

# TDD5

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**0660-33\*\*\*19**

**0660-33\*\*\*78**

**516600**

**0769-27\*\*\*228**

**0769-22\*\*\*903**

**523109**

**3**

**5**

1	.....	1
2	.....	3
3	.....	13
4	.....	21
5	.....	25
6	.....	29
7	.....	45
8	.....	51
9	.....	53
	.....	56

1

	TDD5				
	4 /				
	3.3 /				
	2017 7		2017 4		
	2017 9		2017 10 13 ~14		
	2017 175		2017 8 7		
	8665		25		0.29%
	8665		50		0.58%
	<p>1 682 &lt;</p> <p>&gt; 2017 10 1</p> <p>2 1994 7 6 2012</p> <p>7 26</p> <p>3 1999 61 &lt;</p> <p>&gt;</p> <p>4 13</p> <p>2002 2 1</p>				

5 2000 38  
2000 2 22  
6 < > <  
> [2012]21  
7 <  
> [2017]1529 2017 9  
29  
8 <  
> [2017]1235  
2017 8 3  
9 TDD5  
2017  
7  
10 2017 175  
TDD5

2

1

TDD5

"

"

26

26

3

2

26

3

MEMS

2015

6

4

MEMS

2014 343

26

MEMS

TDD5

2017 7

TDD5

2017

8 7

TDD5

2017 175

3

2017 4

2017 8

2017 9

2017 6 12

4415022012000010

4

<

>

682

"

"

<

>

682

13

2017 9

10

TDD5

<

>

[2017]1529

<

>

[2017]1235

2017 11 14

TDD5

TDD5

**2**

26 3

115° 23 11

22° 47 31

2-1

2-2



2-1



2-2

3

26 3



QC

2-3



2-3

4

4 / 1200 / 3.3

/ 990 /

2-1

2-1

		( )	
		4	3.3

5

26 3 26 10000m<sup>2</sup>

4 40000m<sup>2</sup>

26



		26	1
		26	1

**7**

400                      2                      12                      300

**8**

2-4

2-4

1		1	1	17		1	1
2		1	1	18	UV	1	1
3		2	2	19		6	6
4		1	1	20		10	10
5	COG	4	4	21		4	4
6	FOG	4	4	22		2	2
7	FOG	2	2	23	AFC	1	1
8		4	4	24		3	3
9		4	4	25		1	1
10		26	26	26		1	1
11		10	10	27		3	3
12		1	1	28		7	7
13	OCA	15	15	29	UV	9	9
14		6	6	30		1	1
15		4	4	31		1	1
16		8	8	32		1	1

**9**

2-5

2-5

t/a

1.	IPA		2.16                      1.782
2.			0.04                      0.033

3.	0512-001		0.12	0.099
4.	UV1010G		0.144	0.1188
5.	3523		0.2	0.165
6.	TF-8141B		0.3	0.2475
7.	TF-4200EB-75		0.7	0.5775
8.	TSE3996-B		0.5	0.4125
9.	SE9187L		0.3	0.2475
10.	ECS0601-B		0.2	0.165
11.			0.07	0.05775
12.			0.007	0.005775
13.			1200	990
14.			1200	990

