

()

1958

55

2016

24.618

1 /

2021 11

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2021

250

25

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2022 4

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2019

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600

328

280

546

4

126.12

/

60.62

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130

/

13

0.5 /

150 /

2019

2021

1

2

1	2015	1	1		
2		2018	12	29	
3		2018	1	1	
4		2018	10	26	
5		2018	12	29	
6			2020	9	1
7		2019	1	1	
8	2004	8	28		
9	2019	4	23		
10		2012	7	1	
11		2018	10	26	
12		2018	10	26	
13		2021		2021	1 1
14		682		2017	10 1
15				2011	35
16		2008	38	2000	11
26					
17	2021	1	1		
18				2013	37
19				2015	17
20				2016	31
21				2005	22
22				2005	152
23					2012

77

24 2012 98

25

2022 26

26 2014 31

27 2019 1 1

28 2015 4

29 2019 2021 2021 12

27

30

2017 84

31

2019 2

32

2017 43

33 2020 171

34 2019 25

35 < > 2019

56

1 2016

2 2019

3 <

> 2016 2146

4

2011 143

5 2017

6 2011
52
7
2012 9
8
2012 103
9
2012 20
10
2016 151
11
2016 152
12 0

∧



50 (100)

8	HJ169-2018
9	HJ884-2018
10	HJ991-2018
11	
HJ944-2018	
12	
13	HJ 194-2017
14	GB 18218-2018
15	HJ/ 91-2002
16	HJ/ 164-2020
17	HJ/ 166-2004
18	HJ 819-2017
19	
HJ863.4-2018	
20	(HJ 953-2018)
21	
	2018 9
22	GB 34330-2017
23	HJ 298-2019
24	HJ 1091-2020
25	GB/ 14158-1993
	DD2008-01
	GB50027-2001
26	HJ/ 338-2007
27	GB50487-2008
	GB50021-2001 2009

- 1
- 2 1 /
- 3 1 /
- 4

			H C D B D ₅ — H ₂			
			A			
				1.2-2	1.2-3	

	/	/	/		/	/	/	/
		/		/	/	/	/	/
	/	/	/		/	/	/	/

		$2 \begin{matrix} \nearrow \\ \text{A} \end{matrix} M_{2.5} C \quad 3$ $C \quad C \quad)$	$2 \begin{matrix} \nearrow \\ M_{2.5} \end{matrix}$
		H C D B D ₅ LA	/
		H () K ⁺ $\begin{matrix} \nearrow \\ \text{A} \end{matrix}$ C ²⁺ $\begin{matrix} \nearrow \\ \text{A} \end{matrix}$ ²⁺ C _{3²⁻} HC ₃₋ C ⁻ _{4²⁻}	C D C ⁻
		A	A
		1,1- 1,2- 1,1- -1,2- -1,2- 1,2- 1,1,1,2- 1,1,2,2- 1,1,1- 1,1,2- 1,2,3- 1,2- 1,4- + 2- , 1,2,3-	/
			/

1

2019 2035

GB3095-2012

2

2019 2035

GB3838-2002

GB3838-2002

GB3838-2002

3

2019 2035

GB3096-2008 3

GB3096-2008 2

1		
2		III
3		3 2
4		
5		
6		
7		
8		
9		
10		
11		
12		

1

2  M₁₀ 3 C

GB3095-2012

GB3095-2012

HJ 2.2-2018 D

1.2-6

		/ 3	60	GB3095-2012
	24		150	
	1		500	
			40	
	24		80	
	1		200	
M _{2.5}			35	
	24		75	
M ₁₀			70	
	24		150	
			200	
	24		300	
3	8		160	
	1	200		
	1	20		
		7		
C	24	/ 3	4	
	1		10	
		/ 3	0.5	
			0.005	
			0.006	
			60	
	1	/ 3	50	HJ 2.2-2018 D
			15	
	1	/ 3	200	

2

GB3838-2002

GB3838-2002

GB3838-2002

1.2-7



H	6 9	6 9	6 9
	0.2	0.3	0.4
	20	30	40
	4	6	10
	1.0	1.5	2.0
	0.2	0.3	0.3

	1.0	1.5	1.5
	0.05	0.5	1.0
	250	250	250
	0.05	0.05	0.1
	/	/	/

2

GB/ 14848-2017

1.2-8

1	H	6.5 8.5
2		3.0
3		450
4		0.5
5		1
6		20
7		250
8		0.002
9		0.05
10		0.01
11		0.001
12		0.05
13		0.01
14		0.005
1		

7

3	65	55
2	60	50

4

GB36600-2018

1.2-10

28	1,2-	95-50-1	560	560	560	560
29	1,4-	106-46-7	5.6	20	56	200
30		100-41-4	7.2	28	72	280
31		100-42-5	1290			

6	3/	10000		/	/	
7		/		1.0		GB16297-1996
8		/		1.5		GB14554-93

2

GB8978-1996

1.2-12

GB18918-2002

A

	H		C D	B D ₅	
	6 9	400	500	300	-

3

GB12348

2008 3

GB12348 2008

2

1.2-13

		GB 12523 2011	70 55
		GB 12348 2008 2	60 50
		GB 12348 2008 3	65 55

4

GB 18599-2001

GB 18597-2001

2013

E J2.2-2018

HJ2.2-2018

AE C EE 

> >

10%

D_{10%}

/ 100%

%

C

1


/ ³

C₀

/ ³

GB3095 1

8

1		2	0.465	0.09	0
			4.390	2.14	0
			1.980	0.22	0
		HC	1.740	3.48	0
			0.362	1.81	0
2	+		64.10	7.12	0
3			0.461	0.23	0

1.3-3

	10%
	1% <10%
	<1%

+

7.12% $D_{10\%}=0$

HJ 2.2-2018

HJ2.3-2018

5.2.2.2

B

HJ610-2016

1.3-4

2019 2035

HJ 610-2016 1

HJ610-2016 2

1.3-5

GB3096-2008

3

HJ2.4-2021

1.3-6

	0	>5 B(A)	
	1 2	3 B(A) 5 B(A)	
	3 4	<3 B(A)	

