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5.1.6 ..... Ÿ Q8R.P €

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10.2 .....
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10.2.6 .....
10.2.7 .....
10.2.8 .....
10.2.9 .....

10.5 .....

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0.1

0.1.1

5

302487 m^2 6

5

2018 8 21 [2018] 8

65981m^2 2

93332m^2 3

143174m^2 3 2018

10 2020 2 29 2020

3 1 2020 4 30

2020 4

[2015] 52 <

> [2020] 688

2020 11 16

5

5

2021 5 7

[2021] 8

2021 7

5

3

6 30%

[2015] 52 <

> [2020] 688

0.2

2022 3

6

2022 4 2

http://www.fjest.com/article-22597-153300.html

0.3

1

[a] SO_2 NO_2

2

3

4

5

6

0.4

0.4.1

2019

2010 [2010]

122

[a]

3

GB12348-2008 3 4

2	SO_2	7.792t/a
3	VOCs	2.807 t/a
4		

0.5

6

1

1.1

1.1.1

1 2015 1 1

2 2018 12 29

3 2018 10 26

4 2022 6 5

5 2018 1 1

6 2020 4 29

7 2019 1 1

8 2011 3 1

9 2019 8 26

10 2019 4 23

11 16

2021 1 1

12 2017 10 1

13 2019 1 1

14 2019

29

15 2019

11

16 2021 1 1

17 2017 10 1

18 2018 8 1

19

[2012]98

20 [2013]37

21 < >

[2014]30

22 [2015]17

23 [2016]31

24

[2017]84

25 2022 5 1

26 2014 1

27

2015 26

28

2016 45

29

[2018]25 2018 11 6

30 2019 10 13

1.1.2

1 HJ 2.1-2016

2 HJ 2.3-2018

3 HJ 2.2-2018

4 HJ 2.4-2021

5 HJ 19-2022

6 HJ 169-2018

7 HJ 610-2016

8 HJ 964-2018

9

HJ 1119-2020

10 HJ 819-2017

11 HJ 884-2018

1.1.3

1 6 2022 4

2 5

2018 6

3 5

2018 8

4 5

2021 3

5 5

2021 5

6

1.2

1.2.1

1 “ ”

“ ”

2

3 “ ”

4

5

6

“ ”

1.2.2

1

2

3

1.3

1.3.1

1.3.1

		SO_2 NO_2 PM_{10} TSP CO O_3 [a]
		SO_2 PM_{10} [a]
		SO_2
		pH BOD_5 NH_3-N
		COD NH_3-N
		COD NH_3-N
		L_{Aeq}
		L_{Aeq}
		K^+ Na^+ Ca^{2+} Mg^{2+} CO_3^{2-} HCO_3^- Cl^- SO_4^{2-} pH Zn Pb Cd As Ni Hg Cr^6
		CODcr
		pH 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-	[a]	[a]	[b]	[k]	
			[a,h]	[1,2,3-cd]			
		[a]					

1.4

1.4.1

GB36600-2018

2018 8 1

GB15618-1995

GB36600-2018

1.4.2

pH	6~9		
	4	6	
BOD_5	3	4	GB3838-2002
NH_3-N	0.5	1.0	
	0.05	0.05	

3

GB/T14848-2017

1.4.3

1.4.3 **mg/L**

1	pH	6.5 8.5	10	≤	0.001
2	≤	3.0	11	≤	0.01
3	≤	250	12	Cr^{6+}≤	0.05
4	≤	250	13	≤	0.01
5	≤	20.0	14	≤	1.0
6	≤	1.0	15	≤	200
7	≤	0.5	16	≤	0.02
8	≤	450	17	≤	0.005
9	≤	1.0			

4

GB3096-2008

3 GB3096-2008 4a

1.4.4 **(GB3096-2008)** **dB**

		3		65 55	dB(A)
		4a		70 55	dB(A)

5

GB36600-2018

1.4.5

1.4.5 **mg/kg**

1		20	60	120	140
2		20	65	47	172

3		3.0	5.7	30	78
4		2000	18000	8000	36000
5		400	800	800	2500
6		8	38	33	82
7	K}				

44	[1,2,3-cd]	5.5	15	55	151
45		25	70	255	700

1.4.2

DB35/1782-2018

GB37822-2019

2021

1

2019 10

30

200 300 /

SO_2 NO_x

SO_2 200mg/m^3 NO_x

300 mg/m^3 30 mg/m^3

DB35/1782-2018 1 80mg/m^3

GB37822-2019

1.4.6

1.4.6

(mg/m^3)	m	kg/h	mg/m^3	(mg/m^3)	m	kg/h	mg/m^3
120	24	3.5	12.74	120	15	1.75	1.0

(GB16297-1996)

(GB16297-1996)

2

GB8978-1996

4

GB/T31962-2015 B

1.5.1

1

SO_2 [a] NMHC

HJ2.2-2018

— 100%

0

P_i— i %

C_i— i 1h μg/m³

C_{0i}— i μg/m³ GB3095 1

1.5.1

1.5.1

	/	
/		/
		40.2
		-1.9
		90
	/km	/
	/ °	/

1.5.2

				Cmax	Pmax
			μg/m^3	μg/m^3	%
		SO_2	500	1.4779	0.30
1	5#		450	6.0822	1.35
		[a]	0.0075	0.000013	0.17
		NMHC	2000	0.5392	0.03
2	6#		450	23.6110	5.25
3	7#		450	0.0888	0.02
4	8#		450	0.1998	0.04
5	9#		450	29.9880	6.66
		SO_2	500	6.71	1.34
6			450	0.1454	0.03
		[a]	0.0075	0.000063	0.84
		NMHC	2000	2.6591	0.13
		SO_2	500	31.613	6.32
7			450	0.6036	0.13

1.5.3

		Q/ m^3/d W/
		Q≥20000 W≥600000
A		Q 200 W 6000
B		—

3

3

HJ2.4-2009

4

(HJ610-2016)

69

1.5.4

1.5.4

1.5.5

									—
								—	—

“ — ”

6

93332m^2

HJ19-2011

2

7

1.5.2

1.5.7

1.5.7

	B	/
		5km
		200m
		50m
		200m

1.6

HJ2.2-2018

غ DZ

1.6.2

1.6.2

	E					/
						/m
	1		/		D2	/
	E					/

1.7

1.7.1

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2.1.1

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3 24956.14 6000

4 65981m^{2} 2 ;6 ;1mĎ ѕ

5

5

2021 5 7

[2021] 8 2021 7

		1 1080
		1 392m^2 50m^2 1 30m^3
		1 1080

2.1.3.2

2.1.2

2.1.2

				/
1		***	***	***
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2.1.4

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1

2.1.3

+ +15m

G1

1#

G2



2.1-2

2

1 1018m^3

15min

2.1.4

	3600m^3/a	0	
	180m^3/a	0	
	530m^3/ 7950m^3/a	0	
	8.8m^3/d	8.8m^3/d	

3

2.1.5

2.1.5

			/	dB(A)	
	1	***	***	70-75	
	2	***	***	85-90	

	3	***	***	75-80	
	4	***	***	70-75	
	5	***	***	70-75	
	6	***	***	80-85	
	7	***	***	70-75	
	8	***	***	75-80	
	9	***	***	75-80	
	10	***	***	70-75	
	11	***	***	80-85	
	12	***	***	80-90	
	13	***	***	70-75	
	14	***	***	85-95	
	15	***	***	80-90	
	16	***	***	75-80	
	17	***	***	70-75	
	18	***	***	75-85	
	19	***	***	80-85	

4

2.1.6

2.1.6

	t/a		
S1	22	07	309-001-07
	7.65	HW49	900-041-49
S2	1065	46	309-001-46
S3	204	46	309-001-46
S4	220	46	309-001-46
S5	3.5	46	309-001-46
S6	2	99	900-999-99
S7	98		

GB18599-2020

1 50m^2 1 30m^3

18597-2001

5

2021 4 27 350922-2021-002-L

2021 5 30

2021 7 2021 7 20

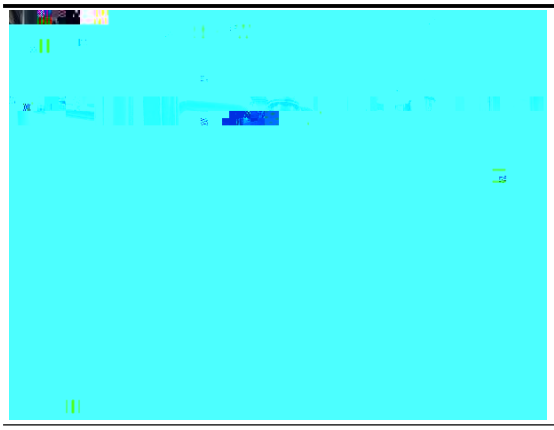
15min

“

+ + ”

2.1.7

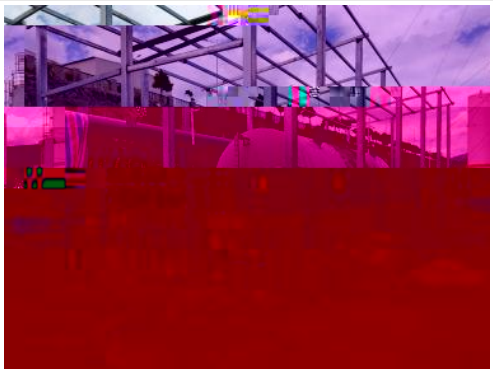
		m^3	m^3
1	1	30	52
2	2	4.5	41.6
3		30	52
4	1	30	78
5	2	4.5	
6	1	1.6	18.25
7	2	1.6	18.25
8	3	2	18.25
9	4	2	18.25
10	2	6	14.96
11	2	8	14.96



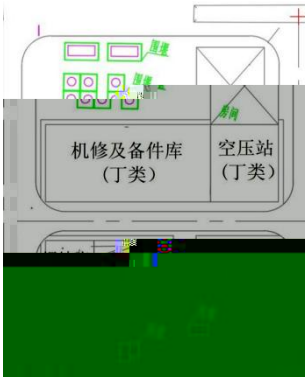


1

2

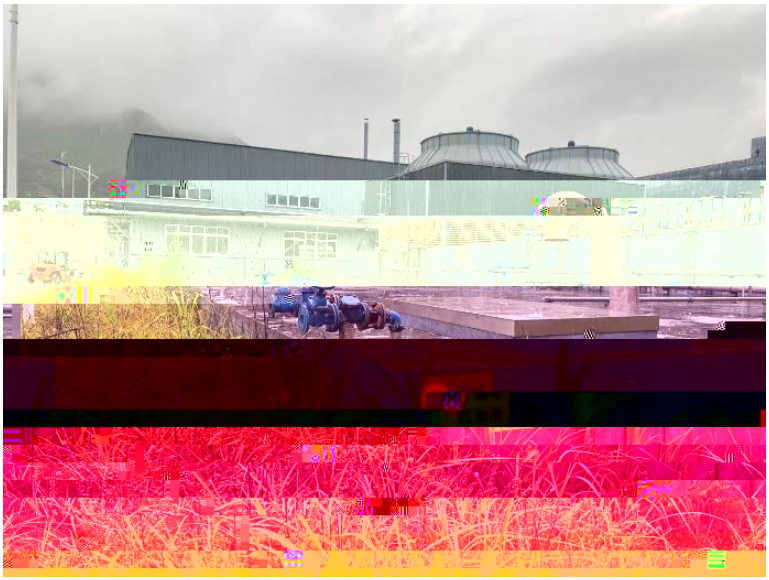






1018m^3

1



20cm

30cm

20cm

[a]

0.093~0.235mg/m^3 0.004~0.019mg/m^3

(GB16297-1996)

