3

“

” “ ”

2009 -2011 5.2 “

” 225

3

10

3

76830 “

3 ”

2022 7 22

1970 2007 1

2010 10

6 100%

MPV 568 9.24

M3/M4/M5/M6 10

3

2021

36

—361

10

”

2022 ¤ 7ó

“

2019

2016-2030

C3612 C36 “
”

“ ”

1

“ ”

2

3

4

2012-2030

2016-2030

2016-2030

1.4-1

1 2014 4 24 2015 1
1

2 2018 12 29

3 2018 1 1

4 2018 10 26

5 2018 12 29

6 2019 1 1

7 2020 4 29
2020 9 1

8 2012 2012 7 1

9 2019 4 23

10 2018 10 26

1
2012 98 2012 8 8

2 2013 37
2013.09.10

3 2015 17
2015.04.16

4 2016 31
2016 5 28

5

2016 150 2016.10.26

6 682 2017 10 1

7

2017 84 2017 11 14

8 4 2019

1 1

9

2019 53 2019 6 26

10 2019 29 2019

2019 10 30

11

2019 56 2019

7 1

12 < >

2020 65 2020 12 17

13 (2021

16 2020 11 30 2021 1 1

14 2021 15

2020 11 25

3

2018 11 31

4

2018 1 1

5 2015 131

2015 12 29

6 2013 89

2013 12 30

1 — (HJ2.1-2016)

2 — (HJ2.4-2009)

3 — (HJ19-2011)

4 — (HJ610-2016)

5 — (HJ2.2-2018)

6 — (HJT2.3-2018)

7 (HJ169-2018)

8 — (HJ964-2018)

9 (HJ2015-2012)

10 (HJ2000-2010)

11

5

2016 21

12 39

2017 7 1

13 HJ 2027-2013

14 HJ 2026-2013

15 (HJ819-2017)2017.6.1

16 (GB18218-2018)

17 (HJ42-2018) 2018 2 8

18 —— (HJ971-2018)

2018 9 28

19 —— HJ1097-2020

2020 3 1

20 —— HJ1086-2020

2020 1 6

21 HJ 1181-2021 2021

5 12

22 2019.12.20

23

2020 3 31 2021 2 1

24 GB24409-2020

25

26 GB38508-2020

27 GB33372-2020

1

2 3

2022 4

3 15

2012 1040

4 15 10

[2016]1205

5 91341622560691399700 1Q

6 3416222020QY006

3

2018.12

4

[2012]1576 2012.12.31

5

[2013]135 2013.7.23

6

[2019]158

1.2-1

		—	--	—	—	—	—	—	—	—
		—	—	—	—	—	—	—	—	—
		—	—	—	—	—	—	—	—	—
		—	—	—	—	—	—	—	—	—
		—	—	—	—	—	—	—	—	—
		—	-L1DCR	-L1DCR	—	—	—	—	—	—
		-L1DCR	—	—	—	—	—	—	—	—
		—	—	—	—	-L1DNCR	—	—	—	—
		—	—	-L1ICR	-L1ICR	—	—	—	—	—
		-S2DCR	-S2DCR	-S1ICR	-S1ICR	—	—	—	—	—

1.2-1

1.3-1

	SO_2 NO_2 PM_{10} $PM_{2.5}$ CO O_3	TSP $PM_{2.5}$ PM_{10}	

TSP NOX NH_3 H_2S NO_2 SO_2

NOx VOCs

pH COD BOD_5 NH_3-N SS TP

2		60	/ 3	3095-2012
	24	150		
	1	500		
2		40		
	24	80		
	1	200		
10		70		
	24	150		
	24	4000		
	1	10000		
2.5		35		
	24	75		
3	8	160		
	1	200		
		200		
	24	300		
		50		
	24	100		
	1	250		
	1	200		
		2000		16297-1996

2

GB3838-2002

/	
6-9	3838-2002
5	
20	
5 4	
1.0	
0.2	
1.0	
6	

	0.05	
	0.05	
	0.005	
	0.05	
	1.0	
	1.0	
	0.05	
	0.2	
	0.005	

3

GB3096-2008 3

GB3096-2008 2

	( )	
3096-2008 3	65	55
3096-2008 2	60	50

4

GB/T14848-2017

	mg/L	
pH	6.5-8.5	GB/T14848-2017
Na^+	≤200	
	≤0.50	
	≤20	
	≤1.0	
	≤0.002	
	≤0.05	
	≤1.0	
	≤0.01	
	≤0.001	
	≤0.05	

$CaCO_3$	≤450
	≤0.01
	≤0.005
	≤0.3
	≤0.1
	≤1000
	≤250
	≤250
	≤3.0
	≤100
	≤3.0
	≤0.02
	≤

17	1,2-	78-87-5	5
18	1,1,1,2-	630-20-6	10
19	1,1,2,2-	79-34-5	6.8
20		127-18-4	53
21	1,1,1-	71-55-6	840
22	1,1,2-	79-00-5	2.8
23		79-01-6	2.8
24	1,2,3-	96-18-4	0.5
25		75-01-4	0.43
26		71-43-2	4
27		108-90-7	270
28	1,2-	95-50-1	560
29	1,4-	106-46-7	20
30		100-41-4	28
31		100-42-5	1290
32		108-88-3	1200
33	+	108-38-3 106-42-3	570
34		95-47-6	640
35		98-95-3	76
36		62-53-3	260
37	2-	95-57-8	2256
38	[a]	56-55-3	15
39	[a]	50-32-8	1.5
40	[b]	205-99-2	15
41	[k]	207-08-9	151
42		218-01-9	1293
43	[a,h]	53-70-3	1.5
44	[1,2,3-cd]	193-39-5	15
45		91-20-3	70
46	C_{10}-C_{40}	/	4500

			GB8978-1996		
1	pH	6-9	/	6-9	/
2	COD	320	500	320	50
3	BOD_5	160	300	160	10
4	SS	180	400	180	10
5		3			

		27m		11.79	
	NOx	15m	240	0.77	0.12
		18m		1.09	
		20m		1.3	
		27m		3.47	
		15m	70	1.0	1.2
		18m		1.42	
		20m		1.7	
		27m		4.64	
		15m	120	10	4.0
		18m		14.2	
		20m		17	
		27m		42.2	
		/	30	/	/
	SO_2	/	200	/	/
GB13271-2014 3			20	/	/
	SO_2		50	/	/
2020	NOx		50	/	/
GB37822-2019			1h	/	/	6
				/	/	20
GB14554-93	NH_3	15m		/	4.9	1.5
	H_2S			/	0.33	0.06

1.3-9

	(mg/m^3)			
	6	1h		GB37822-2019
	20			

GB 12523-2011

GB12348-2008 3

$$GBB($$

	$_{max}$<1%

1%<Pmax<10% -

HJ2.2-2018

GB8978-

1996

HJ2.3-2018

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

B

B

3 3dB(A)

HJ2.4-2009

HJ610-2016

A “73 ” “

”

	I	II	III

HJ/T169-2018

	IV IV +	III	II	I
				a
a				

Q Q

1

- HJ964-2018

HJ19-2011

5km

HJ2.3-2018 B “
”

10 5000

2020 2021 73.6% 70.5%

70%

61%

3%

10000 /a 5000

“ ”

“ ”

“ ”

2021-2035

[2017]53 “

2014 7 21

[2014]35 “

“

” “

”

“

”

[2015]16

2022 7 22

2207-340000-
04-01-652703

	\ N©	

2019 53 2019

6 26

+

80% 90%
VOCs

1.1

VOCs

VOCs

VOCs 2.1.4-1

VOCs

VOCs

GB/T38597-2020

08-2020

GB33372-2020

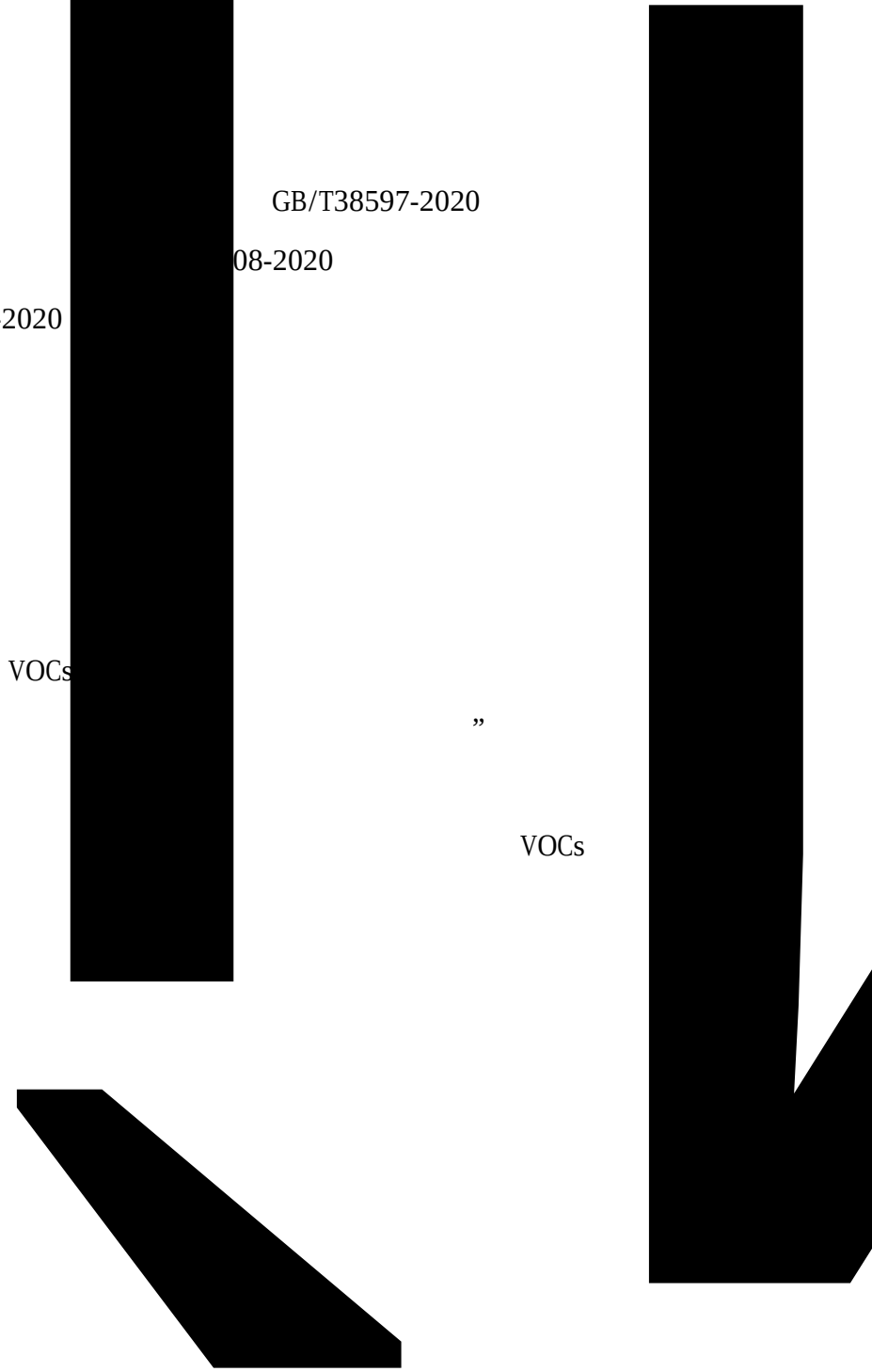
VOCs

“ VOCs

VOCs

”

VOCs



		( ) ( ) ( )	“ ”	
2	[2020]38	“ ” “1 5 15 ” “ ”	60 “1 5 15 ”	

1964

1

2

3

80%

GB24409

HJ2537

“ ”

100% 100%

30%

2018

2018~2030 65.9km^2

GB3095-2012

GB3096-2008

2 3

GB/T15190 8.3

4a

GB36600-2018

GB/T14848-93

(GB3838-2002)

GB18918 2002

A

2021 2021

2 2 3 3095-2012

10 2.5

120m 40m

680m 400m

115m

315m 25m 240m

+ RTO

RCO

126.007t/a 4.43t/a

			/m					
			X	Y		(m)		
	1		77	-618	S	60		GB3095-2012
	2		541	-811	SE	517		

	3		-676	-135	W	693		
	4		-1062	39	W	1046		
	5		-985	-541	SW	1090		
	6		-1216	-830	SW	1295		
	7		-328	-985	SW	743		
	8		-560	-1390	SW	1186		
	9		-830	-1351	SW	1257		
	10		-1197	-1390	SW	1705		
	11		-1757	-1197	SW	2019		
	12		-618	-1776	SW	2337		
	13		-1042	-1757	SW	1864		
	14		-1332	-1718	SW	1999		
	15		-1950	-1622	SW	2348		
	16		-1718	-2008	SW	2548		
	17		-1737	-2239	SW	2767		
	18		-2027	-2027	SW	2765		
	19		-1062	-2162	SW	2156		
	20		-695	-2162	SW	2014		
	21		-2123	-2432	SW	3120		
	22		2317	-869	SE	2135		
	23		2336	-1139	SE	2181		
	24		560	946	N	510		
	25		1062	849	NE	902		
	26		-309	907	NW	897		
	27		-541	560	NW	958		
	28		-714	811	NW	1311		
	29		-1042	985	NW	1302		
	30		-1660	232	W	1482		
	31		-1776	-174	SW	1791		
	32		-1969	-425	SW	1661		
	33		-1757	-888	SW	1839		
	34		656	1641	N	1729		
	35		1216	1564	NE	1910		
	36		2432	541	NE	2303		

