

..

120

H

30

30000

SUV

MPV

2009

2013

30

EG

15

EG/EB

[2010]079

[2013]53

3.5817

6

ET

51

/

253

2004 58

%			
% %			
% % %			
1		[2014]	9
2		77	
3		[2002]	72
4		[2000]	32
5		[1996]	77
6		[2005]	31
7		[2008]	87
8	1998	253	
9			2
10			2011
11		1	
12		2004	58
13		52	
14		[2004]	67
15		1999	17
16		[2003]	6
17		[2012]	98

%'

1.3-1

1.3-1

1				
2				
3				
4				
5				
6				
7				
8				
9				

1.3.1

1.3.2

2009

”

”

2011

1.3.3

1.3.4
NMHC

SO₂ NO₂

1.3.5

1.3.6

1.3.7

1.3.8

1.3.9

% (

1.4.1

- a.
- b.
- c.
- d.

1.4.2

%)

%)" %

- HJ2.2-2008

SO₂ NO₂

P_i P_i

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

P_i — i %

C_i — i mg/m³

C_{oi} — i mg/m³

1.3-1~ 1.3-2

1.3-1

	NO ₂	SO ₂	
kg/h)	0.129	0.0119	0.0161
m	15		
m	0.6		
k	653		
(Nm ³ /h)	10000		

1 NO₂/NO_x=0.815

1.3-2

	NO ₂	SO ₂	PM ₁₀
C _i (mg/m ³)	0.0059	0.000545	0.000737
C _{oi} (mg/m ³)	0.24	0.5	0.45 ¹
P _i (%)	2.46	0.11	0.16

1 PM10

1.3-2

Pmax 2.46% Pmax<10%

%) " &

29.5m³/d

161.3m³/d

HJ/T2.3-93

%) " " "

3

4.2.2.3

%) *

%) * "%

5km

2

% * " &

% * " ' ' .

1m

% +

% + " %

PM₁₀ SO₂ NO₂

PM₁₀ SO₂ NO_x

% + " &

pH COD_{Cr} BOD₅ SS

% + " ' ' .

A

% + " (

% ,

1-8-1

1-8-1

1			1150m	
2			1500m	
3			500m	

*

% , " &

% , " & " %

% , " & &

DB12/356 2008

% , " & "

GB12348-2008

3

% , " & (

% , " &)

% -

GB3095-1996

3

GB3096 2008 3

% - "%

GB3095-1996

GB3095-2012

GB3096 2008 3

1.9-1

1.9-2

				(mg/m ³)	
f W	SO ₂	1		0.06	GB3095-2012
				0.15	
			0.5		
	PM ₁₀		0.07		
			0.15		
	NO ₂	1		0.04	GB3095-2012
				0.08	
			0.2		
	PM _{2.5}		0.035		
			0.075		

1.9-3

dB(A)

3		65	55

% - " &

GB16297-1996

DB12/356-2008

GB12348-2008 3

GB/T18920-2002

GB/T19923-2005

GB18599 2001

GB18597 2001

HJ 2025-2012

1.9-4~8

1.9-4

GB16297-1996

	mg/m ³		
		m	kg/h
	120	15	3.5
NMHC	120	15	10
SO ₂	550	15	2.6
NO _x	240	15	0.77

1.9-5

DB12/356-2008

1	pH		
---	----	--	--

2

12g/L... 0.50¹CaCO
mg/L

&"

