

9.24

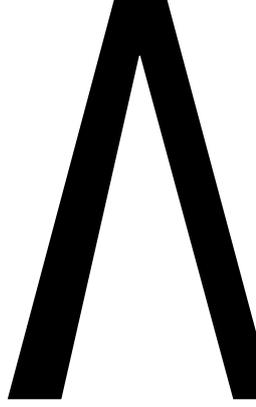
2.00

1.37

4

5

89.85



	.....	1
	.....	1
1	.....	1
2	.....	2
2.1	.....	2
2.2	.....	3
2.3	.....	3
2.4	.....	4
2.5	.....	4
2.6	.....	4
3	.....	7
3.1	.....	7
3.2	.....	7
3.3	.....	15
4	.....	15
4.1	.....	17
4.2	.....	18
4.3	.....	18
4.4	.....	24
4.5	.....	25
5	.....	26
5.1	.....	26
5.2	.....	27
5.3	.....	27
5.4	.....	29
5.5	.....	32
6	.....	34

6.1	.....	34
6.2	.....	38
7	.....	42
7.1	.....
7.2	.....	42

1 ;

2

3

1

2

3

4

5

6

7

8

9

10

11

1

2020 12

GB50433-2018

GB/ 50434-2018

2020 12

2-1

	19974.63	2	
	38366.74	2	
	1.83		
	8187.6	2	
	40.99	%	
	15	%	



2.2

2.2

82.6 83.5

0

83.2

82.8 83.2

82.4

2.3

20 30 ,

0.40 ²

0.12 ³

0.30 ²

30 40

0.12 ³

2.40 4.70 74.14 74.70 1.30 3.60
 75.24 75.80
 2

2.6.3

1726 , 18.6 281
 10 5600 1.7 /

2.6.4

1.2 827
 8.3 104 ²
 52 14
 6.5
 24.21 50
 23.76 20 23.25 10 22.68 5 22.12 3
 21.57

2.6.5

0.4 ² 20 30 0.12 ³ 0.0039

20%

3

3.1

GB50433-2018

3-1

3-1

1			
1			
2			
3			

3-1

3.2

3.2.1

20%

15%

3.2.22.0²**3.2.3**

0.12³ 1.84³ 0.92³
0.12³ 0.92³ 0.12³

3-2

1			
2			
3			
4			

3-2

2

GB50433-2018

0.12 3

3.2.4

3.2.5

3.2.6

1

3-3

3-3

1			
2			
3			
4			
5			
6			

7			

3-5

2

3.2.7

1

$$2 \quad 20 \quad 30 \quad 0.14 \quad 3 \quad 0.4 \quad 2$$

$$3 \quad 30 \quad 40 \quad 0.14 \quad 3 \quad 0.30 \quad 2$$

$$4 \quad 0.30 \quad 2$$

$$820 \quad 26 \quad 33$$

=

$$\frac{L/S}{L/0.65}$$

()

$$q = \frac{5007(1 + 0.48 \lg P)}{(t + 10)^{0.92}}$$

10

=2.0

=

3/

2

/

$$= \frac{1}{\frac{2}{3} \cdot \frac{1}{2}}$$

/

DN300

3-6

3-6

					$Q_{\text{th}} = A \cdot C \cdot \sqrt{Ri} = 1/n \cdot A \cdot R^{2/3} \cdot i^{1/2}$					
	363.9	0.65	0.30	0.071	0.3	0.007	0.009	0.07	0.08	0.117