	37		-193	1873	NW	1849		
	38		-676	-125	W	600		
	39		-1776	1448	W	2252		
	40		2258	354	NE	2855		
	/		--	--	S	840		GB3838-2002
	1		77	-618	S	60		GB3096-2008 2
	/		--	--	--	--	--	GB/T14848-2017
	/	200m	--	--	--	--	--	GB36600-2018
	1		77	-618	S	60		

3

3.1-1

C3611 C2612

76830 1642

242 89340m^2

1300 1216 250

8

242

3

3

3.2-1

1 1 2
1F
3
207m*73m*18.5m
16215m^2 15940m^2

1 3 1F 3F
207m*74m*16m
15318m^2
15903m^2
/
1 PBS 1F +
3
292m*66m*17.5m
2 1 22560m^2 21576m^2
/
/

◯ 2 2.8MW
◯ 1
◯ TNV
RTO
567.6m^3/h 227.04 m^3/a 2.1.7-2
1
50m^3/min 1 0.6MPa m^3/ .
m^3/
1745.4m^3/d
10m^3/h 94%

			4801m^3/h 44.072m^3/h 1 900m^3/h 2 1633m^3/h 1 635m^3/h
		913.848m^3/d UPVC DN200 GB18918-2002 A	
		17767kW 1802.6 kWh·a	
		3.2-8	
		3.2-8	
		4F 5F 207m*12m*23m 26082m^2 107328m^2	
		1	
		1	
		440.87m^2	
		110	
		440	
		1	
		1 1	
		“ ” 1 2m^3/h “ + + ”	

2 30m^3/h “ + + ”

3 15m^3/h “ + +pH ”

4

45m^3/h “ +pH + +A/O+ + + ”

GB8978-1996 4

+1

+1 20m P1

			SO_2 NOx	
				1 TNV 3# +1 18m P11
			1	1 18m P12
			2	1 18m P13
				+1 +1 20m P14
			1	+1
			2	+1
			3	+1
			1	1
			2	2
			3	3
				1 “ + ” +1 18m P17
				1 “ + ” +1 15m P18
				1 20m P19
				1 20m P20
				1 20m P21
				1 20m P22
				+1 15m P23
			NH_3 H_2S	+1 15m P24
			RO	

			440.87m^2
		1 2 1	

12m

7m

4.2-1

	4	9000	
	5	6000	
		9000	
	6	6000	
	/	30000	/



4



5





6

mm	5050×2080×2395
mm	2960
/ mm	195
L	80
kg	2265

	6 /MT
(ps/rpm)	190/5000
(N·m/rpm)	360/1515 ~ 5

	mm	5300×2080×2160,2395
	mm	3360
	/ mm	190
	L	80
	kg	2250
	kg	1385
		6 /MT
	(ps/rpm)	139/4000
	(N·m/rpm)	310/1800-2800
		5.6L
		≥150

	mm	5990×2098×2645
	mm	3570
	/ mm	170
	L	80
	kg	2840
	kg	1795
		6 /MT
	(ps/rpm)	153/3200
	(N·m/rpm)	355/1800-2600
		6.5L
		≥130

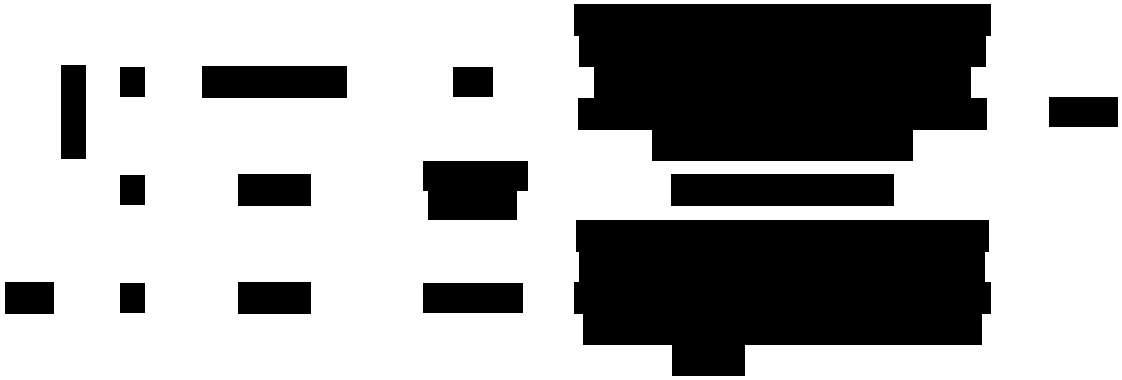
				t/a		
1			/	5.4	0.45	/
2			/	0.6	0.05	/
3			/	120	10	/
4			/	8	0.67	/
5	CO_2		/	5.85	0.5	/
6			CY-6E	69	1.36	250kg/ 0.4KG/
7			CY-1	12	0.24	430G/
8			CY-2	19	0.38	430G/
9			5016C GP 310ML	5	0.16	370G/
10		A	FC-E2091LMC	16	0.32	25kg/
11		B	FC-E2091LBC	6	0.12	25kg/
12			CT-8005CM	35	0.7	25kg/
13		A	CT-8005C	35	0.7	25kg/
14		B	CT-8005C	8.5	0.17	25kg/
15M	pH		AJ-4762			

16C (.

$r@m$ ÷“`f r@f ÷“`` $ @` $ ñ``t ñ``a—@l t ñ``$ ñ``!8$ •!8$ ÷“ # t ÷“`$ $ @$ $ ñ``$ $ •$ $ ÷“`'Y•4 u™ ñ``'Y•l u™ ÷“`)4• @)4• ñ``)4 • ÷“`™ @™ ñ``™ •™ ÷“ s• ÷“`E⊤

20		/	/	0.03	0.0024	/	/	
21			TEROSON PV 8255Q	306	1.224	250kg/		
22		3C2B	FV8H-OD9A	78.3	0.31	180kg/		
23		2C2B	FH82-0A1A	136.1	0.54	180kg/		
24			FU8B-7B6A	214	0.856	180kg/		
25			SPO	83.214	0.33	180kg/		
26			SV08047A THINNER	7.236	0.03	180kg/		
27			LACS L805	3	0.2	25kg/		
28			SV13013A/160K-C1	30	0.12	180kg/		
29			SV99016A/170K-C1	30	0.12	180kg/		
30			AC 1000 J	18	0.36	180kg/		
30			/	60000L	1200L	1000L/		
31			/	354000L	7080L	1000kg/		
32			DOT4	30000L	600L	200L/		
33			ATF-	36000L	720L	209L/		
34			R134a	45	1	500kg/		
35			AUS32	360	7.2	1000kg/		
36			/	405000L	8100L	/	/	
37			/	405000L	8100L	/	/	





1 [redacted] L"

6				[redacted]	6.0 0 100 94 1.03±0.05g/cm^3.		1- -2- 427700mg/kg 2- 141400mg/kg
7				[redacted]	pH 1.1 1.1 27		LD50 1400 mg/kg LD50 3654 mg/kg LD50 204 mg/kg LD50 370 mg/kg LD50 EUCLP 1- 2 LC50 0.79-1.915 mg/L(1h) LD50 68 mg/kg LD50 EUCLP 3- 4 LC50 EUCLP 2- 3
8			A	[redacted]	pH 1.5 ЬS0 7		LD50 68 mg/kg LD50 EUCLP 3~ 4 LC50 EUCLP Ğ~ Į LC50 0.17mg/L(4h) LC50 0.22mg/m^3(4h) LC50 0.16 mg/L(4h) LC50 0.16 mg/L(4h)
9			B	[redacted]	pH 2.2 ЬS0 7		LD50 3654mg/kg LD50 204mg/kg ЯD50 70mg/kg

122

kPa 5.5mg/Hg

10 pH [redacted] pH 1 =1 HNO_3LC50 67 ppm/4hr

=1

11 [redacted] 1 LD50>5.000mg/kg

1.5g/cm^3

2000.000mPa.s

12 [redacted]

14 B [redacted]

LD50 1870mg/kg
LD50 273mg/kg
LD50 2000mg/kg

: 2
: 5 ( )

: 3
26 5 ( )
16 5 ( )
2- ( ) olypropylene

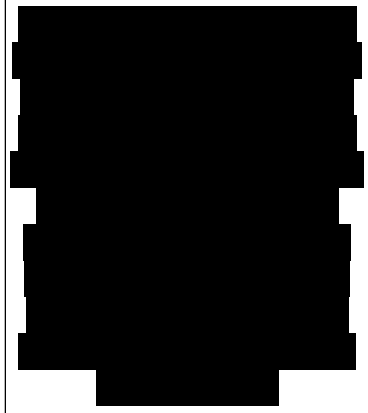
[redacted] pH 7.9-8.3

100.00-
199.00
100

1.190g/cm^3

15 3C2B /

lyc

						: 4
16 17			2C2B		62 1.100g/cm^3	/	: 2 : 3 (-) : 3 ( ) : 3 ( ) 2- : 4 : 5 ( ) : 4 (-) 1- -2- : 3 : 5 ( ) 2-( ) : 3 : 3 (-) : 4 ( ) : 4 ( ) 2- : 4 : 4 (-) : 4 ( ) : 4 ( ) 1- -2- : 3 : 5 ( ) , C11-15 : 4

						: 4 : 5 ( )
18				pH 8.0-8.5 100.00- 199.00 63 1.250g/cm^3		1- -2- : 3 : 5 ( ) 2-( ) : 3 : 3 (-) : 4 ( ) : 4 ( )
19				pH :8~8.5 65-250 >25 9Torr/20 0.90-1.00g/cm^3 >370		LD50 LC50 A LD50 4360mg/Kg LC50 8000ppm/4hr
20				22 44 0.882g/cm^3		/
21						: : > 5.000 mg/kg : : > 40 mg/l



					36g/cm^3		
23					pH 8.0 1000 61 20 0.950g/cm^3		( ): 4,396mg/kg 2-( ) ( ): 1,183mg/kg 1- -2- ( ): 3,300 mg/kg 2-( ) ( ): 6.1mg/l 1641 ppm 4 h ( ): 2,764mg/kg
24					1.26-1.32g/cm^3 6700000mPa.s		-4,4'- LD50> 2,000 mg/kg LD50 > 9,400 mg/kg 1- -2-[(4-)] LD50> 2,000 mg/kg LD50 > 9,400 mg/kg

MSDS

PVC

VOCs

1

1

“ ” $1.54g/cm^3$

“

100 0-5 2.5

1.060-1.260g/ml 1.16g/ml 1.16g/ml

VOC 409g/L

35.3%

monocoat

monocoat 1-3% 2%

1.10-1.30g/cm^3 1.2g/cm^3

1.2g/cm^3 VOC 272g/L

22.7%

◯ VOC 152g/L

1.275g/ml 11.9%

11.5:1

11.5:1

(VOC) 432g/L 0.90-1.00g/cm^3

0.95g/cm^3 0.882g/cm^3

0.94g/cm^3 45.96%

VOCs GB24409-

2020 480g/L MSDS 0.91-0.97g/cm^3

0.94g/cm^3 VOCs 51.09%

VOCs

850g/L

MSDS

0.950g/cm

2% VOCs 28g/L

MSDS >97% 1.35g/cm^3

97% 3% VOCs

40.5g/L

VOCs

MSDS

		g/cm^3	%	VOCs g/L
		1.54	1.2	18.48
		1.53	0.4	6.12
		1.43	0.9	12.87
		1.16	1	11.6
		1.1	3.09	34
		1.16	35.3	409
	monocoat	1.2	22.7	272
		1.275	11.9	152
		0.94	45.96	432
		9.4	51.06	480
		0.86	100	850
		0.950	21.9	208
		1.40	2	28
		1.35	3	40.5

3.1.4.4.2 VOC

“2.1.4.4.1 ”