&" %

45

114527m²

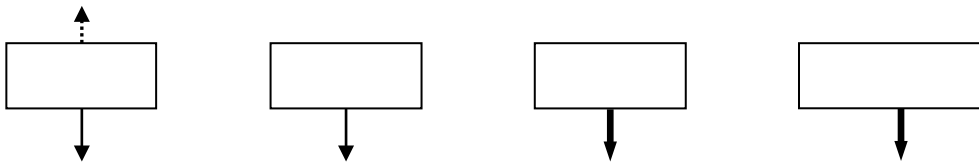
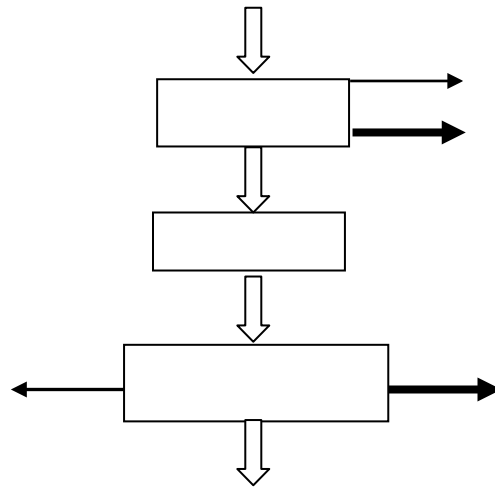
47023m²

1

30 / EG

15 EG/EB

2-1-1



2-1-1

2.2-3

				t/a	
S ₁				1440	
S ₂				7.2	
S ₃				10	
S ₄				10	
S ₅				450	
S ₆				0.3	
S ₇				147	

&" &" (

&"'

&"' "%

5 15m

GB16297-1996

15m

&"' "&

131.8m³/d

1

+ + +

+ +

DB12/356-2008

&" "'

2.5-1 30 / EG

1	8 1 15	5
2		
3		
4		
5		
6	[2002]71 >	< [2007]57
7		

2.5-2 15 / EG/EB

1		
2	4 4 15	
3		
4		
5		
6		
7	[2002]71 >	< [2007]57
8		

&"*

3.

' "%

6 ET

1~2

2014 8

2015 6

' "&

3.5817

' ''

' '' "%

ET

6

51

/

3-3-1

3-3-1

EG

EB

ET

&

" *

3.6-1

3.6-1

1	t/a	3102	—		
2	t/a	966.6	—		
3	t/a	240	—		
	t/a	840	—		
4	t/a	126	—		
5	/a	6	—		—
6	/a	6	—		—
7	t/a	16	5		
8	t/a	90	2		—
9	t/a	70	10		
10	t/a	10	1		—
11	t/a	10	2		

1

2

3

4

" +

3.7-1

3.7-2

3.7-1

		/			/
1		1	35		1
2		8	36		1
3		3	37	/	1
4		1	38		1
5		1	39		1

'",

1

ET EB

1

1

1

'", "%

†

TM# Ä Ä

1

2

3

'' , ''

