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1	.....	1
1.1	.....	1
1.2	.....	3
1.3	.....	3
1.4	.....	4
1.5	.....	4
2	.....	6
2.1	.....	6
2.2	.....	10
2.3	.....	11
2.4	.....	13
2.5	.....	18
2.6	.....	24
2.7	.....	25
3	.....	27
3.1	.....	27
3.2	.....	30
3.3	.....	31
3.4	.....	31
3.5	.....	32
3.6	.....	33
3.7	.....	42
3.8	.....	61
3.9	.....	61
3.10	.....	64
3.11	.....	64
4	.....	66

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4.1	.....	66
4.2	.....	66
4.3	.....	70
4.4	.....	71
4.5	.....	74
4.6	.....	76
4.7	.....	78
4.8	.....	79
4.9	.....	79
4.10	.....	79
5	.....	81
5.1	.....	81
5.2	.....	81
5.3	.....	88
5.4	.....	88
5.5	.....	107
6	.....	109
6.1	.....	109
6.2	.....	112
7	.....	115
7.1	.....	115
7.2	.....	116
7.3	.....	119
7.4	.....	131
7.5	.....	132
7.6	.....	154
8	.....	155
8.1	.....	155
8.2	.....	155

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9	.....	180
9.1	.....	180
9.2	.....	186
9.3	.....	189
9.4	.....	196
9.5	.....	202
10	.....	203
10.1	.....	203
10.2	.....	203
11	.....	214
11.1	.....	214
11.2	.....	214
11.3	“ ” .....	215
11.4	.....	215
11.5	.....	216
11.6	“ ” .....	217
11.6	.....	219
11.7	.....	219
11.8	.....	220
12	.....	221
12.1	.....	221
12.2	.....	222
12.3	.....	222
12.4	.....	223
13	.....	224
13.1	.....	224
13.2	.....	226
13.3	.....	226

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13.4	.....	229
13.5	.....	231
14	.....	233
14.1	.....	233
14.2	.....	236

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	“ 1”	“ 2”	2000t/a		1000t/a
	2019	8			
			2019 10	1	10000t/a
2	4000t/a			1	2000t/a
	2020	2	1	1000t/a	
	2020	7			4000t/a
			1	2	15000t/a 2021 12
			10000t/a	1	14000t/a
		1	3#		2 10kV
1	1		1	51#	
	43593.71m		6809.19m		

4.2

GB/T4754-2017 2019

C3985

“

”

2021

“81

398

”

100kv

# PAROLES



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1V8

k 眞

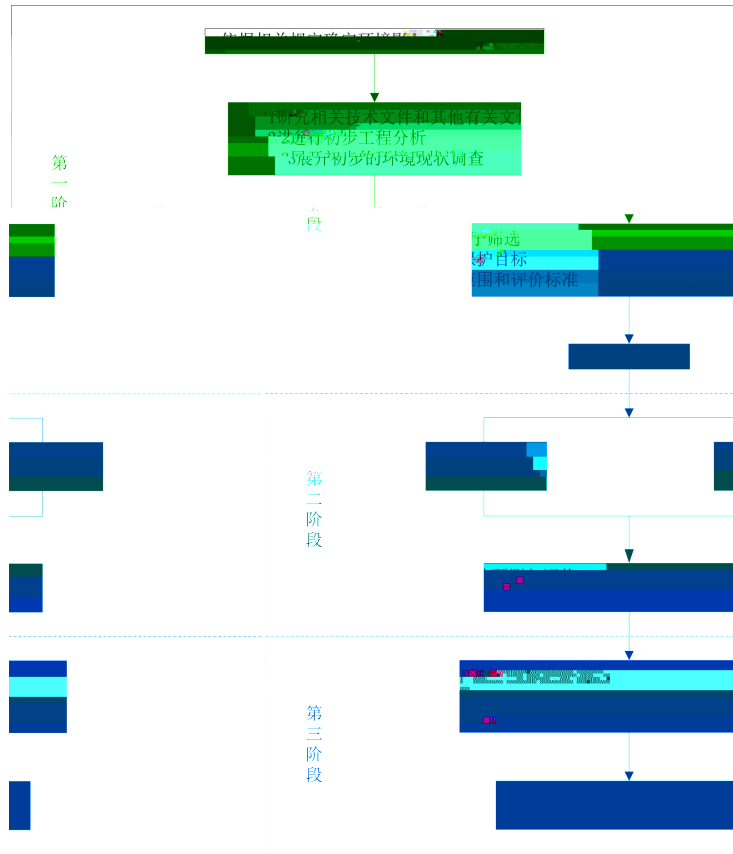
N©

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1

2

3

4

5

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1		2015	1	1	
2			2018	12	29
3			2018	10	26
4			2018	1	1
5		2016	7	2	
6				2018	12 29
7				2020	9 1
8				2019	1 1
9			2011	3	1
10			2017		2017
682					
11				2021	
12		2021			
13		2019		2021	
14					2012
7	3				
15					2005
11	28				

19 [2016]31

2016 5 28

20 [2014]197 12 30

21 [2015]162 ”

22

[2016]150

23

[2016]81

Ä24 2019 1 1

25 < >

2018 48 2019 1 1

2





15							
16			2013	4	1		
17					2017	1	1
18		<				>	2020 7
1							
19					<		>
	[2013]7		2013	1	22		
20					“	”	
[2020]12	2020		6	30			
21		<	“	”			
		>				2020	11 10
22		<	“	”		>	
[2021]968	2021	12	16				
23			“	”			2021-2025
	[2021]68		2021	11	30		
1					HJ2.1-2016		
2					HJ2.3-2018		
3					HJ610-2016		
4					HJ2.2-2018		
5					HJ2.4-2021		
6					HJ 19-2022		
7					HJ964-2018		
8					HJ169-2018		
9					[2001]199		
10					HJ2000-2010		
11					GB18218-2018		

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	12		2017
43			
	13	HJ819-2017	
	14	- HJ942-2018	
	15	- HJ1035-2019	
	1		
	2		
		[2017]54	
	3	( )	( )
	4		
		[2020]31	
	5		
	6		2020 4
	7		
		[2021]36	
	8		
	1		
	2		
	3		

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3

Leq(A)

Leq(A)

Leq(A)

1,1-

1,2-

1,1-

4

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11		mg/L	0.05
12	*	mg/L	0.02
13	*	mg/L	1.0
14	*	mg/L	0.1
15	*	mg/L	250
16	*	mg/L	250
17	**	mg/L	1000
***		GB3838-2002 2 3	
**		GB5084-2021	

3

GB/T14848-2017

2.4-4

	pH	COD <sub>Mn</sub>	NH <sub>3</sub> -N		
	6.5 8.5	3.0	0.50	1.0	0.02
	250	20.0	0.01	1.00	0.3
	1.00	0.05	0.01	0.005	0.001

4

GB3096-2008 3

2.4-5

	3	65	55

5

GB36600-2018 1 2

		GB36600-2018

1		20	60
2		20	65
3		3.0	5.7
4		2000	18000
5		400	800
6		8	38
7		150	900
8		20	70
9		0.9	2.8
10		0.3	0.9
11		12	37
12	1,1-	3	9
13	1,2-	0.52	5
14	1,1-	12	66
15	-1,2-	66	596
16	-1,2-	10	54
17		94	616
18	1,2-	1	5
19	1,1,1,2-	2.6	10
20	1,1,2,2-	1.6	5.8
21		11	53
22	1,1,1-	701	840
23	1,1,2-	0.6	2.8
24		0.7	2.8
25	1,2,3-	0.05	0.5
26		0.12	0.43
27		1	4
28		68	270
29	1,2-	560	560
30	1,4-	5.6	20
31		7.2	28
32		1290	1290
33		1200	1200
34	+	163	570
35		222	640
36		34	76

37		92	260
38	2-	250	2256
39	[a]	5.5	15
40	[a]	0.55	1.5
41	[b]	5.5	15
42	[k]	55	151
43		490	1293
44	(a,h)	0.55	1.5
45	(1,2,3-cd)	5.5	15
46		25	70

1

GB16297-1996

2

HCl

GB1673-2015

315

a "

2

GB31573-2015 1  
I

H1\LS'5-5018

GB31573-2015

pH SS COD

CBI822Δ-5001 5013  
CBI822δδ-5050

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Δ0	22
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CBI5253-5011

3	22
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		~δ	00	00	0	

Δ l

g ..

$P_i$  10%  $D_{10\%}$   $P_i$

$$P_i = C_i / C_{oi} \times 100\%$$

$P_i$  —  $i$  %

$C_i$  —  $i$   $mg/m^3$

$C_{oi}$  —  $i$   $mg/m^3$

	Pmax 10%
	1% Pmax<10%
	Pmax<1%

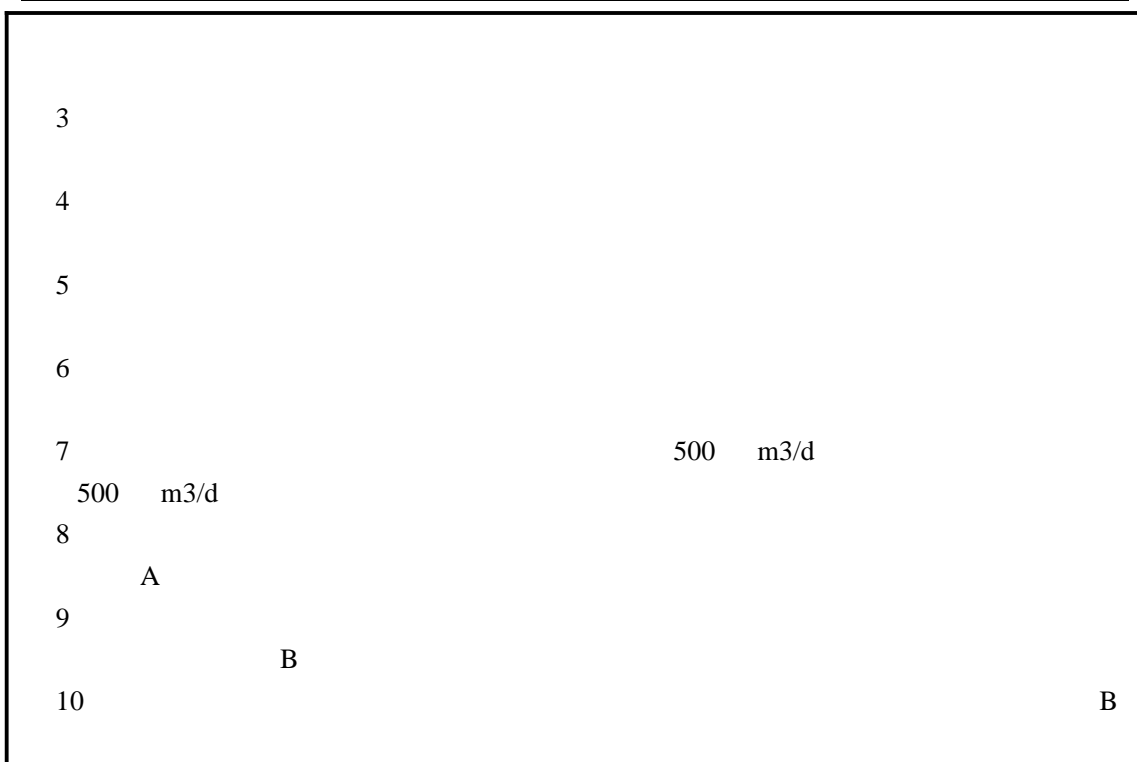
A

AERSCREEN

		$\mu g/m^3$	%	m
<u>DA007</u>		<u>2.1543</u>	<u>1.08</u>	<u>58</u>
<u>DA008</u>		<u>2.3838</u>	<u>1.19</u>	<u>61</u>
<u>DA011</u>		<u>2.401</u>	<u>1.20</u>	<u>61</u>
<u>DA012</u>		<u>2.6251</u>	<u>1.31</u>	<u>58</u>
<u>DA010</u>		<u>0.42489</u>	<u>0.05</u>	<u>54</u>
		<u>0.193</u>		
		<u>0.077202</u>	<u>0.04</u>	
	<u>HCl</u>	<u>0.077202</u>	<u>0.15</u>	
<u>DA027</u>		<u>0.46872</u>	<u>0.05</u>	<u>66</u>
		<u>0.11718</u>		
		<u>0.087939</u>	<u>0.04</u>	
	<u>HCl</u>	<u>0.087939</u>	<u>0.18</u>	

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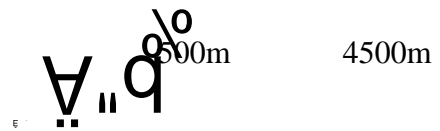
	<u>          </u>	<u>0.7148</u>	<u>0.08</u>	
<u>DA009</u>	<u>          </u>	<u>0.3362</u>	<u>0.01</u>	
	<u>          </u>	<u>0.75721</u>	<u>0.38</u>	<u>51</u>
	HCl			



HJ2.3-2018

B

2



40y

a

E

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2

200m

1

HJ19-2022 6.1.2

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	IV IV+	III	II	I

HJ169-2018

9.2

5km

500m      4500m      5km  
6km<sup>2</sup>

-

HJ964-2018

									—
							—		—
“ — ”									

—

HJ964-2018

A

50hm<sup>2</sup>

“ ” “ ”

“ ”

200m

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3

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5

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2016 12 26 2017 6

2017

8 21 2017 54

2018

12 1

2018 12 19

201843012400000441

2017 6 2018 9 2019 8

2019 8

28 2019 3

2019 10 29 [2019]42

8000

23000 [2019]43

2020 7 31 [2020]31

2020 7 31 [2020]32

2021 1 19 [2021]4

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2022 1 20

[2022]5

6000

6000

3000

10000

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192508.19m<sup>2</sup>

2017	6								
				10000t/a				“	
1”	4000t/a					“		”	
“	1”	“	2”	2000t/a				1000t/a	
		2019	8						
				2019	10	1	10000t/a	1	2
4000t/a						1	2000t/a		
2020	2		1	1000t/a					
2020	7							4000t/a	
				1	2		15000t/a	2021	12

1

1

1

$\frac{1}{1\#}$	1	10000t/a	1		1	3	19.95m
5#					2000kW		2500kVA
6#		1125m <sup>3</sup> /d					+
		1320m <sup>3</sup> /d		+			
4#	1.5m	4		1800m <sup>2</sup>	2	4	1800m <sup>2</sup>
							16
							0.30Mpa
		8	30m <sup>3</sup> /h	1	25m <sup>3</sup> /h		

					25000KW
				0.9	
				120m	
				5m	
	1#	1			+15m
				+	+15m
				+	+15m
	6#		MVR		+20m
				+	+20m
			1		
			GB/T19923-2005		1
					150m <sup>2</sup>
					150m <sup>2</sup>
			1	4200m <sup>3</sup>	5800

1

			t/a		
1			10000		25kg/
2			16040		25kg/

1

		t	t			
--	--	---	---	--	--	--

1			29720	320		25kg	
2			25000	200		25kg	
3		21%	40	100			
4		32%	1271	70			

1

0 9 .. 9 ..

