! " # $ % & ' ( ) * +
$ % , - . / 0 1 2 3 4
5 4 6 7 8 $ 9 : ;

! " # $ % & ' ( ) * + , -

! . / 0 1 2

< = > ?

! " # $ % & ' ( ) * + , - . / 0 1 2 3 4 5 6 2 7 8 9 : * ; < = > ? @ A = > B C * D E
. F G H 0 1 4 5 I J = > K L 9 : A 6 2 2 M % = N 8 * O P Q R S 0

编　委　会

@　　)　345

A　@　)　647　89:　;<=

B　　C　>?7　@　A　BCD　E　F　>GH

IJK　L　M　NOP　Q!R

n 6 2 o U p q r s |) - 2 3 v N

2 3 n 2 4 * 6 2 Q 5 M 6 7 - . / 0 * T 208 8 n 6 2 o U p q r s ^ 9 : " f M * * • ; 2 3 Q 5 # <n 6 2 o U p q r s 5 = > ?t @ A 1yz

o U p q r ^ $ l # 6 2 \ 3 7 8 ~ • B C D E F X z 6 2 Q 5 M 4 1 2 6 2 Y G 5 H I J o U K L A > M N [- # G J / 0 * 2 O P Q I R S T # o U a U { p q r V W (u<*?X + X ~ Y * O Z T) [\ # O P] ^ { " | p q r _ # * ` > ^ t @ A 2yz

* ` T) _ # n 6 2 o U p q r s O a 6 2 Q 5 M b c * a 4 |) Q # $ 6 2 z

6 2 V W D E d } b c _ # n 6 2 o U p q r s n (# $ 6 2 z 6 2 Q 5 M | e) < f g . h ? i 6 * { o U # $ 5 = < o U p q r j f g ?t w k # l • R > E y* ~ m o U n P 2 M \ 3 f o 2 p = > ~ • ! > M q r s m - z

1.

业指导书》

Q 5 t x N

6 2 k u N

p X	g U	p q r t x	p q r v X	H Y

2

业指设置》

6 2 o U p q r t x	
6 2 o U p q r v X	
G J O P N	

表 分

- 7

u o 6 p q v w x y 7

BDYCSY–ZW–01 T U V 0 W < X Y Z [A B o U p q r 1

BDYCSY–ZW–02 T U V 0 \ ] ^ Y Z [A B o U p q r 11

BDYCSY–ZW–03 _ V 0 \ ] ^ Y Z [A B o U p q r 17

BDYCSY–ZW–04 SF_6 0 \ ] ^ Y Z [A B o U p q r 23

BDYCSY–ZW–05 ` a E ; Y Z [A B o U p q r 29

BDYCSY–ZW–06 0 P V 8 K Z [A B o U p q r 37

BDYCSY–ZW–07 GIS t HGIS y Z [A B o U p q r 43

BDYCSY–ZW–08 b c d G e f g Y Z [A B o U p q r 51

BDYCSY–ZW–09 0 h Y ! i j : k Z [A B o U p q r 59

BDYCSY–ZW–10 l m n f A B o U p q r 67

BDYCSY–ZW–11 O o 0 P Y Z [A B o U p q r 73

BDYCSY–ZW–12 p : Z \ q X A B o U p q r 79

BDYCSY–ZW–13 r s 0 P Y Z [A B o U p q r 85

BDYCSY–ZW–14 _ V < X Y Z [A B o U p q r 91

BDYCSY–ZW–15 SF_6 E ; Y o U p q r 99

BDYCSY–ZW–16 0 P V 0 X] ^ Y A B o U p q r 105

BDYCSY–ZW–17 0 t V 0 X] ^ Y A B o U p q r 111

BDYCSY–ZW–18 u 1 [u 0 v w 8 A B o U p q r 119

TSSY–ZW–01 GIS Z \ q X A B o U p q r 147

TSSY–ZW–02 SF_6 = J Z [A B o U p q r 156

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TSSY–ZW–07	0 \ ] ^ Y ! " # $ % B o U p q r	200
TSSY–ZW–08	0 X] ^ Y ! " # $ % B o U p q r	209
TSSY–ZW–09	& ' T Z [A B o U p q r	219

X Y

1 ( ) % x 3
2 v ^ ; 7 3
3 o U \ 3 3
4 > M q r s ` y z { 4
5 o U • H 5
6 o U a U 6
7 7 8 { k i 6 ! % B ~ • 7

1 Z [\ ]

7 o U p q r ( ) Q T U V 0 W < X Y z

2 B L ^ _

` 2-1 B L ^ _

p X		) } J t x
1	GB 50150 ~ 2006 n 0 = ? = > ? 2 3 0 = 5 H Z [A B ~ • s
2	DL 408 ~ 1991 n 0 U > M 2 o $ 3 t ' 0 • A < 0 0 = M * ys

3 0 1 a b



4 e j k l m

4.1 0 W < X Y Z [A 2 Q 5 M 6 7 ! Q 5 o U e " 6 2 #
2 > M r p ` st v w x n n (1 2 3 > M q r $ % 2 o * • ; ! e " #
4.2 ` s ^ y T U V T j - 0 . 2 4 T c (U V) 1 2 0

2f01056 Tf10.5(•) Tj/F5+3 10.56 Tf10.32 0 TD (qr) Tj/F53 10

5 0 1 n o

5.1 M N p o

` 5-1 0 1 M N p o

2 p t x	2 4 I 2 o V J 1	+ d V J	, D V J
8 K 8 K 8 KAB 8 K A B	2	1	1

{"2?(q_#:=+Xz

6.9 $％&F'(yz)aGH$a

w8{|0\y${/XjOU*ABQd/~^B_Bu ^~/B_Bu _~^B/Bu+X*w8|9v?(q_#:=*O％&KL'(*{|0\oD(;<Z[~•#$lz

6.10 $9:; qI:;J54678$9:;!

6.10.1 ~R<•ABz2Q 35kV！uv0X-)<XY*$e)_XA;vhU166kV！u(0X-)<XY*$e)PQR|Uw8~RSTlUz

6.10.2 Z\qXABz{<XY#::j+XZ\qXAB*4ue)462P0X#ABaU*V4ue)^|0X#ABaUzW8e)XoYZ^|qXABaV*4LMAB5HP8z0X-){ 110kV！u(#<XY^37$k[+XZ\qXABzAB0Xo！|}Z[~•+Xz

6.10.3 ~R8M8K#xy^|0XAB}zM{0ABz0X-){ 220kV！u(#<XY*{@>?yBC+X#$xy^|0X}zM{0ABz0X-) 110kV#<XY*\2&'b]^y*$+XzM{0ABz)u％w<XYOM_#23#&'`az

6.10.4 [l0Xv#\7s[ABzdbFac$lPmz

6.10.5 %@"uz%@<XY#"u*BCy01"u,dz

7 A％mKL.r！;Mn

7.1 A％mKL.

7.1.1 T^efJ#gU*`zUTVy|{<XYY6T)*7=$l#y•_a4+XzUfTV_*P89fPY*:_!y;<"fM=％Bz

7.1.2 <XYN\0vw8Pm 1600kVA！uv0X-)R"<XY*4"w(o#"]"o|jQ:!o#41*:•w(o#"]"o|jQ:!o#211600kVAu(R"<XY*4"w(o#"]"o|jQ:!o#211:•w(o#"]"o|jQ:!o#11z

7.1.3 <XY#N\0vyM'vhF:•-wJoQq*"|<GD|％Q211DM'(v0vo D
d}Vt7-1yL)N

$$R_2 = R_1 \frac{T + t_2}{T + t_1}$$ t7-1y

V^N

R_1 R_2~~'({ t_1 $t_2$tiyy#0vo*

` 7-1 O P Q $ R S T U 6 7 $ * N O ~ P Q ?

' (" *K*	5	10	15	20	25	30	35	40	45	50	55	60
L) q J *A*	1.2	1.5	1.8	2.3	2.8	3.4	4.1	5.1	6.2	7.5	9.2	11.2
Y N 1. > ^ *K* - w ' (L r 20 i # & 2 o z 2. w 8 ' (u (s T ' • z												

t 3 y < X Y 0 X -) 35kV ! u (* , P 8 4000kVA ! u (y * | w 8 W + Q z W + Q y h F : • o " Q | + k | " S * { * ' v | D j Q 1.3 1 \ R_{60s} % Q 3000MΩ y * W + Q 4 D o + * P m z

t 4 y < X Y 0 X -) 220kV ! u (, P 8 120MVA ! u (y * $) 5000V & ' 0 v > w 8 T G p J z w (o y h F : • o " Q | + k | " S * { * ' v D j Q 1.3 z \ R_{60s} % Q 10 000MΩ y * T G p J 4 D o + * P m z

7.1.8 w 8 ~ R 8 M 8 K # X 7 K Y Z e K o tan*d* * | w s v p $ l N

t 1 y \ < X Y 0 X -) 35kV ! u (, P 8 8000kVA ! u (y * | w 8 X 7 K Y Z e K o tan*d* z

t 2 y E w ~ R # tan*d* o D | % Q h F : • A B o # 130 1 z

t 3 y \ w 8 y # ' (y h F : • A B ' (D w s y * 4 d > 7-2 L) 3 M , ' (y # J o + X Q q z

` 7-2 @ A B C D E } F **tan***d* " ! N O ~ P Q ?

' (" *K*	5	10	15	20	25	30	35	40	45	50
L) q J *A*	1.15	1.3	1.5	1.7	1.9	2.2	2.5	2.9	3.3	3.7
Y N 1. > ^ *K* - w ' (L r 20 i # & 2 o z 2. w 8 ' (u (s T ' • z 3. + X q % # ' (L) , A B ' 2 ; < 7 # L t u $ l y *	+ X v s * ` w E z									

7.1.9 w 8 ~ R 8 M 8 K # N \ { | 0 \ * | w s v p $ l N

t 1 y \ < X Y 0 X -) 35kV ! u (* , P 8 8000kVA ! u (y * | w 8 N \ { | 0 \ z

t 2 y A B 0 X ~ • | w s > 7-3 # $ l z \ 6] A B 0 X x 1min y * { / X j O U { | 0 \ z { | 0 \ o D $; < > 7-4 # $ l z

` 7-3 O P Q $ R S T U) a G H : ; $ T M n

~ R [l 0 X kV	6 y 10	20 y 35	63 y 330	500
N \ A B 0 X kV	10	20	40	60
Y N 1. ~ R [l 0 X 13.8kV ! 15.75kV y * d 10kV) ~ • 1 18kV y * d 20kV) ~ • 1 2. *) & ' < X Y z d E A ~ R 0 X -) # ~ • z				

` 7-4 S T U) a R T S G H $ a k T U N O V W G H $ a F

[l 0 X kV	A B 0 X { o kV	{ v p ' (y # ~ R { | 0 \ o μA							
		10 i	20 i	30 i	40 i	50 i	60 i	70 i	80 i
2 y 3	5	11	17	25	39	55	83	125	178
6 y 15	10	22	33	50	77	112	166	250	356
20 y 35	20	33	50	74	111	167	250	400	570
63 y 330	40	33	50	74	111	167	250	400	570
500	60	20	30	45	67	100	150	235	330

7.2 A % m K `

` 7-5 A % m K `

p X	{ k 7	{ k a V		
		W	H	S
1	< X Y A B			|

Y N 7 8 { k 7 ^ H N } 2 ~ % 7 1 W N • O 7 1 S N 7 z

> M T) * Q/ : N 0 = l							
# $ [1 Z 0 V W , t							
H Y							

j k Nt , y 7 & 5 & 55

&55WTj5&55

X Y

1 ( ) % x 13
2 v ^ ; 7 13
3 o U \ 3 13
4 > M q r s ` y z { 14
5 o U • H 15
6 o U a U 15
7 7 8 { k i 6 ! % B ~ • 16

1 Z [\ ]

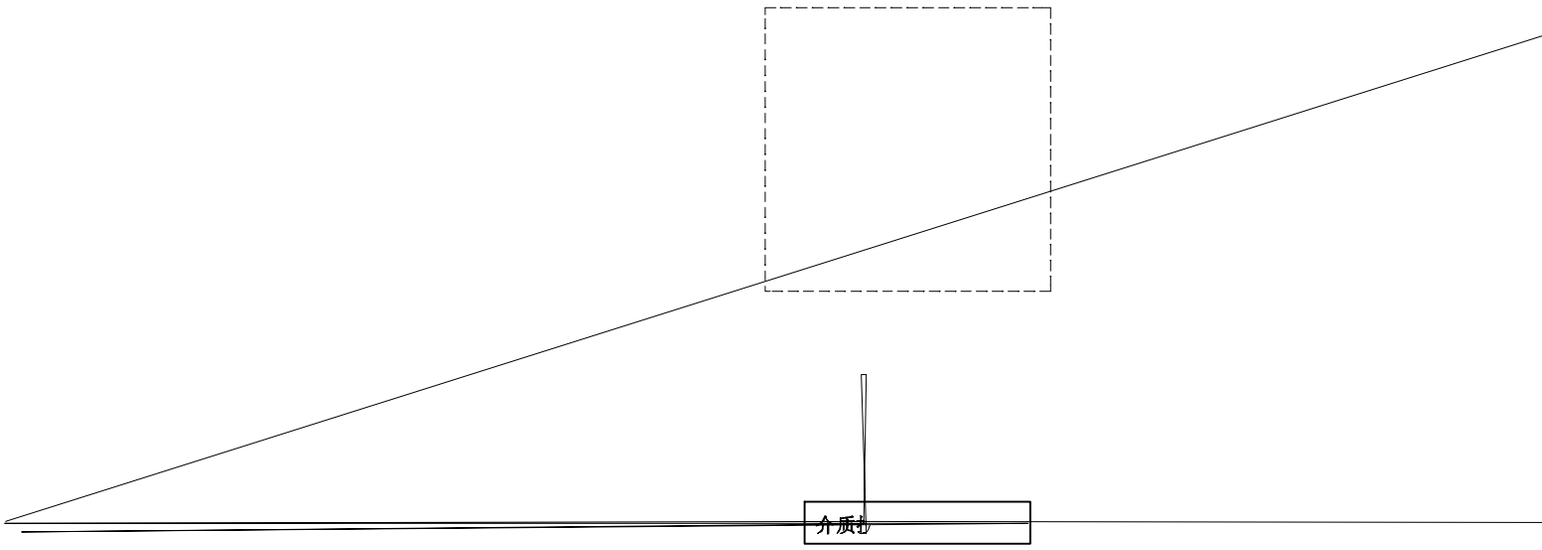
7 o U p q r ( ) Q T U V 0 \ ] ^ Y z

2 B L ^ _

` 2-1 B L ^ _

p X		) } J t x
1	GB 50150 ~ 2006 n 0 = ? = > ? 2 3 0 = 5 H Z [A B ~ • s
2	DL 408 ~ 1991 n 0 U > M 2 o $ 3 t ' 0 • A < 0 0 = M * ys

3 0 1 a b



c3-1 01 /d!abc

4 e f g h i j k l m

4.1 T U V 0 \ ] ^ Y Z [A B 4 * 6 2 Q 5 M 6 7 ! Q 5 o U e " 6 2 # A * | } n 0 1 4 5 6 2 > M & • q r p ` st v w x n p ` sy n (1 2 3 > M q r $ % 2 o * • ; ! e " # q r * ` > z

4.2 d n p ` s ^ y T U V 0 \ ] ^ Y Z [ A B " f o # n 0 1 4 5 > M 6 2 o U & st v w N BDYCSY-ZW-02-01/01 y* ' s # $ - . / 0 + X " ( G * ` * \ l q r -) * # $ = > W] ^ > M 6 2 o U & * > M W b * * 6 2 + d V , ' z

4.3 6 2 + d V * 2 q r { k i 6 * O { - . / (2 M J o U V W + X > M Z 0 * [1 Z 0 # o U V W + d Z > M i 6 2 - 3 4 o U e " A - 2 ^ z

4.4 > M 6 2 o U & 5 6 2 + d V # $ 6 b * 2 o O P u 7 D < y 4 8 9 .) 10 : * ; < 10 : C = @ > L o U & * { 2 o [; _ (Z Q 5 M] ? H @ z > ‡ M 2 e 5 z

t ? ~ R @ t S 3 % @	3	1	1
< Q % @	2	1	1
X 7 K Y ! 0 P 8 w 8	3	1	1
Y N o U V J 6 7 G J 2 3 8 $] J H z			

5.2 / U q r s U s ` p t

` 5-2 @ ? / U q r s U s ` p t

p X	t x	$ E / v X	k u	J 8	H Y
1	& ' 0 v w A v		MΩ	1	
2	p 1 V _) >		/	1	
3	X A < X Y		/	1	
4	~ • 0 \ ] ^ Y		/	1	
5	Z \ B > >		V/A	2	
6	X K w A v		/	1	
Y N n P 2 Y G ! v Y v > 6 7 G J 2 3 8 $] J H z					

6 0 1 # u

A B 4 Z C D 0 \ ] ^ Y > N t ! k l y E F _ G z

6.1 w 8 0 \ ] ^ Y # & ' 0 v z) 2500V & ' 0 v > w 8 , ? ~ R 2 t ? ! u # & ' 0 v 1) 2500V & ' 0 v > * S w 8 t ? ~ R • ! u # & ' 0 v 1 & ' 0 v o D $ _ Q 1000MΩ z

6.2 w 8 0 P V 0 \ ] ^ Y # k l # & ' 0 v * & ' 0 v o D $ j Q 1000MΩ 1 c k l 2 u & ' 0 v j Q 1000MΩ y * | w 8 n tan*d* z

6.3 0 \ ] ^ Y # T 3 % @ z) A B : Z H 0 I A 0 \ ] ^ Y # , ? ~ R 8 [*) p 1 _) > t J u { { 3 j 0 \ J (y # > K * S [{ E w # t ? ~ R j 1 (zZ H 0 I #< B ?T : I [3 , ? ~ R #< L1 ?* M y) L p 1 _) > # p 1 M 5 N e a _) * 3 < 0 ? O F z : _ P n H 0 I # < B ? A B : * M y) L p 1 _) > # p 1 M 5 N + a _) * 3 < 0 ? O F z

6.4 0 \ ] ^ Y , t ? ~ R N \ 0 v w 8 z

6.5 w 8] D R TA # @ t S 3 Q : z A B y 0 X T R @ F (r * u 0 \ & • * O U 0 X o * N < [l 0 \ *] D R | + X S Q A B z

6.6 < Q % @ z { , ? ~ R H " 0 \ * t ? ~ R [0 \ > * O U , t ? ~ R 0 \ o z

6.7 X K K Y N J ! 0 P 8 w 8 N , ? ~ R 2 k l # X K o | D % Q : • o # 1301 t T0.51 y* 0 P 8 y : • o # " S D ; : 0511 k l 2 t ? ~ z K o #

7.2 A％mK`

`7-1 A % m K `

pX	{ k 7	{ k a V		
		W	H	S
1	TUV0\]^YAB	|		
YN78{k7^HN}2~%71WN•O71SN 7z				

7.3 ！；Mn

78%Bdn10kVy500kV 9<0！J02378B+y$l~• L4KN<00=AB23s^# Q/CK

@ A 1 > M 6 2 o U &

B X 8 **BDYCSY-ZW-02-01/01**

2 o y •	2 o u 7	= > W	# $ > M W	# $ + d V

> M q r * ` ! { k i 6

p X	A B t x	q r C D	q r -)	q r { k i 6
1	E A F c G 0 H	q 0	! _ q r	
2	/ X A B < 3 ^ ' 5 0 X 6 7	5 H " K	! ^ - q r	
3	A B 0 u D H l	5 H g K	! ^ - q r	
4	A B n o a 5 = > M x p	q 0	! ^ - q r	
5	/ X A B < 3 ^ % i 6 D 3 u	q 0	! / q r	
6	- / o U > M D i 6 D [\	. 2	! / q r	
7	A B 0 u D H l	5 H g K	! ^ - q r	
8	A B 5 H a [u R [u D b	5 H g K	! _ q r	
9	8 9 : A	5 H " K	! ^ - q r	
10	| [A B 0 u y q 0	V W X Y	! / q r	
11	0 \ ] ^ Y t ? # n ;	5 H K L	! ^ - q r	
12	E T y } 0 5 H > M U			

> M T) * Q/ : N 0 = l
$ [1 Z 0 V W , t
H Y

j k Nt , y 7 & 5 # $ = > W] ^ * # $ > M W b * * # $ + d V , ' 5 1 z # $ + d V n 2 4 * 2 q r { k i 6 O 2 O zt t y 2 o O P u 7 > M i 6 D < y 7 & 3 x 4 .) 4 : * 5 6 | = @ > & *) _ (Z H @ 1 \ V W ' 5 < 7 y * | { H Y p % & < 7 / 0 z 2 @ S V W + X Z 0 * O , t \ \ zt R y | 6 7 # $ # A % x A K L * T) > M * R y R y

> & 7 y 7 , t t (y) Tj / F 9 . 1 2 7 4 n n 5 f 9 . 1 2 0 T D ! M i o y 7

X Y

1 ( ) % x 19
2 v ^ ; 7 19
3 o U \ 3 19
4 > M q r s ` y z { 20
5 o U • H 21
6 o U a U 21
7 7 8 { k i 6 ! % B ~ • 22

1 Z [\ ]

7 o U p q r ( ) Q _ V 0 \ ] ^ Y z

2 B L ^ _

` 2-1 B L ^ _

p X		) } J t x
1	GB 50150 ~ 2006 n 0 = ? = > ? 2 3 0 = 5 H Z [A [~
2	DL 408 ~ 1991 n 0 U > M 2 o $ 3 t ' 0 • A < 0 C = N

3 0 1 a b

c3-1 01 /d!abc

交流耐压

4 e f g h i j k l m

4.1 _ V 0 \ ] ^ Y Z [A B 4 * 6 2 Q 5 M 6 7 ! Q 5 o U e " 6 2 # A * | } n 0 1 4 5 6 2 > M & • q r p ` st v w x n p ` sy n (1 2 3 > M q r $ % 2 o * • ; ! e " # q r * ` > z

4.2 d n p ` s ^ y _ V 0 \ ] ^ Y Z [ A B " f o # n 0 1 4 5 > M 6 2 o U & st v w N BDYCSY-ZW-03-01/01 y* ' s # $ - . / 0 + X " ( G * ` * \ l q r -) * # $ = > W] ^ > M 6 2 o U & * > M W b * * 6 2 + d V , ' z

4.3 6 2 + d V * 2 q r { k i 6 * O { - . / (2 M J o U V W + X > M Z 0 * [1 Z 0 # o U V W + d Z > M i 6 2 - 3 4 o U e " A - 2 ^ z

4.4 > M 6 2 o U & 5 6 2 + d V # $ 6 b * 2 o O P u 7 D < y 4 8 9 .) 10 : * ; < 10 : C = @ > L o U & * { 2 o [; _ (Z Q 5 M] ? H @ z 6 b *62bo* 2 o 1]] y 4 M ( ]) T] (F 5 6 . 3 2 0 2 . 9 0 2 D

~RN\0vw8	2	1	1
t?~R@tS3%@	3	1	1
<Q%@	3	1	1
X7KY！0P8w8	3	1	1
Z\qXAB	4	1	1
YNoUVJ67GJ238$]JHz			

5.2 /UqrsUs`pt

`5-2 @?/UqrsUs`pt

pX	t x	$E/vX	ku	J8	H Y
1	&'0vwAv		MΩ	1	
2	p1V_)>		/	1	
3	XA<XY		/	1	
4	~•0\]^Y		/	1	
5	Z\B>>		V/A	2	
6	k"QXY			1	
7	F\Y			1	
8	AB<XY		/	1	
YNnP2YG！vYv>67GJ238$]JHz					

6 01#u

6.1 AB4ZCD0\]^Y>NEF_Gz

6.2 w80\]^Y#&'0vz）2500V&'0v>w8，?~R2t?！u#&'0v1）2500V&'0v>*Sw8t?~R•！u#&'0v1&'0voD$_Q 1000MΩz

6.3 w80\]^Y#kl#&'0v*&'0voD$jQ 1000MΩzckl2u&'0vjQ 1000MΩy*|w8n tan*d*z

6.4 0\]^Y#T3%@z）AB：ZH0IA0\]^Y#，?~R8[*）p1_）>tJu{{3j0\J（y#>K*S[{Ew#t?~Rj1（zZH0I#<B?T：I[3，?~R#<L1?*Myｊ*

b]^y*|./6]#w80*w80\tN\oy,UD$;<[l0\ta!6oy#501z

7.1.3 w8]DR TA#@tS3Q：NMDu0\]^Y#S3"]Qq*|+|V"Sz

7.1.4 <Q%@|yk"•*s"wz

7.1.5 0\]^YqXAB8Mnf7JAB,Q+X*{$lAB0Xv 1min*D72*+(*#oz

7.2 !;Mn

78%Bdn 10kV y 500kV 9<0!J02378B+y$l~• L4KN<00=AB23s ^# Q/CSG > 4-8.1.1 y 4-8.1.3 Q/CSG > 4-8.2.1 y 4-8.2.4 PmFXz

@ A 1 > M 6 2 o U &

v w N **BDYCSY-ZW-03-01/01**

2 o y •	2 o u 7	= > W	# $ > M W	# $ + d V

> M T) * Q/ : N 0 = l
$ [1 Z 0 V W , t

H Y

4

X Y

1 ( ) % x 25
2 v ^ ; 7 25
3 o U \ 3 25
4 > M q r s ` y z { 26
5 o U • H 27
6 o U a U 27
7 7 8 { k i 6 ! % B ~ • 28

5.1 M N p o

` 5-1 0 1 M N p o

2 p t x	4 I 2 o V J	+ d V J	, D V J
& ' 0 v w 8	2	1	1
T 3 % @	2	1	1
~ R N \ 0 v w 8	2	1	1
t ? ~ R @ t S 3 % @	3	1	1
< Q % @	3	1	1
SF_6 = J 8 9 3 A B	2	1	1
Z \ q X A B	4	1	1
Y N o U V J 6 7 G J 2 3 8 $] J H z			

5.2 / U q r s U s ` p t

` 5-2 @ ? / U q r s U s ` p t

p X	t x	$ E / v X	k u	J 8	H Y
1	& ' 0 v w A v		MΩ	1	
2	p 1 V _) >		/	1	

3 461.04 TD (2) Tj/* 0 TD17.524 TD (2) Tj/* 0 TD17.524 TD (2)lN2s &'s wAs / 1

7.1 A % m K L .

7.1.1 w 8 & ' 0 v o N | w s $ 3 A • h = > P m z

7.1.2 M u X M $ E M c ? 0 \ ] ^ Y , t ? ~ R # N \ 0 v A : ! o # " (D $ % Q 10 1 z \ b] ^ y * | . / 6] # w 8 0 \ * w 8 0 \ t N \ o y , U D $; < [l 0 \ t b 1 o y # 50 1 z

7.1.3 w 8] D R TA # @ t S 3 Q : N M D u 0 \ ] ^ Y # S 3 "] Q q * | + | V " S z

7.1.4 < Q % @ | y k " • * s " w t 0 \ ] ^ Y # < Q R Z (! " # % B * { : • y b d + X < A B * > ? y D / b < G z { Z [A B y * 2 < Q A B * c M c Q * 2 3 % @ * D C) 0 \ ] ^ Y A B Y d % @ yz

7.1.5 0 \ ] ^ Y q X A B 8 M n f 7 J A B , Q + X *{ $ l A B 0 X v 1min *D 7 2 *+ (* # o z

7.2 A % m K `

` 7-1 A % m K `

p X	{ k 7	{ k a V		
		W	H	S
1	SF_6 0 \ ] ^ Y A B			
Y N 7 8 { k 7 ^ HN } 2 ~ % 7 1 WN • O 7 1 SN 7 z				

7.3 ! ; M n

7 8 % B d n 10kV y 500kV 9 < 0 ! J 0 2 3 7 8 B + y $ l ~ • L 4 K N < 0 0 = A B 2 3 s ^ # Q/CSG > 4-7.1.1 y 4-7.1.3 Q/CSG > 4-7.2.1 y 4-7.2.4 P m F X z

@ A 1 > M 6 2 o U &

v w N **BDYCSY-ZW-04-01/01**

2 o y •	2 o u 7	= > W	# $ > M W	# $ + d V

> M q r * ` ! { k i 6				
p X	A B t x	q r C D	q r -)	q r { k i 6
1	E A F c G 0 H	q 0	! _ q r	
2	/ X A B < 3 ^ ' 5 0 X 6 7	5 H " K	! ^ - q r	
3	8 9 : A	5 H " K	! ^ - q r	
4	- / o U > M D i 6 D [\	. 2	! / q r	
5	A B 0 u D H l	5 H g K	! ^ - q r	
6	/ X A B < 3 ^ % i 6 D 3 u	q 0	! / q r	
7	A B n o a 5 = > M x p	q 0	! ^ - q r	
8	[q SF_6 = J < [^ \	e f X B	! _ q r	
9	A B 5 H a [u R [u D b	5 H g K	! _ q r	
10	A B 5 H E ? y > M D i 6 D [\	5 H " K	! / q r	
11	| [A B 0 u y q 0	V W X Y	! / q r	
12	0 \ ] ^ Y t ? # n ;	V W X c 5 H : 0 T D ( ) T j / F 5 + 1 9 2 T D (#) T j / F 5 + 2 9 . 1 F 5 + 1 9 .		

