



1 :

Guide for measuring earth resist

3.3 & 6 ; < = > ? 4 i G ;

(1) L M N 4 = I 1 0 = L M P Q # , - = > ;

(2) L M - A = B U V 、 " p = # j , \$ = # ;

(3

$$j f t \quad 4 \sim = B \# f v = B A (F n a \bullet - A) S \# = B e .$$

$$h; X \sim = B A \& \# \quad n = B, X \sim = B A w \# \quad = B .$$

4.14 $v = B L$ equipotential line or contour

$$p \quad * / S (\quad 4 v = B \quad \# \quad .$$

4.15 $= B (\quad) L$ potential profile

$$j \quad : \quad * M \quad s, = B t \quad \# \quad V 5 h \quad L .$$

4.16 $A = B U V$ surface-potential gradient

$$= B L \# \quad ? , J \quad t v = B L n 4 .$$

4.17 $, \$ = \#$

An abstract geometric composition featuring a large black triangle on the left side, pointing downwards. A horizontal black line runs across the upper portion of the image. Above this line, on the left, is a small black rectangle. To the right of the rectangle, the text "# 0 5 9 5 0" is visible. The background is white, and the overall style is minimalist and geometric.



w X , J A y Z . e , p u v F { | & * 4 - A = B E (G

k ! 1 # R i , p z , - h i / , u a 4 # .
 , - N 1 R R , - N # - A = B U V a s X ; < = > ? # V . a , , - N # , - = > \$
a k X ; < = > ? # V , p , - N R n / a 7 .
h : p , - N q p ; < = > ? g & # s X ; < # N S 9 : y , s u [) : .
0 = L M # • , - U V) S = > ? # X ; < # \] , T " ? , I L = ? 1 C D " # -
k M > @ s)) s X U V ; < X #

(2) A , - • 1 ; < # ! >) 。

8.2 1 # 7 [, 0 z s & 6。 , & k # , - =>] 0 g Y , D 0 t
] [, - => X 。 ` 7 , N = B Z [& 6 1。

k V 4 [0 & 6 ! ' = N x R - | (w E G u ' = N - y l m V # 5 ~ 10) # ; <
9。 & 6 g z # ; < , ` X [ & 6 , ` A # ' = N l ; < a) ; #。

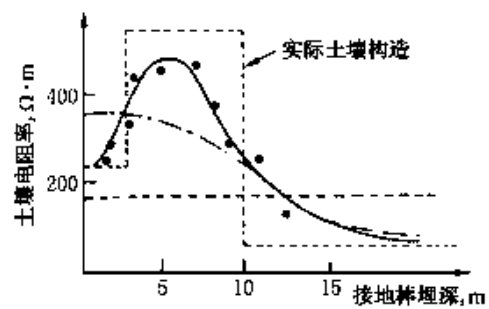
7.2.3 W [

" # (Shepard) ; < = > ? & * H j w i # W [p ; < \$ Q - & 6 o | % . l # ; < # =
> ?。 ' (7 } ~ # P = N j 7 } ~ # P = N , b \ B N p s。 = X # n N F l 7 (
& 0 c , ! ~ # = N s , = X # N ` c , ! 7 = N。 u H I p = X f = # s ' g , 5 ,
S Q Ω • cm 。 H I G (+ , F l A = N l - 3 1) * + ; < # , - 1 > l , p ! / S (
~ . ; < z 6 & 6。

7.2.4 X [

g z % . l # ; < z ; < = > ? # & 6 , 8 g Y # [a X [. A ~ = N q & ;

@ (Wenner) [# 7 } # a E = N S r ! w E / , (, W } = N # = B e G H y Z , F n
H I &) 7 w # = B e . 0 & 6 S = 6 N / # ; < = > ? , A 3b) # n z . 7
/ = B N n p w # = 6 N N R , 7 E & & # = B e .
7 n # M 5 z 5 G Y * , = N # q - k V b t J d j c

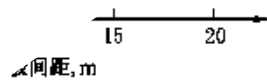
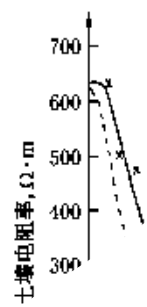


- 测试数据
- 三层等值构造土壤的视在土壤电阻率计算曲线
- - - 两层等值构造土壤的视在土壤电阻率计算曲线
- 单层等值构造土壤的视在土壤电阻率计算曲线

A 4 ; < = > ? ? k V # 4

} L s , ; < J K + m X , p @ X ; < (k 2 ~ 5 m) , ; < = > ?

