

	2020-32135 -24-03-512161		
			13 14 55031
	1		
	<u>11 4 13.772 34 05 20.1 3</u>		
	2452		2 2
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	10000		2
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		2	43606.72 65.14
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	1	2001	6
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		2015	131
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		201	
		51.4	
		2020	2
		2020-32135	-24-03-512161
	2		
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	<p style="text-align: center;">2006 1</p> <p style="text-align: right;">1</p> <p style="text-align: center;">2006 1</p> <p style="text-align: center;">200 1</p> <p style="text-align: right;">200 17</p>
	<p style="text-align: left;">1</p> <p style="text-align: left;">1</p> <p style="text-align: right;">1</p> <p style="text-align: right;">201 74</p>

		1-1				
		1-1				
		11 43 3 34 04 21	1000	1000		
				100		
				2000	13.5	7.5
		500		100		
		2000	1000			
		100				
		11 43 2 34 03 40	1000	1000		
				100		
				2000	14.7	.6
		500		100		
		2000	1000			
		100				
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						7.5
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74						
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					2020	1
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		15			
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		2020 1			
	3				
			2020 4		1-3
		1-3			
			2020 1		
		201 74			
		"	"		
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		2020	
	14 .6	1.2	11. 66. 5.4 2 .2 2.7
			2020
		524.15	
			2020
		70%	
			0%
		456. 7	2020
	3 0.67		
		2020 1	
	201	74	
			2020 4
	2		
	201		201
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[2020]78

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		1025 /
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			(2013 (2013
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		2006 1	
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			200 17
	1	2020	
	[2020]33		
		2020	2020 33

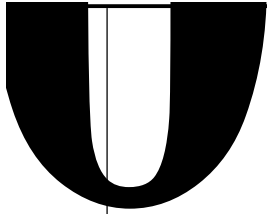
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1-5 **2020**

2020 7 1

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		7 15		
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B9 DC

2000 B9 DC

2000 B9 DC

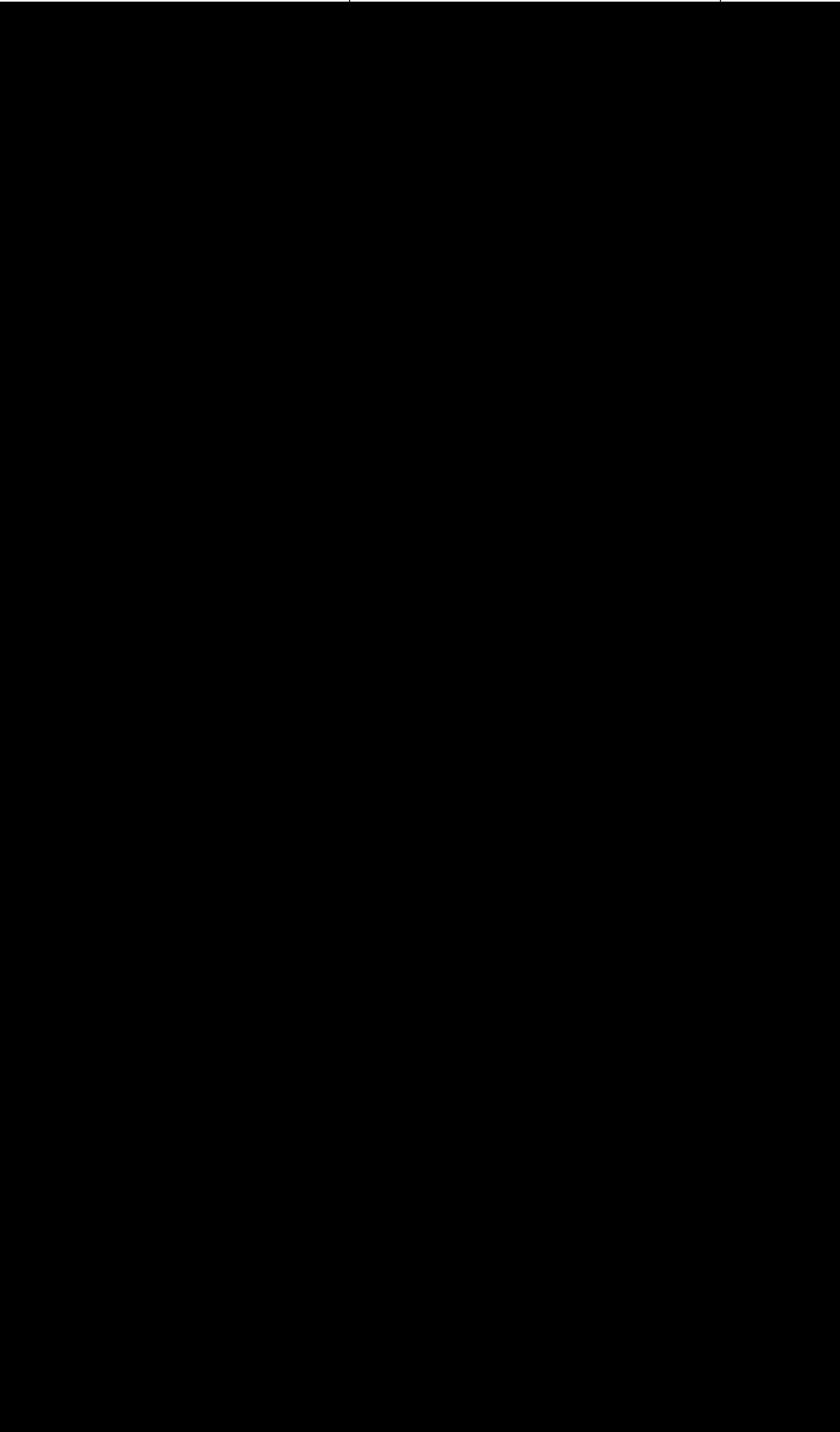
2000 B9 DC

2000 B9 DC

	1.				
	2.2020				
	11.	66. 2 .2	5.4 2.7	14 .6	1.2
	1.				
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	4.				
	1.	524.15		2020	1.
		2020			70%
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5 2018 122 1-9			
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		32/ 3500 201	
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1			600 /	600 /	0	
4						
2-3						
				/	/	
1		-5545		0	6	+6
2		-5030		0	6	+6
3		3		0	6	+6
4		/		0	6	+6