0.67~0.97mg/m^3 DB35/

1782-2018 1.33~1.65mg/m^3

GB37822-2019

DB35/ 1782-2018

3

pH

GB89784B

3

3.1

3.1.1

2016 10

5 2018

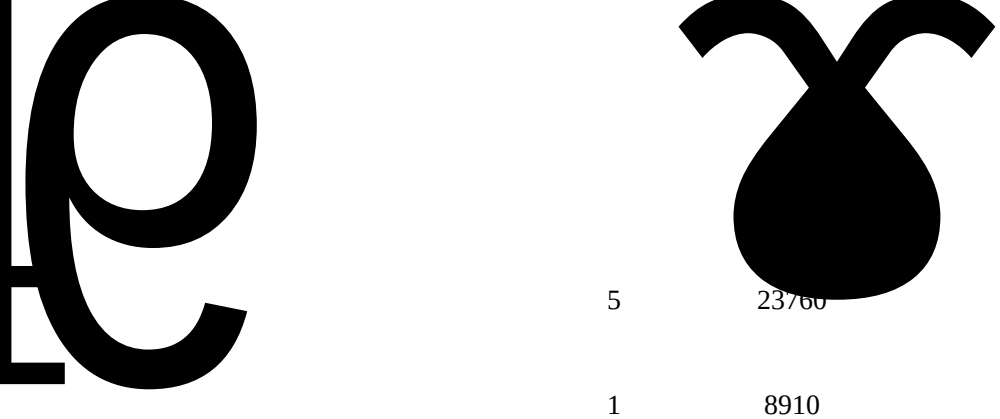
3

XRD

1×20m^3 1×50m^3

3×20m^3 2×50m^3

1, m" מ



5 23760

1 8910

1 1188
1 4320
1 4320
1 2376 /
1 1512
1 216

544

2 2952 1 35KV

928
252
1 50

1



M’

3.1.4

1					
2					
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21					

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25					

3.1.3.4

3.1-1 3.1-2

3.1-1

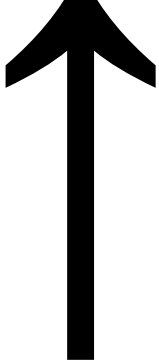
3.1-2

3.1-3

3.1.3.5

1

3.1-4



A-240



-1200 8h - 1200 4h - 1200 - 3h

15h 800

ppm

2

ppm

3.1-5

3

1	$24m^3/h$

3.1.4

1

3.1.5

2

3.1.6

		(m^3/d)							
				(mg/L)	(kg/d)	(mg/L)	(kg/d)		
W1		49	COD_{Cr}	350	17.15	350	17.15	/	
			BOD_5	175	8.575	175	8.575		
			NH_3-N	25	1.225	25	1.225		
				25	1.225	25	1.225		
			SS	300	14.7	300	14.7		
W2		5	COD_{Cr}	1800	9	500	2.5		
			BOD_5	900	4.5	300	1.5		
			NH_3-N	15	0.075	15	0.075		
				600	3	100	0.5		
			SS	500	2.5	300	1.5		
W3		15	COD_{Cr}	30	0.45	30	0.45		
			SS	25	0.38	25	0.38		
		54*							

*

3

3.1.7

				dB(A)		dB(A)
	N1			60		50
	N2			80		65
	N3			90		75
	N4			95		75-80
	N5			75		65
	N6			85		65
	N7			90		75
	N8			80		65

	N9			100		80

4

3.1.8

3.1.8

			t/a	t/a
S1		/	45	0
S2		/	10	0
S3		/	460	0
S4			1200L	0
S5			900L	0
S6		HW49	1200L	0
S7		900-047-49	1800L	0
S8			180L	0
S9			4200L	0
S10			180L	0
		HW34		
		900-349-34		

[a]	0	0	0
SO_2	0.005	0	0.005
N			

3.2

3.2.1

6

1 6

2

3

4

5 52636.09 1640

6 93332m² 140

7 300

8 300 12

9 15



3.2.2

3.2.1 . į

495m^2

830m^2

100m^2

420m^2

4155.39m^2

14257.48m

6#

1 15m 6#

1 25m 9#

3.2.4

6 3.2.3

GB/T24533-2019 3.2.4

3.2.3

		t/a
1		6

3.2.4

			mA·h /g	%	g/cm^2	%	%	ppm	ppm	RoHS
NG			≥ 360.0	≥ 95.0	≥ 1.65	≥ 96	≥ 99.97	≤ 0.1	≤ 10	
AG	CMB		≥ 350.0	≥ 95.0	≥ 1.50	≥ 94	≥ 99.97	≤ 0.1	≤ 20	
	NAG		≥ 355.0	≥ 94.0	≥ 1.25	≥ 94	≥ 99.97	≤ 0.1	≤ 20	
	CPAG		≥ 350.0	≥ 95.0	≥ 1.40	≥ 94	≥ 99.97	≤ 0.1	≤ 20	
CG			≥ 350.0	≥ 94.0	≥ 1.60	≥ 94	≥ 99.97	≤ 0.1	≤ 20	

1

2 RoHS

3.2.5

3.2.5

3.2.5

				/	
				/	
				/	

3.2.6~ 3.2.7

3.2.6

					S	

	g/cm^3	%	%	/100g	ppm	ppm
	2.24	0.01	0.06	5		0.044

3.2.7

20 40

g/cm^3 % % % mm/s %

1.08(08(я î

3

2				
3				

4

5

6

7

8

9				

3.2.7

3.2-1 3.2-2~ 3.2-3

3.2-4

3.2-1

3.2-3

3.2.8

3.2.8.1

D12

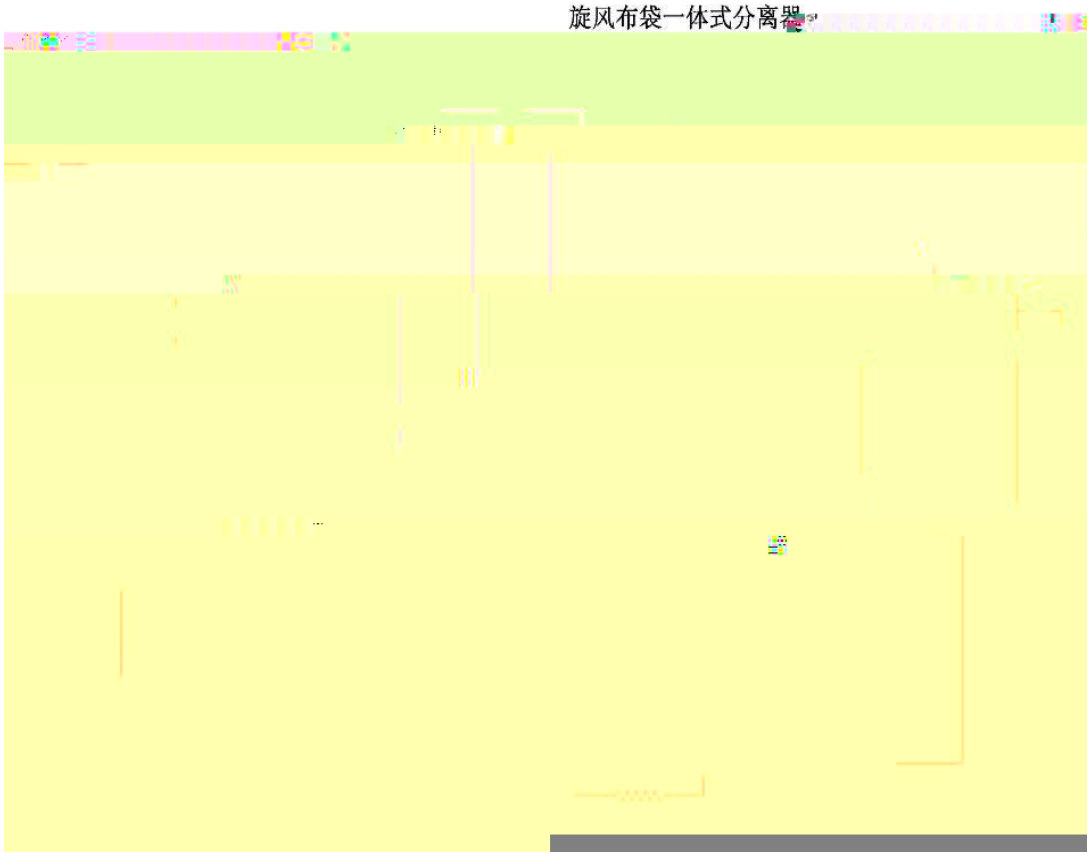
3.2-5

3.2-5

3.2-6

10　1

旋风布袋一体式分离器



3.2-7

φ

$CnHm \rightarrow C+H_2O+Cn\text{-}aHm\text{-}b$ a b a n b m C $nC+mO \rightarrow CnOm$

20 4

16

A

$1500m^3/h$

B 200 ~300

C 350 ~800

500 800

[a]

D 1300 1300

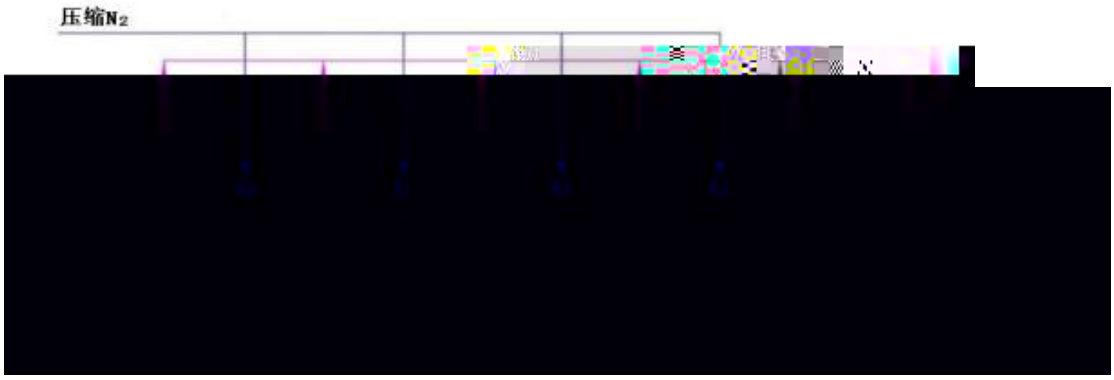
E 12h 3h

100

20-30 40-50

2 1 1

3.2-8



3.2-8

F

+ + + + RCO +

3.2.8.2

3.2-9

3.2-9

3.2-10

3.2.8.3

3.2-11

3.2-11

3.2.8.4

3.2-12

3.2-12

3.2.8.5

3.2-13

3.2.8.6

3.2.10

3.2.10

G1			+
G2	SO_2	[a]	+ + + + RCO +
G3			+
G4			+
GS1			
GS2			
GS3			
GS4	SO_2	[a]	
W1	pH COD SS		
W2	pH COD SS		
W3	pH COD SS		
N	L_{Aeq}		
S1			
S2			
S3			
S4			
S5			

	S6				
	S7				
	S8				
	S9				
	S10				
	S11				
	S12				
	S12				

3.2.9

3.2.9.1

1

3.2.11

3.2.11

	(t/a)			(t/a)

2

3.2.12

3.2.12

	(t/a)			(t/a)



3

3.2.13

3.2.13

	(t/a)			(t/a)