	/		/	/
		DD<	↓ 0W	0 u б
1	2		30m³/h	
2	6	PPH	50m³	3200
3	4	PPH	30m³	3200
4	4	PPH	30m³	3200
5	8	PPH	30m³	3200
6	8	PPH	30m³	3200
7	8		PGRF-50C	
8	26			
9	4	PPH	10m³	2200
10				

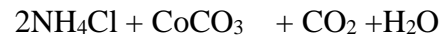
mgsRF-

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pH

40 50



0.5 ~ 1h

50 60

400 800

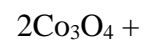
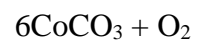
6 7h

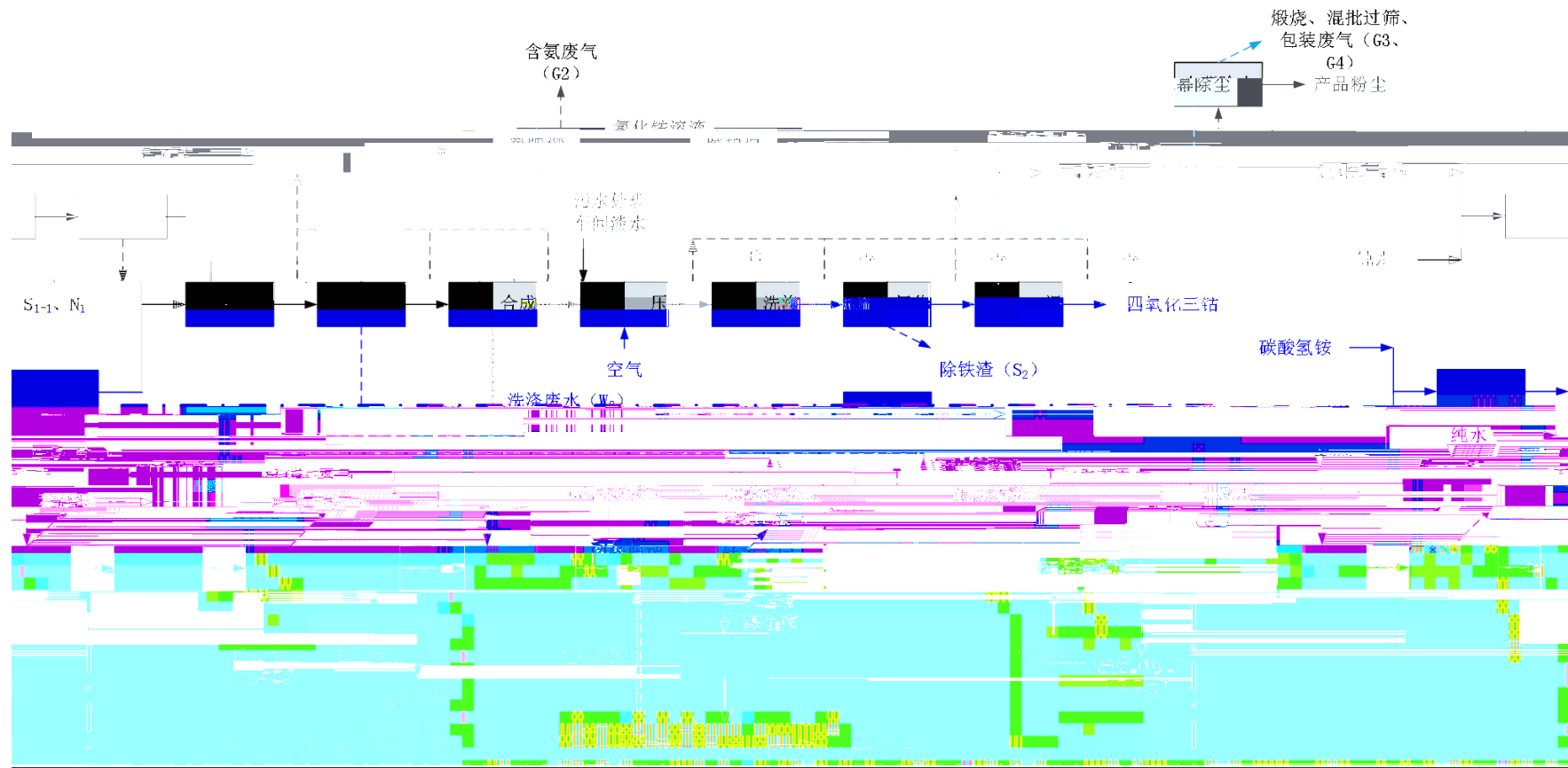
338

HCl

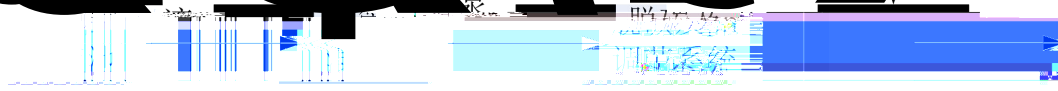
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A

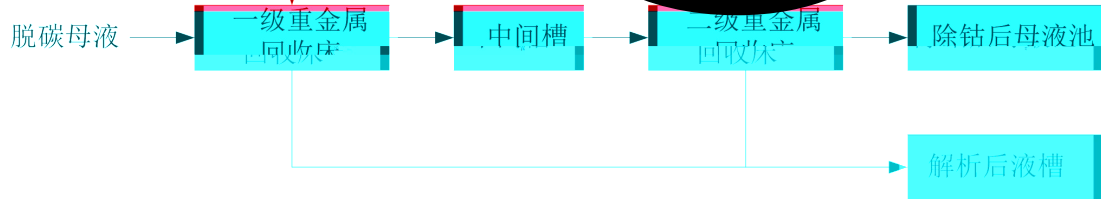


pH

4~5

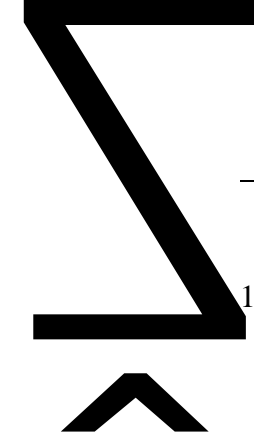
盐酸

再生液



1ppm 1mg/L

$C / 10^1$

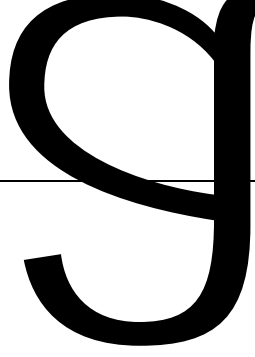


100

b

i

c



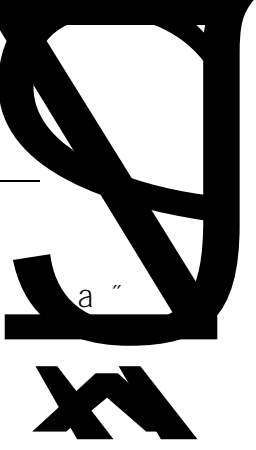
MVR

È

97

MVR

a "



35

D +

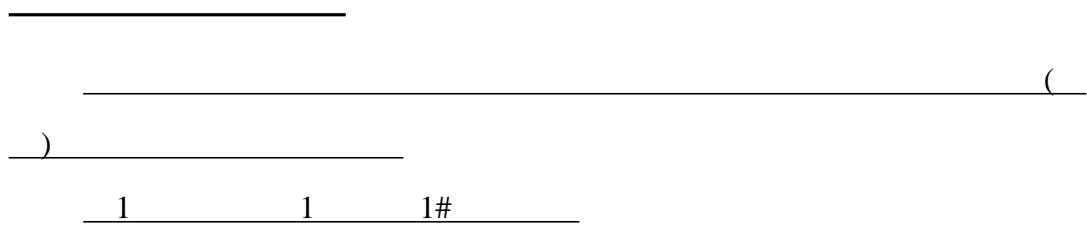
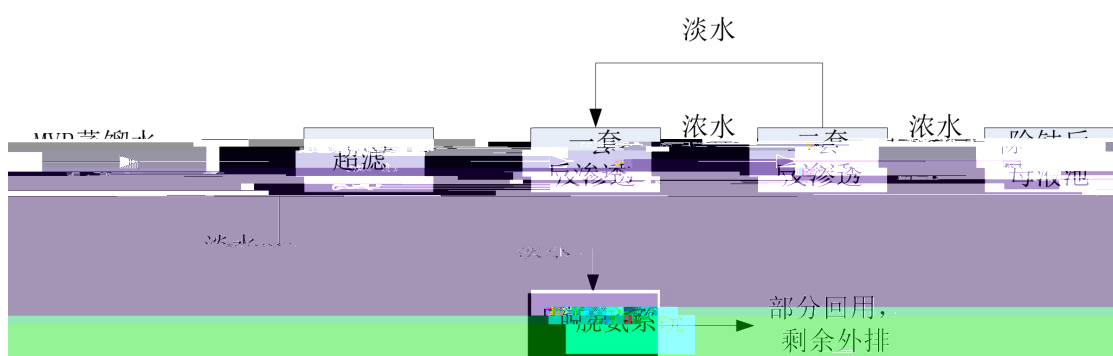
a

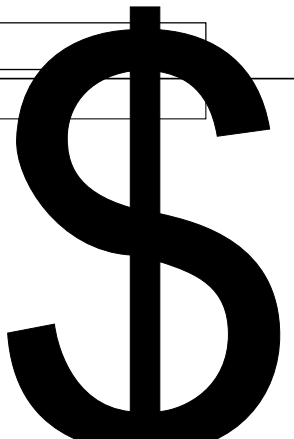
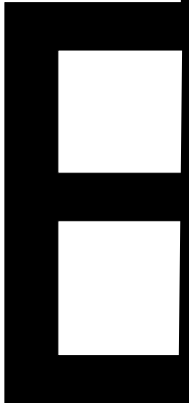
MVR

2

MVR

MVR





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\_\_\_\_\_ ( ) \_\_\_\_\_

\_\_\_\_\_ ( ) \_\_\_\_\_

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1 1#

1 1#			1
			3
			+ +
4#	HCl		1

1 \_\_\_\_\_

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_____	_____	_____	_____
_____	_____	88.5mg/m <sup>3</sup> 10.514t/a	8.475mg/m <sup>3</sup> 1.007t/a
_____	_____	100.167mg/m <sup>3</sup> 35.699t/a	10.092mg/m <sup>3</sup> 3.597t/a
_____	_____	716.7mg/m <sup>3</sup> 102.2t/a	7.167mg/m <sup>3</sup> 1.022t/a
	_____	319mg/m <sup>3</sup> 45.5t/a	3.19mg/m <sup>3</sup> 0.455t/a
_____	_____	13.67mg/m <sup>3</sup> 1.3t/a	1.367mg/m <sup>3</sup> 0.130t/a
	HCl	0.037mg/m <sup>3</sup> 0.003t/a	0.037mg/m <sup>3</sup> 0.003t/a
	_____	0.07mg/m <sup>3</sup> 0.007t/a	0.07mg/m <sup>3</sup> 0.007t/a

\_\_\_\_\_ ( ) \_\_\_\_\_ ( ) \_\_\_\_\_

HCl

GB31573-2015

4

2022

8114~

			3.86	20
			3.69	20
			3.70	20
			3.55	20
			5.2	10
			2.31	5
			4.52	20
		HCl	0.2	20
			0.2	10

HCl

GB31573-2015 4

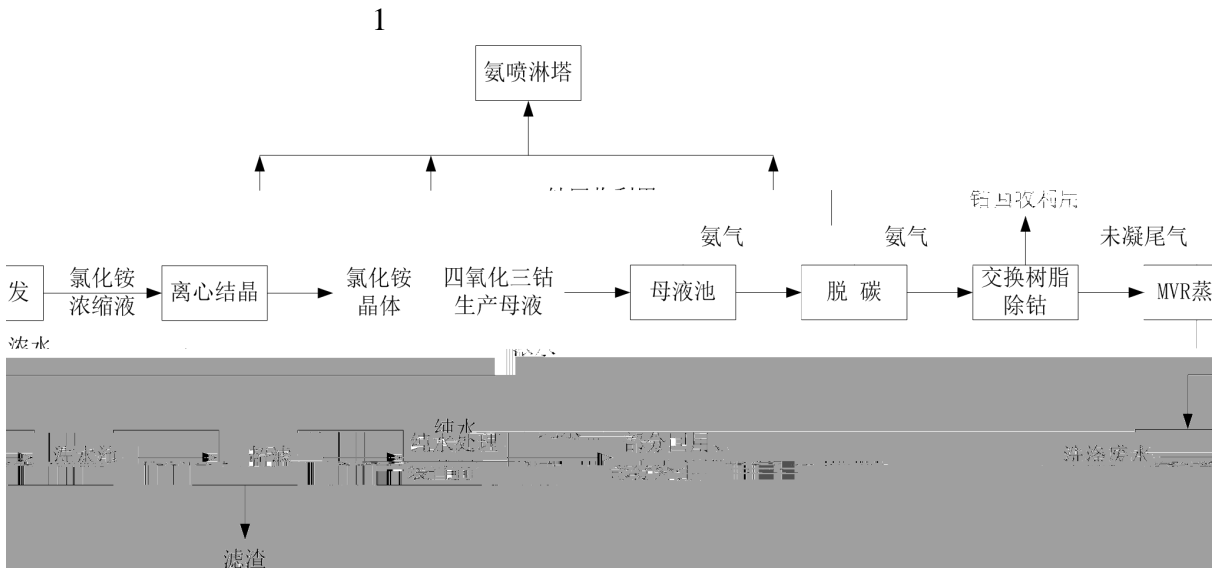
2

2019.2.25~2.26

0.114~0.385

1.0

		kg/h	t/a
1#		0.095	0.75
		0.0325	0.25
		0.015	0.125
		0.0001	0.001
		0.0001	0.001
	HCl	0.0001	0.001



	1 1080m <sup>3</sup> /d +	1 600m <sup>3</sup> /d +	MVR



		0.55	0.59	0.57	0.52	0.55	0.58	0.52	0.55	1	mg/L
		0.27	0.28	0.27	0.29	0.24	0.21	0.23	0.27	0.5	mg/L
		3.0	3.5	3.2	3.4	3.1	3.9	3.5	3.0	6	mg/L
GB 31573-2015 1											
GB/T 31962-2015 1A											

GB31573-2015 1

GB/T31962-2015 1A

2 2022

Ni Co Mn

2022 2 21 ~2 26

mg/L

pH

NH<sub>3</sub>-N

7.18

5

55.7

0.14

24

34.43

0.4

0.06

0.28

6~9

100

60

2

200

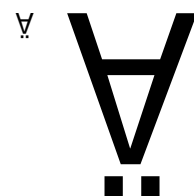
40

1

6

6

			65dB(A)	55dB(A)
				Leq
		2019.2.21	58.2	42.2
			57.9	42.6
1		2019.2.21	61.4	45.5
2		2019.2.22	61.9	45.9
	1	2019.2.21	60.9	45.6
		2019.2.22	62.5	44.2
		2019.2.21	62.6	43.7
4		2019.2.22	61.7	44.8
	1	2019.2.21	51.7	42.4
5		2019.2.22	51.3	42.1
	1	2019.2.21	50.4	41.8
6		2019.2.22	52.0	41.4







					<u>mg/m<sup>3</sup></u>	<u>t/a</u>			<u>mg/m<sup>3</sup></u>	<u>t/a</u>
				<u>H=15m D=0.7m</u>	<u>2</u>	<u>0.013</u>			<u>H=15m D=0.7m</u>	<u>10.092</u>

1#

		PM <sub>10</sub>	H=15m D=0.7m	20	0.14			
			+					
		PM <sub>10</sub>	H=15m D=0.7m	20	0.07			
			+					
			H=15m D=0.5m	11.16	1.06			
			12000m <sup>3</sup> /h					
			H=15m D=0.5m	11.16	1.06			
			12000m <sup>3</sup> /h					
			H=15m D=0.5m	11.16	1.06			
			12000m <sup>3</sup> /h					
			H=15m D=0.5m	11.16	1.06			
			12000m <sup>3</sup> /h					
9#			H=15m D=0.5m	11.16	1.06			
			12000m <sup>3</sup> /h					
			H=15m D=0.7m	3.28	0.52			
			20000m <sup>3</sup> /h					
			H=15m D=0.7m					
			3500m <sup>3</sup> /h			69.583	1.915	
			H=15m D=0.8m			5.975	0.710	
			H=15m D=0.8m			4.67	0.555	
			H=15m D=0.8m			5.198	0.618	
			H=15m D=0.8m			4.323	0.514	
			H=15m D=0.8m					

61109T f03m% W W Q



					/	/			1.753	0.167
					/	/			3.067	0.291
					/	/			8.483	0.806
					1.31	/			=	=
15#			+	H 18.5m D=0.5m 1000m <sup>3</sup> /h	1.31	/	VOCs	H=15m D=0.2m	=	=
					1.31	/			=	=
1		VOCs	+	H 18.5m D=0.5m 3000m <sup>3</sup> /h	6.67	0.0178	VOCs	H=15m D=0.2m	=	=
					1.31	/			3.208	0.036
20#			+	H 15m D=0.5m 1000m <sup>3</sup> /h	1.31	/	VOCs	H=15m D=0.7m	0.545	0.006
					1.31	/			5.178	0.28
2		VOCs	+	H 15m D=0.5m 3000m <sup>3</sup> /h	6.67	0.0178	VOCs	H=15m D=0.7m	0.484	0.026
					1.34	0.116		H=15m D=0.8m	6.958	1.323
								H=15m D=0.8m	6.492	1.234
									6.165	0.488
									3.118	0.247
					2.53	0.219		H=15m D=0.6m	1.28	0.101
									1.158	0.092
									5.723	0.680
23-1#									1.265	0.150
			+	H=15m D=0.6m 12000m <sup>3</sup> /h	0.81	0.070		H=15m D=0.8m	0.982	0.117
									1.02	0.121
									8.097	0.962
					0.32	0.028			2.32	0.276
								H=15m D=0.8m	2.138	0.254
					0.5	0.04			1.29	0.153

37#		HCl	/	/	/	/	+	H=15m D=0.5m	2.795	0.266
37#			/	/	/	/	+	H=15m D=0.5m	5.642	0.536
32-2#			+	H=15m D=0.6m	1.3	0.11		H=15m D=1m	4.363	0.829
	MVR	VOCs		12000m <sup>3</sup> /h				H=15m D=0.5m	3.992	0.19
32-3#MV			/	/	/	/		H=15m D=1m	6.788	1.29
R-	MVR		/	/	/	/		H=15m D=0.8m	5.48	0.521
31#			/	/	/	/		H=15m D=0.6m	6.472	0.513
1			/	/	/	/		H=15m D=0.6m	6.472	0.513
6#				H=15m D=0.8m	6.95	1.0		H=15m D=1m	6.567	1.248
				20000m <sup>3</sup> /h				H=15m D=0.8m	6.958	1.102
39#				H=15m D=1m						
				500						

