
2015 1674 ≤ 60

2022 8 2023 1 1 1674

2023 4 20

3

1.1		1
1.2		1
1.3		1
1.4		5

2.1		7
2.2		7
2.3		

У

1.

1.1

1.2

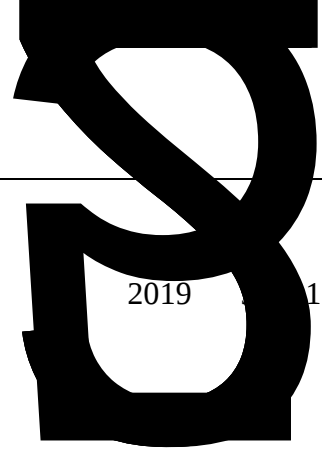
1.2.1.

1								2021	9	1
2								2021	4	29
3						591		2013	12	7
645										
4						708		2019	4	1
5					2025					
14	34	2025	5	28						
6									103	
					2022	11	9			
7									3	2015
5	29				80		2015	7	1	
8										



9

30 2015 5 29



2019

1

80 2015 7 1

11

29

12

2015 3 23

13

80

2015 7 1

12

79 2015 7 1

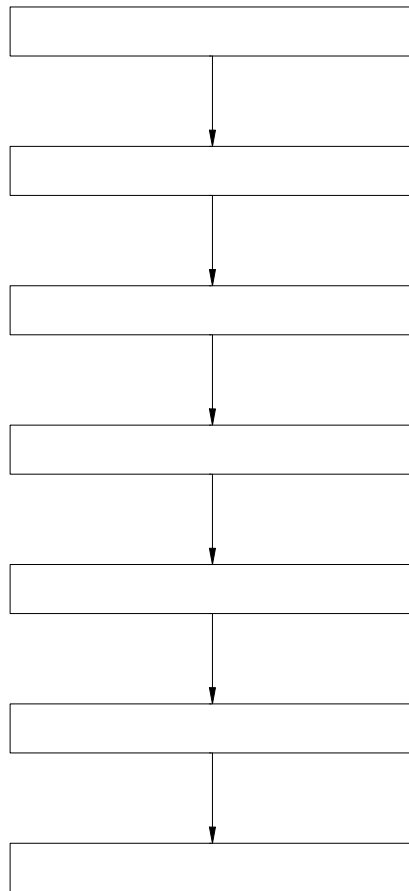
6 44 2025 6 1

44 2015 5

55



2011]142 '0 11 / 1
2016, 5
24
2019 107
2019 10 28
25
5 18
Ä26
2017 45 ' 2017 12 23
o 23 27 2016-142
<



1.4-1

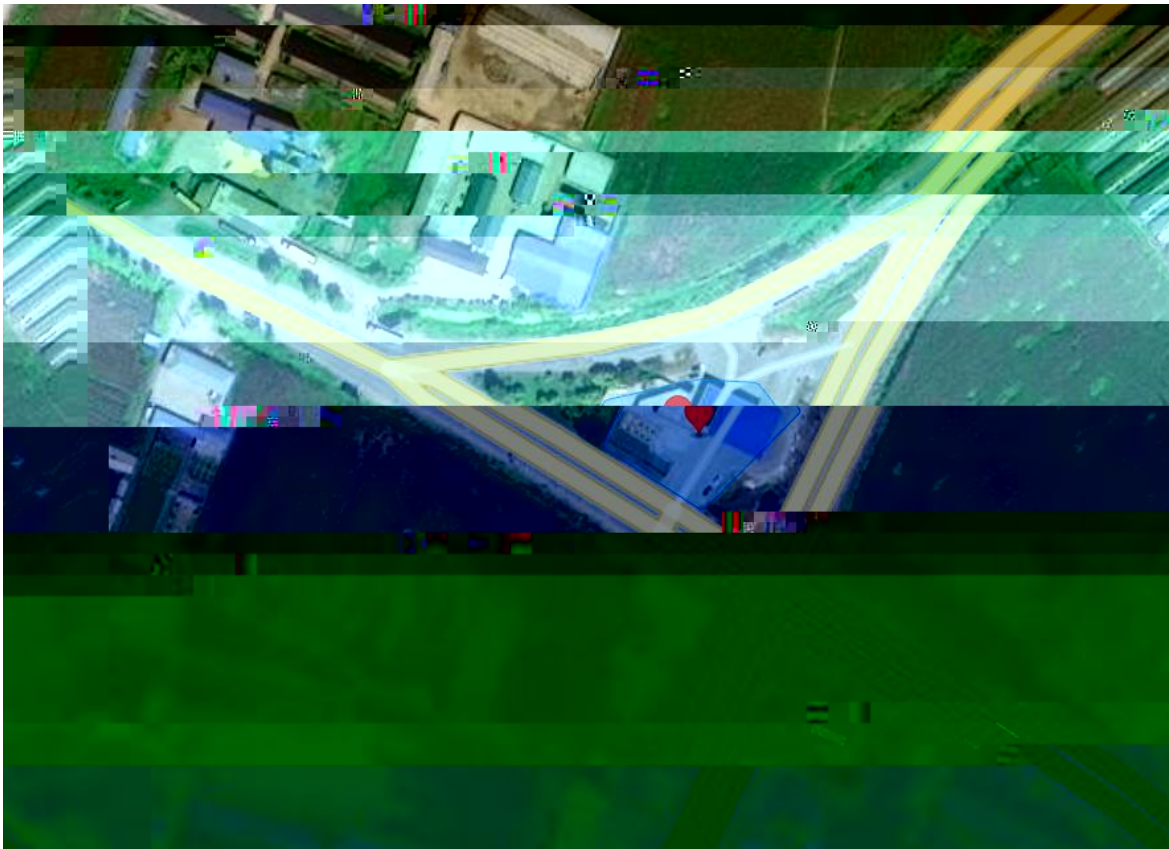
2.