5		16	3	3	0
6		-250	1	1	0
7		1600	0	15	+15
		1200	0	15	+15
		100	0	1	+1
10		50	0	1	+1
11		00	0	1	+1
12		50	0	1	+1
13		-30	0	1	+1
14		$\frac{10}{7.5}$	0	1	+1

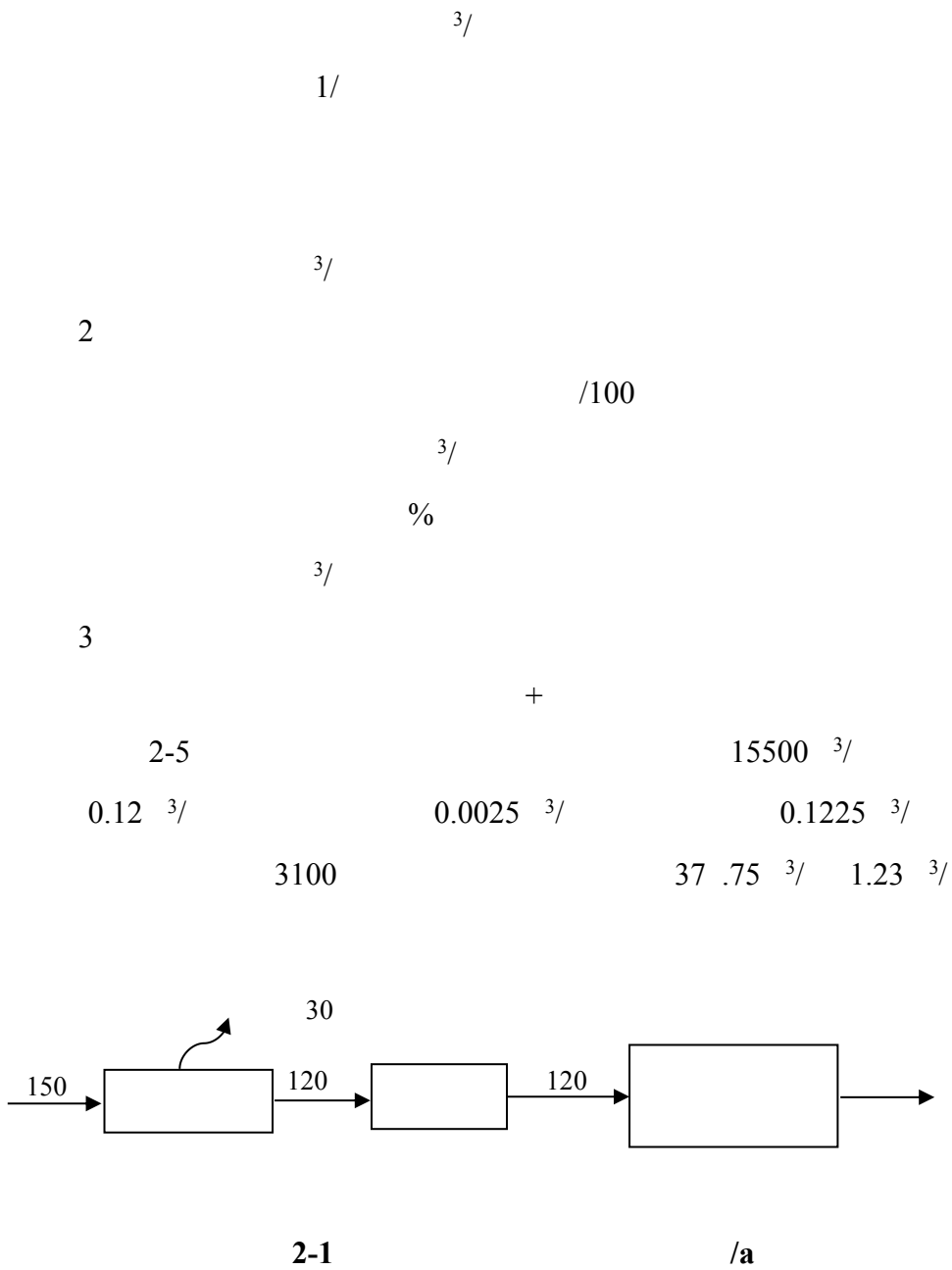
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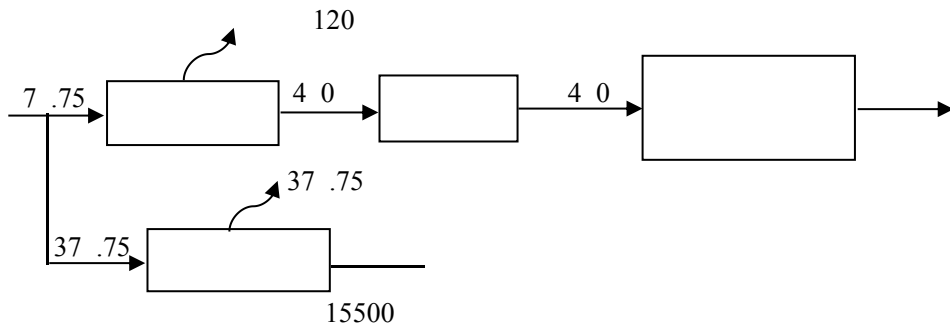
1

2-4

		/a	/a	/a			
1		0	300	+300			25 /
2		0	50	+50			25 /
3		0	10	+10			25 /
4		0	0.01	+0.01			1 /
5		10000 ^{3/}	10000 ^{3/}	0			/
6		500 ^{3/}	500 ^{3/}	0			/
7		5	10	+5			/

