

2007 05 14

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960 /
2025 10

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2016 49 ž m'
77

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3	- 35 -
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3.3	- 39 -
3.4	- 52 -
3.5	- 56 -
3.6	- 58 -
3.7	- 61 -
3.8	- 62 -
4	- 63 -
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4.2	- 70 -
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5.2	- 71 -
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7	- 75 -

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88	2019	7	11		2	

8		GB/T12801-2008
9	GB/T14161-2008	
10	GB2894-2025	
11		GB12348-2008
12	GB/T15259-2008	
13	GB/T 3608-2008	
14	GB50057-2010	
15	2024	GB/T50011-2010
16		GB50187-2012
17	GB/T50034-2024	
18	GB 6722-2014	
19	2018	GB50016-2014
20	GB55037-2022	
21		GB 51016-2014
22	GB50201-2014	
23		GB18218-2018
24	GB/T8196-2018	
25		KA/T 2063-2018
26	GB 2811-2019	
27		GB/T29639-2020
28	GB16423-2020	
29	GB21148-2020	
30	1	GB 39800.1-2020
31	4	GB 39800.4-2020
32		GB/T12265-2021
33		GB/T13861-2022
34	GB 50029-2014	
35		

AQ2027-2010

36

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2007 05 14

B501

21 35°

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B2

3.150044

4.

2 3 2

1.

1

CaO 52% 54% S P 0.02%

F1

15° 20°)