ε #))g d =1m

∂#

31#											
2	VOCs	/	/	/	/			H=15m D=0.6m	5.253	0.333	
36#		/	/	/	/				4.537	0.2164	
		/	/	/	/			H=15m D=0.3m	6.808	0.324	
54#	HCl		H=15m D=0.8m	3.2	0.6			H=15m D=0.8m	5.035	0.718	
			25000m <sup>3</sup> /h								
54#	HCl		H=15m D=0.8m	3.2	0.6			H=15m D=0.8m	4.578	0.653	
			25000m <sup>3</sup> /h								
	VOCs			2.0	0.14			VOCs	5.67	0.808	
								H=15m D=0.8m	3.512	0.501	
								NH <sub>3</sub>	3.378	0.482	
								VOCs	6.152	0.877	
53#	HCl	+ +	H=15m D=0.5m	4.0	0.21			HCl	4.652		
			10000m <sup>3</sup> /h								



			H=20m D=0.2m 800m <sup>3</sup> /h	0.18	0.001
			H=20m D=0.8m 22800m <sup>3</sup> /h	1.204	0.198
				0.226	0.037
		+	H=20m D=0.9m 26580m <sup>3</sup> /h	0.062	0.012
				0.025	0.005
				0.035	0.007
			H=20m D=0.2m 800m <sup>3</sup> /h	0.18	0.001
			H=20m D=0.8m 22800m <sup>3</sup> /h	1.204	0.198
				0.226	0.037
		+	H=20m D=0.9m 26580m <sup>3</sup> /h	0.062	0.012
				0.025	0.005
				0.035	0.007
			H=20m D=0.2m 800m <sup>3</sup> /h	0.18	0.001

			179190		179190	
	184700					
	100000					400m <sup>3</sup> /d



---

—	<u>0.005</u>	<u>0.0001</u>	<u>0.005</u>	<u>0.0001</u>
—	<u>0.005</u>	<u>0.0001</u>	<u>0.005</u>	<u>0.0001</u>
—	<u>0.002</u>	<u>0.00003</u>		

---

\_\_\_\_\_ +  
\_\_\_\_\_ 125753  
6000 9200  
\_\_\_\_\_ 46000

55200

55200

1  
MVR  
450m<sup>3</sup>/d  
1

		<u>COD</u>	<u>30</u>	<u>2.189</u>	<u>30</u>	<u>2.189</u>			
		—	<u>1.5</u>	<u>0.109</u>	<u>1.5</u>	<u>0.109</u>			
		—	<u>35638.52</u>		<u>35638.52</u>		—		
		<u>COD</u>	<u>30</u>	<u>1.069</u>	<u>30</u>	<u>1.069</u>	—		
		—	<u>1.5</u>	<u>0.053</u>	<u>1.5</u>	<u>0.053</u>	—		



	[2017]54	
1	1 10000t/a 3 12000t/a 1 1000t/a 1 2000t/a	
2	“ ” 120m <sup>3</sup> 1 1080m <sup>3</sup> /d 1 1200m <sup>3</sup> /d 1 600m <sup>3</sup> /d 1 2 872m <sup>3</sup> /d 1 900 m <sup>3</sup> /d “ pH + +MVR + + ” 2 “ + + +MVR + ” “ + + ” MVR GB/T31962-2015 1 A COD GB31573-2015 1 GB31573-2015 1 GB/T31962-2015 1 A	“ ” 120m <sup>3</sup> 1 600m <sup>3</sup> /d 1 2 872m <sup>3</sup> /d 1 900 m <sup>3</sup> /d 1 “ pH + +MVR + ” pH pH MVR pH RO MVR NH <sub>3</sub> -N
3	1#	



---

[2017]54

	1 10000m <sup>3</sup>	4 1220m <sup>3</sup> /d 1
<u>2</u>	HCl	4#
<u>3</u>		
<u>4</u>		5.2.2

---

1

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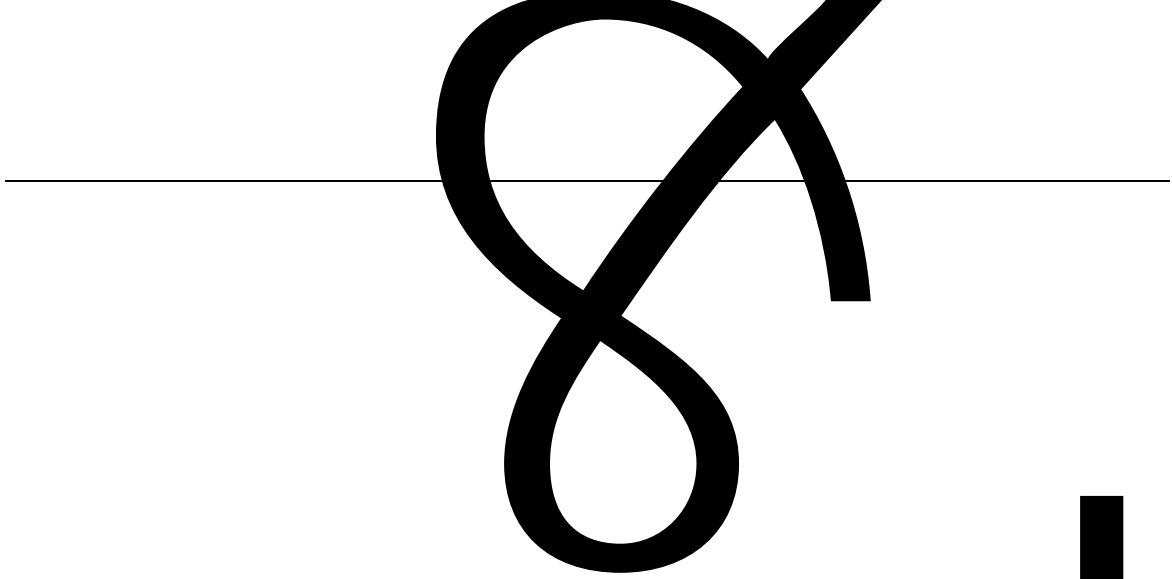


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2 4#

---

4# 1



C3985

5000

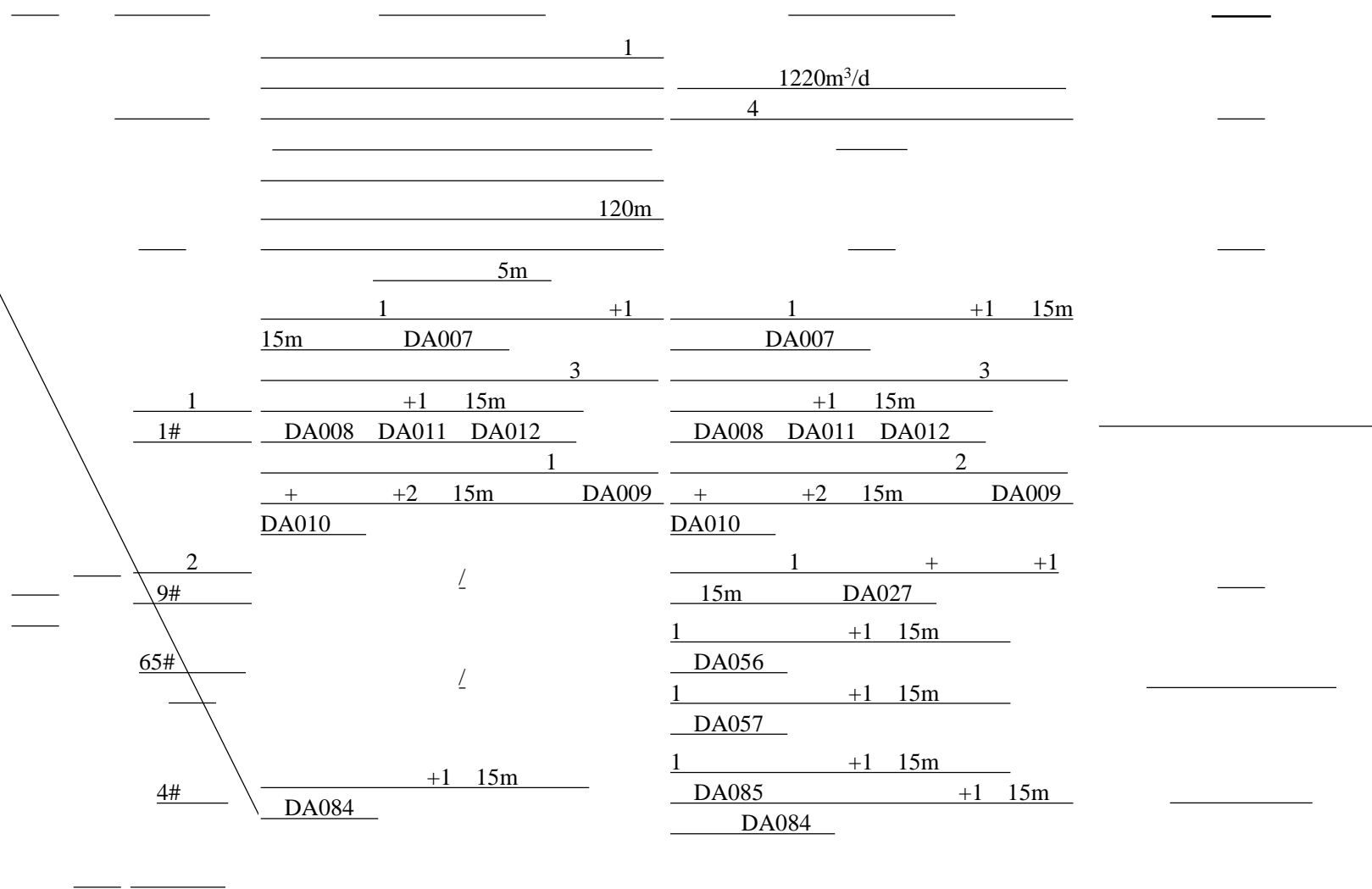
2820

56.4%

10000tWD



1#	1	10000t/a	1		4000t/a	
					14000t/a	
9#	1	15000t/a		1#	4	1
					1	
4#	26	4	2			
	4		16			
3#		/			4118.06m <sup>2</sup>	
					4298.47m <sup>2</sup>	
		/			6	





4.3-1

		t/a			t		
1		10000	14000	4000	300		1000kg/
2		16040	19643	3603	200		25kg/

GB/T26525-2011

1	Co	72.6 73.6
2	Ni	0.02
3	Mn	0.01
4	Cu	0.01
5	Fe	0.01
6	Na	0.01
7	Ca	0.01
8	Mg	0.01
9	Pb	0.005
10	Si	0.01
11	Al	0.005
12	S	0.01
13	C	0.01
14	g/cm <sup>3</sup>	0.5 1.6
15	g/cm <sup>3</sup>	2.8
16	D <sub>10</sub> um	2.0
17	D <sub>50</sub> um	5.0 10
18	D <sub>90</sub> um	25
19	D <sub>100</sub> um	35

GB/T 2946-2018 2

1.5274	
50g	5g
(	
)1650mg/kg	350 520

1# 1  
 9# 1# 2 12 2# 4

		/	/ /		/	/ /	
1		2	30m <sup>3</sup> /h		2	30m <sup>3</sup> /h	
2		6	PPH 50m <sup>3</sup> 3200		6	PPH 50m <sup>3</sup> 3200	
3		4	PPH 30m <sup>3</sup> 3200		4	PPH 30m <sup>3</sup> 3200	
4		4	PPH 30m <sup>3</sup> 3200		4	PPH 30m <sup>3</sup> 3200	
5		8	PPH 30m <sup>3</sup> 3200		8	PPH 30m <sup>3</sup> 3200	
6		8	PPH 30m <sup>3</sup> 3200		8	PPH 30m <sup>3</sup> 3200	
7		8	PGRF-50C		8	PGRF-50C	
8		26			26		
9		4	PPH 10m <sup>3</sup> 2200		4	PPH 10m <sup>3</sup> 2200	
10		4	PPH 10m <sup>3</sup> 2200		4	PPH 10m <sup>3</sup> 2200	
11		4	304 5m <sup>3</sup> 1800		4	304 5m <sup>3</sup> 1800	
12		48	PPH 10m <sup>3</sup> 2200		48	PPH 10m <sup>3</sup> 2200	
13		4	PPH 30m <sup>3</sup> 2500		4	PPH 30m <sup>3</sup> 2500	

§ BH

14

H

CM442  
CPS

pH

14

CM442  
CPS11D

15

16

16

5

DN50 25m<sup>3</sup>/h

5

DN50 25m<sup>3</sup>/h

17

32

32

18

8

40m<sup>2</sup> 16MPa

8

40m<sup>2</sup> 16MPa

19

4

PPH 10m<sup>3</sup>

4

PPH  
10m<sup>3</sup>

20

ББ + Е з

ББ 10 з

a &

---

		/	
2	2	30m <sup>3</sup> /h	2 30m <sup>3</sup> /h
3	/		/
4	/		/
5	2	PPH 30m <sup>3</sup>	2 PPH 30m <sup>3</sup>
6	2	PPH 30m <sup>3</sup>	2 PPH 30m <sup>3</sup>
7	4	PPH 30m <sup>3</sup>	4 PPH 30m <sup>3</sup>
8	6	PPH 40m <sup>3</sup>	6 PPH 40m <sup>3</sup>
9	6	PPH 50m <sup>3</sup>	6 PPH 50m <sup>3</sup>
10	16	PPH 30m <sup>3</sup>	16 PPH 30m <sup>3</sup>
11	8	PPH 40m <sup>3</sup>	8 PPH 40m <sup>3</sup>
12	2	PPH 50m <sup>3</sup>	2 PPH 50m <sup>3</sup>
13	4	PPH 50m <sup>3</sup>	4 PPH 50m <sup>3</sup>
14	8	50m <sup>2</sup>	8 50m <sup>2</sup>
15	38		38
16	28		28
17	2	DN80 50m <sup>3</sup> /h	2 DN80 50m <sup>3</sup> /h
18	40		40
19	28	316L 10m <sup>3</sup>	28 316L 10m <sup>3</sup>
20	28	PPH 18.	



25	8	PPH 18m <sup>3</sup>	8	PPH 18m <sup>3</sup>
26	4	PPH 4m <sup>3</sup>	4	PPH 4m <sup>3</sup>
27	32	316L	32	316L
28	8	PPH 18m <sup>3</sup>	8	PPH 18m <sup>3</sup>
29	4	PPH 4m <sup>3</sup>	4	PPH 4m <sup>3</sup>
30	4	304 10m <sup>3</sup>	4	304 10m <sup>3</sup>
31	96		96	
32	40	IMC50-40- 160FT	40	-160FT
33	8	PLG2500/1 0	8	PLG2500/ 10
34	8	304 4m <sup>3</sup>	8	304 4m <sup>3</sup>
35	4	ZYDP-100 0-2S	4	ZYDP-10 00-2S
36	4	AT-CG-150 HHH /	4	0HHH /
37	/		/	
38				

1	1		2972 0	4254 6	12826	320		25kg	
2			2500 0	2757 1.6	2571.6	200		50kg	
3		20%	1271	1333	62	70			4#
4		21%	40	40	0	140			4#

2

CoCl<sub>2</sub>·6H<sub>2</sub>O

237.93

3.35

1049

86

	Co	Ni	Mn	Fe	Cu	Ca	Mg	Zn	Pb	Cd	Cr	Al	
	24 .5%	10 ppm	10 ppm	10 ppm	10 ppm	50 ppm	50 ppm	10 ppm	10 ppm	10 ppm	10 ppm	5 ppm	0.01 %

HCl ( )-114.8( )

( =1) 1.20

( ) 108.6(20%)

( =1) 1.26

---

NH<sub>3</sub>·H<sub>2</sub>O  
-77      36      0.91g/cm<sup>3</sup>  
LDLo 43mg/kg      LD50 350mg/kg

NH<sub>4</sub>HCO<sub>3</sub>

58      70

1

0.30Mpa

2

1

1

65#

1220m<sup>3</sup>/d

GB/T19923-2005

1

	600	600	0	700	700	0	100	100	0
MVR									

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2

---

10KV I

---

150m<sup>2</sup>

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---

150m<sup>2</sup> ,

---



---

4 15 6

---

2000m<sup>3</sup>

---



---

3#

---

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

1		50			3#
2		2000		25kg	3#

	98%	7.2*3.2	4	50	30	
	21%	7.2*3.2	4	50	140	
	30%	7.2*3.2	16	50	420	
	30%	7.2*3.2	2	50	70	

