

(生态影响类)

项目名称：                     码头建设项目                      
建设单位（盖章）：           莲榕建材南通有限责任公司            
编制日期：           二〇二一年六月          

中华人民共和国生态环境部制



	22			60m
	( [2021]4 )			2015~2035
	-			
	1	5	5	
	2	5 1	1 5	
	3			
	4			
5				
6				

	2018		
--	------	--	--

1

1

[2018]74

[2020]1  
5km

[2018]74

[2020]1

2

2020

2020

S

		(2015-2030 ) (2017-2035 )		
		( )		
		( )		
		( )		
		( )		

		( )		
		( ) ( ) ( ) 1 1 ( ) 1	( ) ( ) ( ) 1	
		( )	3	
		( )		
		( ) ( )		



	[2020]49 ”		
	-		
	1		
	2020 1		
		2018 74	
		23216.24	
		22.49%	
	8474.27		
	8.21%		
	14741.97		
		14.28%	2
			“
			”
			3
			1
	“	”	
			4



				5		
	1					
		2	2020			
		85.4	149.6	66.8	91.2	
		11.9	29.2	2.7		
	1					
		2				
				3		
				4		
	1					
		2020				
		524.15				

		2020 70%		
		90% 2 2020 456.87		
		390.67	3	
		1.		
		2.		
		1		
		2		
		3		
			2021 4	
		-		
		1.	1.	
		2018 42	2018 42	

		2017 55	2017
		55	
	2018~2020		2018~2020
	2018 63		2018 63
	2017 20		2017 20
	2016 35	2.	2016 35 2.
	3.		3.
	2018 42		
			2018 42
			4.
	4.		
		2020 94	
	2014 10		
		1	
	1		

秘

	<p>3.</p> <p>2018 32</p>	
	<p>1.</p> <p>2.</p> <p>3.</p> <p>2013 59</p> <p>136.9</p>	<p>1.</p> <p>2.</p> <p>3.</p>

		2095.8	
		1-4	
2			
3			
4			[2017]13
			[2017]13
5		[2017]13	2019
	45		
			2
		2019	45

6

[2017]11

[2017]11

[2017]11

7

8

( )

9

( 2020 41 ) 2020  
)

(

10

( 2020 41 )

( )				
-				
1.			/	
2.			/	
3.			/	
4.			/	
5.				
6.	CEP	CPA		



7.			/	
8.			/	
9.		20cm	/	
10.	e	4 1m <sup>3</sup> 1 1m <sup>3</sup>	120L 2 / e	

12 -				
1		(2015~2035 )  ( [2021]4 )		

2		
3	“ ”	

4	GB/T18920-2020	1
5		
6	50m 18599-2020)	(GB (GB18597-2001) (HJ2025-2012) ( [2019]327 )
7	)	( 2020 41

8

9

10

11

”

“

		120	32	47.706	32	35	39.198
		10	t/a	60	600	1	1 8T
					2-1		
				-			
					60	600	
				1	10	t/a	
					8T	1	
					5		
				1	20m <sup>3</sup>	1	20m <sup>3</sup>
				1	20m <sup>3</sup>		
				3	1m <sup>3</sup>		
					2		
				2-2			
				-			
		1			t/a		10

2		t	11
3			3
4		d	250
6		%	60
7			500
8			600
9			1

(1)

2-3

-

	5	5		0	/	10
	5	5		0	/	10
	10	10	/	0	/	20

600 / 10 / 10 / 170  
 25 / 4000

(2)

2-4

-

1.		8T	1	5.16t
2.		10T	1 台	
3.		3T、5T	2 台	
4.		4~5m	200m	
5.			2000m <sup>2</sup>	
6.			1	
7.			1	

(3)

600

600t

2-5

-

	( )	( )	( )
600	40	7.6	2.8





[2014]20

22

( )

3

9

5

2

2

242

50

( )

30

2019 4 22 ~4 24

2

(1)

	( ) ( )	
pH	( ) 2002 ) pH 3.1.6.2	0.01( )
	HJ/T399-2007	3.0mg/L
	GB/T 11901-1989	4.0mg/L
	HJ 535-2009	0.025mg/L
	GB/T 11893-1989	0.01mg/L
	HJ 636-2012	0.05mg/L