50m

F5

4100m

80 200m

78 80

260m 80 83

70 80m

15° 35°

S1

H

S21 3

+

54.35 74.78m

63.72m

11.80%

40%

2

F5

124

800m

180 200m

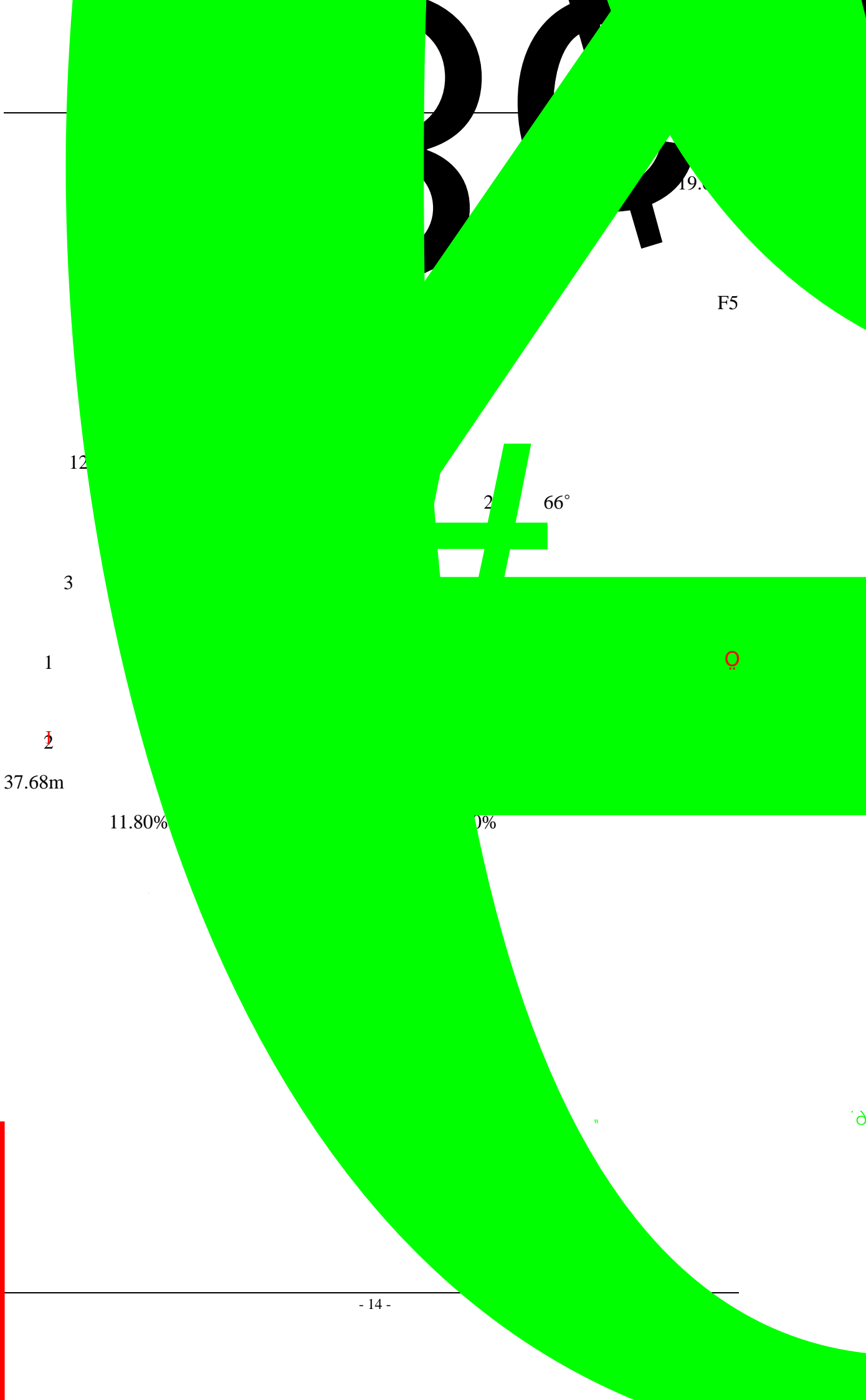
345° 360°

15° 35°

(S1

(H

S21



—

5 35cm

15% 0.4 2mm 2. 25mm 5
55% 0.5 2mm 3. 25mm

2 25c

1 6cm 10cm

97%
+ 2% 1% 0.01 0.05mm

1. 8m

0.5 3cm 1 10cm

2

0.3-3cm

5-9%

0.2-1.1mm

2mm

95%

+ 1.5% 1%

0.01-0.05mm

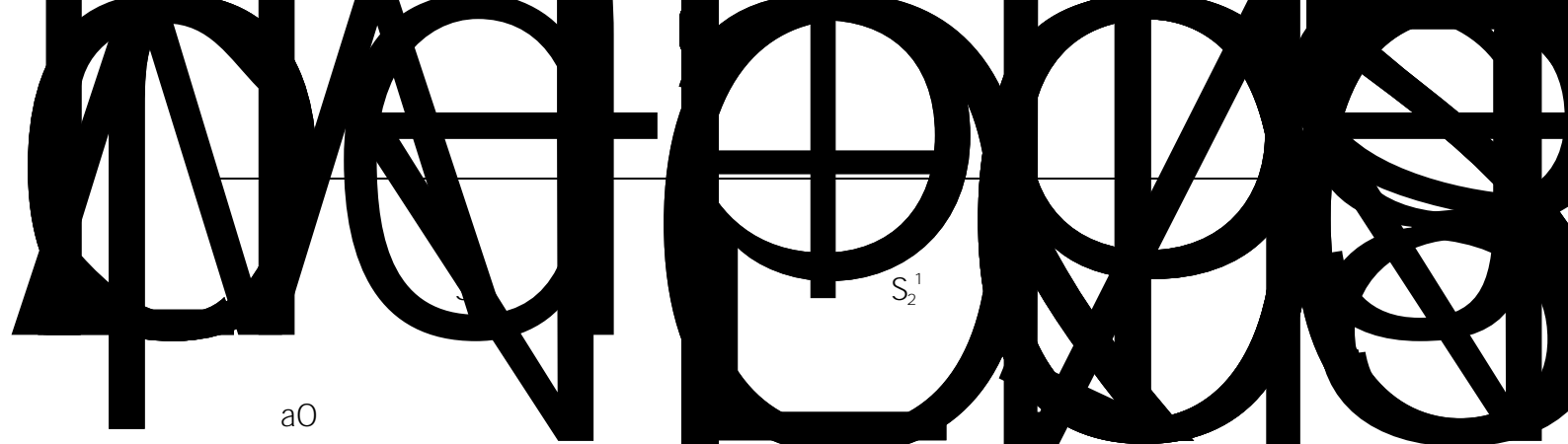
5-55cm

4.

