
2017 9 19

1. _____ 30
2. _____
3. _____
4. _____
5. _____

6. _____

7. _____
8. _____

	13962558902		—	—
				[2017]43
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	C552
		60000		
	1832.6		80	4.4%
			2019	1
()	()	
		1-4		1-6
/	807	/	/	
/	100	/	/	
/	/		/	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	507t/a	2127.3t/a	A
			GB18918-2002	

()

1

) , () ,

2017 5 5

[2017]43

1

2

1832.6

80 4.4%

16

60000m²

330

7920

2019 1

3

3 500

50

: 3 3 6 2

1-1

1-1

PTA		50	0	50	/

4

1-2 1-3

1-2

		221.46m			
	8.8m	500t 2.5m	3	206m	45m
	10t	3	3	6	2
		0.8 m ²			

2

3

“

”

4

[2013]113

E

4

5

GB18918-2002

A

6

7

8

“

”

“

”

2018

5000mg/kg

2019

55000mg/kg

2017

“

”

9

30°45' 31°14' 120°21' 120°54'

23

8 318 205

60

1

2 4

42.87

31.6

9 15

/

“

1990 ”

1992 160

50

10%

2-1

2-1

1			15.8
			39.0
			-6.6
2			2.5m/s
			32.1m/s
3			101.6kPa
4			1069mm
5			SE 17.2%
			NW 5.4%
			SE 10.8%
6			2200h