0. 0 0. 1									
170						150			
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2-5									
3/h								%	
5		15		40		25		0.05	
1/			-10		0	10	20	30	40
0.0016				0.000	0.001	0.0012	0.0014	0.0015	0.0016
				0.1		0.05			
				1.2		0.			
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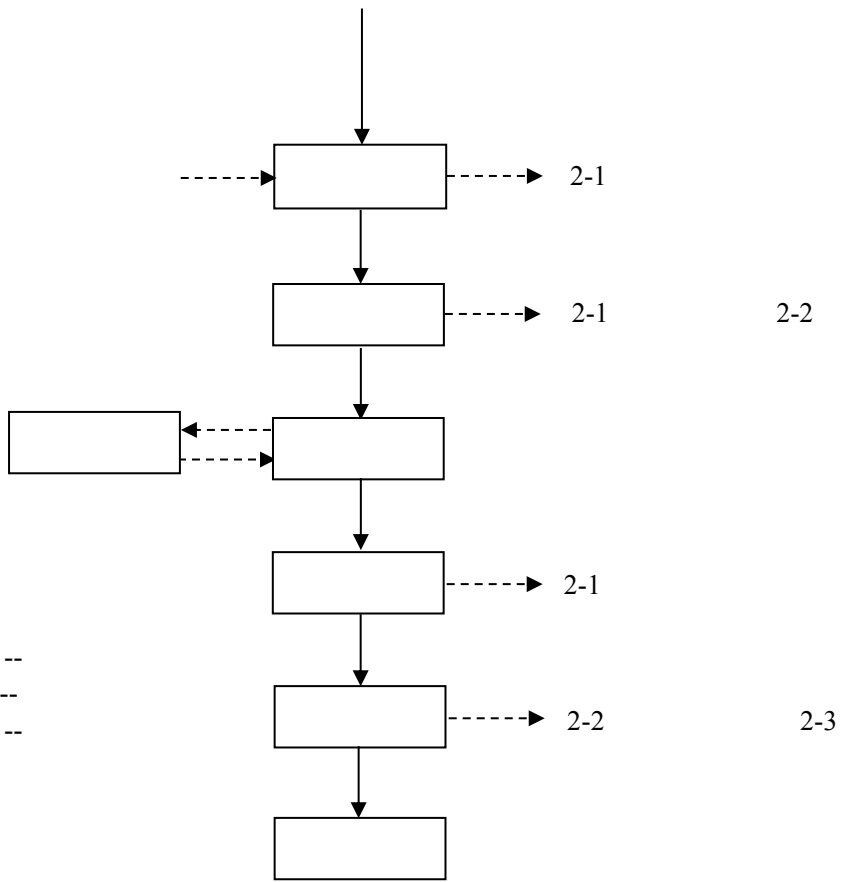
2

()

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2

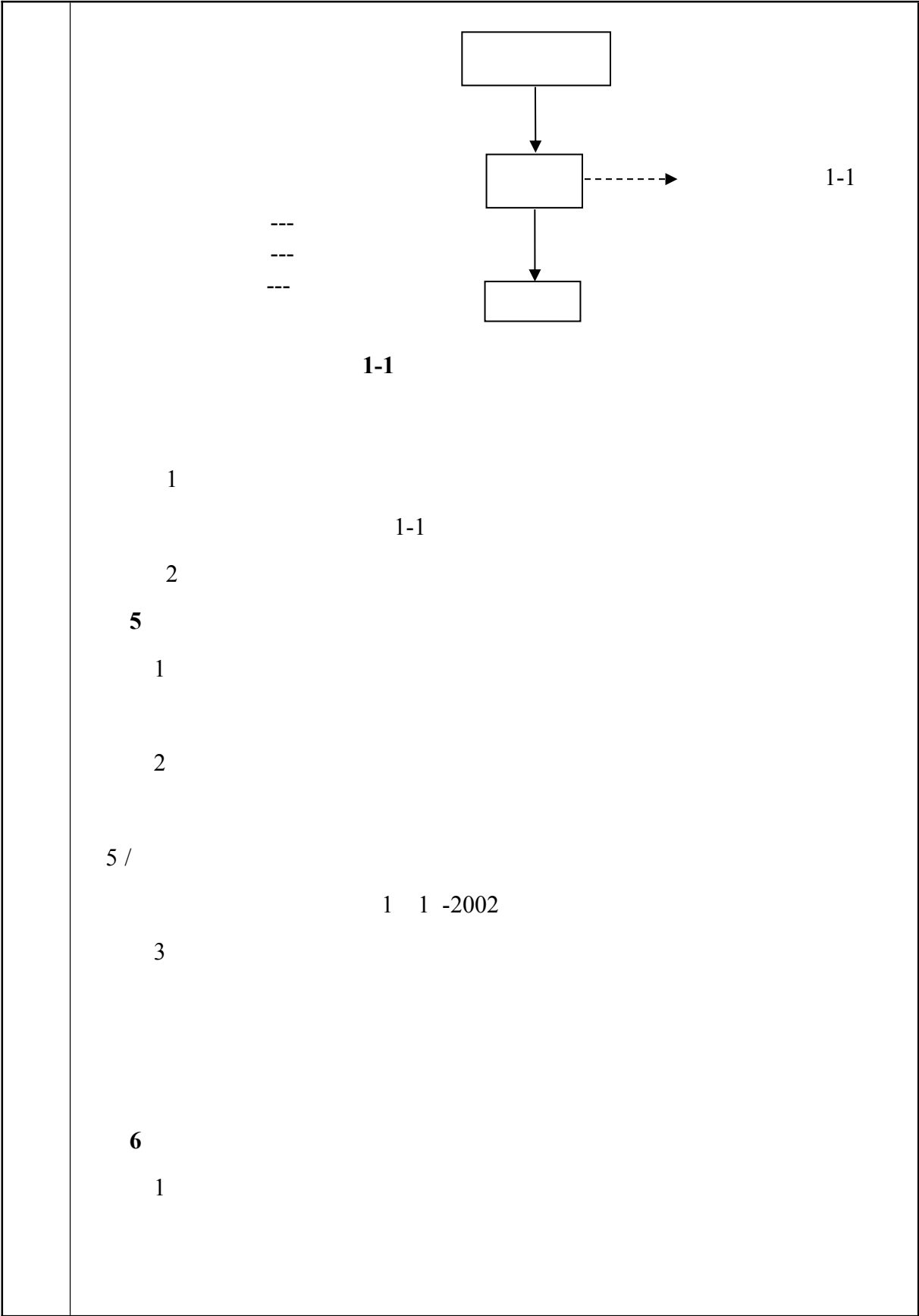
()



