ấ ֏ ° ´ ע ᴸ ẽ φ ï̋ ɔ ˜

ð Ո Ķ ş 3000 ᵕ /ث ũ ɔ Ĭ ᴺ ¡ 1500 ᵕ /ث ۷ Ĭ

ᴺ ¡ 1500 ᵕ /ث 3,5- ᵽ Ĭ ᴺ ﺝ ÿ ð

| ﺽ ō ķ Ŏ ş ᴋ ۷ ℍ À ų ﻓ

þ ﻍ ٹ ş 2023 ث 06

3000 / 1500 / 1500 / 3,5-

2302-370403-89-02-934652

18763223685

——— ——— ——— ———————

117 26 38.062 34 52 9.624

C2614

44 261

□

☑ □

□ □

□ □

/ /

2302-370403-89-02-934652

10982.96 80

% 7.3 6

□ m² 000

500

ɡ (m " ┬ ų ╓ ⁎

2017-2030

[2017]16

2017-2030 [2017]77

[2017]86

2020-2035

[2020]13

[2017]66

2020-2035

2020-2035 [2021]71

1

1

2

1 2020-2035

[2021]71

1-1

1-1

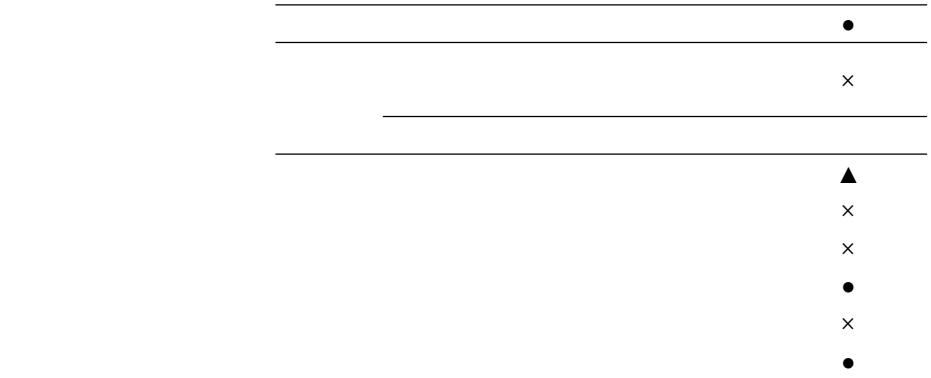
	“ ” “ ”	

3

1-2

1-2

			▲
			×



— ●— ▲— ×—

2021 16

1-2 “ ”

2021 16

	2021 16	
	380.92 8.35%	“ SD-04-A2-006 ” 3.7km
	” 80% 70%	
	2022 2022 SO_2 NO_2 GB3095-2012 $PM_{2.5}$ PM_{10}	
	PM2.5 44 / 80 100%	GB3838-2002
	92% 92%	
		“ ”

GDP

1

5.8%

2

21.5%

3

72.7%

ظه

	1 3 64.76%	
	1 “ ” 2 “ ” “ ” 3	

1

2

“

”

2025

70%

500

20 100 /

2500 /

“ ” “ ”

“

”

“ ”

“ ” “ ”

“ ”

10% 3.5

LDAR

LDAR

LDAR

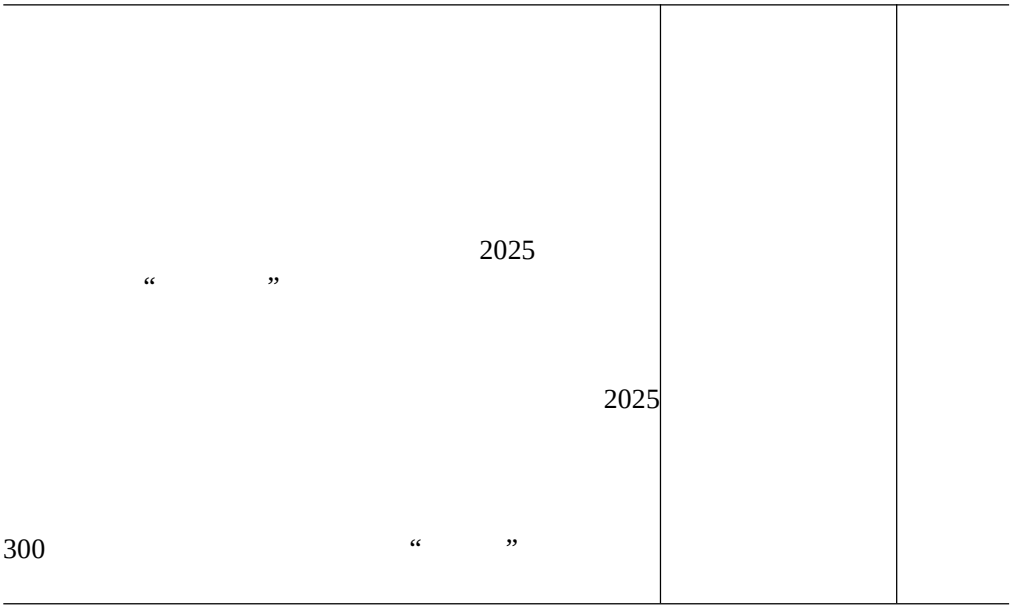
2023

021—2025

5

“

”