533.13km²

160.6km²

30.1

26

4.1-2

3507

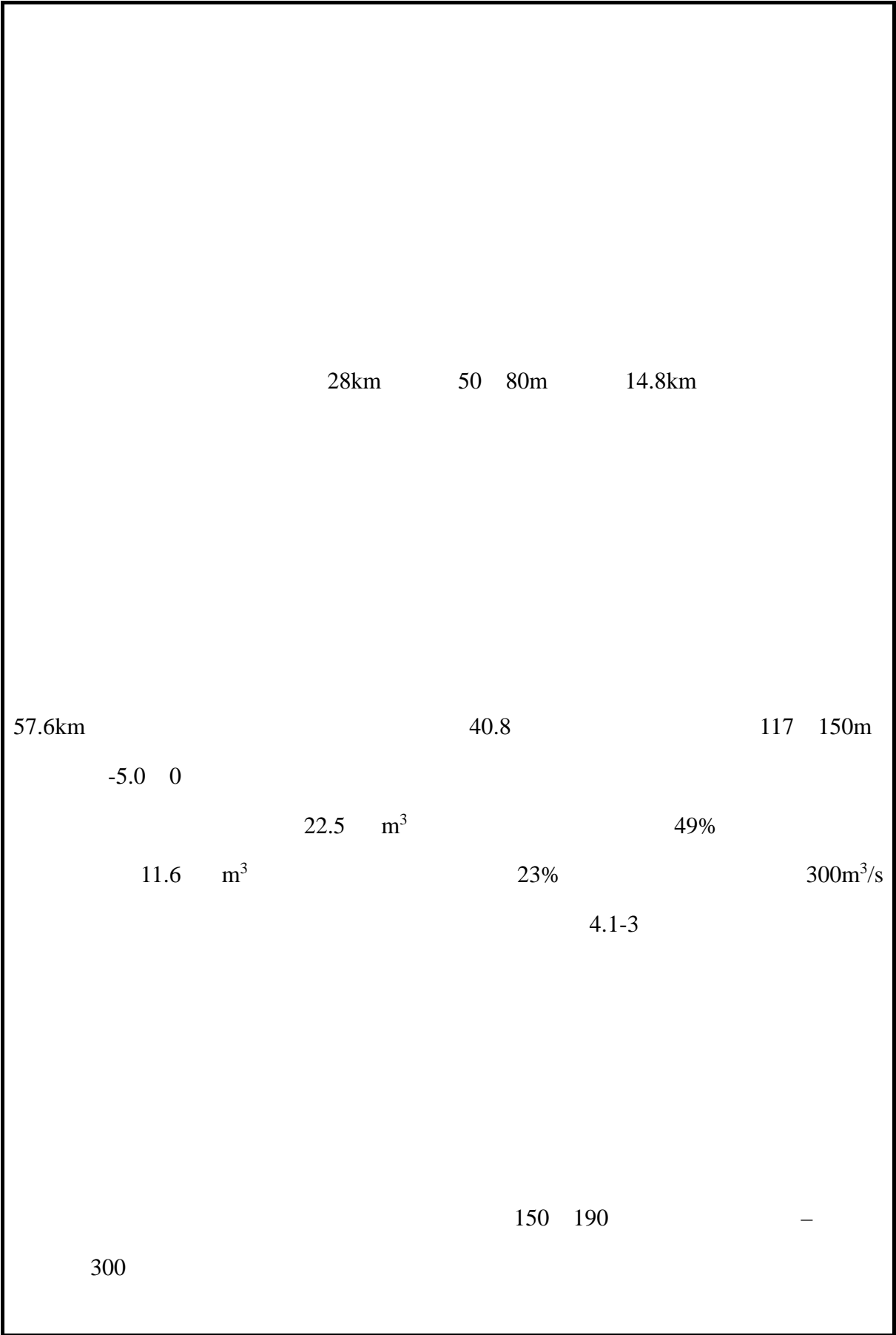
0.7m

538 m³

3658

0.8m

561 m³



1000 5000 / 5000
/
150
30 50

60

1 /

1 3 /

3 /

1 /

200 8000 /

10 500 /

30

20

PTA

20							
G1				G1			
0.5		2017 3 6 12		3-1		3-2	
NO ₂ SO ₂				PM ₁₀			
GB3095-2012							
3-1 SO₂ NO₂							
		mg/m ³			%		mg/m ³
G3	SO ₂	0.017~0.054		0		/	
	NO ₂	0.02~0.05		0		/	
3-2 PM₁₀							
		mg/m ³		%		mg/m ³	
G3	PM ₁₀	0.109~0.129		0		/	
GB3838-2002							
20							
W1				500			
9 3 11		2017 3		pH			
COD SS							
3-3 mg/L pH							
		pH		COD		SS	
W1		7.86		8		27.15	
		6~9		10		30	

