

2007 05 14

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2025 10

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2.4		- 25 -
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3.1		- 35 -
3.2		- 37 -
3.3		- 39 -
3.4		- 52 -
3.5		- 56 -
3.6		- 58 -
3.7		- 61 -
3.8		- 62 -
4		- 63 -
4.1		- 63 -
4.2		- 70 -
5		- 71 -
5.1		- 71 -

5.2		- 71 -
5.3		- 73 -
6		- 74 -
7		- 75 -

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7						2016
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

2

2.1

1

2007 05 14

[illegible][illegible][illegible][illegible]

			285.61m
	30m	255.61m	15-25 °
	2.3		
	—		2
—	24	-	24—6
-	24—6—2		
2.3.1			
1.			
1			
—		10 35 °	
347.78m	40%		
	18.87m		
	IB3		
			80%

[illegible][illegible][illegible][illegible][illegible][illegible][illegible][illegible][illegible][illegible][illegible][illegible][illegible][illegible][illegible][illegible][illegible]

B50P

21 35 °

604.571

IB2

315994

4.

2.3.2

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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 °

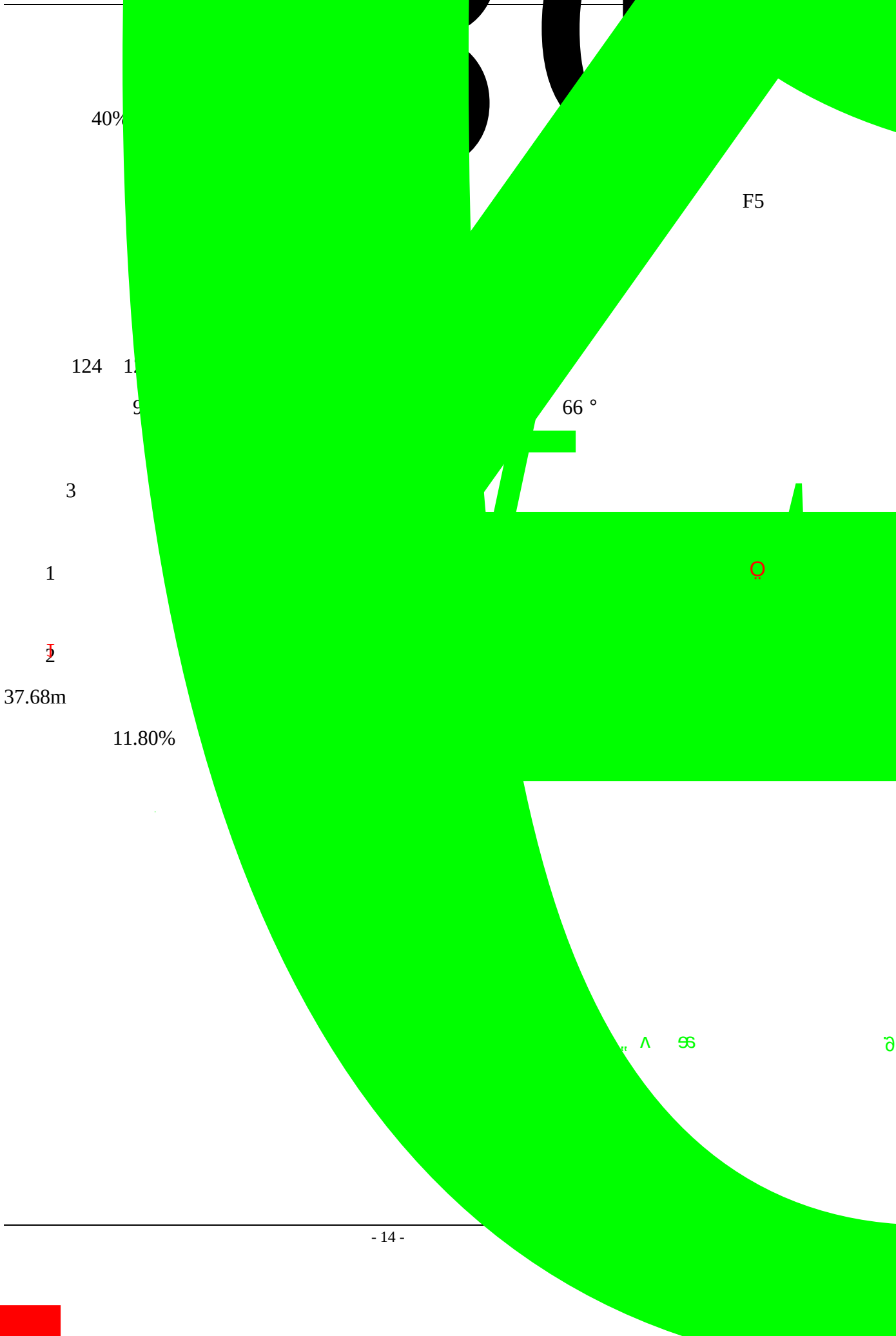
15 ° 35 °

(S1

(H

S21

1



—

5 35cm

15% 0.4 2mm 2.25mm 55% 0.5 2mm 3.25mm

5

2 25c

1 6cm 10cm

97% 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.

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	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%	LOS	41.33	42.82%
42.05%								