12 9.8 146 TD /F5+1 9.154 Ti /F5+1 9.17+3 90 Tc (Xc) Ti /F(V) Ti /F57.1292 0.96 2 Tf 9.8 113.76 /F5+1 9.154 Ti /F5+1 9.17+3 90 Tc (Xc) Ti /F(V) Ti /F57.

> M T) * Q/ : N 0 = l							
# $ [1 Z 0 V W , t							
H Y					>W/F1 9.15+3 Tf18.24 re8080 #$/F1 9.15+2 Tf18.24 080 6D/F1 9.15		

\ ] ^ _ U V W : ; 0 1 2 3 4

v w N BDYCSY-ZW-05

33 7 78{ki6!%B~•

32

31 4 >M

X Y 1 ()%x

3

1 Z [\ ]

7 o U p q r ( ) Q ` a E ; Y z

2 B L ^ _

` 2-1 B L ^ _

p X		) } J t x
1	GB 50150 ~ 2006 n 0 = ? = > ? 2 3 0 = 5 H Z [A B ~ • s
2	DL 408 ~ 1991 n 0 U > M 2 o $ 3 t ' 0 • A < 0 0 = M * ys

3 0 1 a b 4c 3 9 9 7 1 2 9 T a b c T r e g 1 ¥ e 0 5 4 1 0 5 a E Y Z 5 A B 4 1 6 2 Q 5 M 6 4 Q 5 8 0 2 - 1 2 = 8 4 T D 1 4 5 6 2 F M 8 1 6 2 1 5 2 6 8 3 5 1 8 4 0 c T 1 6 2 1

外观检

pX	A B t x	qrCD	qr-)	qr{ki6
5	AB0uDHl	5HKL	^-qr	AB4|)vYw80u0X*\]wsABPm
6	AB5HE?y>MDi6D[\	5HKL	/qr	E?y2oVWBC6O(P gVpME?

4 _) > c 1

)AB<XY QXYR;,D/XZ\);o /XZ\0u**S2E;YC"#s[st2u *[stE#•+XqXABtGJABaU•Sx3ABZ\qXABM*yz

7 A%mKL.r!;Mn

7.1 A%mKL.

7.1.1 w8E;YnqP#* s[y•*w8* s[#M_3*w8s[<3^qP[q_#vZy•z

7.1.2 w8&'Py#&'0vo*D|_Q 1200MΩz

7.1.3 w8C"q0);#0vo|wshF=>#A#$lz

7.1.4 Z\qXABz|{E;Ys[!*[stv+XZ\qXAB1\{s[stv+Xy*AB0X|ws> 7-1 #$l1\{*[stv+Xy*`azj{E#•#AB0X|wshF=>#A#$l*AB^D|'5#23{0z

`7-1 VaRTS :;$T

[l0X kV	3/2o0X kV	1min 2Pq10X {o*kV			
		"2u	"•	E;YE#	lmE#
3	3.6	25	25	25	27
6	7.2	32	32	32	36
10	12	42	42	42	49
35	40.5	95	95	95	118
66	72.5	155	155	155	197
110	126	200	200	200	225
		230	230	230	265

7.1.5 w8E;YnqP#* s[y•*w8* s[#M_3*w8s[<3^qP[q_#vZy•z

7.1.6 s[<3^qP[q_#vZy•N40.5kV uvE;YD|%Q 2ms 140.5kV !u(E;YD|%Q 3msz

7.1.7 w8|{E;Y[l5o0X!|X#Avz

7.1.8 -wJo|wshF=>#A#$lz

7.1.9 w8* s[:k!s[[qY:k#&'0vo*D|_Q 10MΩ1N\0voyhF:•ABo"Q|+k|"Sz

7.1.10 E;Y5Fgi#AB*|wsvp$lN

t1y s[5o#5o0X{851y1101U_ny5Fgi|4<Foz

t2y *[5o#5o0X{%Q651U_ny*|4<u*[1\jQ301U_ny*D|*[z

7.2 A%mK`

`7-2 A % m K `

pX	{k7	{kaV		
		W	H	S
1	`aE;YAB	|		
YN78{k7^HN}2~%71WN•O71SN 7z				

7.3 ！；Ｍｎ

７８％Ｂｄｎ10kVｙ500kV ９＜０！Ｊ０２３７８Ｂ＋ｙ＄ｌ～• Ｌ４ＫＮ＜００＝ＡＢ２３ｓ ^ # Q/CSG ＞ 4-11.1.1 Q/CSG ＞ 4-11.2.1ｙ4-11.2.2 ＰｍＦＸｚ

@A1 >M62oU&

vwN **BDYCSY-ZW-05-01/01**

2oy•	2ou7	=>W	#$>MW	#$+dV

>Mqr*`!{ki6

pX	ABtx	qrCD	qr-)	qr{ki6
1	ABVW[: ^!	5HgK	!^-qr	
2	EAFcG0H	q0	!_qr	
3	/XAB<3^ '50X67	5H"K	!^-qr	
4	AB5Ha[u R[uDb	5HgK	!_qr	
5	AB0uDHl	5HgK	!^-qr	
6	-/oU>M D i6D[\	.2	!/qr	
7	5H?{^|0	q0	!^-qr	
8	AB0uDHl	5HgK	!^-qr	
9	ghZFM*	CX.2	!^-qr	
10	/XAB<3^ %i6D3u	q0	!/qr	
11	ABnoa5= >Mxp	q0	!^-qr	
12	89:A	5H"K	!^-qr	
13	H	%i6D		

>XXF5+6 9.12 Tf 9.12 0 TD (Mx) T0pF5+4 9.12 Tf 18 0 T T8 rersF5+4 9.12 Tf 9.12 0D 4(X

^ABF1 9.12 0 TD (6D) TilF1 9.1212 Tf 9.12 0 TD (Mx) Ti; Tc (12124Tf 8.88 0 T8 re) Ti dF1 9.121

> M T) * Q/ : N 0 = l							
# $ [1 Z 0 V W , t							
H Y							

j k Nt , y 7 & 5 # $ = > W] ^ * # $ > M W b * * # $ + d V , ' 5 1 z # $ + d V n 2 4 * 2 q r { k i 6 O 2 O zt t y 2 o O P u 7 > M i 6 D < y 7 & 3 x 4 .) 4 : * 5 6 | = @ > & *) _ (Z H @ 1 \ V W ' 5 < 7 y * | { H Y p % & < 7 / 0 z 2 @ S V W + X Z 0 * O , t \ \ zt R y | 6 7 # $ # A % x A K L * T) > M * Q R : N 0 = l 丰 8 y \ q r -) y & • q r -) D , d y * Q 5 M | R S " f V W = @ + X q r $ % O k l i 6 丰 9 y & • q r -) y q r { k i 6 { n 2 4 # $: < ; ?zt < y , t D = M t N > , t # y ! o } & • L z

1 Z [\ ]

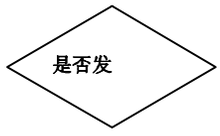
7 o U p q r ( ) Q 0 P V 8 K z

2 B L ^ _

` 2-1 B L ^ _

p X		) } J t x
1	GB 50150 ~ 2006 n 0 = ? = > ? 2 3 0 = 5 H Z [A B ~ • s
2	DL 408 ~ 1991 n 0 U > M 2 o $ 3 t ' 0 • A < 0 0 = M * ys

3 0 1 a b



> 4-1 o U e " > M & • q r p `

p X	A B t x	q r C D	q r -)	q r { k i 6
1	A B 5 H a [u R [u D b	5 H K L	_ q r	A B 4 * | \ ` % @ [u : 8 [4 < * [u b f
2	A B n o a 5 = > M x p	V W X c	^ - q r	A B n o B C d $ l 5 = > M x p A ~ r s - > M i 6 * O > >

6 0 1 # u

6.1 Z 8 K U m A f g n < [u z

6.2 8 K # & ' 0 v w 8 z) 2500V & ' 0 v > * S w 8 q 0 D 2 k l A j k l 2 U m t u y # & ' 0 v z

6.3 8 K # X 7 K Y Z e K A 0 P o w 8 z) X 7 K Y w 8 v * S w 8 8 K # q 0 D 2 j 8 K j 8 K 2 U m X 7 K Y Z e K A 0 P o 1) e [U w 8 q 0 D 2 j 8 K X 7 K Y Z e K A 0 P o 1) 6 [U w 8 k l 2 U m t u y X 7 K Y Z e K A 0 P o z w 8 y P % & A B ' 2 A K L ' (? (z

7 A % m K L . r ! ; M n

7.1 A % m K L .

7.1.1 A B < 3 ^ B C $ & ' 1 I L _ G z

7.1.2 A B 5 H b c 4 5 B C > M 4 < [u z

7.1.3 A B [: B C e \ * / X | : W 4 q A * O y A F 8 [n o * / X : y l K : [u : D q ~ S Z • z

7.1.4 66kV ! u (# 0 P u 8 K * | w 8 < t X j 8 K ? 2 U m R < w 8 j 8 K ? 2 U m # & ' 0 v z e) 2500V & ' 0 v > w 8 * & ' 0 v o D | _ Q 1000MΩ z

7.1.5 w 8 20kV ! u (_ : 8 K # n & ' X 7 K Y Z e K o tan*d* A 0 P o * | w s v p $ l N { { ' D _ Q 10 i # # A v * 8 K # X 7 K Y Z e K o tan*d* D | % Q > 7-1 # $ l z

` 7-1 y z @ A B C D E } F **tan***d* M n

8 K n & ' D u		tan*d* 3 % o
0 P V	T U l	0.7 t 500kV 8 K 0.5 y !
	3 U l	0.7 "
	3 # l	1.0 t 66kV ! u v 0 X -) 8 K 1.5 y ! "
	$ % & '	1.5
	= J	1.5
	b g * s & ' (	0.7
! O p # 0 X q) ~ x 0 X z " 2 20kV ! u (0 P V) 3 R 3 l 8 K # * h F * n tan*d* o 4 2 R 2.5 z (b g * s & ' 8 K # X K A B * $ { _ + K L v + X z Y N 0 P V 8 K # - w 0 P 8 o y h F * s J o R : • A B o " Q * n " o | { 0 5 1 % x O z		

7.2 A % m K `

` 7-2 A % m K `

p X		{ k a V

7.3 ！；Ｍｎ

７８％Ｂｄｎ10kVｙ500kV ９＜０！Ｊ０２３７８Ｂ＋ｙ＄ｌ～• Ｌ４ＫＮ＜００＝ＡＢ２３ｓ^# Q/CSG＞4-1.1.10 Q/CSG＞4-1.2.6 Ｐｍ Ｆ Ｘｚ

@A1 >M62oU&

vwN**BDYCSY-ZW-06-01/01**

2oy•	2ou7	=>W	#$>MW	#$+dV

>Mqr*`!{ki6

pX	ABtx	qrCD	qr-)	qr{ki6
1	EAFcG0H	q0	!_qr	#$oU|DEFX"f>M$3!>M=>i6*O=7fYlDcQuvi6N
2	/XAB<3^'50X67	5H"K	!^-qr	![AB4|)vYw80u0X*\]wsABPmz
3	/XAB<3^%i6D3u	q0	!/qr	!AB4*|\`%@[u:8[4<*[ubfz
4	ABnoa5=>Mxp	q0	!^-qr	!n`AB45+dV\`%@AB[:z
5	AB0uDHl	5HgK	!^-qr	!ABnoBCd$l5=>MxpA~rs->Mi6*O>tgV+X,Dz
6	89:A	5H"K	!^-qr	!DEd}$l\35oz
7	,$t{ SF_6=J	^\	!_qr	!ABn`y*|H!@"oUVW*O5=>Mxp*#gV$S15oVW\|%&'!4{$VW*(3)|4un`*a4FX*3b(*|+,E0z
8	SF_6=J{|	%=xy	!4[1#qr	!.)/a:/T 01-/[:*3BCoUVW-/oUy*Oe\.)>M}*234z
9	-/oU>M Di6D[\	.2	!/qr	!oUVW89:YyO2<>M} 234*D(e)>e•V?@2G*BC.)ANe\?@2Gz
10	AB5Ha[uR[uDb	5HgK	!_qr	!d}•h=>jkr5o*e\.)2YGz
11	AB5HE?y>M Di6D[\	5H"K	!/qr	!ABVWe\.)BP#&'2G >M D)Fz
12	|[AB0uyq0	VWXY	!/qr	!AB_*|!y2EAF)*{0*{0)#[u:BC4<[uz
				!ABVWfn{=}z
				!pM HNgV6O(P1QE4%@EG1oU<3^RSoU$%z
				!DEFX0=2o&*2-4Q>Mi6*]6,Dz
				!AB['\`%@*\\([|:d)**+y[u:d(,*#$+-.2GA/e

> M T) * Q/ : N 0 = l

# $ [1 Z 0 V W , t							

H Y

GIS 外 HGIS V W : ; 0 1 2 3 4

v w N BDYCSY-ZW-07

1 Z [\ ]

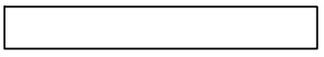
7 o U p q r ( ) Q GIS t HGIS yz

2 B L ^ _

` 2-1 B L ^ _

p X		) } J t x
1	GB 50150 ~ 2006 n 0 = ? = > ? 2 3 0 = 5 H Z [A B ~ • s
2	DL 408 ~ 1991 n 0 U > M 2 o $ 3 t ' 0 • A < 0 0 = M * ys

3 0 1 a b





4 e f g h i j k l m

4.1 GIS(HGIS) Z [A B 4 * 6 2 Q 5 M 6 7 ! Q 5 o U e " 6 2 # A * | } n 0 1 4 5 6 2 > M & • q r p ` st v w x n p ` sy n (1 2 3 > M q r $ % 2 o * • ; ! e " # q r * ` > z

4.2 d n p ` s ^ y GIS(HGIS) Z [ A B " f o # n 0 1 4 5 > M 6 2 o U & st v w N BDYCSY-ZW-07-01/01 y* ' s # $ - . / 0 + X " ( G * ` *


中国南方电网
CHINA SOUTHERN POWER GRID

> M T) * Q/ : N 0 = l
$ [1 Z 0 V W , t

X Y

1 ( ) % x 53
2 v ^ ; 7 53
3 o U \ 3 53
4 > M q r s ` y z { 53
5 o U • H 55
6 o U a U 55
7 7 8 { k i 6 ! % B ~ • 56

1 Z [\ ]

7 o U p q r ( ) Q b c d G e f g Y z

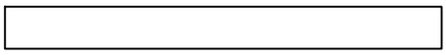
2 B L ^ _

` 2-1 B L ^ _

p X		) } J t x
1	GB 50150 ~ 2006 n 0 = ? = > ? 2 3 0 = 5 H Z [A B ~ • s
2	DL 408 ~ 1991 n 0 U > M 2 o $ 3 t ' 0 • A < 0 0 = M * ys

3 0 1 a b

M&• qrp`stvwxnp`syn(123>Mqr$%2o*•;!e"#qr*`>z 4.2 dnp`s^ybcd



4.4 e f . / 0 1 ` a . / b ( M c d e & f / 0 < = : g h i S S j ' k l [ 10 m f n o 10 m p q r s t 0 1 ` f u / 0 v w x y V z X 6 { | o " }

> 4-1 o U e " > M & • q r p `

p X	A B t x	q r C D	q r -)	q r { k i 6
1	A B 5 H a [u R [u D b	5 H K L	_ q r	A B 4 * | \ ` % @ [u : 8 [4 < * [u b f

\

A B

3	{ 0 3 J J B v		/	1	
4	2 > >		D	1	
Y N n P 2 Y G ! v Y v > 6 7 G J 2 3 8 $] J H z					

6 0 1 # u

6.1 [redacted]:

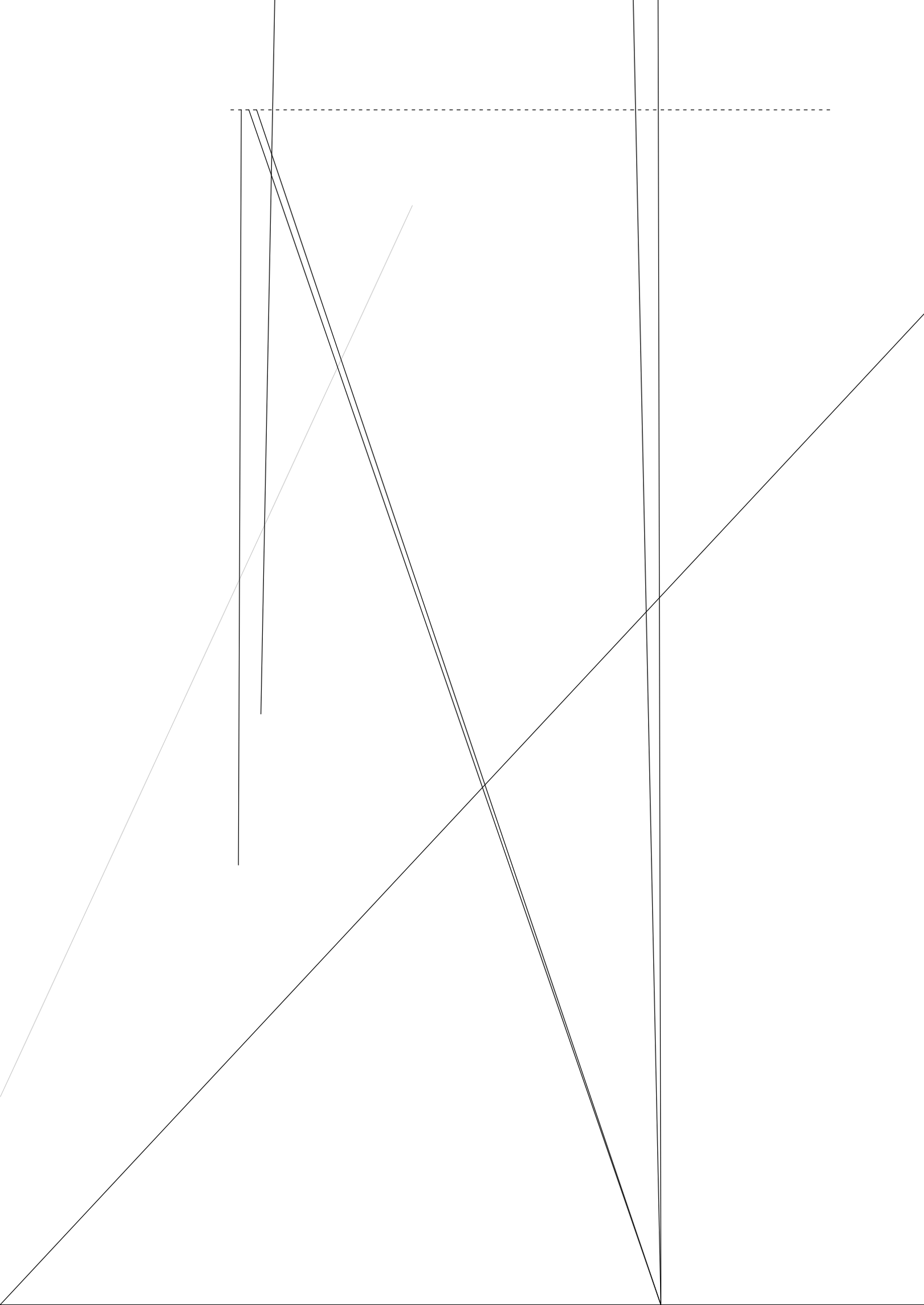
[redacted] A R S f g Y 7 J A 0 K # & ' 0 v w A * G J O P • > 6-1 z

` 6-1 6 7 $ * $:

p X	[redacted] 2 o O P	5 o ! 2 M
1	O { & ' 0 v > & ' 0 v > % @	9 v s (u = * Z & ' 0 v > 9 : { H * A B 4 2 & ' 0 v > 7 W + X % @
2	8 [w A : A [u :	Z & ' 0 v > # [u j y E A f g Y # u : 8 [*Z } l K # 8 [: [3 E A f g Y w 8 M u t B P y [(l K K y
3	n ` w 8 *O U O % & w 8 ' 2	b F & ' 0 v > * 9) 2500V L w 8 f g Y 7 J A 0 K # & ' 0 v O U 60s # w 8 o O % &
4	[redacted] 8 *Z E A F A ; { 0 O	} % w 8 * Z E A F A ; { 0 O [u

6.2 [redacted] T # $0.75U_{1mA}$ G H $ a $:

[redacted] U



@ A 1 > M 6 2 o U &

B X 8 **BDYCSY-ZW-08-01/01**

2 o y •	2 o u 7	= > W	# $ > M W	# $ + d V
> M q r * ` ! { k i 6				

p X A B t x q r C D q r -) q r { k i 6

> M T) * Q/ : N 0 = l

X Y

1 ( ) % x 61
2 v ^ ; 7 61
3 o U \ 3 61
4 > M q r s ` y z { 61
5 o U • H 62
6 o U a U 63
7 7 8 { k i 6 ! % B ~ • 64

pX	A B t x	qrCD	qr-)	qr{ki6
5	|[AB0uyq0	VWXY	/qr	DEFX0=2o&*2-4Q>Mi6*]6,D
6	AB0uDHl	5HKL	^-qr	AB4|)vYw80u0X*\]wsABPm
7	AB5HE?y>MDi6D[\	5HKL	/qr	E?y2oVWBC6O(P gVpME?
8	&'TxyKL	9xy 2oKLxy	^-qr	fzT{| }T~^?{ l7•L
9	/XAB<3^ %i6D3u	VWXc	/qr	ABn`y*|H!@"oUVW*O5=>

6.6 $ % & F ' (y z @ A B C D E } F tan*d*

6.6.1 A B y * P Z X K v / X A B :) & ' 3 } h a * D y 0 h Y 5 J [q z

6.6.2 % & f A B y # K L ' (* L) < : • " M ' (Q q y * D | % Q : • o # 1.3 G z w 8 J 7 3 2 y : • s " r % * | Y H I J 8 K R) q : l K 8 K * L M 8 K # > N { | 0 \ z w 8 $ { " 2 ? (q _ # : = + X z

6.7 $ % & F ' (y z) a G H $ a

w 8 { | 0 \ y $ { / X j O U * w 8 | 9 v " 2 ? (q _ # : = * O % & K L ' (* { | 0 \ o D (; < Z [~ • # $ l z

6.8 V a R T : ;

{ 0 h Y # : : j + X Z \ q X A B * 4 u e) 4 6 2 P 0 X # A B a U * V 4 u e) ^ | 0 X # A B a U z W 8 e) X o Y Z ^ | q X A B a V * 4 L M A B 5 H P 8 z 0 X -) { 110kV ! u (# 0 h Y ^ 3 7 $ k [+ X Z \ q X A B z A B 0 X o ! | } Z [~ • + X z 0 h Y Z \ q X A B y * | Y H 8 K TA D (n ; z

6.9 • ! "

6.9.1 % @ = J C 0 Y > ? [f *) 500V & ' 0 v > % @ = J C 0 Y q 7 & ' * b F d v = J C 0 Y A B d ` * % @ = J C 0 Y q 7 D s b f z

6.9.2 % @ W X q g & ' b f * H 0 Z X q g * q g r e \ Z b f W X \ 0 g &' • ! "

6

Y 6 6 * Y b 6 g Z

t 3 y 0 h Y 0 X -) 35kV ! u (, P 8 { 4000kVA ! u (y * | w 8 W + Q z W + Q y h F
: • o " Q | + k | " S * { * ' v | D j Q 1.3 1 \ R_{60s} % T f 1 1 . 0 4 1 . 4 4 T D (% T f

7.3 ! ; M n

7 8 % B d n 10kV y 500kV 9 < 0 ! J 0 2 3 7 8 B + y $ l ~ • L 4 K N < 0 0 = A B 2 3 s ^ # Q/CSG > 4-3.1.1 Q/CSG > 4-3.2.1 Q/CSG > 4-4.1.1 y 4-4.1.10 Q/CSG > 4-4.2.1 y 4-4.2.3 Q/CSG > 4-5.1.1 Q/CSG > 4-5.2.1 Q/CSG > 4-6.1.1 Q/CSG > 4-6.2.1 P m F X z -