Z2 Z3 Z4

Z2 Z3 Z4

2017 3 9 3 10

GB3096-2008 3

3-4

2; 4; 5; 6; 7; 8; 9; 10; 11; 12; 13; 14; 15; 16; 17; 18; 19; 20; 21; 22; 23; 24; 25; 26; 27; 28; 29; 30; 31; 32; 33; 34; 35; 36; 37; 38; 39; 40; 41; 42; 43; 44; 45; 46; 47; 48; 49; 50; 51; 52; 53; 54; 55; 56; 57; 58; 59; 60; 61; 62; 63; 64; 65; 66; 67; 68; 69; 70; 71; 72; 73; 74; 75; 76; 77; 78; 79; 80; 81; 82; 83; 84; 85; 86; 87; 88; 89; 90; 91; 92; 93; 94; 95; 96; 97; 98; 99; 100; 101; 102; 103; 104; 105; 106; 107; 108; 109; 110; 111; 112; 113; 114; 115; 116; 117; 118; 119; 120; 121; 122; 123; 124; 125; 126; 127; 128; 129; 130; 131; 132; 133; 134; 135; 136; 137; 138; 139; 140; 141; 142; 143; 144; 145; 146; 147; 148; 149; 150; 151; 152; 153; 154; 155; 156; 157; 158; 159; 160; 161; 162; 163; 164; 165; 166; 167; 168; 169; 170; 171; 172; 173; 174; 175; 176; 177; 178; 179; 180; 181; 182; 183; 184; 185; 186; 187; 188; 189; 190; 191; 192; 193; 194; 195; 196; 197; 198; 199; 200; 201; 202; 203; 204; 205; 206; 207; 208; 209; 210; 211; 212; 213; 214; 215; 216; 217; 218; 219; 220; 221; 222; 223; 224; 225; 226; 227; 228; 229; 230; 231; 232; 233; 234; 235; 236; 237; 238; 239; 240; 241; 242; 243; 244; 245; 246; 247; 248; 249; 250; 251; 252; 253; 254; 255; 256; 257; 258; 259; 260; 261; 262; 263; 264; 265; 266; 267; 268; 269; 270; 271; 272; 273; 274; 275; 276; 277; 278; 279; 280; 281; 282; 283; 284; 285; 286; 287; 288; 289; 290; 291; 292; 293; 294; 295; 296; 297; 298; 299; 300; 301; 302; 303; 304; 305; 306; 307; 308; 309; 310; 311; 312; 313; 314; 315; 316; 317; 318; 319; 320; 321; 322; 323; 324; 325; 326; 327; 328; 329; 330; 331; 332; 333; 334; 335; 336; 337; 338; 339; 340; 341; 342; 343; 344; 345; 346; 347; 348; 349; 350; 351; 352; 353; 354; 355; 356; 357; 358; 359; 360; 361; 362; 363; 364; 365; 366; 367; 368; 369; 370; 371; 372; 373; 374; 375; 376; 377; 378; 379; 380; 381; 382; 383; 384; 385; 386; 387; 388; 389; 390; 391; 392; 393; 394; 395; 396; 397; 398; 399; 400; 401; 402; 403; 404; 405; 406; 407; 408; 409; 410; 411; 412; 413; 414; 415; 416; 417; 418; 419; 420; 421; 422; 423; 424; 425; 426; 427; 428; 429; 430; 431; 432; 433; 434; 435; 436; 437; 438; 439; 440; 441; 442; 443; 444; 445; 446; 447; 448; 449; 450; 451; 452; 453; 454; 455; 456; 457; 458; 459; 460; 461; 462; 463; 464; 465; 466; 467; 468; 469; 470; 471; 472; 473; 474; 475; 476; 477; 478; 479; 480; 481; 482; 483; 484; 485; 486; 487; 488; 489; 490; 491; 492; 493; 494; 495; 496; 497; 498; 499; 500; 501; 502; 503; 504; 505; 506; 507; 508; 509; 510; 511; 512; 513; 514; 515; 516; 517; 518; 519; 520; 521; 522; 523; 524; 525; 526; 527; 528; 529; 530; 531; 532; 533; 534; 535; 536; 537; 538; 539; 540; 541; 542; 543; 544; 545; 546; 547; 548; 549; 550; 551; 552; 553; 554; 555; 556; 557; 558; 559; 560; 561; 562; 563; 564; 565; 566; 567; 568; 569; 570; 571; 572; 573; 574; 575; 576; 577; 578; 579; 580; 581; 582; 583; 584; 585; 586; 587; 588; 589; 590; 591; 592; 593; 594; 595; 596; 597; 598; 599; 600; 601; 602; 603; 604; 605; 606; 607; 608; 609; 610; 611; 612; 613; 614; 615; 616; 617; 618; 619; 620; 621; 622; 623; 624; 625; 626; 627; 628; 629; 630; 631; 632; 633; 634; 635; 636; 637; 638; 639; 640; 641; 642; 643; 644; 645; 646; 647; 648; 649; 650; 651; 652; 653; 654; 655; 656; 657; 658; 659; 660; 661; 662; 663; 664; 665; 666; 667; 668; 669; 670; 671; 672; 673; 674; 675; 676; 677; 678; 679; 680; 681; 682; 683; 684; 685; 686; 687; 688; 689; 690; 691; 692; 693; 694; 695; 696; 697; 698; 699; 700; 701; 702; 703; 704; 705; 706; 707; 708; 709; 710; 711; 712; 713; 714; 715; 716; 717; 718; 719; 720; 721; 722; 723; 724; 725; 726; 727; 728; 729; 730; 731; 732; 733; 734; 735; 736; 737; 738; 739; 740; 741; 742; 743; 744; 745; 746; 747; 748; 749; 750; 751; 752; 753; 754; 755; 756; 757; 758; 759; 760; 761; 762; 763; 764; 765; 766; 767; 768; 769; 770; 771; 772; 773; 774; 775; 776; 777; 778; 779; 780; 781; 782; 783; 784; 785; 786; 787; 788; 789; 790; 791; 792; 793; 794; 795; 796; 797; 798; 799; 800; 801; 802; 803; 804; 805; 806; 807; 808; 809; 810; 811; 812; 813; 814; 815; 816; 817; 818; 819; 820; 821; 822; 823; 824; 825; 826; 827; 828; 829; 830; 831; 832; 833; 834; 835; 836; 837; 838; 839; 840; 841; 842; 843; 844; 845; 846; 847; 848; 849; 850; 851; 852; 853; 854; 855; 856; 857; 858; 859; 860; 861; 862; 863; 864; 865; 866; 867; 868; 869; 870; 871; 872; 873; 874; 875; 876; 877; 878; 879; 880; 881; 882; 883; 884; 885; 886; 887; 888; 889; 890; 891; 892; 893; 894; 895; 896; 897; 898; 899; 900; 901; 902; 903; 904; 905; 906; 907; 908; 909; 910; 911; 912; 913; 914; 915; 916; 917; 918; 919; 920; 921; 922; 923; 924; 925; 926; 927; 928; 929; 930; 931; 932; 933; 934; 935; 936; 937; 938; 939; 940; 941; 942; 943; 944; 945; 946; 947; 948; 949; 950; 951; 952; 953; 954; 955; 956; 957; 958; 959; 960; 961; 962; 963; 964; 965; 966; 967; 968; 969; 970; 971; 972; 973; 974; 975; 976; 977; 978; 979; 980; 981; 982; 983; 984; 985; 986; 987; 988; 989; 990; 991; 992; 993; 994; 995; 996; 997; 998; 999; 1000