2

CaO MgO fSiO₂ SiO₂

CaO 45.06 52.16% 0 , m 48.37% ≤ 97%

MgO 0.60 3.58% 0.29% SiO₂ 0.23%

7.42% 5.46% fSiO₂ 0.001% 0.004% 0.007% 0.004% 0.007% 0.004%

S 0.007 0.004% 41.624 0.004% 0.007% 0.004%

0.017% K₂O+Na₂O 0.004% 0.004% 0.004% 0.004%

62% Al₂O₃ 0.53 1.79% 0.004% 0.004%

LOS 3.82% 41.70% 40.20%

CaO MgO fSiO₂ 0.004%

CaO 45.06 52.16% 0 , m 48.37% ≤ 97%

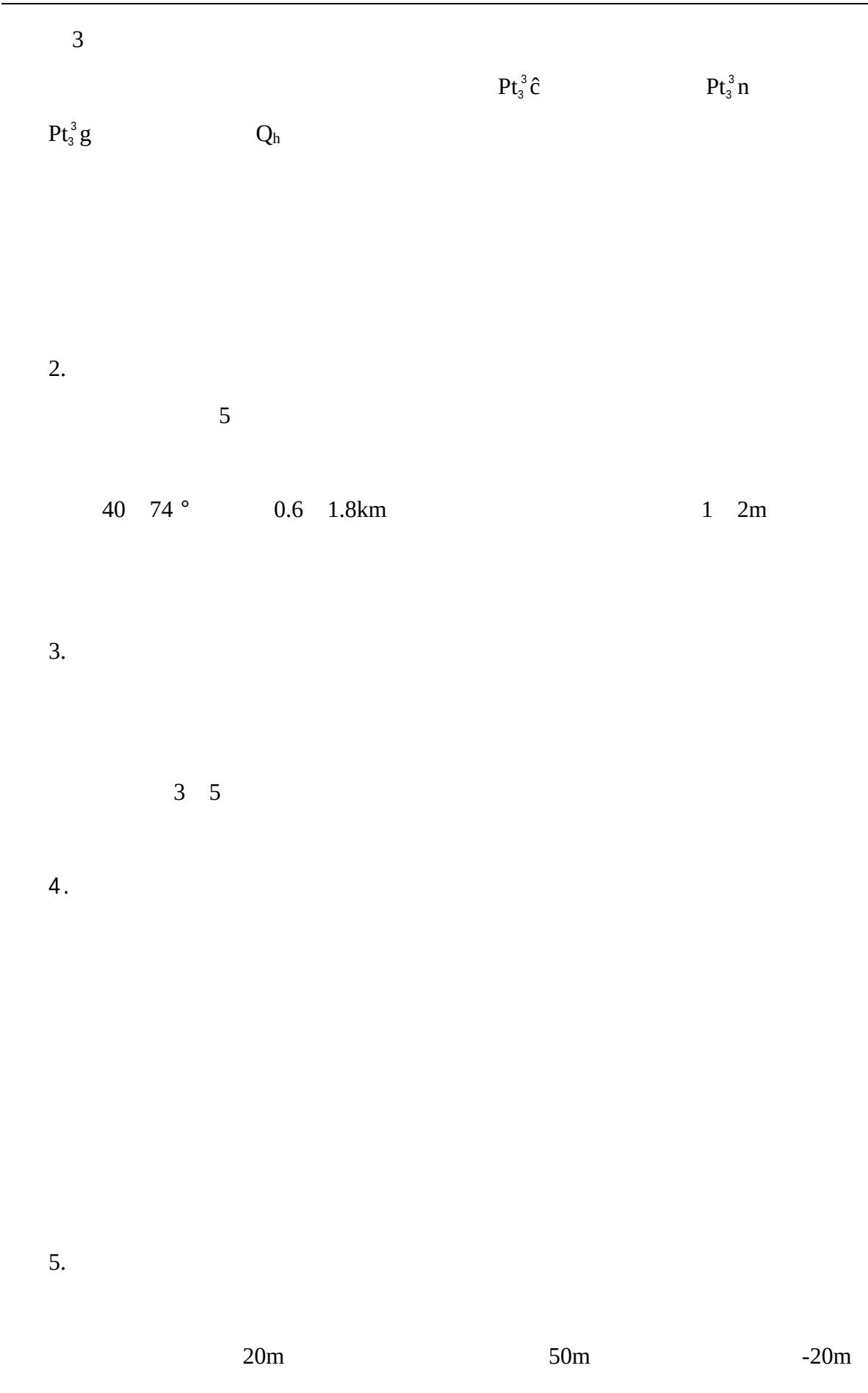
CaO 0.60 3.58% 0.29% SiO₂ 0.23%

0.004%

* —

H

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



-20m 50m

50m

70m

70m

$$\text{HCO}_3^- \cdot \text{Cl}-\text{Ca}^{2+}$$

774.98mg/L

5.29 5.5mmol/L PH 7.17 7.34

GB12719-2021

2.3.4

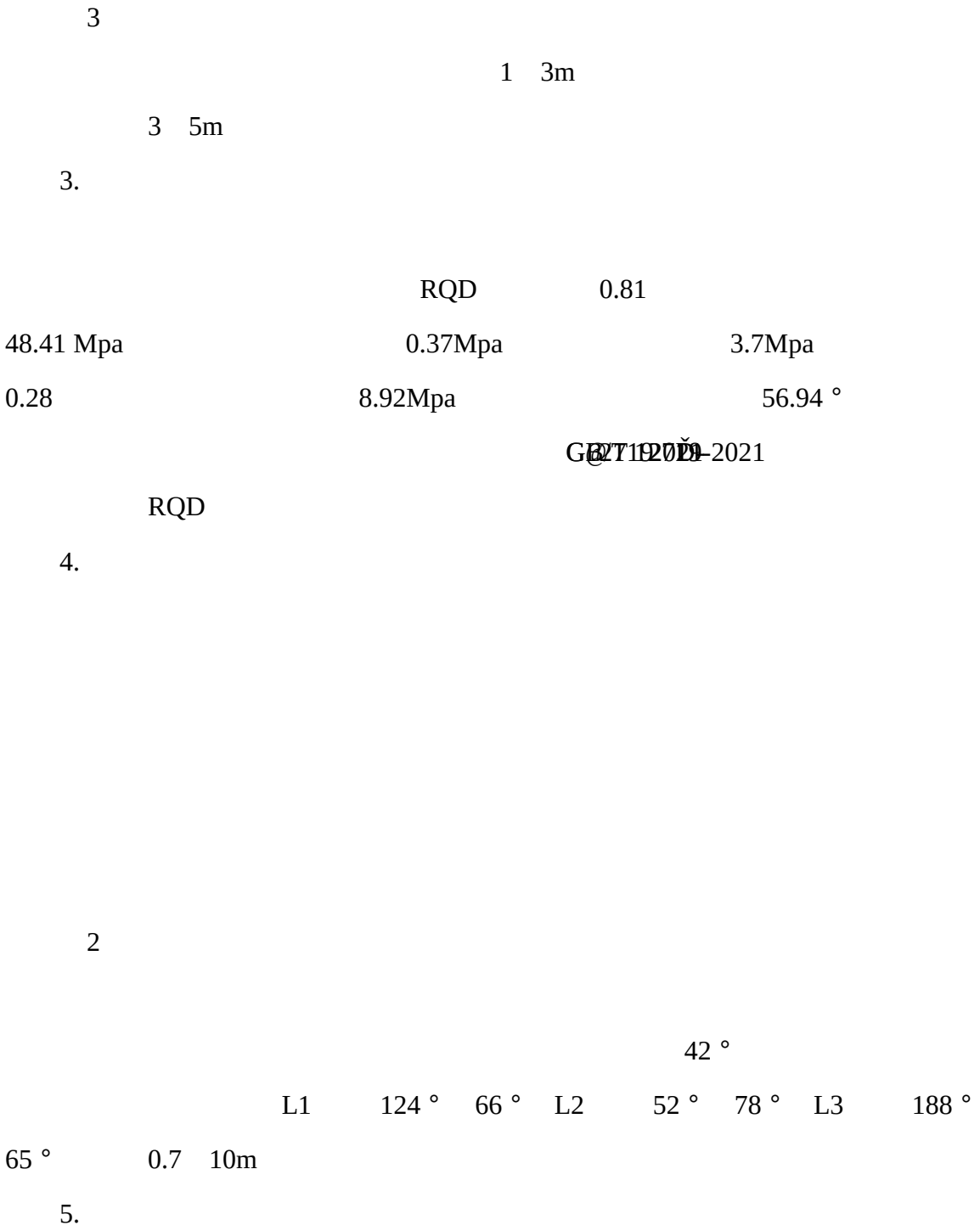
1.

