
1.

1.1

1.2

1.2.1.

1							2021	9	1
2							2024	11	1
3						591	2013	12	7
645									
4						708	2019	4	1
5					2025				
14	34	2025	5	28					
6									2024
23	2024	10	1						
7								3	2015
5	29				80	2015	7	1	

22

2020 1 2020 5 30

23

2015

2015 80 2015 8 19

24

2011 95 2011 7 1

25

2011 142 2011 7 1

26

 $\angle$
$$> \quad <$$
$$>$$

2017	121	2017	11	13
------	-----	------	----	----

27

 $\angle$

> <

$$>$$

2019 78

28

2019 62 2019 12 26

29

341 2021

5 18

30

2017 45 2017 12 23

31

2012 144 2012 8 30

32

 $\angle$
$$>$$

2017 22 2017 11 28

33

2018 21

2018 8 31

2.

1

GB50156-2021

2

GB 6944-2025

3

GB 12268-2025

4

GB 18218-2018

5

GB 17914 2013

6

GB 50058-2014

7

AQ 3009-2007

8

GB/T 6441-1986

9

GB 11386-2022 P 8†f

10

GB 50140-2005

11

GB 50057-2010

12

GB 12158-2024

13

-

SH/T

3178-2015

14

GB 50395-2007

15

GB/T 29639-2020 .

16

YJ/T 9007-2019

17

ÄAQ 3010-2022

18

GB30871-2022

19

XF/T 3004-2020

20 É#,

GB55036-2022

1-1

			2.						
			813m ²		SF	4	1	1	
		4							
		4	2	20m ³	2	20m ³			
60m ³								GB 50156-2021	
3.0.9					60m ³				
								2023	9
			2.1						
	H=10m		7.5m	15m					
		15m	304		7m				
		25m	11m						
			2.2						
	1								
								7.7	
		7						25.2	
		1						-12.7	
								38.3	
								-30.6	
								8.3	
								6.9	

2			69%
			67%
	7		78%
	1		61%
3			101.2kPa
			103.9kPa
			96.9kPa
4			755.4mm
			997.3mm
			520.5mm
			178.8mm
			42.6mm
5			250.0mm
6			3.2m/s
			23m/s
7			28.3d
			42d
8			6
			1.40m

2-1		m	
		m	
		7	7.5
	H=10m	6.5	14
304		5.5	21
		7	33
		10.5	24
		10.5	13
		7	10
	H=10m	6.5	24
304		5	26
		7	33
		10.5	25
		10.5	11
		7	22
	H=10m	6.5	22
304		5	13.5
		7	15
		10.5	38
		10.5	16
		6	10
	H=10m	6.5	15
304		3	13
		6	33
		9	31
		10.5	16
		6	10.5

		H=10m	6.5	24
304			3	26
			6	33
			9	25
x	"			

2-2							m							
	0.5	0.5	0.5	0.5	-	-	-	-	-	-	-	-	-	-
	0.5	0.5	0.5	0.5	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	3	3
	-	-	-	-	-	-	-	-	-	-	-	-	2	3.5
	4	8	3	10	4	8.5	3.5	8	5	8	4	14.5	5	11.5
	2	5	2	7.5	2	3	2	3	-	-	-	-	-	-