2

W1		500m	pH COD SS TN	TP
W2		1000m		

(2)

(GB3838-2002)

i j

$$S_{i,j} = C_{i,j} / C_{si}$$

pH

$$S_{pH,j} = \frac{7.0 - pH_j}{7.0 - pH_{sd}} \quad pH_j \leq 7.0$$

$$S_{pH,j} = \frac{pH_j - 7.0}{pH_{su} - 7.0} \quad pH_j > 7.0$$

$S_{i,j}$       i      j  
 $C_{i,j}$       i      j      mg/L  
 $C_{si}$       i      mg/L  
 $S_{pH,j}$       j      pH  
 $pH_j$       j      pH  
 $pH_{sd}$       pH  
 $pH_{su}$       pH

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

W1		7.17	27	48	0.94	0.23	0.94
		7.13	20	29	0.53	0.14	0.53
		7.14	24	39	0.81	0.21	0.81
	(%)	0	0	0	0	0	0
		0	0	0	0	0	0
W2		7.18	28	42	0.731	10.25	1.10
		7.15	19	29	0.616	0.16	0.69
		7.17	23	35	0.677	0.21	0.83
	(%)	0	0	0	0	0	0
		0	0	0	0	0	0
(mg/L)		6~9 ( )	30	60	1.5	0.3	1.5
pH COD GB3838-2002 SS SL63-94  (GB3096-2008) 2 (GB3096-2008) 4a (GB3096-2008) 1 3-4 - ( )							
2021.5.1		52.7	58	52.5	53.9	53	
		44.4	41.3	46	43	41.5	
2021.5.2		54.1	55.5	51.4	55.8	51.1	
		45.3	43.9	40.9	44	40.8	

[2021]4 )

(

-								
		270729	3609361		10	GB3095-2012	w	35
		270946	3609326		50		S	70
		270269	3609481		1000		W	370
		270020	3608928		5192		WS	1300
		271424	3607892		10		S	1500
		268396	3609464		300		W	2300
		271182	3610877		100		N	1600
		271196	3607007		80		S	2400
		273006	3608888		120		E	2500
		/	/	/	/		(GB3096-2008) 2	/
		/	/	/	/	(GB3096-2008) 4a	/	/
		/	/	/	/		N	5000

-

		0	0	0	0	0	0	0	III
		0	0	0	0	0	0	0	
<p>1 (1)</p> <p>1998</p> <p>SO<sub>2</sub> NO<sub>2</sub> NO<sub>x</sub> PM<sub>10</sub> PM<sub>2.5</sub> CO O<sub>3</sub> TSP (GB3095-2012)</p> <p>3-6</p> <p>- ( )</p>									
SO <sub>2</sub>	0.5	0.15	0.06	(GB3095-2012) 1					
NO <sub>2</sub>	0.2	0.08	0.04						
NO <sub>x</sub>	0.25	0.1	0.05						
PM <sub>10</sub>	/	0.15	0.07						
PM <sub>2.5</sub>	/	0.075	0.035						
CO	10	4	/						
O <sub>3</sub>	0.2	0.16(8 )	/						
TSP	/	0.3	0.2						
	2( )								
(2)									
<p>III IV (GB3838-2002) III IV SS (SL63-94) 3-7</p> <p>- ( )</p>									
pH( )	6~9		6~9		(GB3838-2002) III				
COD	≤20		≤30						
NH <sub>3</sub> N	≤1.0		≤1.5						
TP	≤0.2		≤0.3						
TN	≤1.0		≤1.5						
SS*	≤30		≤30						
	0.05		0.5						
BOD <sub>5</sub>	4		6						
(3)									

(GB/T15190-2014) 35m 5m  
 (GB3096-2008) 4a 50  
 (GB3096-2008) 4a 3-8  
 2 3-11

4a	≤70	≤55
2 类	≤60	≤50

(4)

GB15618-2018 1 3  
 3-9

	0.3	0.4	0.6	0.8
1	0.3	0.3	0.3	0.6
2	0.5	0.5	0.6	1.0
	1.3	1.8	2.4	3.4
3	30	30	25	20
	40	40	30	25
4	80	100	140	240
	70	90	120	170