3308m² SF 5 1 1

6

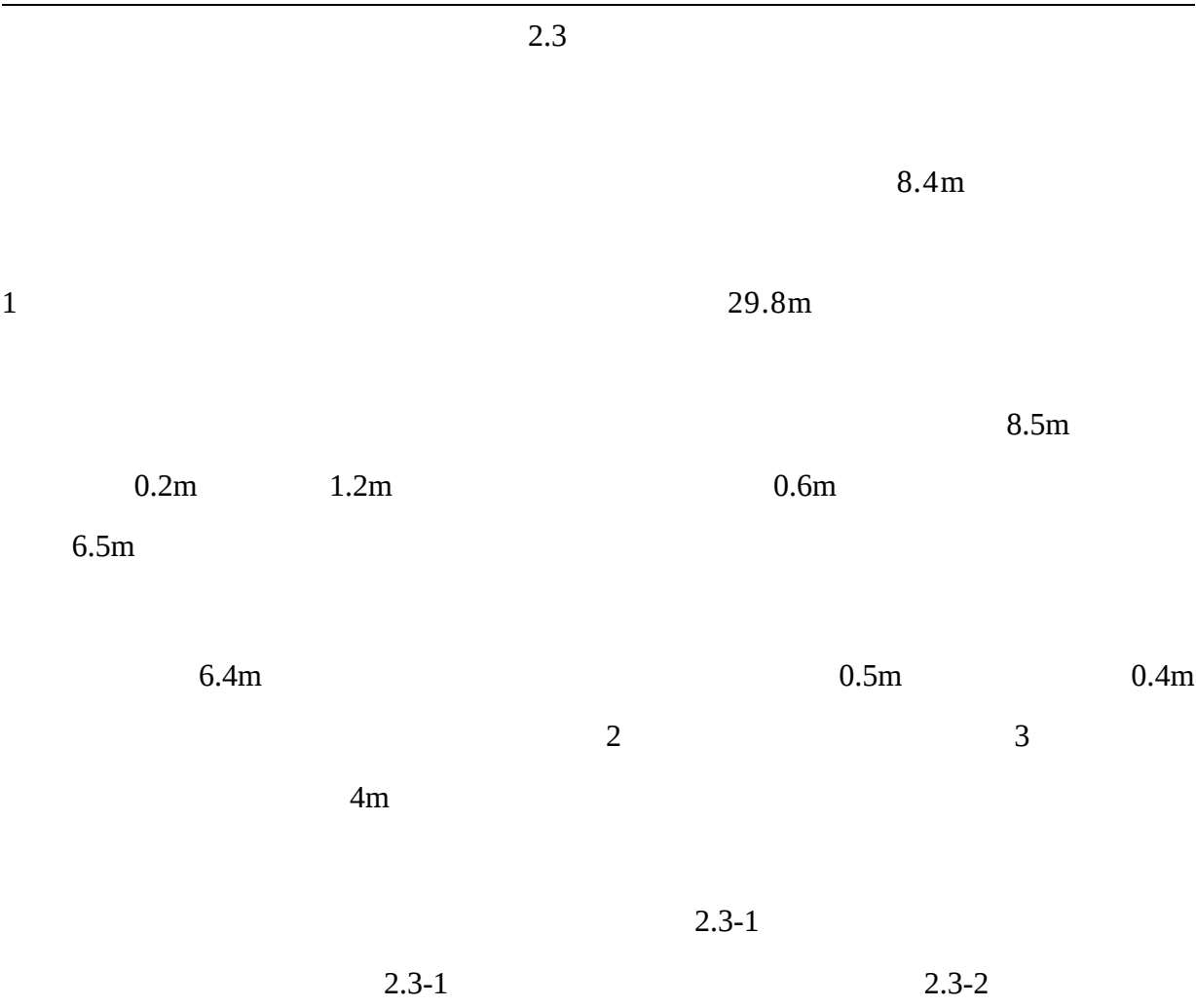
5 2 30m³ 3 30m³
GB50156-2021 3.0.9
105m³