1

80m³/d

480m³/d

480

m³/d

2

'' , ''(

1

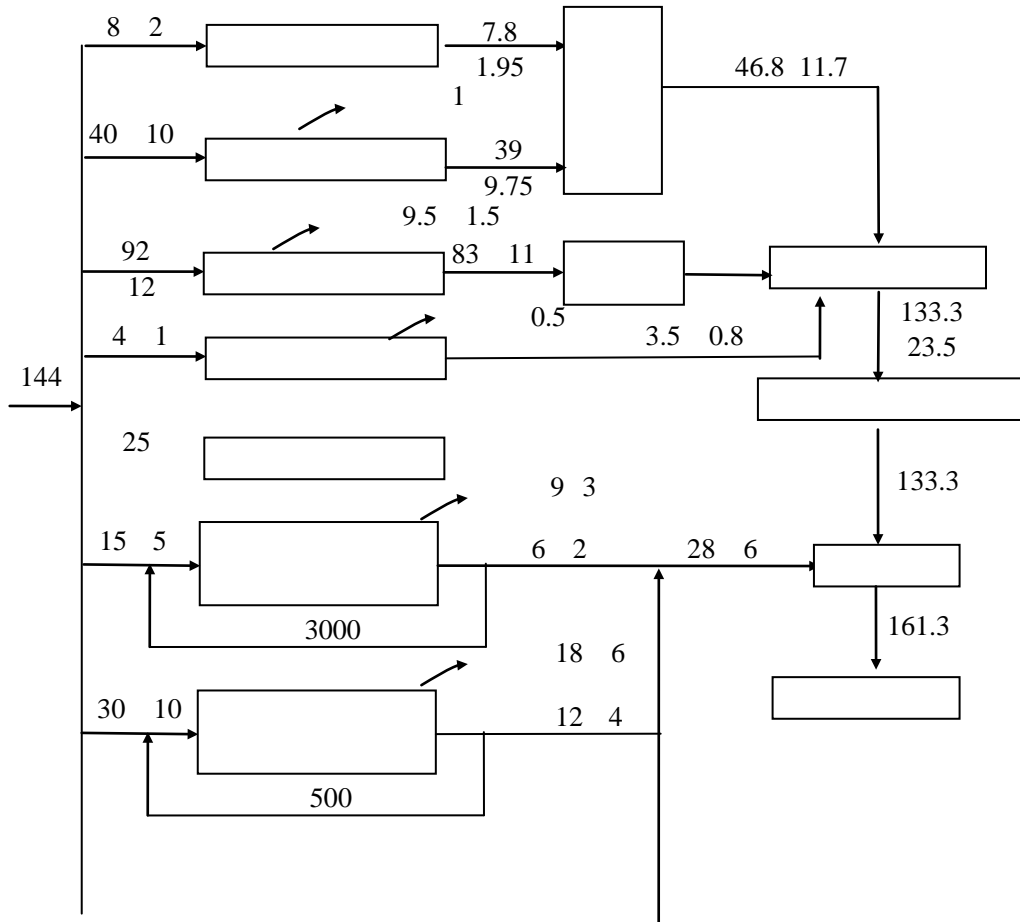
127

80L/ d·p

12m³/d

10m³/d

2m³/d



2.5-1

m³/d

2

6

7

1

15m³/min

5

8

9

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("%%"

4.4-1

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G₁

ET

8

7

1

15m

2 15

1

1

NO_x0.158kg/h SO₂ 0.0119kg/h 0.0161kg/h 0.335kg/h

NO_x0.0226kg/h SO₂0.0017kg/h 0.0023kg/h

0.0478kg/h

("("&

W

W ₃				6m ³ /d
	SS<80mg/L	COD<50mg/L		
W ₄			0.8m ³ /d	pH 6-9
	COD<500mg/L	BOD ₅ <300mg/L	SS<400mg/L	<30mg/L
W ₅			11m ³ /d	
		127		SS<250mg/L
				COD<350mg/L
	BOD ₅ <200mg/L	<35mg/L	TP<3mg/L	
(" (" (
	80~85dB(A)			
		80~85dB(A)		
85~90dB(A)			80dB(A)	
		96~98dB(A)		
75~80dB(A)			85dB(A)	
(" ((
S ₁			220t/a	
S ₂				1.8t/a

S₃

2.1t/a

S₄

2.1t/a

S₅

50t/a

S₆

0.5kg/ p·d

20t/a

(")

(")"%

1

8

8

2 15m

(")"&

80m³/d

COD

30m³/h

480m³/d

DB12/356-2008

(")"'

4.6-3

			dB(A)	
1			85	
2			85	
3			90	
4			90	
5			85	
6			85	
7			85	
8			85	
9			85	
10			80	
11			80	
12			85	
13			85	
14			85	
15		/	85	
16			80	
17			80	
18			80	
19			80	
20			80	
21			90	
22			80	
23			85	

(" * " (

4.6-4

				t/a		
1				220	1660	
2				1.8	9	
3				2.1	12.1	
4				2.1	12.1	
5				50	500	
6				0	0.3	
7				20	167	

2.7m/s

12.9

1016.6mpa

458.8mm

65%

2247.7h

1853.4mm

11.6

60cm

)" &" &

TEDA

2m

1m

1/6000 1/10000

)" &" (

)""