2-3

150-220

				1	1	2
	1					3
	1			201	6	
		1				2021
	2					
			1-14			
			1-14			
		/	/	/		/
	3					
			1-15			
			1-15			
						h
				600	/	2400
	4					
			1-1			



1 1 -2002

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2021 4

2021- -0336

1-16

1-16		1		
2021.04.14	1		.36	
			162	/
			0	/
			2 .4	/
			3. 6	/

7 -1 6

/ 31 62-2015) 1

4

2

1234 -200 3			
2021- -0336			
1-20			
1-20			
		dB(A)	
		2021	4 14
1	1	57	46
	1	55	47
3	1	55	46
4	1	56	47
		65	55
		1. / 2.2 /	
<hr/>			
	1234 -200 3	65	55
7			
1			
	120 ^{3/} 0.4 ^{3/}		2021- -0336
		162 /	0 / 3- 2 .4 /
3. 6 /			0.01 4/ 0.00 6 /
3- 0.0034 /	0.0005 /		
2			
1-21			

1-21				
		/a		
1		1.2		
2		1.5		
8				
1				
1				7 122
9				

- (2.2-201)

(30 5-2012)

3-3

3-3

g/ ³

		g/ ³	
1	2020.10.0	02 00	0.5
		0 00	0.57
		14 00	0.55
		20 00	0.64
	2020.10.10	02 00	0.5
		0 00	0.62
		14 00	0.64
		20 00	0.56
	2020.10.11	02 00	0.63
		0 00	0.53
		14 00	0.5
		20 00	0.65
	2020.10.12	02 00	0.65
		0 00	0.56
		14 00	0.5
		20 00	0.52
	2020.10.13	02 00	0.65
		0 00	0.5
		14 00	0.5
		20 00	0.74
	2020.10.14	02 00	0.63
		0 00	0.60
		14 00	0.6
		20 00	0.65
2020.10.15	02 00	0.65	
	0 00	0.72	
	14 00	0.62	
	20 00	0.67	

3-3

g/ ³

		g/ ³		%	%	
1		2000	0.52-0.74	0.37	0	

				-	(2.2-201)
		2021			
	2021	5	2021	2.5	43 /
			74.2%	4.5 /	
					2020
	%	10%	2. %		
				
	2.5				
	3				
	4				
	5				
	6				
	7				
				
	2				

3 3 -2002

2017-201

3-4

3-4

g/ , H

		H	DO	COD	COD _M							LAS
	2017	7.36	4.	1	4.4	0.002	1.23	0.236	0.035	0.006		
	201	7.2	5.3	21	4.	0.002	1.3	0.23	0.04	0.004	0.03	
	201	7.31	6.52	20	5.1	0.0016	1.32	0.21	0.04	0.006	0.0 3	
	2017	7.35	5.05	1	4.2	0.0022	0. 6	0.1	0.04	0.006	0.02	
	201	7.47	5. 6	21	4.7	0.0021	0. 2	0.21	0.04	0.005	0.03	
	201	7.21	6. 0	20	4.7	0.0017	1.14	0.1	0.04	0.005	0.0	
		6	3	30	10	0.01	1.5	0.3	0.5	0.05	0.3	

ND

LAS

0.05 g/ ³

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201

54. ()

10 61. () 50 51.4 ()

0 47.7 ()

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	/						
	X	Y					

		666726.50	34.0 660					15
UTM								
3-6								
				6 40				3 3 -2002
				15	450			30 6-200 2
				7100	6 .34			
1								
		31572-2015	5					
				37 22-201				
						31572-2015		
							14554- 3	1
2			3-7	3-				
3-7								
		g/ ³	g/h			g/ ³		
1		60	1.2	15		4.0		31572-2015 5
2		2000		15		60		(14554- 3) 1 2
3-8								
			g/ ³					
			6		1			
			20					
2								

7 - 6 4
/ 31 62-2015 1

1 1 -2002 1

3-

3-9		g/L	H
	6-		6-
	500		50
	400		10
	35		5
			0.5
	70		15
		7 -1 6 4	
		/ 31 62-2015	1
		1 1 -2002	1

3

1234 -200 3

3-10

3-10

GB12348-2008

	dB(A)	dB(A)
3	65	55

4

1 5 -2020

1 5 7-2001

2013 36

2000 120

2010 61

3-11				/a					
		1#		0.74	0.77	-	0.07		
				0.07	0	-	0.07		
				360	0	360	360		
				0.144	0.126	0.10	0.01		
				0.10	0.104	0.072	0.004		
				0.00	0.007	0.00	0.002		
				0.001	0.000	0.001	0.0002		
				0.011	0.006	0.011	0.005		
				3.6	3.6	0	0		
				4.37	4.37	0	0		
3.12				/a					
							*		
								*	
		0	0	0.74	0.77	0.07	0	0.07	+0.07
		0	0	0.07	0	0.07	0	0.07	+0.07
		120	120	360	0	360	0	40	+0.01
		0.036	0.006	0.144	0.126	0.01	0	0.024	+0.004
		0.024	0.001	0.10	0.104	0.004	0	0.005	+0.002
	3-	0.003	0.0006	0.00	0.007	0.002	0	0.0026	+0.0002
		0.0004	0.00006	0.001	0.000	0.0002	0	0.00026	+0.005
		0.003	0.001	0.011	0.006	0.005	0	0.006	+0.01
		0	0	3.6	3.6	0	0	0	0
		0	0	4.37	4.37	0	0	0	0
0.07/				0.07/					

