.... 3

1.1 3

1.2 4

1.3 4

1.4 4

2 6

2.1 6

2.2 6

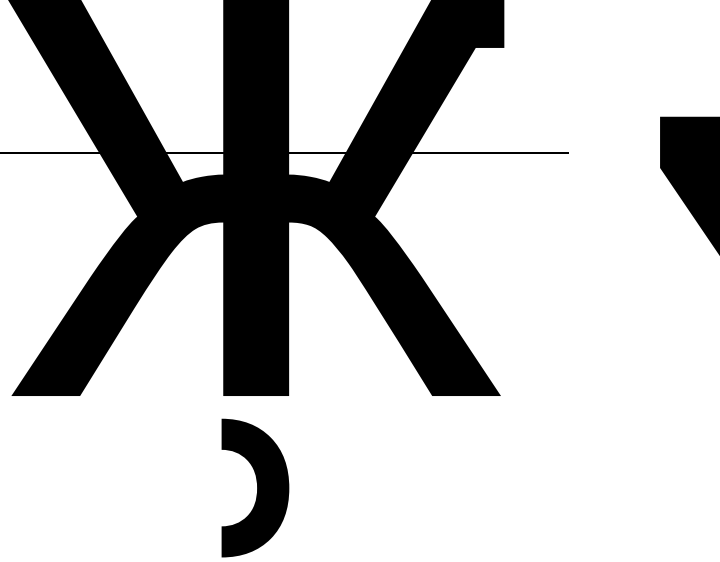
2.3 7

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



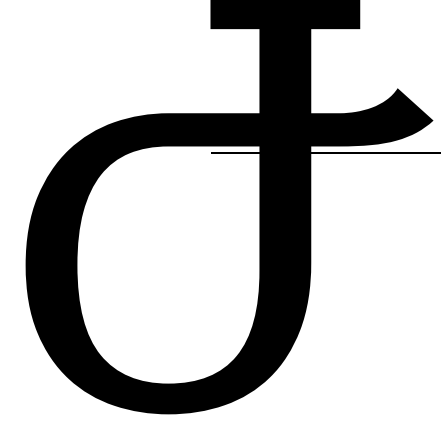
p p

1.2

1.3

1.4

1.4-1



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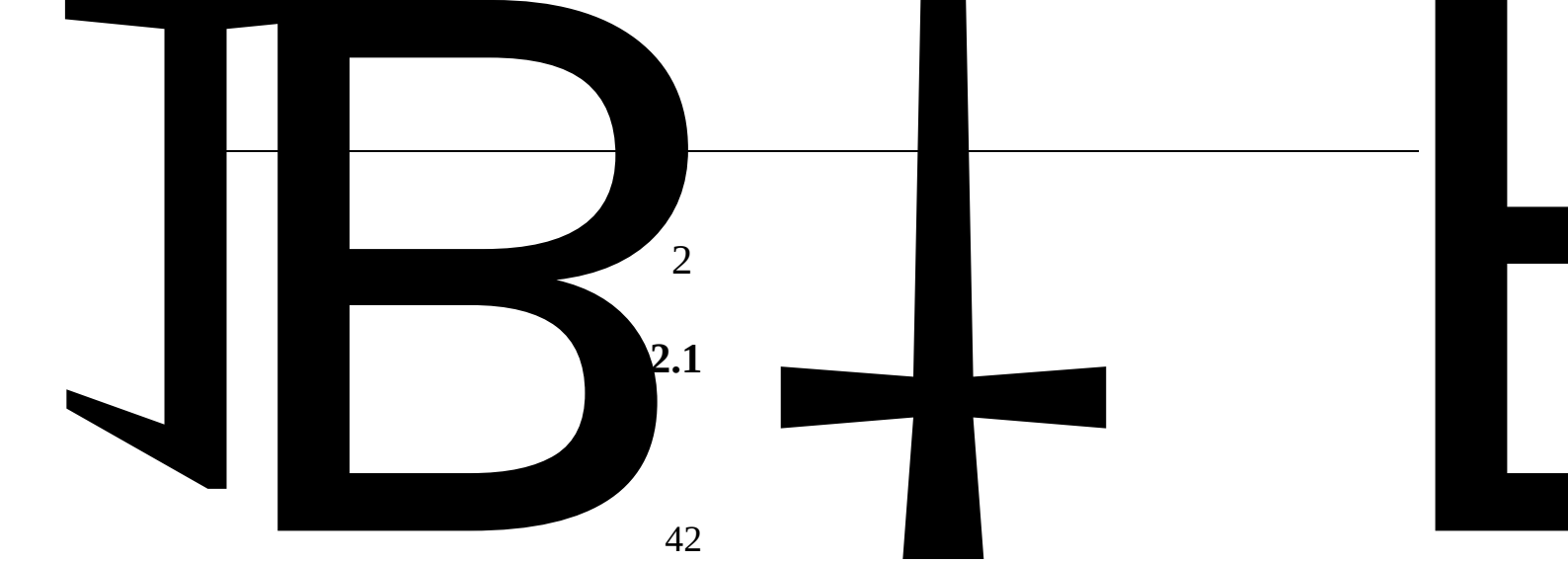