5 “ ” 2021—2023

1-5 “ ” 2021—2023

“ ”

	3 4 5		
4	1 2 3		
1			
2	(1) (2) (3)		
3			
4			
1			
2			
3			
		--	--
1			
2			
3			
4			

“ ”

(2018-2020)

6

1-6

“ ”

“ ”

“ ” 47

“ ”

( )

[2015]17

2015.04.
16

t g

31			

“ ”“ ”“ ”

8 “ ”

2023 34

“ ”

2023 34 “ ” 16

16

16

9 (2018 11 30)

1-8 2018 11 30

1			
2			

1

2018 8 13

60%

40% 15001 1971

u u u

300 7200

2

2-1

2-1

		1 5 3600m² 2 1	
		3 5- 1 2	
		6900 m²	
		3F 630 m²	
		1F 630 m²	
		2F 1500m²	
		43812m³	
		396 kW·h	
		350	
		686.2 m³	
		+SNCR+ + + + + 35m DA001	
		“ + ” 1 15m DA004	
		144m³/d “ — — — — — —MBR ”	

3

2-2

1		C_7H_8O	108.14		40	30.9	1.05		95-48-7	
2		C_7H_8O	108.14			10.9	1.03		84989-04-8	
3		$C_8H_{10}O$	122			20	1.02		526-75-0	

5

2-4

2-4

530

1	TW-101	1	Φ1600×H50780mm	1	CS/304		151/170 -80KPaG
2	TW-102	2	Φ1600×H50780mm	1	CS/304		151/170 -80KPaG
3	TW-103		Φ1600×H50780mm	1	CS/304		140/160 -80KPaG
4	F-104		FF200-8000L	2	CS/		100/120 10KPaG
5	V-101	1	Φ2600×L8000mm	1	316L		160 -60KPaG
6	V-102	1	Φ1100×L2700mm	1	304		0

9	V-105	99.5% 1	Φ1100×L2700mm	1	304	50 10KPaG
10	V-106	2	Φ2600×L8000mm	1	316L	160 -60KPaG
11	V-107	2	Φ1100×L2700mm	1	304	50 -90 KPaG
12	V-108	≤98% 2	Φ1100×L2700mm	1	304	50 10KPaG
13	V-109	99% 2	Φ1100×L2700mm	1	304	50 10KPaG
14	V-110	99.5% 2	Φ1100×L2700mm	1	304	50 10KPaG
15	V-111		Φ2600×L8000mm	1	316L	160 -60KPaG
16	V-112		Φ1100×L2700mm	1	304	50 -90 KPaG
17	V-113	≤98%	Φ1100×L2700mm	1	304	50 10KPaG
18	V-114	99%	Φ1100×L2700mm	1	304	50 10KPaG
19	V-115	99.5%	Φ1100×L2700mm	1	304	50 10KPaG
20	F-116		FF200-8000L	2	CS/	100/120 10KPaG
21	V-121/122	1 2	Φ1400×H3000mm	2	304	50 -95KPaG
22	V-123/124		Φ1400×H3000mm	1	304	50 -95KPaG

	23	E-101	1	80m^2		1	316L		160/50 32/42 0.5 MPaG 0.5MPaG
	24	E-102	1	205m^2		1	304		150/50 32/42 -0.08MPaG 0.5MPaG
	25	E-103	2	80m^2		1	316L		160/50 32/42 0.5 MPaG 0.5MPaG
	26	E-104	2	205m^2		1	304		150/50 32/42 -0.08MPaG 0.5MPaG
	27	E-105		80m^2		1	316L		160/50 32/42 0.5 MPaG 0.5MPaG
	28	E-106		205m^2		1	304		150/50 32/42 -0.08MPaG 0.5MPaG
	29	P-101		25m^3/h 50m		1	316L		160 -60/500KPaG
	30	P-102A/B		10m^3/h 50m		2	304		50 -80/500KPaG
	31	P-103A/B		10m^3/h 50m		2	304		50 10/500 KPaG

32	P-104	2	25m³/h 50m	1	316L		160 -60/500KPaG
33	P-105A/B	2	10m³/h 50m	2	304		50 -80/500KPaG
34	P-106A/B	2	10m³/h 50m	2	304		50 10/500 KPaG
35	P-107		25m³/h 50m	1	316L		160 -60/500KPaG
36	P-108A/B		10m³/h 50m	2	304		50 -80/500KPaG
37	P-109A/B		10m³/h 50m	2	304		50 10/500 KPaG
38	PA-101A/ B/C		425m³/h -90KPaG	3	304		50 -90/20KPaG
39	TW-5109	1	φ 1000 × H27000(T-T)mm	1	CS/304/316L	3 5-	180-205 -85KPaG
40	E-5124	1	Φ 2500 × 8922mm Φ 25 × 2.5 L=4500mm n=99U	1	CS/304/316L	3 5-	205-210 -80KPaG