1

GB3095-2012

4-1

		mg/Nm ³	
SO ₂		0.06	GB3095-2012
	24	0.15	
	1	0.50	
NO ₂		0.04	
	24	0.08	
	1	0.20	
PM ₁₀		0.07	
	24	0.15	
		2.0	

2

GB3838-2002

4-2

4-2

mg/L pH

	pH	COD				BOD ₅			SS
	6~9	30	10	0.3	1.5	6	0.5	3	60

3

GB3096-2008 4a

GB3096-2008 3

4-3

4-3

dB(A)

3		65	55
4	4a	70	55

1

SO₂ NO_x

GB16297-1996 2

4-4

		mg/m ³
		1.0
SO ₂		0.40
NO _x		0.12
		4.0

N kw

2

pH COD

DB32/1072-2007

3

DB32/1072-2007

BOD₅ SS

GB18918-2002

A

4-5

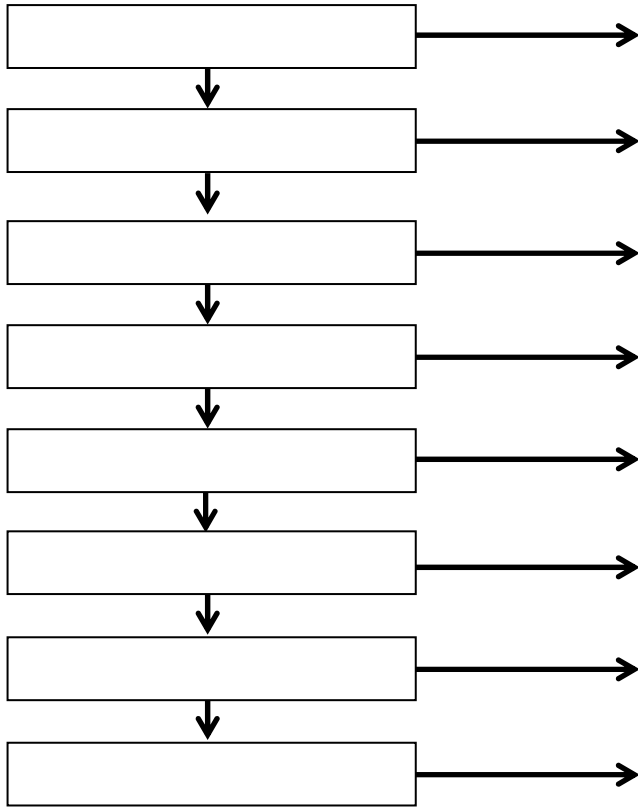
4-5

mg/L

	pH	COD	BOD ₅	SS						
	6-9	500	300	400	35	8.0	40	200	4000	20
	6-9	60	10	10	5()	0.5	15	30	—	1

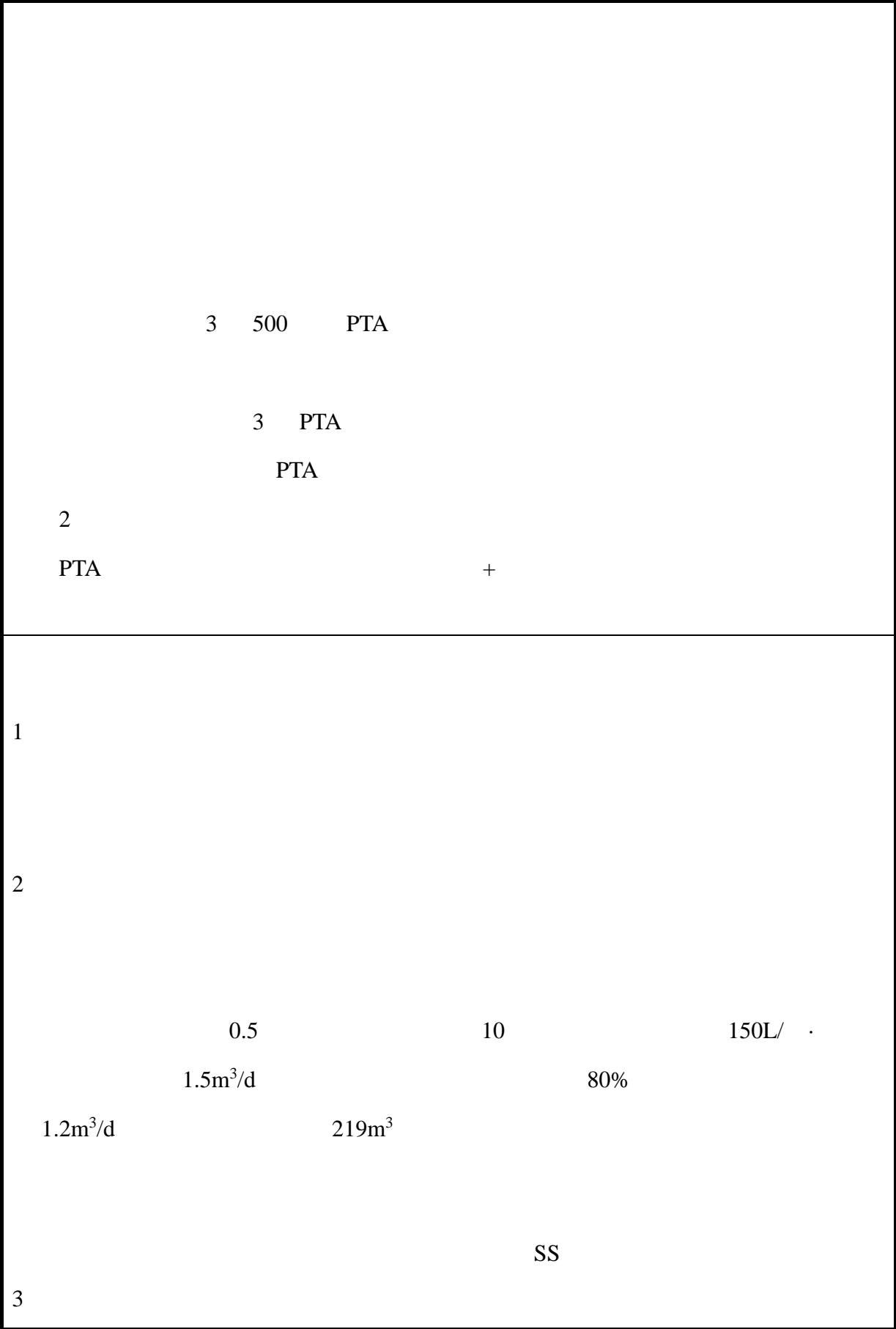
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5-1



5-1

:



3 500 PTA

3 PTA

PTA

2

PTA

+

1

2

0.5

10

150L/ ·

1.5m³/d

80%

1.2m³/d

219m³

SS

3

4

0.5kg/ .d

5kg/d

912.5Kg

5

1.

PTA

PTA

NOx 1340.44g/100km SO₂

97.82g/100km

134.04g/100km

500m/

20t

+

75 /

5-1

5-1

		SO ₂	NO _x	
	kg/d	0.037	0.503	0.050
	t/a	0.01	0.166	0.016

2.