1 \_\_\_\_\_

\_\_\_\_\_

213m<sup>2</sup>

2 \_\_\_\_\_

\_\_\_\_\_

106.78m<sup>2</sup>

3 \_\_\_\_\_

\_\_\_\_\_

214.3m<sup>2</sup>

1



1

2022 7

2022 9

2

20

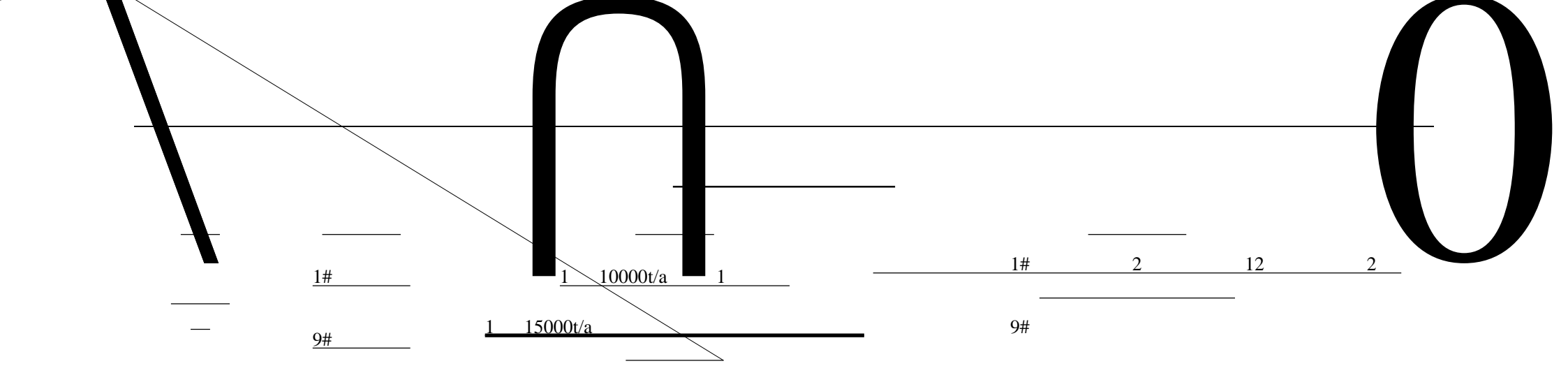
2

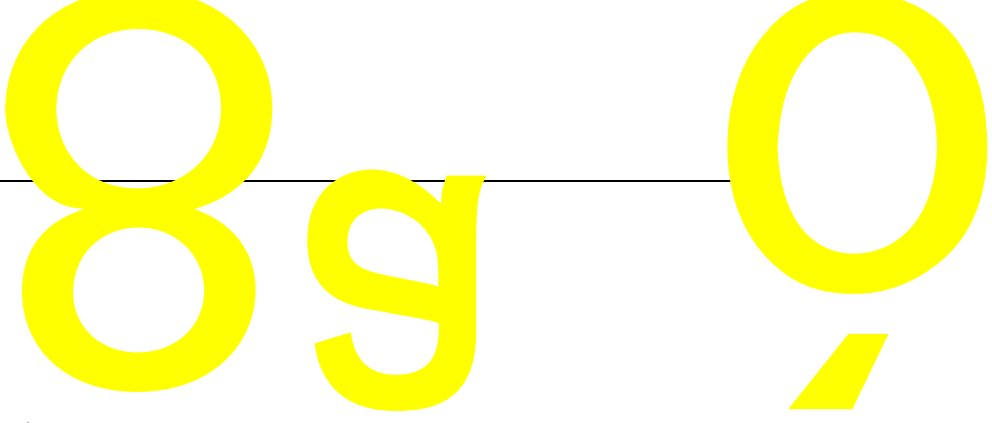
3

4

3

1





1

3.6.1.1

	200t/		50		10000t/a
	200 t/		70		14000t/a

	7	4.2 /	4	0.5 /	1	2.8 /
	5	4.2 /	4	0.5 /	1	2.8 /

1 5.2-1

EP "%PI(TM)

	<u>9.012</u>	<u>36047.91</u> <u>2</u>	<u>126174</u>		<u>36047.91</u> <u>2</u>	<u>126174</u>
	<u>0.050</u>	<u>199.99</u>	<u>700</u>		<u>45997.93</u> <u>7</u>	<u>161000.83</u>
	<u>0.095</u>	<u>380.838</u>	<u>1333</u>		<u>0.527</u>	<u>1.843</u>
	<u>0.003</u>	<u>11.428</u>	<u>40</u>		<u>0.245</u>	<u>0.858</u>
					<u>1828.026</u>	<u>6398.41</u>
					<u>342.84</u>	<u>1200</u>
				<u>MVR</u>	<u>519.974</u>	<u>1820</u>
					<u>277.764</u>	<u>972.221</u>
					<u>0.154</u>	<u>0.538</u>
					<u>37.5%</u>	<u>4.286</u>
					<u>37.5%</u>	<u>0.286</u>
					<u>15.142</u>	<u>53</u>
			<u>331304</u> <u>.6</u>		<u>94653.72</u> <u>4</u>	<u>331304.6</u>

81

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1

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1      1# Co      4.2-2

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24.2%      Co<sub>3</sub>O<sub>4</sub>      73.4%

<u>t/a</u>		<u>t/a</u>	
<u>2941.653</u>	<u>10296.3</u>	<u>2936.425</u>	<u>10278</u>
<u>4.571</u>	<u>16</u>	<u>5.143</u>	<u>18</u>
		<u>0.051</u>	<u>0.179</u>
		<u><del>0.571</del></u>	<u>16</u>

_____	3538.295	12384.651	_____	3538.295	12384.651
-------	----------	-----------	-------	----------	-----------

\_\_\_\_\_

\_\_\_\_\_

1			
		83914m <sup>3</sup> /a	38162m <sup>3</sup> /a
8085m <sup>3</sup> /a		897m <sup>3</sup> /a	36050m <sup>3</sup> /a
		24257m <sup>3</sup> /a	
63782m <sup>3</sup> /a		65#	
GB/T19923-2005			
1	1#	36050m <sup>3</sup> /a	46000m <sup>3</sup> /a

\_\_\_\_\_

2	1
---	---

1

_____	<u>22640</u>	<u>28297</u>	<u>8085</u>	_____	<u>2857</u>	<u>3020</u>	<u>862</u>
_____	<u>1560</u>	<u>3141</u>	<u>897</u>	_____	<u>3</u>	<u>6</u>	<u>2</u>
				_____	<u>/</u>	<u>982</u>	<u>281</u>
_____	<u>282050</u>	<u>291182</u>	<u>83914</u>	_____	<u>282050</u>	<u>291182</u>	<u>83914</u>

---

GB/T19923-2005  
161000m<sup>3</sup>/a

1

126174m<sup>3</sup>/a

1

5.2-1



3#

1 1# 10000t/a  
14000t/a 1#  
4 9# 1# 2 12  
2  
1# 5 15m 1 1#  
2  
2 1 4

1	DA00 7		15m* 0.8m			15m* 0.8m		
2	DA00 8		15m* 0.8m			15m* 0.8m		
3	DA01 1		15m* 0.8m			15m* 0.8m		

4

DA01  
2

15m\* 0.8m

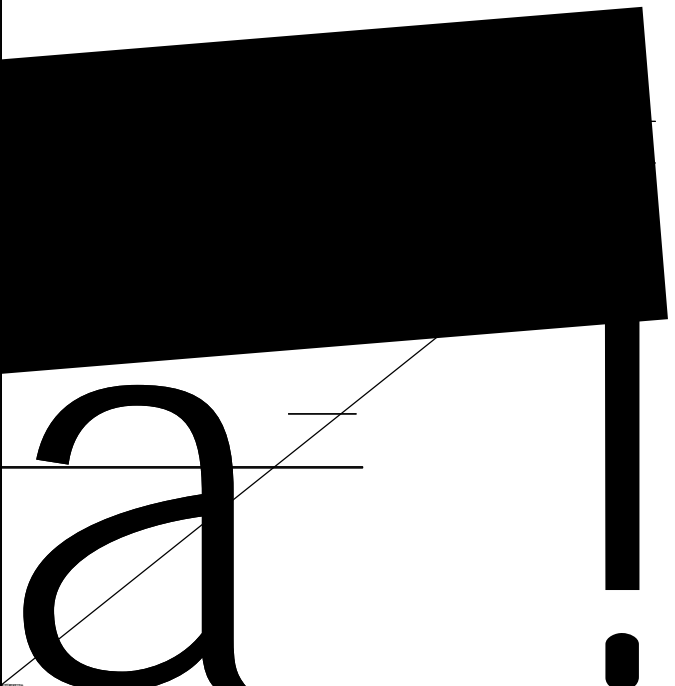
15m\* 0.8m

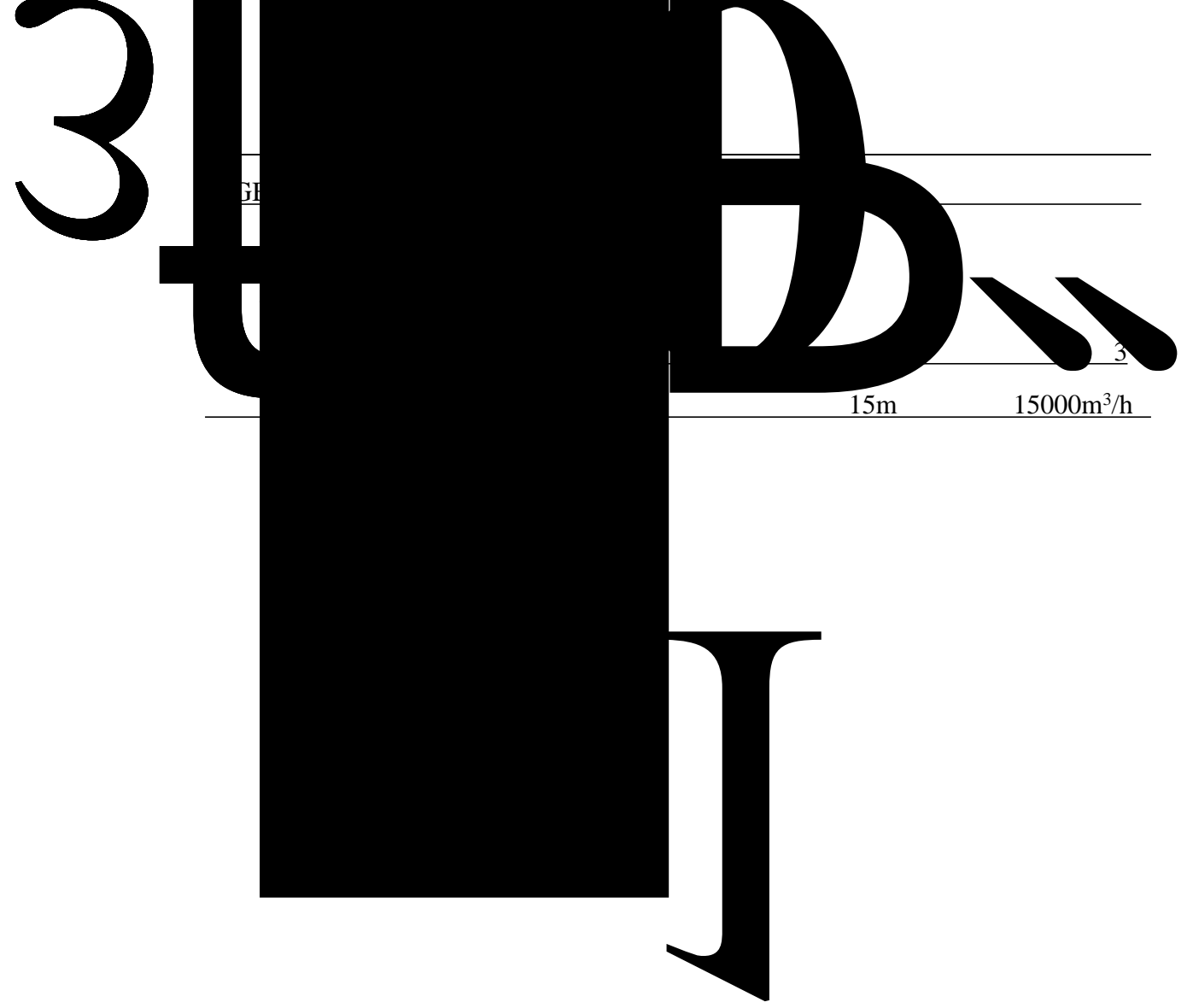
5

DA00  
9

0<sup>a</sup> ç ~ +

15m\* 0.8m







g

GB31573-2015 3HCl

10 mg/m<sup>3</sup>

DA027

106.2mg/m<sup>3</sup>

1.593kg/h

12.617t/a

1.062mg/m<sup>3</sup>

0.016kg/h

0.126t/a

GB31573-2015

4

10 mg/m<sup>3</sup>

23.52mg/m<sup>3</sup>

0.353kg/h

2.794t/a

0.235mg/m<sup>3</sup>

0.004kg/h

0.028t/a

GB31573-2015 3

5 mg/m<sup>3</sup>

2.167mg/m<sup>3</sup>

0.033kg/h

0.257t/a

0.217mg/m<sup>3</sup>

0.003kg/h

0.026t/a

i

\

d

GB31573-2015

3

20 mg/m<sup>3</sup>

HCl

2.167mg/m<sup>3</sup>

0.033kg/h

0.257t/a

0.217mg/m<sup>3</sup>

mg/m<sup>3</sup>



_____	1	0.3	0.038
_____		0.1	0.013
_____		0.05	0.006

\_\_\_\_\_

65#

pH MVR

pH

\_\_\_\_\_

2 15m

DA056 DA057

G5 DA056

pH

MVR

99% 5000m<sup>3</sup>/h

90%

120mg/m<sup>3</sup>

0.6kg/h 4.752t/a 12mg/m<sup>3</sup> 0.06kg/h

0.475t/a

GB31573-2015 3 20 mg/m<sup>3</sup>

500

100

GB14554-93 2 15m

2000

G6 DA057

pH

HCl HCl

6t/a HCl

HCl 4mg/m<sup>3</sup> 0.060  
 mg/m<sup>3</sup> 0.060  
 G 73-20 3HCl 10  
 65# HCl HCl

---	---	---	---
---	65#	0.080	0.010
HCl	---	0.060	0.008

4#  
 2 8 HCl  
 1 DA084 .008  
 HCl a " 8 12000m<sup>3</sup>/h

20mg/m<sup>3</sup>

0.0027t/a

0.0063t/a

2

		t/a	kg/h
		0.001	0.0001
HCl	4#	0.001	0.0001
		0.001	0.0001

	t/a	kg/h		mg/m <sup>3</sup>	kg/h	t/a	mg/ m <sup>3</sup>	kg/h
DA007	14.72 4.206	1.859 0.531	15000m <sup>3</sup> /h	D-0.7m h-15m T-30	11.865 3.39	0.178 0.051	1.41 0.403	20 --
DA008	16.66 4.76							

---

4.049



18000m<sup>3</sup>/h

T-30



1		
83914m <sup>3</sup> /a		38162m <sup>3</sup> /a
8085m <sup>3</sup> /a	897m <sup>3</sup> /a	36050m <sup>3</sup> /a
24257m <sup>3</sup> /a		
63782m <sup>3</sup> /a		
65#		
GB/T19923-2005		
36050m <sup>3</sup> /a	46000m <sup>3</sup> /a	
1		
	291182m <sup>3</sup> /a	84900 <sup>3</sup> /a
223240m <sup>3</sup> /a		1
65#		
GB/T19923-2005		
126174m <sup>3</sup> /a	161000m <sup>3</sup> /a	
2		
100m <sup>3</sup> /a		
700m <sup>3</sup> /a		

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+

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m<sup>3</sup>/a

pH

(mg/L)

(t/a)

m<sup>3</sup>/a

(mg/L)

(t/a)

(mg/L)

63782

1

1#



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HW13-	900-015-13
10t/a	
5	0.5t/a
2021	HW08-
900-249-08	
6	
1t/a	
GB18597-2001	
	GB18599-2001

		t/a			
		1	HW08	900-249-08	
		10	HW13	900-015-13	
		4.29	==	==	
		2.8			
		0.28	==	==	
		1	==	==	

<u>1</u>		HW13	900-015-13	10					60d	T	
<u>2</u>		HW49	900-249-08	1					60d	T I	

		m <sup>3</sup> /a	8.81	4.20	4.61
		COD t/a	5.355	3.972	1.383
		NH <sub>3</sub> -N t/a	1955.292	1955.223	0.069
		t/a	13.398	13.3978	0.0002
		t/a	35.3	34.947	0.353
		t/a	12.9	12.771	0.129
		HCl t/a	2.185	1.934	0.251
		t/a	<u>25.106</u>	<u>22.6</u>	<u>2.506</u>
		t/a	0.1	0	0.1
		t/a	0.05	0	0.05
		HCl t/a	0.06	0	0.06
		t/a	<u>0.38</u>	<u>0</u>	<u>0.38</u>
			4.29	4.29	0
			0.28	0.28	0
			2.8	2.8	0
			1	1	0