VOC

3.1-5 VOC

		VOCs	GB24409-2020		GB/T38597-2020	GB38508-2020	GB33372-2020	
		34	≤250	≤250	≤200	/	/	
		409	≤530	≤530	≤420	/	/	
	Monocoat	272	≤530	≤530	≤420	/	/	
		152	≤350	≤350	≤300	/	/	
		432	≤500	≤550	≤480	/	/	
		480	≤480	/	/	/	/	
		208	/	≤300	/	≤300	/	
		850	/	≤900	/	≤900	/	
		28	/	/	/	/	≤250	
		40.5	/	/	/	/	≤250	

$$m=\rho\delta s\eta\times10^{-6}/\ NV\cdot\varepsilon$$

m— t

ρ— g/cm^3

δ— μm

s— m^2

η— %

NV— %

ε— %

- E

VOCs

3.1-6

s m^2/ m^2	ρ g/cm^3	δ μm	NV %	ε %	t/a
:45		20		99.5	
:63 540	1.1	10	21		332.6
:72		8			
52 78	1.16	15	28-35		

6			0	1	
7			0	1	
8			0	1	
9			0	10	
10			1	0	
11			0	1	
12			0	2	
13			6	10	
14			9	25	
15			0	1	
16			0	1	
17			0	1	
18			0	1	
19			0	1	
20			0	1	
21			0	3	
22			0	1	
23			0	1	
24			0	1	
25			0	1	
26			0	3	
27			0	1	
28	AUDIT		0	1	
29			0	1	
30	/		0	1	
31			0	1	
32			16	77	
1		+	0	1	
2	1 /2	8m	0	1	
3	1 /2	7m	1	0	
4		8m	1	0	
5	OK	8m	1	0	
6	1		1	0	
7		6.3m	1	0	

8			1	0	
9			1	0	
10			1	0	
11			1	0	
12			1	0	
13	/		0	1	
14			0	1	
15			1	0	
16			11	4	

DN250

1745.4m^3/d 43.6 m^3/a

10m^3/h 94% 68.36m^3/d 17090m^3/a

75m^3/h 80%

+ + + +EDI+ 461.29m^3/d 27.16m^3/d

4

4801m^3/h 61.2m^3/d 1 900m^3/h 2 1633m^3/h 1 635m^3/h

2.1.7-2

		m^3/h	
1	1	900	32/37
2	2	3266	32/37
3	1	635	



2.1.7-3

1				
2				
3				
4				
5			RTO	
6			TNV	

3.3.5

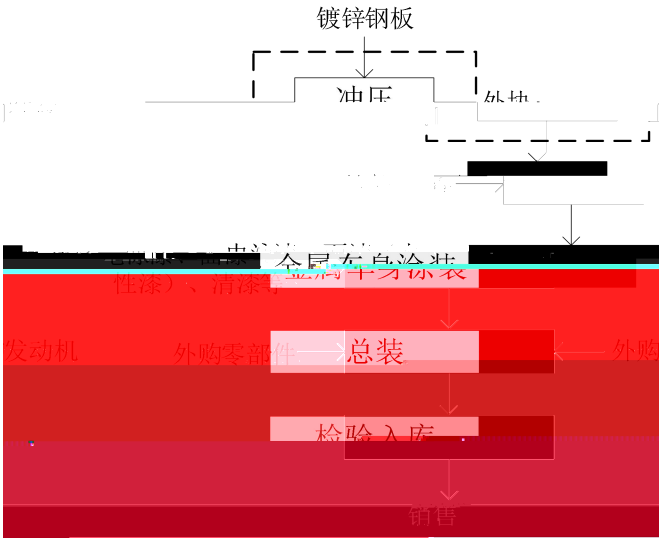
3.3.5.1

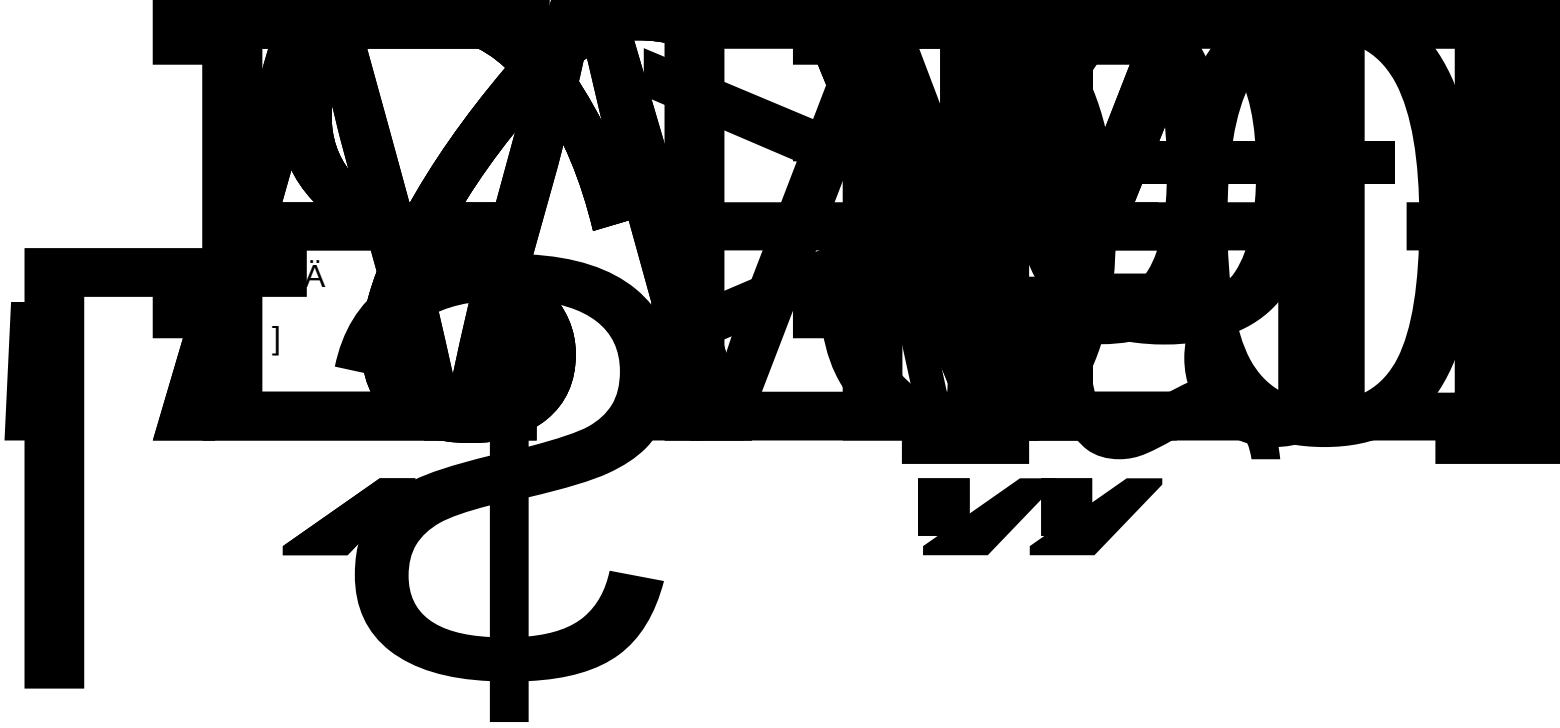
567.6m^3/h 227.04 m^3/a

2.1.7-4

		m^3/h	H	m^3/a	
		290*2	4000	116*2	2
	TNV	176.5	4000	70.6	1
	TNV	117.6	4000	47.04	1
1		23.5	4000	9.4	1
		58.8	4000	23.52	1
	TNV	141.2	4000	56.48	1
	RTO	50	4000	20	1
2		567.6	/	227.04	/

1218kw


镀锌钢板
冲压
总装
检验入库
销售



	mm	mm	mm
	5990	2098	2645
	6900	2500 2350	2800

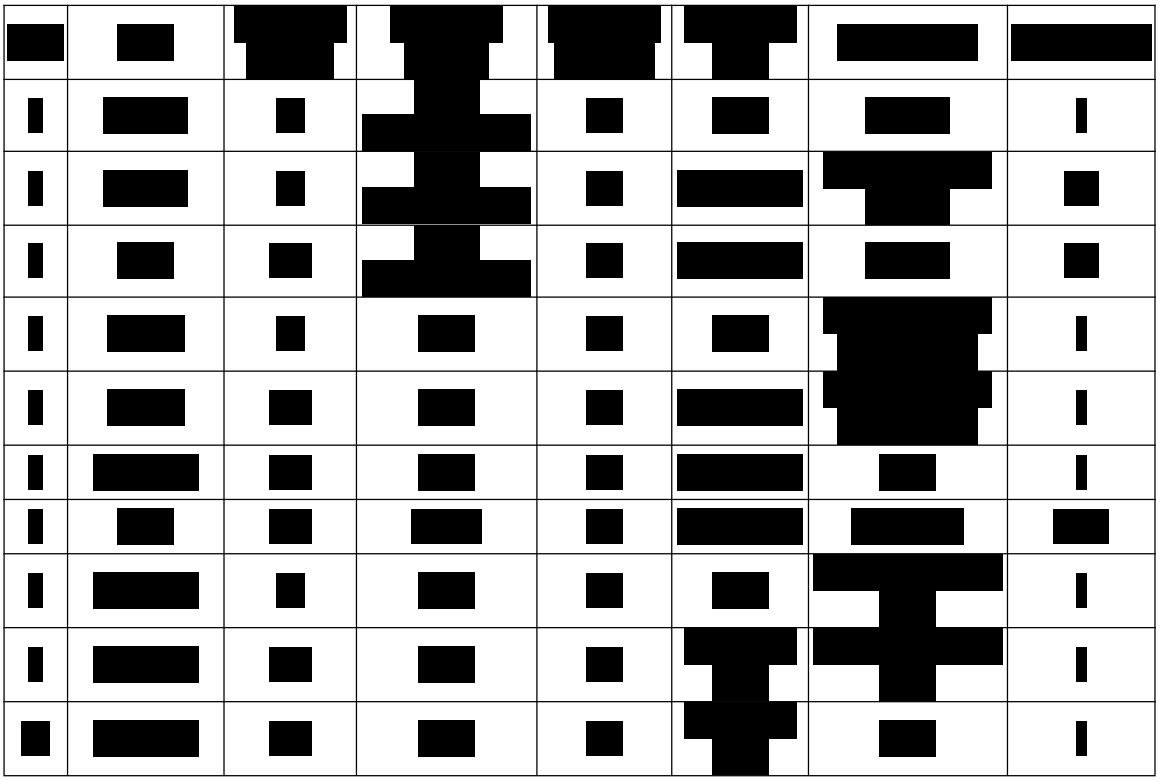
3C2B

	m^2/	μm/	m^2/	μm/
	45	18-22 8-12 6-10	40	35 3C2B 15 2C2B 40 40
	63		12	
	72			
	180	/	52	/

1

4.4-5 4.4-5

3.1.3-2



[redacted]

	S2-1		
	S2-2		
	S2-3		

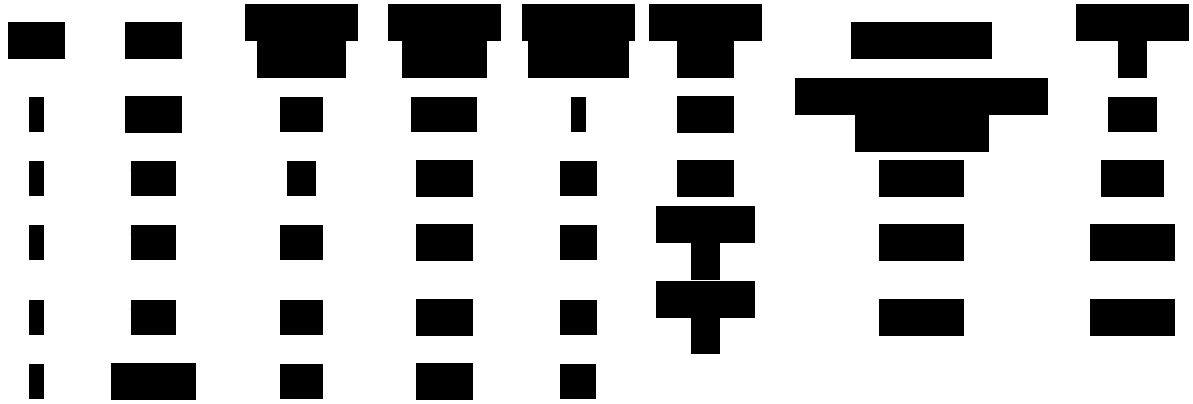
1

UF

4

4.5-6 4.5-6

3.1.3-4



第1章

1-EV

[redacted]

[redacted]

[redacted]

[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]