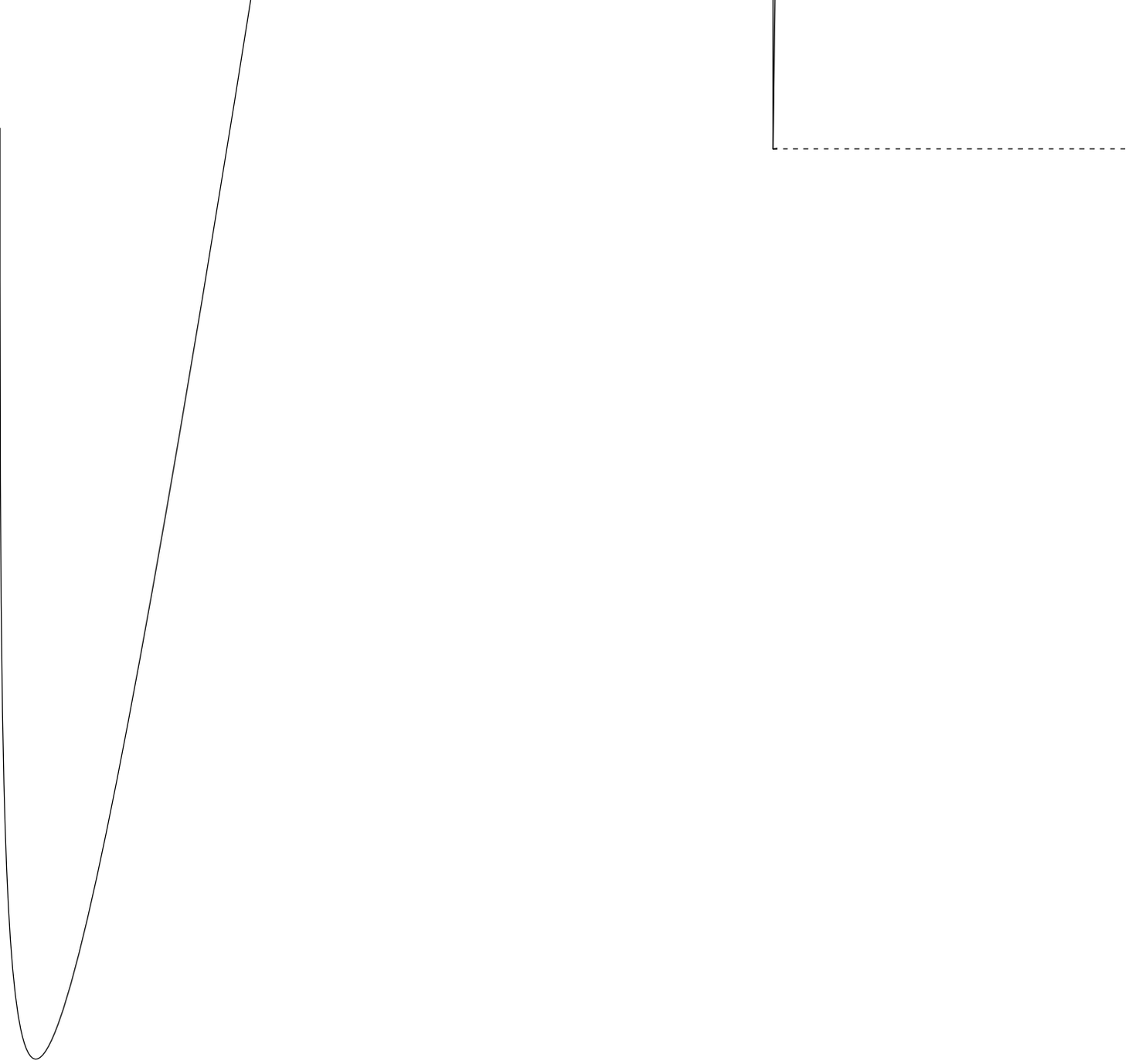
@ A 1 > M 6 2 o U &

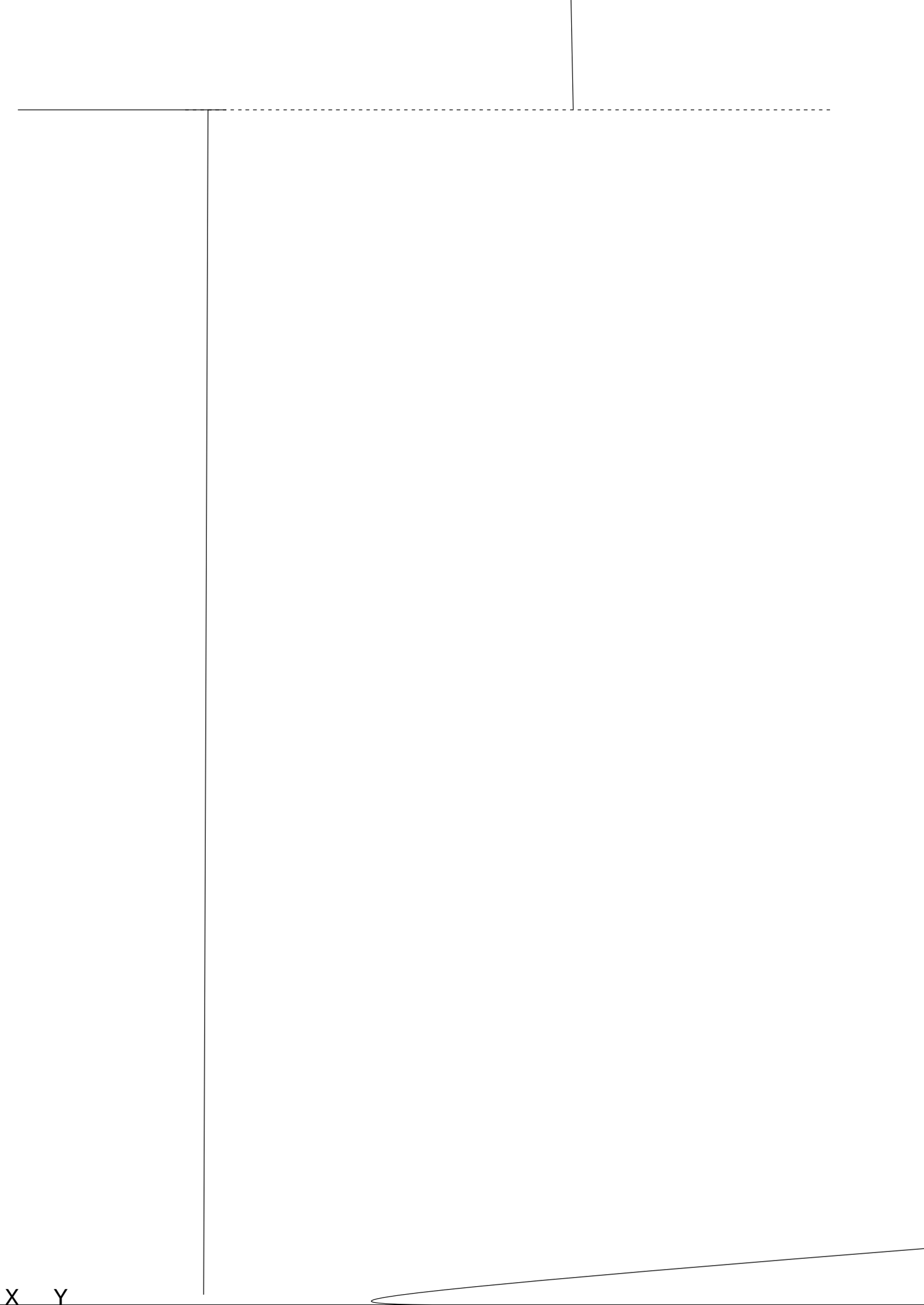
v w N **BDYCSY-ZW-09-01/01**

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2	/ X A B < 3 ^ % i 6 D 3 u	q 0	! / q r	! A B 4 |) v Y w 8 0 u 0 X * \ ] w s A B P m z
3	E A F c G 0 H	q 0	! _ q r	! { A B 4 * 2 o V W O h i j k r l l * d } P m [: * O 5 2 o + d V * @ [: e \ 3 z
4	A B 5 H a [u R [u D b	5 H g K	! _ q r	! A B n o B C d $ l 5 = > M x p A ~ r s - > M i 6 * O > t g V + X , D z
5	8 K E ? F G D H	5 H K L	! / q r	! A B n ` y * | H ! @ " o U V W * O 5 = > M x p * # g V $ S 1 5 o V W | % & ' ! 4 { $ V W * ( 3 ) | 4 u n ` * a 4 F X * 3 b (* | + , E 0 z
6	- / o U > M D i 6 D [\	. 2	! / q r	! D E d } $ l \ 3 5 o z
7	& ' T x y K L	K L x y	! ^ - q r	! .) / a : / T 0 1 - / [: * 3 B C o U V W - / o U y * O e \ .) > M } * 2 3 4 z
8	A B 0 u D H l	5 H g K	! ^ - q r	! o U V W 8 9 : Y y O 2 < > M } * 2 3 4 * D (e) > e • V ? @ 2 G * B C .) A N e \ ? @ 2 G z
9	/ X A B < 3 ^ ' 5 0 X 6 7	5 H " K	! ^ - q r	! A B _ * | ! y 2 E A F) * { 0 * { 0) # [u : B C 8 [4 < * [u b f z
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11	A B 5 H E ? y > M D i 6 D [\	5 H " K	! / q r	! A B V W e \ .) B P # & ' 2 G > M D) F z
12	A B V W [: ^ !	5 H g K	! ^ - q r	! p M H N g V 6 O (P 1 Q E 4 % @ E G 1 o U < 3 ^ R S o U $ % z
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3	ABnoa5=>Mxp	VWXc	^-qr	ABnoBCd$l5=>MxpA~rs->Mi6*O>tgV+X,D
4	|[AB0uyq0	VWXY	/qr	DEFX0=2o&*2-4Q>Mi6*]6,D
5	5H?{^|0	q0	^-qr	e\.)>M D)F
6	AB0uDHl	5HKL	^-qr	AB4|)vYw80u0X*\]wsABPm
7	AB5HE?y>MDi6D[\	5HKL	/qr	E?y2oVWBC6O(P gVpME?
8	ghZFM*	VWXc	^-qr	AB4\]gij•+V2o
9	/XAB<3^ %i6D3u	VWXc	/qr	ABn`y*|H!@"oUVW*O5=>Mxp*#gV$S15oVW\|%&'!4{$VW*(3)|<4un`?_a4FX*3b(*|+,E0
10	-/oU>M Di6D[\	VWXc	/qr	.)/a:/T 01-/[:*3BCoUVW-/oUy*Oe\.)>M}*234
11	/XAB<3^'50X67	5HKL	^-qr	DEd}$l\35o
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13	?FABi6D3u	CX 5H"K	^-qr	+X?F4BCH!"f2oVW*O>tVW+X,D
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5.2 /UqrsUs`pt

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6.1

6.1.1 % @ l m n f # , ? s t *] O n y } 0 5 H b k | E n 7 z

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6.1.4 l m n f 0 = M * > ? [' * G H A B # A z

6.2 | :

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6.3 _ $ * $:

b F w A v n ` w 8 * ~ w 8 o H l * v Y p r + < G y * % & w 8 0 v o z

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6.5.3 O U O % & w 8 J 7 ! A B 0 X] X y • z

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7.1 A % m K L .

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7.1.2 Z \ q X A B z

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`7-1t9y

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66	69.0	165	165	165	148
110	126.0	265	265	265	240
220	252.0	495	495	495	440

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7.1.5 lmnf +Hnf#ghR0=D@?=|•\4<z

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7.3 !;Mn

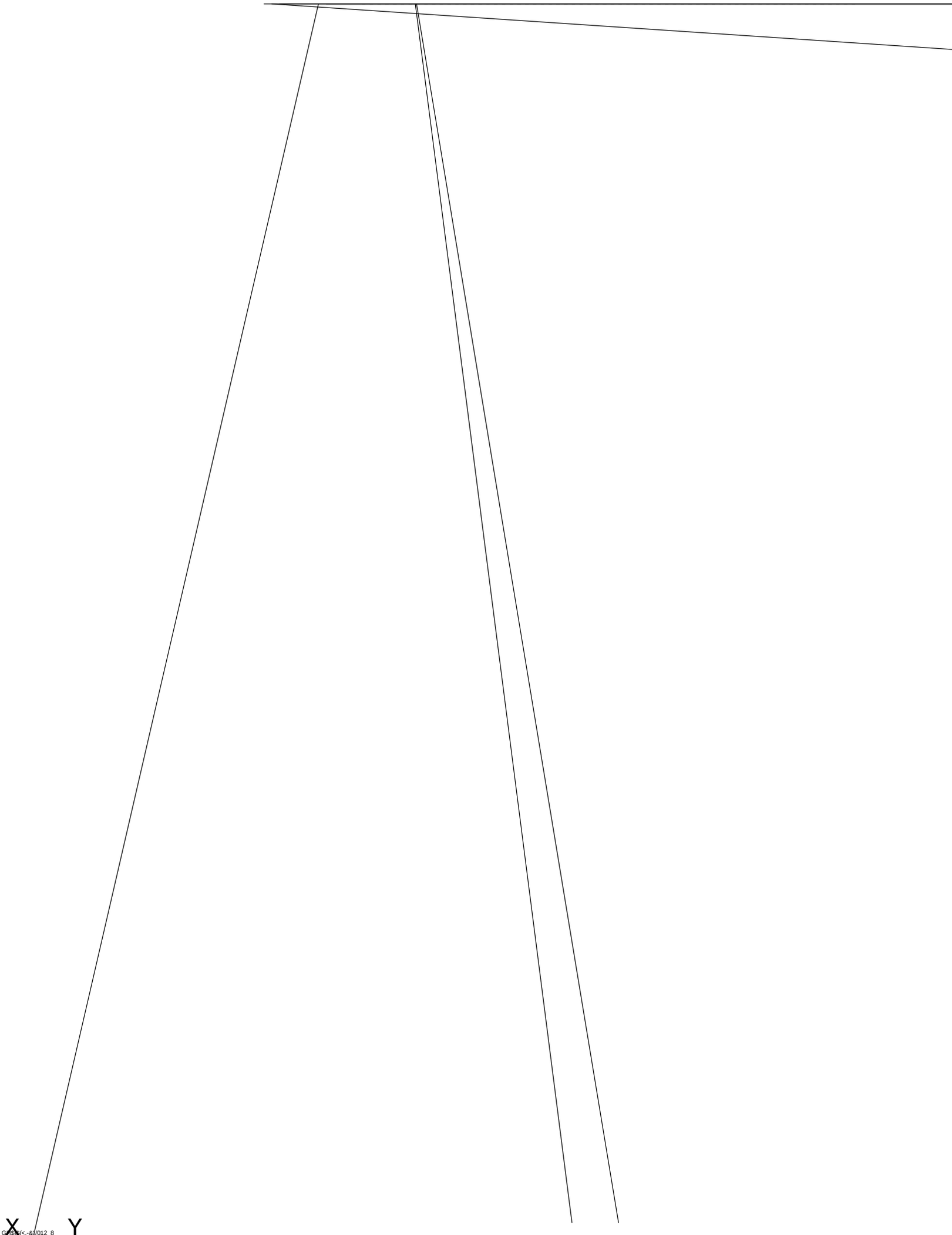
78%Bdn10kVy500kV 9<0!J02378B+y$l~• L4KN<00=AB23s^# Q/CSG > 4-12.1.1 Q/CSG > 4-14.2.1 PmFXz

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B X 8 **BDYCSY-Z34-.12 Tf230.16 0 TD ( ) T**

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j k Nt , y 7 & 5 # $ = > W] ^ * # $ > M W b * * # $ + d V , ' 5 1 z # $ + d V n 2 4 * 2 q r { k i 6 O 2 O zt t y 2 o O P u 7 > M i 6 D < y 7 & 3 x 4 .) 4 : * 5 6 | = @ > & *) _ (Z H @ 1 \ V W ' 5 < 7 y * | { H Y p % & < 7 / 0 z 2 @ S V W + X Z 0 * O , t \ \ zt R y | 6 7 # $ # A % x A K L * T) > M * Q R : N 0 = l 8 y \ q r -) y & • q r -) D , d y * Q 5 M | R S " f V W = @ + X q r $ % O k l i 6 9 y & • q r -) y q r { k i 6 { n 2 4 # $: < ; ?zt < y , t D = M t N > , t # y ! o } & • L z


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7.2 A%mK`

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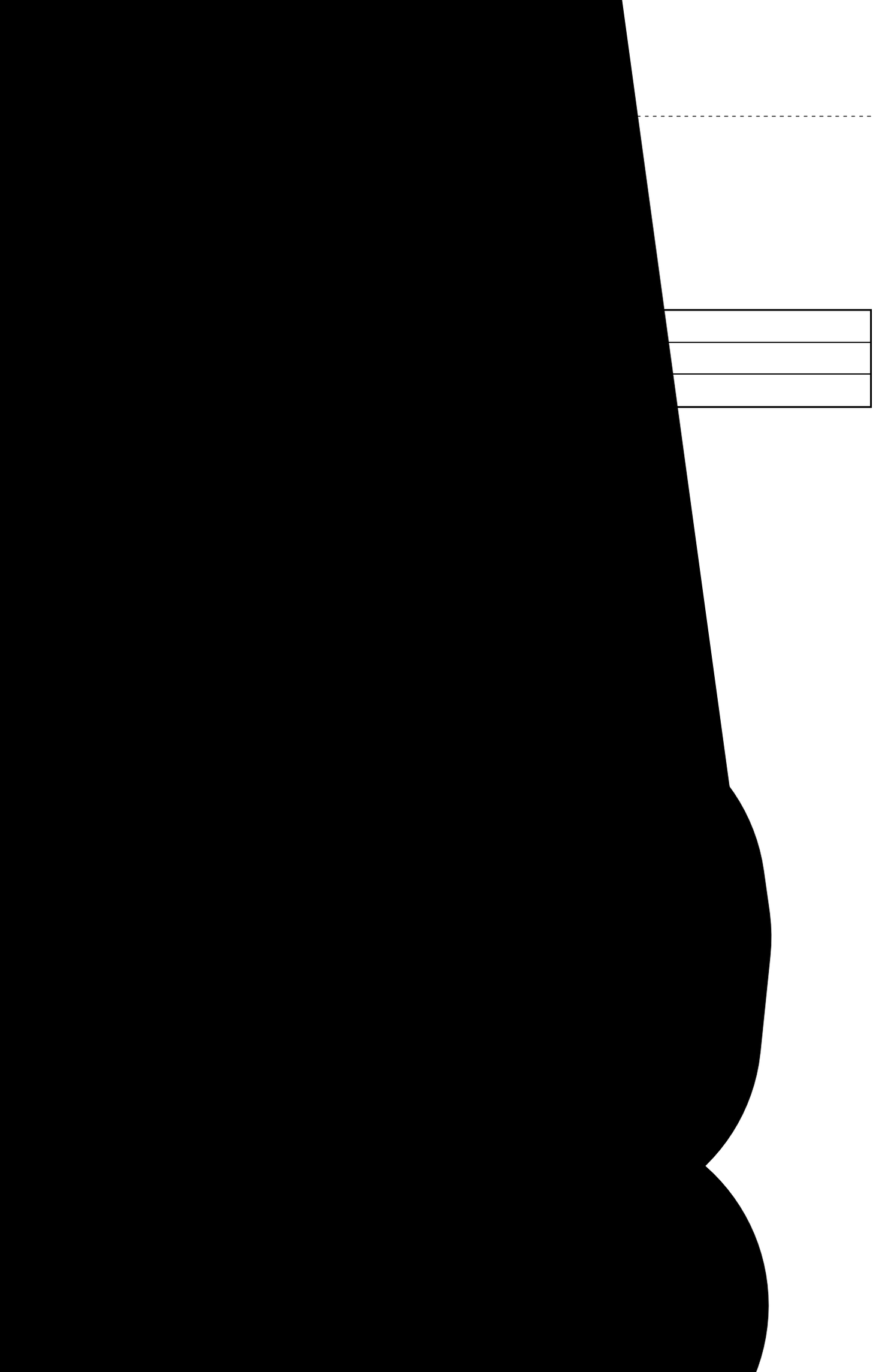
7 k

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X Y

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4 > M q r s ` y z { 82
5 o U • H 83
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4 e f g h i j k l m

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4.2 d n p ` s ^ y p : Z \ q X A B " f o # n 0 1 4 5 > M 6 2 o U & st v w N BDYCSY-ZW-12-01/01 y* ' s # $ - . / 0 + X " ( G * ` * \ l q r -) * # $ = > W] ^ > M 6 2 o U & * > M W b * * 6 2 + d V , ' z

4.3 6 2 + d V * 2 q r { k i 6 *O { - . / (2 M J o U V W + X > M Z 0 * [1 Z 0 # o U V W + d Z > M i 6 2 - 3 4 o U e " A - 2 ^ z

4.4 > M 6 2 o U & 5 6 2 + d V # $ 6 b * 2 o O P u 7 D < y 4 8 9 .) 10 : * ; < 10 : C = @ > L o U & * { 2 o [; _ (Z Q 5 M] ? H @ z @ 6 2 'M M Z M 2

5.2 / U q r s U s ` p t

` 5-2 @ ? / U q r s U s ` p t

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6.1 0 6 7 $ * $ %

6.1.1 E n p : # 0 u * (, R E n 2 4 # , K 8 : * O Z n [u { 0 z

6.1.2 Z & ' 0 v > { = : H * Z & ' 0 v > # [u j P < E ? y E A F # [u j " 8 * { } b l K : # w 8 q : # = : A l K : * S y & ' 0 v > # w 8 j P < L ? ! l K j P < G ? " 8 [t w A \ 4 " y * n x / " A [[u y z

6.1.3 [: [; _ * ~ & ' 0 v > J o H l _ * O U & ' 0 v o z

6.1.4 O U & ' 0 v # J o _ * } % & ' 0 v > 2 E A F # & ' # w 8 O E n n [: * : _ 1 2 E A F + X) * { 0 z

Y N \ .) b F & ' 0 v > y * N w F & ' 0 v > < [l r : t 120r/min y* S y * & ' 0 v > p 1 | p < x ?* 1 Z = : [< E A F * ~ p 1 H l _ * O U & ' 0 v # J o z O U & ' 0 v # J o _ * N E n [< E A F # = : * : _ Z & ' 0 v > } % Z r * 3 _ 1 2 E A F + X) * { 0 z

6.2 0 V a R T : ;

6.2.1) & ' q : Z F X < X Y Q X Y 0 X > 0 \ > d [: l + X e \ 8 [* : _ y z % @ [: M 5 e \ + ! z

6.2.2 F X 4 | % @ Q X Y M 5 { R u z F - X < 3 * | , R b f v > 1] X < 3 ^ * | 8 K , R / X) ; * , R E A F z

6.2.3] < A B 0 X _ } . 1min * O U { | 0 \ o O % & * 1 n o - _ A B 0 X < R z 2 P Z \ q X A B [; _ * | { N Z Q X Y - < R u * : _ E n A B 0 u * 1 E n [< E A F # e q : * w 8 E A B " # & ' 0 v z n x | 4 / " A B a U " M z

7 A % m K L . r ! ; M n

7.1 A % m K L .

7.1.1 & ' 0 v w 8 # $ 7 8 • O 7 z N S * { ? (q % # # A v + X w 8 y * 4 { E A F > N] - 0 u l K z S y { [: (P Y H * E A F (# l K K | ["] X # / X : } ~ m [u M * * L M l K 2 u # > N { | * u z " ; & ' 0 v > < B z

7.1.2 { | 0 \ < G Q # $ 7 8 • O 7 * A B < 3 ^ * c N a = ? (' (> N • x - * | Q E A F > N R a = { 0 * { | 0 \ D H l * | a I J _ + • L _ 1 + X A B z \ { | % y |) _ + I J # 0 E r E A F f f & ' 1 > N # x *B P y 4 N) T R n x (\ # r _ G 8 K > N # B z

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7 8 % B d n 10kV y 500kV 9 < 0 ! J 0 2 3 7 8 B + y $ l ~ • L 4 K N < 0 0 = A B 2 3 s ^ # P m F X z

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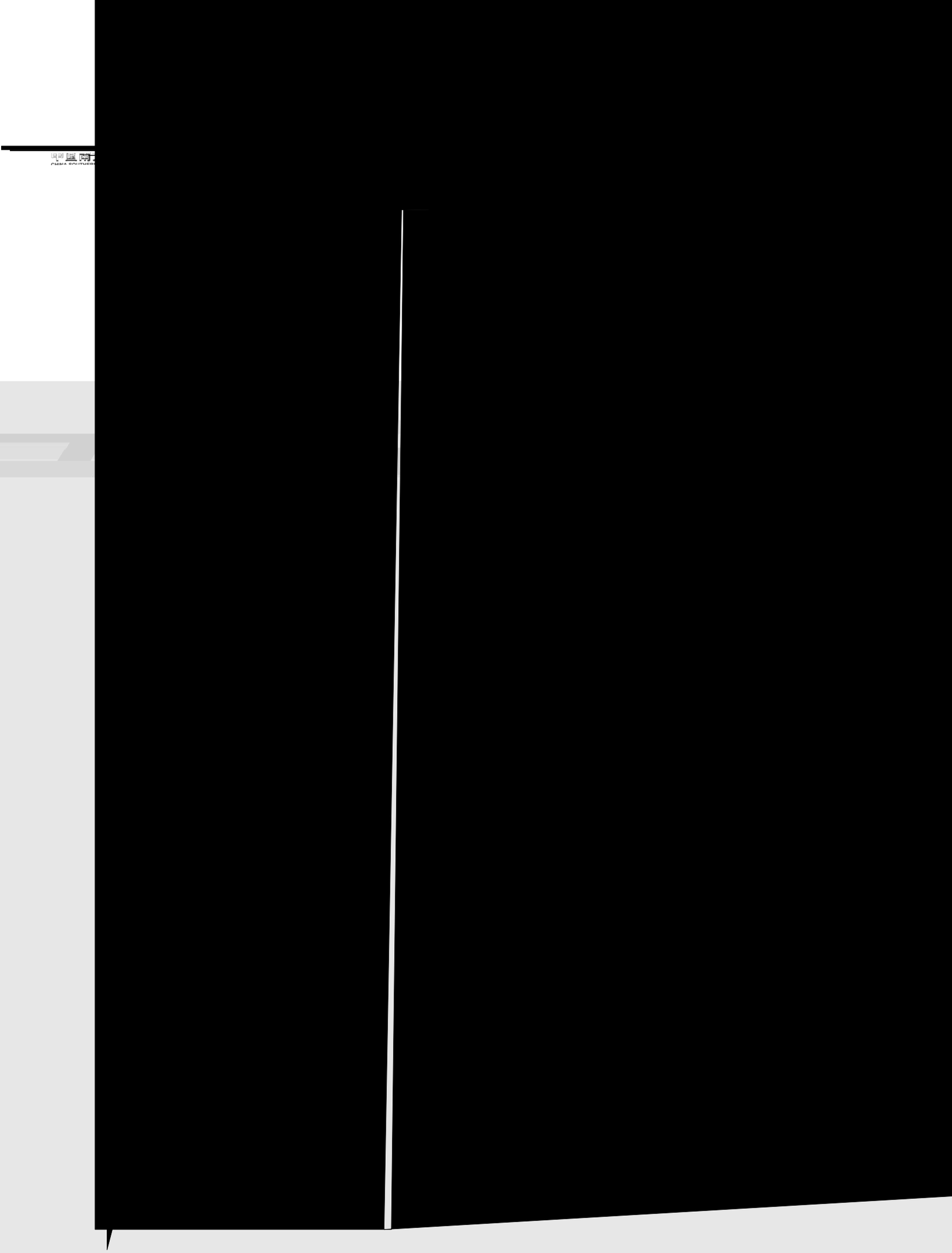
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1	EAFcG0H	q0	!_qr	#$oU|DEFX"f>M$3!>M=>i6*O=7fYlDcQuvi6N
2	/XAB<3^%i6D3u	q0	!/qr	!AB4*|\`%@[u:8[4<*[ubfz
3	ABnoa5=>Mxp	q0	!^-qr	![AB4|)vYw80u0X*\]wsABPmz !{AB42oVWOhijkr ll*d}Pm[:*O52o+dV*@[:e\3z
4	-/oU>M Di6D[\	.2	!/qr	!ABnoBCd$l5=>MxpA~rs->Mi6*O>tgV+X,Dz
5	AB5Ha[uR[uDb	5HgK	!_qr	!ABn`y*|H!@"oUVW*O5=>Mxp*#gV$S15oVW\|%&'!4{$VW*(3)|4un`*a4FX*3b(*|+,E0z
6	89:A	5H"K	!^-qr	!./a:/T 01-/[:*3BCoUVW-/oUy*Oe\.)>M}*234z
7	AB5HE?y>M Di6D[\	5H"K	!/qr	!.)]>[u:z !AB_*|!y2EAF)*{0*{0)#[u:BC4<[uz
8	/XAB<3^'50X67	5H"K	!^-qr	!ABVWe\.)BP#&'2G >M D)Fz !DEFX0=2o&*2-4Q>Mi6*]6,Dz
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j k Nt , y 7 & 5 # $ = > W] ^ * # $ > M W b * * # $ + d V , ' 5 1 z # $ + d V n 2 4 * 2 q r { k i 6
O 2 O zt t y 2 o O P u 7 > M i 6 D < y 7 & 3 x 4 .) 4 : * 5 6 | = @ > & *) _ (Z H @ 1 \ V W ' 5 <
7 y * | { H Y p % & < 7 / 0 z 2 @ S V W + X Z 0 * O , t \ \ zt R y | 6 7 # $ # A % x A K L * T) > M } > # $ # \y M