41	E-5120	1	(BJS) Φ600 × ~5144mm Φ25 × 2.5 L=4000mm n=192		1	CS/304	3 5-	:205/70 32/42 -0.085MPaG 0.5MPaG
42	V-5111	1	φ 1100 × L3300(T-T)mm		1	304	3 5-	70 -90 KPaG
43	V-5112	1	φ 1100 × L3300(T-T)mm		1	304	3 5-	70 -90 KPaG
44	V-5113		φ 1100 × L3300(T-T)mm		1	304	3 5-	70 -90 KPaG
45	P-5120	1	30m³/h 38m		1	304	3 5-	70 10/380 KPaG
46	P-5121	1	5.8m³/h 49m		1	304	3 5-	70 10/490 KPaG
47	P-5122	1	3.6m³/h 28m		1	304	3 5-	70 10/300 KPaG
48	P-5123	V-5112	6m³/h 16m		1	304	3 5-	70 10/160 KPaG
49	P-5124		6m³/h 16m		1	304	3 5-	70 10/260 KPaG
50	TW-5110	2	φ 1000 × H27000(T-T)mm		1	CS/304/316L	3 5-	180-205 -85KPaG

51

P-5129

	TK-27	180 00	1	30	1.5KP
12	TK-2791	ID1800 H3000 8m³	1	304	50 1.5KPaG
13	TK-2792	ID2200 L5000 17m³	1	304	5

1 v

H

25	P-2791A/B	$5m^3/h$ 30m	2	304	50 300KPaG
26	P-2792	$10m^3/h$ 30m	1	304	50 300KPaG
	272				
1	M-7241	/	1	304	50 500KPaG
2	M-7256	/	1	304	50 500KPaG
	230				
1	R-2302	350 kcal/h	1		220/240 200/400KPaG
	240				
1	C-2410C	$39Nm^3/min$	1		0.6~0.8MPa
2	M-2425	$7.6Nm^3/min$			

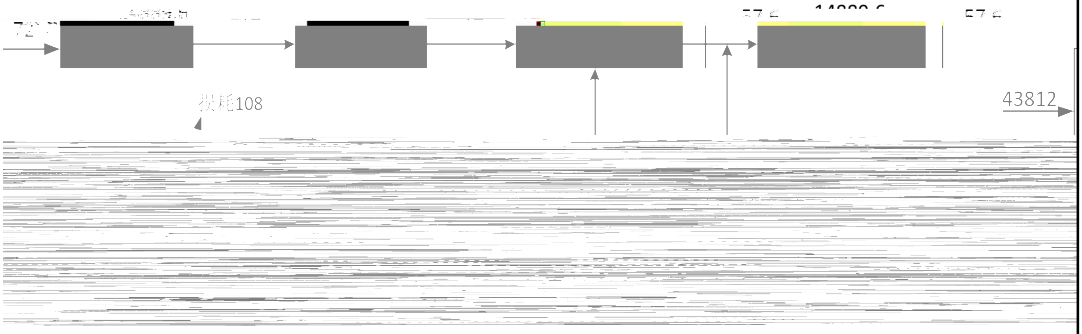
1

GB50015-2019 6

300d 40L / · d 72m^3/a

540m^3/a 0.8

432m^3/a COD_{Cr}800mg/L 200mg/L NH_3-N100mg/L



1 m^3/a

3

396 kWh/a

8

1

2

1

2

[redacted]

[redacted]