4

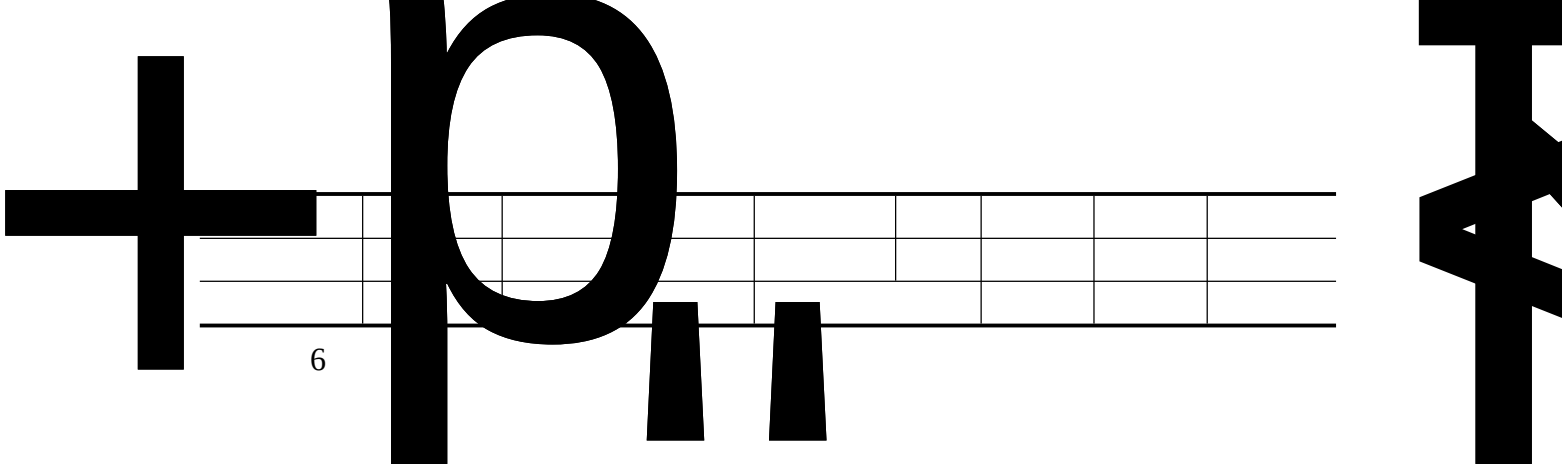
3.2.14

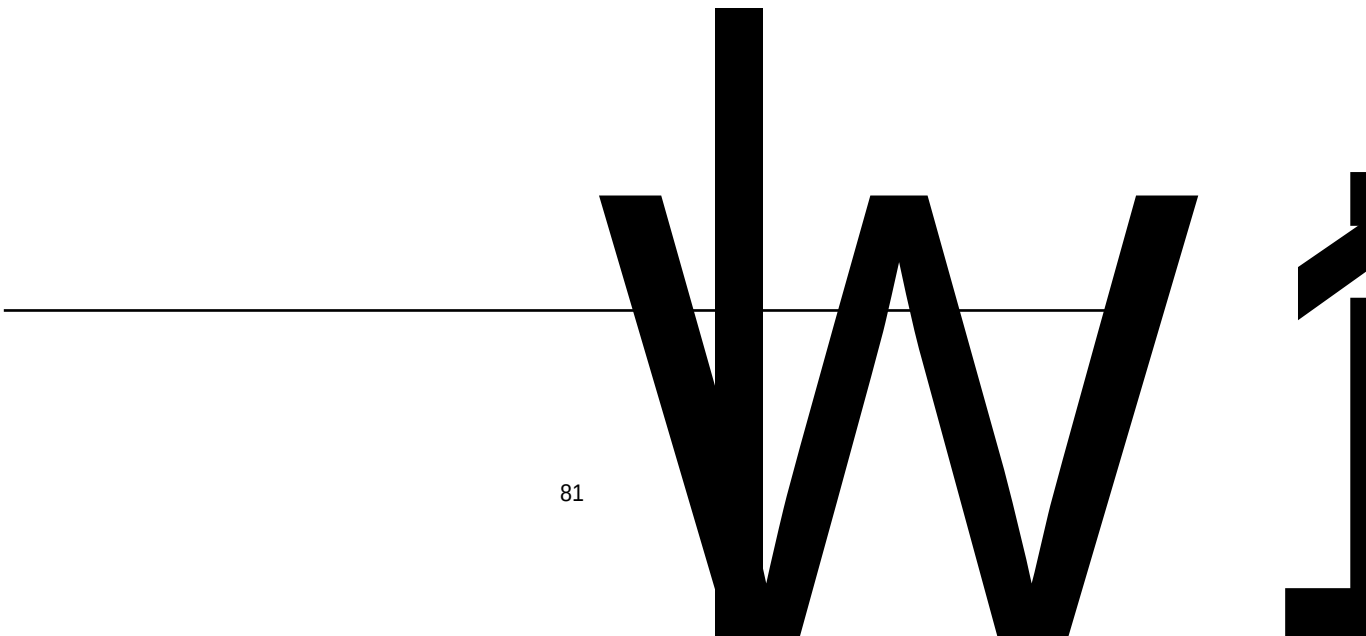
3.2.14

	(t/a)			(t/a)

5

ë





175 2565m^3/a 8.55m^3/d

5

$$Q=F\times q\times \Psi$$

Q L/s

Ψ 0.9

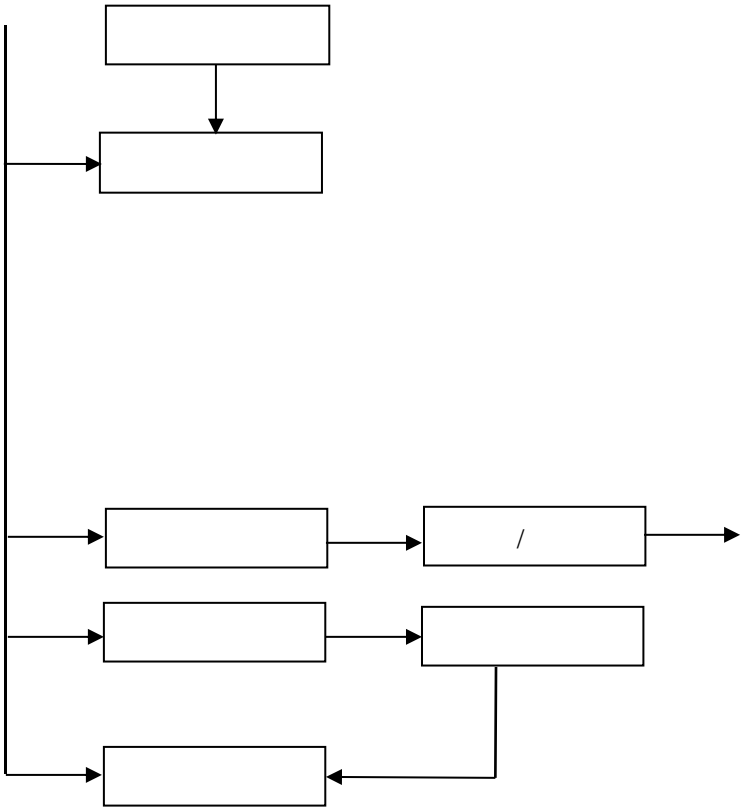
F 4.1hm^2

q L/s · hm^2

218.3L/s · hm^2

15min 725m^3/ 15 /

10875m^3/a SS



97012.35m^3/d

1012.35m^3/d 96000m^3/d 1.8m^3/d 99%

3.3

3.3.1

+

3.3.1.2

1

3.2.9.1

2

250t

25t/a 12.5t/a +

15m

3

20000t/a

83.60t/a + 15m

4

300

3×300 / =900

35g 3%

945g/d 8 5 /

3000m^3/h 7.86mg/m^3

0.28t/a GB18483-2001

80%

1.58mg/m^3 0.056t/a <2mg/m^3 15

GB18483-2001

3.3.1.2

1 GS1

0.0015~0.2kg/t

0.1kg/t

3.3.2

2 GS2

([2017] 81)

2.09kg/t

0.023kg/t

3.3.1

			t/a	t/a			t/a
***	***		6486.48	13.557		99%	0.149
	***		6224.04	13.008			0.143
	***		/	26.565			0.292
***	***		41081.08	85.859			1.975
	***		39418.96	82.386			0.907
	***		/	168.245			2.882

***	***		15063	31.482			0.346
	***		155.18	0.324			0.004
	***		14907	31.156			0.343
	***		1940	4.055			0.045
	***		13200.066	27.588			0.304
	***		/	94.605			1.041
***	***		53346	111.493			1.227
	***		550	1.150			0.013
	***		52795	110.342			1.214
	***		6829	14.273			0.157
	***		46800.234	97.812			1.076
	***		/	335.069			3.687
***	***		1100	2.299			0.023

3 GS3

0.005kg/t 3.3.2

3.3.2

			t/a	t/a		t/a
***	***		5896.8	0.590		0.590
***	***		6000	0.030		0.030
***	***		37346.437	3.735		3.735
***	***		38000	0.190		0.190
***	***		15530	1.553		1.553
***	***		13200	0.066		0.066
***	***		55000	5.500		5.500
***	***		46800	0.234		0.234
***	***		1100	0.110		0.110

4 GS4

99% SO_2

[a]

3.3.3

		t/a					h

				%	t/a	t/a	
		16.571			0.166	0.166	
	SO_2	0.704			0.007	0.007	
***		100.441			1.004	1.004	7200
	[a]	3.04E-04			3.04E-06	3.04E-06	
		12.847			0.128	0.128	
		104.950	+	99	1.049	1.049	
	SO_2	4.460			0.045	0.045	
***		636.125			6.361	6.361	7200
	[a]	0.002			1.92E-05	1.92E-05	
		81.365			0.814	0.814	

3.3.1.3

70~99% 70% 3.3.5

3.3.5

t/a

Nm^3/h % t/a h m

*** / + / 0.684

***

30000 7200

			SO_2		0.704		/	0.007		/	/
					100.441		/	1.004		/	/
			[a]		3.04E-04		/	3.04E-06		/	/
			NMHC		12.847		/	0.128		/	/
	***	***		/	7.856		70	2.357	7200	/	/
			SO_2		4.460		/	0.045		/	/
					636.125		/	6.361		/	/
			[a]		0.002		/	1.92E-05		/	/
			NMHC		81.365		/	0.814		/	/
	***	***		/	2.660		70	0.798	7200	/	/
	***	***		/	9.421		70	2.826	7200	/	/
	***	***			0.133	/	/	0.133	600	/	/

3.3.1.4

RCO

1

30 1

1 2

2

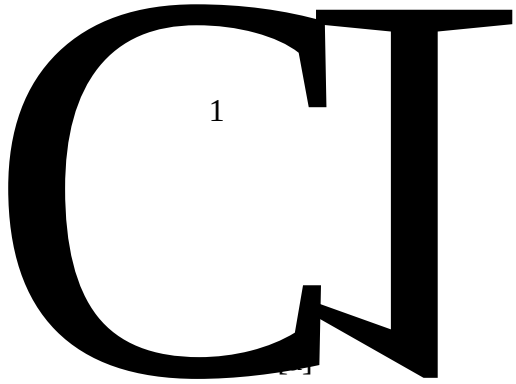
30 1

1 2 [a]

3 RCO

RCO 30 1

1 2



60% 70% 80%

3.3.6 5#

		Nm³/h	t/a	%	t/a
	SO_2	0.603		0	0.603
		28.715	+	90	2.872
***	***	86.000	+	70+40	
		30000	+ +		

RCO

+

			[a]		3.01E-04		98	6.02E-06
			NMHC		12.719		90+80	0.254
			SO_2		4.416		0	4.416
					103.378		90	10.338
	***	***			625.599		70+40	112.607
			[a]		1.91E-03		98	3.82E-05
			NMHC		80.551		90+80	1.611
			SO_2		5.715	+	0	5.715
					148.498	+	90	14.850
					811.035	+ +	70+40	145.986
				30000		RCO		
			[a]		2.47E-03		98	4.94E-05
						+		
			NMHC		104.270		90+80	2.085