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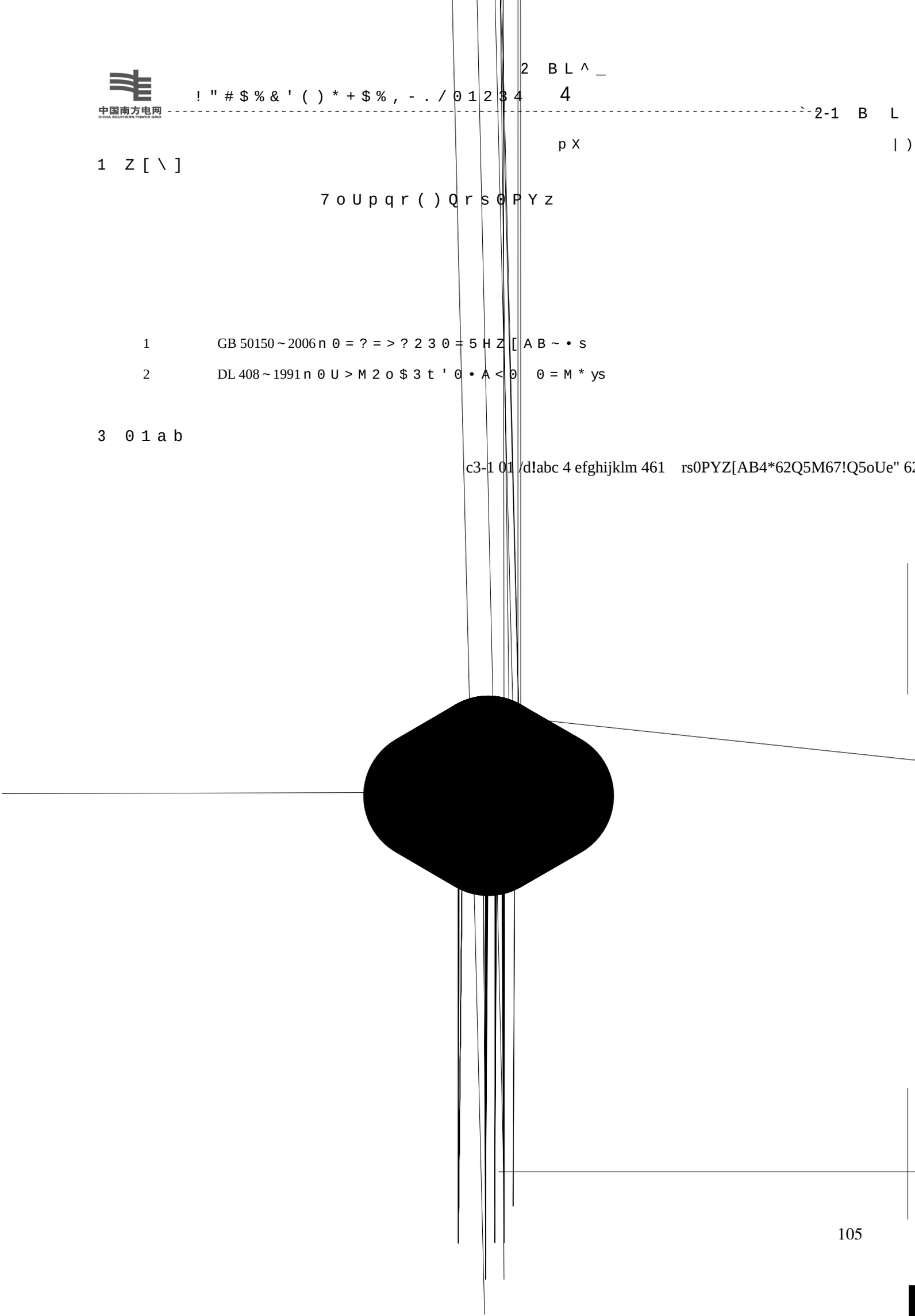
7 o U p q r ( ) Q r s 0 P Y z

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4.3 6 2 + d V * 2 q r { k i 6 * O { - . / (2 M J o U V W + X > M Z 0 * [1 Z 0 # o U V W + d Z > M i 6 2 - 3 4 o U e " A - 2 ^ z

4.4 > M 6 2 o U & 5 6 2 + d V # $ 6 b * 2 o O P u 7 D < y 4 8 9 .) 10 : * ; < 10 : C = @ > L o U & * { 2 o [; _ (Z Q 5 M] ? H @ z

> 4-1 o U e " > M & • q r p `

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3	9 v s (# w 8 0 X	& ' 0 v # w A 9 v & ' 0 v > 2500V J 1 k l 2 u & ' 0 v w A 9 v & ' 0 v > 1000V J
4	n ` w 8 * O U O % & w 8 ' 2	b F & ' 0 v > n ` w 8 & ' 0 v * O U 60s # w 8 o
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` 6-2 **tan***d* r $ = % $:

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7 A % m K L . r ! ; M n

7.1 A % m K L .

7.1.1 & ' 0 v w A z

t1y e \ O { & ' 0 v > % @ & ' 0 v > s t * & ' 0 v > O { u = \| > M * O { \| 9 : H o * A B 4 2 & ' 0 v > + X < A ; ? < n ; ? w A % @ z

t2y 8 [\| n o 4 < % w A : & ' D b & ' 0 v > # 9 : j D q [^ * A B) # q : \| .) & ' D 8 : R l K : * \ ` % @ w A : A [u : # 8 [* % @ & ' 0 v > # 9 : j [: z

t3y] 6 N \ 9 : 0 X H l Y H O J y • e \ * Y H & ' 0 v _ * q d j 0 X - _ * Y H v > p r w 8 y • \| e \ z

t4y \ ] A F d $ 0 { 0 * %) 0 0 H { 0 K L & ' 0 v > " ; V W X B * Y H v > \| r d { 0 [' * u Z E A F A ; [u z

7.1.2 tan*d* ! 0 P 8 w A z

t1y Y H z . / X \| : # M u ! y E A 5 H 8 [# Z (6 @ P m z v Y { = \| > M : H *] O z . / X \| : # M u ! y E A 5 H 8 [# Z (6 @ P m z

t2y e \ + X A B [: * Y H / X w A : y _ E A 5 H R [u M u U m < " / R w A ' 2 z e) e [U * / X \| : x (s (* 0 z s L *] 6 y N " e J b @ V # & ' U m z

t3y YHe\9v[:aU*9ve\#AB0Xz9ve[U*e[Ue) 10kV AB0Xz
t4y

> M T) * Q/ : N 0 = l							
# $ [1 Z 0 V W , t							
H Y							

>W/F1 9.15+3 Tf18.24 re8080 #$/F1 9.15+2 Tf18.24 080 6D/F1 9.15

X Y

1 ( ) % x 93
2 v ^ ; 7 93
3 o U \ 3 93
4 > M q r s ` y z { 93
5 o U • H 94
6 o U a U 95
7 7 8 { k i 6 ! % B ~ • 96

1 Z [\ ]

7 o U p q r ( ) Q _ V < X Y z

2 B L ^ _

` 2-1 B L ^ _

p X		) } J x
1	GB 50150 ~ 2006 n 0 = ? = > ? 2 3 0 = 5 H Z [B ~ • s
2	DL 408 ~ 1991 n 0 U > M 2 o $ 3 t ' 0 • A < 0 0 = M * ys

3 0 1 a b

V W + d Z > M i 6 2 - 3 4 o U e " A - 2 ^ z

4.4 > M 6 2 o U & 5 6 2 + d V # $ 6 b * 2 o O P u 7 D < y 4 8 9 .) 10 :

= @ > L o U & * { 2 o [; _ (Z Q 5 M] ? H @ z

> 4-1 o U e " > M & • q r p `

p X A B t x q r C D q r -) q r { k i 6

5.2 / U q r s U s ` p t sUs`

6.3.1 $ N \ 0 v w A v # 8 6 w 8 : IB UB I– U– [{ < X Y ~ R e H / " : : j 1 R ^ : A e H , " : : (t R " Y o ' + ^ 3 7 | : w : 0 v * b ^ 3 7 | : w " 0 v 1 R " D o ' * { k j ! | : w " 0 v * 9 D R Z • A F w : 0 v y* IB UB , R * I– U– , R *) < X Y N \ 0 v w A v F " w 8 / X # ~ R 4 J R _ X # ~ R # " 0 v t , N \ 0 v y* b * [# ~ R O b * [u = b | w A z

6.3.2 [f w A : * : n v Y 0 u n f 2 E A ~ R) 0 * O U | r # w 8 o * % & A B ' 2 A ~ R ' (z

6.4 V a R T : ;

6.4.1 e) Z \ Q X Y t R Q X j y A b w 8 ~ R # A B < X Y R s A B q) 1 0 u P Q 50Hz * 0 X • | W 4 q [" e • z

6.4.2 Z w ' k A [u * / X ~ R _ X ~ R | : A [z

6.4.3 / X # ~ R q X A B z Z A B < X Y / X A B : [< / X ~ R * _ X # ~ R ! C D A o A , O A [[u z

6.4.4 _ X # ~ R q X A B z Z A B < X Y / X A B : [< _ X ~ R * / X # ~ R [u ! C D A o A , O A [[u z

6.4.5 Z Q X Y 4 5 A A B < X Y / X ~ R h j [u z

6.4.6 w 8 % & E A ~ R # A 4 & ' 0 v * A [2 E A F) * { 0 z

6.4.7 A B y * d 3kV/s # F X : (: H @ # XQ*Tf1 0 A 0 B 4 0 Tx (X) Tj 0 -1.5 -0.5 0 TD (X) Tj 0 -1.5 -0.5 0 TD (X) Tj 0 -1.5 -0.5 0 TD

> M T) * Q / : N 0 = l
$ [1 Z 0 V W , t

H Y							

j k Nt , y 7 & 5 # $ = > W] ^ * # $ > M W b * * # $ + d V , ' 5 1 z # $ + d V n 2 4 * 2 q r { k i 6 O 2 O zt t y 2 o O P u 7 > M i 6 D < y 7 & 3 x 4 .) 4 : * 5 6 | = @ > & *) _ (Z H @ 1 \ V W ' 5 < 7 y * | { H Y p % & < 7 / 0 z 2 @ S V W + X Z 0 * O , t \ \ zt R y | 6 7 # $ # A % x A K L * T) > M * Q R : N 0 = l zt 8 y \ q r -) y & • q r -) D , d y * Q 5 M | R S " f V W = @ + X q r $ % O k l i 6 zt 9 y & • q r -) y q r { k i 6 { n 2 4 # $: < ; ?zt < y , t D = M t N > , t # y ! o } & • L z



1

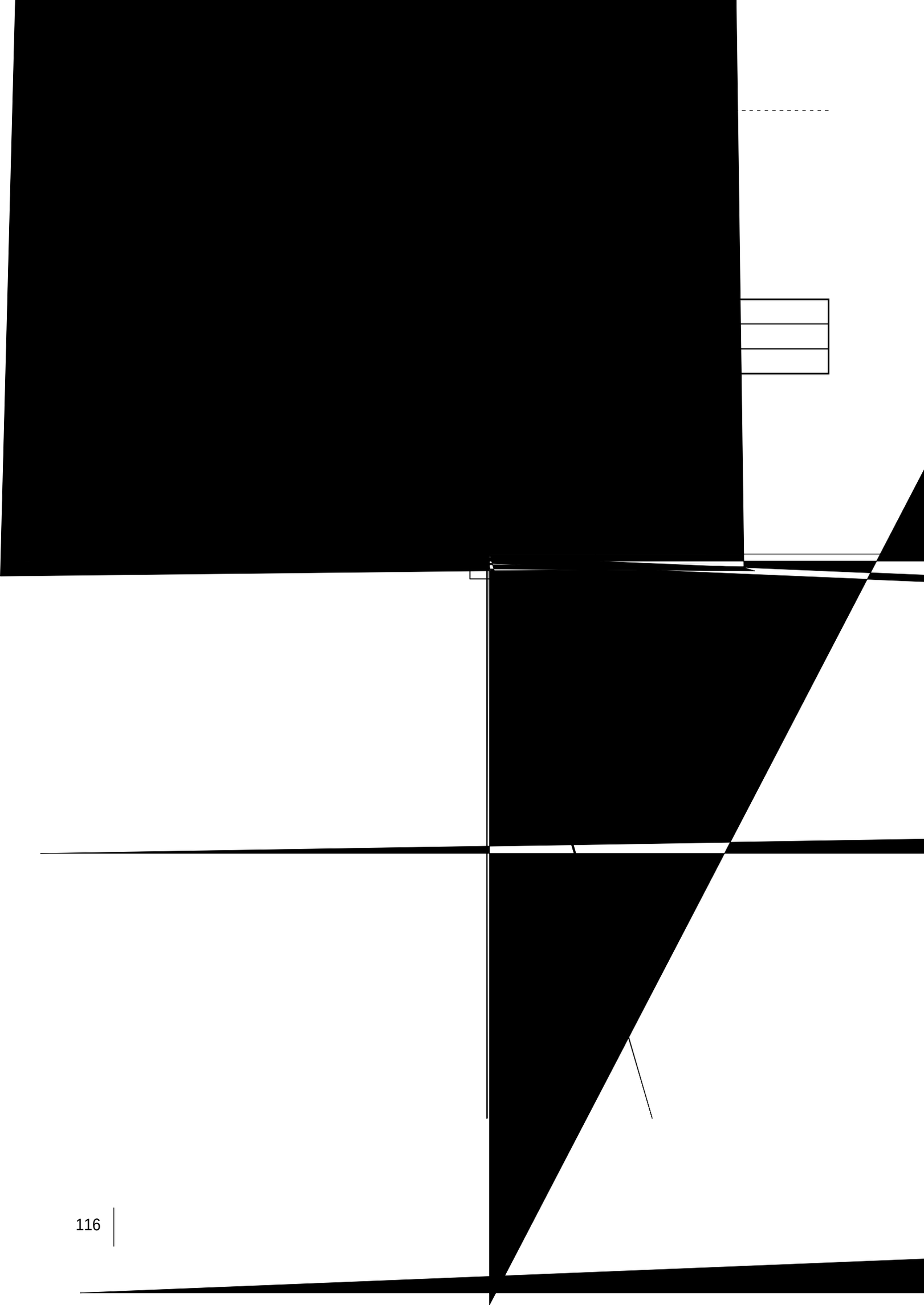
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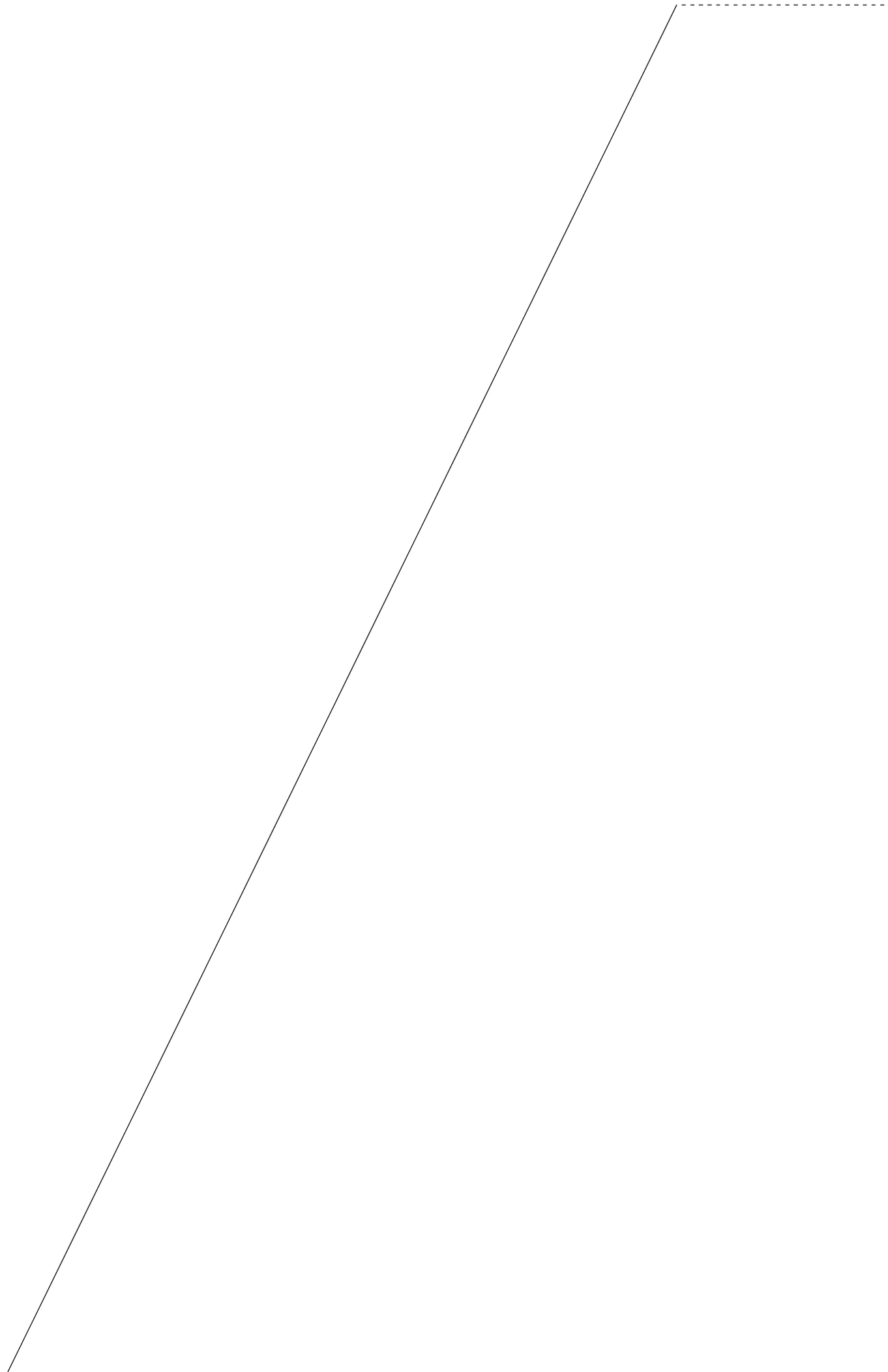
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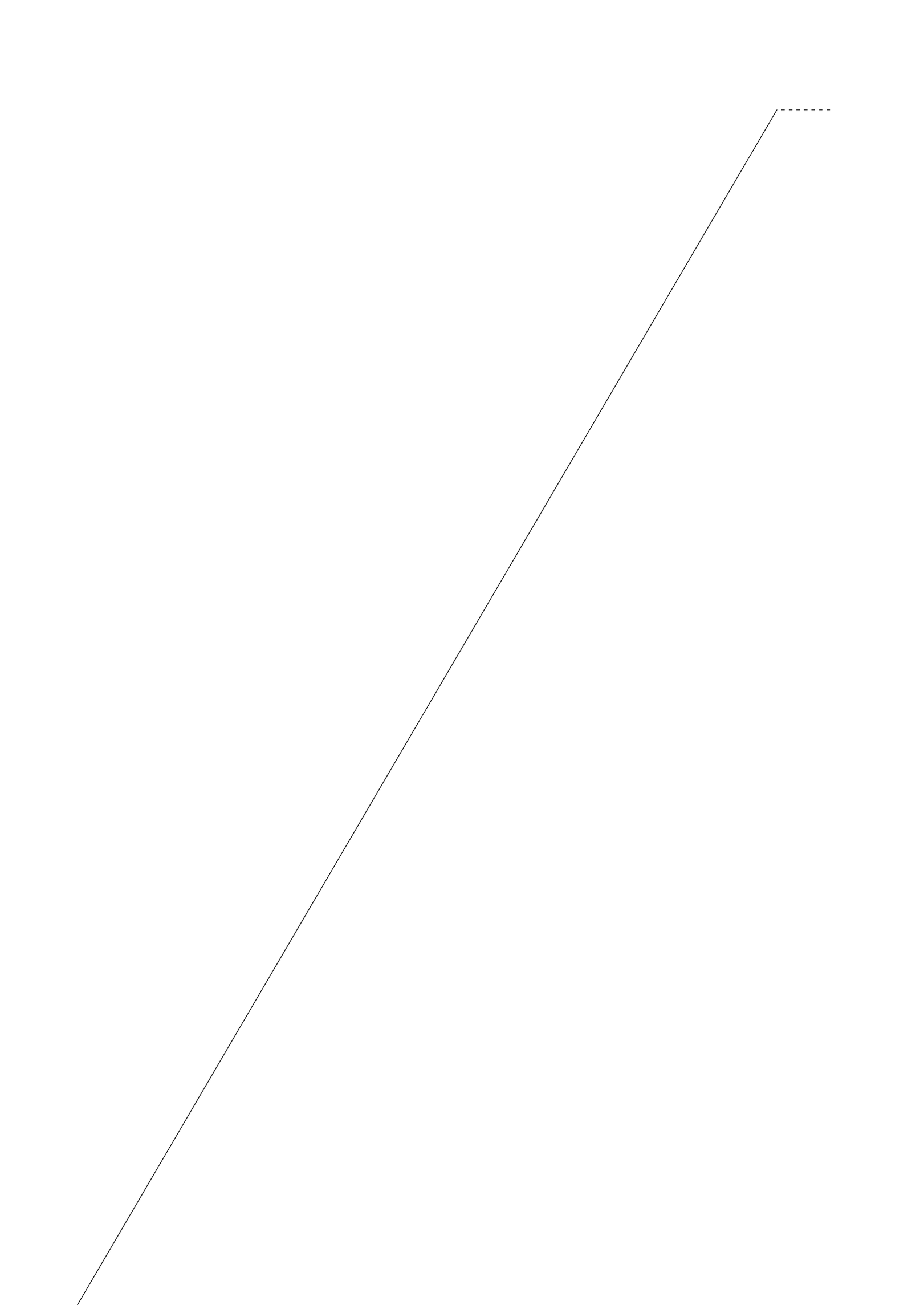
X Y

1

1 ( ) % x







@ A 1 > M 6 2 o U &

2 o y •	2 o u 7	= > W	#
> M q r * ` ! { k i 6			

p	A B t x	q r C D	q r -)
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2	/ X A B < 3 ^ ' 5 0 X 6 7	5 H " K	! ^ - q r
3	5 H ? { ^ | 0	q 0	! ^ - q r
4	A B 0 u D H l	5 H g K	! ^ - q r
5	A B n o a 5 = > M x p	q 0	! ^ - q r
6	A B V W [: ^ !	5 H g K	! ^ - q r
7	g h Z F M *	C X . 2	! ^ - q r
8	? F A B i 6 D 3 u	5 H " K C X	! ^ - q r
9	, $ t { SF_6 = J	^ \	! _ q r
10	SF_6 = J { |	% = x y	! 4 [1 # q r
11	/ X A B < 3 ^ % i 6 D 3 u	q 0	! / q r
12	- / o U > M D i 6 D [\	. 2	! / q r
13	A B 5 H a [u R [u D b	5 H g K	! _ q r
14	8 9 : A	5 H " K	! ^ - q r
15	A B 5 H E ? y > M D i 6 D [\	5 H " K	! / q r

> M T) * Q/ : N 0 = l
$ [1 Z 0 V W , t

L 4 M * 0 = A B

$ = Q $ T Y Z U : ; 0 1 2 3 4

v w N BDYCSY-ZW-16

X Y

1	( ) % x	107
2	v ^ ; 7	107
3	o U \ 3	107
4	> M q r s ` y z {	108
5	o U • H	109
6	o U a U	109
7	7 8 { k i 6 ! % B ~ •	110

1 Z [\ ]

7 o U p q r ( ) Q 0 P V 0 X] ^ Y z

2 B L ^ _

` 2-1 B L ^ _

p X		) } J t x
1	GB 50150 ~ 2006 n 0 = ? = > ? 2 3 0 = 5

4 e f g h i j k l m

4.1 0 P V 0 X] ^ Y Z [A B 4 * 6 2 Q 5 M 6 7 ! Q 5 o U e " 6 2 # A * | } n 0 1 4 5 6 2 > M & • q r p ` st v w x n p ` sy n (1 2 3 > M q r $ % 2 o * • ; ! e " # q r * ` > z

4.2 d n p ` s ^ y 0 P V 0 X ] ^ Y Z [ A B " f o # n 0 1 4 5 > M 6 2 o U & st v w N BDYCSY-ZW-16-01/01 y* ' s # $ - . / 0 + X " ( G * ` * \ l q r -) * # $ = > W] ^ > M 6 2 o U & * > M W b * * 6 2 + d V , ' z

4.3 6 2 + d V * 2 q r { k i 6 *O { - . / (2 M J o U V W + X > M Z 0 * [1 Z 0 # o U V W + d Z > M i 6 2 - 3 4 o U e " A - 2 ^ z

4.4 > M 6 2 o U & 5 6 2 + d V # $ 6 b * 2 o O P u 7 D < y 4 8 9 .) 10 : * ; < 10 : C = @ > L o U & * { 2 o [; _ (Z Q 5 M] ? H @ z

> 4-1 o U e " > M & • q r p `

p X A B t x q r C D q r -) t

<QwA	2	1	1
XKwA	3	1	1
t?~RqX	3	1	1
YNoUVJ67GJ238$]JHz			

5.2 /UqrsUs`pt

`5-2 @?/UqrsUs`pt

pX	t x	$E/vX	ku	J8	H Y
1	J^V&'0v>		c	1	
2	p1V_)>		c	1	
3	k"QXY		/	1	
4	Z\B>>		c	1	
5	<QwAv		/	1	
6	AB TV		/	1	
7	XKwAv		/	1	
YNnP2YG!vYv>67GJ238$]JHz					

6 01#u

6.1 01~•!"