3.1.3-6

G3-1

“

”+18m

G3-2

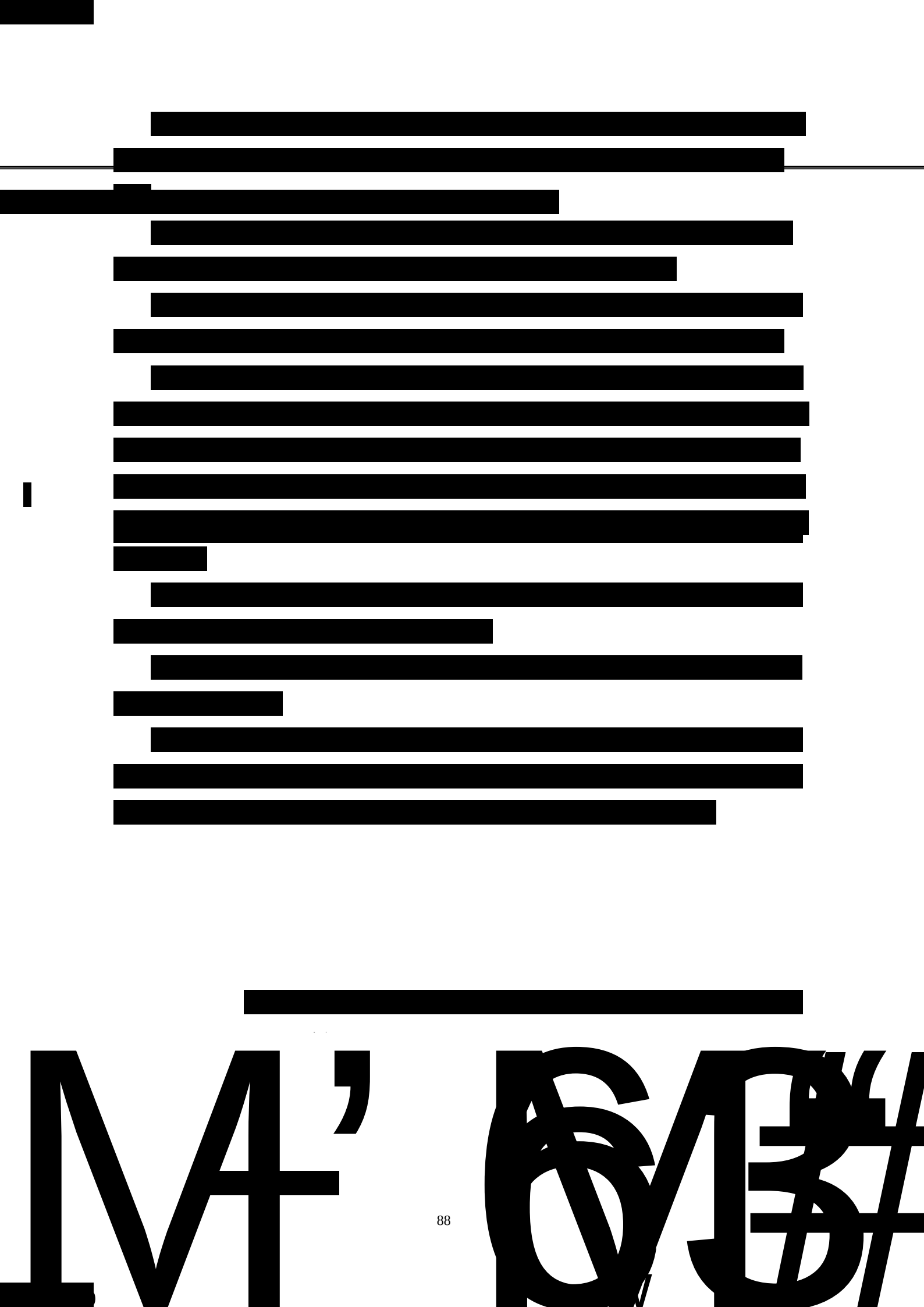
TNV +18m

[redacted]

4.1-9

4.4-8

[redacted]



[redacted]

“ ”

G5-1 +18m

“ ”

G5-2 +18m

G5-3

G5-7 +

+

+RTO+27m

G5-8

G5-10

				“ + ” +18m	
	G5-14				“ ” +18m
	N		75-90dB A		
	S5-1				
	S5-2				
	S5-3				
	S5-4				
	S5-5				
	S5-6				
	S5-7				

4.5-10



HJ 1097-2020 E

3.2.2-1

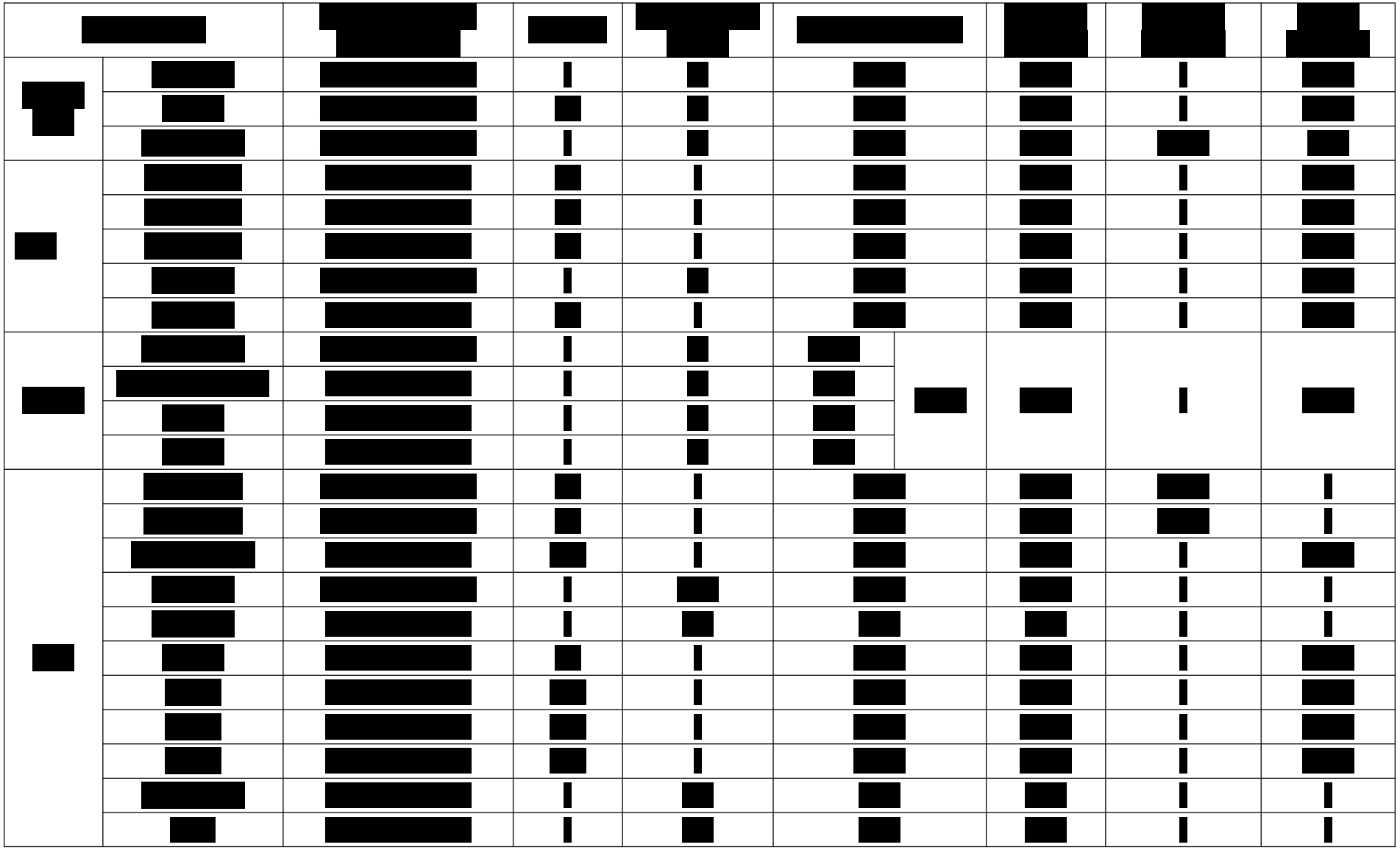
3.2.2-1

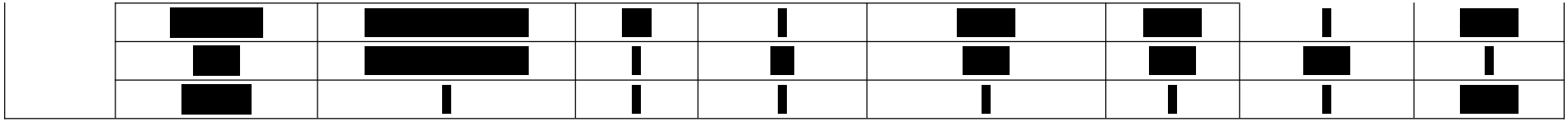
35%

1

24						70%
25						14%
26						15%
27						0
28						70%
29						30%

3.2.2-2 m^3/h





3.2.2-3 3 /a t/a

t/a t/a

307.78

54.249	1.839
12.733	51.264
40.018	2.158
90.45	0.722
48.879	31.5

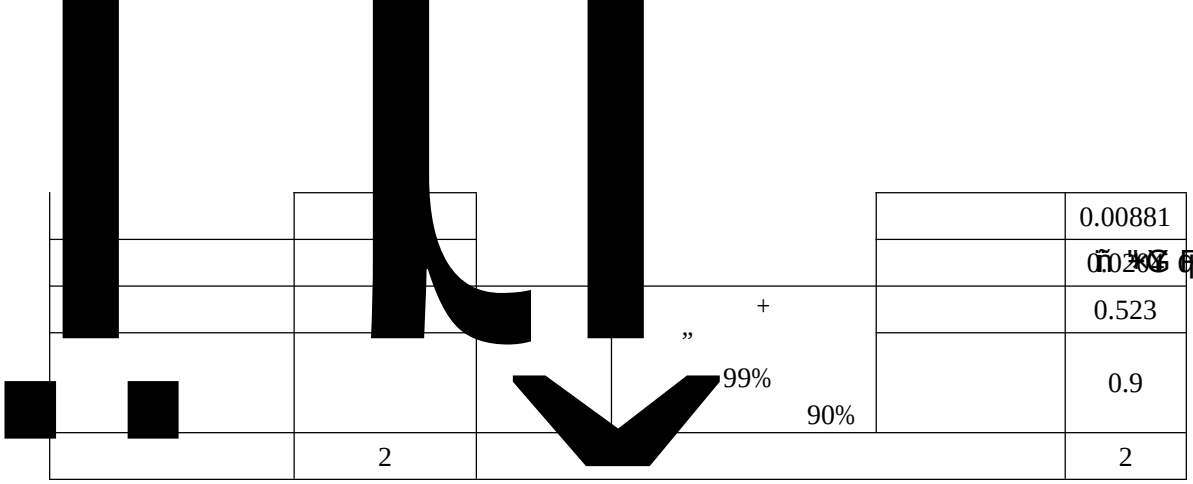
78.3		78.3				2.202
		24.665				3.005
		27.64				102.501
		25.996				4.316
		214				1.107
		108.498				42
		25.466	RTO 91.8%			88.828
		80.036	TNV 98%			48.35
		90.45				
		48.879				
		41.57				
		30				
		6.57				
		23.43				
		30				
		13.77				
		592.6				592.5

3.2.2-6 t/a

		t/a				t/a
		1				0.221
		0.49				0.00264
	VOCs	0.511				0.05
						0.00441
						0.0102
				“ + ”		0.262
				99% 90%		0.45
		1				1

3.2.2-7 t/a

		t/a				t/a
		2				0.441
		0.979				0.00528
	VOCs	1.021				0.1



				0.00881
				0.261
		+		0.523
		„ 99% 90%		0.9
	2			2

G1-1

G1-2 G1-3

							t/a
		4.2	10000		0.039	95% 97% 1 20m	0.0011

C

						2.19 / -

3.3.1-33

								Gÿ
t/a	m^3/h	t/a				t/a	t/a	
			PVC					
2310	12000	5.05				0.04		
					98%			
				99%	1			
			20m					



2% 3%

3C2B 2C2B

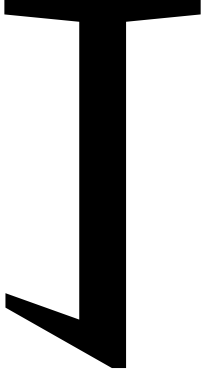
3.3.1-9

			t/a	m^3/h		t/a		(t/a)
			612	45000		1.53	“ + ” 98% 90% 1 18m V	0.15
			/	/		13.77		/
			/	/		0.0306	/	0.0306