		10	10	0
		1	1	0

		1	4000t/a
65#	4#		
		1	1
		2	

				“ ”		
	<u>m<sup>3</sup>/a</u>	<u>17.92</u>	<u>4.61</u>	<u>6.36</u>	<u>16.17</u>	<u>-1.75</u>
	<u>COD</u>	<u>5.376</u>	<u>1.383</u>	<u>1.908</u>	<u>4.851</u>	<u>-0.525</u>
	<u>NH3-N</u>	<u>0.269</u>	<u>0.069</u>	<u>0.095</u>	<u>0.243</u>	

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1 \_\_\_\_\_

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COD NH<sub>3</sub>-N

2 \_\_\_\_\_

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GB31573-2015 1

GB8978-1996

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COD 30mg/L NH<sub>3</sub>-N 1.5mg/L

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46100t/a

COD1.383t/a NH<sub>3</sub>-N0.069t/a

3 \_\_\_\_\_

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5.5-1

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\_\_\_\_\_ COD \_\_\_\_\_

\_\_\_\_\_ 12.05 \_\_\_\_\_ 0.6





27°52 55 28°29 07 111°53 25 112°47 20 36km  
88km 69km

1  
28°19 14.66 112°35 38.54

1

42.26m 86.95m  
10% 0.05g GB18306-2001 0.35s 50

42.26m 86.95m



			20		16.8
	40.6		-12.0	1	4.5
7		29.9		276	10
5300.3		1362.3		1384.2	
81%	1714.7	10		107.78-112.3	/
				2.4m/s	24m/s

16.8

101216.7Pa

1362.3mm

NNW

S

2.4m/s

26.4

35kg/m<sup>2</sup>

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144km

98km



-

319

25km

45km

1998

2002

10km<sup>2</sup>

2006

11.11km<sup>2</sup>

21.11km<sup>2</sup>

2007

2008 6

[2008]71

2010 11

“

”

2013

21.11km<sup>2</sup>

60km<sup>2</sup>

2013 1

2013 12

n n n \$ n

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5.0×10<sup>4</sup>m<sup>3</sup>/d

2.5×10<sup>4</sup>m<sup>3</sup>/d

2.5×10<sup>4</sup>m<sup>3</sup>/d

89.98

“ +

A<sup>2</sup>O+AO

+

+

+

+

”

GB3838-2002

10mg/L

2021 1 25 2020

			$\mu\text{g}/\text{m}^3$	$\mu\text{g}/\text{m}^3$	
	SO <sub>2</sub>		4	60	
	NO <sub>2</sub>		18	40	
	PM <sub>10</sub>		49	70	
	PM <sub>2.5</sub>		31	35	
	CO	95	1.2	4000	
	O <sub>3</sub>	90	127	160	8

2020

2020

GB3095-2012

2020 5 9

				<u>m</u>
G1			==	==
G2	VOCs	2020.5.9-5.15	==	==
G3		2020.8.3-8.9		540

				<u>550</u>
<u>G4</u>				
<u>G5</u>	<u>2021.11.20-11.21</u>			<u>280m</u>
	<u>2020.5</u>	<u>2020.8</u>	<u>2021</u>	<u>.11</u>

	3#	2500m	
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2

2020 5 9 ~11

3

1

3

7.2-2

3

pH COD NH<sub>3</sub>-N

GB3838-2002 1

GB3838-2002 2 3

GB5084-2005 1



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	mg/L	0.006L	0.006L	0.006L	0.006L	0.02	
	mg/L	$2.5 \times 10^{-3}$ L	$2.5 \times 10^{-3}$ L	$2.5 \times 10^{-3}$ L	$2.5 \times 10^{-3}$ L	0.05	
	mg/L	5.76	5.45	5.52	5.68	250	
	mg/L	148	155	146	159	450	
	mg/L	3.16	3.85	3.92	4.08	250	
	pH	7.06	7.11	7.08	7.10	6.5-8.5	
	mg/L	1.04	1.12	1.08	1.10	3.0	
	NH <sub>3</sub> - N	mg/L	0.110	0.122	0.115	0.104	0.50
	mg/L	0.009L	0.009L	0.009L	0.009L	1.00	
	mg/L	0.03	0.03	0.03	0.03	1.00	
	mg/L	0.087	0.090	0.091	0.092	0.10	
	mg/L	$3.00 \times 10^{-4}$ L	$3.00 \times 10^{-4}$ L	$3.00 \times 10^{-4}$ L	$3.00 \times 10^{-4}$ L	0.01	
	mg/L	0.004L	0.004L	0.004L	0.004L	0.05	
2# U 2	mg/L	$5.0 \times 10^{-4}$ L	$5.0 \times 10^{-4}$ L				

# 4L

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							5
		mg/L	1.45	1.38	1.40	1.48	3.0
3# U	N=						
3							

		mg/L	$3.00 \times 10^{-4} \text{L}$	$3.00 \times 10^{-4} \text{L}$	$3.00 \times 10^{-4} \text{L}$	$3.00 \times 10^{-4} \text{L}$	0.01	
		mg/L	0.004L	0.004L	0.004L	0.004L	0.05	
		mg/L	$5.0 \times 10^{-4} \text{L}$	$5.0 \times 10^{-4} \text{L}$	$5.0 \times 10^{-4} \text{L}$	$5.0 \times 10^{-4} \text{L}$	0.005	
		mg/L	$2.5 \times 10^{-3} \text{L}$	$2.5 \times 10^{-3} \text{L}$	$2.5 \times 10^{-3} \text{L}$	$2.5 \times 10^{-3} \text{L}$	0.01	
		mg/L	0.006L	0.006L	0.006L	0.006L	0.02	
		mg/L	$2.5 \times 10^{-3} \text{L}$	$2.5 \times 10^{-3} \text{L}$	$2.5 \times 10^{-3} \text{L}$	$2.5 \times 10^{-3} \text{L}$	0.05	
		mg/L	7.33	7.14	7.23	7.28	250	
		mg/L	186	175	172	182	450	
		mg/L	5.83	5.54	5.63	5.68	250	
GB/T 14848-2017 1								
GB/T 14848-2017 2								

GB/T 14848-2017 III

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1  
pH

2

4

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D1

79.2m

1  
pH

		pH														
GB14848-2017		6.5~8.5	3.0	0.50	250	250	1.00	0.01	1.00	0.005	0.01	0.02	0.05	0.1	0.05	0.0001
D 1		6.76	0.87	0.03	57	19.4	0.00925	0.00211	0.0319	<0.00005	0.00019	0.00261	<0.02	0.03	<0.004	<0.00002
		6.72	0.80	0.02	11	17.8	0.00919	0.00207	0.0305	<0.00005	<0.00012	0.00255	<0.02	0.02	<0.004	<0.00002
		-	0.84	0.03	27	18.4	0.00921	0.00209	0.0313	<0.00005	0.00014	0.00258	<0.02	0.03	<0.004	<0.00002
	)	0.56	0.28	0.06	0.108	0.073	0.009	0.0209	0.031	0.01	0.014	0.129	0.4	0.3	0.08	0.2
D 2		6.71	0.46	0.03	11	18.4	0.00045	<0.00009	0.0396	0.00006	<0.00012	0.00210	<0.02	0.04	<0.004	<0.00002
		6.52	0.41	<0.02	9	16.8	0.00039	<0.00009	0.0378	0.00006	<0.00012	0.00207	<0.02	0.04	<0.004	<0.00002
		-	0.44	0.02	10	17.6	0.00042	<0.00009	0.0384	0.00006	<0.00012	0.00208	<0.02	0.04	<0.004	<0.00002
		0.96	0.147	0.04	0.04	0.07	0.0004	0.0009	0.038	0.012	0.012	0.104	0.4	0.4	0.08	0.2
D 3		6.65	1.22	0.15	12	16.6	0.00733	<0.00076	0.0336	0.00006	0.00026	0.00189	<0.02	0.07	<0.004	<0.00002
		6.60	1.14	0.12	9	15.1	0.00695	<0.00070	0.0333	0.00006	<0.00012	0.00180	<0.02	0.07	<0.004	<0.00002
		-	1.17	0.13	10	15.8	0.00720	<0.0007	0.0335	0.00006	0.00020	0.0018	<0.02	0.0	<0.004	<0.00002



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1

pH

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2

7

		D9	D10	D11	D12	D13	D14	D15
				6				
pH		6.68	8.54	6.89	7.42	8.87	8.43	6.86
	mg/L	0.095	0.035	0.085	0.208	0.156	0.185	0.229
	mg/L	10.3	4.84	19.8	9.64	15	2.83	8.33
	mg/L	0.003L	0.013	0.027	0.003L	0.004	0.01	0.013
	mg/L	0.0003L	0.0003L	0.0003L	0.0003L	0.0003L	0.0003L	0.0003L
	mg/L	0.004L	0.004L	0.004L	0.004L	0.004L	0.004L	0.004L
	µg/L	0.3L	0.3L	0.3L	0.3L	1	0.4	0.3L
	µg/L	0.07	0.04L	0.04L	0.04L	0.04L	0.04L	0.04L
	mg/L	0.004L	0.004L	0.004L	0.004L	0.004L	0.004L	0.004L
	mg/L	23	168	56	49	280	133	51
	µg/L	2	1L	1L	1L	1L	1L	1L
	µg/L	0.1L	0.1L	0.1L	0.1L	0.1L	0.1L	0.1L
	mg/L	0.05	0.09	0.19	0.07	0.23	0.13	0.05L
	mg/L	0.03L	0.22	0.04	0.12	0.12	0.04	0.08
	mg/L	0.01L	0.23	0.22	0.11	0.07	0.12	0.14
	mg/L	140	283	216	165	572	279	116
	mg/L	0.98	1.32	0.96	2.07	1.45	1.24	2.07



mg/L

8L

42

8L

8L

40

26



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5

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HJ610-2016

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1

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$$P_i = \frac{C_i}{C_{oi}}$$

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——i

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——i mg/L

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——i mg/L

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pH

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$$S_{pH_j} = \frac{pH_j - 7.0}{pH_{su} - 7.0} (pH_j > 7.0) \quad S_{pH_j} = \frac{7.0 - pH_j}{7.0 - pH_{sd}} (pH_j \leq 7.0)$$

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pH<sub>j</sub>——pH

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pH<sub>sd</sub>——pH

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pH<sub>su</sub>——pH

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GB/T14848-2017

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D10 D13 pH D9 D13

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pH

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GB/T14848-2017

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D10 D13 D14 Ca-HCO<sub>3</sub>

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		D9	D10	D11	D12	D13	D14	D15
	mg/L	0.95	35.9	2.25	2.73	11.2	6.62	2.00
	mg/L	8.81	32.3	13.9	13.9	29.5	19.6	7.27
	mg/L	10.8	57.5	16.7	12.8	95.5	39.9	8.09
	mg/L	5.00	9.53	4.20	5.30	9.86	10.7	3.98
	mg/L	5L	5L	5L	5L	5L	5L	5L
	mg/L	16	174	13	17	256	121	15
	mg/L	3.68	41.8	8.08	11.2	39.0	32.4	3.09
	mg/L	13.5	20.1	15.6	23.4	48.9	37.9	9.60

<u>1</u>	D9	Ca-Cl
<u>2</u>	D10	Ca-HCO <sub>3</sub>
<u>3</u>	D11	Ca-Cl
<u>4</u>	D12	Ca-Cl
<u>5</u>	D13	Ca-HCO <sub>3</sub>
<u>6</u>	D14	Ca-HCO <sub>3</sub>
<u>7</u>	D15	Ca-Cl

			51	49	55	dB	A
N2			60	61	65	dB	A
			50	48	55	dB	A
N3			56	60	65	dB	A
			51	51	55	dB	A
N4			55	57	65	dB	A
			51	50	55	dB	A
N5			61	60	65	dB	A
			50	49	55	dB	A
N6			58	59	65	dB	A
			48	50	55	dB	A
N7			57	60	65	dB	A
			51	49	55	dB	A
N8			55	57	65	dB	A
			50	48	55	dB	A
N9			57	57	60	dB	A
			45	46	50	dB	A
N10			57	56	60	dB	A
			46	46	50	dB	A

GB3096-2008 3

GB3096-2008 2

8000

23000

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7.5-1

T1 18#		0~0.2m	1
T2 20#		0~0.5m 0.5~1.5m,1.5~3m	3
T3 21#		0~0.5m 0.5~1.5m ,1.5~3m	3
T4 17#		0~0.5m 0.5~1.5m,1.5~3m	3

T5		0~0.2m	1
T6		0~0.2m	1
*T1	300m	0~0.2m	1
*T2	300m	0~0.2m	1
*T3	500m	0~0.2m	1
“*”	( )	( )	

2.4-7 47

2019 8 9 2020 5 9

GB15618

-2018

GB15618-2018

7.5-2

T1 18#	0m- 0.2m		pH		7.76	—
				mg/kg	17.8	60
				mg/kg	0.47	65
				mg/kg	2L	5.7
				mg/kg	34	18000
				mg/kg	179	200
				mg/kg	3.7	800
				mg/kg	0.180	38
				mg/kg	11	900
			*	mg/kg	2.13	70
				mg/kg	299	—
				mg/kg	2.1×10 <sup>-3</sup> L	2.8
				mg/kg	1.5×10 <sup>-3</sup> L	0.9

			mg/kg	$3 \times 10^{-3}L$	37
		1,1-	mg/kg	$1.6 \times 10^{-3}L$	9
		1,2-	mg/kg	$1.3 \times 10^{-3}L$	5
		1,1-	mg/kg	$8.0 \times 10^{-4}L$	66
		-1,2-	mg/kg	$9.0 \times 10^{-4}L$	596
		-1,2-	mg/kg	$9.0 \times 10^{-4}L$	54
			mg/kg	$2.6 \times 10^{-3}L$	616
		1,2-	mg/kg	$1.9 \times 10^{-3}L$	5
		1,1,1,2-	mg/kg	$1.0 \times 10^{-3}L$	10
		1,1,2-	mg/kg	$1.0 \times 10^{-3}L$	6.8
			mg/kg	$8.0 \times 10^{-4}L$	53
		1,1,1-	mg/kg	$1.1 \times 10^{-3}L$	840
		1,1,2-	mg/kg	$1.4 \times 10^{-3}L$	2.8
			mg/kg	$9.0 \times 10^{-4}L$	2.8
		1,2,3-	mg/kg	$1.0 \times 10^{-3}L$	0.5
			mg/kg	$1.5 \times 10^{-3}L$	0.43
			mg/kg	$1.6 \times 10^{-3}L$	4
			mg/kg	$1.1 \times 10^{-3}L$	270
		1,2-	mg/kg	$1.0 \times 10^{-3}L$	560
		1,4-	mg/kg	$1.2 \times 10^{-3}L$	20
			mg/kg	$1.2 \times 10^{-3}L$	28
			mg/kg	$1.6 \times 10^{-3}L$	129
			mg/kg	$2.0 \times 10^{-3}L$	1200
		+	mg/kg	$3.6 \times 10^{-3}L$	570
			mg/kg	$1.3 \times 10^{-3}L$	640
			mg/kg	0.09L	76
			mg/kg	ND	260
		2-	mg/kg	0.06L	2256

# Б 3 " " # | Б

		a	mg/kg	0.1L	15
		a	mg/kg	0.1L	1.5
		b	mg/kg	0.2L	15
		k	mg/kg	0.1L	151
			mg/kg	0.1L	1293
		a,h	mg/kg	0.1L	1.5
		1,2,3-cd	mg/kg	0.1L	15
			mg/kg	0.09L	70
		pH		8.56	—
			mg/kg	54.6	60
			mg/kg	0.60	65
			mg/kg	2L	5.7
			mg/kg	39 ± Γ (C) w d	8000
			mg/kg	155	200
			mg/kg	5.5	800
			mg/kg	0.122	38
			mg/kg	12	900
		*	mg/kg	1.14	70
			mg/kg	316	—
T2 20#	0m-		mg/kg	2.1×10 <sup>10</sup> L, SMS	\$-2.8
1	0.5m				