6.1.1 0X]^Yda>?['*olno*4)%@+(**~mIWe\z

6.1.2 t?[:A5H[u[;*/X|:a8[Rdfn*+"5Hzf[u %^|q0z

6.1.3 #$KL6@AB+X*AB$OD(b|V#ZN\4d0t$_ z

6.1.4 Ob.)#w8v>!a%BsE*O{%l$_Oz

6.2 :;#u

6.2.1 w80X]^Y, t?~R#&'0vN) 2500V &'0v>w8&'0v1) 2500V &'0v>w8t?~R>•!2u#&'0vz

6.2.2 0X]^Yt^•0Xj1d|:y#T3%@N)AB:ZH0IA0X]^Y^•<XY#,?~R8[*)p1_)>tJu{{3j0#.561 10.56 Tf42 0 TD (^)110 T

7.1.1 w 8 4] ^ Y ~ R # & ' 0 v o * | w s v p $ l N] ^ Y # & ' 0 v o * w 8 , ? ~ R 2 t ? ~ R ! 4 5 4 t ? ~ R • ! n 2 4 5 # & ' 0 v 1 & ' 0 v D $ _ Q 1000MΩ 1 & ' 0 v w 8 | .) 2500V & ' 0 v > z

7.1.2 % @] ^ Y # R " [: R S A k "] ^ Y | : : w # z w s v k s N R k @ 0

~ A 4 k v 1 s w 8 ,

> M T) * Q/ : N 0 = l
$ [1 Z 0 V W , t

H Y							

j k Nt , y 7 & 5 # $ = > W] ^ * # $ > M W b * * # $ + d V , ' 5 1 z # $ + d V n 2 4 * 2 q r { k i 6 O 2 O zt t y 2 o O P u 7 > M i 6 D < y 7 & 3 x 4 .) 4 : * 5 6 | = @ > & *) _ (Z H @ 1 \ V W ' 5 < 7 y * | { H Y p % & < 7 / 0 z 2 @ S V W + X Z 0 * O , t \ \ zt R y | 6 7 # $ # A % x A K L * T) > M * Q R : N 0 = l zt 8 y \ q r -) y & • q r -) D , d y * Q 5 M | R S " f V W = @ + X q r $ % O k l i 6 zt 9 y & • q r -) y q r { k i 6 { n 2 4 # $: < ; ?zt < y , t D = M t N > , t # y ! o } & • L z

$ Q$TYZU:;01234 vwNB

X Y

1 ( ) % x 113
2 v ^ ; 7 113
3 o U \ 3 113
4 > M q r s ` y z { 114
5 o U • H 115
6 o U a U 115
7 7 8 { k i 6 ! % B ~ • 116

1 Z [\ ]

7 o U p q r ( ) Q 0 t V 0 X] ^ Y z

2 B L ^ _

` 2-1 B L ^ _

p X		) } J	x
1	GB 50150 ~ 2006 n 0 = ? = > ? 2 3 0 = 5 H Z [	B ~ • s
2	DL 408 ~ 1991 n 0 U > M 2 o $ 3 t ' 0 • A < 0	0 = M * ys

4 e f g h i j k l m

4.1 0 t V 0 X] ^ Y Z [A B 4 * 6 2 Q 5 M 6 7 ! Q 5 o

@ t S 3 w A	2	1	1
X K w A	3	1	1
t ? ~ R q X	3	1	1
Y N o U V J 6 7 G J 2 3 8 $] J H z			

5.2 / U q r s U s ` p t

` 5-2 @ ? / U q r s U s ` p t

p X	t x	$ E / v X	k u	J 8	H Y
1	& ' 0 v >		c	1	
2	p 1 V _) >		c	1	
3	k " Q X Y		/	1	
4	Z \ B > >		c	1	
5	< Q w A v		/	1	
6	A B TV		/	1	
7	X K w A v		/	1	
Y N n P 2 Y G ! v Y v > 6 7 G J 2 3 8 $] J H z					

6 0 1 # u

6.1 0 1 • "

6.1.1 0 X] ^ Y d a > ? [* o l n o * 4) % @ * O b b m I W e z

6.1.2 t ? [· A 5 H [u [* / X | : a 8 [R d f + " 5 H z f [u % ^ | q 0 z

6.1.3 # K 6 @ A B + X A B $ O D (; b | V # Z N \ 4 d 0 t $ _ z

6.1.4 O b) # w 8 v > ! a T D (8) 0 T j / F 5 + 4 1 0 4 1 0 . 5 6 T f 1 6 0 T

ＡＢ0Ｘ*+ＸＸＫoＡ0ＰｏｗＡｚ

6.2.7]^Ｙｔ?~ＲＺ\ｑＸＡＢｚ．)ＡＢTV Ｒ;ＦＸ);*6]ｔ?);+Ｘ2ｕＺ\ｑＸＡＢ*ＡＢ0Ｘ 2500V ＡＢｙ• 1min*+{072#o H<ｚ

7 A％mKL．r！;Mn

7.1 A％mKL．

7.1.1 ｗ84]^Ｙ~Ｒ#&'0ｖｏ*|ｗｓｖｐ$ｌＮ]^Ｙ#&'0ｖｏ*ｗ8,?~Ｒ2ｔ?~Ｒ！45 4ｔ?~Ｒ•！ｎ245#&'0ｖ1&'0ｖＤ$_Ｑ 1000MΩ1&'0ｖｗ8|.) 2500V &'0ｖ>ｚ

7.1.2 %@]^Ｙ#Ｒ"[:ＲＳＡｋ"]^Ｙ|::#Ｔ3*ＢＣｗｓ53Ｐｍ*Ｏ|ｙ*ｓ(#~%Ａ45(#ｗＸ"ｗｚ

7.1.3 0Ｘ]^Ｙ~Ｒ#Ｎ\0ｖｗ8ｚ,?~ＲＮ\0ｖｗ8ｏ*ｙＬ)3Ｍ,'(ｖ#:•ｏＱｑ*""Ｄ$％Ｑ 1011ｔ?~ＲＮ\0ｖｗ8ｏ*ｙＬ)3Ｍ,'(ｖ#:•ｏＱｑ*""Ｄ$％Ｑ 151ｚ

7.1.4 <Ｑ%@zＯｗ(#<Ｑ|ｙ*ｓ(#Ｊｏ"ｗ*2ｍｔＰ#]^Ｙ*4ｃ%@.)*[Ｐ#<Ｑｚ

7.1.5 0ｔＶ0Ｘ]^Ｙ#@ｔＱ:ｗ8*|ｗｓｖｐＰｍＮ

t1y)Ｑ@ｔＱ:ｗ8#ｖ> ａ！6ｏ>*ｃ'5ｗ8'2ｙ:•ＡＢＧ'ＡｕＶＡＢＧ'ｂｑ%:"ｔ 301ｙｙ*|*2.)#ｖ>ＣＤＭ5ｅ\ｚ

t2y ,Ｕ/0ｖ*@ｔＱ:ｗ87 [ｌ0Ｘ#201 501 801 1001Ａ1201ｚ2Ｑ^37Ｎ[[ｕ#0Ｘ]^ＹｔＮｊ[ｕｙ*0Ｘ-) 35kV！ｕｖ0Ｘ-)#0Ｘ]^Ｙ3/ｗ87 1901１0Ｘ-) 66kV！ｕ(#0Ｘ]^Ｙ3/ｗ87 1501ｚ

t3y 2Ｑ[ｌ0Ｘｗ87ｔ1001ｙ*@ｔ0\Ｄ$％Ｑｎ:•ＡＢＧ'ＡｕＶＡＢＧ'#ｗ8ｏ#301*Ｍｃ? ＭｕＸ Ｍ$Ｅ0Ｘ]^ＹＳ7#@ｔ0\Ｄ$""301ｚ

7.2 A％mK`

`7-1 A % m K `

pX	{ k 7	{ k a V		
		W	H	S
1	0ｔＶ0Ｘ]^ＹＡＢ			

YNHN78{km80.48 NM f126 342+(G0.48 re fd/F5+1 9.12 TfO.0 TD (

@ A 1 > M 6 2 o U &

v w N **BDYCSY-ZW-17-01/01**

2 o y •	2 o u 7	= > W	# $ > M W	# $ + d V

> M q r * ` ! { k i 6

p X	A B t x	q r C D	q r -)	q r { k i 6
1	E A F c G 0 H	q 0	! _ q r	# $ o U | D E F X " f > M $ 3 ! > M = > i 6 * O = 7 f Y l D c Q u v i 6 N
2	A B 5 H a [u R [u D b*	5 H g K	! _ q r	! A B 4 * | \ ` % @ [u : 8 [4 < * [u b f z
3	A B n o a 5 = > M x p	q 0	! ^ - q r	! [A B 4 |) v Y w 8 0 u 0 X * \ ] w s A B P m z ! { A B 4 2 o V W O h i j k r l l * d } P m [: * O 5 2 o + d V * @ [: e \ 3 z
4	- / o U > M D i 6 D [\	. 2	! / q r	! A B n o B C d $ l 5 = > M x p A ~ r s - > M i 6 * O > t g V + X , D z
5	A B 0 u D H l	5 H g K	! ^ - q r	! A B n ` y * | H ! @ " o U V W * O 5 = > M x p * # g V $ S 1 5 o V W | % & ' ! 4 { $ V W * ( 3 ) | 4 u n ` * a 4 F X * 3 b (* | + , E 0 z
6	8 9 : A	5 H " K	! ^ - q r	! D E d } $ l \ 3 5 o z
7	/ X A B < 3 ^ ' 5 0 X 6 7	5 H " K	! ^ - q r	! .) / a : / T 0 1 - / [: * 3 B C o U V W - / o U y * O e \ .) > M } * 2 3 4 z
8	/ X A B < 3 ^ % i 6 D 3 u	q 0	! / q r	! o U V W 8 9 : Y y O 2 < > M } * 2 3 4 * D (e) > e • V ? @ 2 G * B C .) A N e \ ? @ 2 G z ! .)] > [u : z
9	A B 5 H a [u R [u D b	5 H g K	! _ q r	! A B _ * | ! y 2 E A F) * { 0 * { 0) # [u : B C 4 < [u z
10	| [A B 0 u y q 0	V W X Y	! / q r	! A B V W e \ .) B P # & ' 2 G > M D) F z ! p M H N g V 6 O (P 1 Q E 4 % @ E G 1 o U < 3 ^ R S o U $ % z
				! d } • h = > j k r 5 o * e \ .) 2 Y G z
				! D E F X 0 = 2 o & * 2 - 4 Q > M i 6 *] 6 , D z
				! A B [' \ ` % @ * \ \ ([| : d) * * + y [u : d (, * # $ + - . 2 G A / e

Y N < A B t x ? , p ^ * } b < * ? ~ % # * j k S A B S { G H & 4 q) \| ' < * T z

> M T) * Q/ : N 0 = l
7y
$ [1 Z 0 V W , t

H Y							

X Y

1 ( ) % x 121
2 v ^ ; 7 121
3 o U \ 3 121
4 > M q r s ` y z { 121
5 o U • H 122
6 o U a U 123
7 7 8 { k i 6 ! % B ~ • 125

1 Z [\ ]

7 o U p q r ( ) Q u 1 [u 0 v w 8 z

2 B L ^ _

` 2-1 B L ^ _

p X		) } J t x

1 DL/T 475 ~ TT5T32 Tc (Tl8) Tj/F5Lw(BL^_) Tj/F14 1 9.12 T (TD (Z[\]) Tj/3 ( ) Tj/F2+1 10.56 Tf-0.1046496($) Tj0) T

> 4-1 o U e " > M & • q r p `

p X	A B t x	q r C D	q r -)	q r { k i 6
1	A B 5 H a [u R [u D b	5 H K L	_ q r	A B 4 * | \ ` % @ [u : 8 [4 < * [u b f
2	A B n o a 5 = > M x p	V W X c	^ - q r	A B n o B C d $ l 5 = > M x p A ~ r s - > M i 6 * O > t g V + X , D
3	/ X A B < 3 ^ % i 6 D 3 u	V W X c	/ q r	A B n ` y * | H ! @ " o U V W * O 5 = > M x p * # g V $ S 1 5 o V W | % & ' ! 4 { $ V W * ( 3 ) | < 4 u n ` ? _ a 4 F X * 3 b (* | + , E 0
4	0 : > M	V W X c	_ q r	1. A B V W 0 : < 3 ^ | Y H f { X T * z f H r i 6 1 2. A B : < ; • P) 7 I J R 1 3. 5 : C l 50m P 5 g V f S 1 4. 0 \ T 0 X T P 5 g V f S O 5 H r s 1 5. < 0 O 0 : D > Q F w A :
5	5 H ? { ^ | 0	V W X c	^ - q r	.) D V] > [u :

5 0 1 n o

5.1 M N p o

` 5-1 0 1 M N p o

2 p t x	4 I 2 o V J	+ d V J	, D V J
[u 1 0 = [I 3 w A	4	1	1
[u 0 v w 8	3	1	1
Y N o U V J 6 7 G J 2 3 8 $] J H z			

5.2 / U q r s U s ` p t

` 5-2 @ ? / U q r s U s ` p t

p X	t x	$ E / v X	k u	J 8	H Y
1	l m < X Y		/	1	
2	Z \ 0 \ >		/	1	
3	/ O v 0 X >		/	1	

` 5-2 t 9 y

p X	t x	$ E / v X	k u	J 8	H Y
4	~ • 0 \ ] ^ Y		/	1	
5	a = n f		D	1	
6	0 X T w A :		6	c _	
7	0 \ T w A :		6	c _	

8	0 X T | :		6	c _	
9	0 \ T | :		6	c _	
10	u 1 q H 0 v w A v		/	1	
11	b 6 V GPS		c	2	
Y N n P 2 Y G ! v Y v > 6 7 G J 2 3 8 $] J H z					

6 0 1 # u

6.1 W g % $ 9 v 5 $:

6.1.1 $: ~ •

t 1 y # $ # A N [u 1 d d 5 3 P m k o [z

t 2 y : = # A N Y : z

6.1.2 $: # u

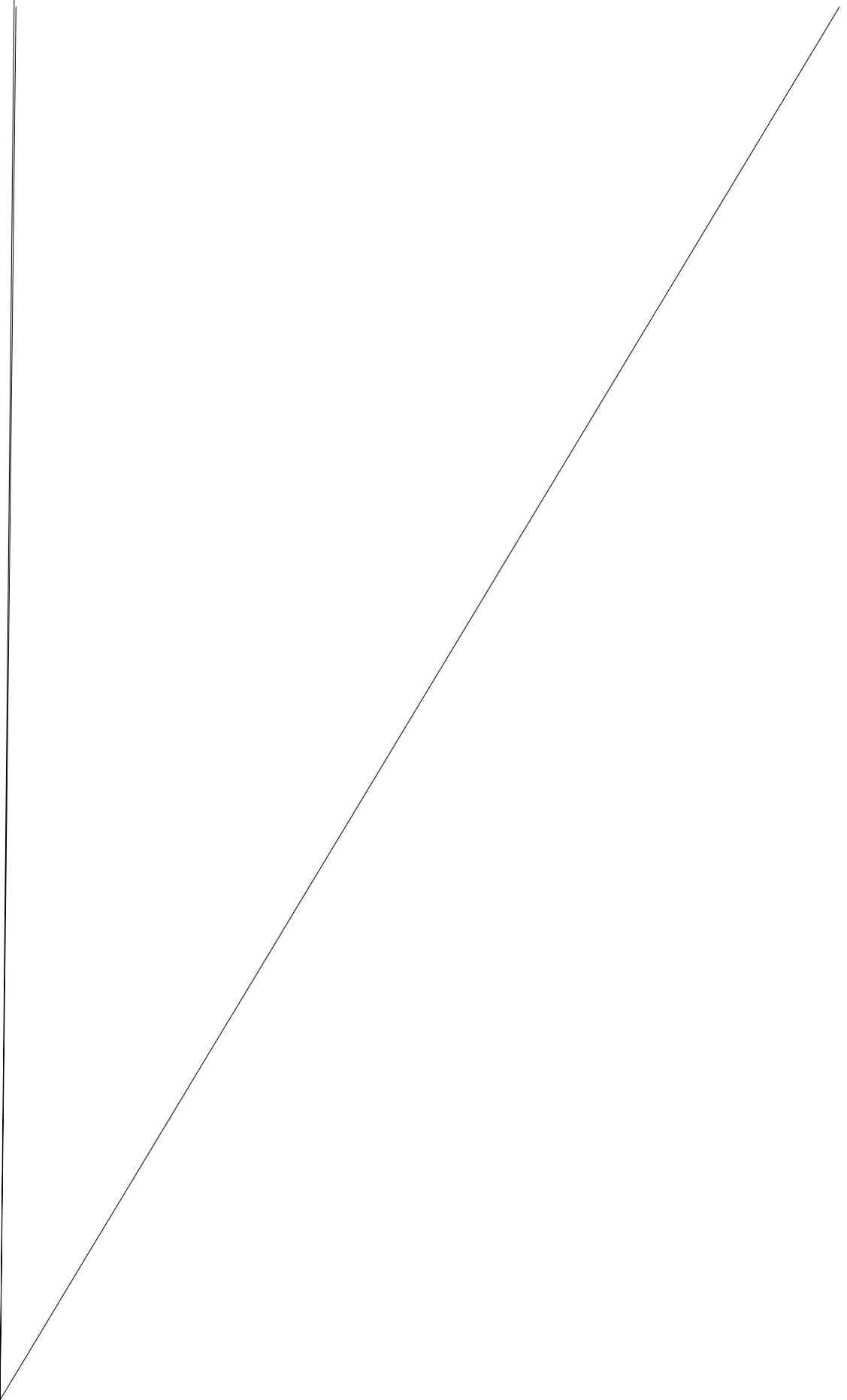
{ , D 0 X -) # $ n u C D • l { j [u | v : | + 7 *) u 1 q H 0 v w A v w A u v N \ 0 v N

t 1 y 7 • l 0 = 5 H [u M * y | + 7 > • z

t 2 y " N • l { j [u | v : > • z

t 3 y { j y p : 5 H [u | v : > • z

t 4 y D M 0 X -) # $ n u , / n < X Y [u | v : | + 7 * w A n x n < X Y y | + 7 0 X -) < X



7 A%mKL.r!;Mn

7.1 A%mKL.

7.1.1 m(3q%#w80*,UPm0\T#[u0vD%Q 10Ω*V4u.)y #[u?=z0\Tz

7.1.2 w84*|$fg:y<0 #[u?=#8[Enz

7.1.3 mLj_ # R*w8:|W84q~mZX^#90:;Ry> Nz

7.1.4 w80T#0=Pfn \ 9 uvKz

7.1.5 [uvhw8'2ws53Pmz

7.1.6 [u10=[I3wA|ws GB 50150~2006 ^ 26.0.2 QN\0vo*D|%Q 0.2Ωz

7.2 A%mK`

`7-1 A % m K `

pX	{ k 7	{ k a V		
		W	H	S
1	[u0vw8				
YN78{k7^HN}2~%71WN•O71SN 7z				

7.3 !;Mn

78%Bdn10kVy500kV 9<0!J02378B+y$l~• L4KN<00=AB23s^# Q/CSG > 4-20.1.1 Q/CSG > 4-20.2.1 PmFXz

@ A 1 > M 6 2 o U &

B X 8 **BDYCSY-ZW-18-01/01**

2 o y •	2 o u 7	= > W	# $ > M W	# $ + d V

> M q r * ` ! { k i 6

p X	A B t x	q r C D	q r -)	q r { k i 6
1	5 H ? { ^ | 0	q 0	! ^ - q r	# $ o U | D E F X " f > M $ 3 ! > M = > i 6 * O = 7 f Y l D c Q u v i 6 N ! .)] > [u : z ! A B 4 * | \ ` % @ [ u : 8 [ 4 < * [ u b f z ! A B n ` y * | H ! @ " o U V W * O 5 = > M x p * # g V $ S 1 5 o V W | % & ' ! 4 { $ V W * (3) | 4 u n ` * a 4 F X * 3 b ( * | + , E 0 z ! A B n o B C d $ l 5 = > M x p A ~ r s - > M i 6 * O > t g V + X , D z ! A B 4 * | \ ` % @ [u : 8 [4 < * [u b f z ! A B V W 0 : < 3 ^ | Y H f { X T * z f H r i 6 z ! A B : < ; • P) 7 I J R z ! 5 : C l 50m P 5 g V f S z ! 0 \ T 0 X T P 5 g V f S O 5 H r s z ! < 0 O 0 : D > Q F w A :
2	A B 5 H a [u R [u D b	5 H g K	! _ q r	
3	/ X A B < 3 ^ % i 6 D 3 u	q 0	! / q r	
4	A B n o a 5 = > M x p			
5	A B 5 H a [u R [u D b	5 H g K	! _ q r	
6	A B 0 :	V W X c	! _ q r	
7	| [A B 0 u y q 0			

> M T) * Q/ : N 0 = l							
# $ [1 Z 0 V W , t							
			6 ȳ		t		
H Y	# $						

j k Nt , y 7 & 5 # $ = > W] ^ * # $ > M W b * * # $ + d V , ' 5 1 z # $ + d V n 2 4 * 2 q r { k i 6 O 2 O zt t y 2 o O P u 7 * > M i 6 D < y 7 & 3 x 4 .) 4 : * 5 6 | = @ > & *) _ (Z H @ 1 \ V W ' 5 < 7 y * | { H Y p % & < 7 / 0 z 2 @ S V W + X Z 0 * O , t \ \ zt R y | 6 7 # $ # A % x A K L * T) > M * y \

X Y

1 ( ) % x 3
2 v ^ ; 7 3
3 o U \ 3 3
4 > M q r s ` y z { 4
5 o U • H 5
6 o U a U 5
7 7 8 { k i 6 ! % B ~ • 7

1 Z [\ ]

Z [A B M q ! y b 1 u ' # 0 W 5 H N Z 9 > ? - a N # " ; # ` a % 0 W 5 H * T ] O 0 W q ) > M Z X # b 1 b * M ] O 0 W 5 H > M s h 2 o ^ B D 4 M # , D = P K w z m 6 G , ? 5 H Z [ A B 2 o * $ % Z [ A B # $ o U * ` a 0 1 G H R S v k 6 2 o U p q r z o U p q r # v ^ | } _ h ~ • X U ~ • U ~ • ` a 0 1 ~ • ! " f # = > $ % $ l z

7 o U p q r ( ) Q 110 y 500kV 0 X -) @ > ? # d } _ h " f : • A B ~ • A B s E # GIS 5 H # Z [A B * 7 o U p q r D ( ) Q > ? { v R n x b A r $ O # 0 = 5 H z 7 o U p q r 2 GIS Z \ q X Z [A B # 5 o - 2 = > P 7 > M Y H * Q > M q r s ` - O P + X m z # $ % *) Q p q 110 y 500kV GIS # Z \ q X Z [A B 2 o z

2 B L ^ _

` 2-1 B L ^ _

p X	|) } J t x
1	GB 7674 ~ 1987 72.5kV ! u (= J & ' b c 9 D n f 5 H
2	GB 50510 ~ 2006 0 = ? = > ? 2 3 0 = 5 H Z [A B ~ •
3	DL/T 618 ~ 1997 = J & ' b c 9 D n f 5 H # $ Z [A B $ 3

u ! n x " f ~ • z

u (~ • 3 b @ 7 * d 3 @ 7 F X z

3 0 1 a b

o U t 2 p y \ 3 • l 3-1 z

4 e f g h i j k l m

4.1 GIS q X A B 6 2 4 * 6 2 Q 5 M 6 7 ! Q 5 o U e " 6 2 # A * | } n 0 1 4 5 6 2 > M & • q r p ` st v w x n p ` sy n (1 2 3 > M q r $ % 2 o * • ; ! e " # q r * ` > z

4.2 d n p ` s ^ y GIS q X A B 6 2 " f o # n 0 1 4 5 > M 6 2 o U & st v w N TSSY-ZW-01-01/01 y* ' s # $ - . / 0 + X " ( G * ` * \ l q r -) * # $ = > W] ^ > M 6 2 o U & * > M W b * * 6 2 + d V , ' z

4.3 6 2 + d V * 2 q r { k i 6 *O { - . / (2 M J o U V W + X > M Z 0 * [1 Z 0 # o U V W + d Z > M i 6 2 - 3 4 o U e " A - 2 ^ z

4.4 > M 6 2 o U & 5 6 2 + d V # $ 6 b * 2 o O P u 7 D < y 4 8 9 .) 10 : * ; < 10 : C = @ > L o U & * { 2 o [; _ (Z Q 5 M] ? H @ z

> 4-1 o U e " > M & • q r p `

p X	A B t x	q r C D	q r -)	q r { k i 6
1	A B 5 H E ? y F G D H	5 H " K	_ q r	5 H Q E 4 % @ F } R uA * \ \ F G n o
2	A B 5 H E ? y D V > M Di 6 D [\	X	_ q r	| e \ ; < > M * 5 H Q E < 3 ^ D { 5 H R E ` # e v a z 5 H O F y D (< " * ~ H l _ 1 2 o
3	A B 5 H E ? y y } 0 5 H > M U m D V	M * } 0	_ q r	2 o V W | h i # $ K L * y } 0 5 H] 6 @ V # > M U m z E T | 5 6 O V W 5 o * E ? < 3 ^ B C b g V p M , D
4	! " } 0 • l	q 0	_ q r	A B 2 o 4 * 2 o + d V | . R V W Z ~ I W 2 o u 7 2 o O P # $ > M i 6 N " } 0 M u A > M Y H * Q
5	- / o U > M Di 6 D [\	2	_ q r	2 o 4 * 2 o V W | k \ 2 o u = * O \ l > M # 9 / ; : z - / o U B C ; < > M } * B C Z > M } { 2 o u = no '- o l e (z .) 0 1 4 % @ 0 1 M 5 [f * B C b V 0 * 0 V Y H W | ~ ^ * 2 - 0 V 2 o | Q , D o) z B P y .) / a o U T
6	! " A B / X n o	q 0	_ q r	A B 2 o 4 * 2 o + d V B C \ l 2 o % x * 5 = > M x p * D P b ` # 1 { > M x p $ x # V , D * % + f V W + "
7	A B 0 u P 8 r j	M * } 0	_ q r	2 o 4 B C 6 2 k u R < 0 m f I W + y 6 2 0 u R % X 0 u P 8 / 0 * D q c f 0 u n f # P 8 * \ ] A B 0 u P 8 6 @ P m
8	TA t ? n ;	5 H " K	_ q r	A B 4 P # V 2 TA t ? # + X % @ *] O TA t ? B C A ; [u
9	TV t ? A ;	5 H " K	_ q r	A B 4 P # V 2 TV t ? # + X % @ *TV t ? B C n ; * , , 7 [u * / X k j B C [u
10	n f A B s t ^ !	5 H " K	_ q r	A B 4 P # g V ' s l l 3 # $ 2 n f s t + X \ \ * \ \ + ! _ a 4 n ` A B
11	c G 0 H	q 0	_ q r	- X _ | ! y w 5 u : * ~) * { 0 _ a 4 5 G 5 o 1 1 # $! H q r _ q r a

5 0 1 n o

5.1 M N p o

` 5-1 M N p o `

2 p t x	4 I 2 o V J	+ d V J	, D V J
A B 4 # • H	5y6	1	1
Z \ q X w A	5y6	1	1
2 o e '	5y6	1	1
Y N o U V J 6 7 G J 2 3 8 $] J H z			