1

	CaO	MgO	CaCO ₃	SiO ₂					
	CaO			50.87	53.11%		51.99%		
	MgO		0.76	2.21%		1.40%	SiO ₂	2.27	
3.57%		2.96%							
S	0.010	0.040%			0.034%	P		0.001	0.027%
	0.009%	fSiO ₂	1.16	2.66%	2.01%	K ₂ O+Na ₂ O		0.22	0.43%
	0.34%	SO ₃	0.066	0.099%	0.085%	LCS	41.33	42.82%	
42.05%									

2



a0

CaO MgO fSiO₂ SiO₂

CaO 45.06 52.16% O ž m⁴48.37% 97%

0.60 3.58% 0.297% SiO₂ 0.2323%

7.42%

5.46% fSiO₂ f. 0.01 5.584% B. 23%

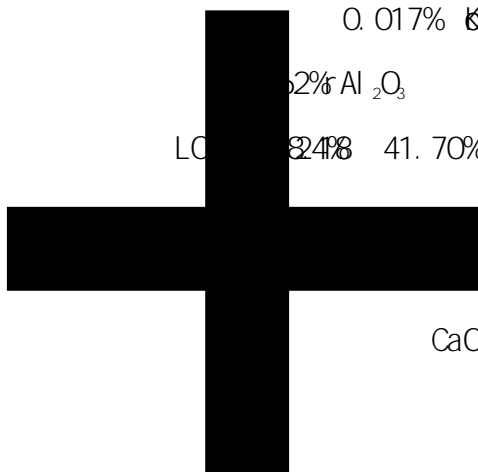
S

0.007 0.064% 11.624% 0.0004% 0.007 4%

0.017% K₂O+Na₂O 0.2 4% 0.05 3%

0.2% Al₂O₃ 0.53 1.79% % S

LC 8.24% 41.70% m 40.20% 0



MgO fSiO₂

CaO q

q

f



		34.74	44.45%	39.6%	MgO 0.21
2.8%	1.5%				
2					

3

Pt₃^g

Q_h

Pt₃³

Pt₃ⁿ

2.

5

40 74°

0.6 1.8km

1 2m

3.

3 5

4.

5.

20m

50m

-20m

50m

-20m 50m

6.

50m

50m

70m

70m

7.

HCO_3^- · Cl— Ca^{2+}

756.82

774.98mg/L

5.29 5.5mmol/L PH 7.17 7.34

8.

GB12719-2021

2 3 4

1.

2

1

3m

120 160kpa

200 280kpa

2

1m

1 5

RQD

0.14 1

0.81

1 3m

40.89

58.16 Mpa

0.26 0.44Mpa

2.2 5.9Mpa

0.25 0.30

2.47 35.58Mpa

52.93 61.45°

2.

1

10 41°

2

1

5

F1 F2 F3

F1

325°

235°

42 55°

600m

F2

F1

68 74°

1100m

F1 F2

1

2m

F3

31°

F2

F4 F5

F4

F5

30°

55 63°

1.8km

2

3

1 3m

3 5m

3.

RQD

0.81

48.41 Mpa

0.37Mpa

3.7Mpa

0.28

8.92Mpa

56.94°

~~GB/T 19209~~-2021

RQD

4.