3

monocoat

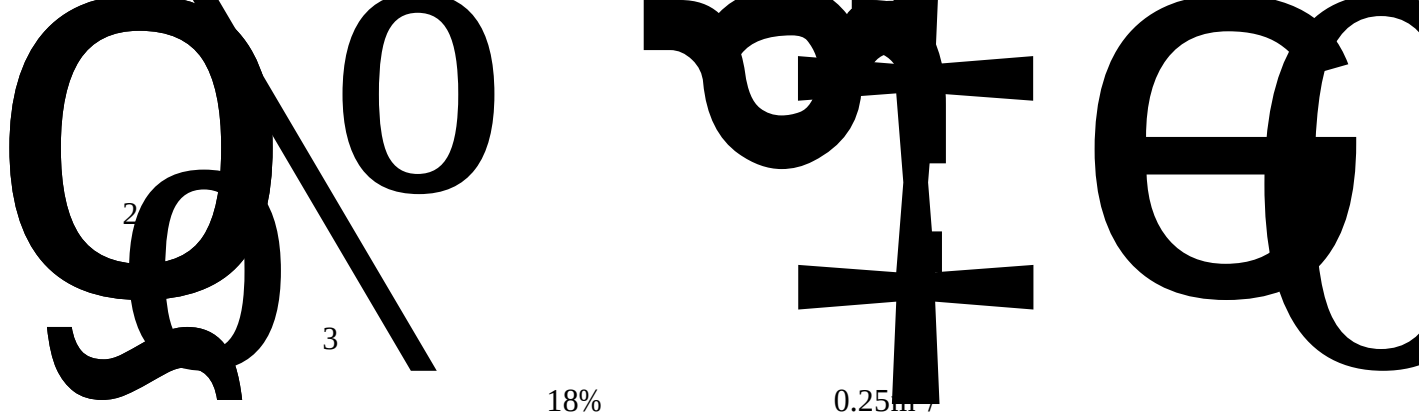
3C2B V



3.3.1-10

					(t/a)
m^3/h		t/a			
9600		0.84	“	”	0.0823
			98%		
9600		0.416	90%	RTO	0.0407
	MŽ+b"	6ȍ0d	+		
			98%		
			98%	+	
			95%		
161865		“	”		7.907
			93%		1.079
			RTO		
			98%		
		1	27m		

			/		0.99		0.99
			/		0.164	/	0.164
			/		0.499	/	0.499
			/		0.88		0.88
			/		0.219	/	0.219
			/		0.682	/	0.682
			/		0.324	/	0.324



18% 0.25m /

2t

HJ1097-2020

“ ” “3.2 ” “ ”

3.3.1-11

			(m^3/h)		(t/a)		(t/a)
		1	44550		0.34	“ + ”	0.017
					0.18	98% 99% 90% 1 18m	0.00088
		2	44550		0.34	“ + ”	0.017
					0.18	98% 99% 90% 1 18m	0.00088
		3	44550		0.34	“ + ”	0.017
					0.18	98% 99% 90% 1 18m	0.00088
		/	/		0.0204	/	0.0204
					0.00881		0.00881

3

MSDS VOCs 0.5%

18t/a

3.3.1-12

(m^3/h) (t/a)

4

1

1 28m×5.5m

,´ NÇ2Â(™G÷XLö"D5™‡WC EŸH f LöÄ

2021 24

“ ” 3.3.1-32

3.3.1-33

		t/a	m³/h		t/a		t/a	t/a
		7635	55440		13.3	+PVC 98% 99% 1 18m	0.13	0.27

2

2

\ɹ

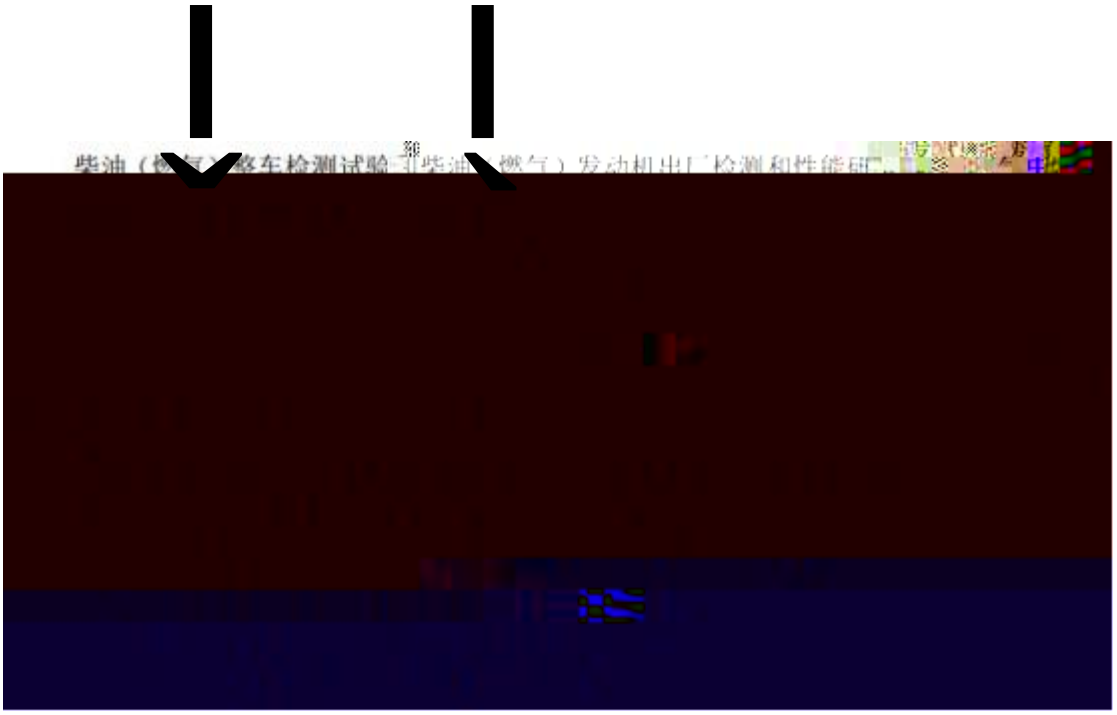
3

7.5m×5.5m *3 +PVC

2021 24

“ ” 3.3.1-32

3.3.1-33



	Rk g/kW·h	γ	S	P kW	T h
	8.0	0.40	20000	190	0.025

t/a

	NOx			
P19	0.304	0.2	0.014	20m 15000m^3/h
P20	0.304	0.2	0.014	20m 15000m^3/h
P21				

1

8% 1.0m²/

2t

HJ1097-2020

“ ” “3.2 ” “ ”

3.3.1-13

			(m³/h)		(t/a)		(t/a)
			20000		1	“ + ” 98% 99% 90% 1 15m	0.00528
					0.528		0.1
			/		0.0204	/	0.0204
					0.00881		0.00881

HJ1097-2020 15 16

	Rk g/kW·h	γ	S	P kW	T h
	8.0	0.40	20000	190	0.025

		t/a			
		NOx			
P22		0.304	0.2	0.014	15m 15000m³/h

HJ971-2018 11

3.3.1.4

1

RTO TNV

NOx

HJ953-2018 ”

3.3.1-48

/	2.86 / -		
/	0.02S / -		HJ953-2018
	9.36 / -		

NOx

HJ953-2018 ”

3.3.1-50

/ /			2.86 / -	HJ953-2018
			0.02S / -	
			9.36 / -	

3.3.1-51

3.3.1-51

	(t/h)	( )	(m3/a)	t/a	SO2 t/a	NOx t/a	(m^3/h	
	4	2	232	0.66	0.928	2.17	6960	P

440.87m^2

577Π

3.3.1-54

m^3/h		/	mg/m^3	kg/h	t/a				mg/m^3	kg/h	t/a	h	mg/m^3	kg/h
10000	P1	H:20m Φ:0.5m	1.95	0.0195	0.039	+	95%	1	97%	0.055	0.00055	0.0011	2000	120	5.9

45000	P6	H:18m Φ:1.0m		8.5	0.383	1.53	98%	1	“ ” 90%	+		0.83	0.0375	0.15	4000	120	14.2
9600*2				21.875	0.21	0.84	98%	1	“ ” 90%	RTO		12.4	2	8.03		120	42.2
		H:27m Φ:2.2m													4000		

2#TNV				SO_2	4.32	0.0475	0.19					4.32	0.0475	0.19		200	/
				NOx	10	0.11	0.44					10	0.11	0.44		50	/
					7.61	0.0168	0.067					7.61	0.0168	0.067		30	/
	2200	P9	H:18m Φ:0.24m	SO_2	10.68	0.0235	0.094					10.68	0.0235	0.094	4000	200	/
				NOx	25	0.055	0.22					25	0.055	0.22		50	/
					7.5	0.0075	0.03					7.5	0.0075	0.03		30	/
	1000	P10	H:18m Φ:0.16m	SO_2	9.4	0.0094	0.0376					9.4	0.0094	0.0376	4000	200	/
				NOx	22	0.022	0.088					22	0.022	0.088		50	/
					331	3.972	15.888	“RTO	” + 98%	1		6.625	0.0795	0.318		120	14.2
	12000		H:18m Φ:0.5m						98%						4000		
					3.375	0.0405	0.162					3.375	0.0405	0.162		30	/
				SO_2	4.79	0.0575	0.23		/			4.79	0.0575	0.23		200	/
				NOx	11.04	0.133	0.53					11.04	0.133	0.53		50	/
					11.85	0.0825	0.33					11.85	0.0825	0.33		20	/
1	3480	P12	H:18m Φ:0.3m	SO_2	16.67	0.116	0.464		-			16.67	0.116	0.464	4000	50	/
				NOx	38.97	0.27	1.085					38.97	0.27	1.085		50	/
	3480	P13	H:18m Φ:0.3m														

									98% 99%									
	1	14850	P15	H:18m Φ:1.0m		117.34	1.74	6.97	1 +PVC 98% 99%	1	2.4	0.105	0.42	4000	120	5.04	
	2	14850				117.34	1.74	6.97	2 +PVC 98% 99%									
	3	14850				117.34	1.74	6.97	3 +PVC 98% 99%									
	1	44550	P16	H:18m Φ:1.8m		0.0025	0.111	0.167	1 98%	1 “ + ” 90% 99%		0.25	0.033	0.05	4000	120	14.2	
						1.32	0.059	0.088										
	2	44550				0.0025	0.111	0.167	2 98%									
						1.32	0.059	0.088										
	3	44550				0.0025	0.111	0.167	3 98%			0.0132	0.00176	0.00264	4000	120	5.04	
						1.32	0.059	0.088										
		31680	P17	H:18m Φ:1.0m		0.71	0.0225	0.09	98% 1 “ ” 90%		0.069	0.0022	0.0088	4000	120	14.2		

			33.3	0.67	1						0.176	0.003520.00528			120	10	
20000	P18	H:15m Φ:0.7m				98%		1	“ ”	+				1500			
			17.6	0.352	0.528		90%				3.33	0.067	0.1		120	3.5	
								99%									
15000	P19	H:20m Φ:0.6m	1.87	0.028	0.014												

				Φ 0.7m	H_2S	0.41	0.0082	0.041	95%	90%	0.05	0.001	0.0039	5000	/	0.33	
4.02t/a						9.806t/a	SO_2	4.61t/a	NOx	5.511t/a	NH_3	0.0646t/a	H_2S	0.0039t/a			

4.6-29

3.3.1-55

			m	m	m	h		t/a	kg/h
3			207	73	18.5	2000		0.0185	0.00925
						4000		1.097	0.27
4						4000		0.101	0.025
0.12t/a						1.097t/a			
9			207	74	16	4000		0.072	0.018
10						4000		0.134	0.0335
						4000		0.27	0.0675
						4000		0.0306	0.00765
13						4000		0.0168	0.0042
14						4000		0.00832	0.00208
15						4000		1.092	0.273
16						4000		0.99	0.25
						4000		0.164	0.041
19						4000		0.499	0.12

20	[illegible]	4000	0.88	0.22
21	[illegible]	4000	0.219	0.055
24	[illegible]	4000	0.6	

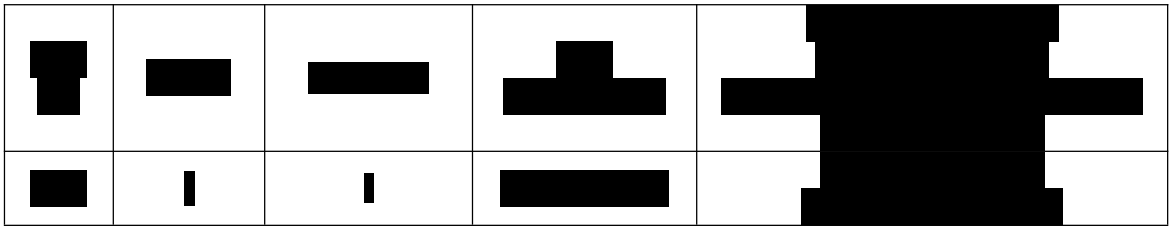
3.3.1-56 P



“3 / ”



[redacted]



5m^3/

30m^3/

◯

1.25m^3/h

23.5m^3/d

2

50m^3 50m^3/

10m^3/d 2500m^3/a

CODcr100mg/L

2

1

2.1.7-2

Qm=QeN/ N-1

Qm—

Qe—

N— 5-6

Qw=0.1%Q

Qw—

Qe=K t

Q (L/s) q (L/S·ha) φ 0.9

F (hm^2)

