

1		3
1.1		3
1.2		4
1.3		4
1.4		4
2		6
2.1		6
2.2		6
2.3		7
2.4		

8	.....	35
8.1	.....	35
8.2	.....	52
9	.....	58
9.1	.....	58
9.2	.....	58
10	.....	59
A	.....	60
B	.....	61
B.0.1	.....	61
B.0.2	.....	61
B.0.3 G·M	.....	61
C	.....	62
C.0.1	.....	62
C.0.2	.....	68
C.0.3	.....	73
C.0.4	.....	74
C.0.5	.....	77
C.0.6	.....	78
D	.....	83
D.0.1	.....	83
D.0.2	.....	83
D.0.3	.....	89
D.0.4	.....	89
.....	.....	93

1

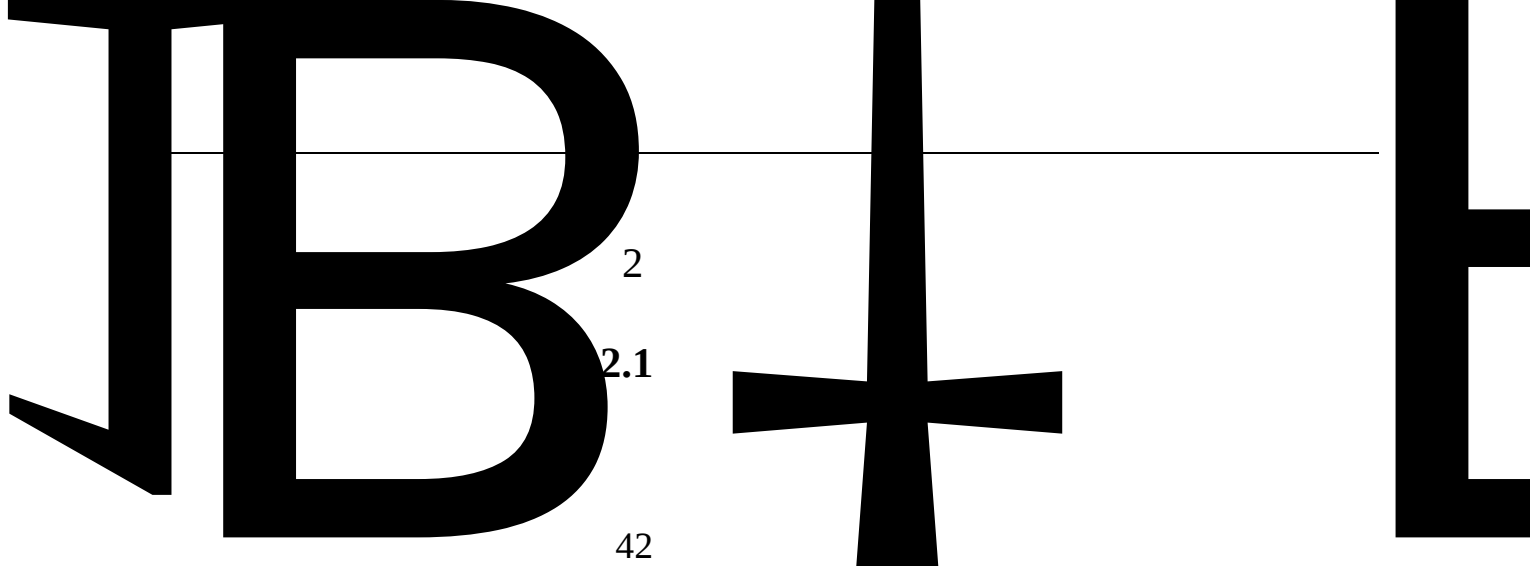
1.1

1.2

1.3

1.4

1.4-1



2.2

1	1	420m ²	
2		189.98m ²	
3	SF	6	30m ³ SF
30m ³ SF	2		4
GB50156-2021	3.0.9		120m ³
IJ	in m	m "	

5

6

1.6m

4.5m



24h

SF

FRP

FRP



Sl

“ ”

2.3.2

p



2.4

2.4.1

25

56.4m 45.4m

13.5m

2F

21.9m 37.4m

2.42

1563.87m²

2.4.3

2 30m³

SF

4 30m³

SF

180m³

2.5

2.5.1

0

5min

*

6m

6.2m

8.1m

8.1m 8m 18.8m

4m

14.7m

2.6

2.6.1

1

5m³/d

0.28m³/h

0.56m³/h

1.0MPa

PP-R

S3.2

2

5

2.6.2

220/380V

TN-S

ZRYJV-1KV

(SC)

ZRBV-450/750V

NHBV-450/750V

UPS

2.6.3

SF

2.6.4

1

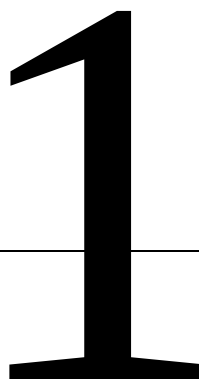
2

3

$$10^{-5} \text{ h}$$

2.6.7

13	1	-	-		
14	1	STC-1	-		
15	1	-	-	1	¹ 8



3

3.1

2015

3.1-1

3.1-1

				CAS		UN				
1		2* 1B 2 1 - 2 - 2	3	86290-81-5	1630	1203		-46	AT3	
2		3	3	68334-30-5	1674	1202		>45	AT3	
1										
2										
3										
4										
5										