2+

□

(GB252-2015)	10mg/ kg		(GB3847-2018)	
2	3-10			
-				
SO <sub>2</sub>		0.4	(DB32/4041-2021)	
NO <sub>x</sub>		0.12		
		0.5		
		4.0		
- ( )				
	( ) ( )	( ) ( )	+	( )
	SV 0.9	P≥37	7.5	0.40
	0.9≤SV 1.2		7.2	0.30
	1.2≤SV 5		7.2	0.20
	5≤SV 15		7.8	0.27
	15≤SV 20	P 3300	8.7	0.50
		P≥3300	9.8	0.50
	20≤SV 25		9.8	0.50
	20≤SV 30		11.0	0.50
- ( )				
	( ) ( )	( ) ( )	+	( )
	SV 0.9	P≥37	5.8	0.3
	0.9≤SV 1.2		5.8	0.14
	1.2≤SV 5		5.8	0.12
	5≤SV 15	P 2000	6.2	0.14
		2000≤P 3700	7.8	0.14
		P≥3700	7.8	0.27
	15≤SV 20	P 2000	7.0	0.34
		2000≤P 3300	8.7	0.50
		P≥3300	9.8	0.50

	20≤SV 25	P 2000	9.8	0.27
		P≥2000	9.8	0.50
	20≤SV 30	P 2000	11.0	0.27
		P≥2000	11.0	0.50
-				
	%	%	-	
a	1.2 40	1.2 40	1500	1
b	0.7 26	0.7 26	900	
1	1500m	1000m	0.25m <sup>-1</sup>	
	0.75m <sup>-1</sup>	2 2020 7 1	b	1200×10 <sup>-5</sup>
2				
				100%
	GB/T18920-2020	1	3-14	
-				
1	pH			
2			30	
3				
4	/NTU			10
5	(mg/L)			1000(2000)
6	(mg/L)			10
7	(mg/L)			8
8	(mg/L)			0.5
9	(mg/L)			-
10	(mg/L)			-
11	(mg/L)			2.0
12	mg/L		0.1	0.2
13	MPN/100mL CFU/100mL			
GB8978-1996 4				



GB/T31962-2015 1 B

GB18918-2002

A

3-15

-

pH	6 9	6 9
COD	≤500	≤50
SS	≤400	≤10
	≤45	≤5 8 *
	≤70	≤15
	≤8	≤0.5
	≤20	≤1

12

12

GB3552-2018

3-16

3-17

-

		2021 1 1	2018 7 1	3-25
		2021 1 1		

-

mg/L	15	

(GB3552-2018)

3

a

b

3-18

-

1	mg/L	50	
2	mg/L	150	
3	/L	2500	

-

1	mg/L	25	
2	mg/L	35	
3	/L	1000	

4	mg/L	125
5	pH	6~8.5
6	mg/L	<0.5

-

1	mg/L	25
2	mg/L	35
3	/L	1000
4	mg/L	125
5	pH	6~8.5
6	mg/L	<0.5
7	mg/L	20
8	mg/L	15
9	mg/L	1.0

> <  
2018 89

“ - - ”

3

(GB12348-2008) 2

(GB12348-2008) 4

(GB12348-2008) 1

3-19

-

	60	50	GB12348-2008 2
	70	55	GB12348-2008 4
	55	45	GB12348-2008 1

4

18599-2020)  
(GB18597-2001)

(GB  
(HJ2025-2012)  
( [2019]327 )

(GB 3552-2018)

1						
3-20			t/a			
			0.0427	0	--	0.0427
			534	534	0	0
		COD	0.0534	0.0534	0	0
		SS	0.267	0.267	0	0
			0.011	0.011	0	0
			353.88	353.88	0	0
		COD	0.035	0.035	0	0
		SS	0.708	0.708	0	0
			0.00708	0.00708	0	0
			30	30	30	0
		COD	0.012	0.012	0.009	0.0015
		SS	0.009	0.009	0.006	0.0003
			0.00075	0.00075	0.00075	0.00015
		TN	0.00105	0.00105	0.00105	0.00045
		TP	0.00012	0.00012	0.00012	0.000015
			0.78	0.78		0
			50/2a	50/2a		0
			0.03	0.03		0
			0.05	0.05		0
			0.51	0.51		0
			0.75	0.75		0