2

42°

L1

124°

66°

L2

52°

78°

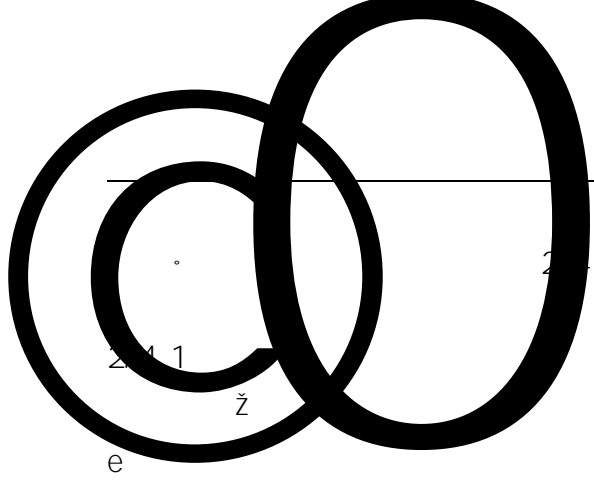
L3

188°

65°

0.7 10m

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		12.0m		14.0m		8%
	20m					
2.4.4						
				2025	07	
					100m	
				+100		
	-20m			17		
	285m	100m		110m	-20m	1.1091km ²
2.4.5						
	10m		285m		-20m	
			100m			
		12.0m	8		20m	
	70t					
	2.6m ³			70t		
					960.0	t/a
			1.0km			
						12.0m

14.0m

8%

1	×	m	552× 532	1009× 840
2	×	m	451× 429	818× 433
3		m	285	110
4		m	100	-20
5		m	185	130
6		m	4	
7		m	8	
8		°	65	
9		°	40- 46	
10		t	5788. 31	
11		t	4630. 52	
12		t	10418. 83	
13		t/t	0. 8	

2.4.6.2

2.4.6.3

1

590BC

Atlscopco976

60m/

130mm

70°

11.00m

1.0m

GB6722-2014

200m

50% 300m

2-2

1		t/m ³	2.7	2.7
2		10 ⁴ t	960.000	768.000
		10 ⁴ m ³	355.56	284.44



3 10t

2 12t

3

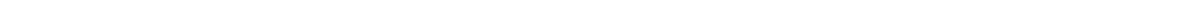
12.0m

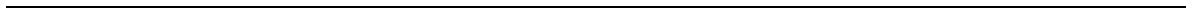
8

20m

70t

2 4 7





4

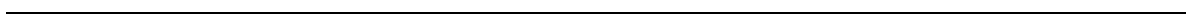
>1

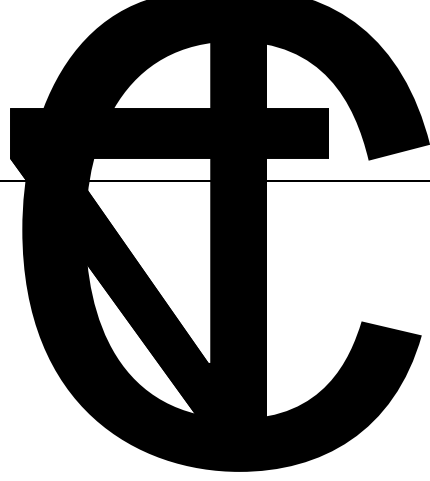
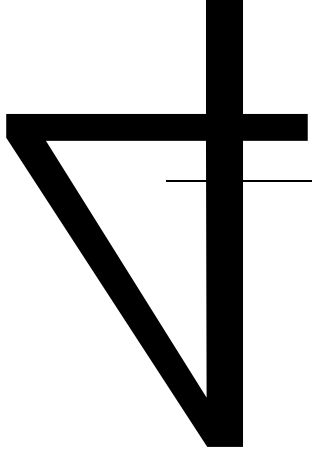
2 4.8

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35m

100m





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x 2000 2100 2200

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	1	3.0.8		
	2.	3.0.10		
	3.	GB16423-2020 5.7.1.2	1m	
	4	4.5.3		