SO_2 0.603t/a 28.715t/a

86t/a [a] 2.6E-04t/a 11t/a

3.3.2

1

4000m^3/h GB/T50102-2014

1%

960m^3/d

2

540m^3/a

COD_{Cr} SS

3

300

0.15t/d·

45.0t/d 13500t/a 300 0.8

36.0t/d 10800t/a

pH 6.5-9.5 COD 500mg/L BOD_5 250mg/L

SS 200mg/L 45mg/L 100mg/L +

5

pH

7.33~7.64 COD 203~213mg/L BOD_5 67.6~72.4mg/L SS 55~63mg/L

13.0~15.4mg/L 40mg/L

5

725m^3/ 10875m^3/a

3.3.8

	540m³/a	0	
	725m³/ 10875m³/a	0	
	36.0m³/d	36.0m³/d	

3.3.9

3.3.9

			COD	BOD_5	SS	NH_3-N	
10800m³/a	mg/L		500	250	200	45	100
	t/a		5.400	2.700	2.160	0.486	1.08
		mg/L	213	72.4	63	15.4	40
		t/a	2.300	0.782	0.680	0.166	0.432
	mg/L		500	300	400	45	100
		mg/L	60	20	20	8	3
		t/a	0.648	0.216	0.216	0.086	0.032

3.3.10

3.3.10

mg/L t/d t/a

COD

3

DW01

2

3.3.3

3.3.11

dB(A)

/

	1	***	***	70-75
	2	***	***	85-90
	3	***	***	75-80
***	4	***	***	70-75
	5	***	***	70-75
	6	***	***	80-85
	7	***	***	70-75
	8	***	***	85-90
	9	***	***	75-80
***		***	***	70-75
	11		***	70-75
	12	***	***	80-85
	13	***	***	70-75
	14	***	***	75-80
	15	***	***	75-80
	16	***	***	70-75
	17	***	***	80-85
		***	***	70-75
	19	***	***	75-80
***	20	***	***	75-80
	21	***	***	70-75
	22	***	***	80-85
		***	***	70-75
	24	***	***	80-85
***	25	***	***	85-90
	26	***	***	85-90
	27	***	***	75

	65
	75
	70
	65
	65
	70
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	75
	70
	65
	65
	70
	70
	70
	75
	65
	70
	70
	70
	75
	65
	75
	75
	75

90

90

	34	***	***	70-75	65	
	35	***	***	85-95	75	
	36	***	***	80-90	70	
	37	***	***	75-80	65	
***	38	***	***	70-75	65	
***	39	***	***	75-85	70	
	40	***	***	80-85	70	

3.3.4

1

PVC

2kg 70900

141.80t/a

GB/T39198-2020 07

309-001-07

2

8769t/a 46

309-001-46

3

1 “ ”

1724.773t/a 769 A ض 8

309-001-46

5

14.711t/a

46 309-001-46

6

6t/a

99 900-999-99

7

500t/a

7.5 60%

200t 2021 HW11

T 309-001-11

8

2021 HW49 T/In 900-041-49

11

“ + + + +

RCO N

3.3.13

t/a

3.3.14

3.3.14

	(t/a)	(t/a)	(t/a)
	10800	0	10800
COD	5.400	3.100	2.300
BOD_5	2.700	1.918	0.782
SS	2.160	1.480	0.680
NH_3-N	0.486	0.320	0.166
	1.080	0.648	0.432

		(t/a)	(t/a)	(m)	(m)	( )	
***		/	1.199				+
***		/	7.824				+
	SO_2	0.696	0.696				
		16.405	1.641				+
***		[432					+
				30	0.95	100	+
							+
							RCO
							+

			[a]	1.91E-3	3.82E-5				
			NMHC	80.551	1.611				
		***		/	5.317	15	0.8	25	+
		***		/	18.829	25	1.1	25	+
		***		7.10	0.071	15	0.5	25	+
		***		1.97	0.020	15	0.8	25	+
		***		0.28	0.056	15	0.3	100	
		***	SO_2	1.078	0.323	72m 12.2m		90m	
				0.704	0.007				
				100.441	1.004				
			[a]	3.04E-04	3.04E-06				
			NMHC	12.847	0.128				
		***	SO_2	7.856	2.357	182m 12.3m		90.4m	
				4.460	0.045				
				636.125	6.361				
			[a]	0.002	1.92E-05				
			NMHC	81.365	0.814				
		***		2.66	0.798	72m 12.2m		35.3m	
		***		9.421	2.826	90.4m 22.3m		63.3m	
		***		0.133	0.133	10m 15m		10m	/
				(t/a)		(t/a)		(t/a)	

			141.8	141.8	0	
			8769	8769	0	
			1724.8	1724.8	0	
			2569.9	2569.9	0	
			14.7	14.7	0	
			6.0	6.0	0	
			200	200	0	
			2.0	2.0	0	
			1.05	1.05	0	
			10	10	0	
			8	8	0	
			0.5	0.5	0	
			45.0	45.0	0	

3.4

3.4.1

2019

2010 [2010]

122

3.4.2

“ ” 3.4.1

3.4.1

“ ”

“ ”

3.4.3

3.4.2

3.4.2

10ppb

1

5000 / 85%

85%

GB/T24533-2019

1200kWh/

3 m^3/

400

0.1229kg /kWh

/

1.214kg /m^3

148.45kg /

80%

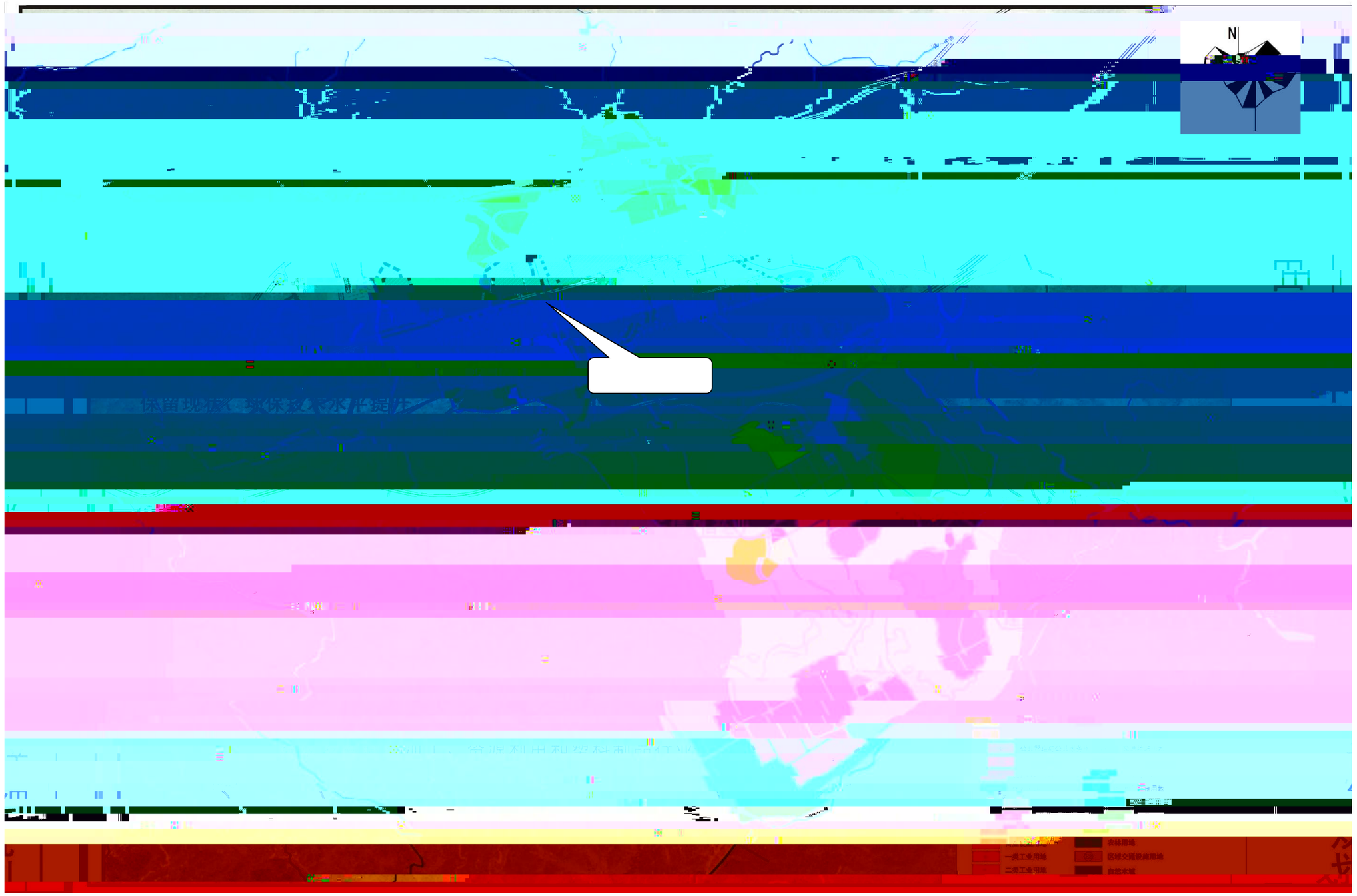
99%

1

“ ”

3.4.4

2017 12 [



3.4-1

3.4.5

1

2 “ ”

3

4

3.4.5

3.4.6

“ ” “

”

$

VOCs

VOCs

100%

⁎

⁎

“ ”

“ ”

+ + +

+ R +



3.4.6

3.5

3.5.1

1

2

3



3

4

3.5.4

1

2

100%

100%

3

[a]

GB16297-1996 2

3.5.2

3.5.2

		kg/t	0.86	26.5	0.35
	SO_2	kg/t	0.08	0.002	0.125
	NO_X	kg/t	/	0.027	0.282
		kg/t	2.29	10.53	1.264
	[a]	kg/t	1.11E-06	1.58E-06	7.5E-06
		kg/t	0.046	5.26	2.1
		m^3/t	0.18	0.75	0.52
	COD	kg/t	0.038	0.071	0.065
		kg/t	0.003	0.007	0.003

3.5.5

100%

3.5.6

1

2

“ ”

3

“ ”

“

” Sx)† È

7

3.5.7

4

4.1

4.2

4.3

4.3.1

4.3.1.1

1

2016 2017-2035

2025 2035

2

8.3924km^2

3

2.28

1.23

4.3.1.2

“ ” “ ”

“ ”

4.3.1.3

4.3.1.4

“ ”

3 2 5

3

4.3-1

4.3.1.5

8.3924 3.9743

47.36% 3.5-1



4.3-1

4.3.2

1

360m^3/d

2012 6000m^3/d

7.66km^2 8000m^3/d

556.6m 557.63m 542.5m

2

110kV

2

3

LNG

4.3.3

1

500m^3/d

4.3.1

GB18918-2002 B

2016 3

500t/d

+MBR+

GB18918-2002 B

4.3.1

t/d

500	100	B
300	20	B

5	1366	0.15	0.023	0.0031
6	942	0.057	0.008	0.001
7	504	0.05	0.0075	0.001
8	428.4	0.043	0.0064	0.0009
9	1436.4	0.144	0.021	0.0029
10	1921	0.19	0.025	0.0032
11	840	0.084	0.013	0.0017
12	3600	1.08	0.126	0.0036
13	2207.4	0.132	0.018	0.002
14	144	0.009	0.001	0.0001
15				

10		2.798	/	/	
11		0.225	1.802	13.38	
12		0.102	/	/	
13		0.195	/	/	
14		0.044	/	/	
15		0.003	/	/	
16		0.15	/	/	
17		25.189	3.2	22.328	
18		0.164			
19		0.098			
20		0.3265			
21		4.414	/	/	
22		1.913	/	0.172	
23		0.268	/	/	
24		0.3	0.34	1.02	
25		2.07	/	/	
		95.9315	27.764	58.364	

4.4

4.4.1

2021

4.4.1

	μg/m³				CO mg/m³	O_3 8 μg/m³
	SO_2	NO_2	PM_{10}	$PM_{2.5}$		
	***	***	***	***	***	***
GB3095-2012	***	***	***	***	***	***
GB3095-2012	***	***	***	***	***	***