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 $3m$

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									



1a

300

3

8

2.4.3

1

8%

20m

2.4.4

2025 07

100m

+100

-20m

17

285m 100m

110m -20m

1.1091km²

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

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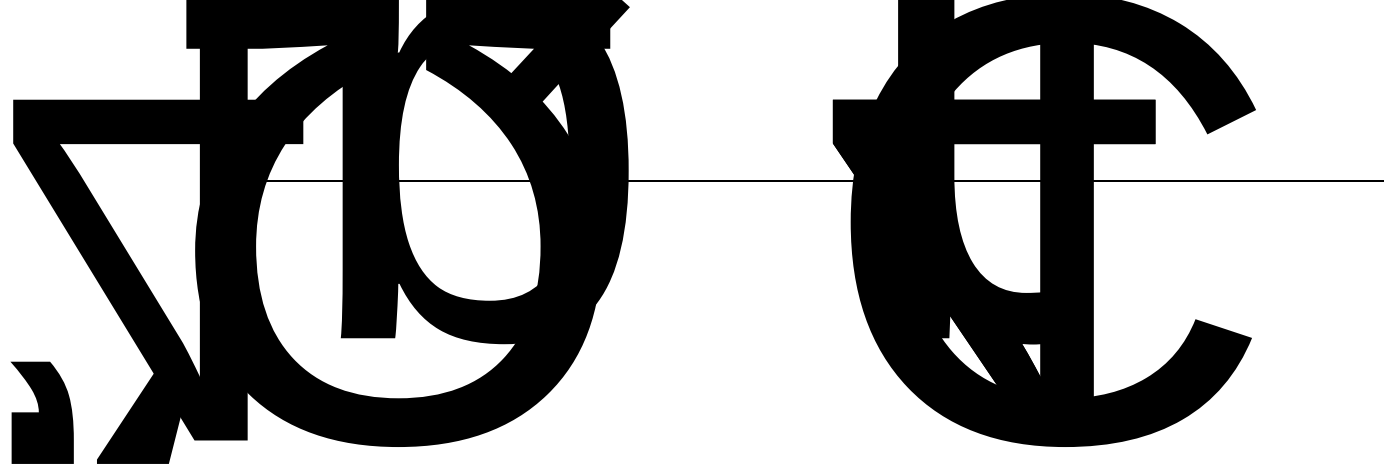
2.4.8