HJ 169-2018 A

10

1

HJ 169-2018

HJ964-2018 A

1000

4.6² 5²

1.3-7 1.3-8

									-
								-	-
									-

2²

HJ19-2011

B

3

22.10 2

4

200

5

6

1000

7

200

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2019-2035

2019 8

2019 9

E

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Q

2020 6

1.4-1

1.4-2

HJ1091-2020

1.4-3

2020 /

HJ1091-2020

1

2



**1
1/4**

**1
1/2**

&

ú

5		GB31574		GB31574

1		2012	2013 21 2012 31	2011	2019	2018
					2019 2035	
					2019 2035	2019 8

2007
0000000000 000

2016

20 2021

F

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21

37
17
2016 31

2013
2015

2013 37

2015 17

2016 31

				GB18597-2001 2013
3		4		
		98%	3%	2 3%
4				98%

	1			
	2			
	3		GB31574-2015	
	4	GB34330	GB31574-2015	

2.5-1

	1			503	500		GB3095-2012
	2			630	800		
	3			1749	2300		
	4			1662	2000		
	5			449	50		
	6			383	500		
	7			665	230		
	8			712	140		
	9			1328	800		
	10			1527	200		
	11			1497	200		
	12			1770	600		
	13			1680	2000		
	14			1764	300		
	15			1506	400		
	16			1200	300		
	17			1497	40		
	1			1867	/	/	GB3838-2002
	2			4104	/	/	GB3838-2002
	3			3263	/	/	GB3838-2002

	1			383	500		GB/ 14848-1993	
	2			449	50			
	3			1497	200			
	4			1328	800			
	1			383	500		GB36600-2018	
	2			449	50			
	3			1497	200			
	4			1506	400			
	1							/

6
4 3000 ²
10000 4800 /
1700 / 3500 /

1 /

2365.77

313.1

6 E108 33 44 ~~22 42 55~~

1
3075 ²
6

300 /

3 /

8 /

9

7795 A 95%

2400

2.2-1

		2	
		1	
		2	
		381 /	
		47.25 /	
		96 ^{3/}	
		1	
		600 ² 20.35	
		60 ² 20.35	
		105 ² 19.80 0.5*0.5*0.5	

2.2-2

1		4800	H 48 2021
2		1700	
3		3500	
4		195	


200 /

4%

2400 /

4800 /

2.2-3

		1#	2#	3#	
1	A	47.11	54,46	3.78	35.117
2	A	36.67	48.67	59.19	48.176
3	C	0.0070	0.056	0.036	0.033
4		0.0001	0.0001	0.0001	0.00005
5		0.011	0.24	0.0080	0.0863
6	C	0.0001	0.0001	0.0001	0.00005
7		0.0057	0.0033	0.0018	0.0036
8	C	0.0033	0.018	0.0053	0.00886
9	C ⁶⁺	0.00005	<0.00005	0.00005	0.000025
10	F	0.36	0.30	0.82	0.493
11	M	0.0081	0.027	.43	0.488
12	M	.52	0.22	0.13	0.623
13	K	0.005	<0.005	0.12	0.04
14		0.37	0.37	0.054	0.264