**10**

2-6

**2-6**

1		t/a	4800	4800	
2		kwh/a	48000	48000	

**11**

16t/d

4800t/a

85%

13.6t/d

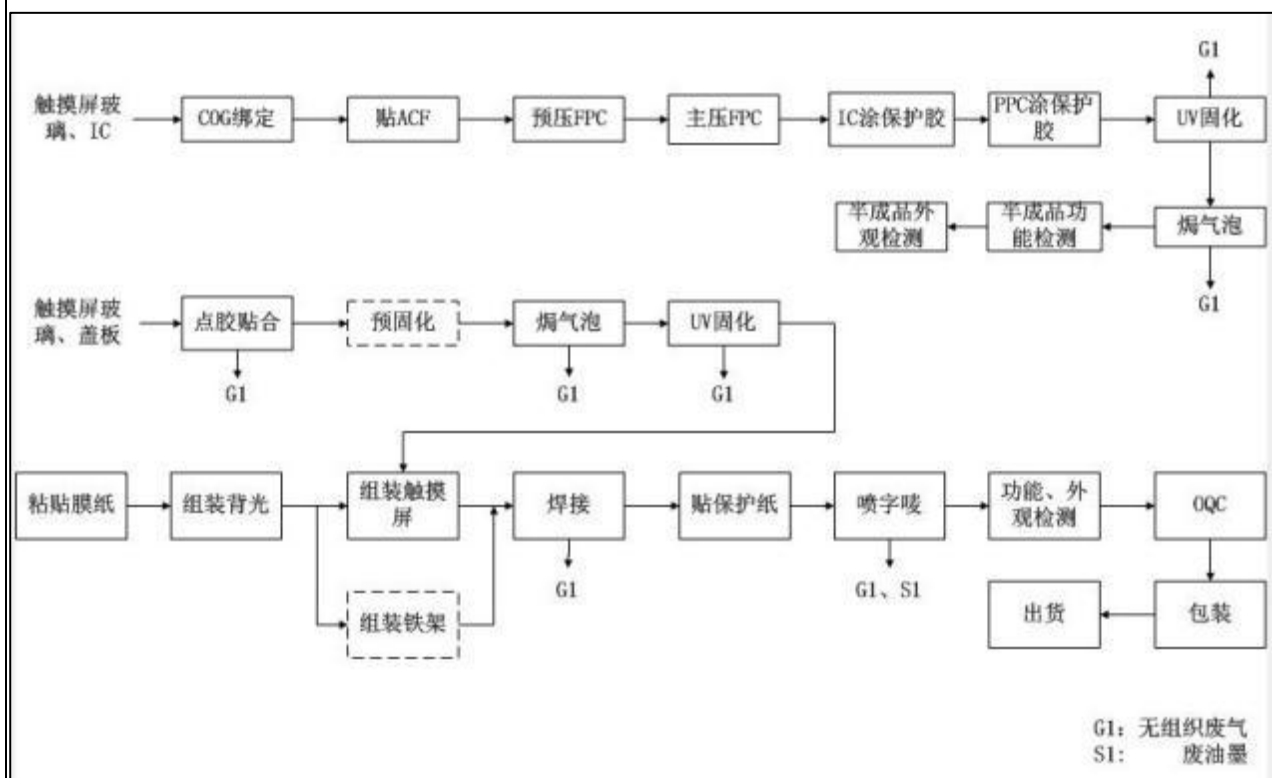
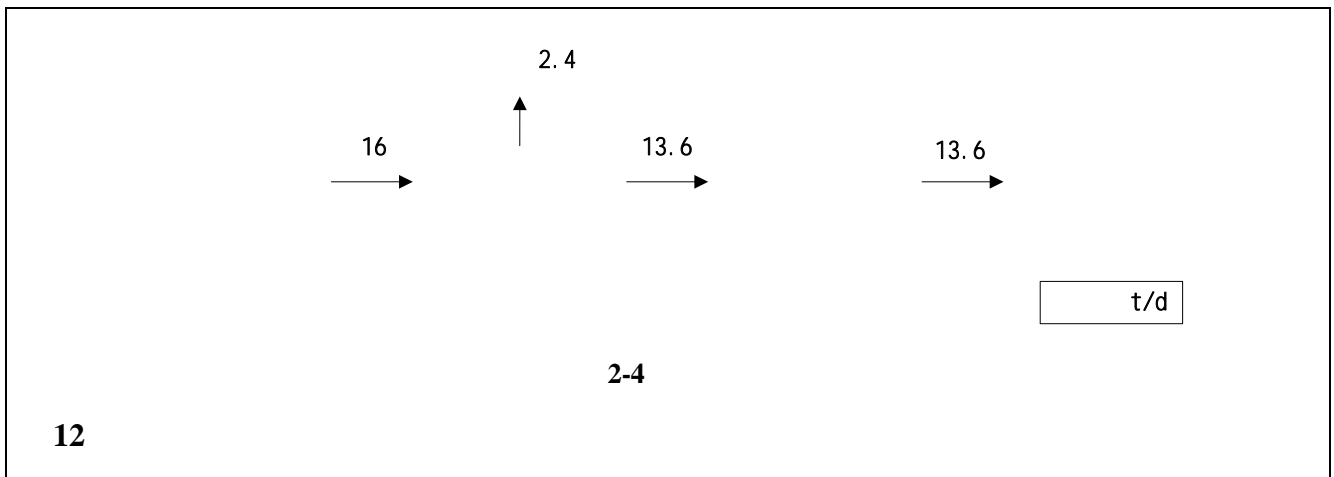
4080t/a