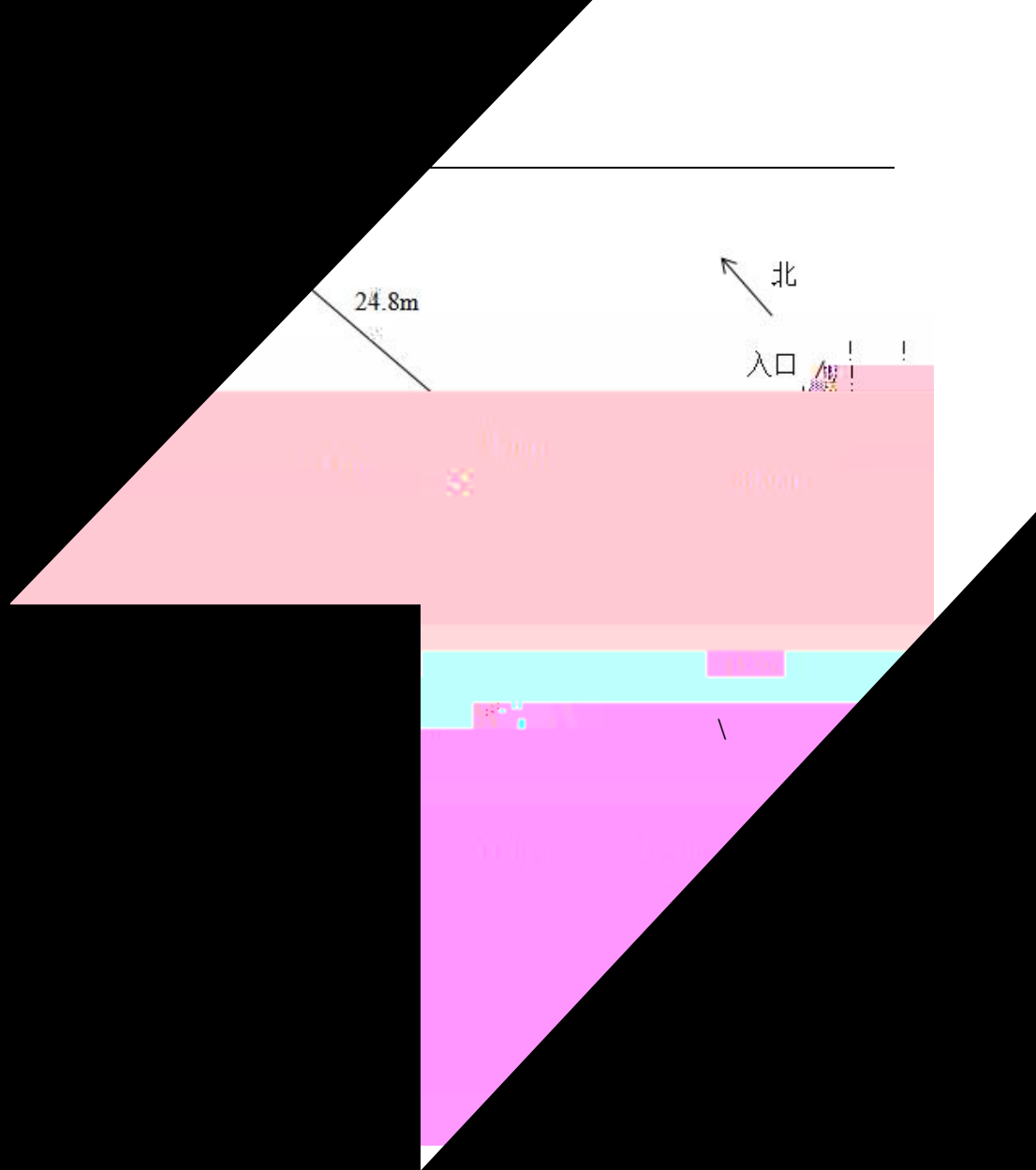
2.1



2.1-1

1	8.3 35.2 -28.2 28.2 -15.7
2	70.5% 82% 54%
3	101.6Kpa
4	658mm
5	4.6m/s 25.7m/s
6	23.4d
7	15.0cm 1.17m
8	7 0.10g





2-2

m

2.4

2.4-1

2.4-1

1			256.69m ²			
2			670m ²			H=6.5m

2.4-2

2.4-2

ϕ
 γ Δ  $\circ$ y I $\mathbb{W}_{\text{u}}$

5

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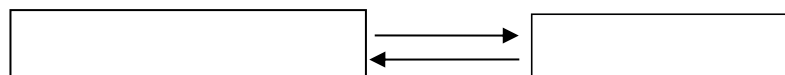
5Im

!!

2.6

1.0 1.2

2.6-1 2.6-2 2.6-3 2.6-4



2.6-1



2.6-2

4

4m 3

12

5

90%

3.

3.1

3.1.1

GB18218-2018

1

2

3.1.2

1

2

$$S=q_1/Q_1+q_2/Q_2+\dots+q_n/Q_n\geq 1$$