GB50085.5-2007

2021

H 48

321-024-48

H 48 321-025-48

H 48 321-026-48

>

2.2-4

H 48		321-024-48			4800
		321-025-48			
		321-026-48			
		321-034-48			

5 6 7

1 3

	5	99%		600
	6			
	7			
	1	99.2%		2500
	3			

2.2-6

1			2
2			1
3			2

4

1

I

GB 18597-2001

10^{-7} / 2

2

10^{-10} /

				HC 20%	
				2 HC	

AL KEC

90%

1

2

3

90%

4

1

2

/

90%

- 1 9-19 0 9 8 19
- 2 60 ³/ -
- 3 70-100 K
- 4 4 5 /
- 5 0 6 /
- 6 360
- 7

- 1 24
- 2 30 /
- 3 700 760 660
- 4
- 5 500 600 2000
- 6 30

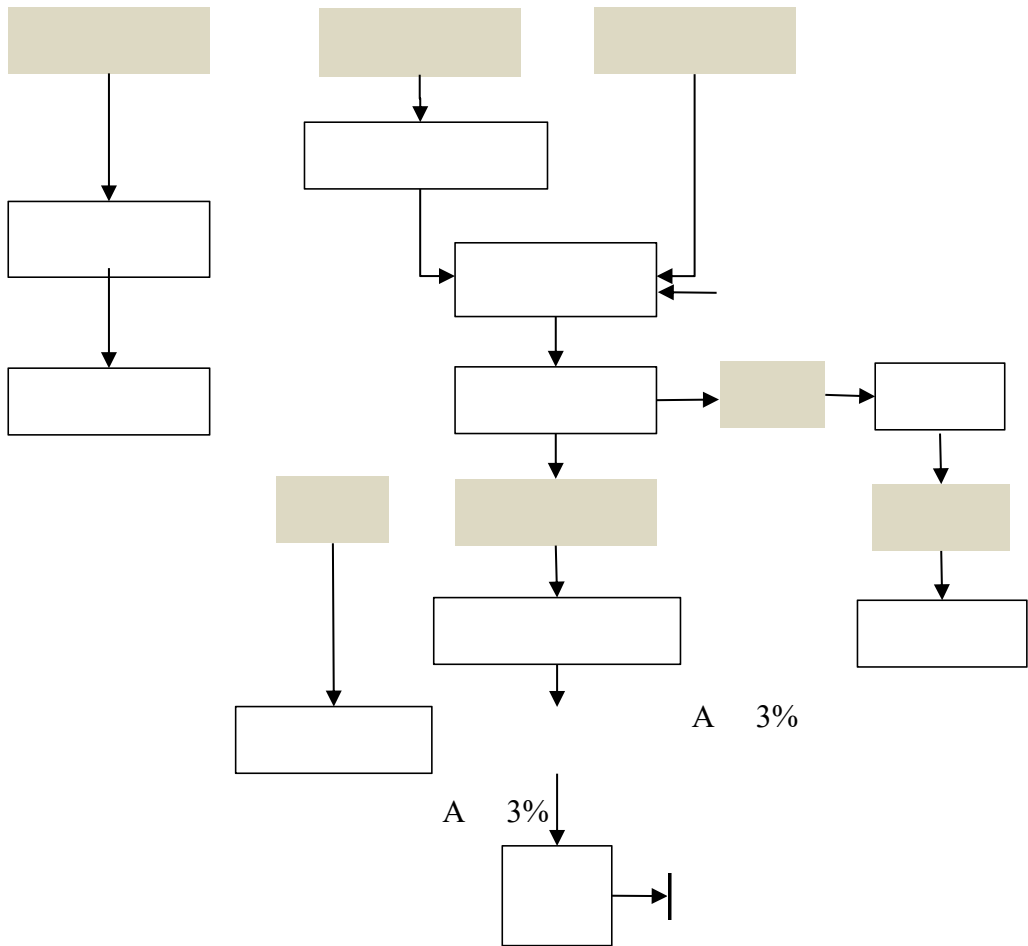
90 %


2

1

3

4



	G1			25	
	G2				
	1		C D B D ₅ — H ₂ 		
	2		/		/
	1				/
	2				/
	3				
	4		/		/
	5		/		/

2.4-1

1

/

1.2 20 /

10
5 /

0.5 /


2

1

250

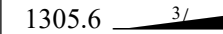


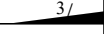
100

25

96  ^{3/}

3200 ^{3/}

C33-C37

	13.6 ^{3/ 3}	96	1305.6  ^{3/}	1305.6  ^{3/}	
2	0.0002 / ³		0.192 /	0.192 /	
	0.00187 / ³	 ^{3/}	1.796 /	1.796 /	
	0.000286 / ³		0.275 /	0.0014 /	99.5%

10

/

2.5%

4800 /

1700 /

162.5

/

160.875 /

99%

1.625 / 1%

0.804 / 99.5%

HC

~~C KC~~

650 700 C

~~C KC~~

802 C

1465 C

770 C

1420 C

HC

H⁺ C⁻

10

27.60 /

0.027 /

21.67 / 6500 /

0.021 /

0.151 /

1423 C

2500 C

~~C KC AF~~

A_{2 3}

A F₃

10

27.60 /


0.031 /

21.67 / 6500 /

0.024 /

0.173 /

750 1740 2567 700 750 680
 2670 2730 1962
 2400 /
 10 /
 0.5% 12 / 0.6 /
 5% 11.4 / 95% 99.5%
 0.057 /

2	12000	2.222	0.027	0.192	7200	2.222	0.027	0.192
		20.787	0.249	1.796		20.787	0.249	1.796
		1997.11	23.96	172.55		9.988	0.119	0.863
HC		1.75	0.021	0.151		1.75	0.021	0.151
		2	0.024	0.173		2	0.024	0.173

95%

2.6.1.1

1.625 /

95%

95%

2.6.1.1

0.6 /

0.005 /

2400 /

0.012 /

10 /

=0.123 /5 /6.8^{0.65} /0.05^{0.72}

/ . 10 /

2 0.05 /²

300

2 2400 / 0.04 /

=0.123 10/5 2/6.8^{0.65} 0.05/0.05^{0.72}=0.111 /

2400 /

5%

13%

0.1%

2400 5% 13% 0.1%

$$17/41=0.007 /$$

+		2.225	0.309	25 20	20.35	7200
		0.012	0.0016	25 20	20.35	7200
		0.04	0.006	/	/	7200
		0.007	0.001	7 15	19.80	7200

99%

2 1

1

9

300

80L/

80%

172.8 /

2

0.5 ^{3/} 150 ^{3/}

3

2 

	C D	300	0.0007		15	255	0.0006
	B D ₅	200	0.0005		10	180	0.0004
		200	0.0005		30	140	0.0004
		25	0.0001		4	24	0.0001

2.6-5

1		1	80		60
2		2	85		65
3		1	90		60
4		1	80		60
5		1	85		55
6		1	90		60
7		1	90		60
8		1	80		60
9		1	80		60

1

9

300

0.5 /

1.35 /

2

GB50015-2019

4.10.15-2

0.2L

9

0.54 ^{3/}

1.5 / ³

0.81 /

3

0.5 /

4

2021


H 48

0.5

700

1		2225.213			H 48	321-026-48	
2		171.687				321-034-48	
3		0.5 /			H 08	900-214-08	
4		1.35 /			/	/	
5		0.81 /			/	/	

2.6-7

	2	/	0.192	/	0.192
		/	1.796	/	1.796
		/	172.55	171.687	0.863
	HC	/	0.724	/	0.151
		/	0.148	/	0.173
		/	2.237	/	2.237
		/	0.04	/	0.04
		/	0.007	/	0.007
	C D	/	0.0007	0.0001	0.0006
	B D ₅	/	0.0005	0.0001	0.0004
		/	0.0005	0.0001	0.0004
		/	0.0001	/	0.0001