2-4

2-7

**2-7**

		(t/d)	(t/d)	t/d	t/d
1		16	13.6	16	13.6



2-5

- |        |  |     |    |     |
|--------|--|-----|----|-----|
| 1) COG |  | ITO |    | IC  |
| 2) ACF |  | FPC |    | ACF |
| 3) FPC |  | FPC |    |     |
| 4) FPC |  | FPC |    |     |
| 5) IC  |  | ITO | IC | ITO |
| 6) FPC |  | FPC |    | FPC |

7) UV

FPC

VOCs

8)

2-8

		/			
		UV	VOCs		
			COD BOD <sub>5</sub> SS NH <sub>3</sub> -N		

3  
1

COD BOD<sub>5</sub> SS NH<sub>3</sub>-N

DB44/26-2001

26

3-1

3-1 26

2

UV

VOCs

$4.3 \times 10^{-5}$ kg/h 3.07×





3-2

3

4

6.5t/a

26

0.019t/a

2016

HW49

900-041-49

26 1

2017 11 14

5kg 80%

1

2kg

170m<sup>2</sup>

170t

160t

140kg/d 42t/a

3-1

**3-1**

		t/a			
		42			
		6.5			
		0.019			26
			1		



26



26

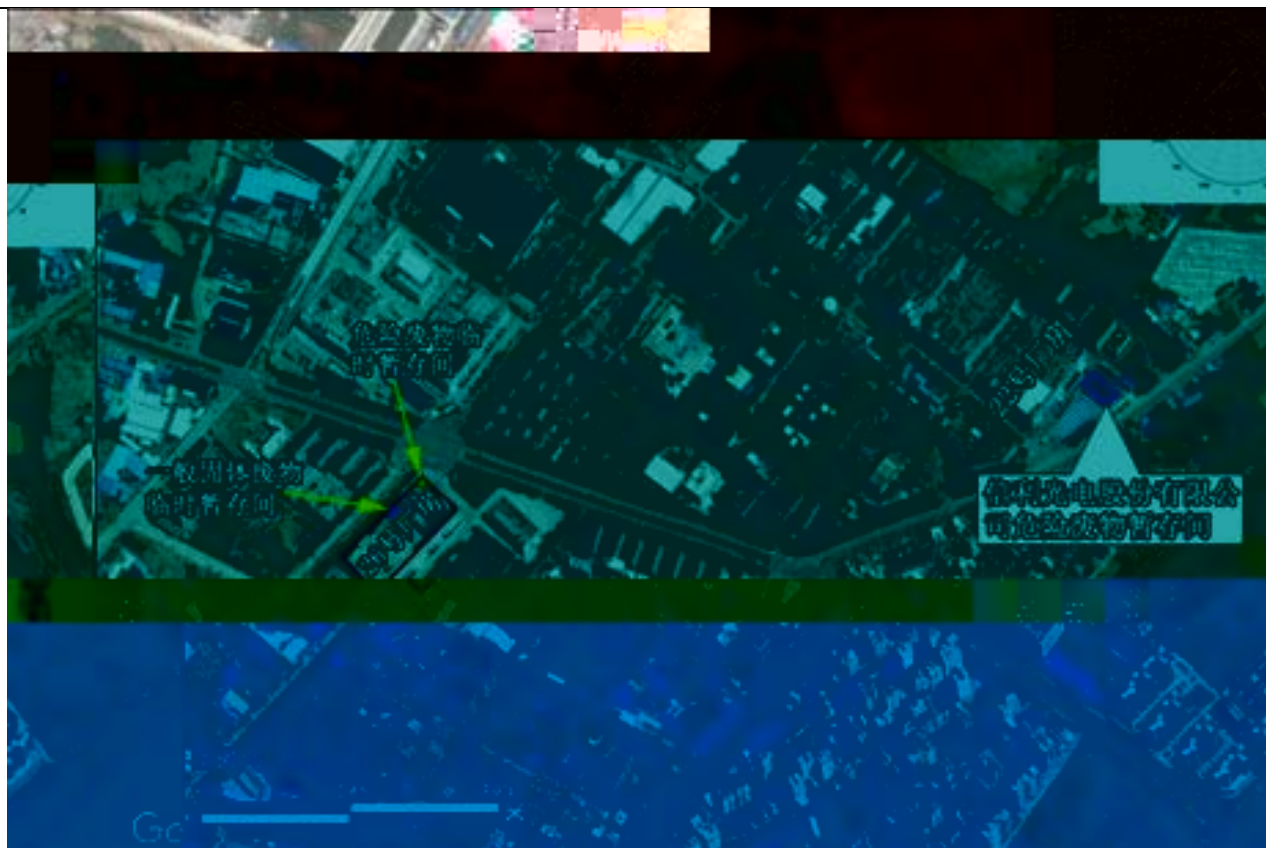
3-3 26

1

4.1-4



3-4



3-5



3-6 26



4  
1

UV

VOCs

$4.3 \times 10^{-5}$ kg/h 0.307kg/a

DB44/27-2001

GB

18599-2001

GB 18597-2001

GB18597-2001

- HJ2.4-2009





DB44/26-2001

GB/T31962-2015 B

DB44/27-2001

VOCs

DB44/815-2010

GB12523-2011

GB12348-2008

2

&

2 %

&

"

" "

" "

26

MEMS

2015

**5**

1

2017 10 13 14 26

5-1

**5-1**

1	W5		pH COD <sub>Cr</sub> BOD <sub>5</sub>	2 4
			18	

2