2014 14						
2			1.5			
			360 /			
0.10 /	0.072 /	3-	0.00 /	0.001 /	0.011 /	
	0.01 /		0.004 /	3-	0.002 /	0.0002 /
0.005 /						
0.0 7 /				0.0 7 /		
2014 14						
2			1.5			
				4 0 /		
	0.144 /		0.0 6 /	3-	0.012 /	0.0014 /
0.014 /			0.024 /		0.005 /	3- 0.002 /
0.0002 /	0.007 /					

1											
4-1											
4-1											
	(³ /h)		(^g / ³)	(^g /h)	(/a)		(%)	(^g / ³)	(^g /h)	/a	()
1#	5000		72.33	0.364	0.74		0	7.23	0.036	0.07	15
2-1											
1 0 200											
360.1 /											
2 2											
2 2											
1											
2.70 / -											
0.71 /											
2400											

							+		0%
							0%	5000 ^{3/}	15
							0.74 /		72.33 / ³
							0.364 /		0.07 /
							7.23 / ³	0.036 /	
									31572-2015 5
							2		
								4-2	
								4-2	
							/		
							/a		g/h
							0.07	20	45
									0.0405
									10%
							0.07 /		0.0405 /
									31572-2015
							5		
							37 22-201		
									31572-2015
							3		
							-		2.2-201
									50%
									4-3

4-3

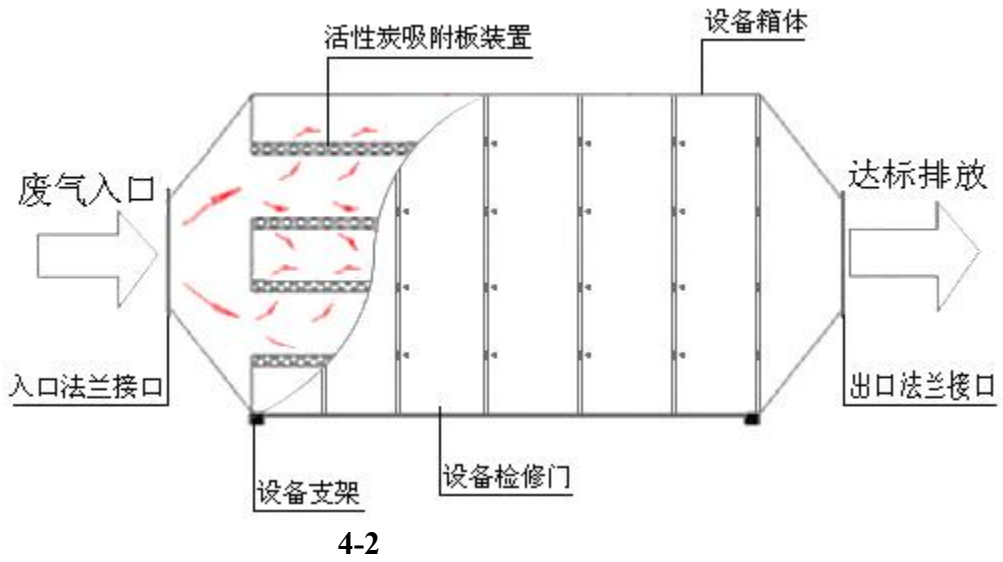
500 1 10-10
700 2300 ^{2/}

50

0%

0%

4-2



4-4

	5000
^{3/h}	300*250*100
	12 40
c ^{3/g}	0. 1
	5%
(^{2/g})	1000 1500
	10
	1

g	30
	0.3 /
1100	
2	

4-5

4-5

		g/ ³	g/h	g/ ³	g/h	
201 .1.5	01	.2	0.14	0.	0.013	0.7
		.06	0.14	0.	0.013	0.7
		.64	0.15	0. 6	0.013	1.3
201 .1.6	01	.66	0.15	0. 4	0.012	2
		.11	0.14	0. 7	0.013	0.7
		.45	0.15	0. 5	0.013	1.3

0%

5

1

4-6

4-6

		2000	/ ³	

- (2.2-201) 5.3

- 2.2-201

4-7

4-7

			10%
		1%	10%
			1%

	10%								10%		
	$P_i = \frac{C_i}{C_{0i}} \times 100\%$										
	%										
	/ 3										
0	/ 3										
2	4-										
4-8											
	()										
	X	Y			()	()	()	()	(³/h)		
1#	666 53.5	3772	0. 4		0	15	0.5	20	5000		0.03 6 /
4-9											
	()										
	X	Y			()	()	()				
	672137.73	377	1 . 7		0	45	20			0.0405	/
3	4-10										
/											
/											
65000											
3											
-1											
/											
/											

	/	/
	/	/

10%

4-11

	10%
	1% 10%
	1%

4-12

			Kg/h	g/ ³	Pi %	g/ ³	D10%()
	1#		0.036	2	0.13	0.001 74	0
			0.0405	2	1.35	0.0202	0

1.35%

0.0202 / ³

- 2.2-201 5.3

1					31572-2015	4.0	0.0 7
						0.0 7	
4-15							
						/a	
1					0.1 4		
6							
-							
2.2-201							
31572-2015							
7							
/ 3 4 -2020							
$\frac{Q_c}{C_m} = \frac{1}{A} (BL^c + 0.25r^2)^{0.50} L^D$							
-- / 3							
-- /							
--							
--							
/							