JTS149-1-2007

450t/a

5000mg/L

1973

1978

5-2

5-2

t	/	t/d	t/a	mg/L	COD mg/L
500 PTA	3	0.27	450	5000	400
	/	/	450	/	/

190L/d

152L/d

500

6

2127.3t/a

3L/m²

577.5m²

7700m²

100

173.25m³/a

2310m³/a

16

120L/d

1.92t/d

0.8

1.536t/d

COD 400mg/L SS 200mg/L

35mg/L

4mg/L

$$Q = \psi \cdot q \cdot F$$

Q

L/s

ψ

F

hm²

q

L/s·hm²

$$q = 167 \times i$$

q——

L/s·hm²

i——

mm/min

P——

1

t——

15min

3.7-5

182.29L/s·hm²

196.87L/s

10

15

1771.83m³/a

SS COD

5-3

5-3

	m ³ /a									
			mg/L	t/a		mg/L	t/a			
507		COD	400	0.203		/	2634.3		2634.3 COD 0.158 SS 0.026 NH ₃ -N 0.013 TP 0.0013	
		SS	300	0.152		COD	400			1.053
			35	0.018		SS	150			0.395
			4	0.002			25			0.066
2127.3		COD	400	0.851		4	0.0265			
		SS	300	0.638						
			35	0.075						
			4	0.0085						
173.25		COD	200	0.034		—	100	0.017		
		SS	200	0.034		—	100	0.017		
1771.83		COD	200	0.354		COD	100	0.177		
		SS	200	0.354		SS	100	0.177		
472.3			5000	2.362			15	0.0071		
		COD	400	0.189		COD	50	0.024		

5.28t/a

16

1.0kg/(·)