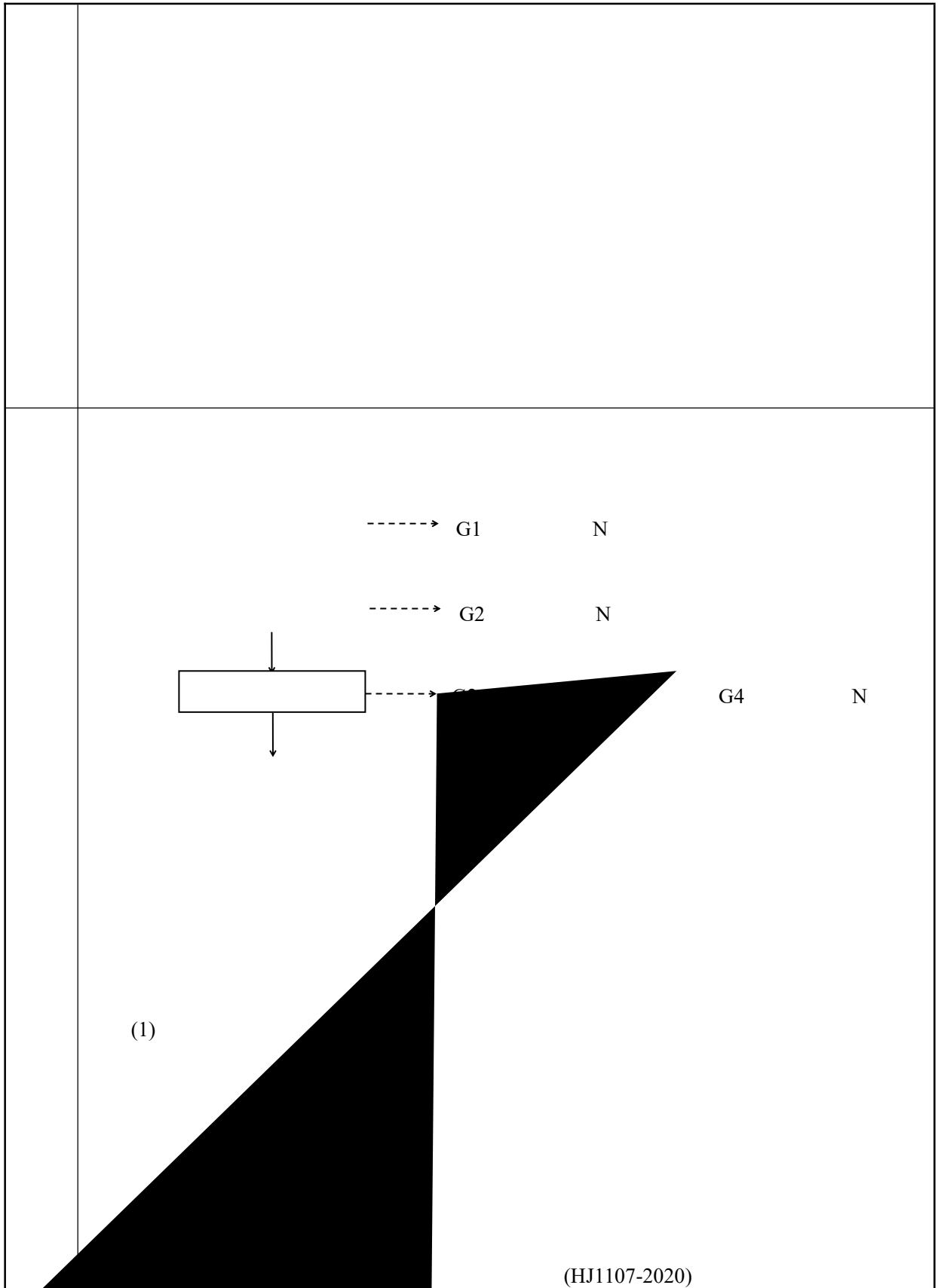
2

G5532

“553” “5532” “55” “101”

[2021]23

(HJ1107-2020)



(1)

(HJ1107-2020)

(1) G1 G2 G3 G4 G5  
 (2) W1 W2 W3 W4  
 (3)  
 (4) (S1 S2 )  
 (S3 S4 S5 )