		/	2225.213	/	2225.213
		/	171.687	/	171.687
		/	0.5	/	0.5
		/	1.35	/	1.35
		/	0.81	/	0.81

99%

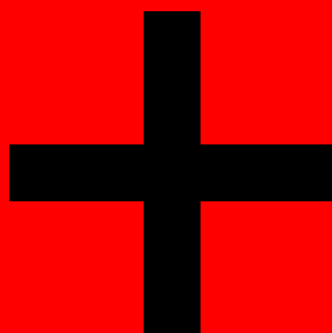
2 / 1

	25/100		99%	19.17	0.23	1	2

107 19 109 38 22 12 24 02 108 22 22 48
 22112 ² 6479 ²

1
 75.0 165.0 15 25 90.0

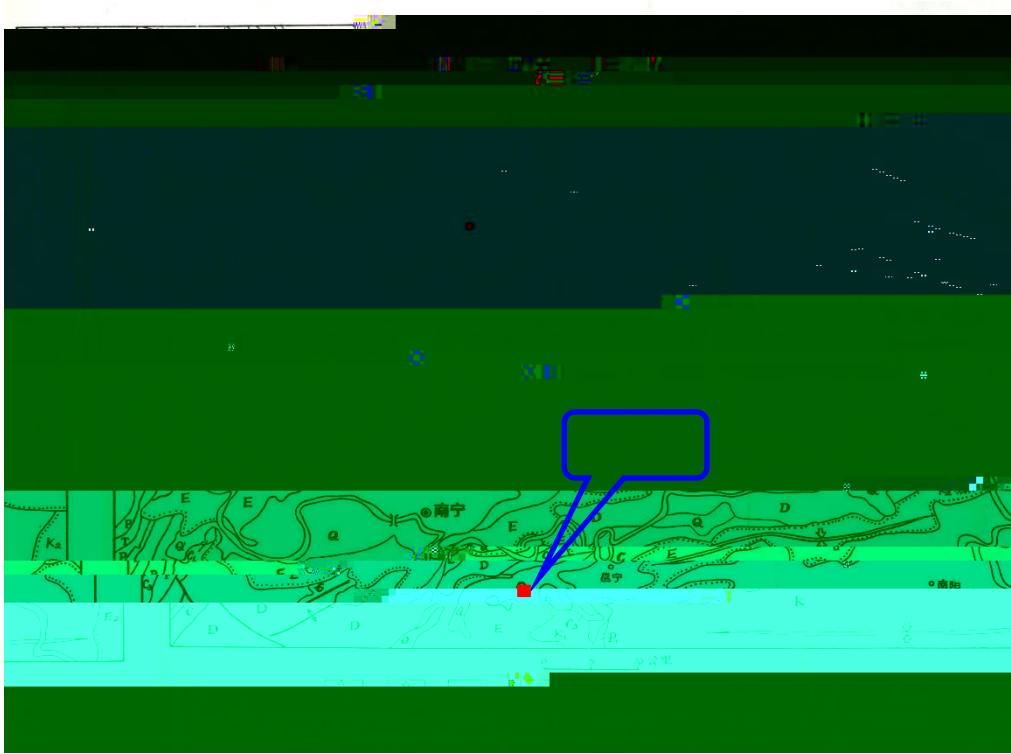
2 80.0



400

K
 - - 26
 15 30 E
 3.4
 - - 30
 10 25 K
 3.2
 140 65 25 40
 300
 21
 1989 1970
 3 84
 (GB18306-2015)
 0.10 0.35 GB50011-2016
 A
 C
 K E
 1
 1 C3
 292 375
 2 C2
 128 200
 3 C1
 158 200

2	K			
1		K1 -1	1221	
2		K1		417
3		K1	885	
3	E			
1		E2		20 30
				90 280
2		E1	5 10	
		70 360		
4				0 30.0



1 20

2

1

2

1 20

1

1

0 30

1 20

0.02

0.05L/

0.5 1.0 L/ ²

10 30

2

225

238

225

238

900 545L/

4.1 L/ ²

2

E1

5 10

225

900L/

4.1L/ 2

10 20L/

3

K1 K1 K1 -1

E2

1 20

0.1 1.0L/

1 20

225 238

1 225
225

10 3 2 30 50

20 25

4.0

1

C

002 003 226 10 ,

220 40

50 300

003

003 226 0.36
0.22 900L/ 4.1L/ 2
2 238
238
500 700
10 130
800 300
545L/
4.19L/ 2
10 25 84.81 108.6 95.0 99.0
E
1
1 4
1.50 8.90
2 4
0.50 10.1

2

E

E1

70 360

351 10

1

2

E1

5 10

0 1.80

76.30 83.60

5.00 7.20

12.10

D1

83.60

D2

76.30

0.60

7.30

12.10

2006 11

2007 12 25

2007 259

2011

7.76 ²

12.81 ² 2011

2011 329

2018

69.79 ²

2019

2019

2019 8)

2019

(2015-2035)

25.64

2019-2035

2019

9

1

220K

110K

110K

110K

220K

110K

110K

2

3

1.5 ^{3/}

4


2019-2035

3.2-1

1		/	/	/	/	/	0.002	/	/		0.6		/	/	/
2		/	/	/	/	/	0.01	/	/		0.2		/	/	/
		/	/	/	/	/	0.012	/	/	/	0.8		/	1.55	/