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35m

100m

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	2.	3.0.10		
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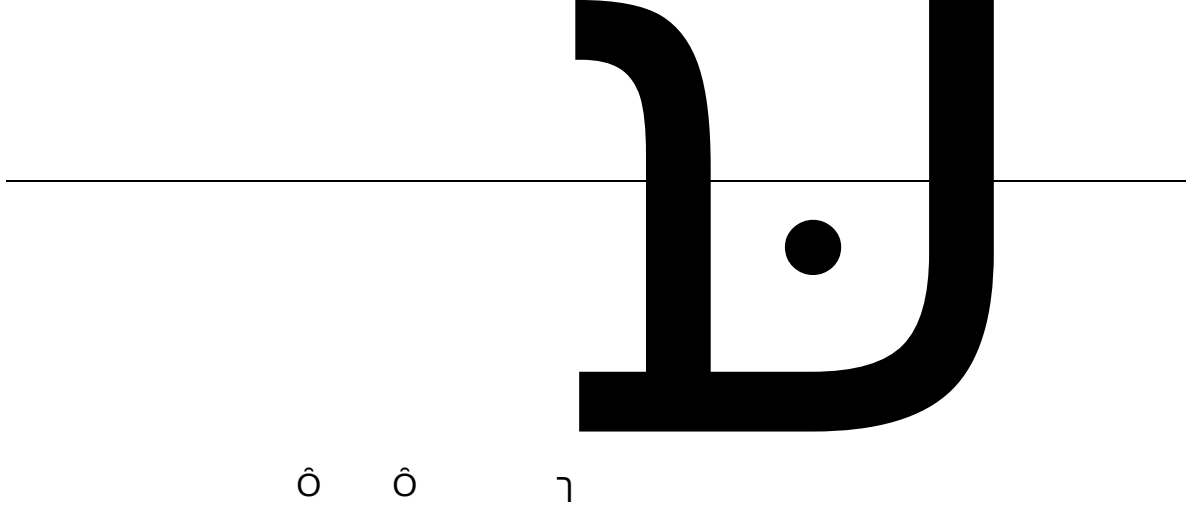
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300m

GB6722-2014

3.3.3

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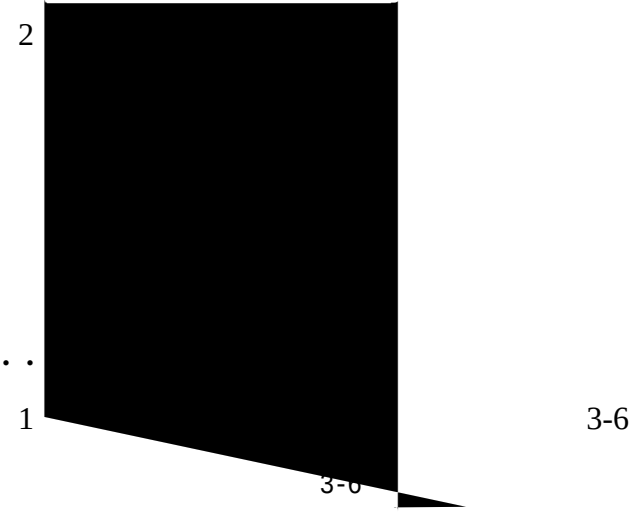
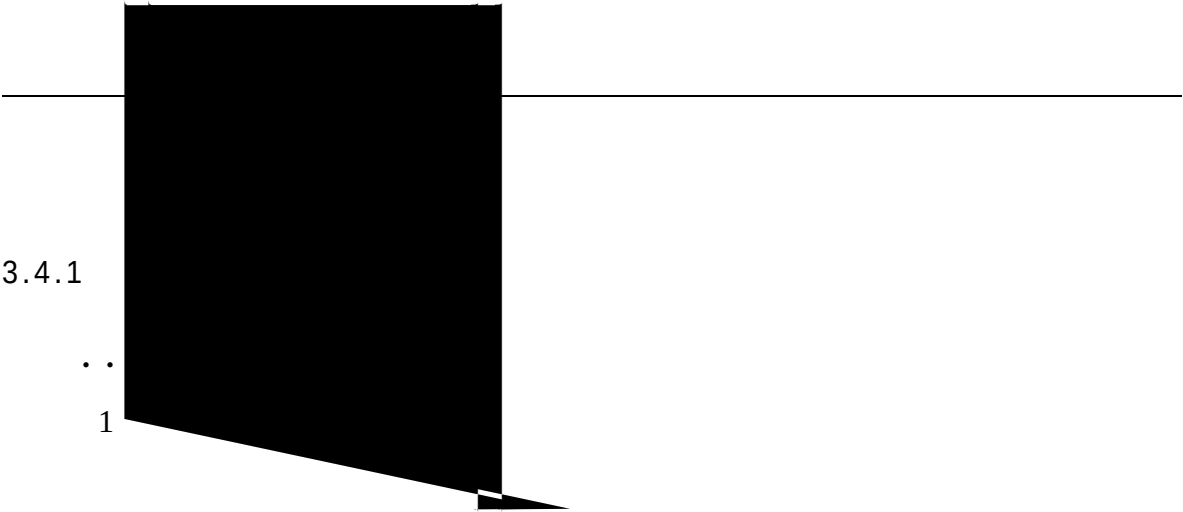
3.3.3.2