10%  
 1  
 2  
 3

0.0427t/a

1  
 W5 W1 W2 W3 W4  
 (1)W1

$$V = q F T$$

V (m<sup>3</sup>)  
 F (m<sup>2</sup>) 4000m<sup>2</sup>  
 T ( ) 15  
 q (L/s m<sup>2</sup>) 0.60( 0.4~0.9 0.7)

$$q = \frac{2007.34(1+0.7521g P)}{(t+17.9)^{0.71}}$$

P— 2 1-3 3-5  
 10-20

q 206.08L/S.hm<sup>2</sup>  
 Q=49.46L/s 15min 44.5m<sup>3</sup>/ 12 /  
 534m<sup>3</sup>/a COD

SS 100mg/L 500mg/L 10mg/L COD SS 100%  
 0.0534t/a 0.267t/a 0.00534t/a  
 SS 80%

(2)W2

1 (JTS166-2020)  
 600 800L/ 1 600L/ 7.2t/a  
 10% 6.48t/a

(GB50015-2019)

	(JTS105-1-2011)	1000m <sup>2</sup>	5L/m <sup>2</sup>	1	1
	12			10%	
	59.4t/a		60t/a		
		353.88t/a			COD
SS		100mg/L	2000mg/L	20mg/L	COD SS
0.035t/a	0.708t/a	0.00708t/a			100%
	SS	80%			
(3)					
	6%	8%		10 t/a	
				2000m <sup>3</sup> /a	
(4)					
3		80d		1.4L/ m <sup>2</sup>	
	2000m <sup>2</sup>		224t/a		
(5)					
		JTS166-2020		1.0L/m <sup>2</sup>	
	240m <sup>2</sup>	1		60t/a	
(6)W3					
					600
	)	500~1000	(JTS149-2018)(2019	)(	600
		0.14t/d		0.14-0.27t/d	23t/a
	(	2020 41			4-1
		4-1			
	200			≥0.5m <sup>3</sup>	
					200
	≥200			≥2m <sup>3</sup>	1m <sup>3</sup>
(7)W4					
			(JTS149-2018)(2019	)(	
	)				150L/d
	0.8	120L/d	600		2
	170		24t/a	32.64t/a	
	(	2020 41			4-2
		4-2			
		P			

	100	100≤P 200	P≥200	
	≥2m <sup>3</sup>	≥6m <sup>3</sup>	≥10m <sup>3</sup>	
1	( )			100
2.	50			2 1m <sup>3</sup>
3.				
4.				
<hr/>				
(7)W5	3	250		GB50015-2019
	50L/d			50
/	3	250	37.5m <sup>3</sup> /a	0.8
				30m <sup>3</sup> /a
		COD 400mg/L	SS 300mg/L	25mg/L TN 35mg/L TP 4mg/L
				COD 0.012t/a SS 0.009t/a NH <sub>3</sub> -N 0.00075t/a TN 0.00105t/a
TP	0.00012t/a			





			20	0.00708		20	0.00708	
	30	COD	400	0.012		300	0.009	
		SS	300	0.009		200	0.006	
			25	0.00075		25	0.00075	
		TN	35	0.00105		35	0.00105	
		TP	4	0.00012		4	0.00012	
<p>2 (1)</p> <p>(2)</p> <p>“ ” (HJ1107-2020) B.3</p> <p>pH6~9 5</p> <p>NTU 1.2~2.0 BOD53.3~4.2</p> <p>GB/T18920-2020 GB/T18920-2020</p> <p>3 ( ) 100%</p>								
1		COD NH3-N TP TN			TW001		DW00 1	

		SS								
--	--	----	--	--	--	--	--	--	--	--

(  
t/a)

4		TP	4	0.00000048	0.00012
5		TN	35	0.0000042	0.00105
		COD			0.009
		SS			0.006
		NH <sub>3</sub> -N			0.00075
		TP			0.00012
		TN			0.00105
4 (1)					
(HJ1107-2020)					
4-8					
		pH TN	COD SS	NH <sub>3</sub> -N BOD <sub>5</sub>	TP /
(2)					
			COD TN	SS SS	2 4
			pH TN	COD SS	NH <sub>3</sub> -N BOD <sub>5</sub>
1					
4-10					
		( )	(dB)		
		1	80~85		
		2	80~85		
		--	85		
		--	95		
		1	85~90		
		--	85~95		
2					