3.2

3.2-1

3.2-1

6					
7					
8					

3.4 “ ”

C

5

5-1

5-1

1			
2			
		G.M	
3			
4			

6

6.1

6.1-1

6.1-1

6.2

6.2.1

6.2-1

6.2-1

	t						
	45t						
	106.8t						

$$\begin{aligned} &= \quad \times \quad = 60\text{m}^3 \times 0.75\text{g/cm}^3 = 45\text{t} \\ &= \quad \times \quad = 120\text{m}^3 \times 0.89\text{g/cm}^3 = 106.8\text{t} \end{aligned}$$

6.2.2

6.2-2

6.2-2

						Q_{TNT}
1			45000kg	$43.0 \times 10^3 \text{kJ/Kg}$	$1.935 \times 10^9 \text{kJ}$	34.97kg
			106800kg	$42.8 \times 10^3 \text{kJ/Kg}$	$4.571 \times 10^9 \text{kJ}$	16.14kg

6.3

6.3.1

6.3.2

/

0.24mJ 1

1m

6.3.3

G·M

SF

30m

Q_{TNT}

6.3-1

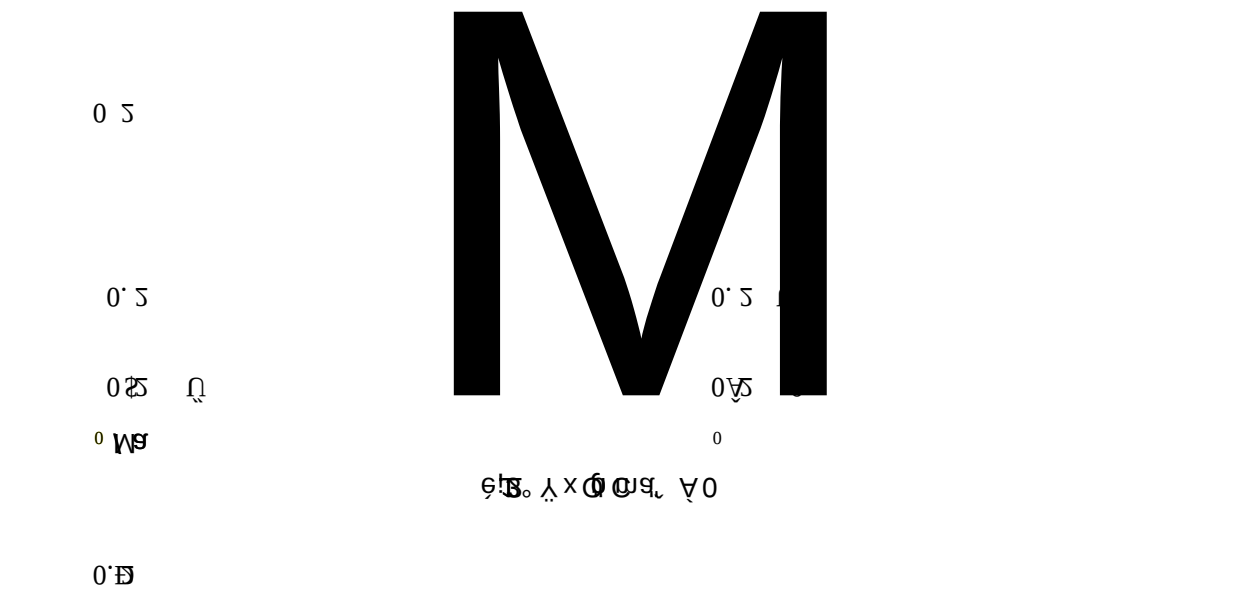
6.3-2

6.3-1

P MPa		P MPa	
0.02 0.03		0.05 0.10	
0.03 0.05		>0.1	

6.3-2

P ₀ /MPa	P ₀ /MPa
0.005 0.006	0.06 0.07
0.006 0.015	0.07 0.10
0.015 0.02	0.10 0.20
0.02 0.03	0.20 0.30
0.04 0.05	



0.015 0.02		12.54 11.49	0.10 0.20		7.06 5.64
0.02 0.03		11.49 10.13	0.20 0.30		5.64 4.97
0.03 0.05		10.13 8.69			