$$Q = 0.117^{3/2} > Q = 0.071^{3/2}$$

1

0.30²

1

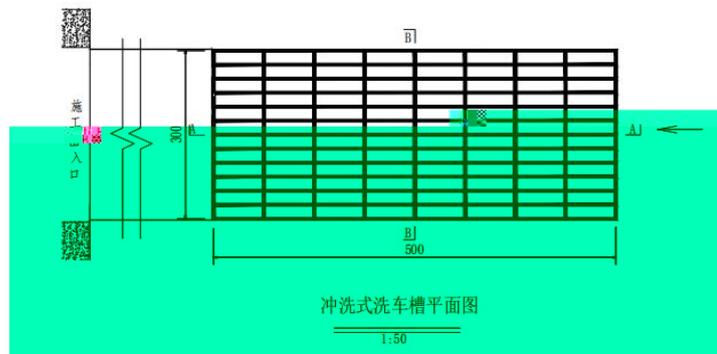
--

1

5

3

3.1



3.1

2

20

M10

630

3-7 H Q

Q=16.67 F				Q = 1/ A R ^{2/3} 1/2				
	/	F ²	Q ^{3/}					Q ^{3/}
0.55	1.98	0.017	0.309	0.4	0.35	0.02	0.013	0.385

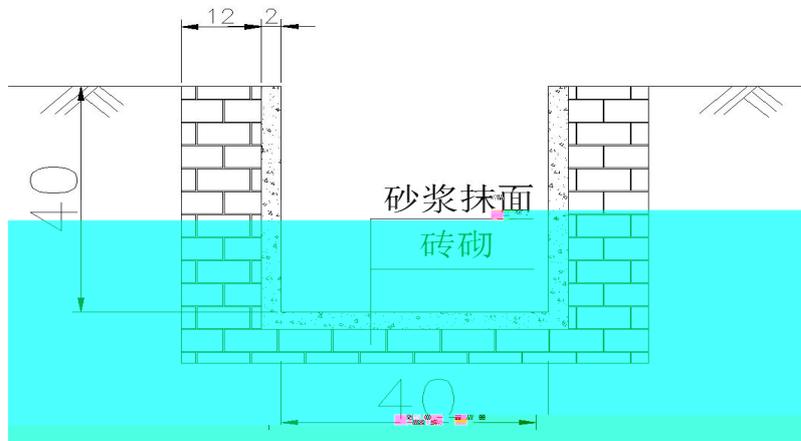
Q =0.385^{3/} Q 0.309^{3/}

0.05

0.4

0.4

3.2



3.2

60

120

20

M10

3-8

3-8

						M10	
				^{3/}	^{3/}	(^{2/})	^{3/}
		0.4	0.4	0.29	0.13	0.69	0.16

3

3

3.3

2

3-9

3-9

			---	---
			---	---

4

4.1

1

		2019	
2660.26	²	487.59	² 18.33%
457.70	²	93.86%	21.63 ²
4.44%		6.57	² 1.35%
1.64	²	0.34%	0.05 ²
0.01%		4-1	

4-1

	²	²	%	²				
	2660.26	487.59	18.33	457.7	21.63	6.57	1.64	0.05

2

(SL190-2007)

500 / (²)

2016 2030

2017

8

8

400 / ²

4-2

4-2

		2			/ 2.		
		2	0 5		400	8	400
		2				8	400

4.2

4.2.1

4.2.2

4.2.3

2.00 ²0.4 ²

4.3

4.3.1

1

2.00 ²0.30 ²

4-5

				/ 2
1				400

SL773-2018

:

M =R K L S B E A
K =NK

M

R

MJ / (2)

K

2 / (2 MJ);

K

2 / (2 MJ);

N

L

S

B

E

A

2

M =R K L S B E A

M

R

MJ / (2)

K

2 / (2 MJ);

L

S

B

E

A

$$L = \frac{100}{20} = 5$$

$$S = -1.5 + 17 / (1 + 2.3 \cdot 6.1) = 2.72$$

$$0.4 \cdot 5 = 2$$

$$0.2 \cdot 1 \cdot 3 = 0.6$$

$$0.3 \cdot 3 \cdot 5 = 4.5$$

$$35$$

$$35$$

$$35$$

4-6

						L	S
		99.03	100	0.3	2	1.58	0.98
		24.98	25	0.3	2	1.62	0.56

$$M = R G L S A$$

M

R

$$MJ / (\text{ }^2 \text{ })$$

G

$$^2 / (\text{ }^2 \text{ MJ })$$

L

S

A

2

4-7 4-8

4-7

		R		L	S	G	A
		6708.7	0.92	3.83	0.11	0.04	0.04

1

265

244

4-10

2

4-11

4-12

374

342

371

99.20%

4-8

		R MJ ² / ()	K ² / (MJ ²)	L	S	B	E		A ²		/ ²
		6708.7	0.0039	2.23	1.73	0.516	1	1	1.96	102	5208
		6708.7	0.0039	1.62	0.56	0.19	1	1	0.3	1.4	451