2020
 95%
 GB3095-2012

2020
 M₁₀
 8 90%
 M_{2.5}

2		8	60	13.3	
		18	40	45.0	
C		1100	4000	27.5	
3	8	120	160	75.0	
M ₁₀		44	70	62.9	
M _{2.5}		26	35	74.3	

2022 5 16 2022 5 22

1

2

3.3-2

A1		/	/	
A2			/	

2

HJ664

3.3-3

HC	1	1 4 02 00 08 00 14 00 20 00	7
A C		20	
		24	
C)	1	02 08 14 20	
	1	02 08 14 20	

HJ664

1		HJ 549-2016	0.02 / 3
			0.010 / 3
2		GB/ 15432-1995	0.001 / 3
3		HJ 777-2015	0.003 / 3
4			0.005 / 3
5			0.004 / 3
6			0.3 / 3
7		2003	4 10 ⁻⁵ / 3
8		HJ955-2018	1 0.5 / 3
			0.06 / 3
9		HJ 533-2009	0.01 /

1

HJ2.2-2018

HJ2.2-2018

$$C = \text{MAX}\left[\frac{1}{C}, 1\right]$$

C

/ 3

C

1 8

/ 3

I

%

C

/ 3

C

/ 3

I 1

I 1

=

/

100%

2

1

GB3095-2012

1

HJ 2.2-2018

D

2020
 95%
 GB3095-2012
 M₁₀
 8
 90%
 M_{2.5}
 2020

2022 5 16

-2022 5 18

1

3.4-1

1		100	
2		500	
3		500	
4		500	

2

H C D B D₅

1

3

2

HJ/ 91-2002

3.4-2

1		GB/ 13195-1991	
2	H	H GB/ 6920-1986	0.01
3		GB/ 11901-1989	4 /L
4		HJ828-2017	4 /L
5		(B D ₅) HJ 505-2009	0.5 /L
6		GB/ 11903-1989	
7		HJ 535-2009	0.025 /L
8		GB/ 11893-1989	0.01 /L
9		GB/ 7467-1987	0.004 /L
10		F ⁻ C ⁻ _____ 3 ²⁻ 4 ²⁻ HJ 84-2016	0.018 /L
11		HJ 637-2012	0.01 /L
121		GB/ 7494-1987	0.05 /L
13	F ⁻	F ⁻ C ⁻ _____ 3 ²⁻ 4 ²⁻ HJ 84-2016	0.006 /L

1

HJ 2.4-2018

$$. = C . / C$$

1

C .

C

D

$$S_{DO,j} = DO_s / DO_j \quad DO_j \leq DO_f$$

$$S_{DO,j} = \frac{|DO_f - DO_j|}{DO_f - DO_s} \quad DO_j > DO_f$$

D

D

/L

D

/L

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$$D = 468 / 31.6 +$$

$$D = 491 - 2.65 / 33.5 +$$

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GB3838-2002

GB3838-2002

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L63-94

2022 5 16

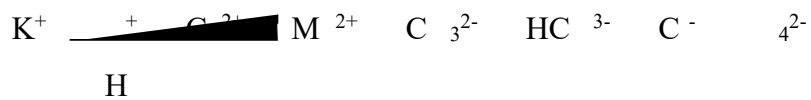
1

3.4-1

D1	=36552221.80, =2514984.60	42	1.80	83.60			
D2	=36552104.80, =2514394.80	46	0.00	76.30			
D3	=3655477.20 =2515087.10	38	0.00	78.80			

D4	=36554403.80, =2514294.70	40	0.00	86.60			
D5	=36553877.90, =2513925.70	47	0.00	85.40			





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3.5-2

1	H	H	GB/ 6920-1986	0.01
2			HJ 535-2009	0.025 /L
3			F ⁻ C ⁻ 	0.016 /L
4		3^{2-} 4^{2-}	HJ 84-2016	0.016 /L
5			F ⁻ C ⁻ 	0.006 /L
6		3^{2-} 4^{2-}	HJ 84-2016	0.007 /L
7				0.018 /L
8			4 ⁻ HJ 503-2009	0.0003 /L
9		3 ⁻	HJ 484-2009	0.001 /L
10				0.3 /L
11			HJ 694-2014	0.04 /L
12			GB/ 7467-1987	0.004 /L
13			ED A GB/ 7477-1987	5 /L
14		11.1	GB/	2.5 /L

		5750.6-2006	
15		9.1 GB/ 5750.6-2006	0.5 /L
16		32 HJ 776-2015	0.01 /L
17			0.01 /L
18			0.009 /L
19			0.05 /L
20			0.12 /L
21			0.02 /L
22			0.003 /L
23		8.1 GB/ 5750.4-2006	/
24		GB/ 11892-1989	0.5 /L
25		32 HJ 776-2015	0.007 /L
26		HJ 970-2018	0.01 /L
27		GB/ 16489-1996	0.005 /L
28		D / 0064.49-1993	5 /L
29			5 /L

HJ610-2016

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GB14848-2017

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GB/ 14848-2017

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				150	300		1,1,2,2-
				300	600		
4		E108 30 45.91 22 42 54		0	50		1,1,1- 1,1,2-
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				150	300		1,2,3-
				300	600		
5		E108 30 45.16 22 42 55		0	50		1,2- 1,4-
				50	150		
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6		E108 30 45.86 22 42 54		0	20		+ - -
7		E108 30 45.60 22 42 55		0	20		2-
8		E108 30 36.51 22 42 58		0	20		
9		E108 30 31.40 22 46 41		0	20		,
10		E108 30 1.00 22 42 27		0	20		1,2,3-
11				0	20		

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3.7-2

1				0.1	/
2			GB/ 17141-1997	0.01	/
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4		2	GB/ 22105.2-2008	0.01	/
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6				1	/