1

2.4.1

2

6.0m

0

0

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1 m

2

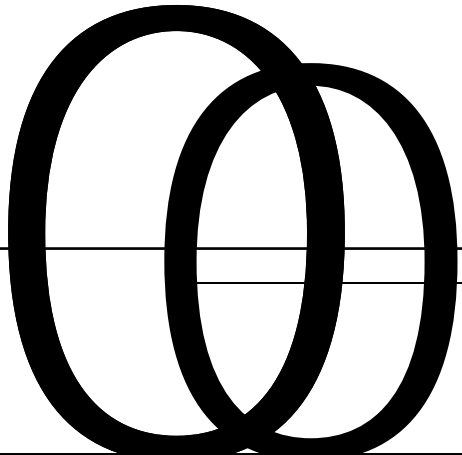
m

m

m

4.

m





3.2.1

70t

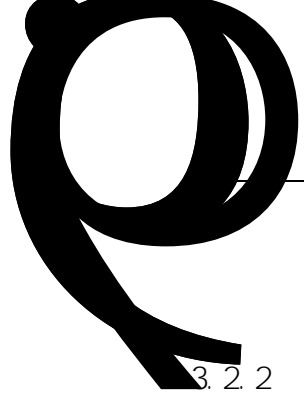
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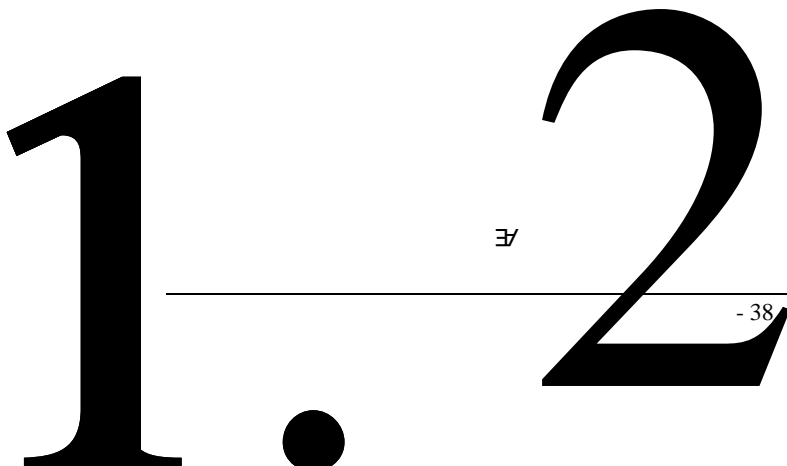
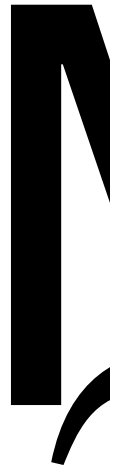


“ ” “ ”

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3.3.1.2

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3.3.1.3

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	1. 2. 3.	1. 2.		1. 2. 3. 4.
	1. 2.			1. 2.

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300m

GB6722-2014

3.3.3

3.3.3.1

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“ ” “ ” “ ”