			1,1,2-	mg/kg	$1.0 \times 10^{-3}L$	6.8
				mg/kg	$8.0 \times 10^{-4}L$	53
			1,1,1-	mg/kg	$1.1 \times 10^{-3}L$	840
			1,1,2-	mg/kg	$1.4 \times 10^{-3}L$	2.8
				mg/kg	$9.0 \times 10^{-4}L$	2.8
			1,2,3-	mg/kg	$1.0 \times 10^{-3}L$	0.5
				mg/kg	$1.5 \times 10^{-3}L$	0.43
				mg/kg	$1.6 \times 10^{-3}L$	4
				mg/kg	$1.1 \times 10^{-3}L$	270
			1,2-	mg/kg	$1.0 \times 10^{-3}L$	560
			1,4-	mg/kg	$1.2 \times 10^{-3}L$	20
				mg/kg	$1.2 \times 10^{-3}L$	28
				mg/kg	$1.6 \times 10^{-3}L$	129
				mg/kg	$2.0 \times 10^{-3}L$	1200
			+	mg/kg	$3.6 \times 10^{-3}L$	570
				mg/kg	$1.3 \times 10^{-3}L$	640
				mg/kg	0.09L	76
				mg/kg	ND	260
			2-	mg/kg	0.06L	2256
			a	mg/kg	0.1L	15
			a	mg/kg	0.1L	1.5
			b	mg/kg	0.2L	15
			k	mg/kg	0.1L	151
				mg/kg	0.1L	1293
			a,h	mg/kg	0.1L	1.5
			1,2,3-cd	mg/kg	0.1L	15
				mg/kg	0.09L	70
T2 20#	0.5m		pH		7.95	—
				mg/kg	33.9	60

2	-1.5m		mg/kg	0.66	65
			mg/kg	2L	5.7
			mg/kg	40	18000
			mg/kg	155	200
			mg/kg	6.8	800
			mg/kg	0.095	38
			mg/kg	14	900
		*	mg/kg	1.14	70
			mg/kg	295	—
			mg/kg	$2.1 \times 10^{-3}L$	2.8
			mg/kg	$1.5 \times 10^{-3}L$	0.9
			mg/kg	$3 \times 10^{-3}L$	37
		1,1-	mg/kg	$1.6 \times 10^{-3}L$	9
		1,2-	mg/kg	$1.3 \times 10^{-3}L$	5
		1,1-	mg/kg	$8.0 \times 10^{-4}L$	66
		-1,2-	mg/kg	$2.0 \times 10^{-4}L$	596
		-1,2-	mg/kg	$9.0 \times 10^{-4}L$	54
			mg/kg	$2.6 \times 10^{-3}L$	616
		1,2-	mg/kg	$1.9 \times 10^{-3}L$	5
		1,1,1,2-	mg/kg	$1.0 \times 10^{-3}L$	10
		1,1,2-	mg/kg	$1.0 \times 10^{-3}L$	6.8
			mg/kg	$8.0 \times 10^{-4}L$	53
		1,1,1-	mg/kg	$1.1 \times 10^{-3}L$	81

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1,2- mg/kg 1.0×10<sup>-3</sup>L 56, m\$

1

			mg/kg	$3 \times 10^{-3}L$	37
		1,1-	mg/kg	$1.6 \times 10^{-3}L$	9
		1,2-	mg/kg	$1.3 \times 10^{-3}L$	5
		1,1-	mg/kg	$8.0 \times 10^{-4}L$	66
		-1,2-	mg/kg	$9.0 \times 10^{-4}L$	596
		-1,2-	mg/kg	$9.0 \times 10^{-4}L$	54
			mg/kg	$2.6 \times 10^{-3}L$	616
		1,2-	mg/kg	$1.9 \times 10^{-3}L$	5
		1,1,1,2-	mg/kg	$1.0 \times 10^{-3}L$	10
		1,1,2-	mg/kg	$1.0 \times 10^{-3}L$	6.8
			mg/kg	$8.0 \times 10^{-4}L$	53
		1,1,1-	mg/kg	$1.1 \times 10^{-3}L$	840
		1,1,2-	mg/kg	$1.4 \times 10^{-3}L$	2.8
			mg/kg	$9.0 \times 10^{-4}L$	2.8
		1,2,3-	mg/kg	$1.0 \times 10^{-3}L$	0.5
			mg/kg	$1.5 \times 10^{-3}L$	0.43
			mg/kg	$1.6 \times 10^{-3}L$	4
			mg/kg	$1.1 \times 10^{-3}L$	270
		1,2-	mg/kg	$1.0 \times 10^{-3}L$	560
		1,4-	mg/kg	$1.2 \times 10^{-3}L$	20
			mg/kg	$1.2 \times 10^{-3}L$	28
			mg/kg	$1.6 \times 10^{-3}L$	129
			mg/kg	$2.0 \times 10^{-3}L$	1200
		+	mg/kg	$3.6 \times 10^{-3}L$	570
			mg/kg	$1.3 \times 10^{-3}L$	640
			mg/kg	0.09L	76
			mg/kg	ND	260
		2-	mg/kg	0.06L	2256

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a	mg/kg	0.1L	15
a	mg/kg	0.1L	1.5
b	mg/kg	0.2L	15
k	mg/kg	0.1L	151
	mg/kg	0.1L	1293
a,h	mg/kg	0.1L	1.5
1,2,3-cd	mg/kg	0.1L	15
	mg/kg	0.09L	70
pH		6.17	—
	mg/kg	29.9	60
	mg/kg	0.57	65

T3 21#                    0m-  
1                    0.5m

			1,1,2-	mg/kg	$1.0 \times 10^{-3}L$	6.8
				mg/kg	$8.0 \times 10^{-4}L$	53
			1,1,1-	mg/kg	$1.1 \times 10^{-3}L$	840
			1,1,2-	mg/kg	$1.4 \times 10^{-3}L$	2.8
				mg/kg	$9.0 \times 10^{-4}L$	2.8
			1,2,3-	mg/kg	$1.0 \times 10^{-3}L$	0.5
				mg/kg	$1.5 \times 10^{-3}L$	0.43
				mg/kg	$1.6 \times 10^{-3}L$	4
				mg/kg	$1.1 \times 10^{-3}L$	270
			1,2-	mg/kg	$1.0 \times 10^{-3}L$	560
			1,4-	mg/kg	$1.2 \times 10^{-3}L$	20
				mg/kg	$1.2 \times 10^{-3}L$	28
				mg/kg	$1.6 \times 10^{-3}L$	129
				mg/kg	$2.0 \times 10^{-3}L$	1200
			+	mg/kg	$3.6 \times 10^{-3}L$	570
				mg/kg	$1.3 \times 10^{-3}L$	640
				mg/kg	0.09L	76
				mg/kg	ND	260
			2-	mg/kg	0.06L	2256
			a	mg/kg	0.1L	15
			a	mg/kg	0.1L	1.5
			b	mg/kg	0.2L	15
			k	mg/kg	0.1L	151
				mg/kg	0.1L	1293
			a,h	mg/kg	0.1L	1.5
			1,2,3-cd	mg/kg	0.1L	15
				mg/kg	0.09L	70
T3 21#	0.5m		pH		5.71	—
				mg/kg	25.8	60

2	-1.5m		mg/kg	0.81	65
			mg/kg	2L	5.7
			mg/kg	53	18000
			mg/kg	176	200
			mg/kg	5.2	800
			mg/kg	0.030	38
			mg/kg	12	900
		*	mg/kg	2.13	70
			mg/kg	165	—
			mg/kg	$2.1 \times 10^{-3}L$	2.8
			mg/kg	$1.5 \times 10^{-3}L$	0.9
			mg/kg	$1.3 \times 10^{-3}L$	37
		1,1-	mg/kg	$1.6 \times 10^{-3}L$	9
		1,2-	mg/kg	$1.3 \times 10^{-3}L$	5
		1,1-	mg/kg	$8.0 \times 10^{-4}L$	66
		-1,2-	mg/kg	$9.0 \times 10^{-4}L$	596
		-1,2-	mg/kg	$9.0 \times 10^{-4}L$	54
			mg/kg	$2.6 \times 10^{-3}L$	616
		1,2-	mg/kg	$1.9 \times 10^{-3}L$	5
		1,1,1,2-	mg/kg	$1.0 \times 10^{-3}L$	10
		1,1,2-	mg/kg	$1.0 \times 10^{-3}L$	6.8

			1,2-	mg/kg	1.0×10 <sup>-3</sup> L	560
			1,4-	mg/kg	1.2×10 <sup>-3</sup> L	20
				mg/kg	1.2×10 <sup>-3</sup> L	28
				mg/kg	1.6×10 <sup>-3</sup> L	129
				mg/kg	2.0×10 <sup>-3</sup> L	1200
			+	mg/kg	3.6×10 <sup>-3</sup> L	570
				mg/kg	1.3×10 <sup>-3</sup> L	640
				mg/kg	0.09L	76
				mg/kg	ND	260
			2-	mg/kg	0.06L	2256
			a	mg/kg	0.1L	15
			a	mg/kg	0.1L	1.5
			b	mg/kg	0.2L	15
			k	mg/kg	0.1L	151
				mg/kg	0.1L	1293
			a,h	mg/kg	0.1L	1.5
			1,2,3-cd	mg/kg	0.1L	15
				mg/kg	0.09L	70
T3 21#	1.5m		pH		5.55	—
3	-3m			mg/kg	37.3	60
				mg/kg	0.50	65
				mg/kg	2L	5.7
				mg/kg	54	18000
				mg/kg	174	200
				mg/kg	5.5	800
				mg/kg	0.023	38
				mg/kg	9	900
			*	mg/kg	1.14	70
				mg/kg	165	—
				mg/kg	2.1×10 <sup>-3</sup> L	2.8
				mg/kg	1.5×10 <sup>-3</sup> L	0.9

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	mg/kg	$3 \times 10^{-3}L$	37
1,1-	mg/kg	$1.6 \times 10^{-3}L$	9
1,2-	mg/kg	$1.3 \times 10^{-3}L$	5
1,1-	mg/kg	$8.0 \times 10^{-4}L$	66
-1,2-	mg/kg	$9.0 \times 10^{-4}L$	596
-1,2-	mg/kg	$9.0 \times 10^{-4}L$	54
	mg/kg	$2.6 \times 10^{-3}L$	616
1,2-	mg/kg	$1.9 \times 10^{-3}L$	5
1,1,1,2-	mg/kg	$1.0 \times 10^{-3}L$	10
1,1,2-	mg/kg	$1.0 \times 10^{-3}L$	6.8
	mg/kg	$8.0 \times 10^{-4}L$	53
1,1,1-	mg/kg	$1.1 \times 10^{-3}L$	840
1,1,2-	mg/kg	$1.4 \times 10^{-3}L$	2.8
	mg/kg	$9.0 \times 10^{-4}L$	2.8
1,2,3-	mg/kg	$1.0 \times 10^{-3}L$	0.5
	mg/kg	$1.5 \times 10^{-3}L$	0.43
	mg/kg	$1.6 \times 10^{-3}L$	4
	mg/kg	$1.1 \times 10^{-3}L$	270
1,2- [/_]			

			a	mg/kg	0.1L	15
			a	mg/kg	0.1L	1.5
			b	mg/kg	0.2L	15
			k	mg/kg	0.1L	151
				mg/kg	0.1L	1293
			a,h	mg/kg	0.1L	1.5
			1,2,3-cd	mg/kg	0.1L	15
				mg/kg	0.09L	70
T4 17# 1	0m- 0.5m		pH		5.95	—
				mg/kg	23.3	60
				mg/kg	0.32	65
				mg/kg	2L	5.7
				mg/kg	35	18000
				mg/kg	173	200
				mg/kg	6.3	800
				mg/kg	0.015	38
				mg/kg	11	900
				* mg/kg	1.14	70
				mg/kg	137	—
				mg/kg	2.1×10 <sup>-3</sup> L	2.8
				mg/kg	1.5×10 <sup>-3</sup> L	0.9
				mg/kg	3×10 <sup>-3</sup> L	37
				1,1- mg/kg	1.6×10 <sup>-3</sup> L	9
				1,2- mg/kg	1.3×10 <sup>-3</sup> L	5
				1,1- mg/kg	8.0×10 <sup>-4</sup> L	66
				-1,2- mg/kg	9.0×10 <sup>-4</sup> L	596
				-1,2- mg/kg	9.0×10 <sup>-4</sup> L	54
				mg/kg	2.6×10 <sup>-3</sup> L	616
				1,2- mg/kg	1.9×10 <sup>-3</sup> L	5
				1,1,1,2- mg/kg	1.0×10 <sup>-3</sup> L	10

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1,1,2-	mg/kg	$1.0 \times 10^{-3}L$	6.8
	mg/kg	$8.0 \times 10^{-4}L$	53
1,1,1-	mg/kg	$1.1 \times 10^{-3}L$	840
1,1,2-	mg/kg	$1.4 \times 10^{-3}L$	2.8
	mg/kg	$9.0 \times 10^{-4}L$	2.8
1,2,3-	mg/kg	$1.0 \times 10^{-3}L$	0.5
	mg/kg	$1.5 \times 10^{-3}L$	0.43
	mg/kg	$1.6 \times 10^{-3}L$	4
	mg/kg	$1.1 \times 10^{-3}L$	270
1,2-	mg/kg	$1.0 \times 10^{-3}L$	560
1,4-	mg/kg	$1.2 \times 10^{-3}L$	20
	mg/kg	$1.2 \times 10^{-3}L$	28
	mg/kg	$1.6 \times 10^{-3}L$	129
	mg/kg	$2.0 \times 10^{-3}L$	1200
	mg/kg	$3.6 \times 10^{-3}L$	570
	mg/kg	$1.3 \times 10$	

3

2	-1.5m		mg/kg	0.29	65
			mg/kg	2L	5.7
			mg/kg	36	18000
			mg/kg	179	200
			mg/kg	4.2	800
			mg/kg	0.032	38
			mg/kg	14	900
		*	mg/kg	3.11	70
			mg/kg	103	—
			mg/kg	$2.1 \times 10^{-3}L$	2.8
			mg/kg	$1.5 \times 10^{-3}L$	0.9
			mg/kg	$3 \times 10^{-3}L$	37
		1,1-	mg/kg	$1.6 \times 10^{-3}L$	9
		1,2-	mg/kg	$1.3 \times 10^{-3}L$	5
		1,1-	mg/kg	$8.0 \times 10^{-4}L$	66
		-1,2-	mg/kg	$9.0 \times 10^{-4}L$	596
		-1,2-	mg/kg	$9.0 \times 10^{-4}L$	54
			mg/kg	$2.6 \times 10^{-3}L$	616
		1,2-	mg/kg	$1.9 \times 10^{-3}L$	5
		1,1,1,2-	mg/kg	$1.0 \times 10^{-3}L$	10
		1,1,2-	mg/kg	$1.0 \times 10^{-3}L$	6.8
			mg/kg	$8.0 \times 10^{-4}L$	53
		1,1,1-	mg/kg	$1.1 \times 10^{-3}L$	840
		1,1,2-	mg/kg	$1.4 \times 10^{-3}L$	2.8
			mg/kg	$9.0 \times 10^{-4}L$	2.8
		1,2,3-	mg/kg	$1.0 \times 10^{-3}L$	0.5
			mg/kg	$1.5 \times 10^{-3}L$	0.43
			mg/kg	$1.6 \times 10^{-3}L$	4
	mg/kg	$1.1 \times 10^{-3}L$	270		

			1,2-	mg/kg	1.0×10 <sup>-3</sup> L	560
			1,4-	mg/kg	1.2×10 <sup>-3</sup> L	20
				mg/kg	1.2×10 <sup>-3</sup> L	28
				mg/kg	1.6×10 <sup>-3</sup> L	129
				mg/kg	2.0×10 <sup>-3</sup> L	1200
			+	mg/kg	3.6×10 <sup>-3</sup> L	570
				mg/kg	1.3×10 <sup>-3</sup> L	640
				mg/kg	0.09L	76
				mg/kg	ND	260
			2-	mg/kg	0.06L	2256
			a	mg/kg	0.1L	15
			a	mg/kg	0.1L	1.5
			b	mg/kg	0.2L	15
			k	mg/kg	0.1L	151
				mg/kg	0.1L	1293
			a,h	mg/kg	0.1L	1.5
			1,2,3-cd	mg/kg	0.1L	15
				mg/kg	0.09L	70
T4 17#	1.5m		pH		5.92	—
3	-3m			mg/kg	21.2	60
				mg/kg	0.14	65
				mg/kg	2L	5.7
				mg/kg	36	18000
				mg/kg	177	200
				mg/kg	2.4	800
				mg/kg	0.021	38
				mg/kg	10	900
			*	mg/kg	2.13	70
				mg/kg	1024	—
				mg/kg	2.1×10 <sup>-3</sup> L	2.8
				mg/kg	1.5×10 <sup>-3</sup> L	0.9

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	mg/kg	$3 \times 10^{-3}L$	37
1,1-	mg/kg	$1.6 \times 10^{-3}L$	9
1,2-	mg/kg	$1.3 \times 10^{-3}L$	5
1,1-	mg/kg	$8.0 \times 10^{-4}L$	66
-1,2-	mg/kg	$9.0 \times 10^{-4}L$	596
-1,2-	mg/kg	$9.0 \times 10^{-4}L$	54
	mg/kg	$2.6 \times 10^{-3}L$	616
1,2-	mg/kg	$1.9 \times 10^{-3}L$	5
1,1,1,2-	mg/kg	$1.0 \times 10^{-3}L$	10
1,1,2-	mg/kg	$1.0 \times 10^{-3}L$	6.8
	mg/kg	$8.0 \times 10^{-4}L$	53
1,1,1-	mg/kg	$1.1 \times 10^{-3}L$	840
1,1,2-	mg/kg	$1.4 \times 10^{-3}L$	2.8
	mg/kg	$9.0 \times 10^{-4}L$	2.8
1,2,3-	mg/kg	$1.0 \times 10^{-3}L$	0.5
	mg/kg	$1.5 \times 10^{-3}L$	0.43
	mg/kg	$1.6 \times 10^{-3}L$	4
	mg/kg	$1.1 \times 10^{-3}L$	270
1,2- [/_]			