UV

VOCs

$4.3 \times 10^{-5}$ kg/h 0.307kg/a

2017 10 13 16

5-2

5-1

**5-2**

1	01#			
2	02#	VOCs		2 3



5-1

3

2017 10 13 ~2017 10 14

4

1 2017 10 13 ~10 14

2

5-3

5-2

5-3

1#	26	1	L <sub>Aeq</sub>	2
2#		1		
3#		1		
4#		1		

5-2

4

5

2017 10 13 ~14 1

5-4~ 5-5 5-3 5-4

5-4

1	SO <sub>2</sub> NO <sub>2</sub> PM <sub>10</sub> PM <sub>2.5</sub> TSP NO <sub>x</sub> HCl VOCs	3

5-5

5#	1	L
----	---	---



5-3



5-4

**6**  
1

10%

10%

10

1



表 7.0-3

4		HJ 535-2009		TU-1810	0.025mg/L

5

6-2

1		HJ/T 43-1999		TU-1810	0.7mg/m <sup>3</sup>
2		HJ 549-2016		CIC-260	0.2mg/m <sup>3</sup>
3		HJ 533-2009		TU-1810	0.25mg/m <sup>3</sup>
4	VOCS	DB 44/815-2010 D	VOCS	GC-2014C	0.5μg/m <sup>3</sup>
5		HJ 482-2009	-	TU-1810	0.004mg/m <sup>3</sup> ( )
6		HJ 479-2009		TU-1810	0.003mg/m <sup>3</sup>
7	PM10	HJ 618-2011	PM10 PM2.5	ME	

**6-4**

1		4		JC2016-6053
2		5		JC2016-6523
3		1		JC2017-7301
4		1		JC2017-7304
5		4		JC2017-7305
6		4		JC2017-6548
7		2		R 2937
8		2		JC2016-6519
9		2		JC2016-6170
10		3		JC2016-6049
11		2		R 2939
12		1		JC2016-6520
13		8		JC2016-6518
14		2		R 2943
15		1		JC2017-7300
16		1		JC2017-7299
17		2		JC2016-6170
18		6		JC2015-5505
19		6		JC2017-6547
20		3		JC2016-6059