7		HJ 491-2019	3 /
8			1 /
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12	1,1-		1.2 /
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19	1,1,1,2-		1.2 /
20	1,1,2,2-		1.2 /
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22	1,1,1-		1.3 /
23	1,1,2-	- HJ 605-2011	1.2 /
24			1.2 /
25	1,2,3-		1.2 /
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30	1,4-		1.5 /
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33			1.3 /
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36	2-	HJ 703-2014	0.04 /
37			0.09 /
38			0.001 /
39			0.1 /
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41		HJ 834-2017	0.2 /
42			0.1 /
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46			0.09 /
47		HJ 873-2017	63 /
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1	2	2.222	0.027	0.192
2		20.787	0.249	1.796
3		9.333	0.112	0.863
4	HC	1.75	0.021	0.151
5		2	0.024	0.173
		2		0.192
				1.796
				0.863
	HC			0.151
				0.173
		2		0.192
				1.796
				0.863
	HC			0.151
				0.173

1	+			GB16297-1996	2.225
2			1		0.012
3		/			0.040
4		/	/	1.5	0.007

				GB14554-93		
						2.277
						0.007

1	2	0.192
2		1.796
3		3.140
4	HC	0.151
5		0.173
6		0.007

1		99%		19.17	0.23	1	2	

172.8 /

	172.8	C D	300	0.0007		255	0.0006
		B D ₅	200	0.0005		180	0.0004
			200	0.0005		140	0.0004
			25	0.0001		24	0.0001

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1		C D B D ₅			/	/	/	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

1	/	0.01728				B D ₅	20
						C D	60
							8
							20

1	/	C D	<u>GB31574-2015</u>	500
2		B D ₅		300
3				400
4				

1	/	C D	255	0.0000144	0.00432
		B D ₅	180	0.0000096	0.00288
			140	0.0000096	0.00288
			24	0.0000024	0.00072
		C D			0.00432
		B D ₅			0.00288
					0.00288
					0.00072

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$$K=5.75 \cdot 10^{-5} /$$

1 (01)				2 (02)			
		F 2	3/			F 2	3/
30	30	900	3.5	30	30	900	2.7
— ————— 6.5 10 ⁻⁵ /				— ————— 5.0 10 ⁻⁵ /			
— 5.75 10 ⁻⁵ /							

$$K=1.60 \cdot 10^{-5} /$$

					/	/	/		
K2	1.50 3.50	130	3.50	3.50	1.08 10 ⁻²	1.25 10 ⁻⁵	1.60 10 ⁻⁵	4	
K4	2.00 8.00	130	8.00	8.00	1.79 10 ⁻²	2.08 10 ⁻⁵			

$$K=2.2 \cdot 10^{-1} /$$

	$\frac{0.366}{\quad} \frac{1.6}{\quad} 10 \sqrt{\quad}$						
	()	3/	()	L()	()	K(/)	K(/)
K1	0.055	36.384	5.8	26.35	26.86	0.2144	2.5 10 ⁻⁴
K2	0.055	38.712	5.67	49.47	22.64	0.1595	1.8 10 ⁻⁴
K3	0.055	51.936	1.85	17.8	23.16	1.5667	1.8 10 ⁻³

$$K=5.73 \cdot 10^{-6} /$$

		/	/	/		
K1-1	9.00 9.20	3.25 10 ⁻³	3.77 10 ⁻⁶	5.73 10 ⁻⁶		
K1-2	9.80 10.0	6.64 10 ⁻³	7.69 10 ⁻⁶			

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HJ610-2011

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	10 15	4			5 9
	15 20	2			4 9
	20	1			4 9
/	0 50	1	I		4 9
	50 100	3			2 10
	100 175	6			9 10
	175 250	8			1
	250	9		/	3
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	2 6	9			5
	6 12	5			6
	12 18	3		/ /	6
	18	1			7
		10	/	/	7
		10			8
		9			9
		8			10
		7		0 50	1
		6		50 100	2
		4		100 150	3
		3		150 200	4
		2		200 300	6
		2		300 400	8
	/	1		400	10

23 75		
75 100		
100 125		
125 150		
150 230		

	D					I	
	1	2	250		6	12	105
			9	6	1	5	3
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	27		18	24	4	5	12
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HJ610 2016

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HJ610 2016

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$$K=7.5 \cdot 10^{-4} /$$

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$$M=2.10$$

$$K=3.68 \cdot 10^{-5} / \quad 0.043 /$$

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$$=M/K=2.10/0.043=48.8$$

M

K

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GB/ 14848-2017

GB/ 14848-2017

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L () A.2

$$L_p(r) = L_p(r_0) - A \quad (A.2)$$

A L () 8 A.3

$$L_A(r) = 10 \lg \left\{ \sum_{i=1}^8 10^{[0.1L_{Pi}(r) - \Delta L_i]} \right\} \quad (A.3)$$

L B
L A B B
A

A A.4 A.5

$$L_A(r) = L_{Aw} - D_{A,r} = A_{A,r} \quad (A.4)$$



A A 500H

A A A A

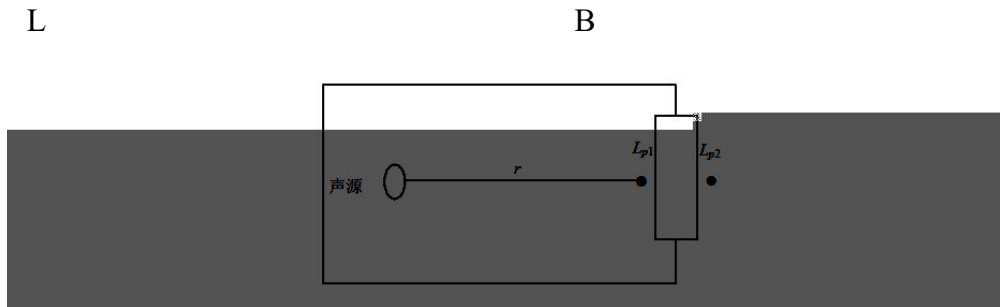
2

4.5-1

L 1 L 2

A.6

$$L_{p2} = L_{p1} - (TL + 6) \quad (A.6)$$



A.7

$$L_{p1} = L_w + 10 \lg \left(\frac{Q}{4\pi r^2} + \frac{4}{R} \right) \quad (A.7)$$