2

2.1

42

2.2

1 1 420m^2

2 189.98m^2

3 SF 6 30m^{3}SF 4

30m^{3}SF 2

GB50156-2021 3.0.9 120m^3

خ İ m "

5 6 1.6m 4.5m

24h SF FRP

FRP

S

“ ”

2.3.2

2.4

2.4.1

25

56.4m 45.4m

13.5m 2F

21.9m 37.4m

2.42

1563.87m^2

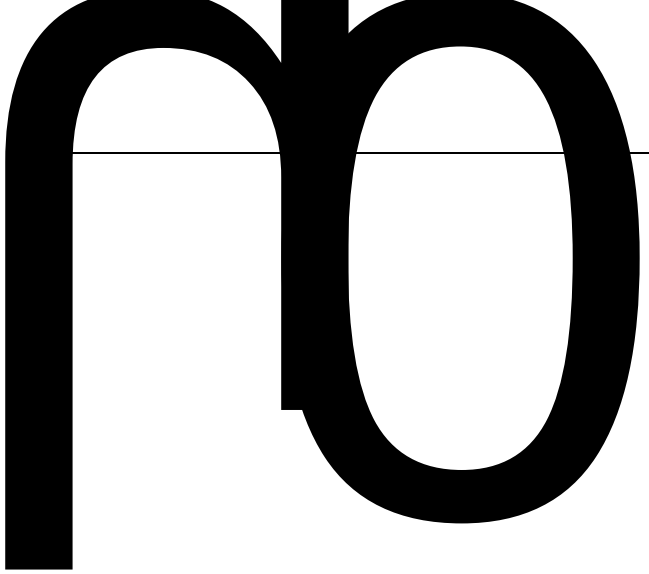
2.4.3

2 30m^3 SF 4 30m^3

SF 180m^3

2.5

2.5.1



5min

*

6m

6.2m

8.1m

8.1m 8m 18.8m

4m

14.7m

2.6

2.6.1

1

5m^3/d 0.28m^3/h 0.56m^3/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

4

10 /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

Á

6					
7					
8					

3.4 “ ”

