5.	1. Ш 2. 3. 4. 5.
5	/	1. 2. 3. 4. 5.	1. 2. 3. 4.
6		1.PT	1.

		2. 3.	2.
7	1/2	1. 2. 3. 4.	1. 2. Ш 3.
8		1. 2. 3. 4.	1. 2. Ш 3.
9		1. 2. 3. 4.	1. 2. 3. Ш
10		1. 2. 3.	1. 2.
11		1. 2.	1. 2.
12		1. 2. 3. 4.	1. 2. 3.
13		1. UPS 2. 3. 4.	1. UPS 2. 3. 4.
14			1. 2.
15		1. 2. 3. PT 4.	1. 2. 3. Ч SVG PT Ш 4.
16	/ /	1. 2. 3.	1. 2. 3.
17		1. 2. $\pm 15V$ 3. 4.	1. 2. $\pm 15V$ 3. 4.

7-2

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7-2 ZG-dSVG

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3			Ш	
4		Ш		
5		Ш		

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