$$= 2 \quad = 4 \quad = 1 \quad = 8$$

$$= \frac{1}{(1 - \dots)} > \dots > 2$$

A.8

$$L_{p1i}(T) = 10 \lg \left(\sum_{j=1}^N 10^{0.1 L_{p1ij}} \right) \quad (A.8)$$



A.9

$$L_{P2i}(T) = L_{P1i}(T) - (TL_i + 6) \quad (\text{A.9})$$

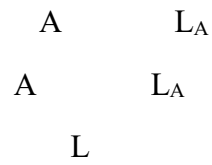


A.10

$$L_{\bar{w}} = L_{P2}(T) + 10 \lg s \quad (\text{A.10})$$

A

3



$$L_{eqg} = 10 \lg \left[\frac{1}{T} \left(\sum_{i=1}^N t_i 10^{0.1L_{A,i}} + \sum_{j=1}^M t_j 10^{0.1L_{A,j}} \right) \right] \quad (\text{A.11})$$



GB12348-2008

3

4.5-2

3	65	55

4.5-4

1		42.0	65	0	42.0	55	0
2		45.4		0	45.4		0
3		39.2		0	39.2		0
4		45.1		0	45.1		0

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GB12348-2008 3

HJ610-2018 A

4.6-1

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4.6-2

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DB36/1282-2020

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0.432 0.864 1.296 /

0.021 /

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4.7-1

1		2225.21 3		H 4 8	321-02 6-48		
2		171.687		H 4	321-03		

				8	4-48		
3		0.5		H 0 8	900-21 4-08		
4		1.35	/	/	/		
5		0.81	/	/	/		

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GB18597-2001

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4.7-1

1				96 ^{3/}	0.08 / 133.33 ^{3/}
2				4800	2400
3				0.500	0.125
4				2225.213	2225.213
5				171.687	171.687

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HJ169-2018

4.7-2 2

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1				503	500
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4				1662	2000
5				449	50
6				665	230
7				712	140
8				1328	800
9				1527	200
10				1497	200
11				1770	600
12				1680	2000
13				1764	300

	14			1506		400
	15			1200		300
	16			1497		40
	500					50
	5					11360
	E					E2
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	E					E3
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HJ169-2018 B

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HJ169-2018 B

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1		8006-14-2	0.08 / 133.33 ^{3/}	50	0.0016

6			0.125	2500	0.00005
8		/	4800	/	/
10		/	2225.213	/	/
11		/	171.687	/	/
					0.00165

HJ 169-2018

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	+			
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HJ 169-2018 A

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HJ 169-2018

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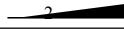
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4.8-5