C

4

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						

= × =60m^3×0.75g/cm^3=45t

= × =120m^3×0.89g/cm^3=106.8t

6.2.2

6.2-2

6.2-2

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

6.3

6.3.1

6.3.2

/

0.24mJ 1

1m

6.3.3

G·M SF

30m

M

Q_{TNT}

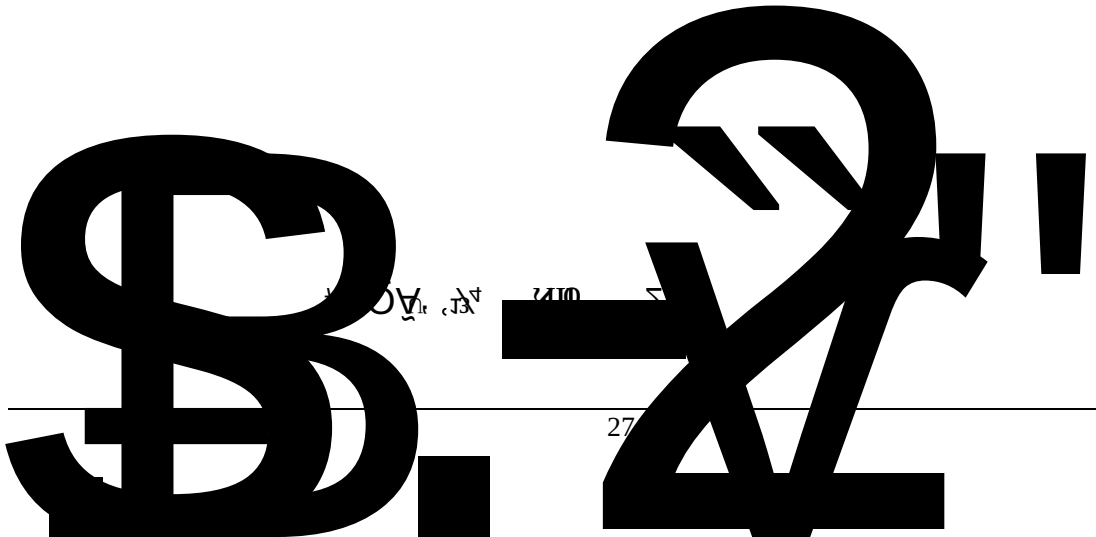
6.3-1 6.3-2

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

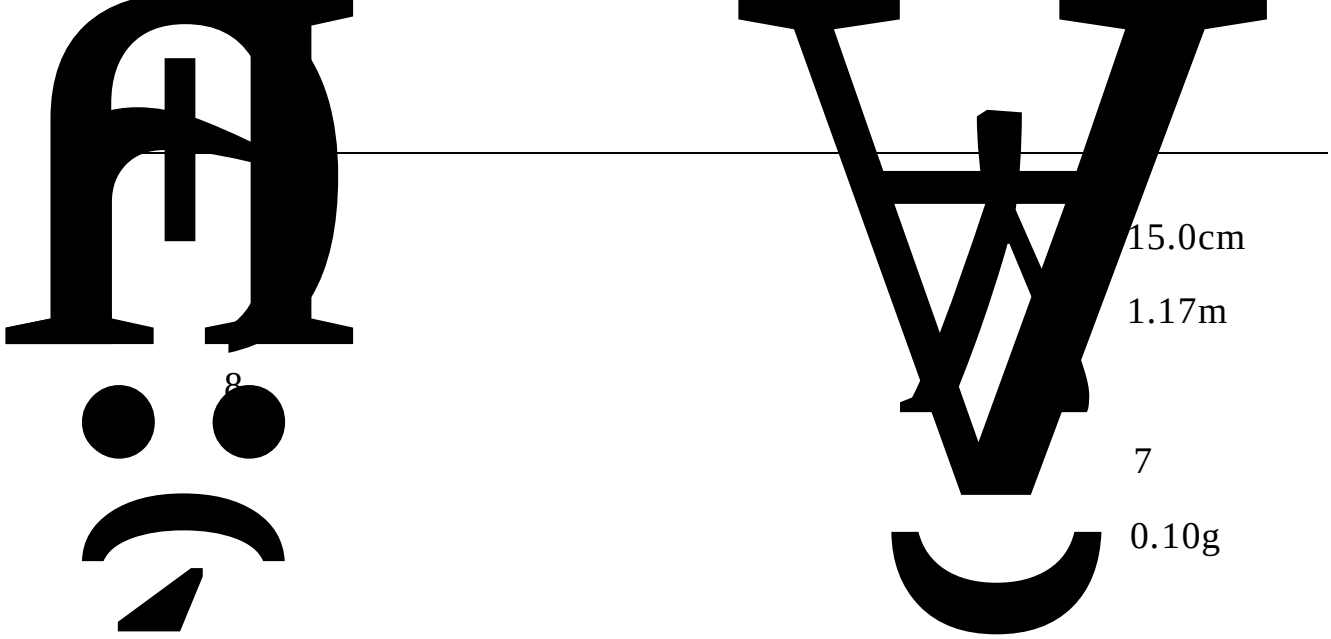