2.25t/a

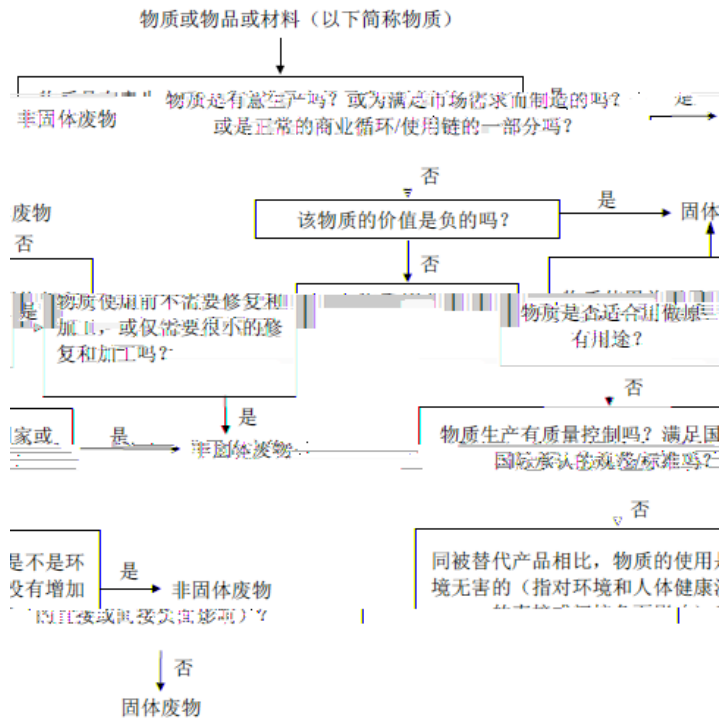
1.5kg/(·)

10kg

3.0t/a

1

5



5-2

5-5

5-5

					/			
1					5.28			
2					2.25			
3					3.0			

5-6

5-6

								/
1					-	-	-	5.28
2					-	-	-	2.25
3					-	-	-	3.0
								10.53

4

5-7

5-7

				(dB)	
1		10t-16m		85	3
2		20t		75 80	4
3		500	/	75 90	/

	()								
		CO	0.101t/a	0.101t/a	—	—	—		
		SO ₂	0.012 t/a	0.012 t/a					
		NO _x	0.166 t/a	0.166 t/a					
			0.016 t/a	0.016 t/a					
			507	2634.3	—	—	10		
		COD	400mg/L 0.203t/a	400 mg/ 1.053t/a					
		SS	300mg/L 0.152t/a	40 mg/L 0.105 t/a					
			35mg/L 0.018t/a	25 mg/L 0.066 t/a					
			4mg/L 0.002t/a	1.5 mg/L 0.004 t/a					
			2127.3						
		COD	400 mg/L 0.851t/a						
		SS	300 mg/L 0.638 t/a						
			35 mg/L 0.075 t/a						
			4 mg/L 0.0085 t/a						
			—	—	—	—			
			5.28	5.28					
			2.25	2.25					
			3.0	3.0					
		1							
		2							
		3							
		4							
		5							
		6							

1.

2.

3.

100m

4.

5.

SS

6.

[2013]113

4

1.

SO₂ NO_x

COD 23.1~23.5mg/L COD 0.11mg/L COD
 22.3mg/L COD 0.11mg/L COD 22.2~22.3mg/L
 COD 0.01mg/L

3.

75-95dB(A)

(HJ2.4-2009)

(Leqg)

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

L_{eqg} — dB(A)

L_{Ai} —i A dB(A)

T — s

t_i —i T s

(Leq)

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

L_{eqg} — dB(A)

L_{eqb} — dB(A)

a. (Adiv) (Aatm) (Agr)

(Abar) (Amisc) r0

(63Hz 8KHz 8) $L_p(r_0)$ (r0)

(r) 8

$$L_p(r) = L_p(r_0) - A_{div} + A_{atm} + A_{gr} + A_{misc}$$

b. A $L_A(r)$ 8

A ($L_A(r)$)

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

$L_{pi}(r)$ — (r) i dB
 L_i — i A dB

7-4 dB(A)

		Z2	Z3	Z4
		36.13	39.77	40.85
		52.8	50.9	51.1
		52.89	51.22	51.49
		70	65	65
		36.13	39.77	40.85
		46.9	45.2	45.5
		47.24	46.29	46.78
		55	55	55

- 1.
- 2.

Z2 Z3 Z4

45.28dB(A)

(GB12348-2008)

4.