4.8-6

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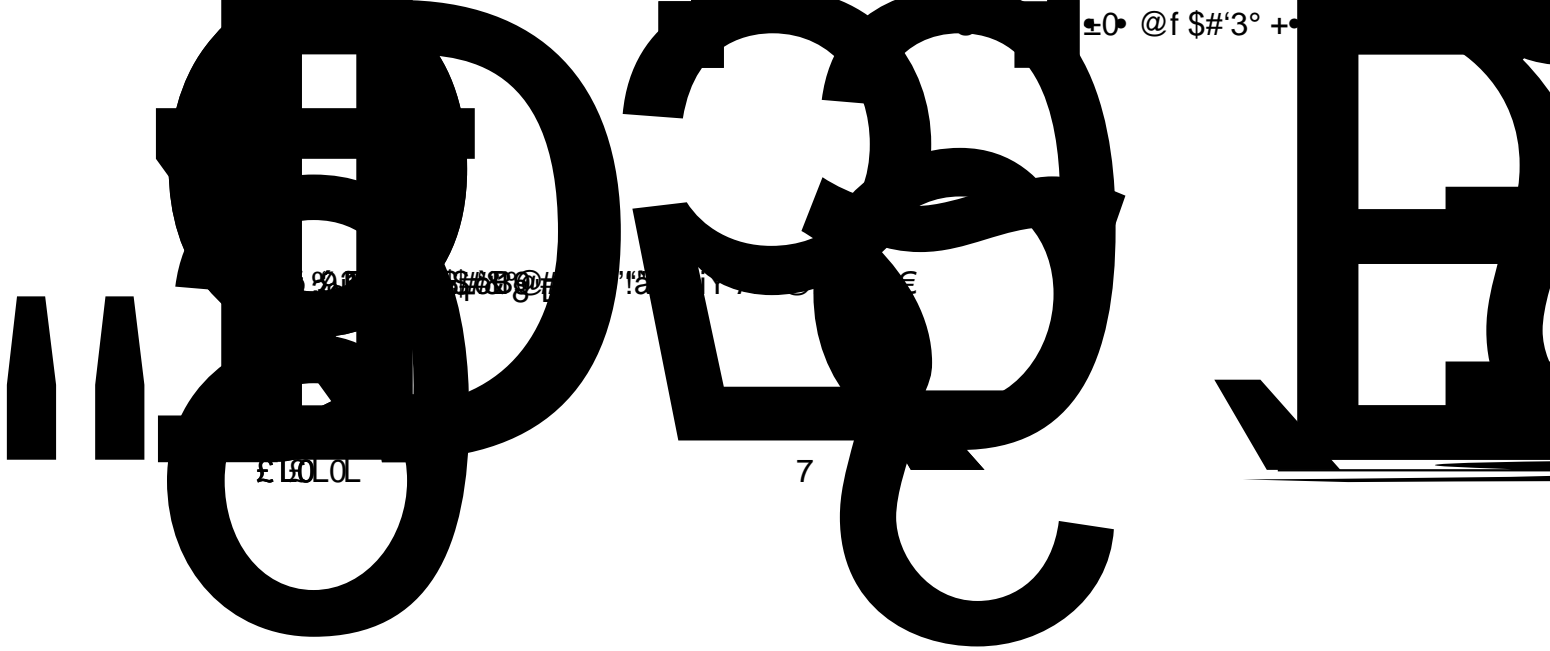
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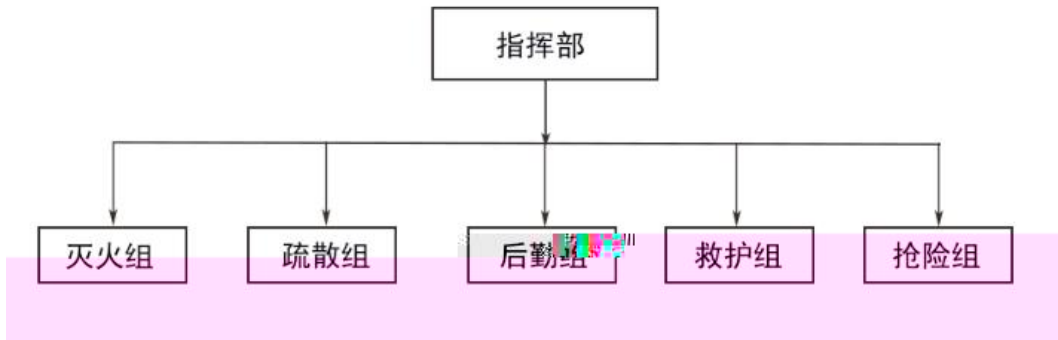
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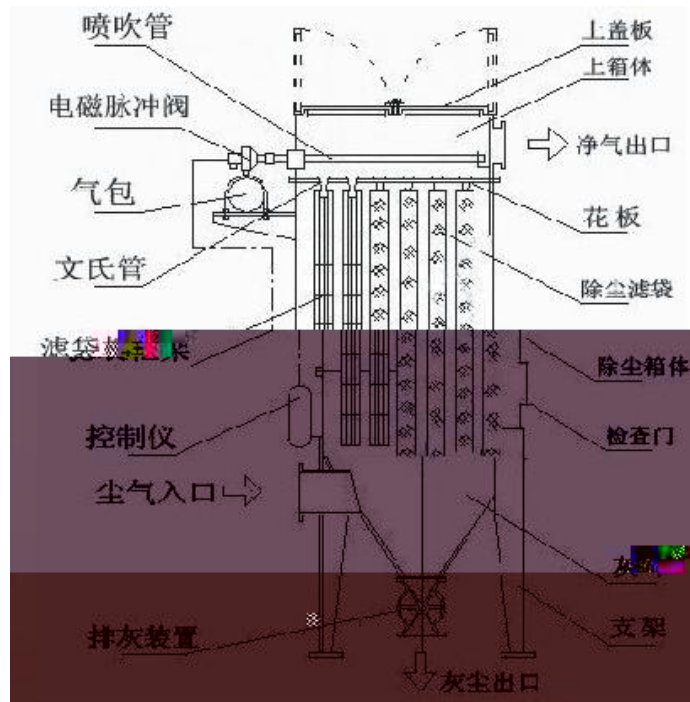
HJ863.4-2018

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GB31574-2015

99%

GB31574-2015 3

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GB31574-2015

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GB31574-2015

GB/ 3840-91

GB/ 3840-91

1.5

$\bar{=}$ 2.303 1/K 1+1/K

$\bar{K=0.74+0.19}$

K

GB/ 3840-91

		0.8	25	3.3	14.49	4.39

GB/ 13201-1991

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GB/ 13201-1991

(GB3095-2012)

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GB12348-2008 3

GB18597-2001

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HJ964-2018

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	2			0
	3			0.5
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	1			250
				0
	2			35
				0
	3			20
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	6			0
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10			313.1	
				313.1

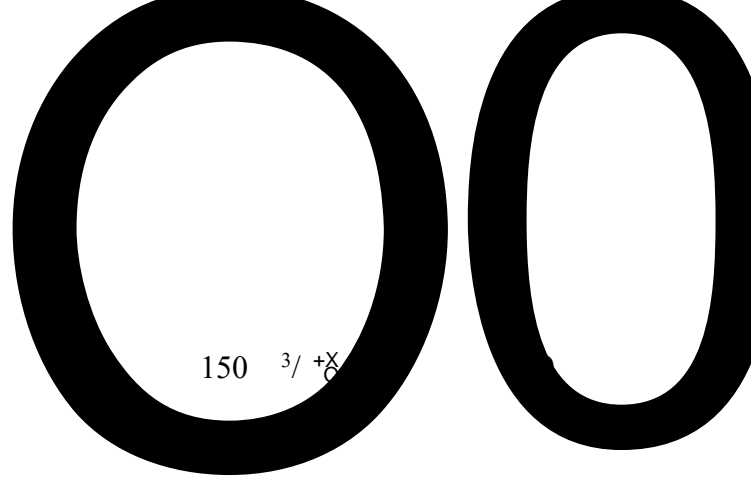
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HJ953-2018

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				GB14554-93
		H		GB31574-2015

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7.4-1

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			HC	(GB31574-2015)
				GB14554-93
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