17.75m

ṇ ص

7

7.1

7.1.3



1

7

7 Ø W

2

—

10^6V/m ,

—

23.4d

3

658mm

15cm

4

7.2

SF

7.2-1

7.2-1

1	
2	
3	
4	SF
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

8 GB 50156-2021

5.0.11

9 GB 50156-2021

5.0.12

2.2m

4.0.4~

4.0.8 1.5 25m

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

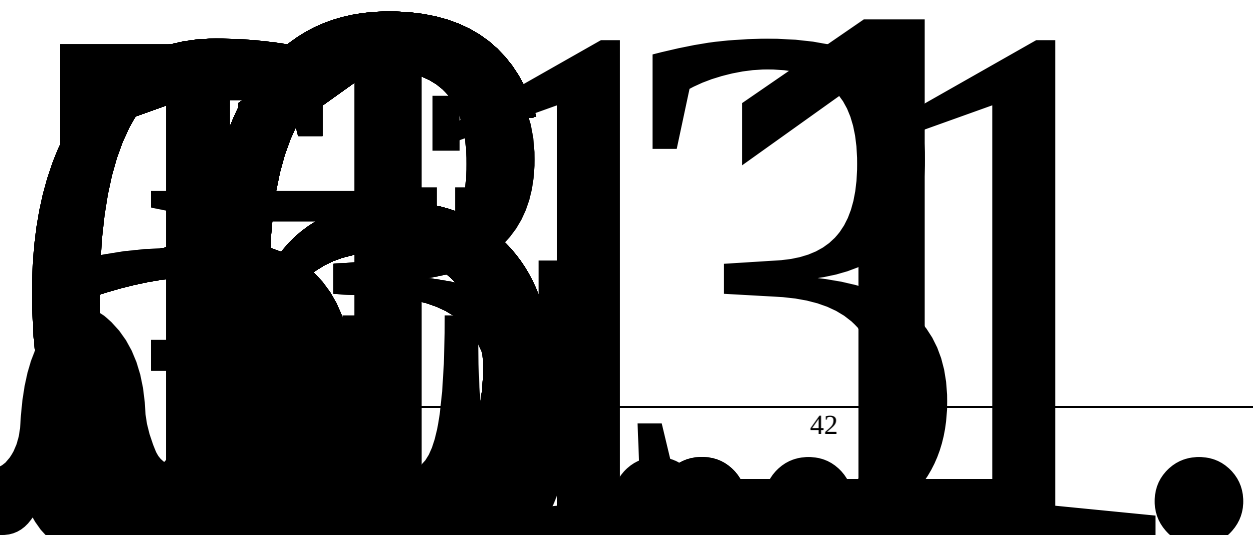
25mm

8 6.3.8

12 6.3.12

6.3.16

6.3.15