S——

q_1 $q_2\ldots$ q_n ——

t

$$Q_1 \quad Q_2 \dots Q_n \text{ ————— } t$$

3

3.1.3

3.1-1

3.1-1		
1		200t
2		5000t

$$45t \qquad 90m^3 \qquad 0.89 \qquad 80.1t$$

$$S=45/200+80.1/5000=0.24102<1$$

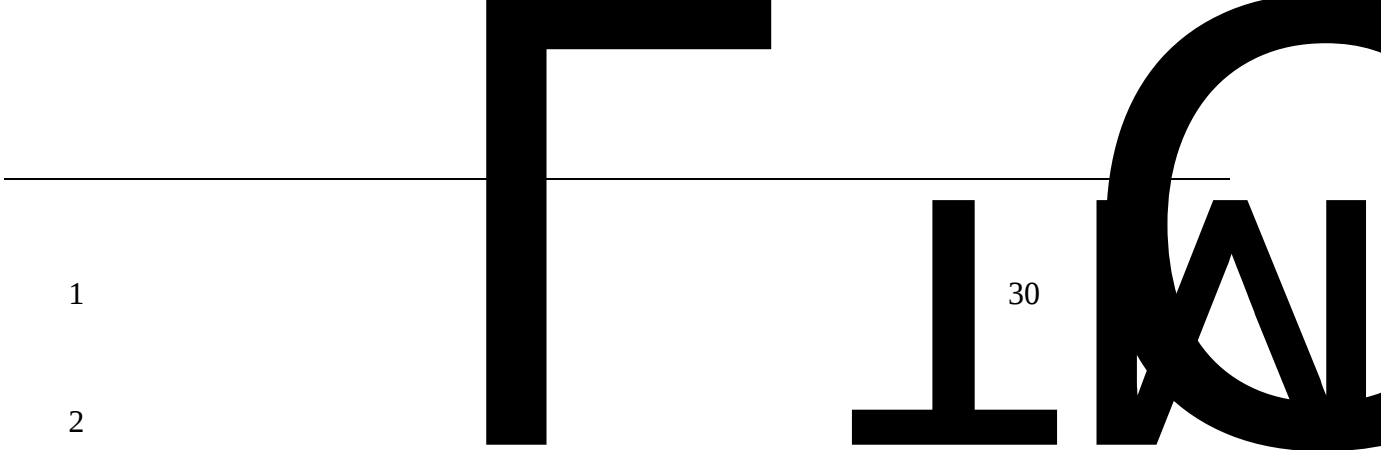
3.2

3.2.1

$$\begin{array}{ccccccc} & & 2^* & & 1B & & 2 \\ 1 & & - & & 2 & & - & & 2 \\ & & 1630 & & & & & & \end{array}$$

$$\begin{array}{ccccccccccc} & & & & E10 & & & & & & 92 \\ 95 & & 98 & 3 & & =1 & 0.72 & 0.775 & & & =1 & 3 \\ 4 & & -46 & & 1.4 & 7.6\% & & & 415 & 530 & & \end{array}$$