34500m^2



						pH				mg/L	
			m^3/d	pH	COD_{Cr}	SS		TN	Zn		LAS
W2-1			30	7-11	1500	300	/	/	/	/	500	40
W2-2			2.13	9-12	5000	1000	/	/	/	/	1000	60
W2-3			0.33									
W2-4/5		/	66	7-11	2200	250	/	/	/	/	500	40
W2-6			65									
W2-7			17.14									
W2-8			0.33	4-6	3000	600	/	100	40	100	/	/
W2-9/10			86	4-6	1500	400	/	50	20	20	/	/
W2-11			18.57									
W2-12			57.5									
W2-13			8									
W3-1/2			0.5	5-6	8000	5000	/	/	/	/	60	/
W3-3		UF1	0.02	6-7	1000	300	/	/	/	/	40	/
W3-4		UF2	0.02									
W3-5		UF2	0.02									
W3-6/7			206									
W3-8			8									
/			23.5	7-10	3000	1000	/	/	/	/	/	/
/			4.36	6~9	80	60	/	/	/	/	/	/
/			124.4	6-9	80	60	/	/	/	/	/	/

W6-1				10	7~9	200	100	/	/	/	/	10	/
/				40.768	6-9	80	60	/	/	/	/	10	/
/				2.56	6~9	80	60	/	/	/	/	/	/
/				140.4	6-9	400	200	45	/	/	/	/	/
/				2.3	6-9	500	400	/	/	/	/	40	/
t/a				913.848	6-9	152.96	35.79	0.936	1.62	0.65	0.65	18.069	1.354

1 900m^3/d 45m^3/h 20h

1

“ + + ” “ +

+ ”

2

“ + +pH ”

3

“ +pH + +A/O+ + +

”

GB8978-1996

3.3.2-9

					pH		mg/L
m^3/d	pH	COD_{Cr}	SS		TN	Zn	LAS

/	140.4	7~9	400	200	45	/	/	/	/	/	20
/	2.3	7~9	500	400	/	/	/	/	40	/	/
/	4.36	6~9	80	60	/	/	/	/	/	/	/

HJ2047-2015 HJ2006-2010

HJ2007-2010

HJ2009-2011

3.3.2-10

					pH			mg/L
	m^3/d	pH	COD_{Cr}	SS	TN	Zn		LAS
	26.46	7-11	3280.					

/				4.36	6~9	80	60	/	/	/	/	/	/
/				124.4	6~9	80	60	/	/	/	/	/	/
/				2.56	6-9	80	60	/	/	/	/	/	/
/				40.768	6~9	80	60	/	/	/	/	/	/
			t/a	228462 m^3/a	6-9	57.3	11.63	1.57	1.12	0.06	0.2	2.2	1.5	0.73
GB8978-1996			/	/	6-9	320	180	30	/	5.0	20	20	20	100

GB8978-1996

HJ1097-2020 G.1 HJ

2021 10 65-120dB(A) 3.3.3-1

3.3.3-1

		(/)	(dB A)			dB A
		85	70-80			55-65
		10	65-75			55-60
		4	75-90			50-55
		8	75~85			55-65
			75~90			50-55
			75~90			50-55
		8	75~85			55-65
		3	80~95			50-70
			100-120			60-70
			75~90			50-55
			75~90			50-55
		2	75~85			55-65
		1	80-85			65-70
		7	75-90			60-65
		/	75			60

65-80dB A

3.4.4.2

3.3.4-5

3.4.4.3

RO RO

3.3.4-5

1

180kg/ 180kg 3316

20kg



18t/a

4 ˘ ↕ ñ‴

θ a

0.3kg/kg 0.26.3t/a

6.079t/a Å È f Lö > ˆ 9 CtCX…} 4 5žäÄ /˝ ↕ ħ

5

102.501t/a 8~9kg

8kg 12813 3kg

38t/a 140.9t/a 102.501t/a

6 t/˝ ↕ ˘˘↕ ↕ h

1 #º4è ø$A‚Ñ2ÂLt h Lt Gÿ4Ö

“

Vi=100Q

Vi— m^3/d

Q— $741.76m^3/d$

C1 C2— kg/m^3

553mg/L 48.83mg/L

X— % 99%

Pi— t/m^3 $1t/m^3$

$11.8m^3$

3.15	HW13	900-014-13
0.3	HW49	900-041-49
0.6	HW49	900-041-49
0.2	HW08	900-209-08
9	HW06	900-404-06
9	HW06	900-404-06
189.94	HW49	900-041-49
140.9	HW49	900-041-49
0.3	HW49	900-041-49
26.3	HW49	900-041-49
1	HW49	900-041-49
76	HW49	900-041-49
1	HW08	900-249-08
3.9	HW49	900-041-49
0.07	HW13	900-014-13

12	18	HW06 900-404-06	0
13	191.24	HW49 900-041-49	0
14			

3.3.4-3

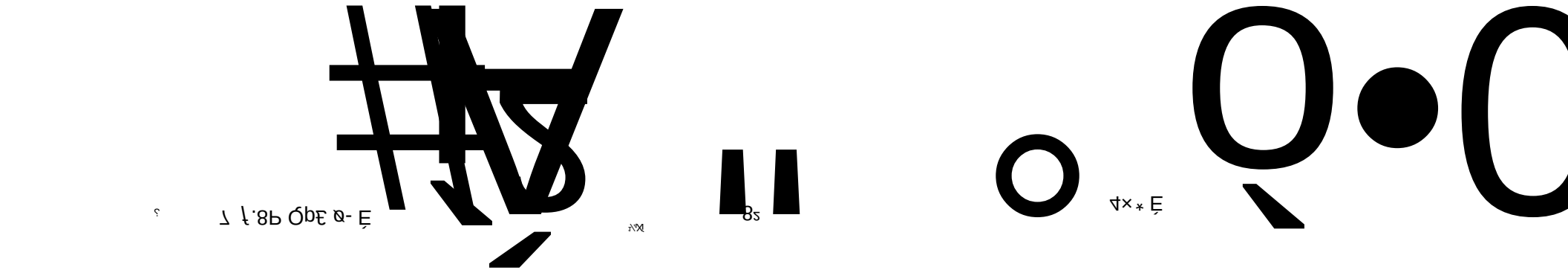
				t/a							
2		HW08	900-249-08	1		/			1	T I	
3		HW08	900-249-08	76					1	T I	
4		HW13	900-014-13	3.34					1	T	
7		HW17	336-064-17	19.2			Al	Al	1	T/C	
8		HW49	900-041-49	1.25					1	T/In	
9		HW49	900-041-49	0.6					1	T/In	
10		HW08	900-209-08	0.2					1	T I	
11		HW49	900-041-49	0.3			/	/		T/In	
12		HW06	900-404-06	18					1	T I R	
13		HW49	900-041-49	191.24					1	T/In	
14		HW49	900-041-49	140.9						T/In	
15		HW49	900-041-49	30.2					3	T/In	
16		HW49	900-041-49	1					3	T/In	
18		HW08	900-210-08	4.2					1	T I	
21		HW17	336-064-17	88.5					/	T/C	

HJ/T293-2006

3.5.2-1

1		0.10	a b c	a	b
2	-	0.10	a	b	

0.53



95%

2

3 120m^2/

4 VOCs VOCs

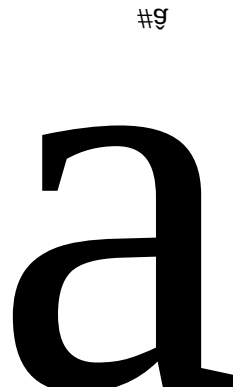
5 VOCs VOCs

VOCs VOCs

6 ≥95%

≥90% ≥85%

a



6	0.05	GB/T 24001	GB/T 24001
7	0.05		
8	0.05		
9	0.05		
10	0.05	“ ”	“ ”
11	0.1		
12	0.1		

I

15

3.5.2.4

2

III

I

II III

3

I

I

YI YI 85 I

YI 85

2

II

II

YII 85 II

YII II YII 85

3

3

III

YIII YIII=100 III

III YIII 100

I	

3 ISO14001

RTO SO_2 NOx TNV

SO_2 NOx

NOx SO_2 NOx

/

P1	H:20m Φ:0.5m	+		1		97%
			95%			
P2	H:20m Φ:0.6m	PVC				99%
			98%			
P3	H:18m Φ:0.5m			1	“	”
			98%			90%
	Φ =		+		“1#TNV	”
	H:18m		98%		98%	
P4	H:18m Φ:0.5m					
		SO_2	/			
		NOx				
P5	H:18m Φ:1.2m		+PVC	1		99%
			98%			

						98%
					/	
				SO_2		
				NOx		
			H:18m Φ:1.0m		+ 98%	1 “2#TNV ” 98%
					/	
				SO_2		
				NOx		
		P9	H:18m Φ:1.0m		/	
				SO_2		
				NOx		
		P10	H:18m Φ:1.0m		/	
				SO_2		
				NOx		
			H:18m Φ:1.2m		+ 98%	1 “3#TNV ” 98%
					/	
				SO_2		
				NOx		
	1	P12	H:18m Φ:1.0m		/	-
				SO_2		
				NOx		
	2	P13	H:18m Φ:1.0m		/	-
				SO_2		

NOx

		P21	H:20m Φ:0.6m	 NOx	/	
		P22	H:15m Φ:0.6m	 NOx	/	
		P23	H 15m Φ 0.9m			1 90%
		P24	H 15m Φ 0.9m	NH_3 H_2S	95%	90%

1

CO_2

CO_2

1

CO_2 18m×5.5m×4m

1 20m P1

4 CO_2 4

2 CO_2

2

HJ 1181 2021

1

GB16297-1996k 6

2

1

8.5m×3m×4m +PVC

18m 98%

90%

1 TNV 1

18m P3 98% “

TNV ” 98%

18m

98%

90%

P6

2

98% 1 90% RTO

P6

98%

95% 98% 1

1

1 RTO

98% 91.8% 1 27m

98% 1 “RTO ”