**4**

HJ 91-2000

HJ/T 373-2007

6-5~ 6-7

**6-5**

**mg/L**

		2017-10-13	2017-10-14		
1		<4	<4	4mg/L	
2		<0.5	<0.5	0.5mg/L	
3	N	<0.025	<0.025	0.025mg/L	
4		<0.01	<0.01	0.01mg/L	
5		<0.05	<0.05	0.05mg/L	
6		<0.08	<0.08	0.08μg/L	
7		<0.67	<0.67	0.67μg/L	
8		<0.05	<0.05	0.05 mg/L	
9		<0.04	<0.04	0.04μg/L	
10		<0.05	<0.05	0.05μg/L	
11		<0.004	<0.004	0.004mg/L	

		2017-10-13	2017-10-14		
12		<0.09	<0.09	0.09µg/L	
13		<0.04	<0.04	0.04µg/L	
14		<0.06	<0.06	0.06µg/L	
15		<0.01	<0.01	0.01mg/L	
16		<0.04	<0.04	0.04mg/L	
17		<0.05	<0.05	0.05mg/L	

**6-6 mg/L**

		2017-10-13			2017-10-14				
		1	2		1	2			
1		12.0	11.0	4.3	13.0	12.0	4.0	20	
		168	159	2.8	165	161	1.2	10	
2		3.70	3.40	4.2	3.90	3.60	4.0	20	
		45.50	44.20	1.4	45.70	44.40	1.4	20	
3	N	0	0	0.0	0	0	0.0	20	
		4.06	3.98	1.0	3.84	3.73	1.5	10	
4		0.04	0.04	0	0.04	0.03	14	10	
		0.30	0.29	2	0.33	0.26	12	10	
5		0.95	0.92	1.6	1.32	1.1	9.1	1.0 10% 1.0 5%	
		20.20	19.80	1.0	19.50	18.40	2.9	10	
6		ND	ND	0.0	ND	ND	0.0	25	---
		ND	ND	0.0	ND	ND	0.0	25	---
7		ND	ND	0.0	ND	ND	0.0	15	---
		ND	ND	0.0	ND	ND	0.0	15	---
8		0.59	0.58	0.9	1.35	1.30	1.9	---	
		0.68	0.65	2.3	1.40	1.37	1.1	---	
9		ND	ND	0.0	ND	ND	0.0	30	---
		ND	ND	0.0	ND	ND	0.0	30	---
10		ND	ND	0.0	ND	ND	0.0	20	---
		ND	ND	0.0	ND	ND	0.0	20	---

		2017-10-13			2017-10-14				
		1			1	2			
11		ND	ND	0	ND	ND	0	15	---
		ND	ND	0	ND	ND	0	15	---
12		ND	ND	0.0	ND	ND	0.0	30	---
		ND	ND	0.0	ND	ND	0.0	30	---
13		ND	ND	0.0	ND	ND	0.0	---	---
		ND	ND	0.0	ND	ND	0.0	---	---
14		ND	ND	0.0	ND	ND	0.0	---	---
		ND	ND	0.0	ND	ND	0.0	---	---
15		0.08	0.10	11.0	ND	ND	0.0	0.05 25% 0.05 1.0 15%	
		0.12	0.10	9.1	ND	ND	0.0	1.0 15% 0.05 1.0 10%	

16

		2017-10-13		2017-10-14		
6		0.828	0.810±0.038	0.816	0.810±0.038	
		0.825	0.810±0.038	0.823	0.810±0.038	
7		1.81	1.77±0.08	1.77	1.77±0.08	
		1.75	1.77±0.08			

6-8

				%		%	%		%		%		
1	VOCS		76	6	100	/	/	/	/	/	/	/	
				/	/	4	5.2	0.22	0.28	4	100	/	/
				/	/	/	/	/	/	/	/	/	/
2			9	6	100	/	/	/	/	/			
		/		/	/	/	/	/	/	/	/	/	
		/		/	/	/	/	/	/	/	/	/	
3			9	6	100	/	/	/	/	/	3	100	
		/		/	/	/	/	/	/	/	/	/	
		/		/	/	/	/	/	/	/	/	/	
4			83	7	100	/	/	/	/	/	6	100	
		/		/	/	/	/	/	/	/	/	/	
		/		/	/	/	/	/	/	/	/	/	
5			24	4	100	/	/	/	/	/	/	/	
		/		/	/	/	/	/	/	/	/	/	
		/		/	/	/	/	/	/	/	/	/	