2.4

2-3

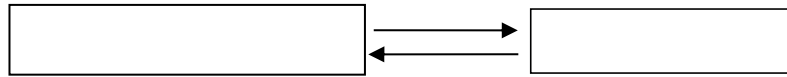
2-3

1			157.2m ²			-
2			580m ²			H=6m

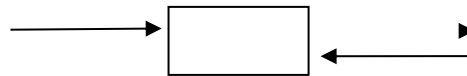
2-4

2-4

2-2 2-3 2-4 2-5 2-6



2-2



2-3

2-4

2-5

2-6 ◀

2.7

2.7.1

1

91210181573497632C

2023 7 18

2

[2023]000531

2023 5 13

3

1062017024 [2026]00569

2026 9 18

4

2.7.2

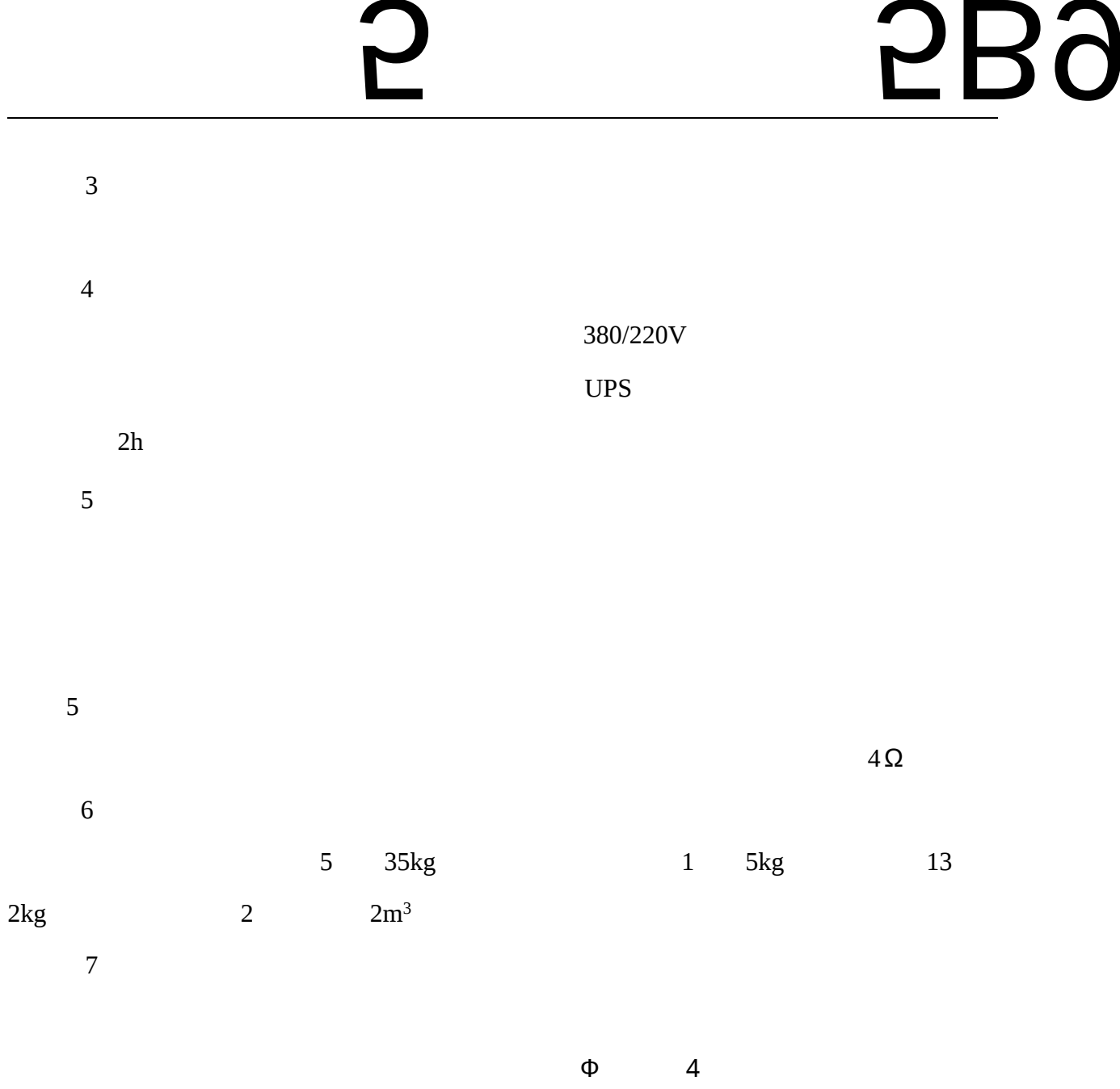
1

2

a. 5

b.

c.