1 12.1.1

2 2 5kg 1 5kg

1 6L 2 2

1 35kg

15m

5 2m³

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

3.2.5

12 5.3.2

100mm

50mm

100m

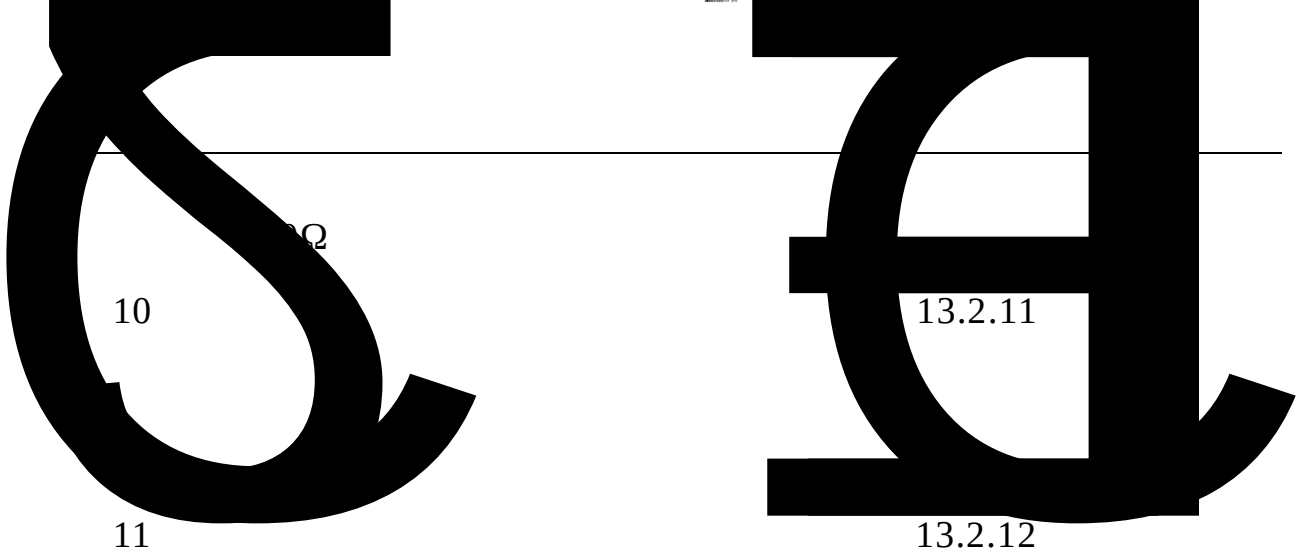
100mm 50mm

2

1 13.2.1

2 13.2.2

4Ω



Ω

10 13.2.11

11 13.2.12

5

12 13.2.13

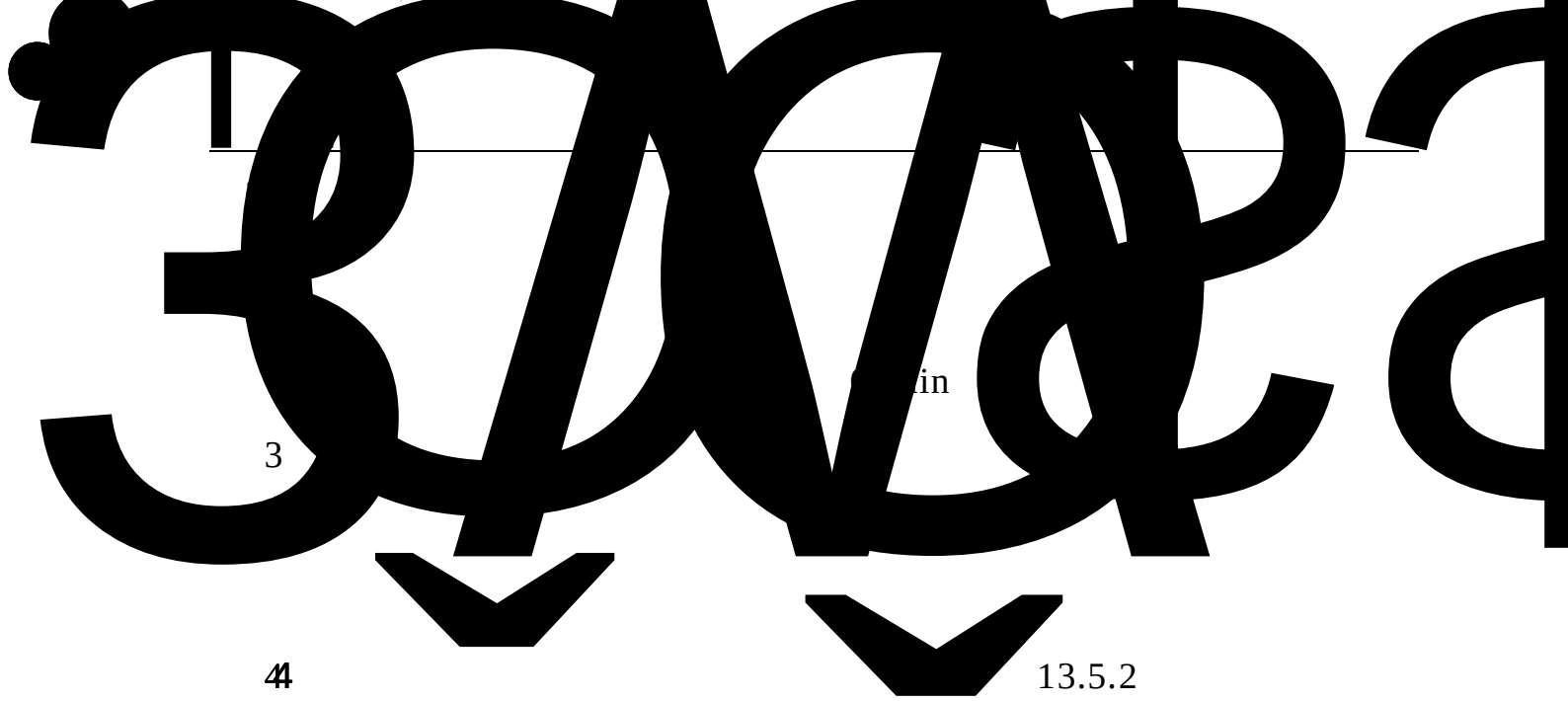
13 13.2.14

14 13.2.15

100Ω

15 13.2.16 È

2



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