0.813MPa



1

30

2

3

1000m³

1

2

()

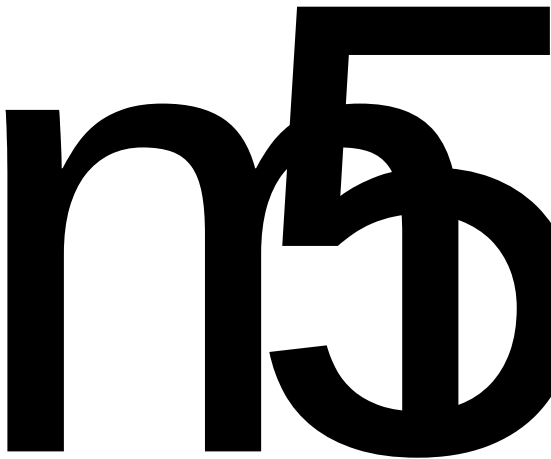
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0.5m³

100mm

3

4



15min

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50m

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300m

1674

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1

5 0 -10 60 -20

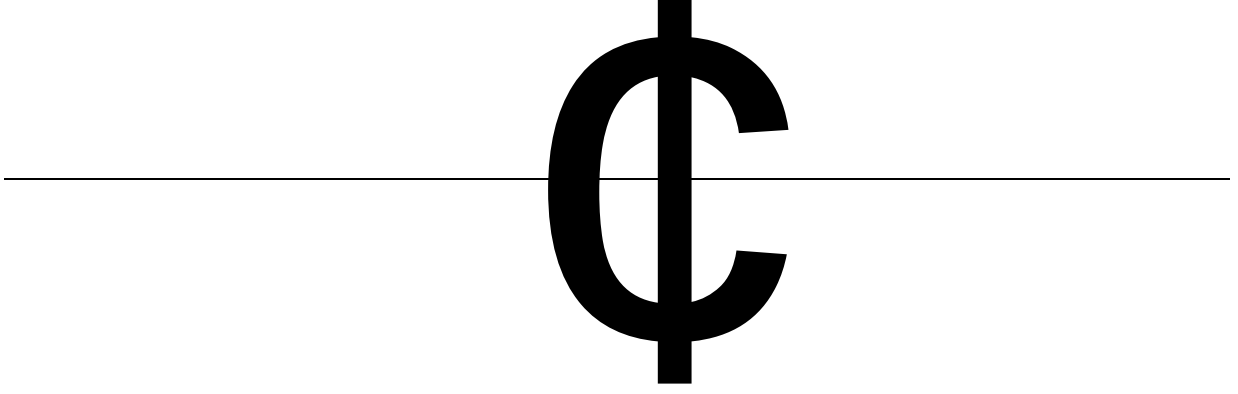
50 -35 -50 45

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3.3.6

3.3.7

1

4.

4.1

8

1

5.