2





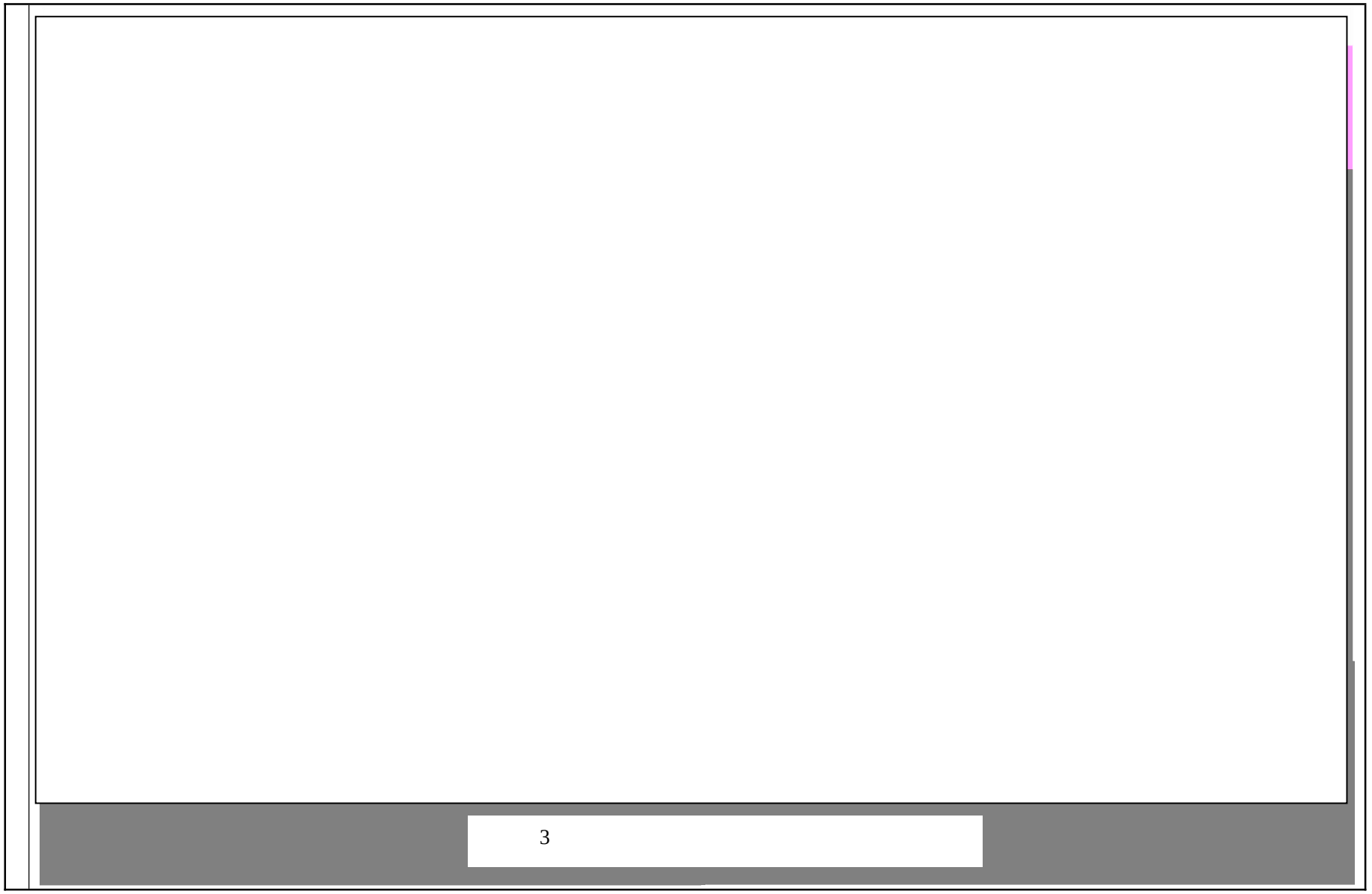
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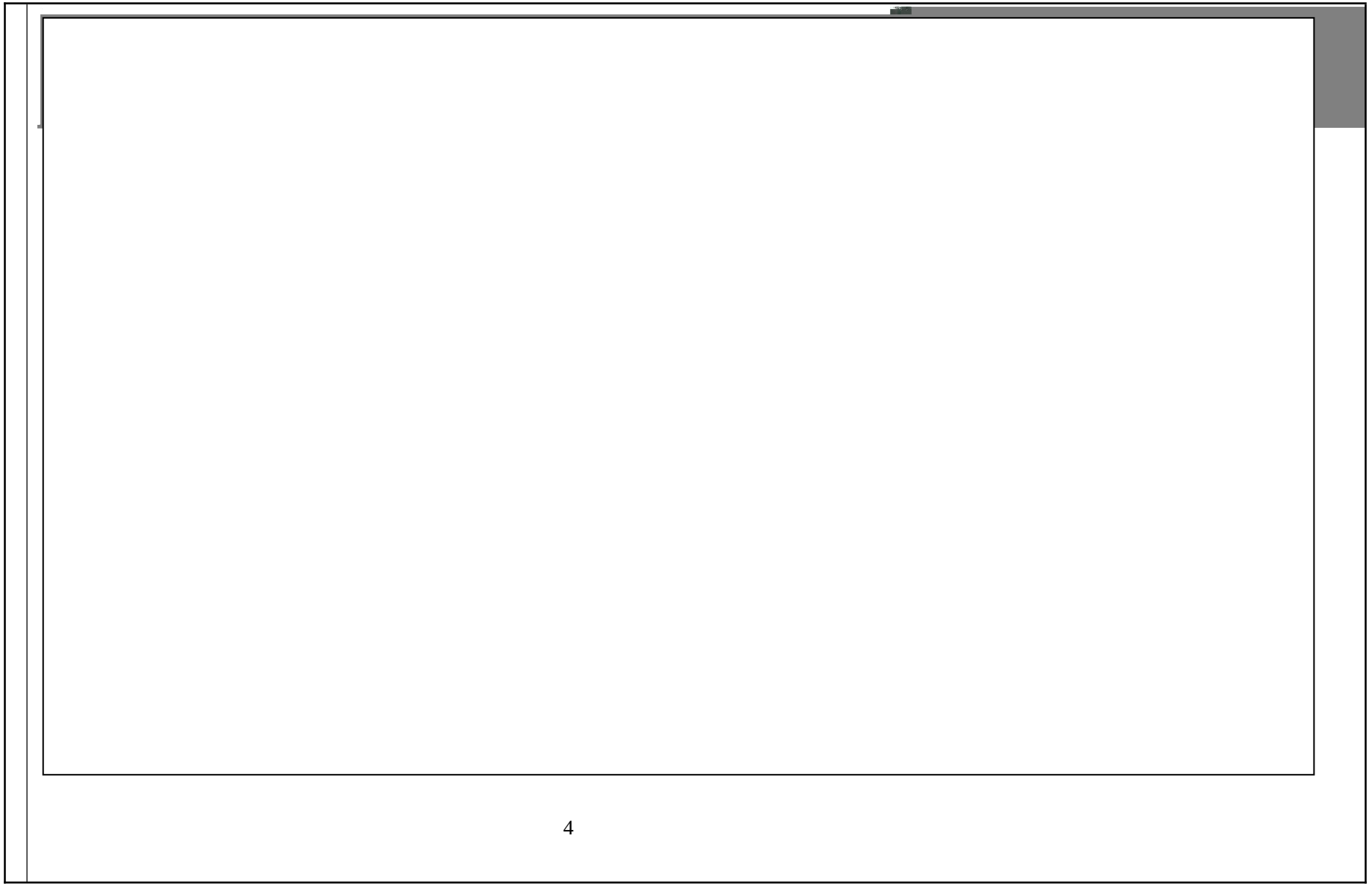