98% 1 18m

3 98% 1 “ +

” 90% 99% 18m

˘ ⌈ “ ” 98%

1 90%

1 18m

10cm 80% 95%

GB16297-1996

2

PVC 1 +

90% 1 18m

GB16297-1996

3

1 2

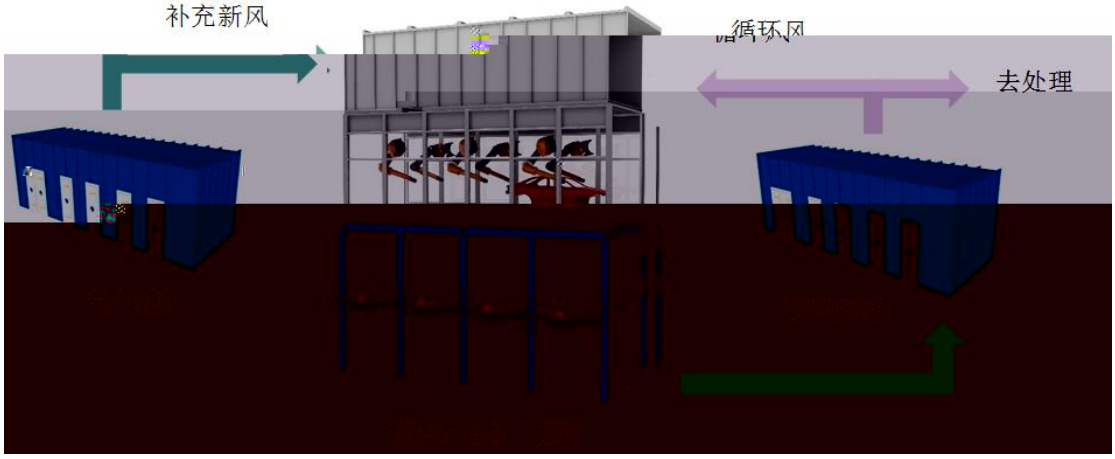
1 90%

GB16297-1996

4

1

6.1.2-2



1

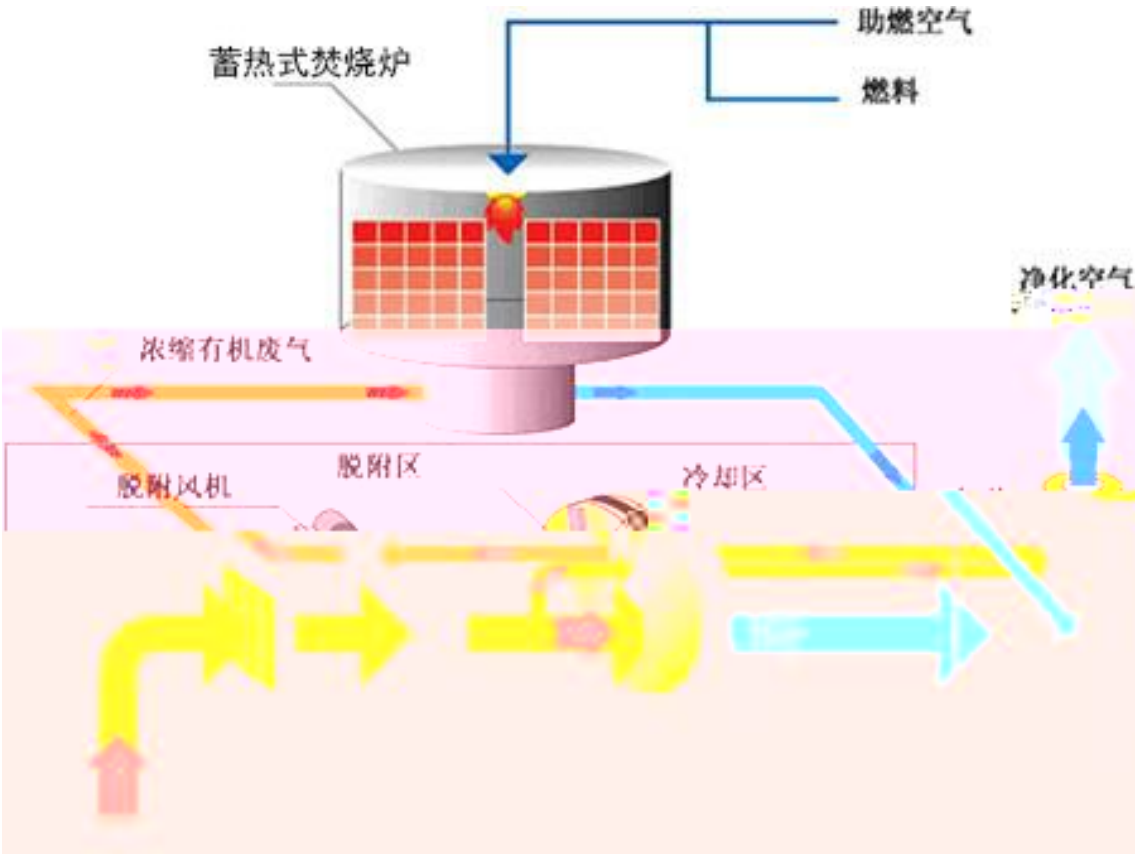
2

+

1

+1 RTO

1 27 6.1.2-3



VOCs VOCs

220 25%

HJ2026-2013

1:20

352800m^3/h

VOC 93% VOC

RTO 7% RTO

VOC

RTO

750 CO2 H2O

1 RTO

750-800 90% 120

98%

RTO

PLC RTO

HJ 971-2018 25

+

RTO VOCs 9.627mg/m^3 0.0392kg/h GB16297-1996

+RTO

TNV

CO2

98%

TNV

2016 VOCs

HJ 971-2018 25

6.1.2-1

6.1.2-1

	mg/m³	kg/h	mg/m³	kg/h
20			0.40~0.92	0.018~0.043
15		/	~0.25	1.39×10⁻³~5.62×10⁻³
18		1.8×10⁻⁵~1.9×10⁻⁵	0.64~1.15	0.0155~0.0285
20	1.70~8.07	1.46×10⁻⁶~9.96×10⁻³	17~27.5	0.0342~0.0566
0				
6	0.144~0.346	1.1		

90%

GB16297-1996

7

1 18m

90% 1 15m P23

15m P24

24 20m/s

		m	m	m^3/h		m/s
P1	1	20	0.5	10000		14.1
P2	1	20	0.6	12000		11.8
P3	1	18	0.7	18000		13
P4	1	18	0.5	8500		12.03
P5	1	20	1.2	55440		13.6
P6	1	20	1.0	45000		15.9
P7	1	27	2.2	181065	65	13.2
P8	1	18	0.5	11000	65	15.6
P9	1	18	0.24	2200	65	13.5
P10	1	18	0.16	1000	65	13.8
P11	1	18	0.5	12000	65	16
1/2 P12 P13	2	18	0.3	3480*2	60	13.7
P14	1	18	0.8	23760		13.1
1/2/3 P15	1	18	1.0	14850*3		15.8
1/2/3 P16	1	18	1.8	44550*3	50	15
P17	1	18	0.8	31680		17.5
P18	1	15	0.7	20000	50	14.4
P19	1	20	0.6	15000		14.7
P20	1	20	0.6	15000		14.7
P21	1	20	0.6	15000		14.7

P22	1	15	0.6	15000		14.7
P23	1	15	0.5	12600		17.8
P24	1	15	0.7	20000		14.4

1

1

2

2

1

2

3

RTO

RTO

1

RTO

31

2013 81

1

2

3 4

5 6

HJ 971-2018

1

2

3

3 ³ C y ú 0 = Ñ Ã : ×

6.2.2

1

1

W2-2 W2-3

W3-1

900m^3/d 20h

45m^3/h

3

W2-8 W2-9 W2-

10 2 W2-11 3 W2-12

PAC PAM

2

6.2.2-1

6.2.2-1



HJ1097-2020 F F.2

%

“ +

+pH ”

50-90

90%

“ +

+ ”

+ + COD30-70 60%

COD SS 60-80 COD

30%

“ +

pH COD / SS +

COD25-50

40-60

1

2

3

4

5

6

7

8

9

			COD SS

6.3.2-1

1.5m 1.0 10^{-7}cm/s

6.0m
$1.0x10^{-7}$cm/s
(HDPE)

1 HDPE
1.50mm 300mm
2

100mm
3
200mm

1.5m
1.0×10^{-7}cm/s

1.5m
$1.0x10^{-7}$cm/s

500mm
500mm

100%
2mm

			C30 P8 C15 200mm 10mm
			6.0m 1.0 10^{-7}cm/s 1 250mm 2 P8 3 1.0mm 1.5mm 4 1% 2%
			6.0m 1.0 10^{-7}cm/s
			1.5m 1.0 10^{-7}cm/s