2

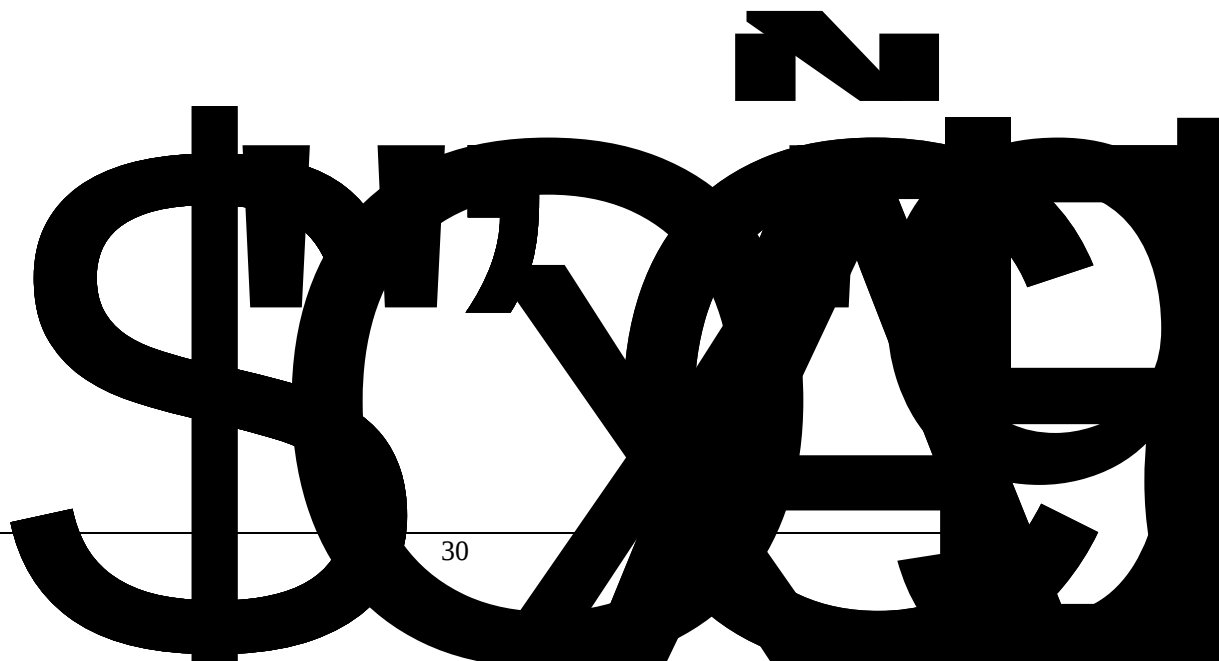
6.3-3 6.3-4 0.02MPa

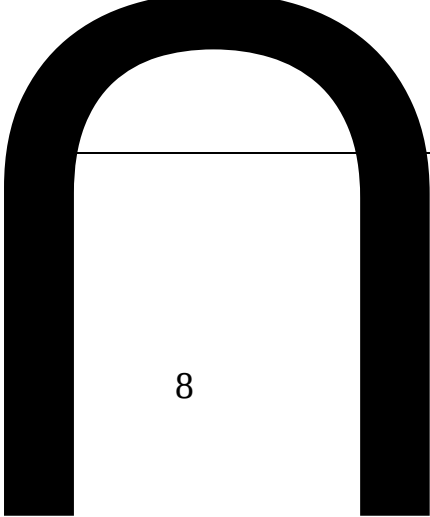
0.005MPa 11.18m

17.75m

7

7.1





8

1

2

7

7

15.0cm

1.17m

7

0.10g

—

10^6V/m ,

—

23.4d

3

658mm

15cm

4

7.2

SF

7.2-1

7.2-1

1

2

3

SF

4

5

6

7

0.6m

8

9

1

2

90%

		95%	
3			
4			
5			
1			
2		SF	
3		5kg 14 35kg 2 5 5 2m ³ 5	
4		A	
5			
6			
7			
8			
9			

7.3

8

8.1

8.1.1

2	6.1.5	-
		-
	SH/T 3178	
3	6.1.9	
4	6.1.10	
	80mm	4mm
5	6.1.11	
6	6.1.12	
	0.5m	
7	GB 50156-2021	
6.1.13		
8	6.1.14	
9	6.1.15	

		90%
	95%	
10		6.1.16
2		
1		6.2.2
		50L/min
2		6.2.3
3		6.2.4
4		6.2.5
5		6.6.2
3		
1		6.3.1
2		6.3.2