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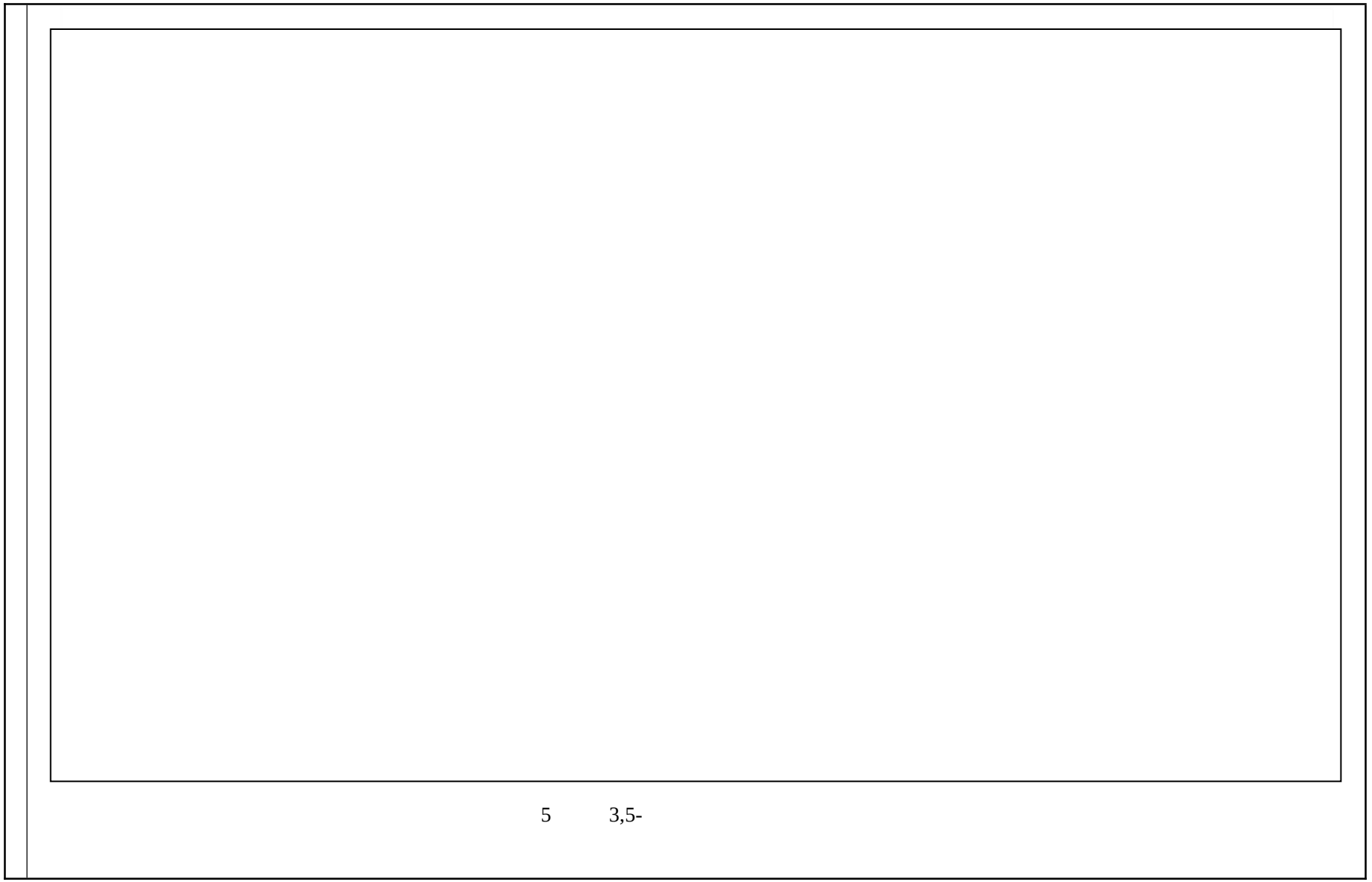
[redacted]