100 50 100 1000

100

/

2.33 /

4-16

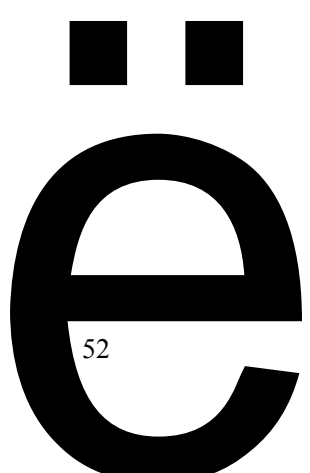
4-16

5	L									
	1000		1000		2000		2000			
2	400	400	400	400	400	400	400	0	0	0
2-4	700	470	350	700	470	350	3 0	250	1 0	0
4	530	350	260	530	350	260	2 0	1 0	14 0	0
2	0.01			0.015			0.015			
2	0.021			0.036			0.036			
2	1.5			1.7			1.7			
2	1.5			1.77			1.77			
2	0.7			0.7			0.57			
2	0.4			0.4			0.76			

470 0.021 1.5 0.4

4-17

4-17



	1	001	1#	,			4	1 /	3 -2017	3157 2-201 5 5
				,						
				,			4	1 /	14675 /	1455 4- 3 2
				,						
	2		/	,			4	1 /	- 604-2017	3157 2-201 5
				,						
				,			4	1 /	14675 /	1455 4- 3 1

9

31572-2015

5

15

37 22-201

31572-2015

1

30

300

50 / *

450 /

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360 /

2

5 ^{3/}

6. ³

/ 50102-2014

4-1

4-19

^{3/h}								[%]	
	5		15	40		25			0.05
1/				-10	0	10	20	30	40
	0.0016			0.000	0.001	0.0012	0.0014	0.0015	0.0016
				0.1		0.05			
				1.2		0.			

1

^{3/}

1/

^{3/}

2

/100

^{3/}

%

^{3/}

3

+

4-1

15500 ^{3/}

0.12 ^{3/}

0.0025 ^{3/}

0.1225 ^{3/}

3100

37 .75 ^{3/}

1.23 ^{3/}

2

1

/2.3-201

4-20

4-20

		Q/ ^{3/} d	/
		20000	60000
		200	6000

600 /

1 1 -2002 1

2

,200 ,27() 1155-1161

/

600 ^{3/}

2 ^{3/}

5 ^{3/}

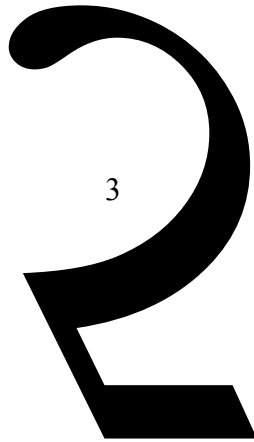
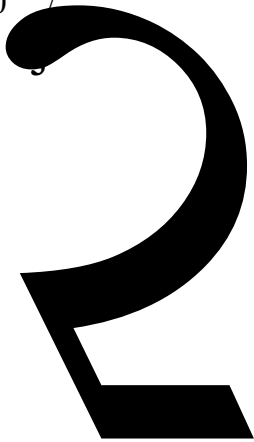
300 /

200 /

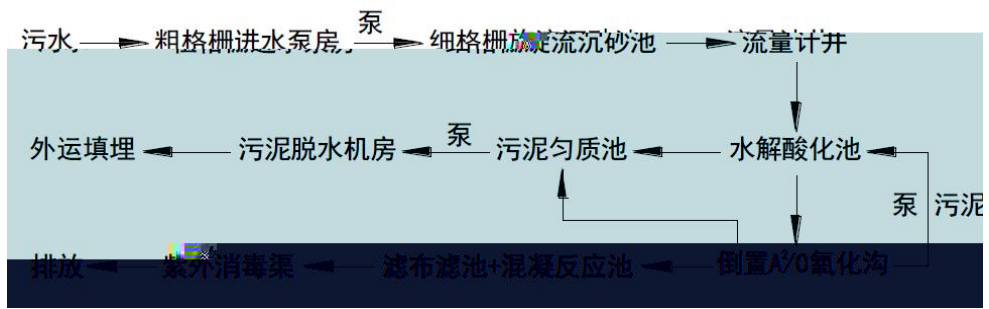
3- 25 /

3 /

30 /



4.



4-4

2/

2/

2/

2/

7. 3/

7 7. 3/

5.1 3/

4 0 3/ 1.6 3/

> 2

4-21

/a	g/ L	/a	g/L	/a	g/L	/a
	400	0.144	300	0.10	50	0.01
	300	0.10	200	0.072	10	0.004
	25	0.00	25	0.00	5	0.002
360	3	0.001	3	0.001	0.5	0.0002
	30	0.011	30	0.011	15	0.005

	/a									/a
4 0		400	0.1 2		300	0.144		50	0.024	
		300	0.144		200	0.0 6		10	0.005	
		25	0.012		25	0.012		5	0.0026	
		3	0.0014		3	0.0014		0.5	0.00026	
		30	0.014		30	0.014		15	0.006	

4-23

				/					/ g/L
1				/a					50
2									10
3	00	11	34 0						5
4	1	4 '5	4'57.	4 0	/				0.5
		0.42"	11"						15

	3	4.
+		+
	+	2/
		205
0.0032%		
		50000 ^{3/}
		4 0 ^{3/} 1.6 ^{3/}
	4	
	1 1 -2002	
	5	
	4-25	

1 1 -2002 1

3

70 0 ()

2.4-200

1

$$L_A(r) = L_A(r_0) - A$$

()

0 0 ()

2

()

$$L_{eqg} = 10 \lg \left(\frac{1}{T} \sum_i t_i 10^{0.1 L_{Ai}} \right)$$

()

()

3

()

$$L_{eq} = 10 \lg(10^{0.1L_{eqg}} + 10^{0.1L_{eqb}})$$

()

()

4

$$A_{div} = 20 \lg(r / r_0)$$

0

4-26

4-26

dB **dB** **dB** **dB** **dB**
A **A** **A** **A** **A**

		1	0	25	45	33.06	24.5			
		30	0	25	40	32.04	22.6			
		1	0	25	50	33.	24.03			
		1	75	25	60	35.56	24.44			
		1	75	25	55	34.1	15.1			
		6	75	25	5	3.5	17.43	22.3	57	57.01
		6	70	25	0	3.06	.5			
		1	0	25	0	3.0	1.3			
		30	0	25	5	3.55	15.45			
		1	0	25	5	3.5	1.42			
		1	75	25	0	3.06	1.4			
		1	75	25	0	3.0	10.2			
		1	75	25	0	3.0	10.2			

57.01
1234 -200 3

5

4-27

					dB(A)	dB(A)
	0 -17	1 -21			65	55
						1 /

4

1

1

30

0.5

4.5 /

2		1.56	1.56		0	
3		4.3 7	4.3 7	0	0	
4		6.0	6.0	0	0	

2

1

2

4.5 / 3. 6 / 4.3 7 /
10²

0.