3		6.3.3
4		6.3.4
	100mm	
5		6.3.5
6		6.3.6
7		6.3.7
	1	
50mm		
		1.0 1.2
		25mm



6.3.16

6.3.15



1

12.1.1

2

2 5kg

1 5kg

1 6L

2 2

1 35kg

15m

$$5 \qquad 2m^3$$

2

12.3.2

0.25m

0.25m

3

12.3.3

1

1

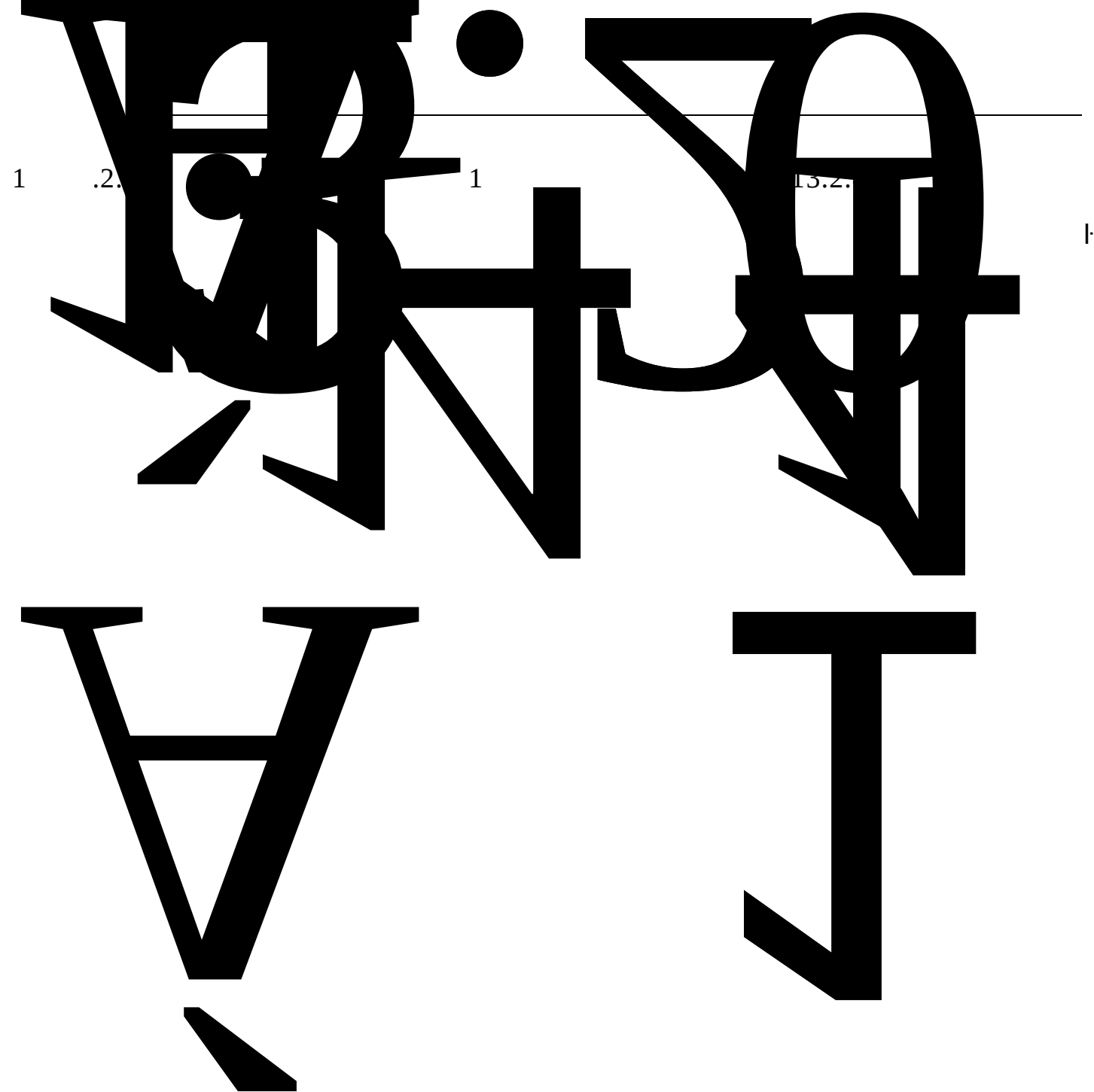
13.1.1

2

13.1.3

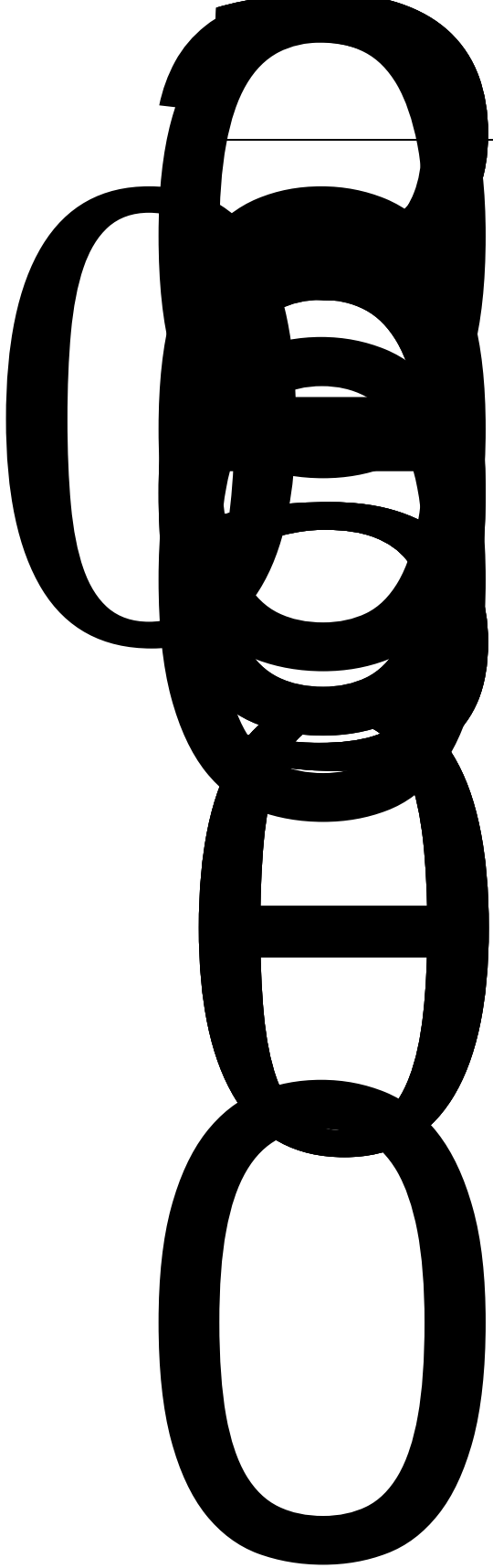
			90min
3		13.1.5	
4		13.1.6	
5		13.1.7	
	GB50058		
6			

10		4.5.5
11		3.2.5
12	3.2.5	5.3.2
100mm		
		50mm
		100m
100mm		50mm
2		
1		13.2.1
2		13.2.2
		4Ω