[redacted]

[redacted]


3





5 3,5-

2-5 7 /



2-6 7 /

	kg/	t/a	kg/ t/a
1			

2-7 3 5- 10 /

kg/ t/a kg/ t/a

1 3 5- 1#



1			/	6362.77	
2			/	2159.49	
3			/	6258.99	
4	2,4-		/	809.45	
5	3,5-		/	1540.46	
6			/	2737.32	

3

2-9

2-9

		(t/a)			
1		45600		25%	≤73%
2		4251.43		≥98%	≤1%
3		15.82		32%	/
4		4		/	/
1		10000		/	/
2		10000			

2-7

1			5×500m³	Φ8900×H8900mm			
2	98%		2×100 m³	Φ5200×H5200mm			
3	32%		2×100 m³	Φ5200×H5200mm			
4			1×30 m³	/			
1			2×500 m³	Φ8900×H8900mm			
1			2×100 m³ 2×500 m³	100m³ Φ5200×H5200mm Φ8900×H8900mm			
2			2×100 m³	Φ5200×H5200mm			
3			4×500 m³	Φ8900×H8900mm			
4	2,4		2×100 m³	Φ5200×H5200mm			
5	3,5		4×100 m³	Φ5200×H5200mm			
6			1×2.7 m³	Φ1100×L2500			
7			1×3 m³	Φ1100×L2700			

1			/	50kg/		/	

4

2-10

2-10

4 /

—MBR ”

mg/m^3	8.6	8.0	8.5
kg/h			

2022/05	26.9	19.2	0.161	59.7	44.4	0.3

6.53×10^{-5}

25.33mg/m³

0.25kg/h 8.07mg/m³

0.29kg/h 94.66mg/m³

0.741kg/h 1

VOCs	0.53	0.58	0.77	0.70
	0.45	0.59	0.73	0.62
mg/m^3	0.45	0.61	0.76	0.82

		ND	ND	ND
		10	10	11
		0.168	0.160	0.166

2023 015-3

2023.01.05

18.33mg/L 0.5 ˇ

6			34.8t/5a	
7			25	
8			3	
9			0.2	
10			0.05	
11			4	
12			0.1	
13			0.2	
14			2	
15			43.38	

(5)

91370403MA3MA00R8G001P

SO_2 NOx VOCs 2.36t/a 13.3t/a 1.03t/a 25.214t/a COD 43.57t/a 6.92t/a 6.1t/a

6

2-16

2-16

(t/a)

VOCs	0.721
	0.671
SO_2	1.704

3

1

2022

3-1 2022 mg/m^3

	SO_2	NO_2	PM_{10}	$PM_{2.5}$	CO	O_3
	0.015	0.029	0.078	0.043	0.9	0.15
	0.06	0.04	0.07	0.035	4	0.16
	/	/	0.21	0.31	/	/

2022 PM_{10} $PM_{2.5}$

GB3095-2012

3

2022 1000×1000

26 33 51.4

12

51.0 44. 1

50

3-4

		(m)		
	SO_2	P2 15	50 mg/m^3	/
	NO_X		100 mg/m^3	/
			10 mg/m^3	/
				/

3-5

1	VOC_S	2.0 mg/m^3	DB37/2801.6-2018 3
2	VOC_S	6 mg/m^3	GB37822-2019 A.1
3		0.08 mg/m^3	GB16297-1996 2

2

(GB/T31962-2015)A

3-6

1	pH	6.5 9.5	(GB/T31962-2015)A
2	COD	500 mg/L	
3	SS	400 mg/L	
4	BOD_5	350 mg/L	
5		45 mg/L	
6		20 mg/L	
7		8 mg/L	
8		70 mg/L	
9		1 mg/L	

3

GB12348-2008

3 65dB(A) 55dB(A)

GB12523-2011

3-7

	dB A	
3	65	55

3-8 dB(A)

	70	55

4

	SO_2 NOx SO_2 0.486t/a NOx 6.696t/a 0.67t/a

	6 1 1 (248) : 1-2 : 2

CO NO_x

2

1

2

3

5m

80~91dB A

4-1

		dB(A)			dB(A)
		86			86
		84			85
		85			80
		90			90
		80			80
		80			91
		90			85
		82			85
dB(A)	95		80-85		75

(GB/T16453-2008)