4-9

			R MJ ² / ()	G	L	S	A ²		/ ²
		0.92	6708.7	0.04	3.83	0.11	0.04	4	10401

4-10

			hm ²	a	t/km ² .a	t/km ² .a	t	t	t
1			1.96	2.5	400	5208	20	255	235
2			0.04	2.5	400	10401	1	10	9
							21	265	244

4-11

	hm ²	a	t/km ² .a	t/km ² .a	t	t	t
1	1.96	1	400	2090	8	102	94
2	0.04	1	400	10401	1	4	3
	2				9	106	97
1							

2

3

4.5

1

5

5.1

5.1.1

GB50433-2018

2.00 ²

5.1.2

1

5-1

5-1

					²
1					2.00
					0.04
					2.00

5.1.3

GB/ 50434-2018

1

2

1.0

3

2%

4

20%

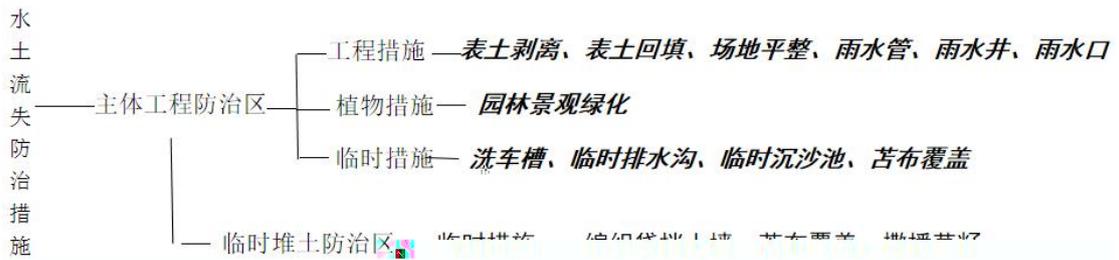
15%

()	*	98				* 98
	*	0.90	0.10			* 1.00
()	95	97		+2		95 99
()	92	92				92 92
()	*	98				* 98
()	*	25			-10	* 15

“*”

5.2

5.1



5.1

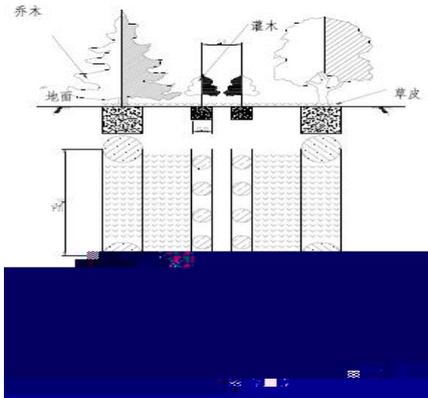
5.3

5.3.1

1	2021	8		
0.30 ³		30 40	0.12 ³	
2	2021	8		
0.30 ²				
3	2018	6	0.12 ³	
4	2019	8		

820 26 33

1	2021	9		
			0.30 ²	5-2

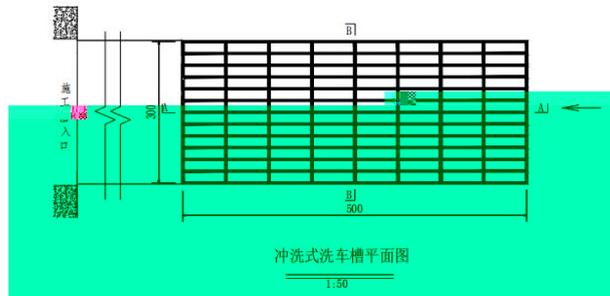


5-2

1	2018	6		
---	------	---	--	--

1

5-3



5.3

2	2018	6		
			630	
630				
3	2018	6		3
4	2018	7		
0.30				²
1	2018	7		
			0.04	²
2	2018	7		
			0.04	²
3	2018	7		
			80	

5.4

5.4.1

1

2

3

2

3 5

3 5

30

2 3

10

4

5.4.2

1

0.4

0.4

5.2

1			1
2			630
2.1		3	182.7
2.2		3	81.9
2.3	M10	2	756
2.4		3	100.8
3			3
3.1		3	13.74
3.2		3	3.24
3.3	M10	2	1.68
3.4	C25	2	8.34