	30Ω		
10		13.2.11	
11		13.2.12	
	5		
12		13.2.13	
13		13.2.14	
14		13.2.15	
	100Ω		
15	Щ	113.2.16	ó





2.1.5

		0.6m	
4		GB 50156-2021	14.2.4
		GB 50016	
5		14.2.7	
	14.1.4		
6		14.2.9	
7		14.2.10	
		300m ²	
8		14.2.11	
	B		
		GB50016	
9		14.2.12	
3h			
10		14.2.14	
			5.0.13

	25m	
	3.00h	
11		14.2.15
12		14.2.16
13		14.3.1
14		9.1
	8.2	
1		
2		15.1.1
3		15.1.5
4		15.1.6

5

15.2.1

6

15.2.9

GB 50517

11

15.7.1

GB 50171

12

15.7.2

GB 50168

13

15.7.3

GB 50303

14

15.7.4

GB 50169

0.6m

				GB 50517
19				15.7.9
20				15.7.10
21	300mm			15.8.4
22	5	80%		
23				15.8.5
	18.5m			
				9.1
	GB 2894-2008			

24

25 4.4
GB/T2893.5 GB2894 GB13495.1 GB15630

26 4.5

27 5.1.6

28

9

9.1

9.2

1

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GB50156-2021

3

A

C

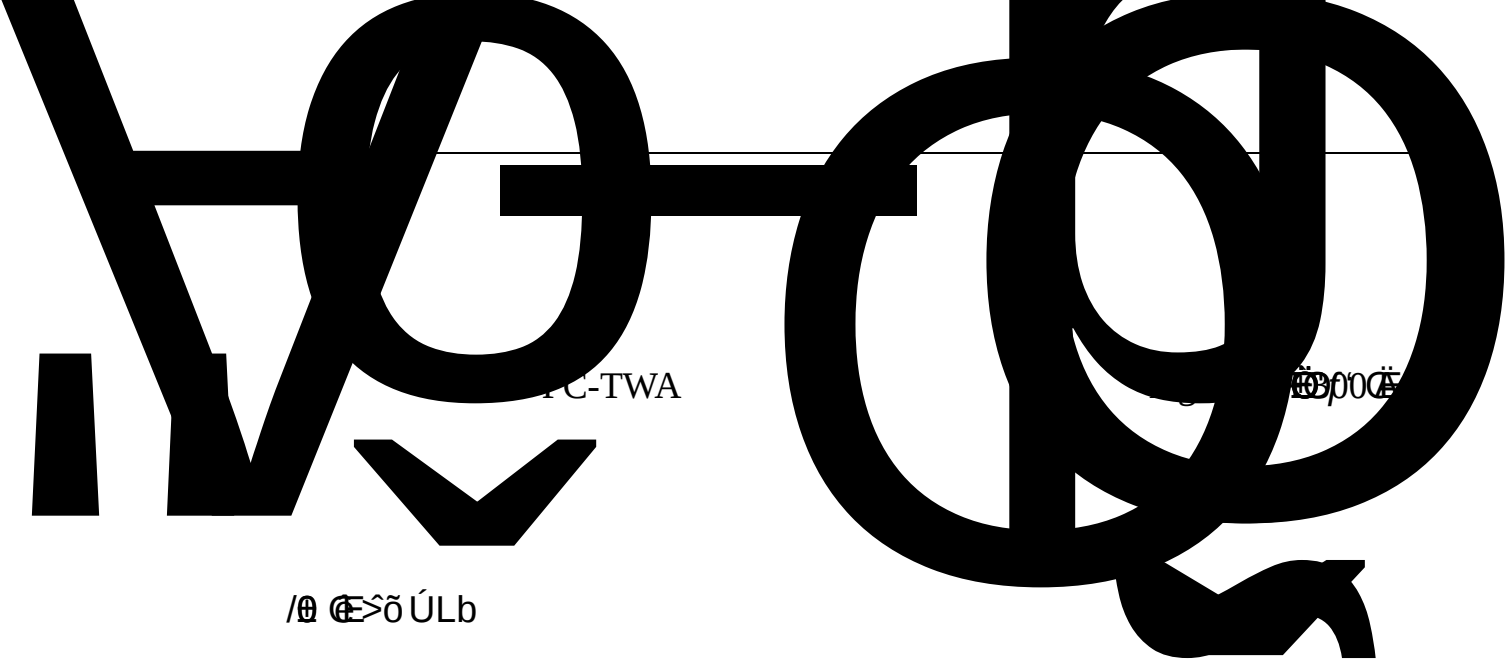
C.0.1

C.0.1.1

		2*		1B
2	1	-		2
-	2			
	1630	UN	1203	

		E10	(GB18351-2017)					E10
		(RON)	92	95	98	3		
=1	0.70	0.80		=1	3	4	-46	
1.3	7.6%		415	530				0.813MPa

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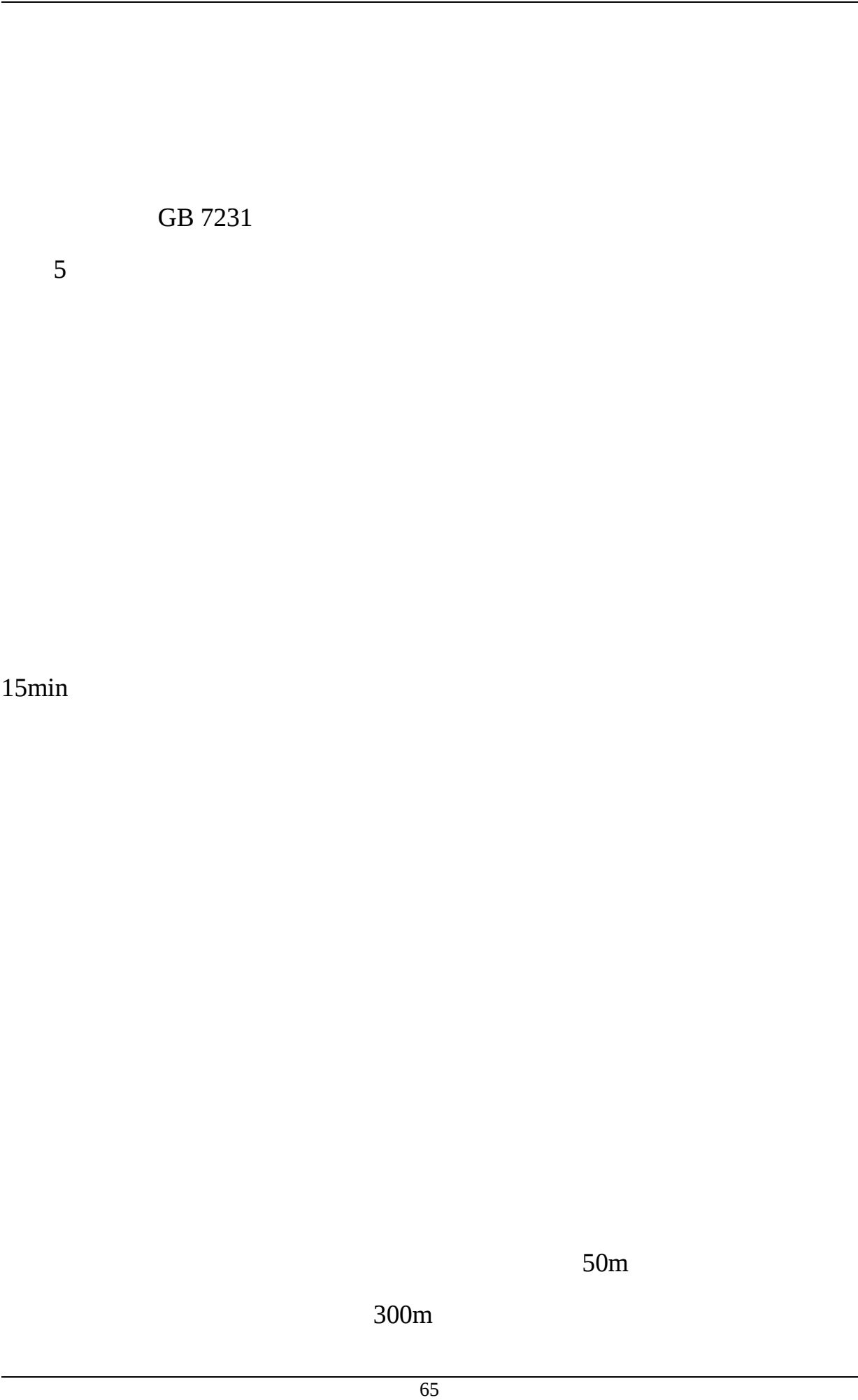
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C.0.2.1

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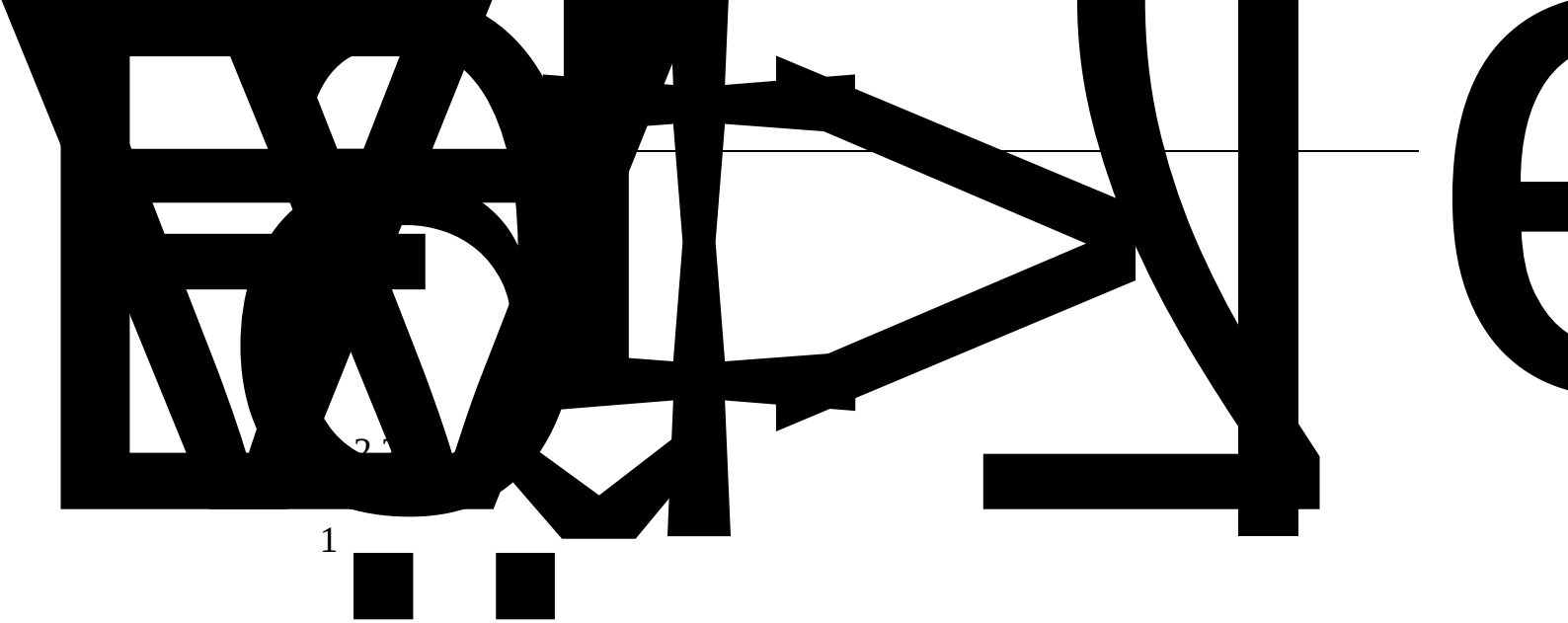
70m