6

ɗ א

1

1



1

1 16.8kg/ 7 /

0.1kg/h 0.72t/a

2 16.8kg/ 7 /

0.1kg/h 0.72t/a

25.2kg/ 7 /

0.15kg/h 1.08t/a

3,5- 1 12kg/ 10 /

0.071kg/h 0.36t/a

3,5- 2 12kg/ 10 /

0.071kg/h 0.36t/a

2

SO_2

NO_X 1 350 24 300

4000 / -5

1 800 1 350

800

2022 800

4-3

4-3 800 2022

R=686.2

St=17.7( )

ηs= 0

K= 1 ((HJ991-2018) B B.3)

0.243t/a

4-4

4-4

	(mg/m^3)	(kg/h)	(t/a)	
		33481756.6m^3/a	4650m^3/h	
SO_2	7.26	0.034	0.243	“

E_S—— E_S 0 /

V_V——

W_V—— /

K_E——

K_S——

V_V 3

$$V_V = \frac{\pi}{4} D^2 H_{VO} \quad 3$$

V_V——

H_{VO}——

D——

a. K_E

$$K_E \quad 0.0018 \quad T_V \quad 0.0018 \quad 0.72 \quad T_{AX} \quad T_{AN} \quad 0.028 \quad I \quad 4$$

K_E——

ΔT_V——

T_{AX}——

T_{AN}——

α——

I—— / .

0.0018—— -1 0.72—— 0.028——

— . . /

b. H_{VO}

$$H_{VO} \quad H_S \quad H_L \quad H_{RO} \quad 5$$

H_{VO}——

H_S——

H_L——

H_{RO}——

c. K_S

$$K_s \quad \frac{1}{1 \quad 0.053 P_{VA} H_{VO}} \qquad 6$$

K_S——

P_{VA}—— /

8

H_{VO}——

0.053—— / . -1

d. W_V

$$W_V \quad \frac{M_V P_{VA}}{RT_{LA}} \qquad 7$$

W_V—— /

M_V—— / -

R—— 10.741 / - · ·

P_{VA}—— /

8

T_{LA}——

E. P_{VA}

$$\lg P_{VA} \quad A \quad \frac{B}{T_{LA} \quad C} \qquad 8$$

A B C——

T_{LA}——

P_{VA}——

B. E_W

$$E_W \quad \frac{5.614}{RT_{LA}} M_V P_{VA} Q K_N K_P K_B \qquad 9$$

E_W—— /

M_V—— / -

T_{LA}——

P_{VA} —— /

Q—— /

K_P—— K_P=0.75

K_P=1

K_N—— 36

K_N= 180+N /6N ≤ 36 K_N=1

K_B——

1

2 3,5- 2 2

VOCs

HJ853-2017 “ 5.2.3.1.2

”

2

2 1

1 2

3,5- 1

+SNCR+ + + + +

35m DA001

2 3,5-

4-8

4-8

1	1	0.37	0	-0.37	kg/h
2	2	0.51	0	-0.51	kg/h
3		72	4.86	-67.14	t/a
4		0	0.2	+0.2	kg/h
5		0	0.15	+0.15	kg/h
6	3,5-	0	0.143	+0.143	kg/h
7		0	0.142	+0.142	kg/h

3

4-9

/

	/	/	/		/	/	/
/	mg/	kg/	t/a		mg/	kg/	t/a
m^3 /h	m^3 h			/%	m^3 /h	m^3 h	/h
32.69	0.45	3.24					

+SNCR

D
A0
01

1376
3

0

(GB16297-1996) 2 VOCs

6 DB37/2801.6-2018

3 VOCs GB37822-2019

A.1

4

4-10

			m	m
DA004	117°26′40.707″	34°52′7.413″	15	

		t/a	kg/h	mg/m^3			
DA004	SO_2	0.243	0.034	7.26	1h	1 /a	
	NOx	12.839	1.783	383.46	1h	1 /a	
		0.335	0.047	10	1h	1 /a	

NOx

HJ953-2018

NOx 18.71kg/ m^3- DA004 NOx

1

2

3

4

2

1

72m^3/a 0.8 57.6m^3/a

COD SS COD 400mg/L 0.023t/a

30 mg/L 0.002t/a SS 250mg/L 0.014t/a

2

0.5%

2m^3/h 14400m^3/a /

2			18	14	129	2	70dB A /1m		
3			1	27	89	1	80dB A /1m		

2

(HJ2.4-2021) A

B

1

(Adiv) (Aatm) (Agr)

(Abar) (Amisc)

Lp(r)=Lp(ro)+Dc-(Adiv+Aatm+Agr+Abar+Amisc)

Lp(r)—— r A dB(A)

Lp(ro)—— ro A dB(A)

Dc—— Lw

0dB

Adiv—— A dB(A)

Abar—— dB(A)

Aatm—— dB(A)

Agr—— dB(A)

Amisc—— dB(A)

A LA(r) 8

A [LA(r)]

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

LA(r)—— r A dB(A)

Lpi(r)—— (r) i dB

ΔLi—— i A dB

3

4-14 dB(A)