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

300mm

21 15.8.4

5 80%

22 15.8.5

18.5m

23 GB 2894-2008 9.1

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

2

GB50156-2021

3

10

A

C

C.0.1

C.0.1.1

2* 1B

2 1 - 2

- 2

1630 UN 1203

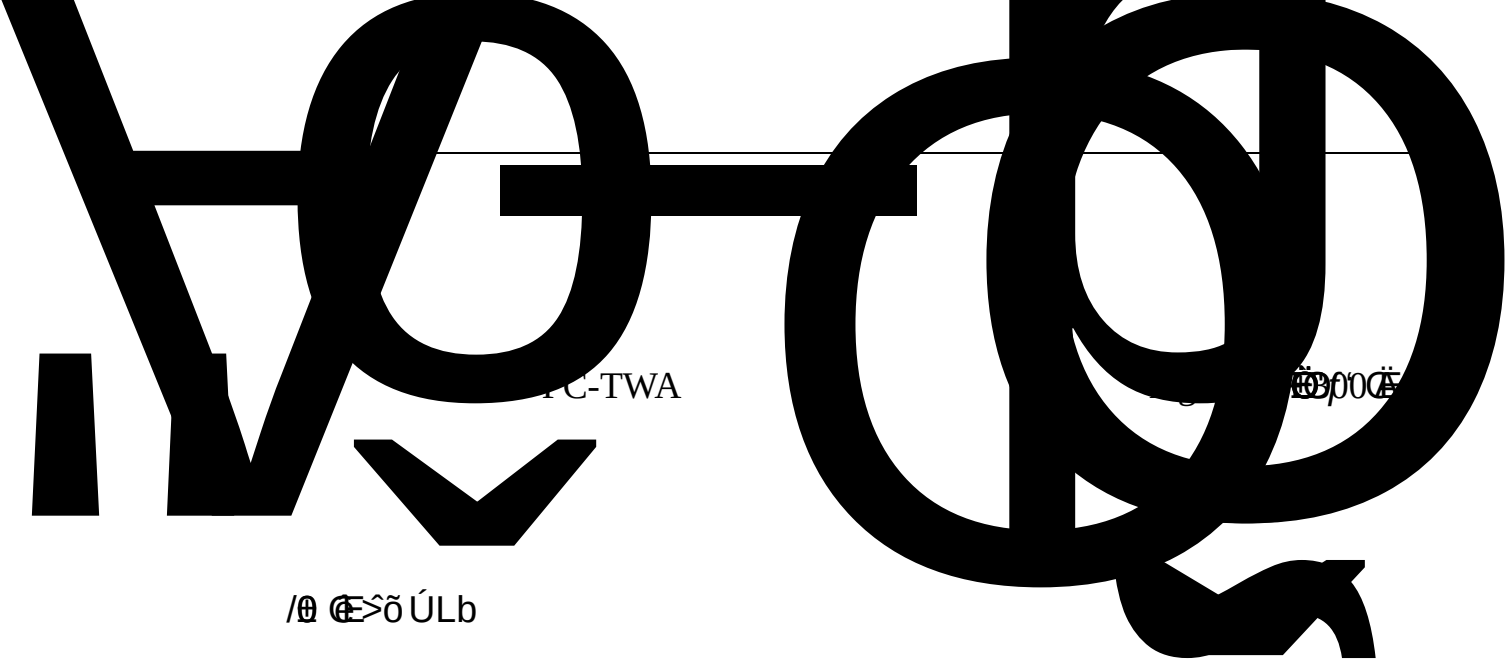
E10 (GB18351-2017) E10

(RON) 92 95 98 3

=1 0.70 0.80 =1 3 4 -46

1.3 7.6% 415 530 0.813MPa

:



GB 7231

5

15min

50m

300m

C.0.1.2

1674

-18 =1 0.79~0.84

300~365

5 0 -10 60

-20 50 -35 -50 45

,

6					
7					
8					

C.0.2.1

1

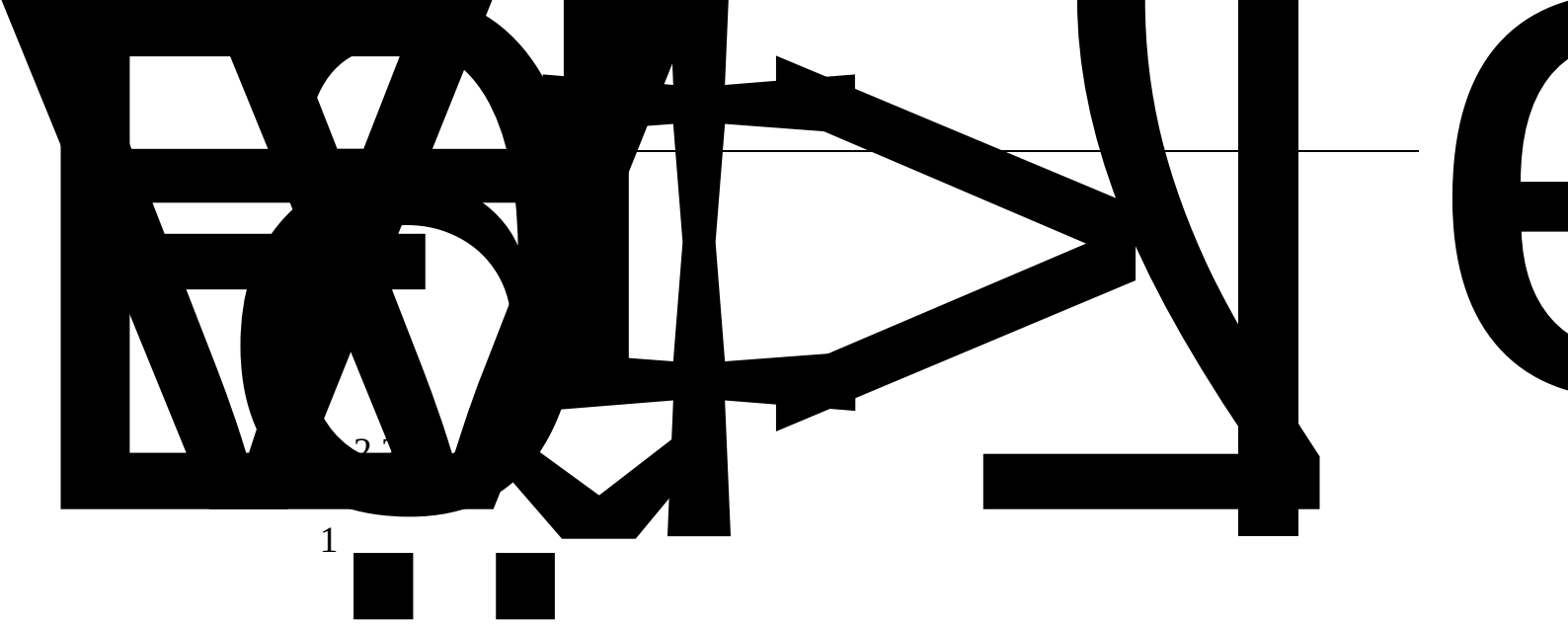
70m

6 46

2

xx x x

xx x x



1

2

C.0.2.3

C.0.2.4

C.0.2.5

C.0.2.6

C.0.2.7

1

S $Q_1+q_2/Q_2\cdots\cdots Q_n\geq 1$

q_1 $q_2\cdots$

Q_1 $Q_2\cdots$ t

1

200t

$60m^3$ 0.75

45t 5000t

$120m^3$ 0.89 106.8t

45/200+106.8/5000=0.24636<1

C.0.4

C.0.4.1

1 3

2004 1 30

2001 3 18 13 15 xx

20m

2

“ ”

C.0.4.4

1

2

3

4

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 4m 6m	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

4

C.0.6-1

C.0.6-2

C.0.6-1

C.0.6-2 (<PHA>)

1

2

5

1

(

2

3

30mA/S

4

D

5

6

)