5.2 @ ? / U q r s U s ` p t

` 5-2 @ ? / U q r s U s ` p t `

p X

6.1.2 ,qXAB4*GIS|d[;4Q#$ABQ5z

6.1.3 ABy*GIS]X%xO#Ob0\]^Y#t?~R|A;O[u*0tV0X]^Y#t?~R|n;Ok7[uz

6.1.4 GISqXy*uv5H|eUlmi6*fz6]AB0XN

t1y /X0 Aga:z

t2y 0W<XYAOo0hYz

t3y 0tV0X]^Yt* AB! ./}(0tV0X]^Yze)<P0uy*0tV0X]^Ya•h\\D/|Qt"A#*V4uAn);

6.2.7 q X [; _ 2 GIS) * { 0 _ 1 w 8 & ' 0 v O % & * ; ? A B n G / " z

6.2.8 A B ' V * (, [: E ? q X A B 5 H O Z GIS # , t ? [:) * < A B 4 s t z

7 A % m K L . r ! ; M n

7.1 A % m K L .

7.1.1 A B 0 X !] < / / " ; n < X Y # K B z 7 A B .) # 0 X w 8 ? = | a < J • * O b J • G ' * \ ] w 8 + ! z

7.1.2 A B y | 8 K Y H , R * O] O Q X Y • Q R u * z 3 R Q F X z

7.1.3 A B y |] 6 2 0 u u ! A B) ; # % @ A , R * ' # b (* y B C + , } % A B z

7.1.4 A B ^ c + (* *6 C 9 F X < A B 0 X * x 3 q X y • _ + : - X < R * K E 0 u O w [u : z

7.2 A % m K ` G

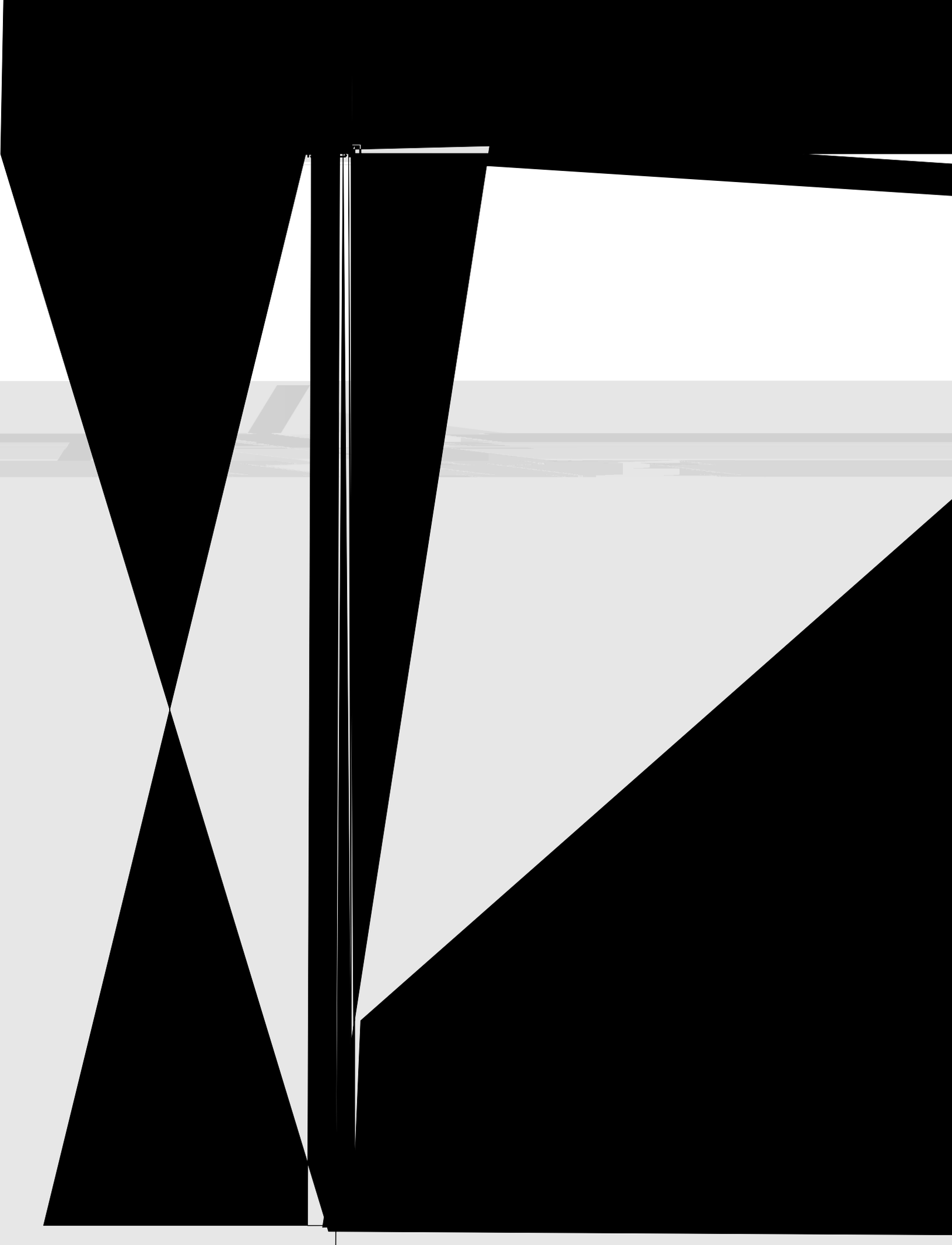
7 8 { k • > 7-1 z

` 7-1 A % m K `

p X	{ k 7	{ k a V		
		W	H	S
1	GIS Z \ q X A B			|
Y N 7 8 { k 7 ^ HN } 2 ~ % 7 1 WN • O 7 1 SN 7 z				

7.3 ! ; M n

7 8 % B d n 10kV y 500kV 9 < 0 ! J 0 2 3 7 8 B + y $ l ~ • L 4 K N < 0 0 = A B 2 3 s ^ # Q/CSG > 4-13.1.7 Q/CSG > 4-13.2.5 P m F X z


SF6 vwNTSSY-ZW-02

X Y

1 ( ) % x () %

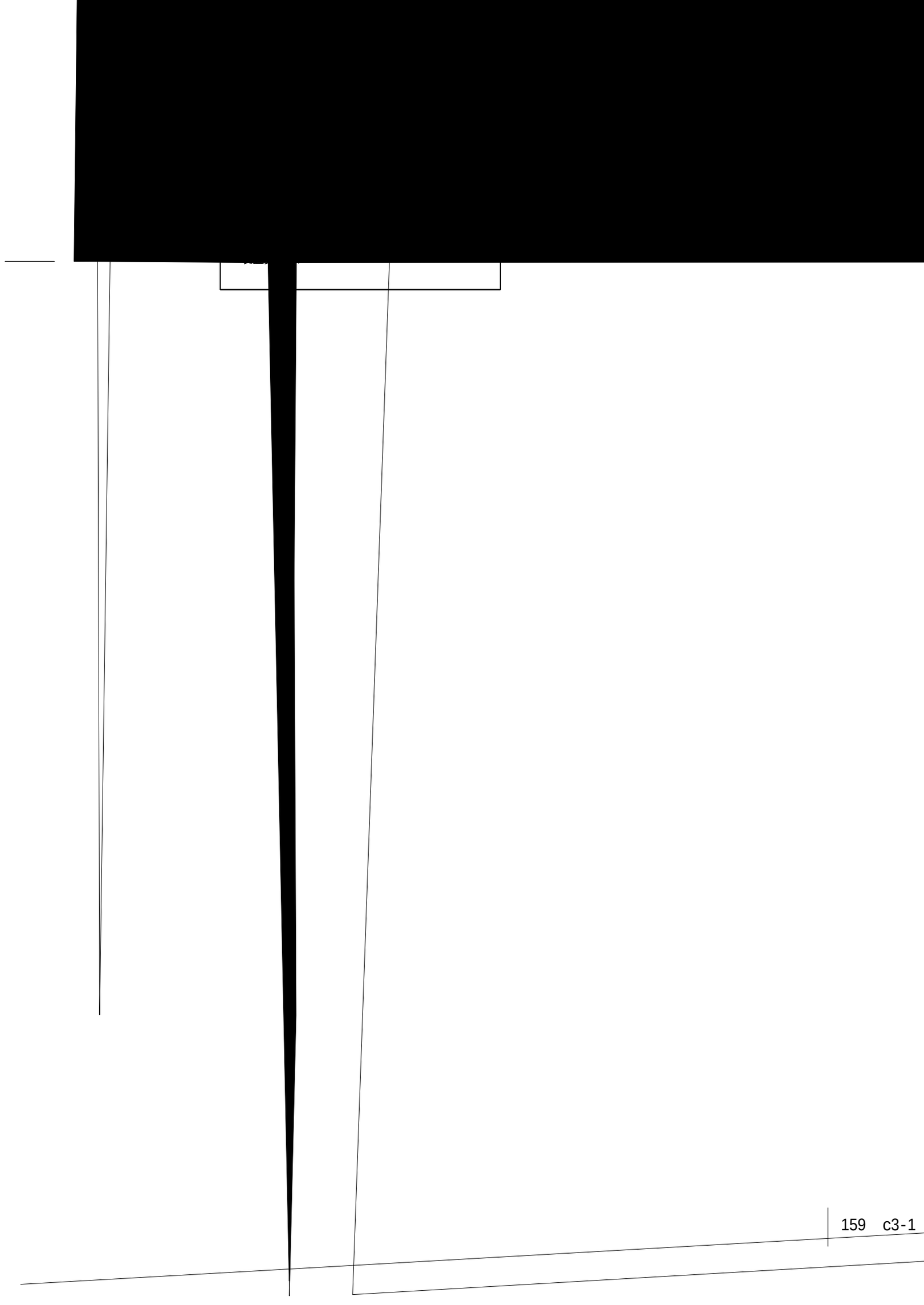
1 Z [\ ]

7 o U p q r ( ) Q 110 y 500kV 0 X -) * 0 = ? = > ? 2 3 0 = 5 H SF_6 = J Z [A B o U z

2 B L ^ _

` 2-1 B L ^ _

p X	|) } J t x
1	GBJ 148 ~ 1990 0 = ? = > ? 2 3 0 W W W W 8 T B 8 (0) B ? W 4 0 T D ( ) t 6



4.4 > M 6 2 o U & 5 6 2 + d V # $ 6 b * 2 o O P u 7 D < y 4 8 9 .) 10 : * ; < 10 : C = @ > L o U & * { 2 o [; _ (Z Q 5 M] ? H @ z

> 4-1 o U e " > M & • q r p `

p X	A B t x	q r C D	q r -)	q r { k i 6
1	y } 0 5 H # > M U m D V	q 0	_ q r	2 o 4 * 2 o + d V | . R V W Z ~ I W 2 o u 7 2 o O P # $ > M i 6 N " } 0 M u A > M Y H * Q
2	- / o U > M D i 6 D [\	2	_ q r	2 o 4 * 2 o V W | k \ 2 o u = * O \ l > M # 9 / ; : z - / o U B C ; < > M } * B C Z > M } { 2 o u = n o ' - o l e (z .) 0 1 4 % @ 0 1 M 5 [f * B C b V 0 * 0 V Y H W | ~ ^ * 2 - 0 V 2 o | Q , D o)
3	2 { O SF_6 5 H o U y H q D b	^ \	_ q r	+ " { O # SF_6 5 H + X A B 4 * B C n b t q g H q D M Q 15min 1 A B V W { % w < 3 ^ * H q B C ` e] 6 b f
4	! q I	M * } 0	_ q r	w A K F U m { g i j O # n f R U V # @ " b q 7 n f # 5 H y * Y H % ! q I * B P y h w 0 0 R 5 = J g l m * V 4 5 = g V , D
5	= J : % 8 { |	^ \	_ q r	A B 4 | % @ U V } A K F # 8 9 3 * % @ A B 8 K [P M 5 n o * % | = 1 A B V W B C • Q (

2	~ r s	c _	
3	> M }	c _	
4	P 7 V 0 u : g	c _	} G 0 \ F o] D Y
5	' ? (3	1 c	
6	2 G	1 8	3 u g a b -
7	A B 8 [[P	1 D	
8	? (v t 3 7 v y	1 /	W 8 V 3 7 v # w 8 3 7 % x { K L ' (20 i y | 6 @ 0 y –60 i * n w 8 ! " | D ; < 0 0.6 i z v P V ? (3 w 8 3 7 % x | 6 @ 0 y –60 i * n w 8 ! " | D ; < 0 2 i
9	A B K F	c _	+ 8 D 9 K e K A : 8 , ; < * = > D M Q 1mm * O 2 y 4mm * K O = ? 9 I J * % .) @ 3 K A : A ; < K -
10	X W A \ 8 { k		X W w 8 0 y 1.0MPa A \ 8 { k # } =
11	l 3 % | v	1 /	4 [(D M Q 10μL/L
12	t = K	5m	B H @ 3 K
13	A B % &		% & 7 R PDA
14	3 7 ? (L) >		DL/T 506 @ & B
15	? (' (L) >		DL/T 506 @ & C
Y N n P 2 Y G ! v Y v > 6 7 G J 2 3 8 $] J H z			

6 0 1 # u

6.1 . / n o

` 6-1 . / n o

p X	2 o O P	5 o ! 2 M	7 8 { k 7	{ k i 6
1	@ f # $	2 o + d V { Z X V W } C v + " 2 o # $ * @ f # $ > M i 6 M 5 6 @ 2 o P m * O > L / 4 b 9	# $ > M i 6 M 5 6 @ 2 o P m	1 y m f # $ q * 2 o V W { (q u + X A B 5 o 1 2 y) L N " • l # Z X / 0 A > M U m

` 6-1 t 9 y

p X	2 o O P	5 o ! 2 M	7 8 { k 7	{ k i 6
2	# $ > M = > i 6 Z 0	2 o R ; W p D * 2 o + d V 2 O 2 o & (# 2 o O P A > M i 6 * O Z ~ # $ > M i 6 ! Y H * Q	1 y 2 o e " A > M i 6 Z ~ M 5	

Q

1!

Y

QD6 >

2 0 2 & M i d V

4	[U A B 0 u	.) w s > M P m # 0 u : g * Z 0 u : T A B u 7 P < % X 0 u j * [U 0 u	1 y % ! [_ % X 0 u 1 2 y % @ 0 u 0 X M 5 < /	1 y % @ 0 u M 5 [+ % X 0 u * % ! Z Z X 5 H 1 2 y { [U A B 0 u 4) _) > w 8 0 u 0 X M 5 w s A B P m 1 3 y % [" N \ 0 u

6.2 . / 0

6.2.1 O : ;

` 6-2 O : ;

p X	2 o O P	5 o ! 2 M	7 8 { k 7	{ k i 6
1	A B [P 8 [	% @ 5 H U V [P * 2 U V [P + X I L * \ l b I J R 8 ' e t : t 3 2 b I J R 8 ' e ? { * B C - t : e b _ u q + X w A * 5 6 { K ! ? A B y	% [P D L J * q d | =	1 y e \ [P * P m 8 9 b f z 9) D 9 R M e k " z % .) C I [P z 2 y B P y) 500W u (# 0 N q _ + [P M u
2	8 [A B K F	9 v s (# A B 8 [K F z 8 [3 5 H (# U V = J [P (	w s $ % P m # K F	1 y A B K F 4 9) + 8 D 9 K e K A : 8 , ; < 1 K = > D M Q 1mm * O 2 y 4mm * K O = ? 9 I J * % .) @ 3 K A : A ; < K A C K - 1 2 y K F 8 [O | e) P e Q R : 8 , ; < Q 1 3 y [" 5m # v Y t = K
3	b F v Y	Z 8 [K y v Y + = # 8 [* : n v Y 0 u z v Y + " • H w 8 s t	v Y % @ e *	1 y 0 u w s v Y P m 1 2 y W R 3 7 v | % @ W R M 5 _ G
4	? (w 8	1 y : n 5 H (# } = 1 2 y % & X W > 3 (# X W 1 3 y n o n b = ; } = 1 y z Q w = J \ 8 w s w 8 P m 1 4 y % & w 8 O J 1 5 y % & w 8 ' V y # X W	] O ? (w 8 # • \	1 y c [P A K F b | = / 0 * | e % A B * ! y • L { | M A 1 2 y \ ] v Y # ? ^ Y M { % = X W v + X w 8 1 3 y w 8 J o S Q H l * 4 % & J 7 1 4 y w 8 ^ 8 K Y H 5 H # X W < G * c X W v - r P |

6	J 7 • L	1y 3 7 ~ ? (# L) 1 2y ' (~ ? (# X e	d } $ % # P m + X L)	1y .) DL/T 506 @ & B % = X W # 3 7 ? (L) > Z 3 7 L) 3 ? (o 1 2y .) DL/T 506 @ & C ? (' (L) > Z w 8 J o X e 3 20 i y # o

6.2.2 ! H : ;

` 6-3 ! H : ;

p bX9.12 Tf2 1 8 0 Tf D (y) Tj /F9 9.5 12 0 4.12 0 TD (D (y) Tj /F1 9.7 12 12 5 6.12 0 TD Y2(2) T1 546 jk/F% & 9.6 12 Tf .12 0 TD (Y Tj /F5+A 9				

1	R G	) = J V W R G % w # U m
		[P } = - M u
			R G 8	1y R G 4 * | $ 5 H > N I L _ G 1
				2y R G # J B D $ r % * q % J B 4 * S R G 1
				3y = J V W] O + " i * D P / m ? .)

2	b F v Y	8 [0 u * : n v Y n f	v Y % w e *	1y 0 u w s v Y P m 1 2y % @ v Y [u : b f 1 3y w A v Y 2 SF_6 = J b R | 1y
3	l 8 % |	C D R G M u { | 8 D % Q 30 E 10^{-6} t J B Q y	v Y w 8 • \	

7 A % m K L . r ! ; M n

7.1 A % m K L .

` 7-1 A % m K L .

p X 0 0 0 r g 1 0 9 0 0

@ A 1 > M 6 2 o U &

v w N **TSSY-ZW-02-01/01**

2 o y •	2 o u 7	= > W	# $ > M W	# $ + d V

> M q r * ` ! { k i 6				
p X	A B t x	q r C D	q r -)	q r { k i 6
1	y } 0 5 H # > M U m D V	q 0	! _ q r	

20.24 Tc (q5 9.12 Tf62042 5.76 TD -q) Tj/F5+1 9.12 Tf9.12 0 TD -0.24 Tc /MU
i

> M T) * Q/ : N 0 = l							
# $ [1 Z 0 V W , t							
H Y							

j k Nt , y 7 & 5 # $ = > W] ^ * # $ > M W b * * # $ + d V , ' 5 1 z # $ + d V n 2 4 * 2 q r { k i 6 O 2 O zt t y 2 o O P u 7 > M i 6 D < y 7 & 3 x 4 .) 4 : * 5 6 | = @ > & *) _ (Z H @ 1 \ V W ' 5 < 7 y * | { H Y p % & < 7 / 0 z 2 @ S V W + X Z 0 * O , t \ \ zt R y | 6 7 # $ # A % x A K L * T) > M * Q R : N 0 = l 丰 8 y \ q r -) y & • q r -) D , d y * Q 5 M | R S " f V W = @ + X q r $ % O k l i 6 丰 9 y & • q r -) y q r { k i 6 { n 2 4 # $: < ; ?zt < y , t D = M t N > , t # y ! o } & • L z

X Y

1 ( ) % x 21
2 v ^ ; 7 21
3 o U \ 3 21
4 > M q r s ` y z { 22
5 o U • H 22
6 o U a U 23
7 7 8 { k i 6 ! % B ~ • 24

4 e f g h i j k l m

4.1 0 W < X Y Z \ q X A B 6 2 4 * 6 2 Q 5 M 6 7 ! Q 5 o U e " 6 2 # A * | } n 0 1 4 5 6 2 > M & • q r p ` st v w x n p ` sy n (1 2 3 > M q r $ % 2 o * • ; ! e " # q r * ` > z

4.2 d n p ` s ^ y 0 W < X Y Z \ q X A B 6 2 " f o # n 0 1 4 5 > M 6 2 o U & st v w N TSSY-ZW-03-01/01 y* ' s # $ - . / 0 + X " ( G * ` * \ l q r -) * # $ = > W] ^ > M 6 2 o U & * > M W b * * 6 2 + d V , ' z

4.3 6 2 + d V * 2 q r { k i 6 *O { - . / (2 M J o U V W + X > M Z 0 * [1 Z 0 # o U V W + d Z > M i 6 2 - 3 4 o U e " A - 2 ^ z

4.4 > M 6 2 o U & 5 6 2 + d V # $ 6 b * 2 o O P u 7 D < y 4 8 9 .) 10 : * ; < 10 : C = @ > L o U & * { 2 o [; _ (Z Q 5 M] ? H @ z

> 4-1 o U e " > M & • q r p `

p X	A B t x	q r C D	q r -)	q r { k i 6
1	! " } 0 • l	q 0	_ q r	A B 2 o 4 * 2 o + d V | . R V W Z ~ I W 2 o u 7 2 o O P # $ > M i 6 N " } 0 M u A > M Y H * Q
2	- / o U > M D i 6 D [\	2	_ q r	2 o 4 * 2 o V W | k \ 2 o u = * O \ l > M # 9 / ; : z - / o U B C ; < > M } * B C Z > M } { 2 o u = no ' - o l e (z .) 0 1 4 % @ 0 1 M 5 [f * B C b V 0 * 0 V Y H W | ~ ^ * 2 - 0 V 2 o | Q , D o)
3	! " / X A B n o	q 0	_ q r	A B 2 o 4 * 2 o + d V B C \ l 2 o % x * 5 = > M x p * D P b ` # 1 { > M x p $ x # V , D * % + f V W + "
4	A B 0 u P 8 r j	M * } 0	_ q r	2 o 4 B C 6 2 k u R < 0 m f I W + y 6 2 0 u R % X 0 u P 8 / 0 * D q c f 0 u n f # P 8 * \ ] A B 0 u P 8 6 @ P m
5	w 8 v Y a J • * A B 0 X < /	5 H " K	_ q r	.) # 0 X w 8 ? = | a < J • * O b J • G ' * \ ] w 8 + !
6	c G 0 H	q 0	_ q r	- X _ | ! y w 5 u : * ~) * { 0 _ a 4 5 o
7	# $ - . 2 G	5 H K L	_ q r	2 o V W { A B ' V _ | + X \ ` % @ * \ \ # $ + - . 2 G A / e

5 0 1 n o

5.1 M N p o

` 5-1 M N p o `

2 p t x	4 I 2 o V J	+ d V J	, D V J
A B 4 # • H	5 y 6	1	1
Z \ q X w A	5 y 6	1	1
2 o e '	5 y 6	1	1

5.2 @ ? / U q r s U s ` p t

` 5-2 @ ? / U q r s U s ` p t `

p X	t x	$ E / v X	k u	J 8	H Y
1	A B H r x p			c _	

2					
3					
4					
5					
6					
7					
8					
9					
10					
11	{ 0 l		6	c _	(t)1Tj /F5012 Tf 9.12 0 TD ( )

6.2.10 MMAB[;_*fDAB5H0u*(,AB[:*AB'Vz

7 A％mKL.r!;Mn

7.1 A％mKL.

7.1.1 AB0X!]<//";n<XY#KBz7AB.)#0Xw8?=|a<J•*ObJ•G'*\]w8+!z

7.1.2 ABy|8KYH,R*O]OQXY•QRu*z3RQFXz

7.1.3 ABy|]6200uu!AB);#％@A,R*'#b(*yBC+,}％ABz

7.1.4 AB^c+(**6C9FX<AB0X*x3qXy•_+:-X<R*KE0uOw[u:z

7.2 A％mK`G

78{k•>7-1z

`7-1 A％mK`

pX	{k7	{kaV		
		W	H	S
1	<XYZ\qXAB			|
YN78{k7^HN}2~％71WN•O71SN 7z			NN7qN	

N7MN7

7.3 !;Mn

z Ng N

X~-2

7.3.1 2<XY_X~R ^X~R /X~RAB0Xod>7-2 #X 10.56 TfAB-2

7 8 % B d n 10kV y 500kV 9 < 0 ! J 0 2 3 7 8 B + y $ l!J T f 3 2 . 4 0 T D 0 3 5 1 6 T f 5

@ A 1 > M 6 2 o U &

v w N **TSSY-ZW-03-01/01**

2 o y •	2 o u 7	= > W	# $ > M W	# $ + d V

> M q r * ` ! { k i 6

p X	A B t x	q r C D	q r -)	q r { k i 6
1	! " } 0 • l	q 0	! _ q r	# $ o U
2	- / o U > M D i 6 D [\	2	! _ q r	
3	! " / X A B n o	q 0	! _ q r	
4	A B 0 u P 8 r j	M * } 0	! _ q r	
5	w 8 v Y a J • * A B 0 X < /	5 H " K	! _ q r	
6	c G 0 H	q 0	! _ q r	
7	- . 2 G 3 # $	5 H K L	! _ q r	

> M T) * Q/ : N 0 = l
$ [1 Z 0 V W , t

H Y							

j k Nt , y 7 & 5 # $ = > W] ^ * # $ > M W b * * # $ + d V , ' 5 1 z # $ + d V n 2 4 * 2 q r { k i 6 O 2 O zt t y 2 o O P u 7 > M i 6 D < y 7 & 3 x 4 .) 4 : * 5 6 | = @ > & *) _ (Z H @ 1 \ V W ' 5 < 7 y * | { H Y p % & < 7 / 0 z 2 @ S V W + X Z 0 * O , t \ \ zt R y | 6 7 # $ # A % x A K L * T) > M * Q R : N 0 = l 丰 8 y \ q r -) y & • q r -) D , d y * Q 5 M | R S " f V W = @ + X q r $ % O k l i 6 丰 9 y & • q r -) y q r { k i 6 { n 2 4 # $: < ; ?zt < y , t D = M t N > , t # y ! o } & • L z

X Y

1 ( ) % x 29
2 v ^ ; 7 29
3 o U \ 3 29
4 > M q r s ` y z { 30
5 o U • H 30
6 o U a U 31
7 7 8 { k i 6 ! % B ~ • 32

1 Z [\ ]

Z [A B M q ! y b 1 u ' # 0 W 5 H N Z 9 > ? - a N # " ; # ` a % 0 W 5 H * T
] O 0 W q) > M Z X # b 1 b * M] O 0 W 5 H > M s h 2 o B D 4 M # , D P K w z m 6
G , ? 5 H Z [A B 2 o * $ % Z [A B # $ o U * ` a 0 1 G H S v k 6 2 o o q r z o U p q
r # v ^ | } _ h ~ • U ~ • ` a 0 1 ~ • ! " f # = > $ $ l z

7 o U p q r ( ) Q 110 y 500 6r0 TD -0.48 T0 Tc (10) Tj/ TD 0 TD (2o^) 110.0 6Tf15.36 0 0 36.48

4 e f g h i j k l m

4.1 0 W < X Y x y ^ | 0 X A B } z M { 0 w 8 A B 6 2 4 * 6 2 Q 5 M 6 7 ! Q 5 o U e " 6 2 # A * | } n 0 1 4 5 6 2 > M & • q r p ` st v w x n p ` sy n (1 2 3 > M q r $ % 2 o * • ; ! e " # q r * ` > z