250 4

0.4² 1.6²
10²

1 5 -2001

10²

4.3 7 /

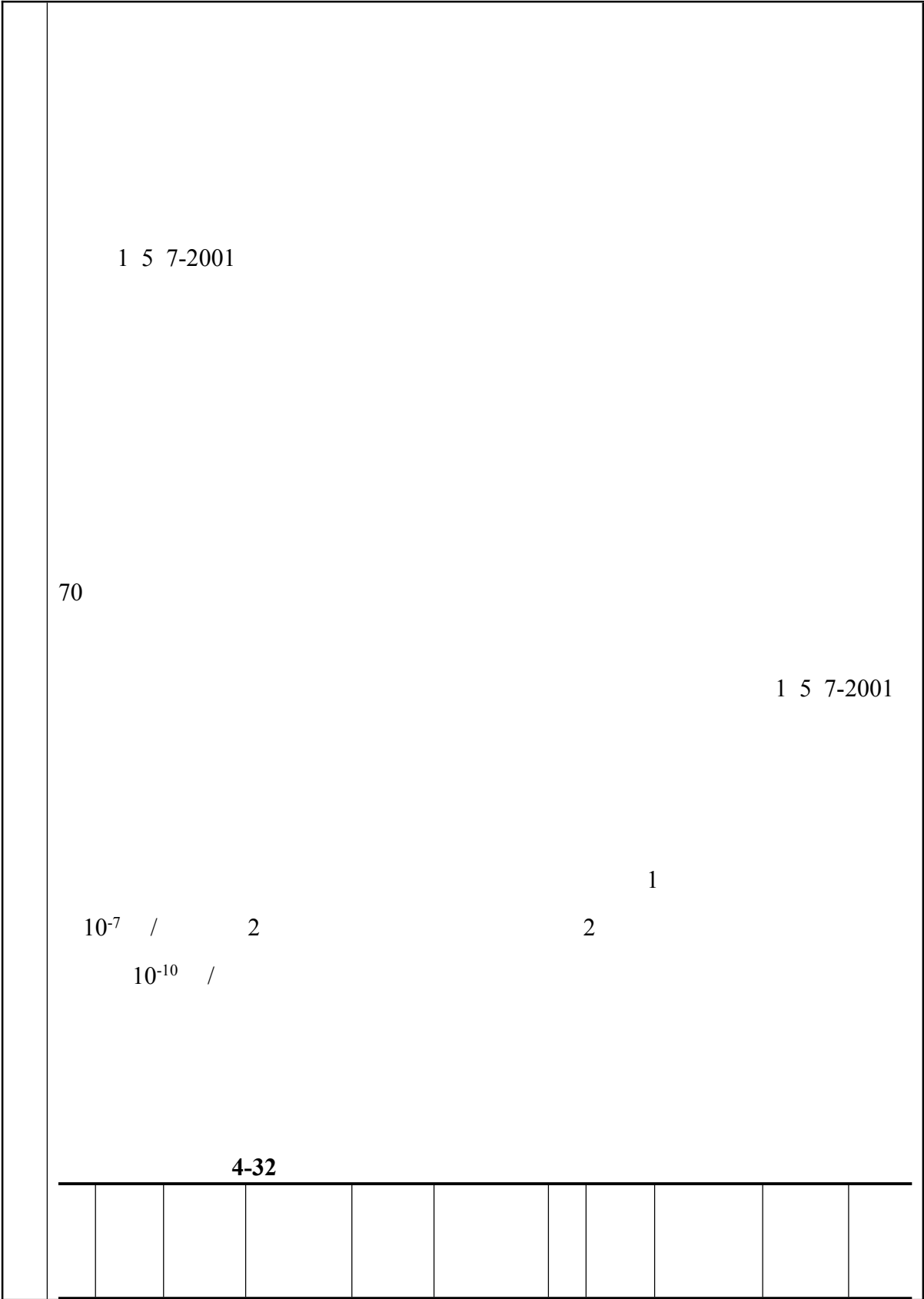
4 1.462 100 4

15 0.4²

6² 10²

3

4-30										
4-31					4-32					
4-30										
									/	
1						4	00-03 -4	4.3	7	
2					/	14	/	5.6		
3					/	10	/	0.36		
4					/		/	6.0		
4-31										
					/a					
1			4	00-03 -4	4.3	7				
GB18599-2001										



1				4	00-03 -4		10 ²		1.462	
15562.2-1 5										
4-33										
4-33										
					-01					
					-02					
5										
1										
() 64-201										
-										
43606.72										
4-34										
4-34										

2

610-2016 4.1

-116

-

3

4-35

4-35

		10^{-10} /
		10^{-7} /

1 5 7-2001

4

6

1

7.5

7.1

1

4-36

4-36

E	P			
	P1	P2	P3	P4
1	+			
2				
3				
+				

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

1 2

1 2

1

1

1 1

10

2

10

100

3

100

4-37

4-37

	i	Qi		i/Qi
	1.462	50	/ 16 -201	0.02 24
	/		/	0.02 24

0.02 24

1

2

16 -201

4-36

4-38

	IV IV⁺	III	II	I

3

4

50140-2005

50016-2014

501 7- 3

1.1

	/			
				37 22-201
	1#		5000 ^{3/} + +15	31572-201 5
		3-	5 ³	1 1 -200 2 1
		/		1234 -200 3
	/			
	/			

32/ 37 5-2020

2015 224

1

2.