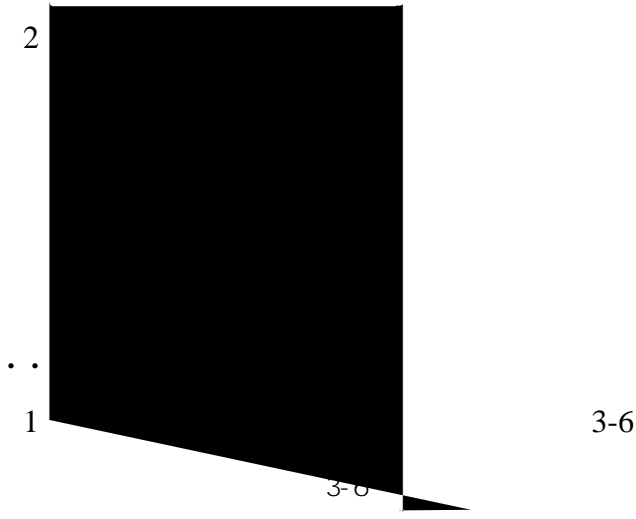
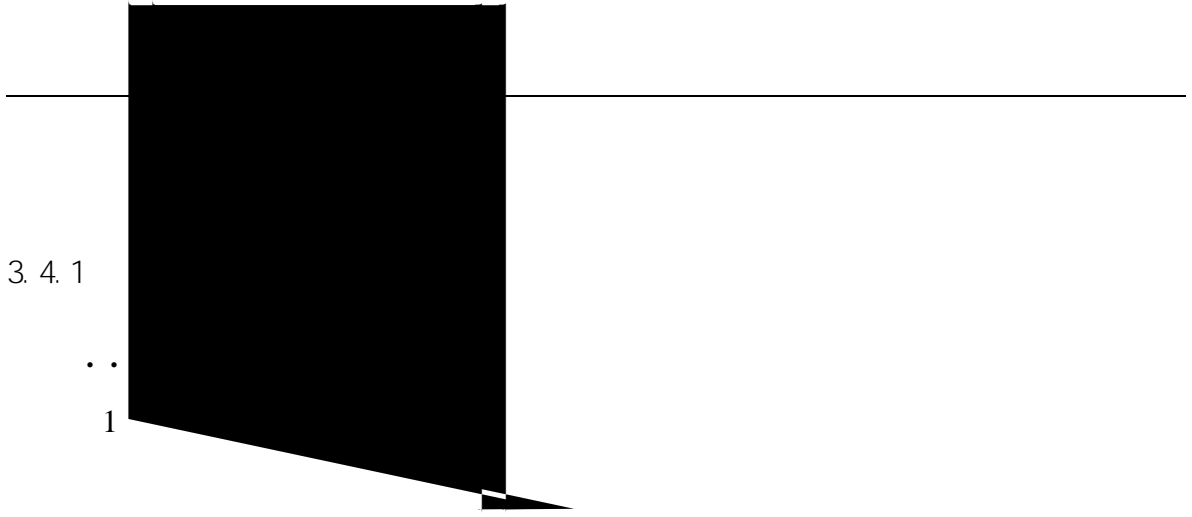
3 3 3 2

3-5

3-5

	1. 2. 3. 4. 5. 6.	1. 2.		1. 2. 3. 4. 5. 6.

	<p>7</p> <p>8.</p> <p>9</p> <p>10. “ ”</p> <p>11.</p> <p>0.5m</p>			<p>7.</p> <p>8.</p> <p>9.</p> <p>10. “ ”</p> <p>11.</p> <p>0.5m</p>
	<p>1.</p> <p>2.</p> <p>3</p>			<p>1</p> <p>2.</p> <p>3.</p>



2

8

-10 -4.5 -8 7 22 -24 600-

800mm 165 220 0.8m

70m

Q₃

$$Q_3 = 1.366 \frac{(2 -)}{\lg 0 - \lg 0}$$

Q₃ m³/d

K m/d ZK2501 ZK2502

K=0.059m/d

H m -20m

H₀=13.75m

H=33.75m

S m -20m S=H

r₀ m $r_0 = \frac{2S}{2\pi}$

P 3541m r₀ 563.57m

R m $R = 2S\sqrt{HK} = 95.25m$

R₀ m R₀=R+r₀ R₀ 658.82m

Q₃ 1353.63m³/d

27364.08+1353.63=28717.71m³/d

73474.12+1353.63=74827.75m³/d

3

-20m
' =

H —

K— 1.25

H_p— 70m -20m 50m 5m

' = 1.25 × (70 + 5) = 93.75m

20

24

28717.71m³/d

$$' = \frac{\quad}{20} = \frac{28717.71}{20} = 1435.89\text{m}^3/\text{h}$$

20

24

5d 120h

74827.75m³/d

$$' = \frac{\quad}{20} = \frac{74827.75}{20} = 3741.39\text{m}^3/\text{h}$$

$$' = \frac{\quad}{5 \times 24} = \frac{74827.75}{5 \times 24} = 623.56\text{m}^3/\text{h}$$