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a	mg/kg	0.1L	15
a	mg/kg	0.1L	1.5
b	mg/kg	0.2L	15

			1,1,2-	mg/kg	$1.0 \times 10^{-3}L$	6.8
				mg/kg	$8.0 \times 10^{-4}L$	53
			1,1,1-	mg/kg	$1.1 \times 10^{-3}L$	840
			1,1,2-	mg/kg	$1.4 \times 10^{-3}L$	2.8
				mg/kg	$9.0 \times 10^{-4}L$	2.8
			1,2,3-	mg/kg	$1.0 \times 10^{-3}L$	0.5
				mg/kg	$1.5 \times 10^{-3}L$	0.43
				mg/kg	$1.6 \times 10^{-3}L$	4
				mg/kg	$1.1 \times 10^{-3}L$	270
			1,2-	mg/kg	$1.0 \times 10^{-3}L$	560
			1,4-	mg/kg	$1.2 \times 10^{-3}L$	20
				mg/kg	$1.2 \times 10^{-3}L$	28
				mg/kg	$1.6 \times 10^{-3}L$	129
				mg/kg	$2.0 \times 10^{-3}L$	1200
			+	mg/kg	$3.6 \times 10^{-3}L$	570
				mg/kg	$1.3 \times 10^{-3}L$	640
				mg/kg	0.09L	76
				mg/kg	ND	260
			2-	mg/kg	0.06L	2256
			a	mg/kg	0.1L	15
			a	mg/kg	0.1L	1.5
			b	mg/kg	0.2L	15
			k	mg/kg	0.1L	151
				mg/kg	0.1L	1293
			a,h	mg/kg	0.1L	1.5
			1,2,3-cd	mg/kg	0.1L	15
				mg/kg	0.09L	70
T6			pH		6.56	—
	0m-			mg/kg	21.9	60

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0.2m		mg/kg	0.32	65
		mg/kg	2L	5.7
		mg/kg	37	18000
		mg/kg	173	200
		mg/kg	4.2	800
		mg/kg	0.028	38
		mg/kg	14	900
	*	mg/kg	1.14	70
		mg/kg	190	—
		mg/kg	$2.1 \times 10^{-3}L$	2.8
		mg/kg	$1.5 \times 10^{-3}L$	0.9
		mg/kg	$3 \times 10^{-3}L$	37
	1,1-	mg/kg	$1.6 \times 10^{-3}L$	9
	1,2- ž [/_[			

			1,2-	mg/kg	1.0×10 <sup>-3</sup> L	560
			1,4-	mg/kg	1.2×10 <sup>-3</sup> L	20
				mg/kg	1.2×10 <sup>-3</sup> L	28
				mg/kg	1.6×10 <sup>-3</sup> L	129
				mg/kg	2.0×10 <sup>-3</sup> L	1200
			+	mg/kg	3.6×10 <sup>-3</sup> L	570
				mg/kg	1.3×10 <sup>-3</sup> L	640
				mg/kg	0.09L	76
				mg/kg	ND	260
			2-	mg/kg	0.06L	2256
			a	mg/kg	0.1L	15
			a	mg/kg	0.1L	1.5
			b	mg/kg	0.2L	15
			k	mg/kg	0.1L	151
				mg/kg	0.1L	1293
			a,h	mg/kg	0.1L	1.5
			1,2,3-cd	mg/kg	0.1L	15
				mg/kg	0.09L	70

*T1 300m	2019.8. 9	5.40	3.16	36.8	75	24.7	146	49	9.97
*T2 300m		4.67	1.57	27.1	73	26.1	117	49	10.2
*T3 500m		4.66	1.60	37.9	87	21.6	173	60	9.95

7.5-2 7.5-3 T1-T4

GB36600-2018

T5 T6 \*T1

300m

\*T2

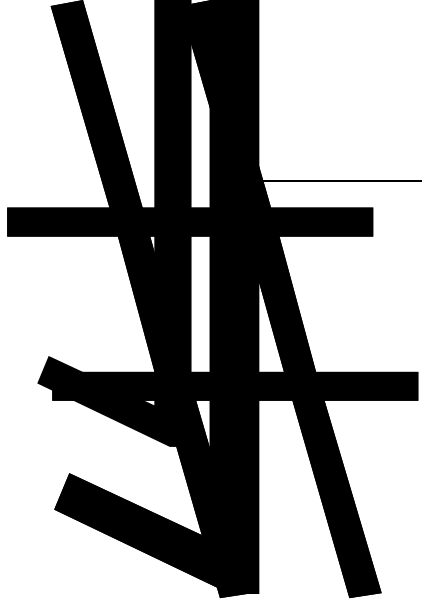
300m

\*T3

500m

' \*

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3#

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		—	<u>0.185</u>	<u>30%</u>	<u>0.1295</u>
		<u>HCl</u>	<u>0.185</u>		<u>0.1295</u>
	<u>DA027</u>	—	<u>12.617</u>	<u>60%</u>	<u>5.0468</u>
		—	<u>2.794</u>		<u>1.1176</u>
			—	<u>30%</u>	<u>0.1799</u>
			<u>HCl</u>		<u>0.257</u>
	<u>DA009</u>	—	<u>13.629</u>	<u>60%</u>	<u>5.4516</u>
		—	<u>6.073</u>		<u>2.4292</u>
			—	<u>30%</u>	<u>0.9982</u>
			<u>HCl</u>		<u>1.426</u>
<u>65#</u>	<u>DA056</u>	—	<u>4.752</u>	<u>30%</u>	<u>3.3264</u>
<u>pH</u>	<u>DA057</u>	<u>HCl</u>	<u>0.317</u>	<u>30%</u>	<u>0.2219</u>

1

HJ2.2-2018

HCl

2

HJ2.2-2018

AERSCREE

AERSCREE

U5\$T

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	/km	-
	/°	-

3

AERSCREE

AERSCREE

AERSCREEN筛选计算与评价等级-筛选方案

筛选方案名称: 筛选方案

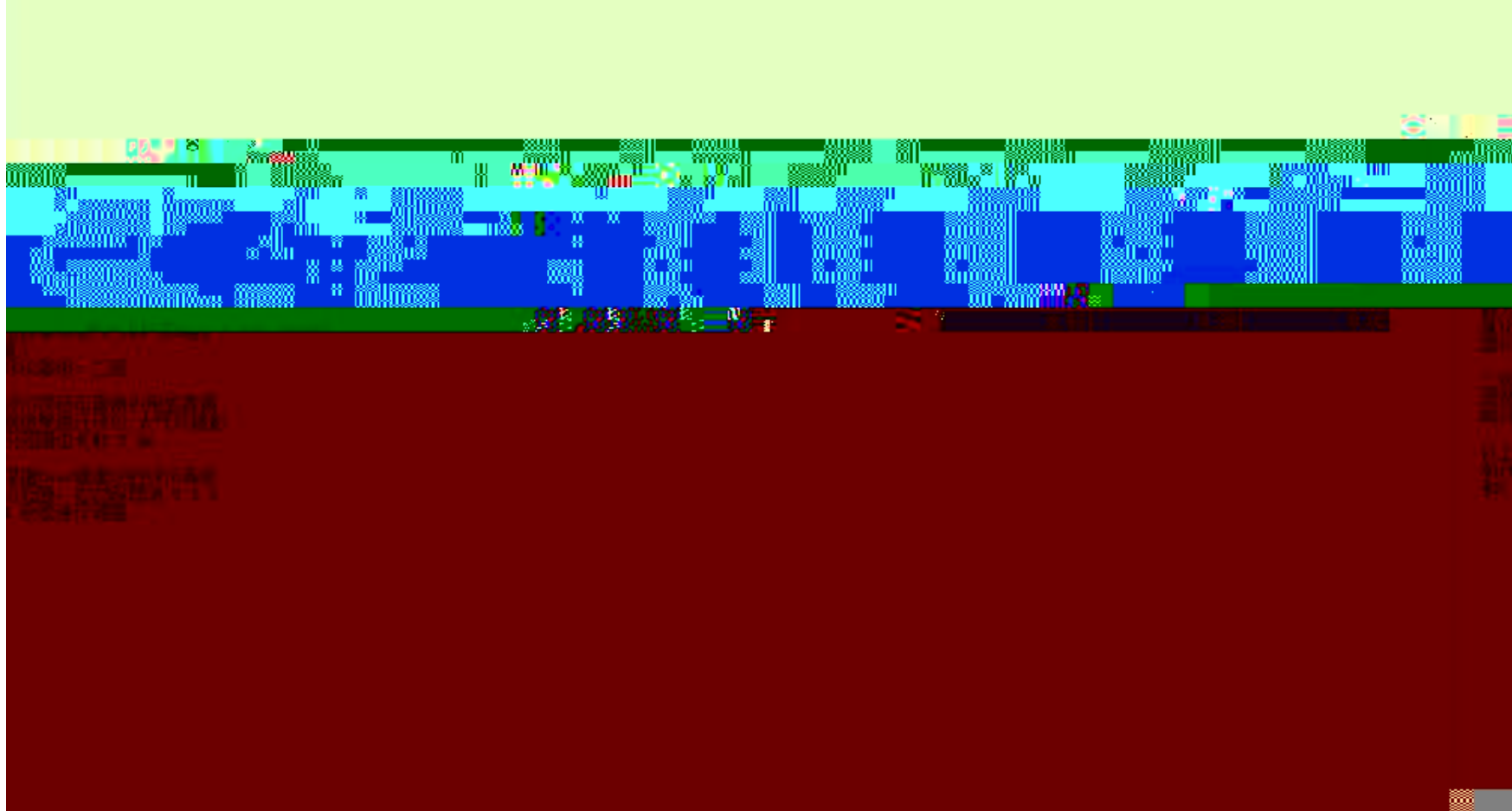
筛选方案定义 | 筛选结果

查看选项

筛选结果: 已考虑地形高程... AERSCREEN运行了 25 次耗时 2:07:25。按【刷新结果】重新计算:

查看内容: 反源的显示值

刷新结果





$\mu\text{g}/\text{m}^3$

%

m



$$P_i = C_i / C_{oi} \times 100\%$$

$P_i$  —  $i$  %

$C_i$  —  $i$   $\text{mg/m}^3$

$C_{oi}$  —  $i$   $\text{mg/m}^3$

	Pmax 10%
	1% Pmax<10%
	Pmax<1%

8.2-6

i

ê

			(mg/m <sup>3</sup> )	kg/h	t/a
1	DA007		3.39	0.051	0.403
2	DA008		4.037	0.061	0.48
3	DA011		4.037	0.061	0.48
4	DA012		4.037	0.061	0.48
5	DA010		0.637	0.011	0.091
			0.284	0.005	0.04
			0.13	0.002	0.019
		HCl	0.13	0.002	0.019
6	DA027		1.062	0.016	0.126
			0.235	0.004	0.028
			0.217	0.003	0.026
		HCl	0.217	0.003	0.026
7	DA009		0.956	0.017	0.136
			0.426	0.008	0.061
			1	0.018	0.143
		HCl	1	0.018	0.143
8	DA056		12	0.06	0.475
9	DA057	HCl	0.8	0.008	0.063
					0.353
					0.129
			HCl		0.251
			NH3		2.506



---

	m <sup>3</sup> /a	
+	36050	
	3000	
	2400	
	600	
	-	
	256866	

1

$2.5 \times 10^4 \text{m}^3/\text{d}$

$2.5 \times 10^4 \text{m}^3/\text{d}$

29.2km<sup>2</sup>

“

+

A<sup>2</sup>O+AO

+

+

+

+

”

GB3838-2002

10mg/L

GB8978-1996

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		m <sup>3</sup> /a					
							/ mg/L
1	DW01	4.6			-	SS	10
						COD	30
						NH <sub>3</sub> -N	1.5
							-
2	DW02	0.01			-		

				mg/L
1	DW01-DW02	pH	GB31573-2015 1	6~9
2		COD		200
3		SS		100
4		NH <sub>3</sub> -N		40
5		Co		1.0
6			500	
7			GB/T31962-2015 1A	400

			mg/L /	kg/d /	/ t/a
1	DW01	COD	40	5.576	1.84
2		SS	20	2.788	0.92
3		NH <sub>3</sub> -N	30	4.182	1.38
4		Co	0.005	0.001	0.0002
5			150	20.909	6.9
6	DW02	SS	20	0.006	0.002
7		COD	40	0.012	0.004
8		NH <sub>3</sub> -N	30	0.009	0.003
		COD			1.844
		SS			0.922
		NH <sub>3</sub> -N			1.383
		Co			0.0002
					6.9



— —

65#

1

100mg/L

2

- HJ610-2011

$$\frac{1}{2} - \left(\frac{1}{2\sqrt{\dots}}\right) \frac{1}{2} - \left(\frac{1}{2\sqrt{\dots}}\right) \quad 7-1$$

x— m

t— d

C—t x mg/L

$C_0$ — mg/L  
 $u$ — m/d  
 $D_L$ —  $m^2/d$  erfc()—

3

$u$

0.05m/d

$x$                        $D_L$   
 “                      =                      ”

20m                       $D_L=1m^2/d$

4

100      1000      5

(m)	(mg/L)		
	100d	1000d	5a
50	100	100	100
100	8.64012	61.20286	83.59877
150	0.3828876	23.87585	52.14999
200	0.01137653	6.665832	24.81061
250	0.000253946	1.437015	9.378646
300	4.54E-06	0.2514486	2.919578
350	6.75E-08	0.03696535	0.7698227
400	8.61E-10	0.004681236	0.1757244
450	9.60E-12	0.000520412	0.03532518
500	9.50E-14	5.15E-05	0.006340126
550	8.46E-16	4.60E-06	0.001027324
600	6.84E-18	3.74E-07	0.000151965
0.05mg/L			

5

100

200

1000

350

GB/T14848-2017

1

70 100dB(A)



Li— i

LA—

n—

4

			dB(A)
1		2	68.01
2		2	73.01

		m	dB A
1		1030	13.94
2		30	44.65
3		100	34.2
4		530	19.71

dB A

dB A

58	58	65	51	51	55
56	56.31	65	51	51.91	55
59	59.01	65	49	49.14	55
56	56	65	51	51	55

1 +

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		t/a			
		1	HW08	900-249-08	
		10	HW13	900-015-13	
		4.29	--	--	
		2.8			
		0.28	--	--	
		1	--	--	

1

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150m<sup>2</sup>

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GB18597-2001

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—	—	—	—	—	—	—	—	—	—
1	—	—	HW0 8	900- 249- 08	—	150	—	100t	30d
2	—	—	HW1 3	900- 015- 13	—	150	—	100t	30d

2

HJ 2025-2012

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8.2-26

8.2-27

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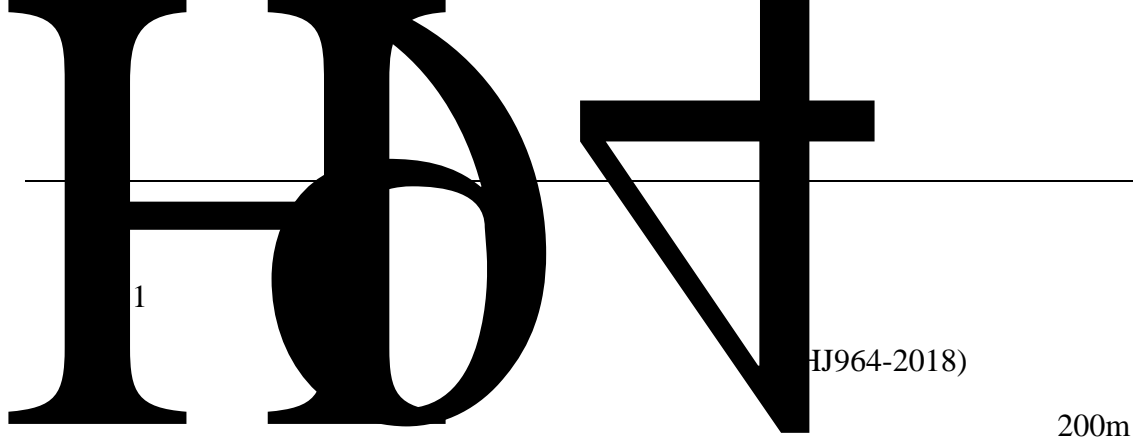
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“ ”

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1

HJ964-2018)

200m

2

† (HJ964-2018)