6

6.1

6.1.1

1

2

2003 67

3

2018 6

1

2003 67

2

1995 37

1995 69

1995 008

3

2002 10

4

2007 670

5

2014 8

6

<

>

2016 132

7

2018

5

8

2019 448

6.1.2

2018 6

2.3%

0.55%

91 / 11.375 /

1

2.0%

1%

2

6.1

6%

8

1995 37

1995 69

1995 008

<

>

2014 8

1.00

92.95

67.65

15.27

45

12.11

13.42

4

5.15

2.00

7-2

6-2

		15.27				15.27	15.27
		15.27				15.27	15.27
		45.00				45.00	45.00
		45.00	6.75	38.25		45.00	45.00
		12.11				12.11	7.38
		10.90				10.90	6.17
		1.21				1.21	1.21
					13.42	13.42	
					1.42	1.42	
					5.00	5.00	
					4.00	4.00	
					3.00	3.00	
		72.38	32.63	184.88	13.42	85.80	
						5.15	
						90.95	
						2.00	
						92.95	67.65

6-3

					152734.80		152734.80
1		³	0.12	112970.12	13556.41		13556.41
2		³	0.12	37120.33	4454.44		4454.44
3		²	0.30	10578.39	3173.52		3173.52
4					131550.43		131550.43
4.1			820.00	146.02	119736.40		119736.40
4.2			26.00	252.21	6557.46		6557.46
4.3			33.00	159.29	5256.57		5256.57
					450000.00		450000.00
1		²	0.30	1500000.00	450000.00		450000.00
					80305.16	18610.08	61695.08
1			1.00	4000.00	4000.00		4000.00
2			630.00		49010.54		49010.54
2.1		³	182.70	31.17	5694.76		5694.76
2.2		³	81.90	497.59	21657.89		21657.89
2.3	M10	²	756.00	22.02	16647.12		16647.12
2.4		³	100.80	49.71	5010.77		5010.77
3			3.00		8684.54		8684.54
3.1		³	13.74	41.80	574.33		574.33
3.2		³	3.24	497.59	1612.19		1612.19
3.3	M10	²	1.68	22.02	36.99		36.99
3.4	C25	²	8.34	721.06	6013.64		6013.64
3.5		³	9.00	49.71	447.39		447.39
4		²	0.34	54448	18512.32	18512.32	
5		²	0.04	2444	97.76	97.76	
6			80		28708.8	28708.8	
6.1		³	120	211.15	25338		
6.2		³	120	28.09	3370.8		

6-4

			2018	2019	2020	2021	2022
		15.27	2.29			12.98	
		15.27	2.29			12.98	
		45.00				45	
		45.00				45.00	
		12.11	6.78	0.36	4.85	0.12	
		10.90	6.17		4.73		
		1.21	0.61	0.36	0.12	0.12	
		13.42	1.18	1.01	5.100	3.13	3
		1.42	0.18	0.01	0.10	1.13	0.00
		4.00	1.00	1.00		2	
		5.00			5.00		
		3.00					3
		85.80	10.25	1.37	9.95	61.23	3.00
		5.15	0.62	0.08	0.60	3.67	0.18
		90.95	10.87	1.45	10.55	64.90	3.18
		2.00			2		
		92.95	10.87	1.45	12.55	64.90	3.18

6-5

1		2.0%	1.42
2		2015 299	4.00
	2007 670		
3		2015 299	

	1.98 ²	0.3 ²
342		2022
	99%	1.25
99.46%	95.83%	98.86%
15%		7-6
	7-7	

6-6

			²	1.98	
%	98				99.00%
			²	2.00	
			/ ²	500	
	1				1.25
			/ ²	400	
			³	0.915	
%	99				99.46%
			³	0.92	
			³	0.115	
	92				95.83%
			³	0.12	
			²	0.87	
%	98		²	0.88	98.86%
			²	0.30	
%	15		²	2	15%

2012382

() □


 (2012382) 2012382 2012382 2012382 2012382 2012382 2012382 2012382 2012382 2012382

5	M10	2	22.02
6		3	497.59
7		2	54448
8		3	37120.33
9		3	49.71
10		2	2444
11			146.02
12			252.21
13			159.29
14			
14.1		3	211.15
14.2		3	28.09

7**7.1**

> 2018 133

<

2017 365

2019 160