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

D

D.0.1

1

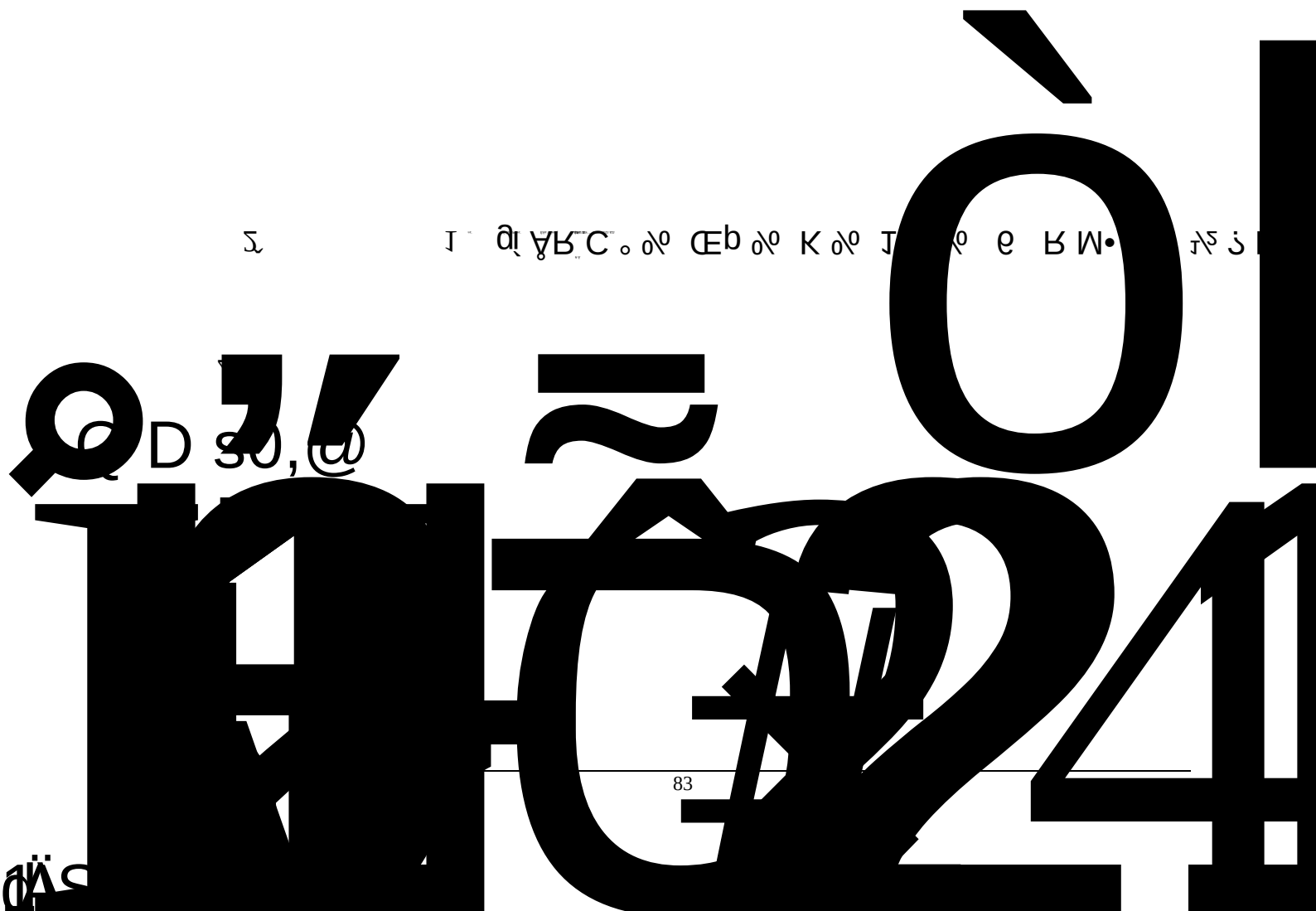
2021 9 1

2 2021

4 29

3

2024 11 1



30

12

14 34 2025 5 29

13

[13] 103 2022 11 9

7 **D.0.2**

1 2015

7 2015 2 5 2022

8 7 2023 1 1

2

45 79

2015 5 27

3

55 2015

7

17

2016 8 2016 2 5

18

2016 3 2016 4 28

19

2016 62 2016 6 3

20 < > < > < > >

2017 15 2017 3 6

21 < > >

2017 121 2017 11 13

22

2018 74 2018 9 4

23

2019 78 2019 8 12

24

2019 107 2019 10 28

25

2019 62 2019 12 26

10 16

26 < ť

> 2020 38

2020 10 23

27

261° 28

2020 3 1 2020 13 5 30

02

28 (2011

2022 8 2023 1 1

42

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

D.0.4

1 2005 4

2 â ضد

1 1

2 2

3

4

4 1

5 1

6 1