E

1

$$\Delta S = \frac{n(I_s - L_s - R_s)}{(\rho_b \times A \times D)}$$

S——

g/kg

I<sub>s</sub>——

g

L<sub>s</sub>——

g

R<sub>s</sub>——

g

ρ<sub>b</sub>——

kg/m<sup>3</sup>

A——

m<sup>2</sup>

D——

0.2m

nA '

$$S = S_b + S$$

$S_b$  —

g/kg

$S$  —

g/kg

1

1350kg/m<sup>3</sup>

0.2m

2

200m

936000m<sup>2</sup>

3

30

4

1	g	000
2	m <sup>2</sup>	000
3	m/	07
4		
5	kg	252720000



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GB36600-2018



1

Q

HJ169-2018

B

Q

$$\frac{1}{1} \quad \frac{2}{2} \quad \dots \quad \text{---}$$

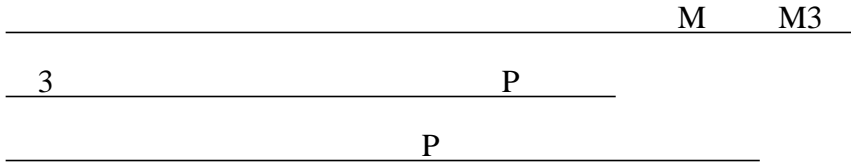
$q_1, q_2, \dots, q_n$ —

t

$Q_1, Q_2, \dots, Q_s$



<u>5 M 10</u>	<u>M3</u>		
<u>M=5</u>	<u>M4</u>		



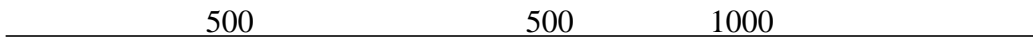
<u>Q</u>	<u>M</u>			
	<u>M1</u>	<u>M2</u>	<u>M3</u>	<u>M4</u>
<u>Q 100</u>	<u>P1</u>	<u>P1</u>	<u>P2</u>	<u>P3</u>
<u>10 Q &lt; 100</u>	<u>P1</u>	<u>P2</u>	<u>P3</u>	<u>P4</u>
<u>1 Q &lt; 10</u>	<u>P2</u>	<u>P3</u>	<u>P4</u>	<u>P4</u>



E1 E2 E3

1

E1	5		5	500
	1000		200m	
	200			
E2	5		1	5
	500	1000		500
		100	200	200m
E3	5		1	500
	500		200m	
	100			

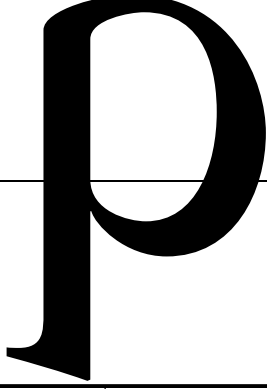


	1	5	E2
2			

F1	24h
F2	24h4
F3	

F3

' a "



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S2

S3

	F1	F2	F3
S1	E1	E1	E2
S2	E1	E2	E3
S3	E1	E2	

F2

S3

E3

3

G1	
G2	
G3	

G3

---

D3

Mb 1.0m K  $1.0 \times 10^{-6}$ cm/s

D2

0.5m Mb 1.0m K  $1.0 \times 10^{-6}$ cm/s  
Mb 1.0m  $1.0 \times 10^{-6}$ cm/s K  $1.0 \times 10^{-4}$ cm/s

D1	"D2" "D3"
----	-----------

0.5m Mb<1.0  $1.0 \times 10^{-6} \text{cm/s} < K$   $1.0 \times 10^{-4} \text{cm/s}$

D2

	G1	G2	G3
D1	E1	E1	E2
D2	E1	E2	

# E1

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1

HJ169-2018

+

				-	2
3	20%	35	1336-21-6	/	1B / 1 - 3 - 1
4		1734		2*	1 - 2 - 2
5	2000mg/L			-	2

1# 9#

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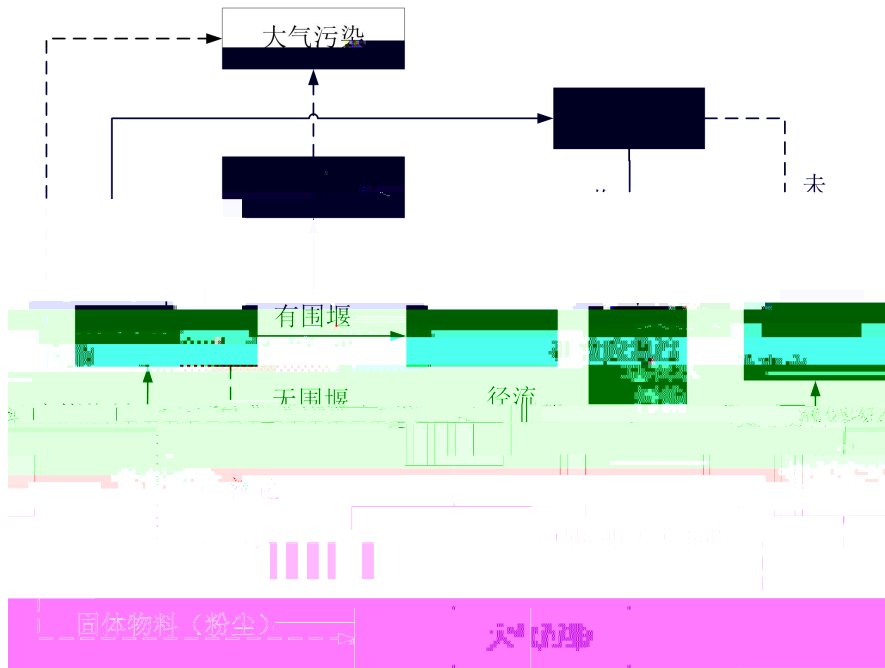


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		4	20	/	
		10	/	/	/
		2	/	/	/
6#	25m <sup>3</sup>				
	10m <sup>3</sup>				
	200m <sup>3</sup>	1		+	

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SO<sub>2</sub> CO



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/ / /	10mm 10min	1.00×10 <sup>-4</sup> /a 5.00×10 <sup>-6</sup> /a 5.00×10 <sup>-6</sup> /a
	10mm 10min	1.00×10 <sup>-4</sup> /a 5.00×10 <sup>-6</sup> /a 5.00×10 <sup>-6</sup> /a
	10mm 10min	1.00×10 <sup>-4</sup> /a 1.25×10 <sup>-8</sup> /a 1.25×10 <sup>-8</sup> /a
		1.00×10 <sup>-8</sup> /a
75mm	10%	5.00×10 <sup>-6</sup> / m·a 1.00×10 <sup>-6</sup> / m·a
75mm 150mm	10%	2.00×10 <sup>-6</sup> / m·a 3.00×10 <sup>-7</sup> / m·a
150mm	10% 50mm	2.40×10 <sup>-6</sup> / m·a * 1.00×10 <sup>-7</sup> / m·a
TNO Guidelines for Quantitative Reference Manual Bevi Risk Assessments * International Association of Oil & Gas Producers Risk Assessment Data Directory (2010,3)		

	min	max
1	5.0×10 <sup>-6</sup>	5.0×10 <sup>-5</sup>
2	1.0×10 <sup>-6</sup>	1.0×10 <sup>-4</sup>
3	9.5×10 <sup>-7</sup>	



	1949-1982		13440		
					17
					19
	13440		261 (1.94%)	1056 (7.86%)	
	505 (3.76%)	828 (6.16%)			6165
(45.87%)		1076 (8.00%)		651 (4.84%)	
	784 (5.83%)		138 (1.03%)		40 (0.29%)
		57 (0.42%)			

	95	1987	20--25
	47.8%		27.6%
			18.8%
8.2%			33.0%
			23.1%
34.2%			34.2%
			22.8%
90			

2

3

8.

$1 \times 10^{-5}$

$1 \times 10^{-5}$

$8.33 \times 10^{-5}$

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1 \_\_\_\_\_

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HJ169-2018 F

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$$\sqrt{\frac{2}{0.2}}$$

Q<sub>0</sub> \_\_\_\_\_ kg/s

P \_\_\_\_\_ 10<sup>5</sup>Pa

P<sub>0</sub> \_\_\_\_\_ 10<sup>5</sup>Pa

\_\_\_\_\_

g \_\_\_\_\_ 9.8m/s<sup>2</sup>

\_\_\_\_\_

\_\_\_\_\_ F.1 0.5

\_\_\_\_\_ 8×10<sup>-5</sup>m<sup>2</sup>

2 \_\_\_\_\_

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Q<sub>3</sub>

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$$\frac{3}{0} \frac{(2)(2)}{(4)(2)}$$

Q<sub>3</sub> \_\_\_\_\_ kg/s

n \_\_\_\_\_

p \_\_\_\_\_ Pa

R \_\_\_\_\_ J/mol·K

T<sub>0</sub> \_\_\_\_\_ K

u \_\_\_\_\_ m/s

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r — m

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19.82kg/s

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0.0209kg/s

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17.84kg/s

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0.066kg/s



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HJ169-2018 G

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SLAB

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/(<sup>o</sup>)

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112.5845

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/(<sup>o</sup>)

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28.3238

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5060	5.7469E-01
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5.0761E+02mg/m <sup>3</sup>	-1 150g/m <sup>3</sup>
45m	-2 33mg/m <sup>3</sup>
150m	-1
-2	
3	
4	
1.5m	

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2

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1

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2

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1 4200m<sup>3</sup>

1 5800m<sup>3</sup>

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10  
11  
12

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4/5 !A





DV0Δ

HCl

	m <sup>3</sup> /h	m
DA007	15000m <sup>3</sup> /h	D-0.8m h-15m T-30
DA008	15000m <sup>3</sup> /h	D-0.8m h-15m T-30
DA011	15000m <sup>3</sup> /h	D-0.8m h-15m T-30
DA012	15000m <sup>3</sup> /h	
DA010	+ 20000m <sup>3</sup> /h	D-0.8m h-15m T-30
DA027	+ 5000m <sup>3</sup> /h	D-0.6m h-15m T-30
DA009	+ 20000m <sup>3</sup> /h	D-0.8m h-15m T-30
65# pH DA056	5000m <sup>3</sup> /h	D-0.5m h-15m T-30
DA057		

\$a+\$

	DA084	15000m <sup>3</sup> /h	D-0.5m h-15m T-30
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1

HCl

pH

HCl

GB31573-2015 3

2

pH

MVR

pH

MVR

GB31573-2015 3

20 mg/

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GB31573-2015

+

15m

GB31573-2015

15m

GB31573-2015

15m/s

HJ2000-2010

HCl

1

+

2

3

1



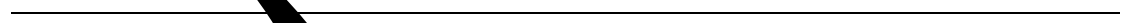
									/	
					1	2	3	4		
W3		2020.02.14			5.70	5.72	5.78	5.59	5.70	
		2020.02.15		mg/L	5.70	5.69	5.70	5.72	5.72	
W4		2020.02.14			0.01L	0.01L	0.01L	0.01L	0.01L	1
		2020.02.15		mg/L	0.01L	0.01L	0.01L	0.01L	0.01L	
		%		99.8						

+MVR

COD

COD

COD



65#

1220m<sup>3</sup>/d

267m<sup>3</sup>/d

1220m<sup>3</sup>/d

	m <sup>3</sup> /d	m <sup>3</sup> /d	
	667m <sup>3</sup> /d	600m <sup>3</sup> /d	
	267m <sup>3</sup> /d	1220m <sup>3</sup> /d	

"

"

Q



_____	<u>1.0</u>	<u>0.01</u>	<u>0.005</u>	<u>0.01</u>	<u>0.02</u>	<u>0.05</u>	<u>0.10</u>	
_____	—	—	—	—	—	—	—	

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GB/T 14848-2017      1

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GB18597-2001

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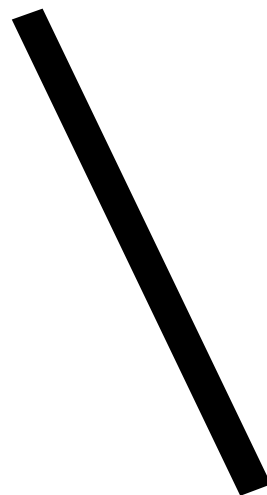
1

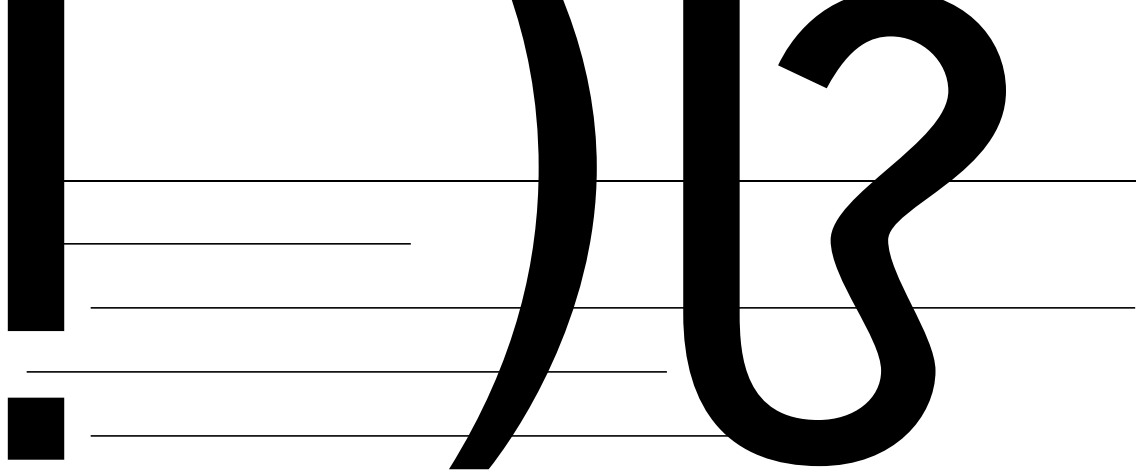
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1 1 4200m<sup>3</sup> (TM-101 \$ DóD 1  
5800 m<sup>3</sup>  
2 1 200m<sup>3</sup>



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2781.58 ( 206.65 )

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[2013]296

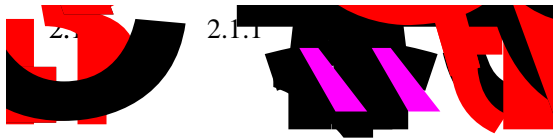
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2018 4

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	3.3		
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2820 56.4%

		1	+1	15m		0
			DA007			
		1	+1	15m		0
			DA008			
1		1	+1	15m		0
			DA011			
		1	+1	15m		0
			DA012			
1		3	+	+3		10
		15m	DA010	DA009		
			DA027			
	4	1	+1	15m		
			DA056	,		5
		HCl	1	+1	15m	
			DA057			
	4#	HCl	1	+1	15m	
			DA085			5
			+1	15m	DA084	
			1	4		
						2800
2		+				0
		• • •				



		0	
3		0	
		0	
4		0	0
5			

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3

4

5

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		HCl NH <sub>3</sub>		GB31573-2015 GB14554-93
		pH SS COD		GB31573-2015
		pH SS COD		
		A		GB12348-2008 3

2

	G1	VOCs HCl				
	G2 500m	NH <sub>3</sub>				
	T1 65#	pH				
	T2 65#					
	T3 65#					
	D1	pH				
	D2					
	D3					
	D4					
	D5					

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\*600,ÀÊË•R10%È>|- CXx 2R,,P@ 5%È2@ôÑAPGÿ

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GB15562.1~2-95

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5 + 5 10  
 4 4

[2017]4

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1 4 +1 15m  
 2 + +2 15m  
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		4200m <sup>3</sup> 5800m <sup>3</sup> 200m <sup>3</sup> 1800m <sup>3</sup> 100m <sup>3</sup>	

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	1	10000t/a		14000t/a
		1	3#	2 10kV
1	1		1	51#
43593.71m			6809.19m	

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5000	2820	56.4%
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1

2020

HCl

HJ2.2-2018

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3

pH COD NH<sub>3</sub>-N

GB3838-2002

1

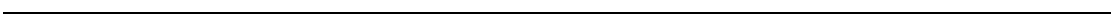
GB3838-2002

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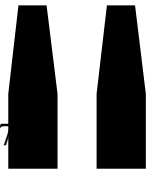
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GB3096-2008 3

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GB36600-2018

GB15618-2018

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GB12348-2008 3

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100%

HJ169-2018 B

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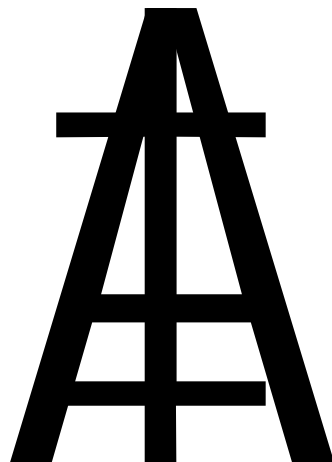
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