3

4

1

7 122

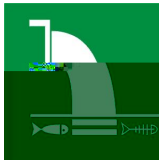

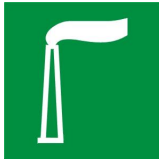

()






5-1

5-1

	-01				
	-02				
	1#				
	-01				
	-01				
	-02				

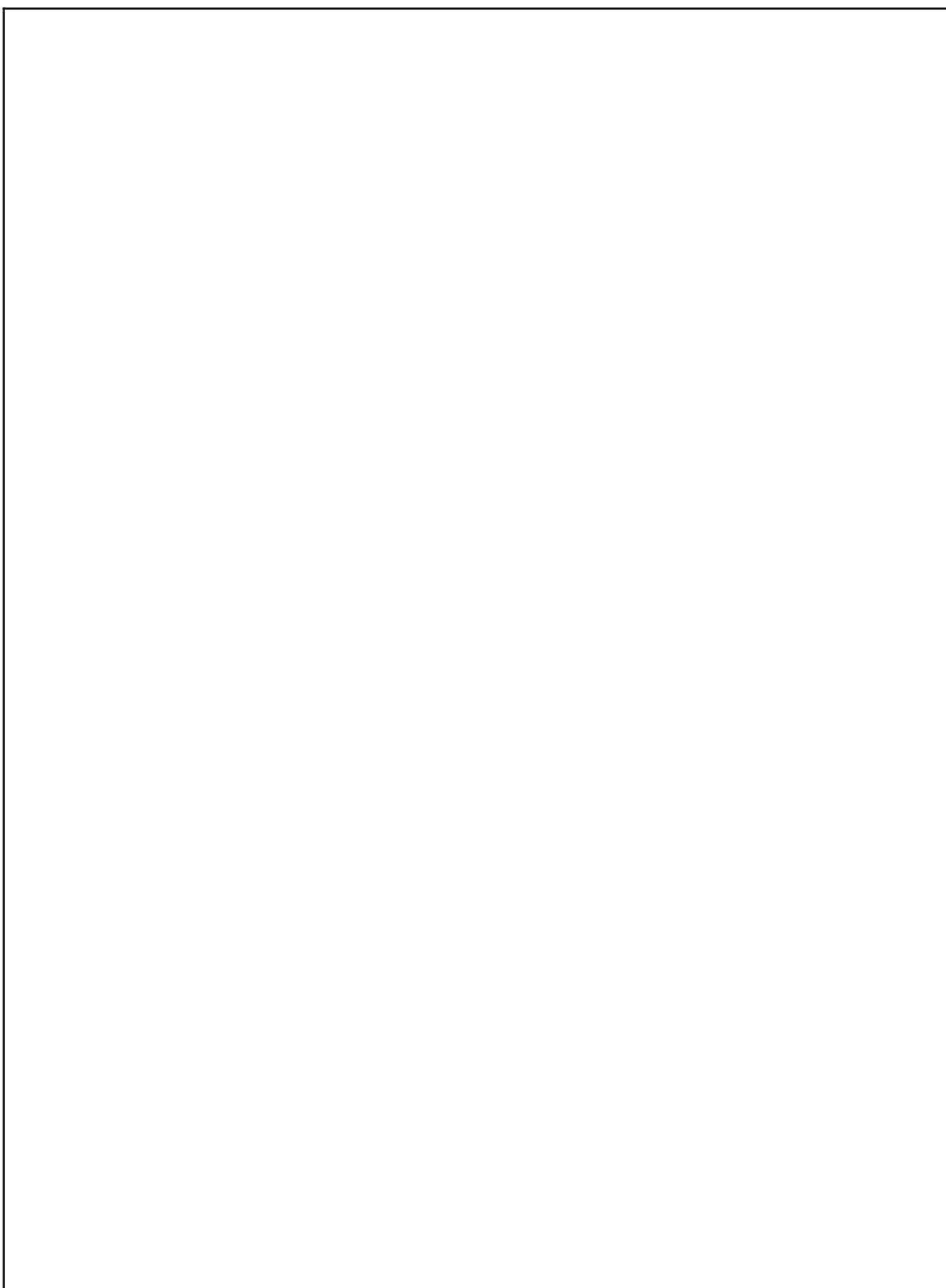
5-2

1				
2				

	3				
	4				
	5	/			
1					
2					
3					
4					
2					
5-3					
5-3					
			5000 ^{3/} +	31572-2015	6
			5 ³	5	/

				1234 -200 3	2
			10 ²	1 5 -2001	1
			10 ²	1 5 7-2001	1
					/
					/
					/
					/
			0.0 7 /	0.0 7 /	
				2014 14	2
				1.5	
				360 /	
				0.10 /	0.072 /
			3- 0.00 /	0.001 /	0.011 /
			0.01 /	0.004 /	3- 0.002 /
			0.0002 /	0.005 /	
				0.0 7 /	/
			0.0 7 /		
				2014 14	2
				1.5	
				4 0 /	
				0.144 /	
			0.0 6 /	3- 0.012 /	0.0014 /
				0.024 /	0.014 /
			0.002 /	0.0002 /	0.005 /
				0.007 /	3-
					/

	50	/	
		10	/



		0	0	0	0.184	0	0.184	+0.184
		120	0	0	360	0	4 0	+360
		0.036	0	0	0.10	0	0.144	+0.10
		0.024	0	0	0.072	0	0.0 6	+0.072
	3-	0.003	0	0	0.00	0	0.012	+0.00
		0.0004	0	0	0.001	0	0.0014	+0.001
		0.003	0	0	0.011	0	0.014	+0.011
		1.5	0	0	4.5	0	6	+4.5
		1.2	0	0	0.36	0	1.56	+0.36
		0	0	0	5.6	0	5.6	+5.6
		0	0	0	4.3 7	0	4.3 7	+4.3 7

+ + - -

1
2
3
4
5
6
7

10
11
12
13
14

1
2
3
4
5
6