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 ... q_n ——

t

$$\frac{Q_1}{3} + \frac{Q_2 + \dots + Q_n}{3} \leq 60 \quad 3-1$$

3.1.3

3-1		
1		200t
2		5000t

$$\frac{40\text{m}^3}{40\text{m}^3} + \frac{0.89}{0.75} = \frac{35.6\text{t}}{30\text{t}} = 0.15712 < 1$$

3.2

3.2.1

$$\frac{1}{1630} + \frac{2^*}{2} = \frac{1\text{B}}{2} = 0.72$$

$$\frac{92}{=1} + \frac{95}{3} + \frac{98}{4} + \frac{3}{-46} = 1.4 + 0.72 + 0.775 = 7.6\%$$

5

1

30

2

3

1000m³

1

2

0.5m³

100mm

3

4

GB7231

5

15min

5 0 -10 60 -20
50 -35 -50 45

15min

3.2.2

3.3



70m

6 46

2

1987 2 4

1986 5 2

3

4

3.3.2

1

2

3



3.3.3

3.3.4

3.3.7

1

2

4.

4.1

8

1

2

3

4

5

6

7

8

4.2

5.

8

5-1

5-1

	1		
	2		
	3		
	4		
	5		

5-2

- 1
- 2
- 3
- 4
- 5
- 1
- 2
- 3
- 4
- 5
- 6
- 7

	8		
	9		
	10		
	11		
	12		
	13		
	14		
	15		
	16		
	17		
	18		
	1		
	2		
	3		
	1		
	1		
	2		
	3		
	1		
	2		
	3		

GB/T29639-2020

5-3

	1	GB50156 3.0.9	GB50156-2021 3.0.9	20m ³
	2		GB50156-2021 3.0.25	
	3		GB50156-2021 3.0.27	10
	1		GB50156-2021 4.0.1	
	2		GB50156-2021 4.0.2	
	3	GB50156 4.0.4	GB50156-2021 4.0.4	4.0.4

4

GB50156-2021

4.0.12

5

	1	GB50156-2021 6.1.1		
	2	GB50156-2021 6.1.2		
	3	GB50156-2021 6.1.3	SF	
	4			
	1	AQ3020 6.1.4	SF	
	0.08MPa			
	5	- - SH/T3178	SF	
	6			
		$10^9 \Omega$ $10^9 \Omega$	SF	
		GB50156-2021 6.1.7		

6.1.7

$A=0.04V_t$ 6.1.7

A ——

m^2

V_t —— m^3

7

11.2

GB50156-2021

SF

6.1.8

8

GB50156-2021

	0.3m			
	12	GB50156-2021 6.1.13		
	13	GB50156-2021 6.1.14		
	14 90% 95%	GB50156-2021 6.1.15		
	15	GB50156-2021 6.1.16		
	16 SH/T 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		

	7 1 50mm 1.0 1.2 25mm	GB50156-2021 6.3.7	50mm 25mm	
	8 100mm T 150mm 200mm 200mm 50mm 45°	GB 50156-2021 6.3.8	100mm 45° 150mm	
	9 4m 2m	GB50156-2021 6.3.9	4m	

2‰

6.3.15

2‰

1%

1%

16

6.3.15

GB50156-2021

6.3.16

1%

17

0.4m

0.5m

0.2m

GB50562-2021

100mm

6.33177

0.3m

0.2m

18

B2020-5051

3

200mm
500mm

23 > Ⅲ

7
4mm 100mm

200mm

5mm

0.25m

0.25m

2

	1		GB50156-2021 13.1.1		
	2	380/220V	GB50156-2021 13.1.2	0V	380/22
	3	90min	GB50156-2021 13.1.3	in	90m
	4	4.5m	GB50156-2021 13.1.4		
	5m	4.5m			
	3m				
	5		GB50156-2021 13.1.5		
	6	LPG LNG CNG	GB50156-2021 13.1.6		
	7	GB50058	GB50156-2021 13.1.7		
	8	IP44	GB50156-2021 13.1.8	IP44	
	1	2	GB50156-2021 13.2.1	SF 2	