7-5

		t/a				
		5.28		—	—	
		2.25		—	—	
		3.0		—	—	
		10.53				

5.

PTA

100

10

293

0.79%

1

2

3

4

VTS

VTS

“

AIS ”

5

6

7

8

9

	()			
		SO ₂ NO _x		GB16297-1996
		COD NH ₃ -N SS TP TN		
		COD		
	/	/	/	/
			/	
	/			
1				
2				
3				
4				
5				
6				

“ ”

780

4.1%

7-8 “ ”

	360	750	330	
			/	/
		COD SS		/
	/	/	/	5
		COD SS		0
		COD	/	
			GB12348- 2008	
				/
			/	
	50m			/

1									
500t	3			PTA	PTA				50
	PTA								
	1832.6					80			16
	330					7920			
2									
								20	
	G1			G1					
0.5		2017	3	6	12			3-1	3-2
						NO ₂	SO ₂		PM ₁₀
						GB3095-2012			
								GB3838-2002	
								20	
	W1				500				2016
16									2
SS								pH	COD
								20	
	Z3	Z4							
	3								

507t/a

2127.3t/a

3

GB12348-2008

4

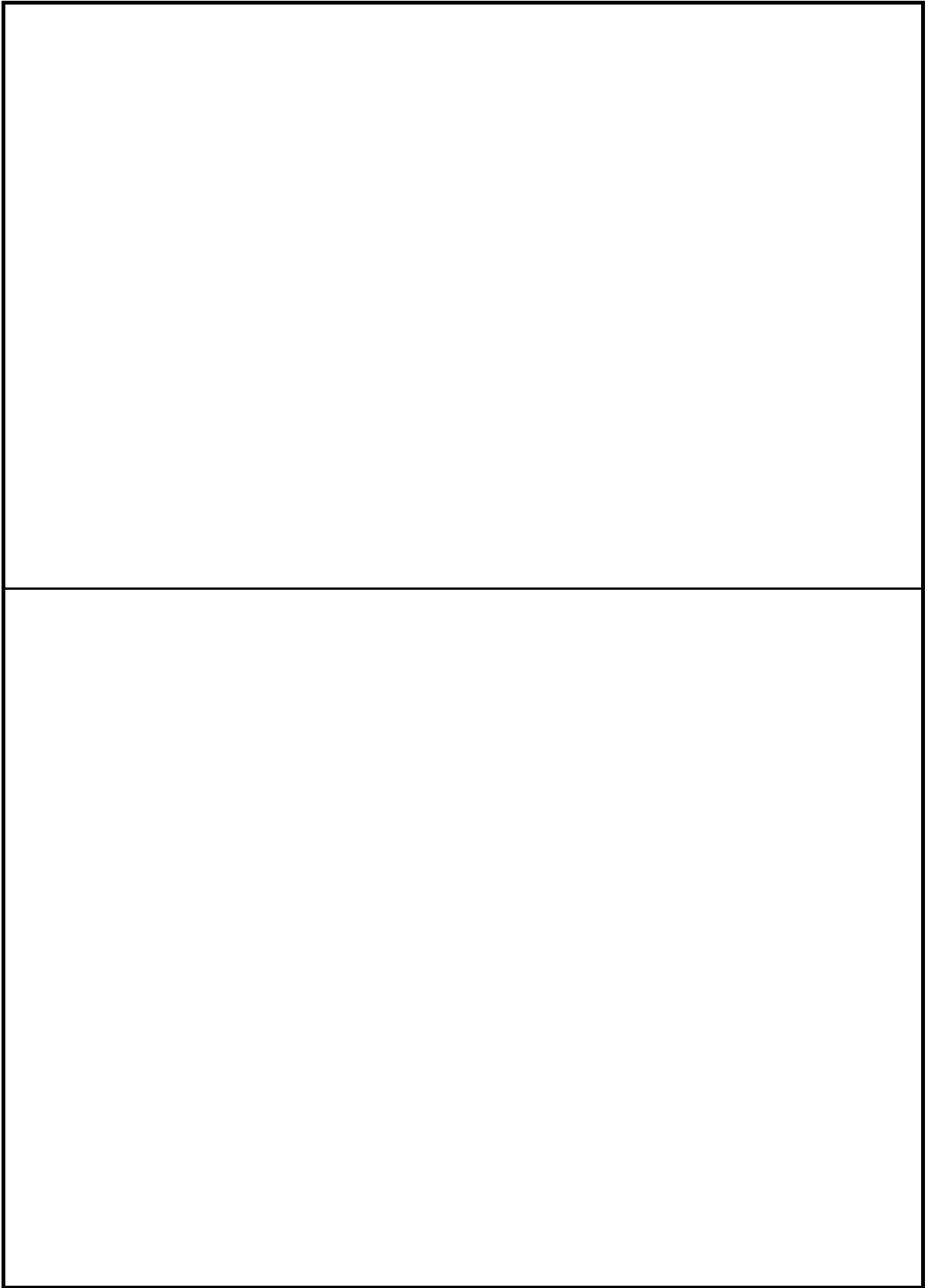
5

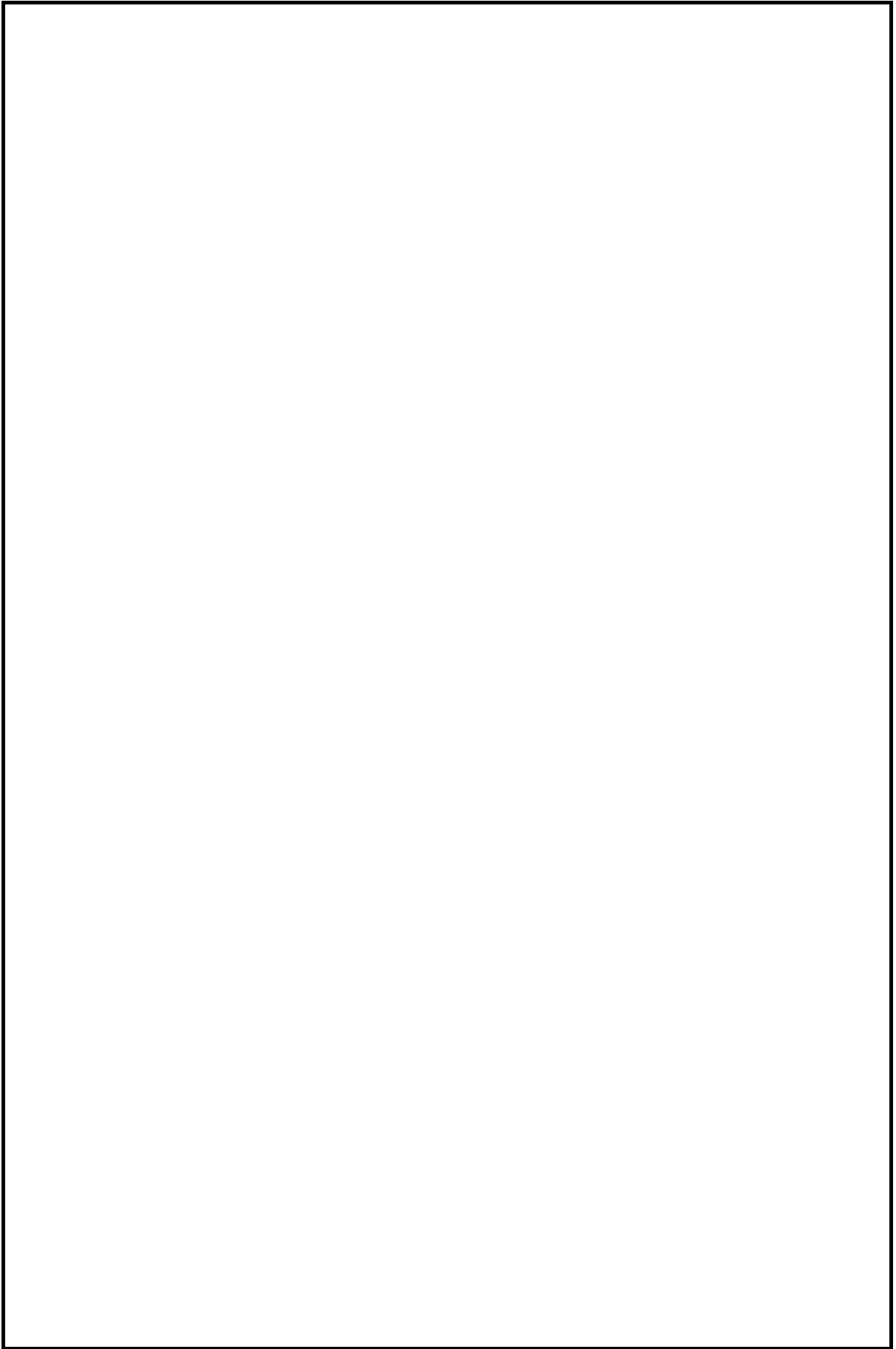
1

“ ”

2

3





1
2
10
1
2
3
4

1-2

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.