3 QKSG800-112-410

800m³/h

112m

410kW

10kV

4

$$' = \sqrt{\frac{4}{3600\pi}} = \sqrt{\frac{4 \times 800}{3600 \times 3.14 \times 2}} = 0.376\text{m}$$

'
— —

m

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— —

800m³/h

— —

1.2 2.2m/s 2m/s

377

377 × 9

3

3.4.2

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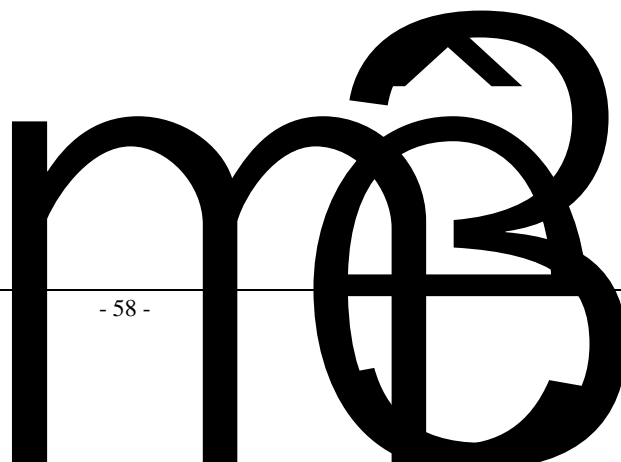
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	<ol style="list-style-type: none"> 1. 2. 3. 4. 5. 			<ol style="list-style-type: none"> 1. 2. 3. 4. 5.

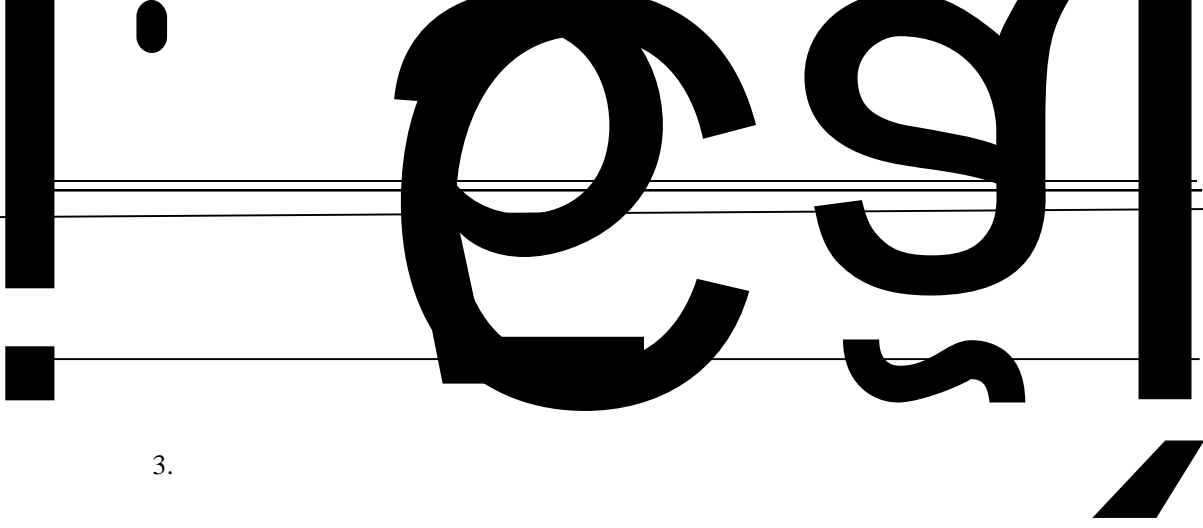
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GB18218-2018