					%		%	%		%		%
												100
				/	/	/	/	/	/	/	/	/
				/	/	/	/	/	/	/	/	/
8			83	10	100	/	/	/	/	/	6	100
				/	/	/	/	/	/	/	/	
				/	/	/	/	/	/	/	/	
9			36	4	100	/	/	/	/	/	/	/
				/	/	/	/	/	/	/	/	
				/	/	/	/	/	/	/	/	

**6-9**

	2017-10-14	2017-10-15	2017-10-16		
PM2.5/PM10/TSP	0.00002	0.00002	0.00003	0.0004g	
	0.00003	0.00002	0.00002		
	0	0	-	1ng/m <sup>3</sup>	
	0	0	-		
	ND	ND	ND	0.004mg/m <sup>3</sup>	
	ND	ND	ND		
	ND	ND	ND	0.003mg/m <sup>3</sup>	
	ND	ND	ND		
	ND	ND	ND		
	ND	ND	ND		
	-	ND	-	0.7mg/m <sup>3</sup>	
	-	ND	-		
	-	ND	-		
	-	ND	-		
	-	ND	-		
	-	ND	-		
	-	ND	-		
	-	ND	-		



	2017-10-14	2017-10-15	2017-10-16		
	ND	ND	ND	0.001mg/m <sup>3</sup>	
	ND	ND	ND		
	-	ND	-	0.2mg/m <sup>3</sup>	
	-	ND	-		
	-	ND	-		
	-	ND	-		
	-	ND	-		
	-	ND	-		
	-	ND	-		
	-	ND	-		
	ND	ND	ND	0.06mg/m <sup>3</sup>	
	ND	ND	ND		
	-	ND	-	0.9µg/m <sup>3</sup>	
	-	ND	-		
	-	ND	-		
	-	ND	-		
	-	ND	-		
	-	ND	-		
	-	ND	-		
	-	ND	-		
	-	ND	-	0.2mg/m <sup>3</sup>	
	-	ND	-		
	-	ND	-		
	-	ND	-		

- ND -

0.25mg/m<sup>3</sup>

**6-10**

**mg/m<sup>3</sup>**

		2017-10-16					
		2017-10-16					
1	VOC	4	0.545	0.542	0.28	-	
			22.9	22.8	0.22	-	

☐ ☐

☐  
**6-11**

**mg/m<sup>3</sup>**

		2017-10-13	2017-10-14		

6-12

/

2017.10.13

LD127 ZM-CS-026

Gilian Gilibrator2 ZM-CS-193

/

		L/min	L/min	%	%	
3012H	ST/XC-01-02	20	20.39	1.95	±2.5	
		40	40.82	2.05		
		50	50.98	1.96		
3012H	ST/XC-01-03	20	20.43	2.15		
		40	40.83	2.08		
		50	50.91	1.82		
3012H	ST/XC-01-04	20	20.41	2.05		
		40	40.84	2.1		
		50	50.96	1.92		
3012H	ST/XC-01-05	20	20.42	2.1		
		40	40.82	2.05		
		50	51.02	2.04		

/

		L/min	L/min	%	%	
TH-110F	91	0.2	0.197	-1.5	±5/±2.5	
	91	0.5	0.49	-2		
	91	1	0.98	-2		
TH-110F	90	0.2	0.196	-2		
	90	0.5	0.491	-1.8		
	90	1	0.981	-1.9		
TH-110F	112	0.2	0.196	-2		
	112	0.5	0.492	-1.6		
	112	1	0.988	-1.2		
TH-110F	113	0.2	0.197	-1.5		
	113	0.5	0.491	-1.8		
	113	1	0.981	-1.9		
TH-110F	272	0.2	0.196	-2		
	272	0.5	0.49	-2		
	272	1	0.989	-1.1		
TH-110F	273	0.2	0.197	-1.5		
	273	0.5	0.491	-1.8		
	273	1	0.988	-1.2		
TH-110F	274	0.2	0.197	-1.5		
	274	0.5	0.491	-1.8		
	274	1	0.983	-1.7		
TH-110F	281	0.2	0.197	-1.5		
	281	0.5	0.49	-2		
	281	1	0.981	-1.9		