2021

2021

4.4.2

4.4.2.1

5

5.1

5.1.1

5.1.2

COD SS

5.1.2.1

COD BOD_5

SS NH_3-N 20 0.8t/d

5.1.2.2

5.1.3

5.1.3.1

5.1.2

5.1.2

GB12523-2011

70m 70 dB A

55 dB A

GB12523-2011

620m

5.1.4

5.1.4.1

5.1.4.2

5.1.6

1

2

3

4

5.2

5.2.1

5.2.1.1

2020 C SE

ESE SSE 53.4 SE 12.4

D

5.2.1.4

1

5.2.8

5.2.8

			t/a	kg/h			
					m	m	
1	5#	SO_2	5.112	0.710	30	0.95	100
			21.038	2.922			
			130.505	18.126			
		[a]	4.422E-05	6.142E-06			
		NMHC	1.865	0.259			
2	6#		5.317	0.738	15	0.8	25
3	7#		18.829	2.615	15	1.1	25
4	8#		0.071	0.006	15	0.5	25

5	9#		0.020	0.003	25	0.8	25

			t/a	kg/h			m
1		SO_2	0.323	0.045	72m	90m	12.2
			0.007	0.001			
			1.004	0.139			
		[a]	3.04E-06	4.222E-07			
		NMHC	0.128	0.018			
2		SO_2	2.357	0.327	182m 90.4m		12.3
			0.045	0.006			
			6.361	0.883			
		[a]	1.92E-05	2.667E-06			
		NMHC	0.814	0.113			
3			0.798	0.111	72m	24m	12.2
4			2.826	0.393	90.4m 63.3m		22.3
5			0.133	0.222	10m	10m	15

2

1.5.1 Ci mg/m^3

Pi %

7.93% - HJ2.2-2018 1

2.5km

3

- HJ 2.2-2018

SO_2

[a] 5.2.9

5.2.9

(t/a) (t/a)
(m)



	0.704	0.007	12.2m	
	100.441	1.004		
[a]	3.04E-04	3.04E-06		
NMHC	12.847	0.128		
SO_2	7.856	2.357		
	4.460	0.045	182m	90.4m
	636.125	6.361	12.3m	
[a]	0.002	1.92E-05		
NMHC	81.5			

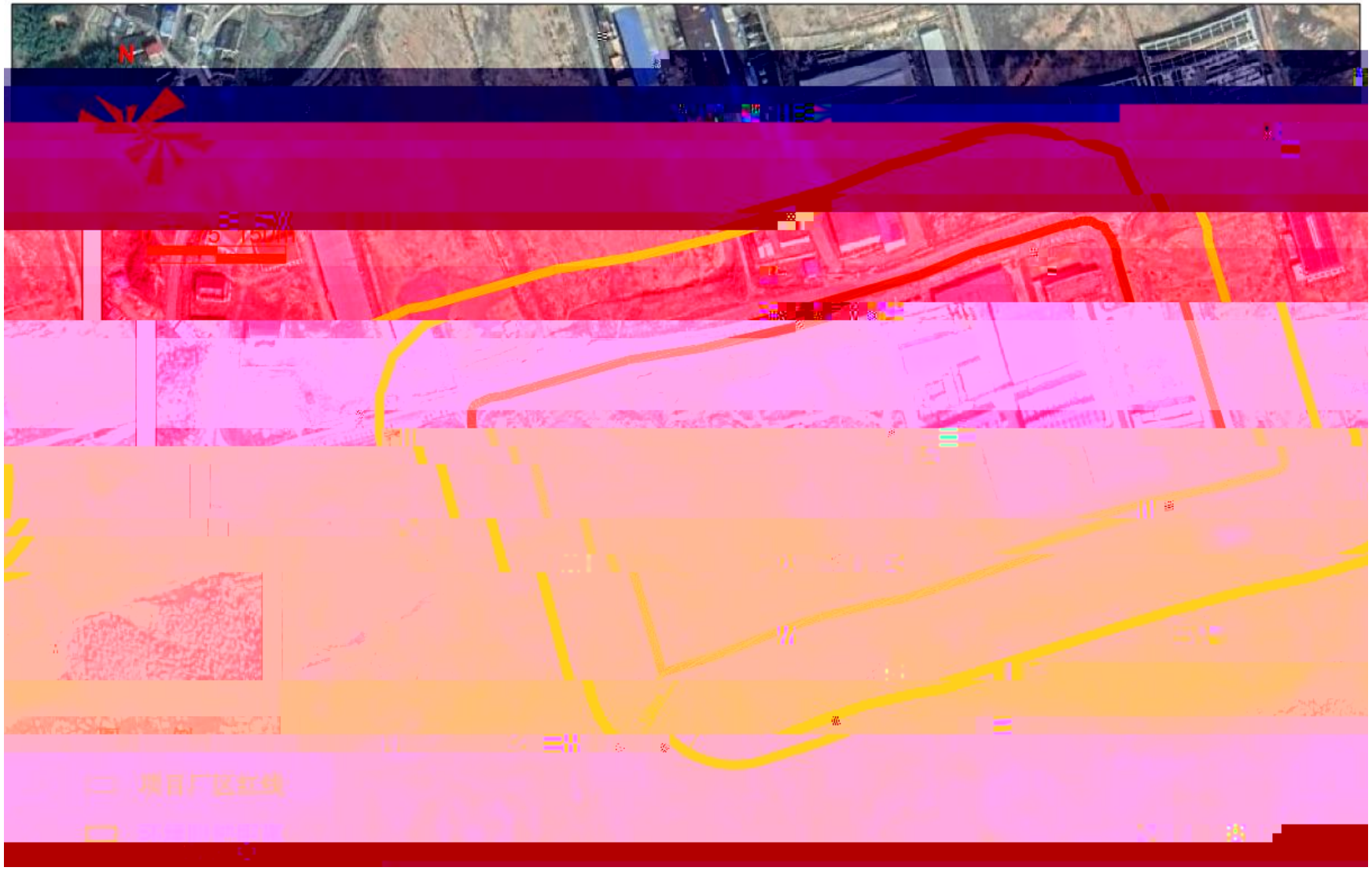
4

- HJ2.2-2018

		100	0.222	80	100

100m

5.2-16



5.2-16

5.2.2

1

960m³/d

36.25m³/d 10875m³/a < 960m³/d

2

36.00m³/d

D

GB8978-1996

3

725m³/ SS

5.2.11

5.2.11

540m³/a 0 2 .

5.2.2.1

+

5.2.2.2

5.2.2.3

36.00m^3/d COD SS

5.2.13

ǎ ﺥ ש

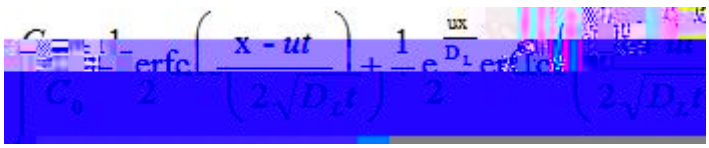
40% 40%

p¥ ﻧ

COD_{Mn}

COD_{Mn} 213mg/L

HJ610-2016



x — m

t — d

C —t x mg/L

C_0— mg/L

D_L— m^2/d

U— m/d

erfc —

U DL

a.

0.75m/d 0.02

Gelhar 1992

aL 10.0m

DL

$DL=aL \times u=10 \times 0.0375=0.375m^2/d$

U=K×I/n

U— m/d

K— m/d

I—

n—

U=0.75×0.02/0.4=0.0375m/d

COD_{Mn}

100 365 1000 3650 4

5.2.14

5.2.14

III m m

3.0m

COD_{Mn}

COD 213mg/L 100d 16m

1000d 62m 3650d 10a 150m

5.2.3

5.2.3.1

5.2.15

5.2.15

			/	dB(A)		
	1			70-75	65	
	2			85-90	75	
	3			75-80	70	
	4			70-75	65	
	5			70-75	65	
	6			80-85	70	
	7			70-75	65	
	8			85-90	75	
	9			75-80	70	
	10			70-75	65	
	11			70-75	65	
	12			80-85	70	
	13			70-75	65	
	14			75-80	70	
	15			75-80	70	
	16			70-75	70	
	17			80-85	75	
	18			70-75	65	
	19			75-80	70	

	20			-80	70	
	21			70-75	70	
	22			80-85	75	
	23			70-75	65	
	24			80-85	75	
	25			85-90	75	
	26			85-90	75	
	27			75-80	70	
	28			85-90	75	
	29			75-80	70	
	30			80-85	75	
	31			70-75	65	
	32			85-90	75	
	33			80-90	70	
	34			70-75	65	
	35			85-95	75	
	36			80-90	70	
	37			75-80	65	
	38			70-75	65	
	39			75-85	70	
	40			80-85	70	

5.2.3.2

HJ2.4-2009

—

—

—

—

0 — 0

2

A

2 10lg

2 1 6

1 e 10lg $\frac{}{4}$ $\frac{4}{2}$ —

—

e —

—

1 —

2 —

—

—

—

—

3

500HZ

dB

2(_____

A—

B—

d—

λ —

4 Aatm

$$Aatm = \frac{a(r - r0)}{1000}$$

a

5.2.16

a dB/ km

%

N1	32.1	62.3	62.3	32.1	53.2	53.2	65	55



S8		HW49	900-047-49				2.8t	180d
S9		HW08	900-249-08				2.8t	180d
S10		HW49	900-041-49				2.8t	180d
S11		HW49	900-039-49				2.8t	180d
		HW49	900-041-49				2.8t	180d

180

20d

100m^2

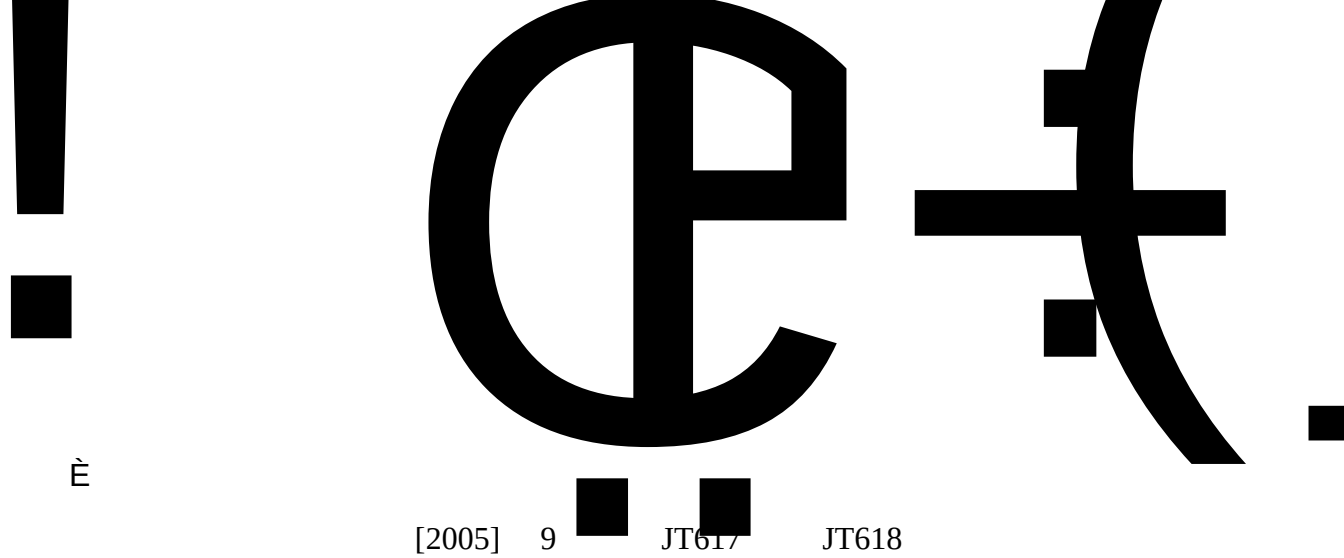
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GB18597-2001 2013