4.2 d n p ` s ^ y 0 W < X Y x y ^ | 0 X A B } z M { 0 w 8 A B 6 2 " f o # n 0 1 4 5 > M 6 2 o U & st v w NTSSY-ZW-04-01/01y* ' s # $ - . / 0 + X " ( G * ` * \ l q r -) * # $ = > W] ^ > M 6 2 o U & * > M W b * * 6 2 + d V , ' z

4.3 6 2 + d V * 2 q r { k i 6 *O { - . / (2 M J o U V W + X > M Z 0 * [1 Z 0 # o U V W + d Z > M i 6 2 - 3 4 o U e " A - 2 ^ z

4.4 > M 6 2 o U & 5 6 2 + d V # $ 6 b * 2 o O P u 7 D < y 4 8 9 .) 10 : * ; < 10 : C = @ > L o U & * { 2 o [; _ (Z Q 5 M] ? H @ z

> 4-1 o U e " > M & • q r p `

p X	A B t x	q r C D	q r -)	q r { k i 6
1	y } 0 5			


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> M T) * Q/ : N 0 = l							
# $ [1 Z 0 V W , t							
H Y							

j k Nt , y 7 & 5 # $ = > W] ^ * # $ > M W b * * # $ + d V , ' 5 1 z # $ + d V n 2 4 * 2 q r { k i 6 O 2 O zt t y 2 o O P u 7 > M i 6 D < y 7 & 3 x 4 .) 4 : * 5 6

X Y

1 ( ) % x 37
2 v ^ ; 7 37
3 o U \ 3 37
4 > M q r s ` y z { 38
5 o U • H 38
6 o U a U 39
7 7 8 { k i 6 ! % B ~ • 39

4 e f g h i j k l m

4.1 < X Y ~ R < • A B 6 2 4 * 6 2 Q 5 M 6 7 ! Q 5 o U e " 6 2 # A * | } n 0 1 4 5 6 2 > M & • q r p ` st v w x n p ` sy n (1 2 3 > M q r $ % 2 o * • ; ! e " # q r * ` > z

4.2 d n p ` s ^ y < X Y ~ R < • A B 6 2 " f o # n 0 1 4 5 > M 6 2 o U & st v w N TSSY-ZW-05-01/01 y* ' s # $ - . / 0 + X " ( G * ` * \ l q r -) * # $ = > W] ^ > M 6 2 o U & * > M W b * * 6 2 + d V , ' z

4.3 6 2 + d V * 2 q r { k i 6 *O { - . / (2 M J o U V W + X > M Z 0 * [1 Z 0 # o U V W + d Z > M i 6 2 - 3 4 o U e " A - 2 ^ z

4.4 > M 6 2 o U & 5 6 2 + d V # $ 6 b * 2 o O P u 7 D < y 4 8 9 .) 10 : * ; < 10 : C = @ > L o U & * { 2 o [; _ (Z Q 5 M] ? H @ z

> 4-1 o U e " > M & • q r p `

p X	A B t x	q r C D	q r -)	q r { k i 6
1	! " } 0 • l	q 0	_ q r	A B 2 o 4 * 2 o + d V | . R V W Z ~ I W 2 o u 7 2 o O P # $ > M i 6 N .) 10

3	> M }		8	c _	
4	_) >		c	2	
5	P 7 V 0 u : g		c	2	} G 0 \ F o] D Y
6	& ' 5 o y		6	c _	
7	(: 2 G ! & ' A & ' }		8	c _	
8	' ? (3		c	1	
9	2 G j		D	1	
10	: Rt & ' q : [u : - y			c _	
11	< X Y ~ R < • w A v		/	1 y 2	9)
12	# $ V ` % & 7		7	c _	

6 0 1 # u

6.1 . / n o

6.1.1 < X Y ~ R < • % w | { O b N \ A B Q 5 > 4 R { ~ R) * { 0 u _ + X z | 6 7 [: P m A [: a V * F , 2 < X Y # 4 D ~ R + X % w z

6.1.2 n ` A B • H 2 o * 9 v s (# A B v Y * O { f 5 H * [U A B 0 u z

6.1.3 (, < X Y / ^ _ X # ! ^ 3 7 y 4 M # 8 [| : O] 6 @ V > M U m * (, # | : W 4 q ~ m E w < X Y 8 K * 2 Q 8 K | : + U (, # < X Y * 4 .) 8 K k l t P o R | j + X % w * l | Y k * O | y M V # A v # % w ' 2 o Q q z

6.2 . / 0

d $ l A B a U 0 = A B [: z

t 1 y < X Y ~ R # P R | S 3 y * [n f # u = b f * $ { 3 / * [u = v % w * R |] O C ? % w y * [n f ! • Q " M # u = z

t 2 y N % w I X q o * O b [: ! | H l 4 < * L j [q 0 v z

t 3 y / D I X % w j # [u : ! | 4 < 8 [{ < X Y 4 5 (# k | [u j t 3 C [u j * 3 f M 7 [u y* [u : | W 4 q A D | p ~ z

t 4 y Z ~ R < • w A q) Q A [' z

t 5 y d } p 2 4 ~ R + X ~ R < • w A * O 2 n J 7 + X * ` w E z

t 6 y M M A B [; _ * f D v Y 0 u * (, A B [: * A B ' V z

7 A % m K L . r ! ; M n

7.1 A % m K L .

7.1.1) A B g) 8 [: Z E A ~ R d " | # A B a U 0 = A B [: z

7.1.2 w A y < X Y 4 # 8 K | : | M M (, * W 8 f z 4 M _ 1 f z A B 0 u 1 3 _ 1 f z $ x h q 0 u _ z

7.1.3 w 8 0 l K s [u : | W 8 t 3 f y < X Y # C M 7 [u * [u 7 P b f * . / 0 1 \ # \ e \ z

7.1 w 4 8 y V | ~ m 8 K * , U | % Q 1 m * u z / l # w 8 ' l 2 z

7.1 5 b B n f | 8 { { 3 % * [P t L , P y w 8 * 8 M Q X ~ R w 8 1 2 B Q X < X Y | { M , * [P + X w 8 z

@ A 1 > M 6 2 o U &

v w N **TSSY-ZW-05-01/01**

2 o y •	2 o u 7	= > W	# $ > M W	# $ + d V

> M q r * ` ! { k i 6

p X	A B t x	q r C D	q r -)	q r { k i 6
1	! " } 0 • l	q 0	! _ q r	
2	^ | 0	q 0	! _ q r	
3	- / o U > M D i 6 D [\	2	! _ q r	
4	/ a 2 2 G	X	! _ q r	

5 - . 2 G 3 # $ 5 G X { d • 1 2 Tf 9 . 1 2 0 TD -0 . j / F TD (X) Tj / F 1 9 . 1 2

> M T) * Q/ : N 0 = l
$ [1 Z 0 V W , t

H Y							

j k Nt , y 7 & 5 # $ = > W] ^ * # $ > M W b * * # $ + d V , ' 5 1 z # $ + d V n 2 4 * 2 q r { k i 6 O 2 O zt t y 2 o O P u 7 > M i 6 D < y 7 & 3 x 4 .) 4 : * 5 6 | = @ > & *) _ (Z H @ 1 \ V W ' 5 < 7 y * | { H Y p % & < 7 / 0 z 2 @ S V W + X Z 0 * O , t \ \ zt R y | 6 7 # $ # A % x A K L * T) > M * Q R : N 0 = l 丰 8 y \ q r -) y & • q r -) D , d y * Q 5 M | R S " f V W = @ + X q r $ % O k l i 6 丰 9 y & • q r -) y q r { k i 6 { n 2 4 # $: < ; ?zt < y , t D = M t N > , t # y ! o } & • L z



X Y

1 ( ) % x 43
2 v ^ ; 7 43
3 o U \ 3 43
4 > M q r s ` y z { 44
5 o U • H 44
6 o U a U 45
7 7 8 { k i 6 ! % B ~ • 45

1 Z [\ ]

Z [A B M q ! y b 1 u ' # 0 W 5 H N Z 9 > ? - a N # " ; # ` a % 0 W 5 H * T ] O 0 W q ) > M Z X # b 1 b * M ] O 0 W 5 H > M s h 2 o ^ B D 4 M # , D = P K w z m 6 G , ? 5 H Z [ A B 2 o * $ % Z [ A B # $ o U * . / 0 1 G H R S v k Z [ A B ~ • G o U p q r z o U p q r # v ^ | } _ h ~ • X U ~ • U ~ • ` a 0 1 ~ • ! " f # = > $ % $ l z

7 o U p q r ( ) Q 110 y 500kV 0 X -) @ > ? # d } _ h " f : • A B ~ • A B s E # 0 = 5 H Z [A B * 7 o U p q r D ( ) Q > ? { v R n x b A r $ O # 0 = 5 H z 7 o U p q r 2 0 Z \ q X Z [A B # 5 o - 2 = > P 7 > M Y H * Q A r 7 * ` - O P + X m z # $ % *) Q p q 110 y 500kV 0 # Z \ q X Z [A B 2 o z

2 B L ^ _

` 2-1 B L ^ _

p X |) } J t x |

h4hijkhijk$h4h4hijk$hf g h i j k l m



FX 6.2.6 - 2 * N < A B [; z
6.2.9 1？w8！"0 #&'0vz
6.2.10 ;？+Xnx/"#AB*AB[;z

7 A％mKL.r！;Mn

7.1 A％mKL.

7.1.1 AB5Ha％BsEz
7.1.2 20 #n&'oqXABRw80vy*|*S{C,"(+XzC,"(+XABRw8y*nx/"qJ bclKRbc8At？s,Q[uz
7.1.3 2bclKRbc8,j[u*|,jbDs<0X]DY#kD0 n&'oZ\qXABy*BCZDs<0X]DYA[*. ,j#0 bclKRbc8+y[uz
7.1.4 AB0X！]<//";20 #KBz7AB.)#0Xw8？=|a<J•*ObJ•G'*\]w8+！z
7.1.5 20]X4*|+XAB5H#FX％@1ABy|8KYH,R*O]OQXY•QRu*z3RQFX1My ％'50X <z
7.1.6 ABy|]620uu！AB)；#％@A,R*'#b(*yBC+,}％ABz
7.1.7 AB^c+(**6C9FX<AB0X*x3qXy•_+:-X<R*KE0uOw[u:z

7.2 A％mK`G

78{k•>7-1z

`7-1 A％mK`

pX	{k7	{kaV		
		W	H	S
1	0 Z\qXAB			|
YN78{k7^HN}2~％71WN•O71SN 7z				

7.3 ！;Mn

20 +XZ\qXAB^*AB<3+mn {0-(*/0*6ABH<z0 Z\qXAB0XAy•3>7-2 Orz

`7-2 $ VaRT:;$T#S

[l0X U_N/UtkVy	A B 0 X	y•tminy
18/30！uv	2.5U_NtR2U_Ny	5tR60y
21/35y64/110	2U_N	60
127/220	1.7U_NtR1.4U_Ny	60
190/330	1.7U_NtR1.3U_Ny	60
290/500	1.7U_NtR1.1U_Ny	60

78％Bdn10kVy500kV 9<0！J023788B+y$l~• L4KN<00=AB23s^# Q/CSG > 4-16.1.1 Q/CSG > 4-16.2.1y4-16.2.4 PmFXz

@A1 >M62oU&

BX8TSSY-ZW-06-01/01

2oy•	2ou7	=>W	#$>MW	#$+dV

>Mqr*`!{ki6

pX	ABtx	qrCD	qr-)	qr{ki6
1	AB5HE?y FGDH	5H"K	!_qr	#$oU|DEFX"f>M$3!>M=>i6*O =7fYlDcQuvi6N
2	AB5HE?y DV>M Di6 D[\	X	!_qr	!2oVW|e\2<>M 2o4A&'b8z !5HQE4%@F}R uA*\\FGnoz
3	AB5HE?y y}05H>M UmDV	M*}0	!_qr	!5HQE<3^D {5HRE`#evaz5H OFyD(<"*~Hl_12oz !2oVW|hi#$KL*y}05H]6@V#> MUmzET|56OVW5o*E?<3^BCb gVpM ,Dz
4	!"}0•l	q0	!_qr	
5	-/oU>M Di6D[\	2	!_qr	!AB2o4*2o+dV| .RVWZ>IW2o u7 2oOP #$>Mi6*N"}0MuA> MYH*Qz
6	!"/XAB no	q0	!_qr	!2o4*2oVW|k\2ou=*O\l>M#9 /;:z-/oUBC2<>M}*BCZ>M} {2ou= no '-ole(z.)014%@ 01M5[f*BCbV 0* 0VYHW|~^* 2-0V2o|Q,Do)z
7	AB0uP8 rj	M*}0	!_qr	
8	nfABst ^!	5H"K	!_qr	!AB2o4*2o+dVBC\l2o%x*5=> Mxp*DPb`#*{>Mxp$x#V,D* %+fVW+"z !2o4BC 62kuR<0 mfIW+y620 uR%X0uP8/0*Dqcf0unf#P8* \]AB0uP86@Pmz
9	cG0H	q0	!_qr	
10	-.2G3#$	5HKL	!_qr	!AB4P#gV'sll3#$2nf g[st+ X*\\+!_a4n`ABz !-X_|!yw5u:*~)*{0_a45oz
				!2oVW{AB'V_|+X\`%@*\\#$+ -.2GA/e

	> M T) * Q/ : N 0 = l
	# $ [1 Z 0 V W , t

H Y

>W/F1 9.15+3 Tf18.24 re8080 #$/F1 9.15+2 Tf18.24 080 6D/F1 9.15

$aYZU cd!;

01234

vwNTSSY-ZW-07

1 Z [\ ]

7 o U p q r ( ) Q ` a 0 1 G H % x O @ ? 5 ! Z X ^ # 3 8) 0 \ ] ^ Y t R 0 \ ] ^ Y 3 8 ~ R y ! " # # $ % B z

2 B L ^ _

` 22

4 e f g h i j k l m

4.1 0 \ ] ^ Y ! " # $ % B 6 2 4 * 6 2 Q 5 M 6 7 ! Q 5 o U e " 6 2 # A * | } n 0 1 4 5 6 2 > M & • q r p ` st v w x n p ` sy n (1 2 3 > M q r $ % 2 o * • ; ! e " # q r * ` > z

4.2 d n p ` s ^ y 0 \ ] ^ Y ! " # $ % B 6 2 " f o # n 0 1 4 5 > M 6 2 o U & st v w N

TSSE0.56 Tf8 807 TD (242) Tj 1 0 E56 (Tf) 16 TD 8/01 TD 50124 0.56 Tf10.8 84 TD (Q) T Tc (sy) Ty*/F5+4 10.56 Tf

e H X z V ` % & > E t | + y • DL/T 506 @ & A z

6.2.5 w t t 4 9 y z , U P m { f g / 0 v + X ! " % B * \ ' # E A 0 \ ] ^ Y # ! " ; " y * . / + X w t _ 1 % B z 3 # w t a U | d ~ s (~ Y # R = > W A ^ O $ l # w t a U A P m $ z 3 k " • a z $ l * $.) D ; w t z

D ; w t U N { 0 \ ] ^ Y # t ? # [, D " \ Q n [l + H 10 y 20 G # 4 < 0 v *, ? H u 2 P Z \ 0 \ * Z 0 \ T R : 9 u F < [l 0 \ o # 120 1 * 1 Z 0 \ ! O n o u - < R * : _ ; ? L j 4 < 0 v < n o # 1/2 1/5 1/10 * = * (; < 3 z

2 Q m ?) # 0 \ ] ^ Y * w t y n G C # t ? ~ R ! | A ; 1 \ M , D C ^ b m D t ? ~ R y * E % # t ? ~ R [w t 0 v * n G # t ? ~ R n ; z

6.2.6 ! ; t } 3 8) 0 \ ] ^ Y t R 0 \ ] ^ Y # 3 8 ~ R y # • \ (-) 0.2 R 0.2S) * n . / ! " • > 6-1 z w E E A 0 \ ] ^ Y # ! " M 5 s E * | u X _ # J 7 • z ! " # X • l • > 6-2 z

` 6-1 $ a Y Z U ' F

• \ -)	I_P/I_n t 1 y	1	5	20	100	120
0.2	Q o " t 0 1 y		0.75	0.35	0.2	0.2
	" u " t 0 y		30	15	10	10
0.2S	Q o " t 0 1 y	0.75	0.35	0.2	0.2	0.2
	" u " t 0 y	30	15	10	10	10

` 6-2 ? _

• \ -)	Q o "	" u "
0.2 R 0.2S	0.02	1

7 A % m K L . r ! ; M n

7.1 A % m K L .

2 3 8) # 0 \ ] ^ Y R 0 \ ] ^ Y # 3 8 ~ R * ! " w 8 y O U # Q o "] . 3 0.001 1 * " u "] . 3 0.01 z w E E A # 0 \ ] ^ Y M 5 s E * | f n { [l + B A v c + B y # ! " M 5 w s > 6-1 # P m z

2 w 8 ^ ! " ; < > 6-1 # P m * l D ; < 1.5 G y * | ! + X * w z

7.2 A % m K ` G

7 8 { k • > 7-1 z

` 7-1 A % m K `

p X	{ k 7	{ k a V		
		W	H	S
1	0 \ ] ^ Y A B			|
Y N 7 8 { k 7 ^ H N } 2 ~ % 7 1 W N • O 7 1 S N 7 z				

7.3 ! ; M n

0 \ ] ^ Y ! " # $ % B | R U JJG 1021 ~ 2007 n 0 W] ^ Y s# Q/CSG > 4-7.1.3 Q/CSG > 4-7.2.2 Q/CSG > 4-8.1.3 Q/CSG > 4-8.2.2 P m + X z


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> M T) * Q/: N 0 = l
$ [1 Z 0 V W , t

H Y							

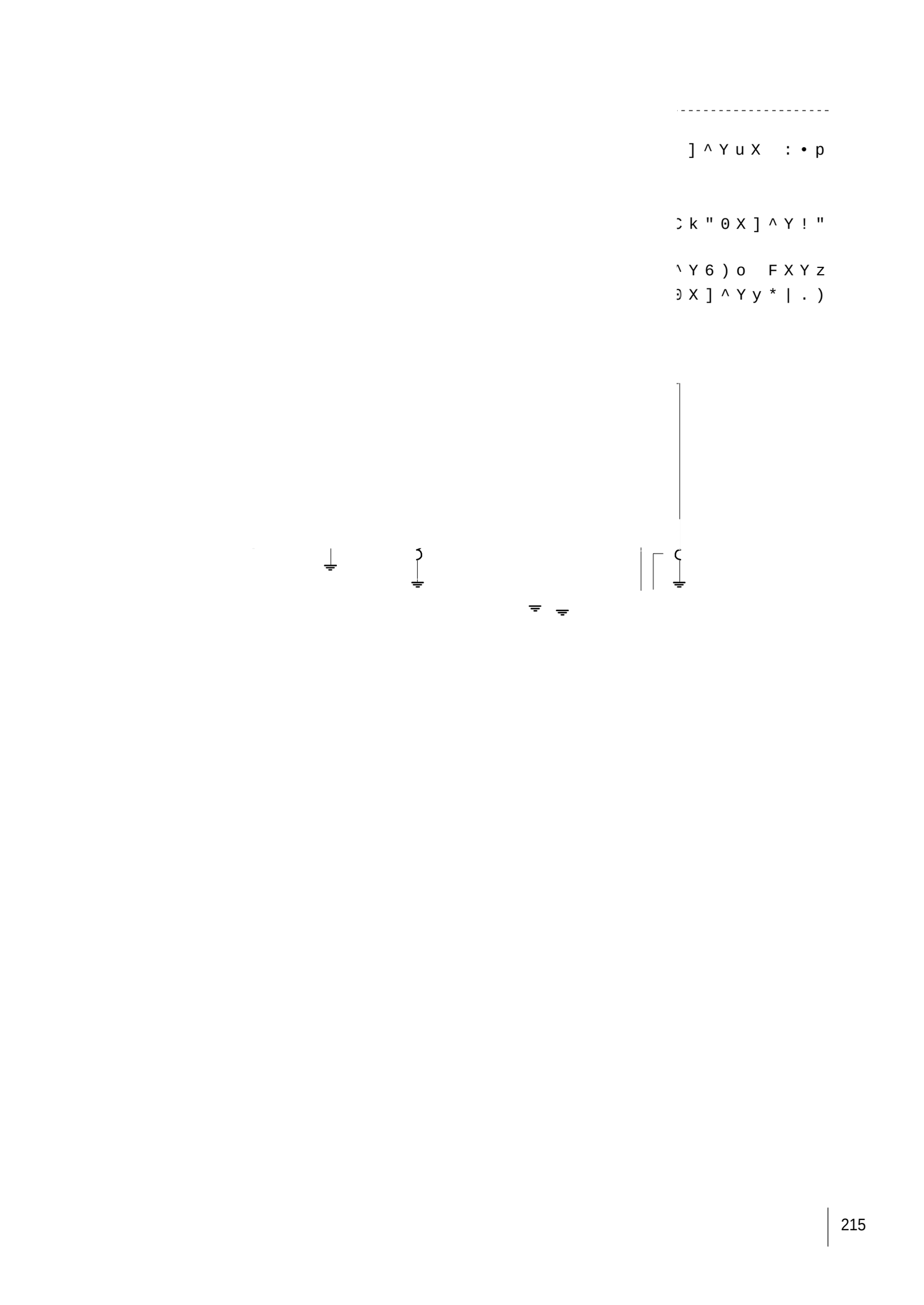
j k Nt , y 7 & 5 # $ = > W] ^ * # $ > M W b * * # $ + d V , ' 5 1 z # $ + d V n 2 4 * 2 q r { k i 6 O 2 O zt t y 2 o O P u 7 > M i 6 D < y 7 & 3 x 4 .) 4 : * 5 6 | = @ > & *) _ (Z H @ 1 \ V W ' 5 < 7 y * | { H Y p % & < 7 / 0 z 2 @ S V W + X Z 0 * O , t \ \ zt R y | 6 7 # $ # A % x A K L * T) > M * Q R : N 0 = l 丰 8 y \ q r -) y & • q r -) D , d y * Q 5 M | R S " f V W = @ + X q r $ % O k l i 6 丰 9 y & • q r -) y q r { k i 6 { n 2 4 # $: < ; ?zt < y , t D = M t N > , t # y ! o } & • L z

X Y

1 ( ) % x 57
2 v ^ ; 7 57
3 o U \ 3 57
4 > M q r s ` y z { 58
5 o U • H 58
6 o U a U 59
7 7 8 { k i 6 ! % B ~ • 61

4 e f g h i j k l m

4.1 0 X] ^ Y ! " # $ % B 6 2 4 * 6 2 Q 5 M 6 7 ! Q 5 o U e " 6 2 # A * | } n 0 1 4 5
6 2 > M & • q r p ` st v w x n p ` sy n (1 2 3 > M q r $ % T c 4 (` 4) T j -2 5 . 2 8 T(f 3 1 . 4 4



t3y A F 2 M 3 / X g a : # / X | : B C (, * (, y B C) g) [u : $ g a : [u z (,
_ # g a :) & ' A o * y A F # U m N 500kV -) D j Q 2m

	" u " t 0 y	10	10	10

* 500kV 110 1 n 4 l S 2 5 1 . 5 X 9 . 1 2 T f 2 . 8 8 0 T D (y) T $ 7 T D ( ) T j / F 1 .

> M T) * Q/ : N 0 = l							
# $ [1 Z 0 V W , t							
H Y							

j k Nt , y 7 & 5 # $ = > W] ^ * # $ > M W b * * # $ + d V , ' 5 1 z # $ + d V n 2 4 * 2 q r { k i 6 O 2 O zt t y 2 o O P u 7 > M i 6 D < y 7 & 3 x 4 .) 4 : * 5 6 | = @ > & *) _ (Z H @ 1 \ V W ' 5 < 7 y * | { H Y p % & < 7 / 0 z 2 @ S V W + X Z 0 * O , t \ \ zt R y | 6 7 # $ # A % x A K L * T) > M *

X Y

1 ( ) % x 65
2 v ^ ; 7 65
3 o U \ 3 66
4 > M q r s ` y z { 67
5 o U • H 69
6 o U a U 71
7 7 8 { k i 6 ! % B ~ • 90

1 Z [\ ]

& ' X M) T 0 = 5 H ^ = P # X 7 > , * G b & ' W X I B J A] D C ~ R !