6-13

/						
2017.10.14						
LD127 ZM-CS-026 GilianGilibrator2 ZM-CS-193						
/						
		L/min	L/min	%	%	
3012H	ST/XC-01-02	20	20.49	2.45	±2.5	
		40	40.92	2.3		
		50	51.08	2.16		
3012H	ST/XC-01-03	20	20.46	2.3		
		40	40.93	2.33		
		50	51.01	2.02		
3012H	ST/XC-01-04	20	20.45	2.25		
		40	40.88	2.2		
		50	50.99	1.98		
3012H	ST/XC-01-05	20	20.46	2.3		
		40	40.89	2.23		
		50	51.08	2.16		
/						
		L/min	L/min	%	%	
TH-110F	91	0.2	0.196	-1.6	±5/±2.5	
	91	0.5	0.489	-1.9		
	91	1	0.978	-1.8		
TH-110F	90	0.2	0.196	-1.9		
	90	0.5	0.488	-2		
	90	1	0.977	-1.6		
TH-110F	112	0.2	0.196	-1.7		
	112	0.5	0.489	-1.8		
	112	1	0.981	-1.3		
TH-110F	113	0.2	0.196	-1.6		
	113	0.5	0.49	-1.7		
	113	1	0.98	-1.8		
TH-110F	272	0.2	0.196	-1.9		
	272	0.5	0.489	-1.9		
	272	1	0.983	-1.2		
TH-110F	273	0.2	0.196	-1.4		
	273	0.5	0.488	-1.9		
	273	1	0.978	-1.5		
TH-110F	274	0.2	0.196	-1.6		
	274	0.5	0.489	-1.9		
	274	1	0.981	-2		
TH-110F	281	0.2	0.197	-1.5		
	281	0.5	0.489	-2.2		
	281	1	0.979	-2.1		

		L/min	L/min	%	%	
QC-1S	119	0.2	0.196	-2		
	119	0.5	0.488	-2.4		
	119	1	0.977	-2.3		
QC-1S	120	0.2	0.196	-2		
	120	0.5	0.489	-2.2		
	120	1	0.978	-2.2		
QC-1S	121	0.2	0.196	-2		

± 5/±2.5

6

0.5dB A

6-14

6-14

/

											dB(A)	
	2017-10-13					2017-10-14						
	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)		
AWA5668	94.0	93.7	-0.3	93.7	-0.3	94.0	93.9	-0.1	93.9	-0.1	±0.5	

AWA5688





7-2

mg/L pH

			pH	COD	BOD <sub>5</sub>	N					
W5	2017.10.13		8.49	160	46.4	3.98	0.30	19.8	0.08×10 <sup>-3</sup> L	0.67×10 <sup>-3</sup> L	1.41
			8.41	151	44.8	3.90	0.33	19.2	0.08×10 <sup>-3</sup> L	0.67×10 <sup>-3</sup> L	1.29
			8.38	165	46.3	3.95	0.26	20.9	0.08×10 <sup>-3</sup> L	0.67×10 <sup>-3</sup> L	1.44
			8.45	162	45.7	4.01	0.34	19.2	0.08×10 <sup>-3</sup> L	0.67×10 <sup>-3</sup> L	1.51
			8.43	159.5	45.8	3.96	0.31	19.8	0.00004	0.0003	1.41
		8.28	154	45	3.92	0.30	18.4	0.08×10 <sup>-3</sup> L	0.67×10 <sup>-3</sup> L	1.57	
		8.43	161	44.8	4.15	0.32	20.8	0.08×10 <sup>-3</sup> L	0.67×10 <sup>-3</sup> L	1.37	