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

	7 8. 9 10. “ ” 11. 0.5m			7. 8. 9. 10. “ ” 11. 0.5m
	1. 2. 3			1 2. 3.



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8

—10 -4.5 —8 7 22 —24 600—

800mm 165 220 0.8m

70m

$$z_3 = 1.366 \frac{(2 -)}{\lg_{10} - \lg_{10}}$$

20

24

5d 120h

74827.75m³/d

$$' = \frac{2}{20} = \frac{74827.75}{20} = 3741.39 \text{ m}^3/\text{h}$$

$$' = \frac{2}{5 \times 24} = \frac{74827.75}{5 \times 24} = 623.56 \text{ m}^3/\text{h}$$

3 QKSG800-112-410

800m³/h

112m

410kW

10kV

4

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

$\frac{1}{m}$

800m³/h

1.2 2.2m/s 2m/s

Φ 377

Φ 377 × 9 3

3.4.2

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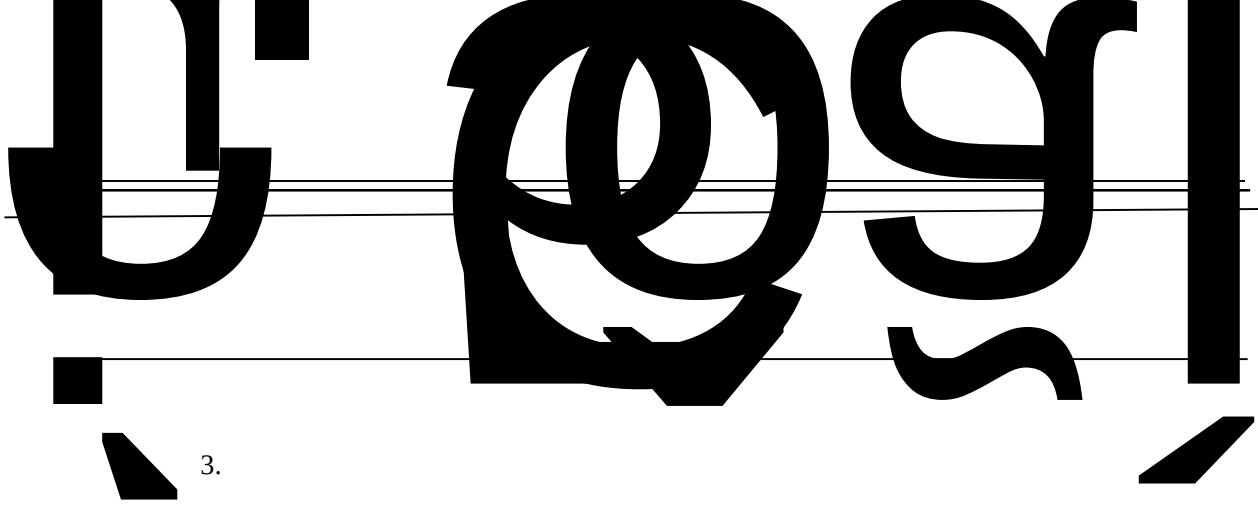
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GB18218-2018

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4.1.3.2

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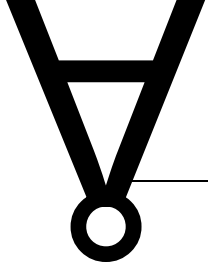
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90°

UEe • u e o Cu 9 : Ö

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1'2'P

4.1.3.3

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5.2.3

5. 10. 2020

Đ. S. D. 10. 2020



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