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GB15562.2-1995



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[2005] 9 JT617 JT618

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5.2.19

	t/a		
S1	141.8		
S2	8769		
S3	1724.8	342m^2	60d
S4	2569.9		
S5	14.7		
S6	6.0		
S7	200	50m^3	60d
S8	2.0		
S9	1.05		
S10	10	100m^2	180d
S11	8		
S12	0.5		
S13	45.0	/	

5.2.4.5

5.2.5

5.2.5.1

1

2

3

4

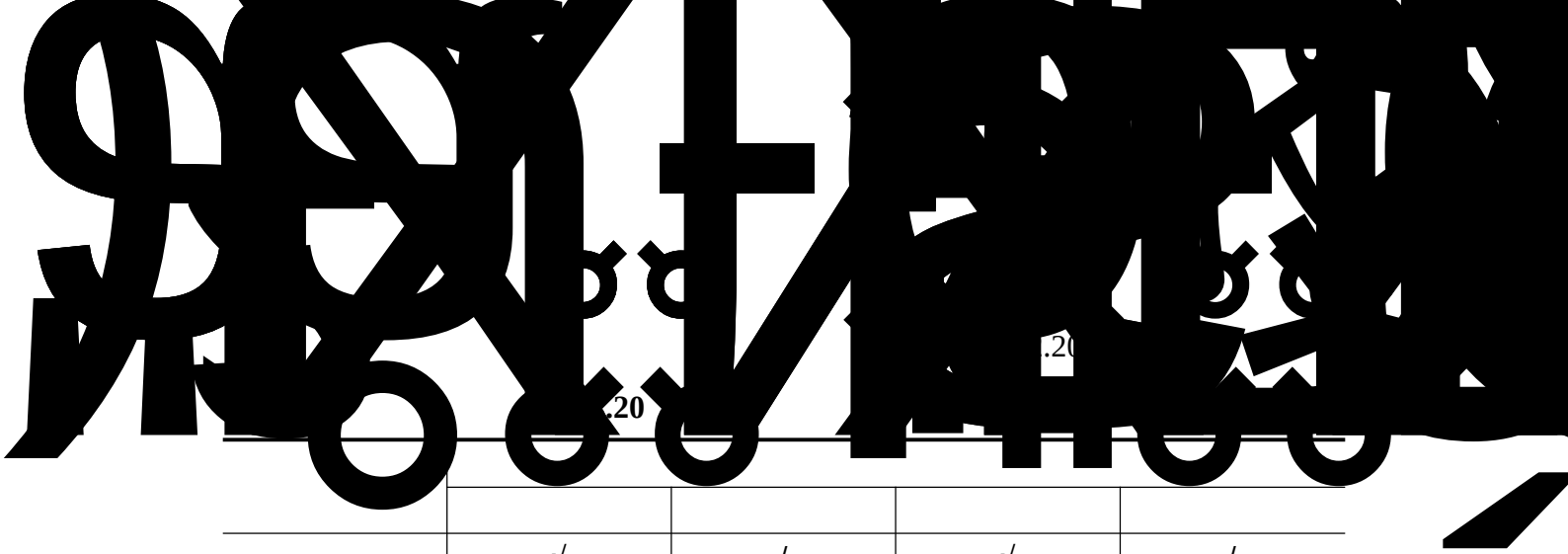
5.2.5.2

1

2

5.2.5.3

“ ”



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	√	/	√	/
	/	/	/	/

5.2.21 ę ị ó

	/				
			SO_2 [a]	[a]	
			pH COD	/	

a

Rs— g

ρ_b— kg/m^3

A— m^2 50m 713000m^2

D— 0.2m

n— a 20a

$$S=S_b+\Delta S$$

S_b—— g/kg

S—— g/kg

5.2.22

5.2.22

	Is g	Ls g	Rs g	ρ_b kg/m^3	A m^2	n
[a]	7.65	0	0	1800	713000	20

5.2.23

5.2.23

	ΔS mg/kg	S_b mg/kg	S mg/kg	mg/kg		
[a]	0.0006	0.1	0.1006	0.55	**1.5**	

[a]

GB36600-2018

2



2- [a] [a]
[b] [k] [a h] [1 2
3-cd]
GB 15618 GB 36600 D.1 D.2

GB36600-2018
/
E F

a b c a b

.

3

A.

B.

C.

D.

5

HJ/T164-2004

3

1 2

pH

[a]

6

3 pH

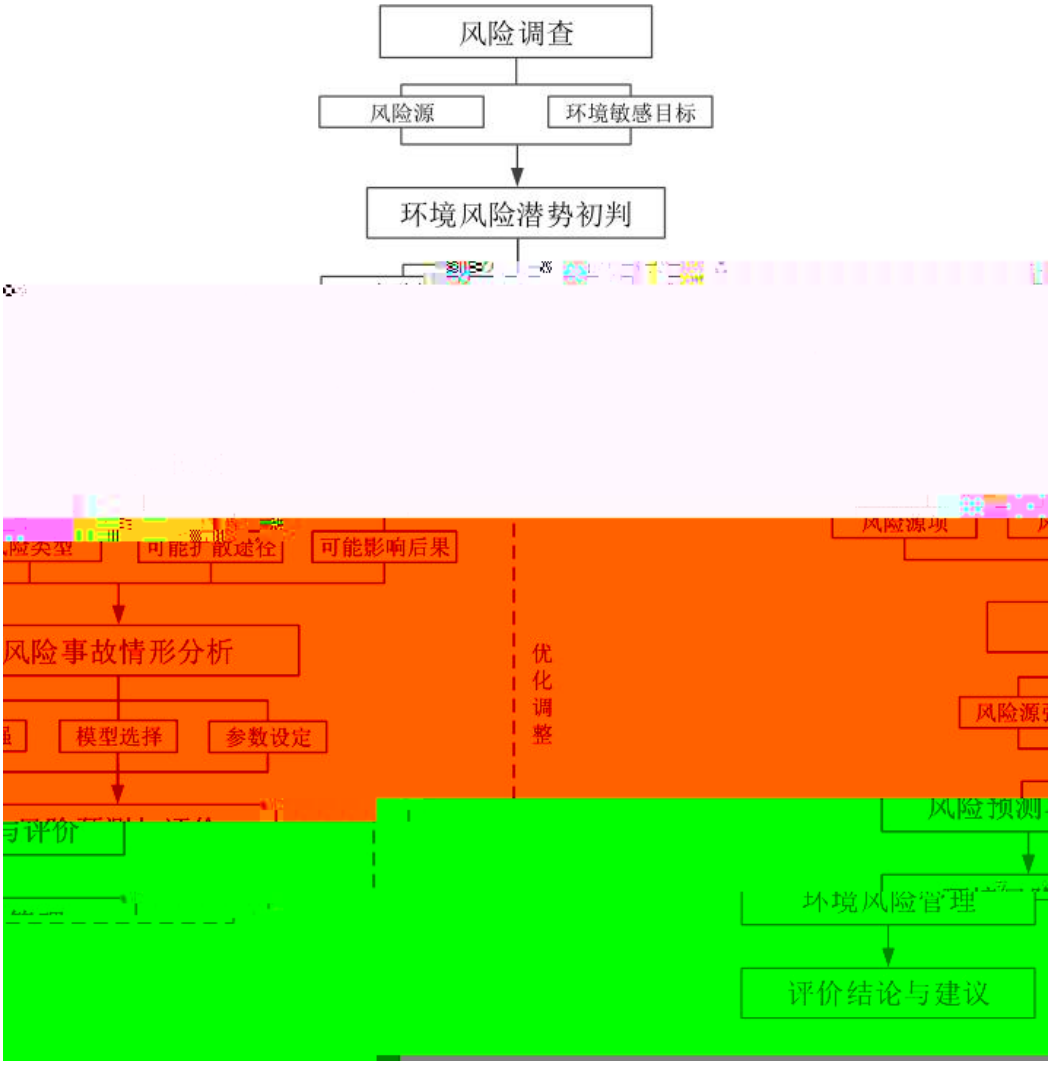
[a]

7

5.2-18

6

6.1-1


风险调查
风险源
环境敏感目标
环境风险潜势初判
可能影响后果
风险事故情形分析
模型选择
参数设定
优化调整
风险预测
环境风险管理
评价结论与建议

6.1-1

HJ169-2018 B

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¢ q

6.1.1

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6.1.2

1

2

3

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CO_2 H_2O

CO

4

6.1.3

6.1.3

1						
2						
3			SO_2 NO_2 [a] NMHC			
4						
5			COD SS			
6						

6.2

6.2.1 ₱

HJ

169-2018

1 Q

B

B Q

Q

Q

q1 q2 ... qn— t

Q1 Q2 ... Qn—— t



1.6.3

6.3

6.3.1

CO_2 CO CO

1200m^3

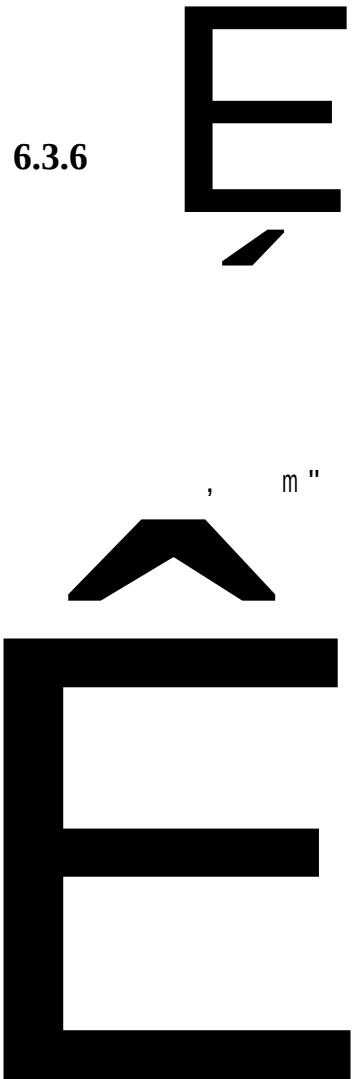
6.3.5

\+ \+ \+ \+ RCO

\+

[a]