8

5-1

5-1

	1		
	2		
	3		
	4		
	5		

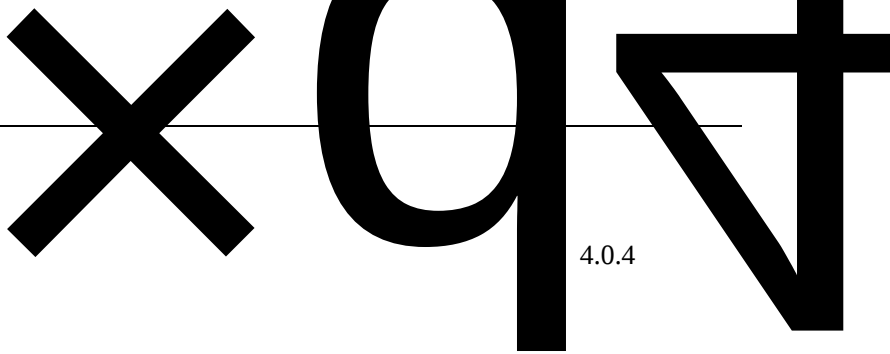
5-2

	1		
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5-3

	1	GB50156-2021 3.0.4		
	2 GB50156 3.0.9	GB50156-2021 3.0.9	30m ³	
	3	GB50156-2021 3.0.25		
	4	GB50156-2021 3.0.27	12	
	1	GB50156-2021 4.0.1		
	2	GB50156-2021 4.0.2		
	3 4.0.4	GB50156-2021 4.0.4		



4.0.4

4

GB50156-2021
4.0.12

5

GB50156-2021
4.0.13

1

GB50156-2021
5.0.1

2

6m 4m 8.5m 8%
GB50156-2021
5.0.2

3

GB50156-2021
5.0.3

4

“ ” “ ” “ ”
GB50156-2021
5.0.5

5 "- E"-P D D D

3m

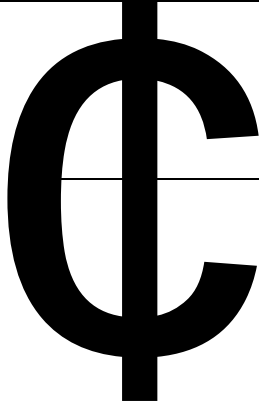
	4.0.4			
	12	GB50156 5.0.13-1	GB50156-2021 5.0.13	
	13	C	GB50156-2021 5.0.16	

5-4

	1		GB50156-2021 6.1.1	
	2		GB50156-2021 6.1.2	
	3		SF	
	6.1.4 0.08MPa		GB50156-2021 6.1.4	
	4	-	SF	
	SH/T3178	-	GB50156-2021 6.1.5	
			SH/T3178	

	5	$10^9\Omega$ $10^9\Omega$ $A=0.04V_t$	GB50156-2021 6.1.7	SF	
	6.	11.2	GB50156-2021 6.1.8	SF	
	7		GB50156-2021 6.1.9	SF	
	8	$4mm$ $80mm$	GB50156-2021 6.1.10	SF	
	9		GB50156-2021 6.1.11		
	10	$0.5m$ $0.9m$ $0.3m$	GB50156-2021 6.1.12		

	11	GB50156-2021 6.1.13		
	12	GB50156-2021 6.1.14		
	13 90% 95%	GB50156-2021 6.1.15		
	14 0.8L/h	GB50156-2021 6.1.16		
	15 SH 3022	GB50156-2021 6.1.17	SF	
	1	GB50156-2021 6.2.1		
	2 50L/min	GB50156-2021 6.2.2	5-50L/min	
	3	GB50156-2021 6.2.3		



5

GB50156-2021

6.2.4

GB50156-2021

6.2.5

GB50156-2021

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5 202

	5	GB 50156-2021 6.3.5		
	6	GB50156-2021 6.3.6		
	7			
	50mm		50mm	
	1.0 1.2	GB50156-2021 6.3.7		
	25mm			
			25mm	

		4mm	
	$10^{10}\Omega$	$10^8\Omega\cdot m$	$10^8\Omega\cdot m$
		100kV	$10^{10}\Omega$
13			GB50156-2021 6.3.13
14			GB50156-2021 6.3.14
15			
2‰			GB50156-2021 Ç
1%			

17

GB50156-2021

6.3.18

18

5

GB50156-2021

13.2.12



11

GB50156-2021

13.2.13

12

GB50156-2021

13.2.14

12

14.1.4

5

300cm²/m²

2

3

4			GB50156-2021 14.2.7
5			GB50156-2021 14.2.9
6		300m ²	GB50156-2021 14.2.10
7	B		GB50156-2021 14.2.11
8	GB50016		
		3h	GB50156-2021 14.2.12
9			GB50156-2021 14.2.13
10		5.0.13	
	25m		GB50156-2021 14.2.14
	3.0h		
11			GB50156-2021 14.2.15
12			GB50156-2021 14.2.16

	1	GB50156-2021 14.3.1		
--	---	------------------------	--	--

5-8

m

5-9

	5	5	0	0
	31	31	0	0
	22	20	0	2
	45	41	0	4
	8	8	0	0
	28	27	0	1
	16	11	0	5
	20	11	0	9
	175	154	0	21

5-9

175

21

154

1		8kg	8kg 6	6
2		35kg	1	2
		8kg	-	2
			2m ³	2m ³
			5	5
3		8kg CO ₂	-	4
		8kg	-	5

6.