TEDA

15

2003

2010

6

42

"

"

30

110

180

30

34

290

38

4800

660

4

160

70

30

80

2010

207

48.2%

55

13.9

)"(
)"("%

" "

2012

5-4-1

5-4-1 2012

mg/m³

			PM ₁₀
2012	0.058	0.039	0.101
	0.06	0.08	0.10
%	81.2		

SO₂ NO₂

GB3095-1996

PM₁₀

GB3095-1996

2012

293

81.2

2013 10 11 2013

10 17

5-4-1

5-4-1

		mg/m ³		mg/m ³	(%)
	SO ₂	0.010	0.042	0.15	0
	PM ₁₀	0.038	0.091	0.15	0
	NO ₂	0.038	0.077	0.08	0

PM₁₀ SO₂ NO₂

GB3095-2012

)")

2014 5 6-7

*"

*" %

80

300

2015

150

6000

184 km²

124km²

+"

+"%

+"%%

3.4m/s	11.9	30.7	40.3		
-20.3	0	4644	15	4139	206
	584.8mm				76%
	240.3mm	1469.1mm	2.4		5
184.6mm	12	28.5mm	1.9		2898.8
	64.7%		128.8kcal/cm ²		

1

A

7-1-1

7-1-1

7-1-2

7-1-1

%



7-1-3

7.1-12

29.5m³/d

161.3m³/d

+ " & " &

+ " & " & " %

+ + ”

5m³/h 80m³/d

30m³/h 480m³/d

30m³/h 480m³/d

BAF

7-2-1

7-2-1

+ " & " & " &

+ " & " & " & "

161.3m³/d

83m³/d

64.8m³/d

18m³/d

46.8m³/d

128m³/d

7-2-3

7-2-3

		m ³ /d			m ³ /d
		1.95	7.8	16	78.8
		9.75	39	16	
		11.7	46.8	32	212.3
		3.5		2	
		11	83	45	

80m³/d

480m³/d

7-2-3

1 1000m³

7-2-4

7.2-4
COD_{cr} BOD₅ SS mg/L

DB12/356-2008

7-2-1

7.2

DB12/356-2008

DB12/356-2008

, "&" &

25~30 /

, "&"'

[2002]71

[2007]57

<

>

, "'

12

16dB(A)

14dB(A)

5~10dB(A)

5dB(A)

GB18599-2001

GB18597-2001

GB15562-1995

,")

,")"%

GB50074 2002

20m³

3m

() () () ()
 () () () ()

, ") "'

	1	1000m ³			
				212.3m ³	
	1011.4m ³	429 m ³	582.4 m ³		
1458 m ³	550 m ³	908 m ³			1000m ³

-		ET		ET01 1.5L		HT	
-		VGT		/		HT	
-		EGR		/ kW/r/min 85/4000		/	
N·m/r/min	285/1500-2500	1000rpm		N·m	155		
g/kw· h	205	ET01 1.5L				A	SUV
B							
V ⁺							

-")

%\$"

SO₂ NO_x

COD_{Cr}

%\$" %

200

4800

3200

10-1-1

10-1-1

VOCs		t/a	1.29	1.29	0.06	0	0.06	0	1.35	+0.06
	SO ₂	t/a	3.24	3.24	0.04	0	0.04	0	3.28	+0.04
	NO _x	t/a	2.93	2.93	0.58	0	0.58	0	3.51	+0.58
		t/a	6.2	6.2	1.23	0	1.23	0	7.43	+1.23
COD _{Cr}		m ³ /a	2.14	2.98	0.59	0.3	0.29	0	2.43	+0.29
		t/a	7.52	9.88	12.95	11.5	1.45	0	8.97	+1.45
		t/a	0.22	0.3	0.93	0.9	0.03	0	0.25	+0.03
		t/a	0.32	0.34	1.92	1.9	0.02	0	0.34	+0.02
		t/a	0	0	296	296	0	0	0	0