2			HW08 900-249-08			3/5a			T,I		3/5a	

T

GB18599-2020

GB18597-2001

5

1

2

3

4

4-18

a)

b)

c)

4-17

4-18

4-17

Mb≥6.0m

$K \leq 1 \times 10^{-7}$cm/s

6

7

(1)

HJ169-2018 B

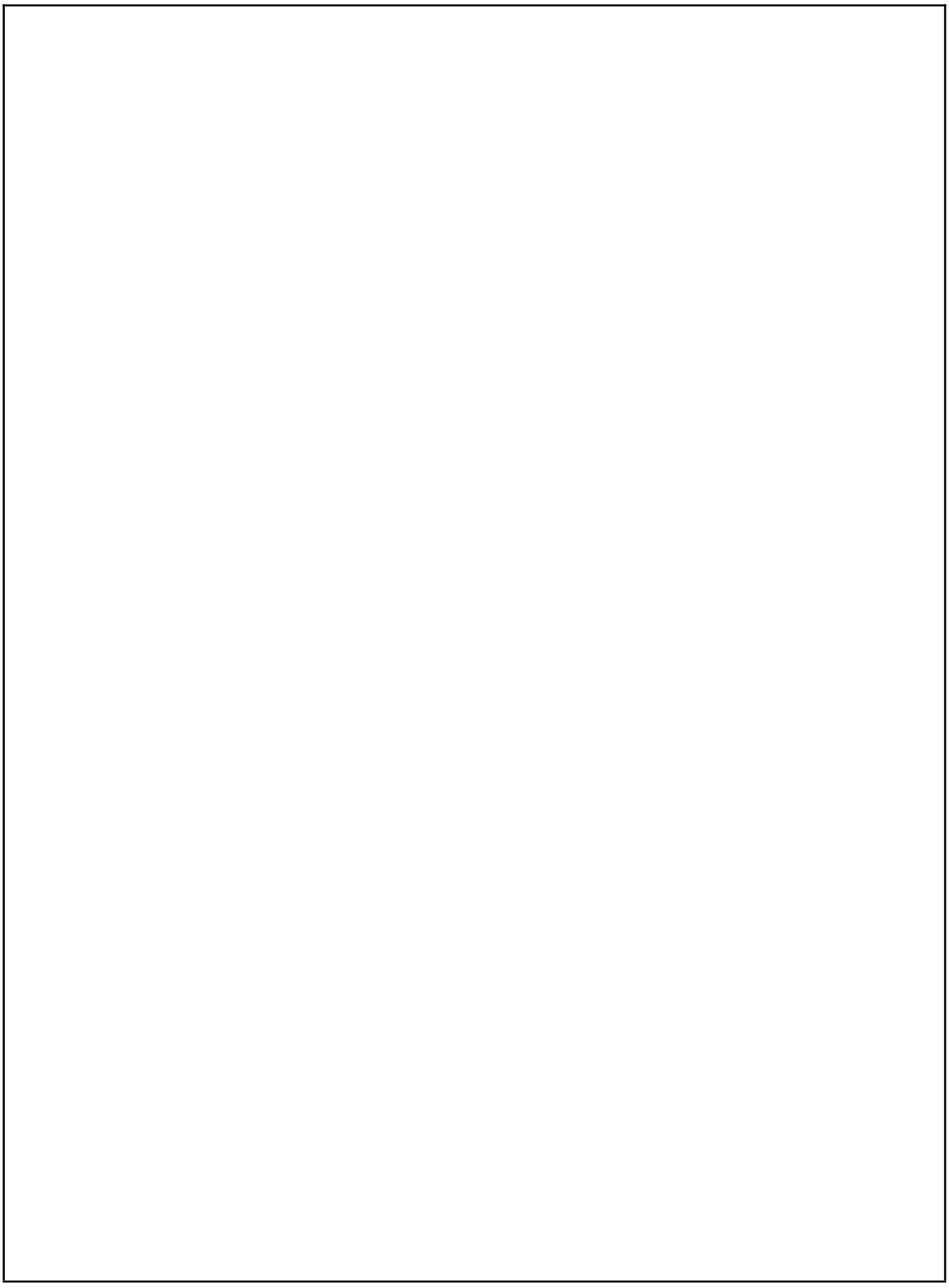
“ 1 ”

“ ”



(

	45 5m 2 [2017]84 2019 11 2019 12 20 “ ” “ 26” “45 ” “ 261” “ 2614 ” “ ” “ 109 ” “ 20 / 14 ” 3 “ ” 2017 4 HJ953-2018 HJ 820-2017 HJ819-2017 5



	t/a	4	/	/	/	/	/	/
	t/a	0.1	/	/	/	/	/	/
	t/a	0.2	/	/	/	/	/	/
	t/a	2	/	/	/	/	/	/
	t/a	60	/	/	/	/	/	/

= + + - = -

1

2

3

4

5

6

7

8

9

10

1

2

3

4

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6

7