附录B

GB 50156-2021

10

5

GB50156-2021

13.2.12

11

GB50156-2021

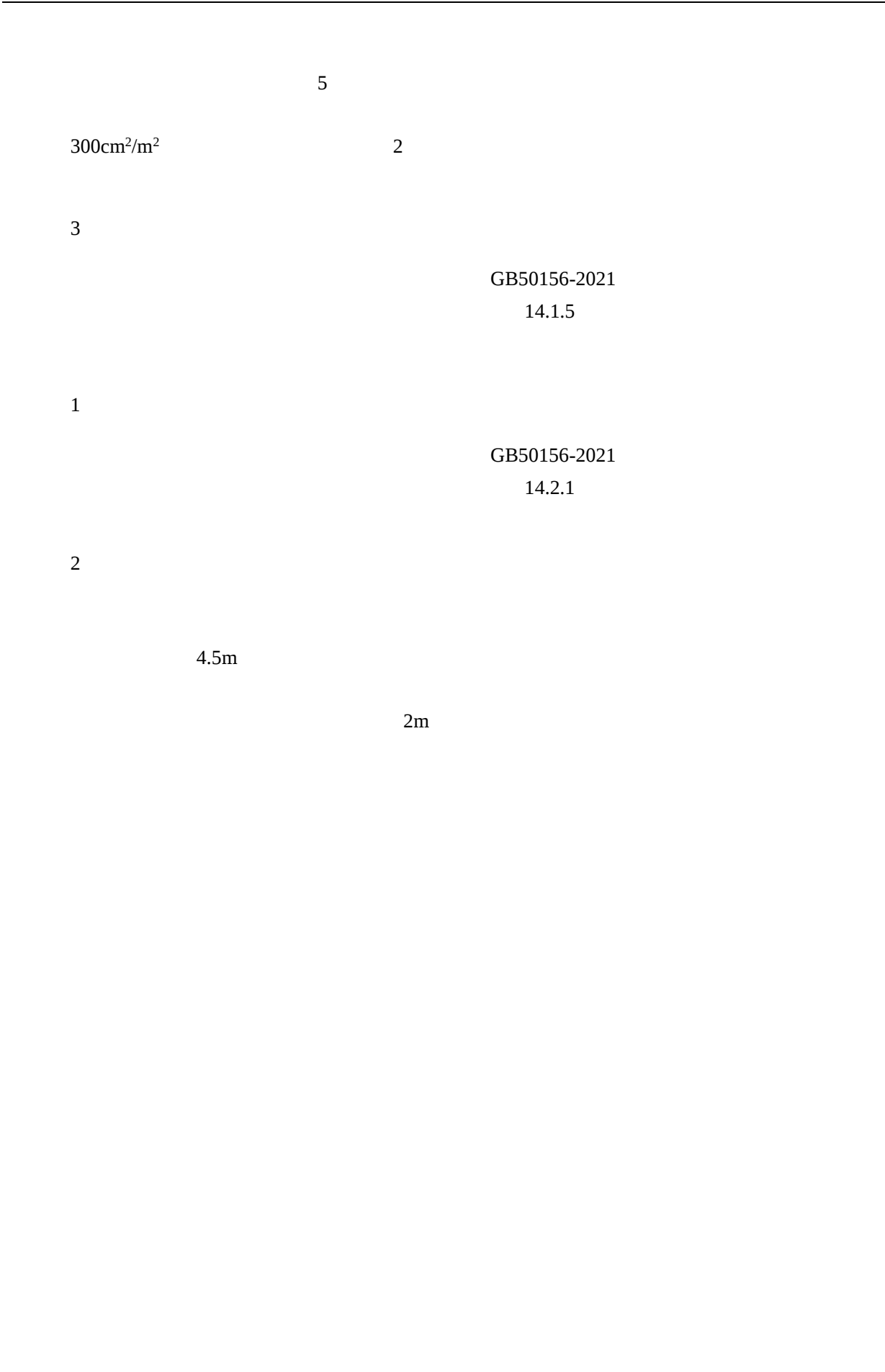
13.2.13

12

	3	GB50395-2007 5.0.8		
	1	GB50156-2021 13.5.1		
	2	GB50156-2021 13.5.2		
	3	GB50156-2021 13.5.4		

5-7

	1	140kW	GB50156-2021 14.1.3	
	2	12	GB50156-2021 14.1.4	



			GB50156-2021
			14.2.7
5			
			GB50156-2021
			14.2.9
6			
		300m ²	
			GB50156-2021
			14.2.10
7			
	B		
			GB50156-2021
GB50016			14.2.11
8			
			GB50156-2021
			14.2.12
	3h		
9			



		GB50156-2021 14.3.1		

	8			
	9			
	10			
	11			
	12			
	13			
	14		UPS	
	15			