6 46

2

xx x x

xx x x



2

C.0.2.3

C.0.2.4

C.0.2.5

C.0.2.6

C.0.2.7

1

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

S...

$q_1 \cup q_2 \dots q_n$ t

$Q_1 \cup Q_2 \dots Q_n$ t

$\Sigma \quad \text{т} \quad \text{б} \quad \text{æ} \quad \text{з} \quad \text{ү}$

1

200t

60m³

0.75

45t

5000t

120m³

0.89

106.8t

$$45/200+106.8/5000=0.24636<1$$

C.0.4

\ Ордн Σ

C.0.4.1

1

2004 1

p

2001 3 18 13 15 xx

20m

2

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C.0.4.4

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C.0.5

GB 50156-2021

C.0.5-1

	1	GB50156-2021 3.0.4		
	2 L-GNG GB50156 3.0.17	GB50156-2021 3.0.17	30m ³	
	3	GB50156-2021 3.0.25		
	4	GB50156-2021 3.0.27	8	
	1	GB50156-2021 4.0.1		
	2 GB50156 4.0.4	GB50156-2021 4.0.4	2.4-2 2.4-1	
	3	GB50156-2021 4.0.13		
	1	GB50156-2021 5.0.1		
	2 6m 4m	GB50156-2021	8.4m 10m	

	8%	5.0.2		
3		GB50156-2021 5.0.8		
4	300m ²	GB50156-2021 5.0.9		
5	4.0.4 “ ” “ ”	GB50156-2021 5.0.10		
6		GB50156-2021 5.0.11		
7	2.2m 4.0.4 1.5 25m 4.0.4	GB50156-2021 5.0.12	4.0.4 1.5 25m	
8	GB50156 5.0.13-1 5.0.13-2	GB50156-2021 5.0.13	2.5-5 2.5-1	
9	C	GB50156-2021 5.0.16		

C.0.6

C.0.6-2

C.0.6-1

C.0.6-2

(<PHA>)

1

2

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30mA/S

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

D

D.0.1

1

2021 9 1

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12

14 34 2025 5 29

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[13] 103 2022 11 9

7 **D.0.2**

1 2015

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2017	121	2017	11	13
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2018 74 2018 9 4

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2019	78	2019	8	12
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2019 107 2019 10 28

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2019 62 2019 12 26

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2020 38

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2022	8	2023	1	1
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13861-2022

17 (GBZ/T 230-2010)