6.3.6



GB50974-2014 20L/s

10L/s 6h

2 20+10 L/s V_2=648m^3

V_3 0m^3

V_4 0m^3

V_5

q— mm

q_a— 1882mm

n— 175

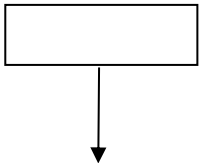
f— hm^2 4.1hm^2

i V_5=440m^3

V = 0+648-0 +0+440=1088m^3

1100m^3 " 1200m^3





2

3

4

5

6

7

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1 1

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1 1

15

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6.4.4

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6.4.5

6.4.6

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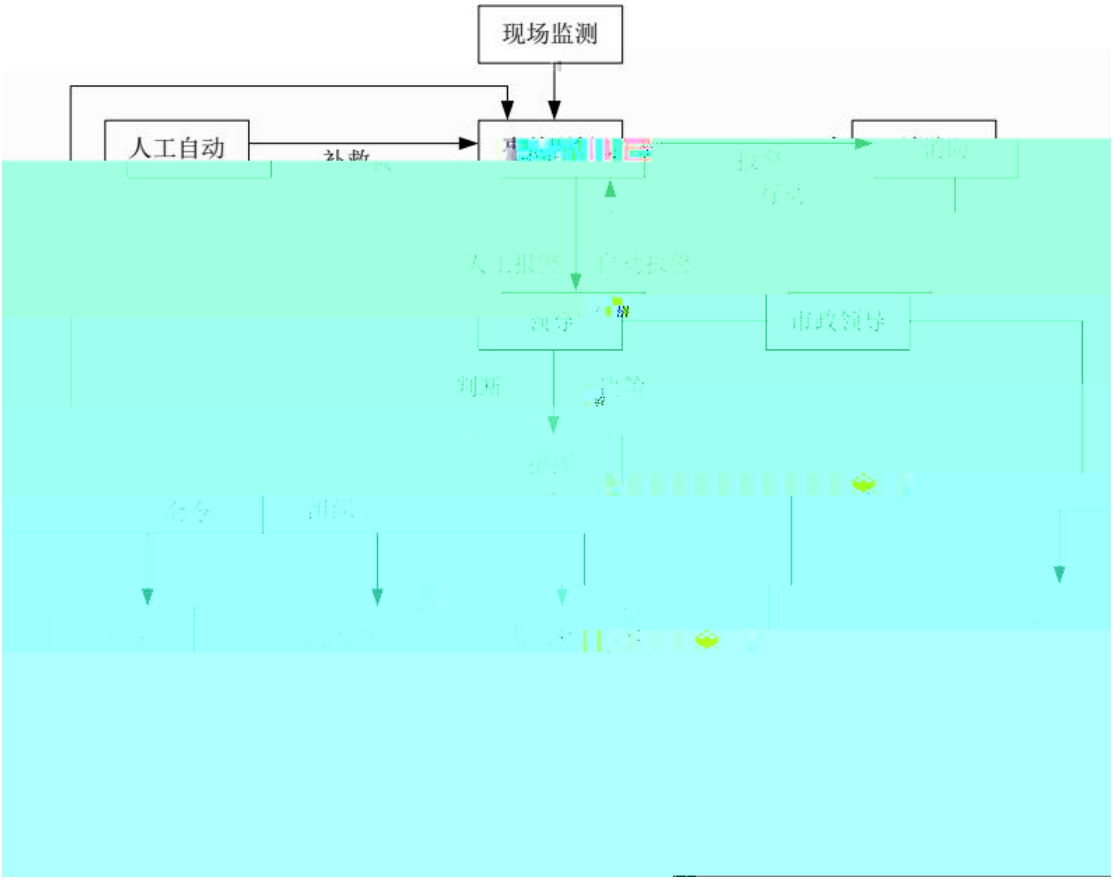
≤ א

[2018]8

6.4.1

6.4.1

1		
2		
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8		
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10		
11		



6.4-2

2

1

2

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[a]

24

6.4.8

سم ٢

MŽ

6.5.2

/t 100.06

500m 0 5km 11259

200m

F1 F2 F3

S1 S2 S3

G1 G2 G3

D1 D2 D3

Q	Q 1	1≤Q 10	10≤Q 100	Q 100
M	M1	M2	M3	M4
P	P1	P2	P3	P4
	E1	E2		E3
	E1	E2		E3
	E1	E2		E3
IV^+	IV	III	II	I

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7

7.1

7.1.1

HJ/T 393-2007

4

7.1.1.1

7.1.1.2

1

2

2

3

4

a) b) c) d)

5

a) b) c) d)

6

10

7

15

8

a) b) c) d)

e)

9

10

a) b) c)

d)

e) f)

11

2000 /100

12

13

14

15

20

7.1.2

27 “

”

ء

“ + + +

+ RCO + ”

[a] + + + + RCO

+

7.2.1

	1				>90%		+	7#
	2				>90%			8#
	3				>90%			1 2 3#
					>95%	SO_2 NO_X [a]	+ + + + RCO +	5#
	4				>90%		+	
					>95%	SO_2 NO_X [a]	+ + + + RCO +	
	5				>90%		+	
					>95%	SO_2 NO_X [a]	+ + + + RCO +	
	6				>90%		+	4 6#
	7				>90%			9#
	1			/	/		+	/
	2			/	/	SO_2		/
				/	/			
				/	/			
				/	/	[a]		
				/	/	NMHC		

7.2-1

7.2-2

7.2-3

7.2.2

7.2.2.1

15m 1 2 3 4 6 7 8# 25m

9#

K. .F.A.

99%

0.2μm 0.2μm

99%

38.7~57.7mg/m^3 0.0673~0.681 kg/h

GB16297-1996

+ 99.99%~99.994%

99.99%

7.2.2.2

[a] SO_2 “ +

+ + + + RCO + ”

30m

7.2-2

1

<70

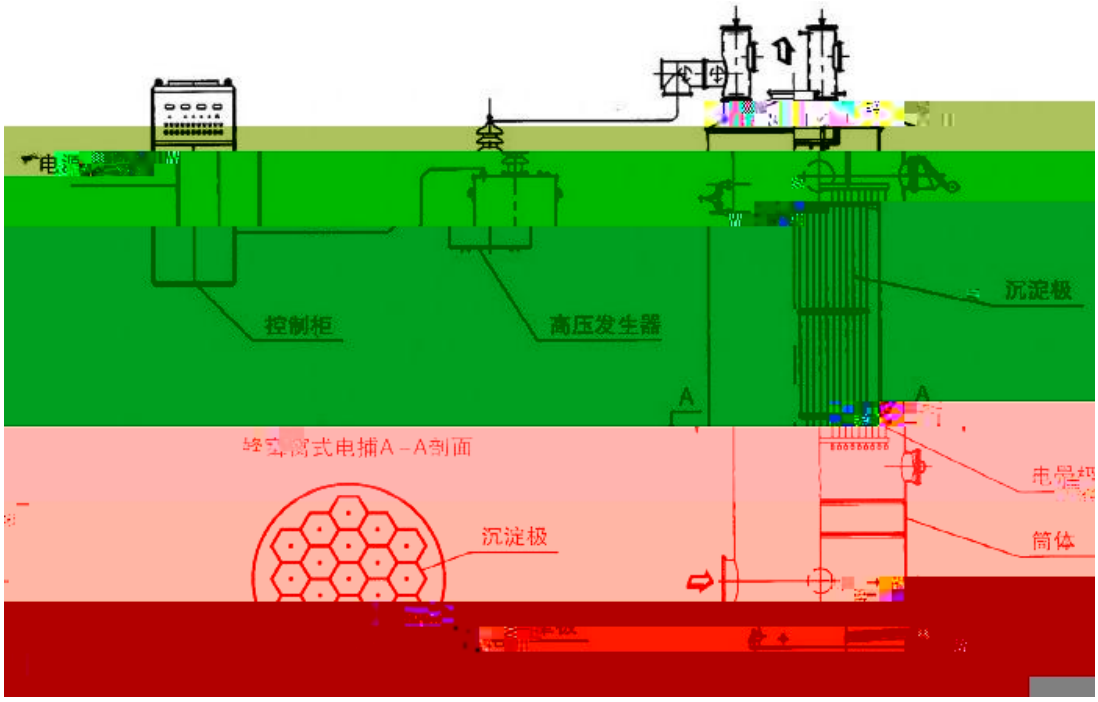
380 100

500 100

40% 40%

30%

80~90% >8μm



7.2-4

10 7%~10%

100

F9

2~4

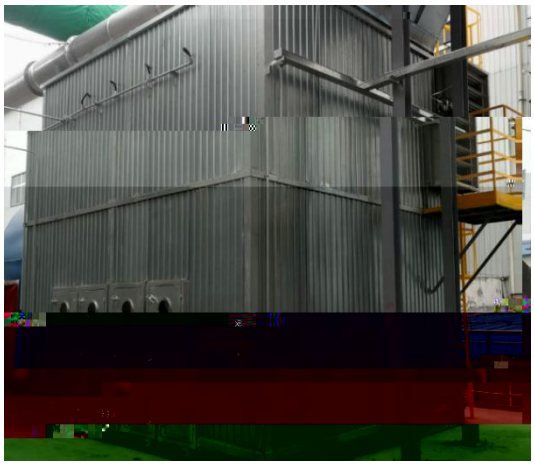
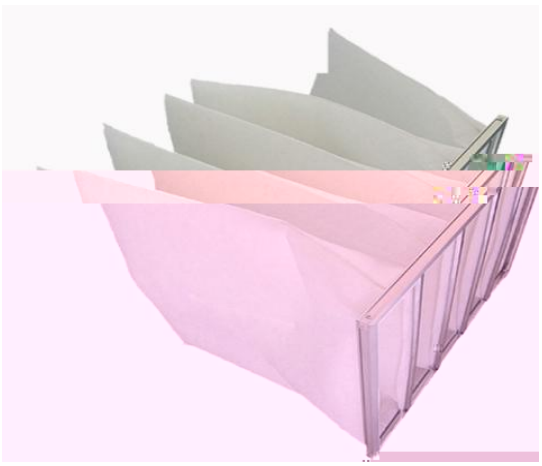
G4-F7-F9

PLC PLC

7.2.2

	3000CMH/	3000CMH/	3000CMH/	3000CMH/
	G4	F7	F9	F9

	≤40	≤40	≤40	≤40
	80-450Pa	80-450Pa	160-450Pa	160-450Pa
	592*592*46	592*592*500	592*592*500	592*592*500

7.2-5

RCO

VOCs

VOCs 200

5~20

RCO

RCO

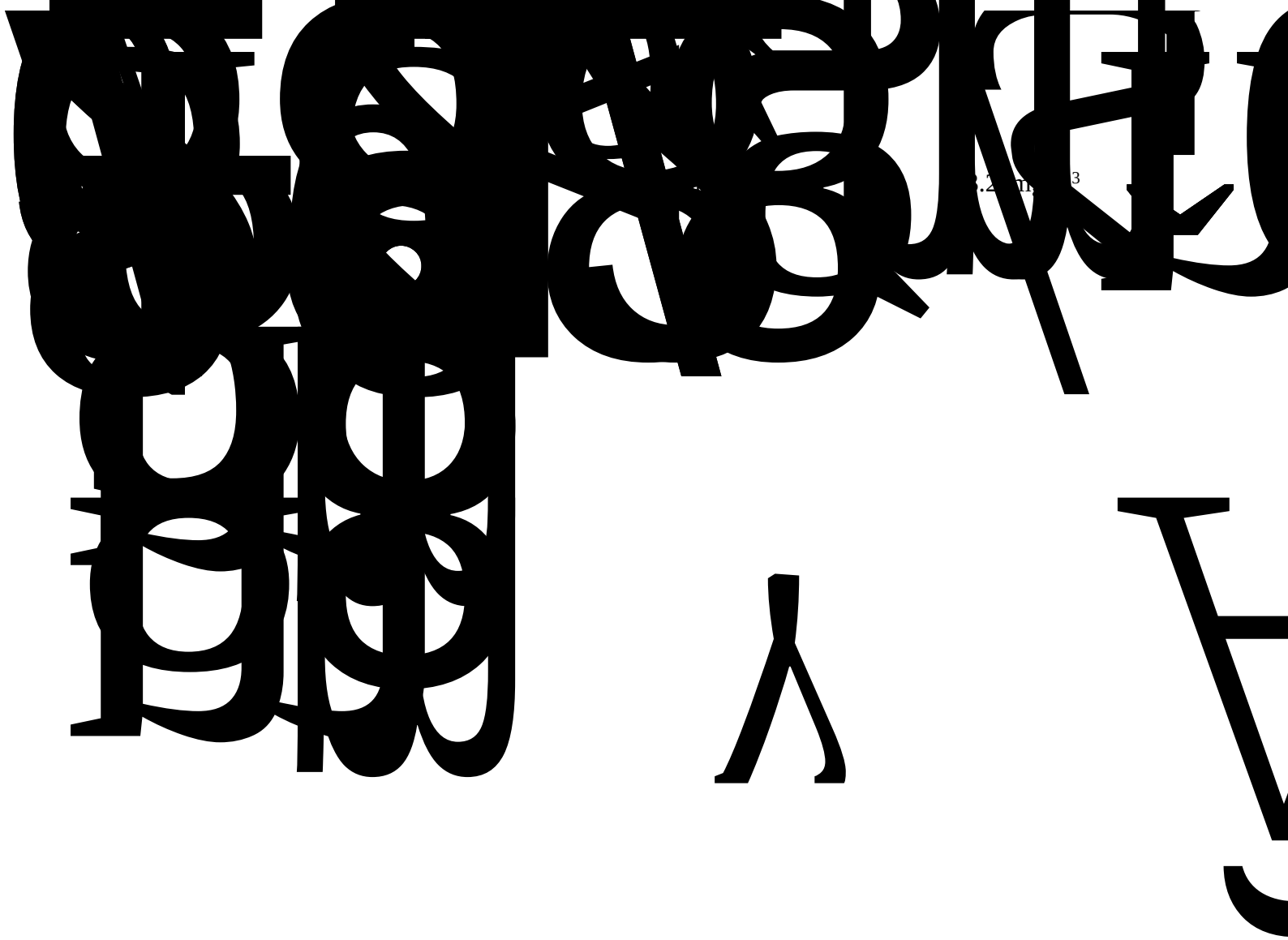
RCO 50

VOCs

RCO



7.2-8



[a]