16

17

18

19

20

5-9

	5	5	0	0
	33	33	0	0
	21	18	0	3
	47	41	0	6
	9	8	0	1
	28	27	0	1
	16	10	0	6
	20	11	0	9
	179	153	0	26

5-9

179

26

153

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

6.

1

7.

GB50156-2021

1.

GB50058-2014

1 0

2 1

3 2

2.

1

3.

1

1

1

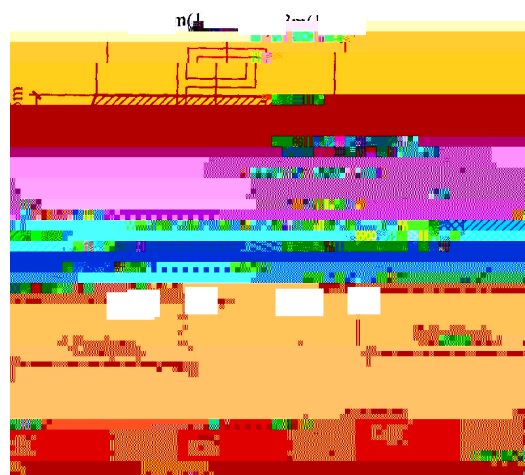
2

3m

0.15m

1.5m

2



4.

2

1

0

2

1.5m

0.5m

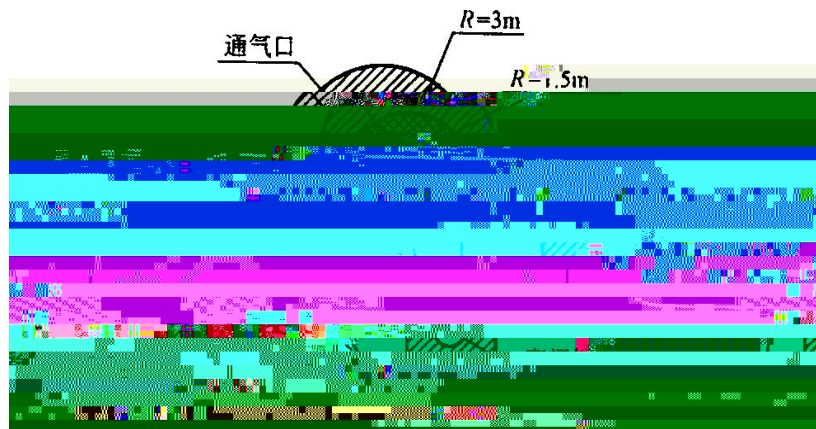
1

3

3m

1.5m

2



5.

3

1

0

2

, m "

0.75m

0.5m

1

3

≤

1.5m

1m

2m

1.5m

2



-
- 1
 - 2
 - 3
 - 4
 - 5
 - 6
 - 7
 - 8
 - 9
 - 10
 - 11