18 GB/T 50610-2010

19 GB 50057-2010

20 GB 6944-2025

21

GB 50171-2012

22 GB 50009-2012

23 GB 50343-2012

24 GB 12268-2025

25 1 GB/T

30040.1-2013

26 2 GB/T

30040.2-2013

27 3

GB/T 30040.3-2013

28 4

GB/T 30040.4-2013

29 5

GB/T 30040.5-2013

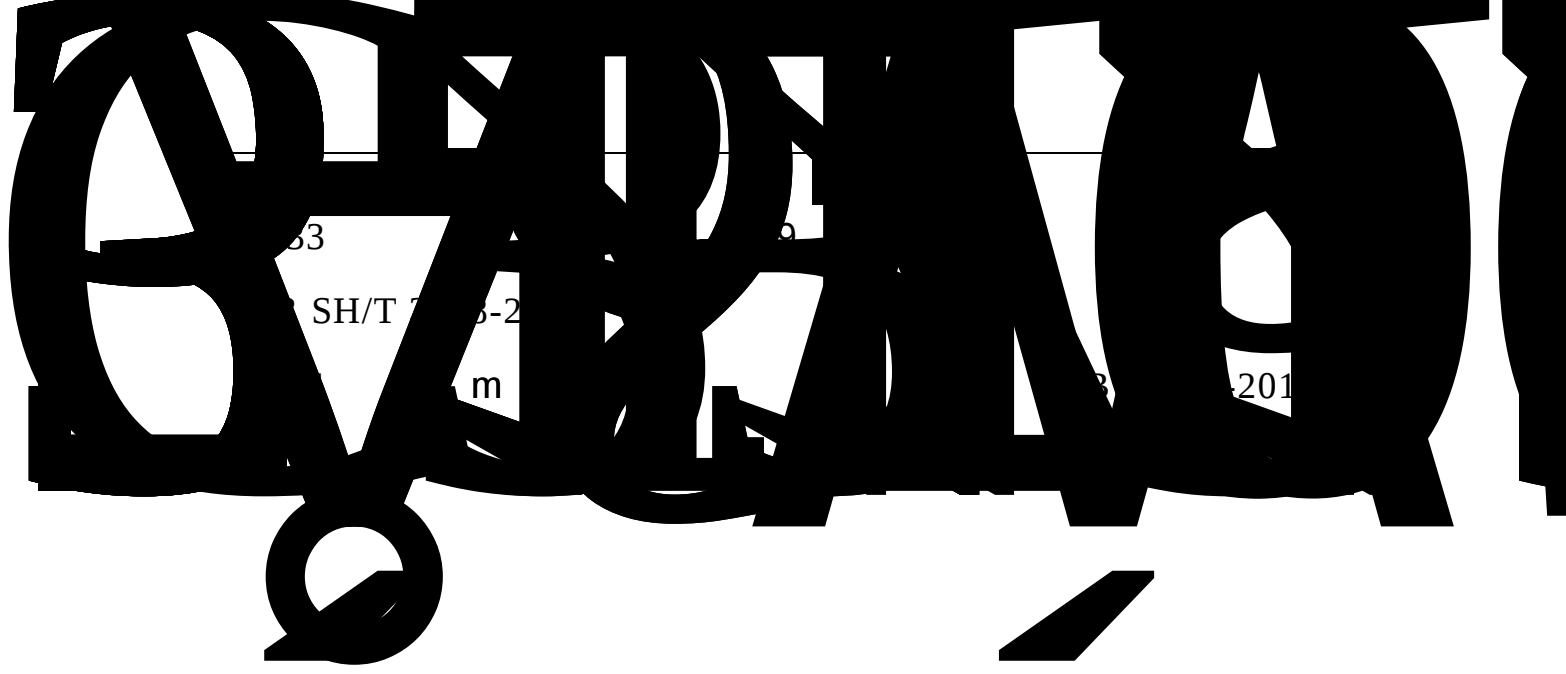
30 6

GB/T 30040.6-2013

31 7

GB/T 30040.7-2013

32 GB 50058-2014



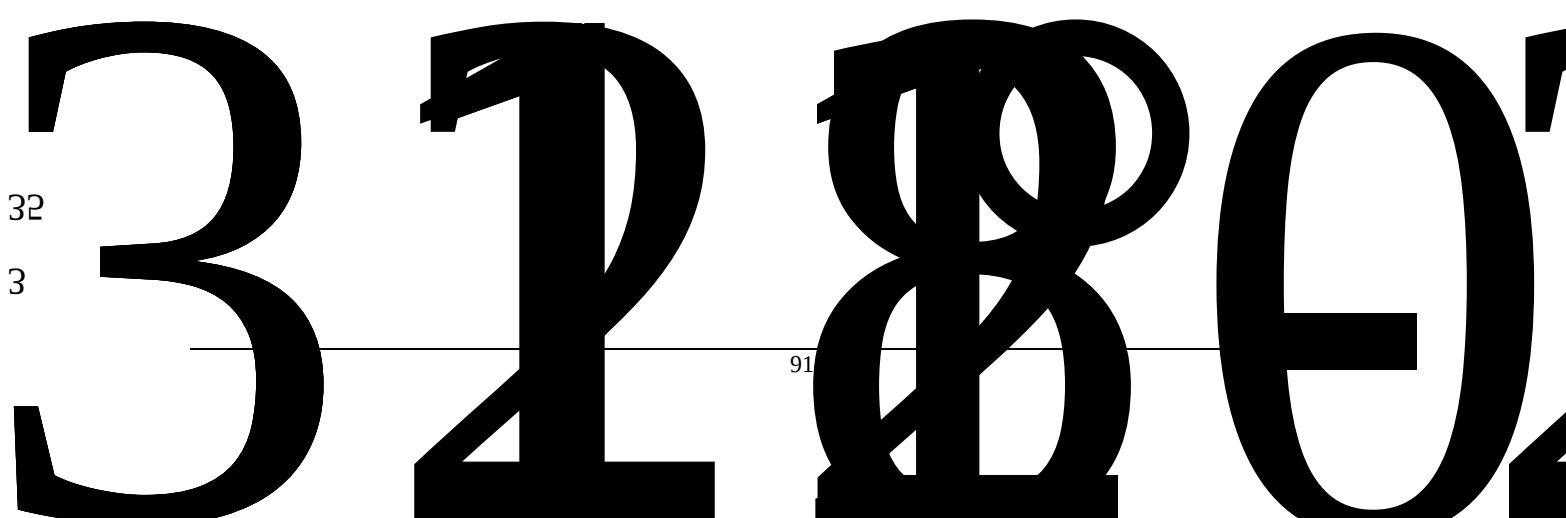
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SH/T 7615-2015

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D.0.4

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5	1	
6		1