1

2

3

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4

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7.

GB50156-2021

1.

GB50058-2014

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1

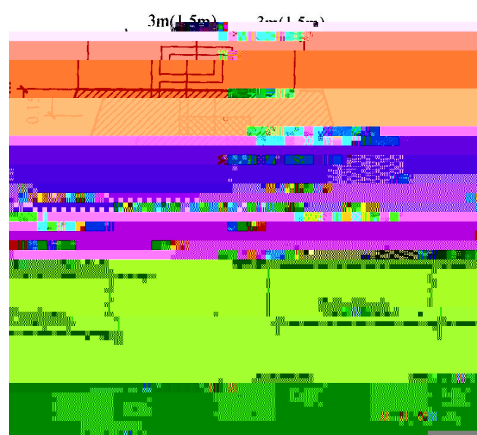
2

4.5m

0.15m

3m

2



1

4.

2

1

0

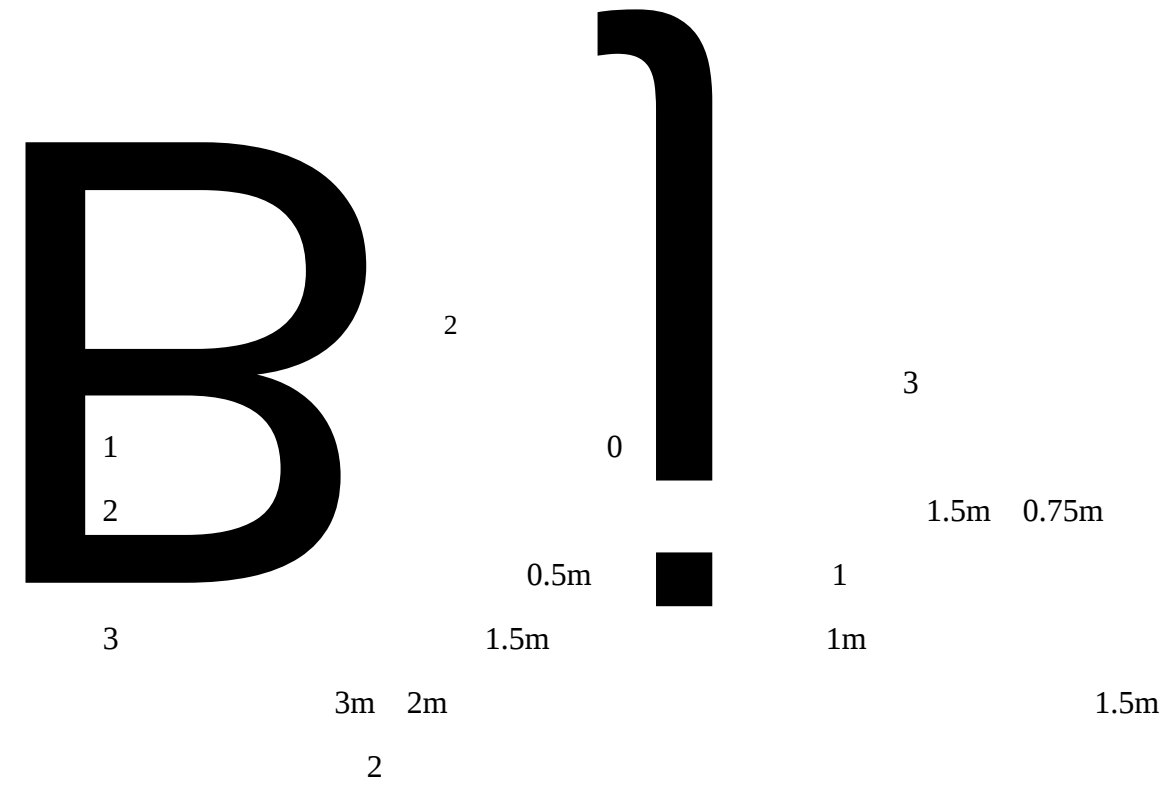
2

1.5m

0.5m

1

1. Introduction



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- 1
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 - 10
 - 11