%\$" &

GB16297

1996

DB12/356-2008

PM₁₀

GB3905 1996

10-1-1

%%'

%%' %

1

2

3

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%%' &

2006 3

18

%%' &" %

[2006]28

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2014 4 15

www.tjeiac.com/

2014 5 8

www.tjeiac.com/

%%' &" &

50

“ ” “ ”

11-2-1

11-2-1

		6 ET					
					30	30 50	50 / lt TM
1		a.	b.	c.	d.		
2		a.	b.	c.	d.		
3		a.	b.	c.	d.		
4		a.	b.	c.	d.		
5		a.	b.	c.	d.		
6		a.	b.	c.	d.	"	
		"					
7		a.	b.	c.	d.		
		"	"				
8		a.	b.	c.	d.		
		"	"				
9							

1

—

2

80%

50

100%

80%

60%

80%

11-4-1

11-4-1

	45	5	0
%	90	10	0

3

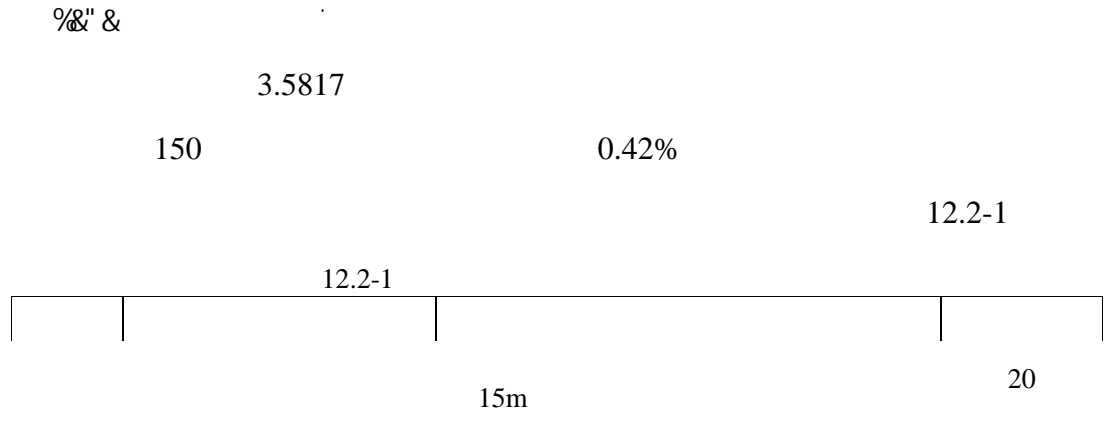
%&"

%&" %

120

9

15 EG/EB



% "

ISO14000

% "%

% "% %

13.1-1

13.1-1

	-	-		

% "% &

- 1 GB16297-1996
- 2 DB12/356-2008
- 3 GB12348-2008 3
- 5 GB18599 2001
- 6 GB18597 2001

% "%'

ISO14000

ISO14000

ISO14000

13.1-1

13.1-1

2015 6

3

% " " &

14-5-1

			NO ₂ SO ₂ VOCs	GB16297-1996
			pH COD BOD SS	DB12/356-2008
		1m	A	GB12348-2008 3

% " (

% " (" %

% " (" &

(GB8978-96)

% " (" "

% " (" (

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ISO14000

% "

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120

H

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SUV

MPV

2012

PM₁₀ SO₂ NO₂

GB3095-2012

()

% " " &

GB3096-2008

3

% " (

% " (" %

NO_x0.158kg/h SO₂0.0119kg/h

0.0161kg/h

0.335kg/h

NO_x0.0226kg/h

SO₂0.0017kg/h

0.0023kg/h

0.0478kg/h

GB16297-1996

HJ2.2-2008

SCREEN3

GB3095-1996

% " (" &

29.5m³/d

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A11020140600

A11020058

A1102008050

A1102003000