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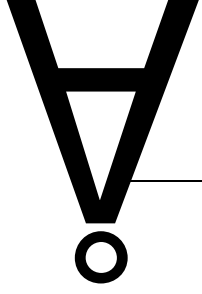
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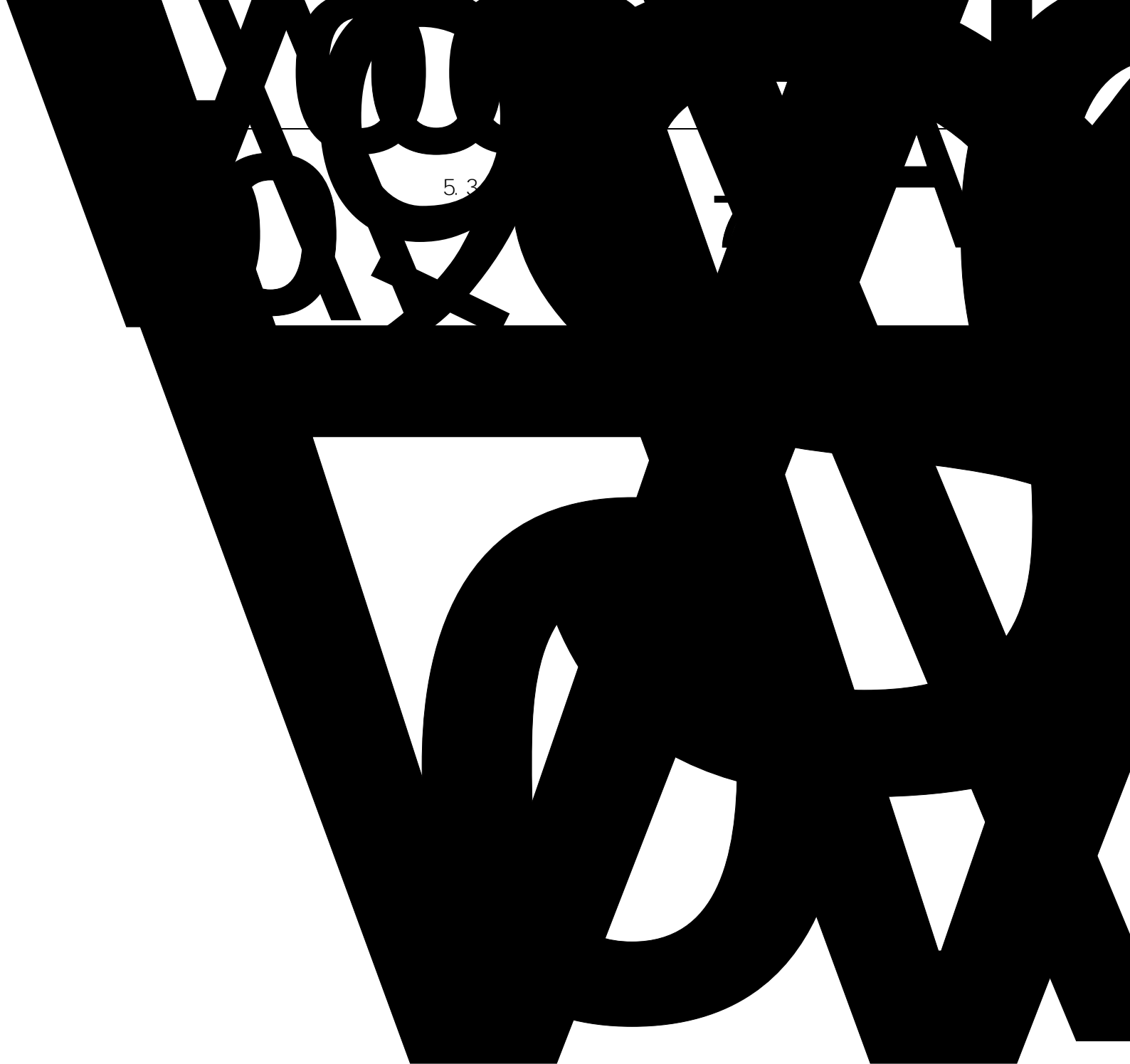
5.2.2

5.2.3

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