(GB12348-2008)4  
(GB12348-2008)1

4  
(1)

(HJ1107-2020)

		A	1 /	1

(2)

		Leq(A)	2 ×1 /	

1

) (S3 S4 S1 S5 S2 S6 )

(1)

S1 S2  
( 2019 11 ) S1  
S2

( 2020 41 ) 4-14

( )

1~3 4~6 7~9 10~12 13~15 ≥15

P( )

P 50

1

1

50  
1

4  
120L



1.	/	/	550-003-99	0.51
2.	2021	T,I	HW08 900-210-08	0.03
3.	/	/	550-003-99	0.78
4.	2021	T,I	HW08 900-214-08	

2

HJ2025-2012

3

	t/a		
	10000	6	HW02 HW03 HW04 HW06 HW08 HW09 / / HW11 HW12 HW49
	20000	1	HW02 HW08 HW06 / / HW09 HW11 HW12 HW49 309-001-49 900-042-49 900-044-49 900-045-49 900-999-49
	13000		HW02 HW03 HW04 HW05 HW06 HW08 / / HW09 HW11 HW12 HW13 HW16 HW17 336-050-17 336-051-17 336-052-17 336-053-17 336-054-17 336-055-17 336-056-17 336-057-17 336-058-17 336-059-17 336-060-17 336-061-17 336-062-17 336-063-17 336-064-17 336-066-17 HW35 HW39 HW40 HW45 HW49,900-039-49 900-041-49 900-042-49



			900-044-49 900-047-49 900-999-49 HW50,263-013-50 275-009-50 276-006-50 261-151-50
	25000	318	HW03 HW04 HW06 HW05 HW08 / / HW09 HW49 900-039-49 900-041-49 900-042-49 900-046-49 900-047-49 900-999-49
(4) (			
[2019]327 )			
1			(900-210-08) (900-214-08)
2			
3			
4			) (
5			
6			
7			( [2019]14) ) ( ) (GB15562.2-1)95) (

		[2019]327 1“ ) ” )	
8			
9			
10		( 2019]327 2“ ) ” )	
11		(GB34330-2011)	(GB34330-2017)
12			

→ →

(JTS105-1-2011)

$$Q = \frac{R}{R_0} \cdot T \cdot W_0$$

Q		(t/h)			
R	W0			89.2%	
R0				80.2%	
T		(m3/h)			
50		90 %	97 %	95 %	
1000 m3/h	1.8 /		3 h/		185
	W0	(t/m3)	38.0×10-3t/m <sup>3</sup>		
				2.172kg/s	

1997 4 7-9  
100~180mg/L 120m [J].  
200~260mg/L

3 8

1

100%

( )

2

( )

(1)

0.1mg/L

0.1~10mg/L,

	<p>(2)</p> <p style="text-align: right;">0.1~15mg/L</p> <p style="text-align: center;">( )</p> <p>)</p> <p>(3)</p> <p style="text-align: right;">( )</p> <p style="text-align: right;">( )</p> <p style="text-align: center;">2.0~15mg/L</p> <p>(4)</p> <p>1</p> <p>(1)</p> <p style="text-align: right;">(HJT169-2018) B</p> <p style="text-align: right;">(JT/T1143-2017) C</p> <p>600</p> <p style="text-align: center;">54.72m<sup>3</sup></p> <p style="text-align: right;">800kg/m<sup>3</sup></p> <p style="text-align: center;">43.776t</p>
--	---

		t	
1		1	
2		43.776	
3		0.07	

(2)

(3)

-

1				
2				

2

4-19

Q  
(Q)

$$Q = \frac{q_1}{Q_1} + \frac{q_2}{Q_2} + \dots + \frac{q_n}{Q_n}$$

q1 q2 qn  
Q1 Q2 Qn

t

t

Q<1

I

Q≥1

Q

(1)1≤Q<10

(2)10≤Q<100

(3)100≤Q

(Q) 4-21

-

	qn/t	Qn/t	Q
1	1	2500	0.0004
2	43.776	2500	0.0175
3	0.07	2500	0.00003
			0.01793

Q

I

I

(HJ169-2018)

IV

III

II

I

I

3

(HJ169-2018)

4

500m

5

3.2mg/L

10mg/L

0.1mg/L

1.0mg/L

3.2mg/L

48

3mg/L

3.1-11.9mg/L

3.2mg/L

2.3

22.7%

18mg/L

84.4%

96.6%

6

a.

b.

c.

d.

e.