3 0 1 a b

o U t 2 p y \ 3 • l 3-1 z c3-1 01 /d!abc

4 e f g h i j k l m

4.1 & ' T Z [A B 6 2 4 * 6 2 Q 5 M 6 7 ! Q 5 o U e " 6 2 # A * | } n 0 1 4 5 6 2 > M & • q r p ` st v w x n p ` sy n (1 2 3 > M q r $ % 2 o * • ; ! e " # q r * ` > z

4.2 d n p ` s ^ y & ' T Z [ A B 6 2 " f o # n 0 1 4 5 > M 6 2 o U & st v w N TSSY-ZW-09-01/01 y* ' s # $ - . / 0 + X " ( G * ` * \ l q r -) * # $ = > W] ^ > M 6 2 o U & * > M W b * * 6 2 + d V , ' z

4.3 6 2 + d V * 2 q r { k i 6 *O { - . / (2 M J o U V W + X > M Z 0 * [1 Z 0 # o U V W + d Z > M i 6 2 - 3 4 o U e " A - 2 ^ z

4.4 > M 6 2 o U & 5 6 2 + d V # $ 6 b * 2 o O P u 7 D < y 4 8 9 .) 10 : * ; < 10 : C = @ > L o U & * { 2 o [; _ (Z Q 5 M] ? H @ z]

5.1 M N p o

`5-1 M N p o `

2 p t x	4 I 2 o V J	+ d V J	, D V J
U V 4 • H	< M 2	1	
U V	< M 2	1	1
U V % &	< M 2	1	
A B 4 • H t 1 Q y	< M 1	1	
& ' T A B t 1 Q y	< M 1	1	
A B J 7 % & y * `	< M 1	1	
Y N o U V J 6 7 G J 2 3 8 $] J H z			

5.2 @ ? / U q r s U s ` p t

`5-2 @ ? / U q r s U s ` p t `

U V 2 Y G ! v Y v >					
p X	t x	$ E / v X	k u	J 8	H Y
1	~ r s	P m $ E	D	c _	
2	> M	P m $ E	2	c _	
3	> M } A - / 2 G t 0 y	P m $ E	# t $ y	c _	/ a o U R B P y .)
4	a b K 1 u g - *) 2 G	P m $ E	$	, 8	
5	' ? (3	~ •	c	1	
[redacted]				c _	
7	R g) b c U V 250mL (g) U V G t y A = J V W O Q 20 y 100mL Y \ Y) b c R H } k 3 K t q T y Y \ Y P M) j 3 P	P m $ E	D t f y	c _	

8

` 5-2t 9 y

p X	t x	$ E/v X	k u	J 8	H Y
24	A	t t & • A y t t & • A y d G t * ` y t * ` * " 2 8 (1.19 y1 T t * ` y t * ` y t t A ! | + X _ + *_ + ' (100 i y 110 i		c _	
25	8 7 v	{ ' y –60 i	/	1	
26	^ j	{ ' y 300 i	/	1	

t 4 y) T 0 # 8 K O + X T # A B y * 4 d GB 50150 ~ 2006 n 0 = ? = > ? 2 3 0 = 5 H Z [
A B T c (. /) T j 0 (=) T j / F 5 + 1 1 0 . 5 6 T f 1 0 . 3 2 0 T j /

` 6-3 t 9 y

p X	2 o O P	5 o ! 2 M	7 8 { k 7	{ k i 6
7	3) * ` w 8 ' 2	U 6 ? 8 9 w l # 7 2 0 X o #) > : ! o * o : ! 7 2 0 X o	6 7 D M # 0 T D u * w E A B ' 2	D M A B a U P m # A B 0 T D M * 7 2 0 X ' 2 b " (N 1 y GB/T 507 M e) u u / C 0 T 1 2 y DL/T 429.9 a U M e) : g u 0 T 1 3 y GB/T 7595 ~ 2000 ^ # A B P m : g 0 T w l o 1 4 y .) 3 C D M • s 0 T w (# 7 2 0 X > • # " (• ~ • # @ &
2 o e '				
1	% @ 4 Q A B ' 2	% & J 7 O , t	w 8 J 7 • \	% @ 4 Q A B Q 5 J 7 M 5 = M J 7 % & M 5 • \ * 2 o + d V ! 4 A B V W { A B % & (, t \ \
2	I J 2 o	I J 0 T ! T	0 T A T J G	I J 0 T A T *3 2 A V # A B ' 2 D s E *| !) I J # T \ _ 3 .
3	0 T T # ? {	C ? 2 o [; _ * T Y " J G # T t 0 T { T ^ y	0 T M M U " { J G # T ^	) J G T U " 0 T
4	I L # $ ' V 2 o	I L N A B 2 o } h 5 # / e * A B _ # } T z f 8 9 / \ ? {	f z x y K L	Z d .) # + 0 - E F e ~ ^ 3 x y e + ~ • * } T z f 8 9 ? {
o U ^ 4 q : # # n P (* # o ! 2 0				
1	7 2 0 X A B	w A J 7 (*	1 y + , U V # A M 5 w s P m 1 2 y + , ? T Y G M 5 I J _ + 1 3 y + , A B T M 5 1 4 ? D s E V F R 1 4 y 0 T F * . 0 T • U L j m 1 5 y = @ U V + X A B	

6.2.3 g U * ` t • > 6-4 yz

` 6-4 ) * 7 j `

p X	2 o O P	5 o ! 2 M	7 8 { k 7	{ k i 6
A B 4 • H 2 o				
1	@ f ; % T V	A B V W % @ O ; V F M 5 $ %	1 y V F R 9 ~ , % & [I 1 2 y V F w s P m 1 3 y V F { b 1 _ O	1 y % @ V F R 9 ~ , % & 1 2 y % @ V F M 5 w s P m 1 3 y % @ U V y •
2	% @ O • H v Y	1 y n g 4 N % @ g U v 4 8 [0 [u : u ! 4 = ; 8 [M 5 • \ b f z B P y 7 L + V # 7 3 Q z 2 y : n = = a = k } ! 4 L X } * Z X W 9 : Q < 8 / Q v Y 2 o y O O X W z 3 y z Q w v Y 4 = ; H X } * . 4 = ; X W \ 8 w s v Y 2 o P m	1 y = J + { | 1 2 y = J X W e * 1 3 y X W \ 8 w s v Y 2 o P m	1 y : n 4 = J _) % | | % @ 4 = J k } L X } u ! 4 = ; 8 [M u \ \ + = J { | 1 2 y % @ \ \ = J X W 9 : Q < 8 / Q v Y 2 o y O O X W 1 3 y % @ \ \ v Y 4 = ; X W \ 8 w s v Y 2 o P m

` 6-4 t 9 y

p X	2 o O P	5 o ! 2 M	7 8 { k 7	{ k i 6
4	v Y ~ l	v Y # ~ l N e) 4 ~ l 8 U z) 1mL Y \ Y D • \ t : d ! 4 R * Y (# ~ • s = J 1mL t R 0.5mL y + X ~ l z T (3 # g U l (% & 4 R * # { N B A_{i*s} t R { / h_{i*s} y z ~ l v Y | { v Y Z X 2 0 H l , " M # # A v + X * < M = * 5 o 2 ? * 2 ? ~ l # = * 3 | { : ! o # 0 2 1 u O * U n : ! o o v Y ~ l # ' 2 z C ? A B ! | ~ l v Y	v Y ~ B	l

6.2.4 T ^ N = 8 * ` t • > 6-5 y

` 6-5 O 9 % 7 j `

p X	2 o O P	5 o ! 2 M	7 8 { k 7	{ k i 6
A B 4 • H 2 o				
1	@ f ; % T V	A B V W % @ O ; V F M 5 $ %	1y V F R 9 ~ , % & [I 1 2y V F w s P m 1 3y V F { b 1 _ O	1y % @ V F R 9 ~ , % & 1 2y % @ V F M 5 w s P m 1 3y % @ U V y •
2	% @ O • H v Y	1y n g 4 N % @ g U v 4 8 [0 [u : u ! 4 = ; 8 [M 5 • \ b f z B P y 7 L + V # 7 3 Q z 2y : n = = a = k } ! 4 L X } * Z X W 9 : Q < 8 / Q v Y 2 o y O O X W z 3y z Q w v Y 4 = ; H X } * . 4 = ; X W \ 8 w s v Y 2 o P m z 7 L + V # 7 3 Q t B P y y	1y = J + { | 1 2y = J X W e * 1 3y X W \ 8 w s v Y 2 o P m	1y : n 4 = J _) % | | % @ 4 = J k } L X } u ! 4 = ; 8 [M u \ \ + = J { | 1 2y % @ \ \ = J X W 9 : Q < 8 / Q v Y 2 o y O O X W 1 3y % @ \ \ v Y 4 = ; X W \ 8 w s v Y 2 o P m
3	n b A B v Y	1y \ \ d : n 4 = J _ : n v Y 0 u n f * n b 9 q g * : n 4 ' ({ k Y F ' n f * 5 l R % @ s ` { TCD FID ! : q ; r G Y ' ( z 1s ` { T(F F ; q n y \ G Y - . 2 9 4 - 1 8 . 2 4 - 1 1 . 7 6 = c (y \ ) T j / F 5 + 3 9 . 1 2 6 1		

` 6-5t 9 y

p X	2 o O P	5 o ! 2 M	7 8 { k 7	{ k i 6
3	r < : v =	1 y A = Y \ Y # • H N U 5mL Y \ Y C * t U M 8 A T \ _ Y B O = 1 y 2 ? _ * W " 0.5mL A T * 8 (@ 3 9 * " B P 1 P * 1 P N (z Z Y \ Y O # a = A A T o o t : * . A T) 6 Y \ Y O = 8 ? } D d c ? a = z 2 y r < : v = N Z Y \ Y A T Z & ^ U : * + , Z n ^ # : v = H < B P 1 P r < 3 Y \ Y C O t | e) 2 e X U r < yz { ' v { = 2min * • \ % & n J B t • \ < 0.1mL y* u H g U * `)	1y Y \ Y C d t U M 8 A T \ _ Y B O = 1 2 y r < : v = e) 2 e X U r <	1y \ \ Y \ Y C d t U M 8 A T \ _ Y B O = O w s P m 1 2 y \ \ r < : v = d e) 2 e X U r <
4	v Y ~ l	v Y # ~ l N e) 4 ~ l 8 U z) 1mL Y \ Y D • \ t : d ! 4 R * Y (# ~ • s = J 1mL t R 0.5mL y + X ~ l z T (3 # g U l (% & 4 R * # { N B A_i t R { / h_{i*s} yz ~ l v Y | { v Y Z X 2 0 H l , " M # # A v + X * < M = * 5 o / ? * / ? ~ l # = * 3 | { : ! o # 0 2 1 u O * U n : ! o o v Y ~ l # ' 2 z C ? A B ! | ~ l v Y	v Y ~ l d { v Y Z X 2 0 H l , " M # # A v + X \ \ v Y ~ l d { v Y Z X 2 0 H l , " M # # A v + X
5	V F * `	A V * ` N ) 1mL Y \ Y D T Y \ Y C ^ • \ t : V F = 1mL t R 0.5mL y* + X * ` z + V y 5 o z 3 + 1 P 1 P U 1 P z T (3 # g U l (% & 4 R * # { N B A_i t R { / h_i yz V F * ` | y v Y ~ l .) M , f + V Y \ Y * U " M + V J B	1y + V y 5 o w s P m 1 2y V F * ` y v Y ~ l .) M , f + V Y \ Y A U " M + V J B	1y + V y 5 o z 3 + 1 P 1 P U 1 P 1 2y \ \ V F * ` | y v Y ~ l .) M , f + V Y \ Y * U " M + V J B
6	' 2 * ` 3)	d G V 3) T ^ 4 * ` R * Y (t R 5 g U 2 o [; y		
7	% & * ` ' 2	{ g U 2 o N) L * ` d =t O_2 y =t N_2 y , d G t CO y t d G t CO_2 y # : { / 0 * % & 4 = J R * N 8 * d G V 3) T ^ N = 8		
8	* ` ! w E	d } GB/T 7252 n < X Y T ^ e f = J * ` A w E q 6 s R DL/T 722n < X Y T ^ e f = J * ` A w E q 6 s + X * ` w E		
A B e '				
1	% @ A B J 7 % &	A B V W % @ A B J 7 % & M 5 • \ [I z 2 o + d V ! A B V W { A B % & (, t \ \	1y / ? = * A B ' 2 # " o D ; < . / " o 1 2y A B J 7 % & • \ [I	1y % @ \ \ / ? = * A B ' 2 # " o w s P m 1 2y % @ O \ \ A B J 7 % & • \ [I

` 6-5 t 9 y

| | | |

` 6-6 t 9 y

p X 2 o O P 5 o ! 2 M 7 8 { k 7 { k i 6 78 78

` 6-6 t 9 y

p X	2 o O P	5 o ! 2 M	7 8 { k 7	{ k i 6
o U ^ 4 q : # # n P (* # o ! 2 0				

3 2 x D 3 P m * 4 q M 5 Q N W v Q w D \

1 a I o w l w 8 9 y a = # > N W y n 3
) ' 2 D 6 @ 71y72mN/m # P m

` 6-7t 9 y

p X	2 o O P	5 o ! 2 M	7 8 { k 7	{ k i 6
A B e '				
1	% @ 4 Q A B J 7 % &	% & J 7 O , t	w 8 J 7 • \ [I	% @ 4 Q A B Q 5 J 7 M 5 = M J 7 % & M 5 • \ * 2 o + d V ! 4 A B V W { A B % & (, t \ \
2	A B ' V * f D v Y 0 u * + v Y O I L A B # $	1 y N f D 0 t 4 5 Y n f * : _ f D v Y 0 u n f 1 2 y I L A B # $ 1 3 y Y \ Y {) V u	v Y 0 u f D	% @ \ \ v Y 0 u d f D
o U ^ 4 q : # # n P (* # o ! 2 0				
1	v Y Q A A J e * T V * `	1 y v Y n b _ x y • D : v 1 2 y Y " A T _ w l y • q x , J o s _	= @ 7 L 0 f | * ~ v Y : v _ = @ w l	

6.2.7 m 7 w 8 t • > 6-8 yz

` 6-8 . h $ % `

p X	2 o O P	5 o ! 2 M	7 8 { k 7	{ k i 6
A B 4 • H 2 o				
1	% @ ; % T V	A B V W % @ O ; V F M 5 $ %	1 y V F R 9 ~ , I [I 1 2 y V F { b 1 _ O	1 y % @ V F R 9 ~ , I | [I 1 2 y ; V | ! y
2	% @ O • H v Y	1 y % @ D # m 7 w l v 0 u : - M 5 d 8 [[f 1 2 y % @ = L X } ! K F M 5 8 [[f	1 y A B v Y | 4 < [u 1 2 y = { |	1 y A B V W | N % @ [u / 0 1 : n v Y 0 u 1 2 y \ \ K F 8 9 b f
A B 2 o				
1	V F * `	1 y T) A T _ 1 y 2 ? z 2 y A V Y " T * ^ A V P ? 6 3 K s ~ % • *: _ (I J _ + # * " ' (3 * { + w A v z 3 y : n v Y 0 u n f A 7 =) = n f *z 5 s (# m 7 ' (z 4 y A B n `] : (P ! O (F * O P D E + X 4 5 z < z _ m 7 4 20 i y * F ' : ({ k { C * X F / 2 y 3 i * O P D E + X 4 5 z 5 y Z v Y 7 = Y = | = 7 * O Z = < Q I 3 [" • * n N 3 y 4mm z 6 y A V ' (3 x z _ m 7 4 10 i y * 2 Q m 7 / Q 104 i A V C F / 2 i 7 = , ? * 2 Q _ Q 104 i A V C F / 1 i 7 = , ? * N < m = % * % & w l ' 2	1 y] 6 T J G 1 2 y = < N Q I w s P m 1 3 y A B < 3 = \ R	1 y) A T Z T _ _ G 1 2 y Z = < Q I 3 [" • * n N 3 y 4mm 1 3 y A B | { H q Y O + X * O f D t q g A 4 g * f z = \ R

` 6-8t 9 y

p X	2 o O P	5 o ! 2 M	7 8 { k 7	{ k i 6
A B e '				
1	% @ 4 Q A B J 7 % &	% & J 7 O , t	w 8 J 7 • \ [I	% @ 4 Q A B Q 5 J 7 M 5 = M J 7 % & M 5 • \ * 2 o + d V ! 4 A B V W { A B % & (, t \ \
2	A B ' V * f D v Y 0 u * = u + v Y O I L A B # $	1y $ A B [_ T O # T C 3 g) } T t } y O * l _ ~ ^ • L z A B T {) V u z 2y f D v Y 0 u z 3y f D = L X } n f ! = K : # n f z 4y I L A B # $	= L X } n f ! = K : # n f d f D	% @ \ \ = L X } n f ! = K : # n f d f D
o U ^ 4 q : # # n P (* # o ! 2 0				
1	m 7 t D # y w l t i y	1y m 7 v } % 4 5 1 2y 7 = Y 4 1 3y 7 = Y = < g z	1y % @ m 7 v } % 4 5 7 = Y 4 # V N O o • L * e * _ = @ U T V A B 1 2y % @ = X W > M 5 = d) [M 5 N a = \ r % N z * @ k V N O o • L _ = @ U T V A B	

6.2.8 o w l t • > 6-9 yz

/F5+3 9.6

` 6-9 / @-9XW 5 4 9 . 3 6) 1 2 0 . 5 4 2 0 (6) 4 8 ■ e f 1

6.2.9 9 e 3 A B t • > 6-10 yz

` 6-10 0 5 / : ;

p X	2 o O P	5 o ! 2 M	7 8 { k 7	{ k i 6
A B 4 • H 2 o				
1	% @ ; % T V	A B V W % @ O ; V F M 5 $ %	1 y V F R 9 ~ , I [I 1 2 y V F { b 1 _ O	1 y % @ V F R 9 ~ , I | [I 1 2 y ; V | ! y
2	• H 4 C v Y Y A	1 y Z • * | | Q g K N) _ + X I _ * 1) E d 9 \ _ * 3 _) 9 _ G * ^ _ W X _ H) 1 2 y % @ A B) 9 t pH 6.0 y 7.0 * 0 q Q j Q 3μS/cm y A 4 C A pH p r pH ~ • n \ e | | w s 7 8 P m O { b 1 _ O 1 3 y % @ 9] Z v 0 u - 8 [:	1 y Y w s P m 1 2 y A w s P m	1 y \ \ Z • * | | Q g K w s P m 1 2 y \ \ A B) 9 A 4 C A pH p r pH ~ • n \ e | w s P m R { b 1 _ O
3	pH p r J k t • > 6-11 y	1 y G J J k a U • 4 ^ 2 y 1 2 y J k f # pH p r |] { D 8 # O g A O *] ? { L] •	pH p r w s P m	Q I pH y P o o] " e
4	pH ~ • n \ e | J k t • > 6-12 y	1 y 0.2mol/L t e | J k N x U 40.846g t * e Q (8 , 9 t R t ? 9 y* < " 1000mL P 8 * 1) , 9 t R t ? 9 y e f <) (1 2 y 0.2mol/L t e | J k N x U 27.218g t * e Q (8 , 9 t R t ? 9 y* < " 1000mL P 8 *1) , 9t R t ? 9 y e f <) (1 3 y 0.1mol/L J k N) 8 B 8 U 16.8mL Y Y " 1000mL P 8 *) , 9 t R t ? 9 y e f <) (t S e | Y (0.2mol/L y* 1) g ~ + 9 + 9 R d ! # " " Y (# ~ • ` e | + X ~ l * : _ e f ; 0.1mol/L 1 4 y 0.1mol/L d G e | J k N + : x U 8g d G { " j g ^ *] " 50 y 60mL 9 . n e f *< " 1000mL P 8 *1] 2 y 3mL 10 1 # A G h e | u [\ * : _ 1) 9 e f <) (* 7 = i I z U (s I | t S e | Y (0.2mol/L y*) t R d ! # " " Y (# ~ • e | + X ~ l * : _ e f ; 0.1mol/L 1 5 y d (; 3 y > Q E) (; e | J k ; pH o D M # pH ~ • n \ e |	pH ~ • n \ e | w s P m	d P m J k pH ~ • n \ e |

` 6-10 t 9 y

p X	2 o O P	5 o ! 2 M	7 8 { k 7	{ k i 6
A B 2 o				
1	9 e 3 A B t) Q g • Q g y	1 y 8 U 50mL A T Q 250mL Z • O *] " - J B z N < # 9 *] t) k = y < 70 y 80 i * O { S ' (v 2 F 5min t R { { 9] Z v (o l 2 F 5min y1 2 y Z Z • ^ # | J C " * | | O * ~ * s O W < { ' _ * U 10mL 9 t : |] " Q g K ^ * | * S U pH3.6 y 5.4 % x # D M pH ~ • n \ e | 10mL * S] " n x # Q g K ^ *M y { (; 4 Q g K ^] " 0.25mL p r t D M pH ~ • n \ e | J ; g ! y* 2 O _ { " Q g • + X Q g * % & n pH o 1 3 y \ T # pH o % Q 5.4 y * d > 6 j / e) P R o p r	1 y { k] ' (A Z y • 1 2 y * | | 8 9 [f	1 y d P m 5 o ! 2 M P m + X 5 o 1 2 y \ \ * | | ` D | | * B P y ) , l E _ G ` O = @ @ (8 9 ' t R) a b c y
2	9 e 3 A B t) + Q g 3 Q g y	1 y M 7 > p X 1 5 o a U 1 y1 2 y Z Z • ^ # | J C " * | | O * ~ * s O W < { ' _ * U 10mL 9 t : |] " Q g K ^ * M y] " 0.3mL p r * 2 O _ { " + Q g 3 # Q g & y Q g & + X Q g * % & n pH o 1 3 y \ T # pH o % Q 5.4 y * 4) o p r	1 y { k] ' (A Z y • 1 2 y * | | 8 9 [f	1 y d P m 5 o ! 2 M P m + X 5 o 1 2 y \ \ * | | ` D | | * B P y ) , l E _ G ` O = @ @ (8 9 ' t R) a b c y

A B e ' \| 5 R B \| R B @ ` R

` 6-11 **pH** 2 1 p K

p r t x	< g % x	J k a U
	3.8 y 5.4 M y	Z 0.1g y 7.5mL0.02mol/L d G , Q i O *) , 9 e f < 250mL z 1 Q I pH 4.5 y 5.4 Y N 3 e) + Q g U * p r Q I pH 5.4
P	5.2 y 6.8 M y P	Z 0.1g P e Q 9.25mL0.02mol/L d G ^ *) , 9 e f < 250mL z 1 Q I pH 6.0
t y	6.0 y 7.6 M y	Z 0.1g e Q 8.0mL0.02mol/L d G ^ *) , 9 e f < 250mL z 1 Q I pH 6.0 Y N 3 e) + Q g U * p r Q I pH 7.0

` 6-12 M n 2 0 3 `

pH	0.1mol/L mL	0.2mol/L t mL	0.1mol/L d G mL	0.2mol/L t mL	e f < J B mL
3.6	6.3	25			100
3.8	2.9	25			100
4.0	0.1	25			100
4.2		25	3.0		100
4.4		25	6.6		100
4.6		25	11.1		100
4.8		25	16.5		100
5.0		25	22.6		100
5.2		25	28.8		100
5.4		25	34.1		100
5.6		25	38.8		100
5.8		25	42.3		100
6.0			5.6	25	100
6.2			8.1	25	100
6.4			11.6	25	100
6.6			16.4	25	100
6.8			22.4	25	100
7.0			29.1	25	100

6.2.10 x y (w 8 z

t 1 y * ` V W + " J G { | W 2 _ G I % k t l b $ P ' (O < (_ G y* L 4 z 5 o y ; < D R z

t 2 y T V t = N Z ? b T V # e V t a b 9 y { " d Y " _ G 9 # ; & I _ Y O t U " 2/3 y* n b Z F t = 1 y 3min * : _ U : V E F _ G z

t 3 y w A N w A v G J 5 o O a v Y • h + X Y Z s E z n g _ * Q I 5 = v Y 5 o | J * F - S % v Y X W < (s % t n P M { k \ : yz , U { k % w y • 30s [; 1 ? w A z = * w A 3 ? * U n : ! o o A B ' 2 z

t 4 y I _ v Y 1 U v w A T * X W Q w S < R * ? (I _ | A t q • I _ | y* { k X W + X I _ 2 y 3 ? * 7 L I _ | B t _ G I _ | y 1 I _ 2 y 3 ? * 1 L (a I J { k X W N

3min _ + v Y H) z
t5y wA'2)S\lzT^ #•s,U 3CDuN! •1" m •Rl•1(D$
6m •zvYwl# M4C•s s #-1 N z$T^ *0#wA'2
2}n_ AS1638 IJ(*)~•t•> 6-13y* \lTV# NAS -)*O3):100mL T
^o5μm # JzYH2}~•yPmC, *0%x# JDq;<~•^"|*
0# Jco*56z-)•Lz

` 6-13 NAS O45O76Mn

*) t J/100mL y	p q *μm				
	5y15	15y25	25y50	50y100	>100
00	125	22	4	1	0
0	250	44	8	2	0
1	500	89	16	3	1
2	1000	178	32	6	1
3	2000	356	63	11	2
4	4000	712	126	22	4
5	8000	1425	253	45	8
6	16 000	2850	506	90	16
7	32 000	5700	1012	180	32
8	64 000	11 400	2025	360	64
9	128 000	22 800	4050	720	128
10	256 000	45 600	8100	1440	256
11	512 000	91 200	16 200	2880	512
12	1 024 000	182 400	32 400	5760	1024
YNn_rar:2Uos/tAIAyNAS1638N1984I1|'0z					

7 A%mKL.r!;Mn

7.1 A%mKL.
GJ78{ki6• 6.2y6.10 GJ#uz

7.2 A%mK`G
78{k•> 7-1z

` 7-1 A % m K `

pX	{ k 7	{ k a V		
		W	H	S
1	n<XYAB			|
2	/XOo0hY			|
3	TUV0\]^YAB			|
YN78{k7^HN}2~%71WN•O71SN 7z				

T A B Q 5 A P m • > 7-4 z

t 1 y & ' T Z [A B t s " Z X 4 y o U t 2 p y & ' T 4 Q A B % B ~ • | w s GB 50150 ~ 2006 n 0 = ? = > ? 2 3 0 = 5 H Z [A B ~ • s ^ > 20.0.1 A > 20.0.2 $ l z) T 0 ! @ A O A X W j ^ # & ' T 4 Q A B % B ~ • | w s > 18.0.8 $ l z b B Q X K L ? = & ' T Y " K L n f T j 4 7 2 0 X | w s > 20.0.1 $ l z

t 2 y < X Y 0 h Y T ^ e f = J # g U * ` 4 ? w (# ; D k s N 8 z | + k | " S z @ ? < X Y 0 h Y T ^ H_2 y s D = J N 8 t μL/L y e , Q D $; < v p J o N k s N 20 * H_2 N 10 * C_2H_2 N 0 z

t 3 y 0 X -) 66kV ! u (# T U V 0 X] ^ Y * ^ | q X A B 4 _ * | 4 + X , ? & ' T # g U * ` * / ? w ( # o " Q D | b k | " S z 2 & ' 3 q b ] ^ # 0 X - ) 66kV ! u ( # T U V ] ^ Y * | + X T ^ e f = J # g U * ` z T ^ e f = J R * N 8 t μL/L y D $; < v p e , o * k s N 10 * H_2 N 50 * C_2H_2 N 0 z

t 4 y 0 X -) 500kV # 8 K & ' T { T) R 7 L y * $ + X T ^ e f = J # g U * ` 1 T ^ e f = J R * N 8 t μL/L y D $; < v p e , o * k s N 10 * H_2 N 150 * C_2H_2 N 0 z

t 5 y 0 X -) 500kV # < X Y 0 h Y * d } $ l y • 7 = _ U V w 8 T ^ # N = 8 * n o D | % Q 1 1 t J B * J y z

t 6 y 500kV ! u (Z \ < X Y T ($ { k { N s Z 4 t T U K _ y 100mL T ^ % Q 5μm # J T 2000 D * 500kV ! u (N \ L \ < X Y s Z 4 t T U K _ y ($ { k { N 100mL T ^ % Q 5μm # J T 1000 D z

t 7 y & ' T \ O P + X s y * { s 4 * | d T # - . .) Q E N U T V + X * ` * n ' 2 | w s GB 50150 ~ 2006 n 0 = ? = > ? 2 3 0 = 5 H Z [A B ~ • s > 20.0.1 ^ L 3 11 Q # $ l z T _ t | d GB 50150 ~ 2006 n 0 = ? = > ? 2 3 0 = 5 H Z [A B ~ • s > 20.0.2 ^ 1 # 0 $ l + X j & 4 1 T # 0 A B 5 z =

0 . 4 T f 2 1 . 1 2

t 8 y 2 +

@ A 1 > M 6 2 o U &

v w N **TSSY-ZW-09-01/01**

2 o y •	2 o u 7	= > W	# $ > M W	# $ + d V
> M q r * ` ! { k i 6				MCD

p X A B t x q r C D q r -) q r { k i 6 q * M i

> M T) * Q/ : N 0 = l							
# $ [1 Z 0 V W , t							
H Y							

j k Nt , y 7 & 5 # $ = > W] ^ * # $ > M W b * * # $ + d V , ' 5 1 z # $ + d V n 2 4 * 2 q r { k i 6 O 2 O zt t y 2 o O P u 7 > M i 6 D < y 7 & 3 x 4 .) 4 : * 5 6 | = @ > & *) _ (Z H @ 1 \ V W ' 5 < 7 y * | { H Y p % & < 7 / 0 z 2 @ S V W + X Z 0 * O , t \ \ zt R y | 6 7 # $ # A % x A K L * T) > M * Q R : N 0 = l 丰 8 y \ q r -) y & • q r -) D , d y * Q 5 M | R S " f V W = @ + X q r $ % O k l i 6 丰 9 y & • q r -) y q r { k i 6 { n 2 4 # $: < ; ?zt < y , t D = M t N > , t # y ! o } & • L z