W5	2017.10.13		$0.04 \times 10^{-3}L$	$0.05 \times 10^{-3}L$	0.004L	$0.09 \times 10^{-3}L$	$0.04 \times 10^{-3}L$	$0.06 \times 10^{-3}L$	0.01L	0.84	0.05L
			$0.04 \times 10^{-3}L$	$0.05 \times 10^{-3}L$	0.004L	$0.09 \times 10^{-3}L$	$0.04 \times 10^{-3}L$	$0.06 \times 10^{-3}L$	0.01L	0.24	0.052
			$0.04 \times 10^{-3}L$	$0.05 \times 10^{-3}L$	0.004L	$0.09 \times 10^{-3}L$	$0.04 \times 10^{-3}L$	$0.06 \times 10^{-3}L$	0.01L	0.74	0.054
			$0.04 \times 10^{-3}L$	$0.05 \times 10^{-3}L$	0.004L	$0.09 \times 10^{-3}L$	$0.04 \times 10^{-3}L$	$0.06 \times 10^{-3}L$	0.01L	0.92	0.05L
			0.00002	0.00003	0.002	0.00005	0.00002	0.00003	0.01	0.69	0.04
	2017.10.14		$0.04 \times 10^{-3}L$	$0.05 \times 10^{-3}L$	0.004L	$0.09 \times 10^{-3}L$	$0.04 \times 10^{-3}L$	$0.06 \times 10^{-3}L$	0.01L	0.88	0.05L
			$0.04 \times 10^{-3}L$	$0.05 \times 10^{-3}L$	0.004L	$0.09 \times 10^{-3}L$	$0.04 \times 10^{-3}L$	$0.06 \times 10^{-3}L$	0.01L	0.99	0.054
			$0.04 \times 10^{-3}L$	$0.05 \times 10^{-3}L$	0.004L	$0.09 \times 10^{-3}L$	$0.04 \times 10^{-3}L$	$0.06 \times 10^{-3}L$	0.01L	1.03	0.05L
			$0.04 \times 10^{-3}L$	$0.05 \times 10^{-3}L$	0.004L	$0.09 \times 10^{-3}L$	$0.04 \times 10^{-3}L$	$0.06 \times 10^{-3}L$	0.01L	0.86	0.057
			0.00002	0.00003	0.002	0.00005	0.00002	0.00003	0.01	0.94	0.04
		0.00002	0.00003	0.002	0.00005	0.00002	0.00003	0.01	0.81	0.04	
DB44/26-2001			0.05	0.1	0.5	1.0	0.5	1.0	2.0	20	20

GB/T31962-2015 B

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				TVOC	
		mg/m <sup>3</sup>			
2017-10-13	1#	0.112	$7.69 \times 10^{-5}$	0.15	10
	2#	0.448	$1.17 \times 10^{-3}$	0.38	13
	3#	0.392	$9.65 \times 10^{-5}$	0.37	14
	4#	0.467	$1.11 \times 10^{-3}$	0.36	11
2017-10-13	1#	0.093	$5.93 \times 10^{-5}$	0.14	10
	2#	0.504	$7.69 \times 10^{-5}$	0.36	15
	3#	0.429	$1.07 \times 10^{-3}$	0.33	13
	4#	0.448	$1.30 \times 10^{-3}$	0.38	12

2017-10-13

1 2# 3# 4#  
2

DB44/27-2001

VOCs

(DB44/815-2010)

GB14554-93 1

7-4

7-4

dB(A)

		2017 10 13			2017 10 14				
1#		58			58			60	
		49			48			50	
2#		59			58			60	
		48			48			50	
3#		57			56			60	
		48			46			50	
4#		59			59			60	
		48			47			50	

GB12348-2008 2

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**8**

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TDD5

2017 8 7

TDD5

2017 175

2017 4

8

2017 6 12

4415022012000010

**2**

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UV VOCs		
<p>GB18597-2001</p> <p>GB18599-2001</p> <p>GB18599-2001 3</p> <p>2013 36</p>	<p>1 1</p> <p>900-041-49</p> <p>2</p> <p>3</p> <p>2016 HW49</p>	





**3**

2017 10

82.5%

a

(DB44/26-2001)

b

DB44/27-2001

VOCs

(DB44/815-2010)

GB14554-93 1

c

GB12348-2008 2

d

26 1

**4**

2017 10 13 ~15 1

10 13~14

1 SO<sub>2</sub> NO<sub>2</sub> NO<sub>x</sub> PM<sub>2.5</sub> PM<sub>10</sub> TSP

GB3095-2012

TJ36-79

TVOC

(GB/T18883-2002)

1

GB3096-2008 2

5

6

TDD5

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