1

GB610-2016 1

1

1

K^+	Na^+	Ca^{2+}	Mg^{2+}	CO_3^{2-}	HCO^{3-}	Cl^-	SO_4^{2-}	pH
				N			N	

2

1

2

HJ/T164

a

b

c

3

1

2

1

2

3

1

2

3

4

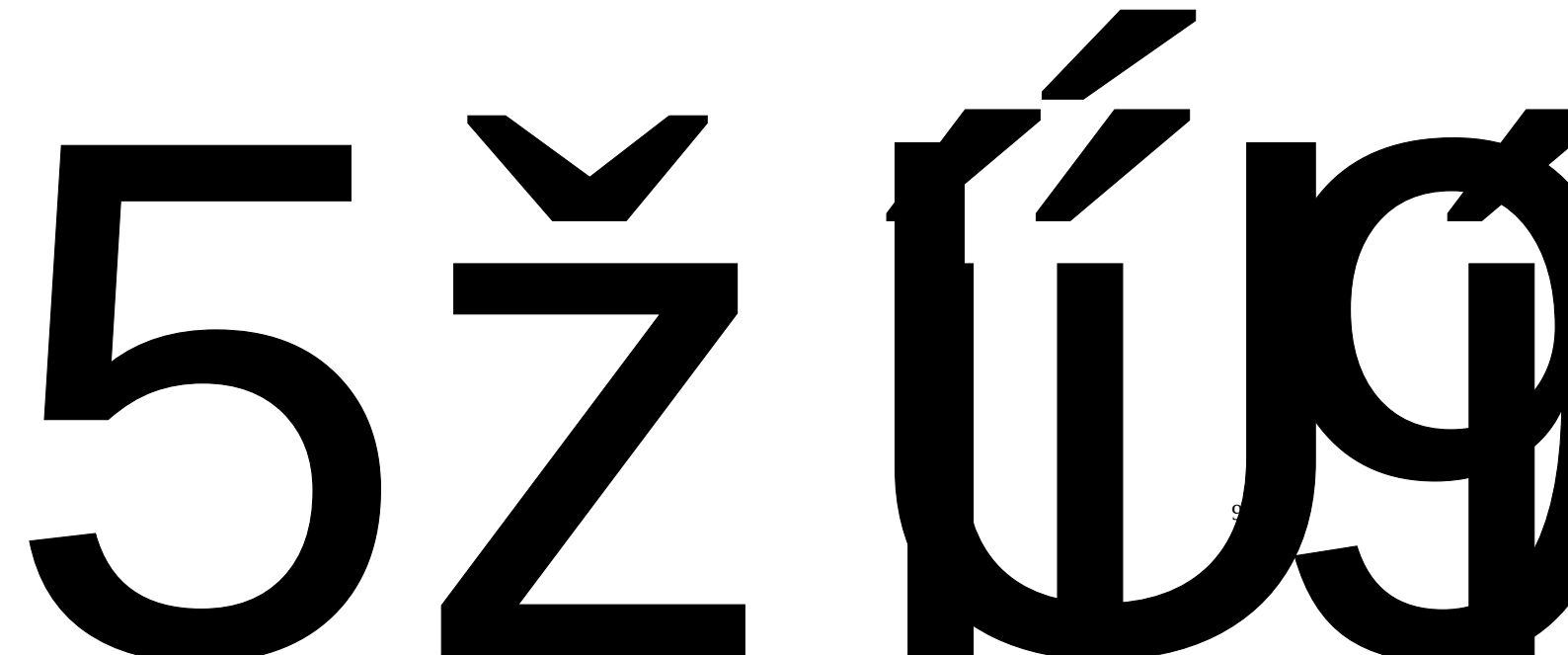
5

6

7

10~50dB

3.3.3-1



3.3.4-5

1

RO

2

3

1

GB18597-2001

440.87m^2

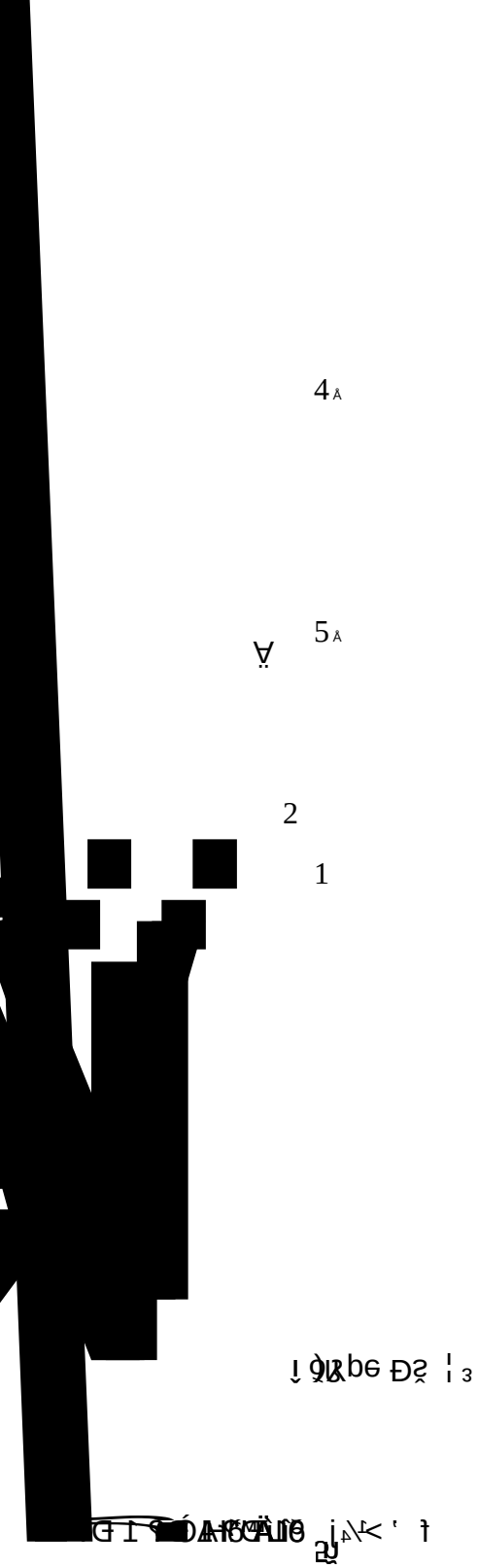
440.87m^2 575.93t/a

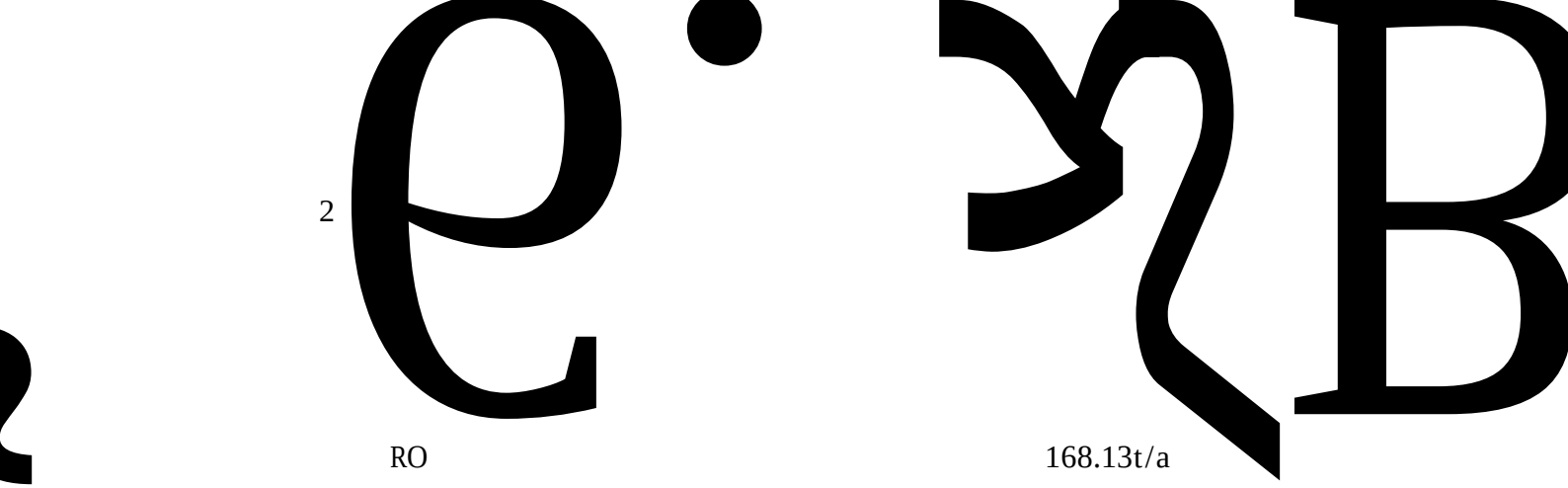
2.3t/d 30 69.1t

300t

7

8



2 

RO 168.13t/a

0.67t/d 7 4.7t

1

2

6.6.3-1

1		GB36600-2018 1 45 +pH	3 1	
2			3 1	2 GB36600-2018

2

359890 4440

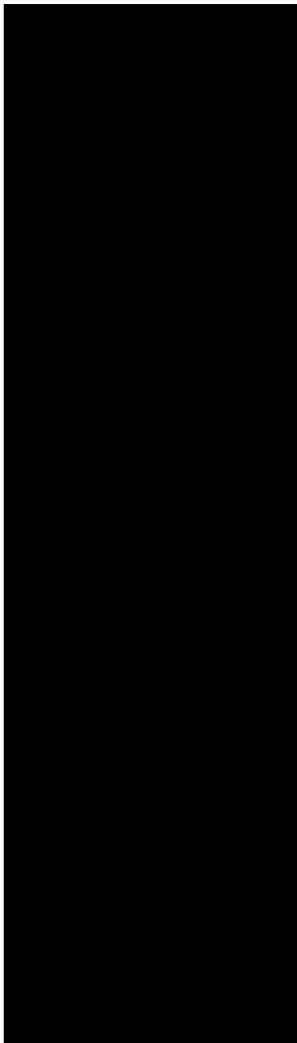
1.23% 8.1-1

k

( )

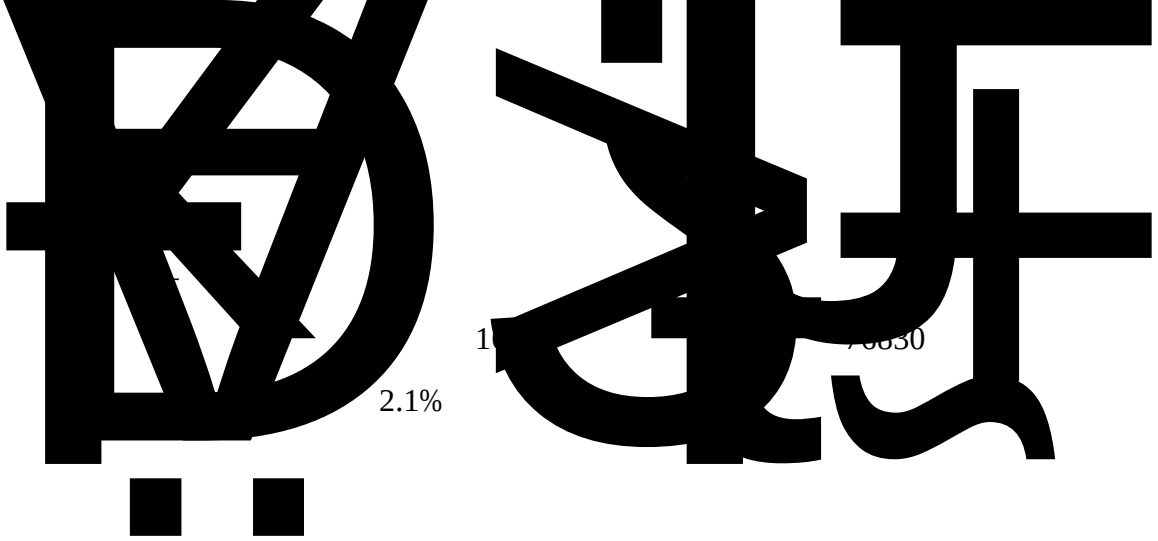
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			1 TNV 3# +1 18m P11	60
		1	1 18m P12	20
		2	1 18m P13	20
			1 +1 20m P14	20
		1/2/3	1 3 1 18m	50
		1/2/3	1 “ + ” +1 20m P16	15
			1 “ ” +1 18m P17	15
			1 + +1 15m P18	15
			1 20m P19	8
			1 20m P20	8
			1 20m P21	8
			1 20m P22	8
			+1 15m P23	15
			+1 15m P24	30
				120
			1 2 3	100
				1642

$H_z = E_0/E_R \times 100\%$



1 7.0830

2.1%

Fg= E_z/E_s ×100%

E_z—

E_S—

185

309125 0.6%

600

7 s $)ß

N© /n J) `

1

2

4

1

2

31

2013 81

1

2

3

4

5

6

1

2

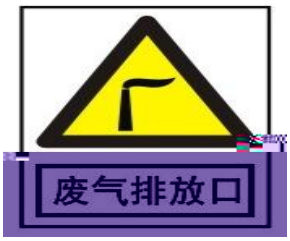
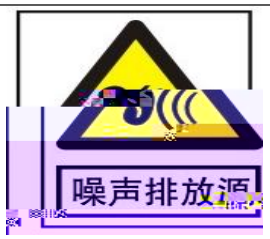
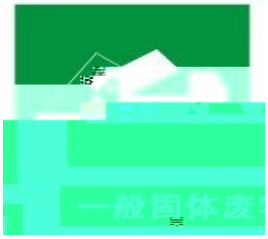
3

3

4

1

9.1-1

1			
2			
3			
4			
5			

1

2

3

4

5

13

14

15

2 3

1

2

3

4

5

6

1

2

3 “ ”

4

1

1

2

3 5%

4

10% 20% 30%

10% 15% 20%

5

9.5-1 9.5-2

	1	 SO_2 NOx	/	-		18m P12	
		 SO_2 NOx	/	-		18m P13	
			+PVC			18m P14	
	1		1 +PVC			18m P15	
	2		1 +PVC				
	3		1 +PVC				
	1					18m P16	
	2			+			
	3						
						18m P17	
				“ + ”		15m P18	
		  NOx	/			20m P19	
		  NOx				20m P20	
			/			20m	

						P21	
		NOx					
						20m	
			/				
		NOx				P22	
						15m	
						P23	
		NH_3			/	15m	
		H_2S				P24	

pH
COD
SS
TN
Zn

LAS

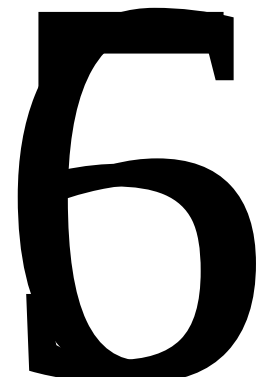
9.5-2

		m^3/h		/			mg/m^3	kg/h	t/a	mg/m^3	kg/h		
		10000	P1	H:20m Φ:0.5m		+ 95% 1 97%	0.055	0.00055	0.0011	120	5.9	GB16297-1996	
		12000	P2	H:20m Φ:0.6m		PVC 98% 99%	1.03	0.012	0.049	120	5.9	GB16297-1996	
		18000	P3	H:18m Φ:0.7m		98% 1 “ ” 90%	4.9	0.088	0.353	120	14.2	GB16297-1996	
	1#TNV	8500		H:18m Φ:0.5m		+ 98% “TNV ” 98%	3.9	0.033	0.133	120	14.2	GB16297-1996	
						/	5.94	0.0505	0.202	20	/		
					SO_2		8.24	0.07	0.28	200	/		
					NOx		19.4	0.165	0.66	50	/		

2020

55440	P5	H:18m Φ:1.2m			+PVC 98% 99%	0.6	0.033	0.13	120	5.01	GB16297-1996
45000	P6	H:18m Φ:1.0m	98%	1 ”	“ + 90%	0.83	0.0375	0.15	120	14.2	GB16297-1996

9600



		SO_2		/		NOx	0.29	0.047	0.187	240	3.47	
		NOx										
					+							
			98%	1	“TNV		15.2	0.17	0.669	120	14.2	
11000	H:18m Φ:0.5m		”			98%						GB16297-1996
							2.95	0.0325	0.13	30	/	
		SO_2		/			4.32	0.0475	0.19	200	/	
		NOx					10	0.11	0.44	50	/	

2

Φ:0.3m	SO_2	16.67	0.116	0.464	50	/
	NOx	38.97	0.27	1.085	50	/

							0.176	0.00352	0.00528	120	10	
20000	P18	H:15m Φ:0.7m		98%	1 “ ”	+						GB16297-1996
						90%	3.33	0.067	0.1	120	3.5	
						99%						
							1.87	0.028	0.014	120		
15000	P19	H:20m Φ:0.6m					26.7	0.4	0.20	120		GB16 - 19
			NOx				40.5	0.608	0.304	240		
							1.87	0.028	0.014	120		
15000	P20	H:20m Φ:0.6m					26.7	0.4	0.20	120		GB16 - 19
			NOx				40.5	0.608	0.304	240		
15000	P21	H:20m Φ:0.6m										

ЗАО «ЭКОПРОЕКТ»

“ ”

1

HJ820

2

1

1

2

1

2

GB14554 GB16297 HJ/T55

HJ971-2018

HJ1086-2020

			P1		
			P2		
			P3		
			P4		
			P5		
			P6		
			P7		
				SO_2	
				NOx	
			P8		
				SO_2	
				NOx	
			P9		
				SO_2	
				NOx	
			P10		
				SO_2	
				NOx	
			P11		
				SO_2	
				NOx	
		1	P12		
				SO_2	
				NOx	
		2	P13		
				SO_2	
				NOx	

P14

P15

1/2/3

P16

1/2/3

P17

P18

P19

NOx

P20

1

HJ/T 353 HJ/T 354 HJ/T 355 HJ/T 356

2

GB/T 16157 HJ/T 397 HJ 732

HJ/T 55

HJ 493 HJ 494 HJ 495 HJ/T 91

3

HJ819

HJ819

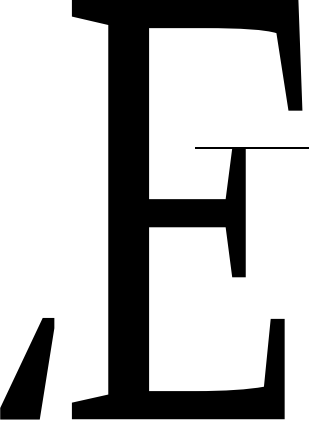
HJ819

1

2

3 4

5



76830 “ ”3

2022 7 22

6 [2015]34

7 “

5

GB36600-2018

GB36600-2018

10.4.1

10.4.1.1

1

2

CO_2 1

1 1 20m

1 20m

18m 98%

90%

1 TNV 1 18m

98% “ TNV ”

98%

1

$2m^3/h$

2

$540m^3/d$ 18h

$540m^3/h$

3

$240m^3/d$ 16h $15m^3/h$

4

5

1 $45m^3/h$ + +

+

GB8978-1996

GB12348-2008 4

GB12348-2008 3

D2 E2

2

“ ”

“ ”

“ ” 10.8-1

	“ ” 1 2m^3/h “ + + ”	GB8978-1996

			2 30m^3/h “ + + ” 3 15m^3/h “ + +pH ” 4 45m^3/h “ +pH + +A/O+ + + ” GB8978-1996 4		
			+1 +1 20m P1		GB16297-1996 2
			6 1		
			PVC 1 +1 20m P2		
			1 “ ” +1 18m P3		
			+ 1 TNV 1# +1 18m P4		
			+1 +1 18m P5		
			1 “ + ” +1 18m P6		
				1 “ ”	
				RTO P7	
			+ RTO +1 27m P7		

1 TNV
2# +1 18m P8
“
1 20m P9
SO_2 NOx
”
“
2020
1 20m
P10
SO_2 NOx
”

1 TNV
3# +1

P20

1 20m P21

1 20m P22

+1 15m

P23

NH_3 +1 15m GB14554-93

H_2S P24

GB12348-2008 3

/

RO

440.87m^2