	18	6	-12		-0.3072
[a]	1.2×10^{-4}	2×10^{-6}	-1.18×10^{-4}		-3.0208×10^{-6}
	6.3	4.73	-1.57		-0.040192

8000h/a

7.2.2.3

2 1 1

,

2 8

[a] SO_2

(GB16297-1996)

9 7.2.6

7.2.6

7.3.1

1		COD ↓ BOD_{5} ↓ ↓ SS ↓			FS001	+	/	DW001		

7.3.1

| | | | |

SS≤30mg/L

HJ1119-2020 A

960m^3/d 36.25m^3/d

10875m^3/a < 960m^3/d , “ ”

7.3.2

2592m^3/a COD BOD_5 SS

1

2

3

4

5

(

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6

GB12348-2008 4a

GB12348-2008 3

7.4

“ ”

“ 5.2.4

”

7.5

2018 11

7.5.1

2017 78

7.5.2

7.5.3



1590

52636.09

3-ЖĦĎ â m" Жnd ` P . Ə

5			5
6			10
		ή	**50**

7.6.2

( )

10	1	+	0	
2	4	+	500	/
	1		300	/
3			150	/
4	3 1 100m² 2 690m²·		50	/
5			200	/
6	1200m³			

8

8.1

8.1.1

8.1.2

1

2

72

3

8.2.3

8.3

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9

5

6

7

8

9

9.1.2

1 “ ”

2

3

9.1.3

9.1.3.1

9.1.3.2

9.1.3.3

9.1.4

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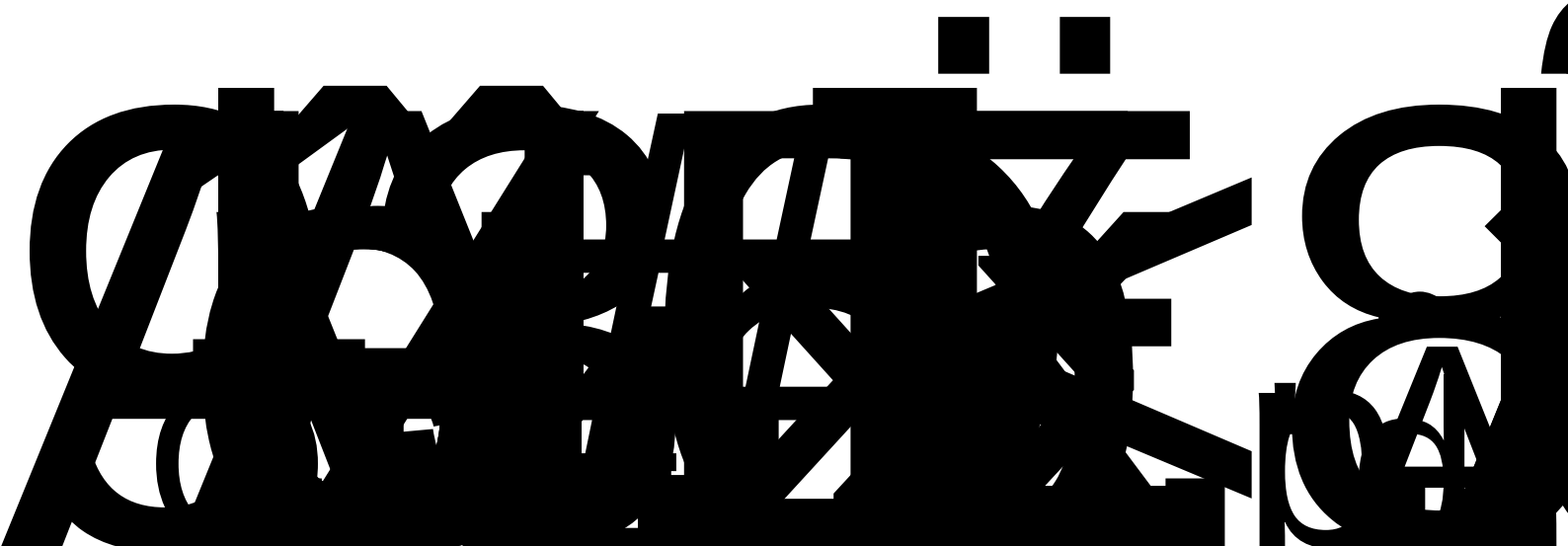
9.1.5.2

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9.1.5.4

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2

9.1.5.5

9.1.1

9.1.1

1

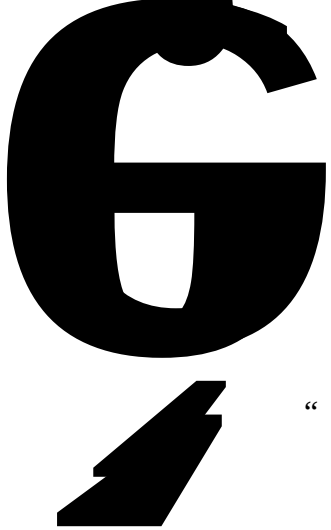
2

3

1 /

1 /




“ ”


9.1.8

è Šضخ

9.3

1

[2014]24

[2016]54 2017 1 1

2017 9 13 “ ”

[2017] 121 VOCs

VOCs

2

B

COD =2592t/a×60mg/L×10^{-6}=0.156t/a

NH_3-N =2592t/a×8mg/L×10^{-6}=0.021t/a

9.3.1

9.3.1

9.4

9.4.1

9.4.1.1

1 [1999] 24

2 [1999] 24

3 “ ” [1999] 3

4 “ ” [1999] 8

5 “ ” [1999] 9

9.4.1.2

1

2

3

4

9.4.1

3

2

4

10

10.1

10.1.1

2

65981m^2 29476.41m^2

3 15m

1 15m

“ + +

+ + +24m ”

24956.14 6000 24.04%

2022 4

6 93332m^2

140

52636.09 1640 3.12%

15m 6# 8 “ ”

1 “ ”

“

+ + + + RCO +

+30m 5# ”

4 4000m^3/h

10.1.2

1

36.00t/d 36.00t/d 10800t/a

2

3

221.55t/a

[a] VOCs

2022 5 20 -26



.2.2-2018 .1

1

È

× $ F.ã n Ä

Ä2

15m 1 2 3# 7 8# 25m

Ä1, Â n Ä 9# Π ≤ 2

[a] O_2

2

960m^3/d 36.25m^3/d 10875m^3/a < 960m^3/d

36.00m^3/d

GB8978-1996

725m^3/ SS

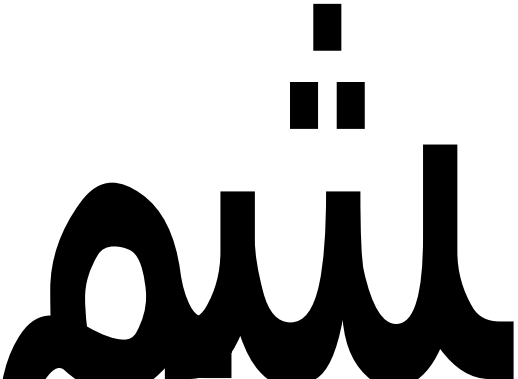
10.2.3.4

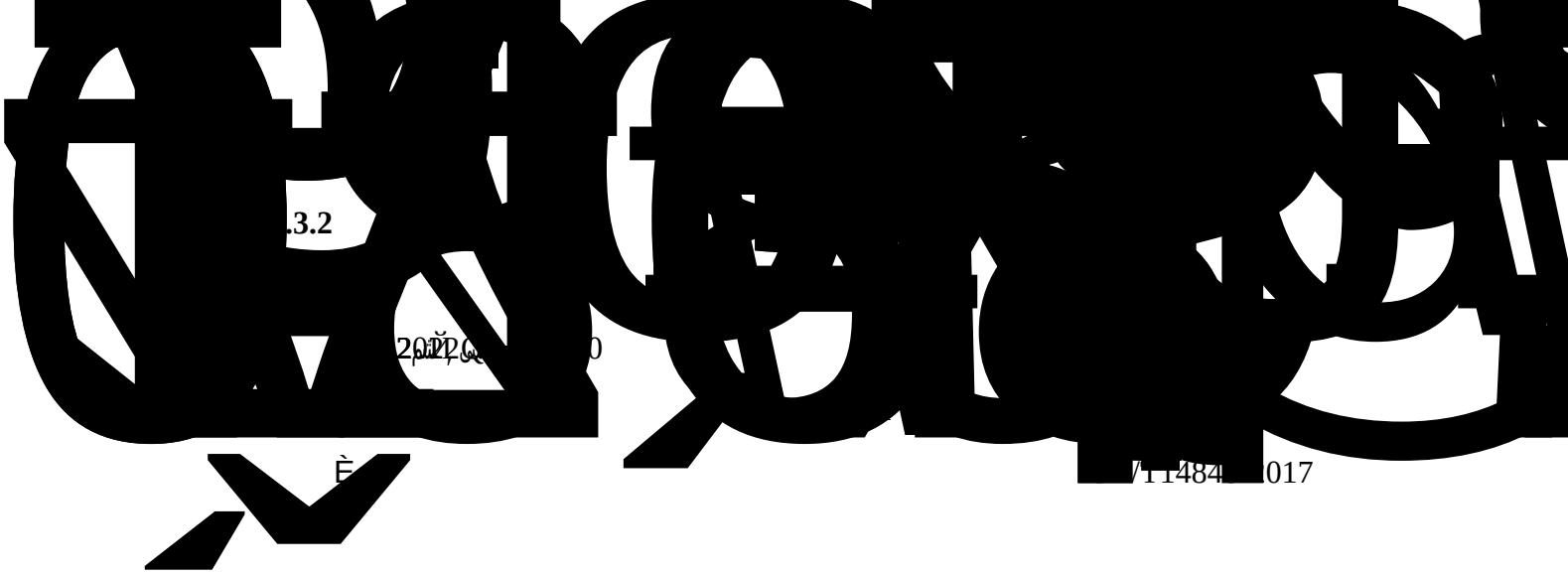
+

500m^3/d

145m^3/d

36.00m^3/d





.3.2

2022 0

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/11484 017

10.2.3.3

1

8-2

“ ”

10.2.3.4

1

2

1.0mm 1.5mm

1% 2%

10.2.5

10.2.5.1

200m

10.2.5.2

2022 5 20

GB3096-2008 3

GB3096-2008 4a

10.2.5.3

1

620m

2

75 90dB

62.3dB A <65 dB A

53.2dB A <55dB A

63.4dB A <70 dB A

53.9dB A <55dB A 200m

620m

10.2.5.4

1

2

10.2.6

100%

10.3

10.3.1

2019

2010 [2010] 122

10.3.2

אq ˜

10.3.4

10.4.1

10.5

6