(

)

f.

g

h

-

	22
	120    32    47.706    32    35    39.198
( )	

a.

b.

c.

d.

e.

( )

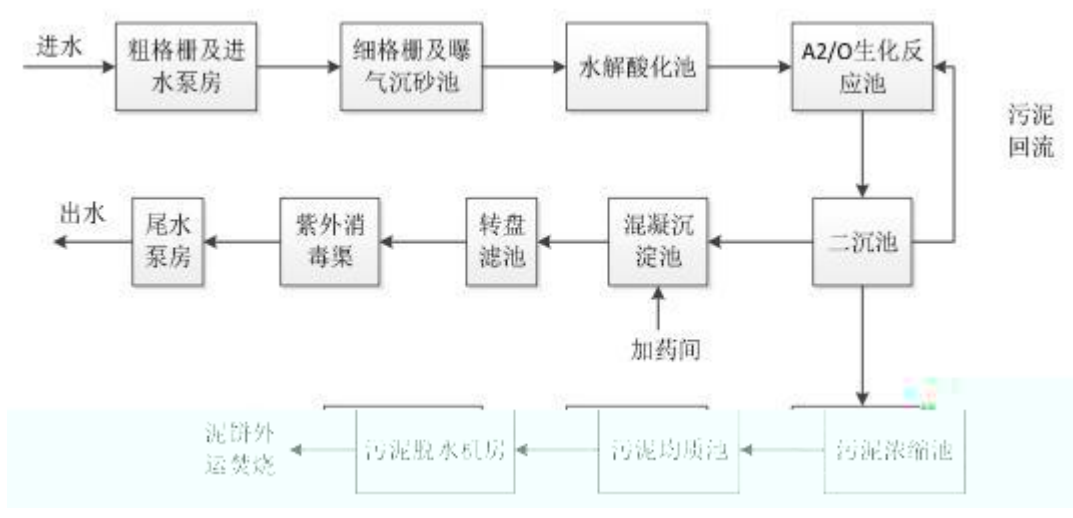
f.

(	I	22
---	---	----

	<p>)</p> <hr/> <p>7</p> <p>(1)</p> <p style="text-align: right;">1</p> <p>(2)</p> <p style="padding-left: 40px;">pH COD SS</p> <p style="padding-left: 100px;">500 1 3</p>
	<p style="text-align: right;">10%</p> <p style="padding-left: 40px;">100%</p> <p>3</p> <p style="padding-left: 100px;">2</p> <p>4</p> <p style="padding-left: 40px;">4</p> <p>4</p> <p>) (S3 S4 S1 S5 S2 S6 )</p> <p>5</p> <p style="padding-left: 100px;">100%</p>



	<p>1</p> <p>2</p> <p>20cm</p> <p>(1)</p> <p>)</p> <p>1.4 t/d</p> <p>0.12t/d</p> <p>2.5 t/d</p> <p>A2/O+</p> <p>(GB18918-2002) 1 A</p>



4

) (S3 S4 S5 S6 S1 S2 )

1

(GB 18599-2020)

GB15562.2-1995

I

II

III

○

5m<sup>2</sup>

5-1

-

1			HW08	900-210-08		5m <sup>2</sup>		2	90
2			HW08	900-214-08					

-

	1	
	2	
	3	
	4	
	5	





/

2

5

( )

(JT/T451-2017)

-

1		3	1	
2		1m <sup>3</sup> /h	1	
3	a	/	1	
4		/	0.3t	
5		/	1m <sup>3</sup>	
a	6000cSt			

6

1

2

3

4

5

7

1

2

3

4

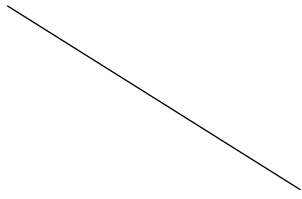
3 8

5

8

-

-			
			( )
			1.5
			1.5
			1.5
			2
			2
			2
			2
			2
			2
			1
			0.5
			0.5
			2
			--
			0.5
			17





				(GB12348-2008) 1
			1. 2.	
			/	/
			1. 2.	
			1.	