6 " # ^ j 8 T E F , F n W X ; < E F 0 k ! 1 #



(2) M z ' _;

(3) Y *;

(a) G = h i , - = 6 # - A = B E & p ` } - 2 (# = B 4 ;

(b) u G H , - N # : 9;

(c) I L = a a = M , - N # : 9;

(4) j k u G H , (- u G H 4 5 s 0 1 3 4 # V c .

G ? s 0 1 、] % j c F y z , = h i j F h i # , - . , Y * , - /

- A = B # 4 9 : 。

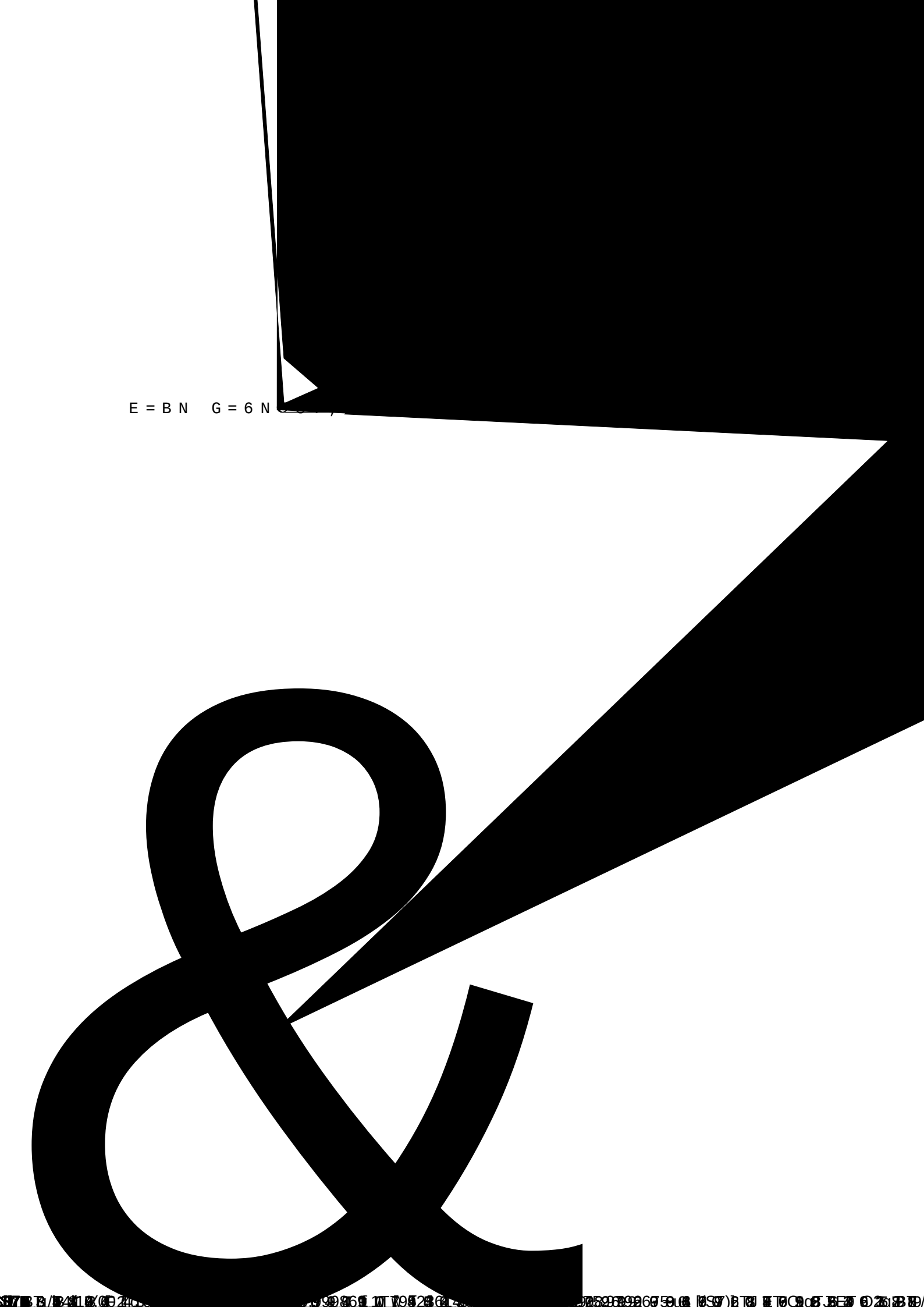
8.1.1

U 9 , 9 : # d e .

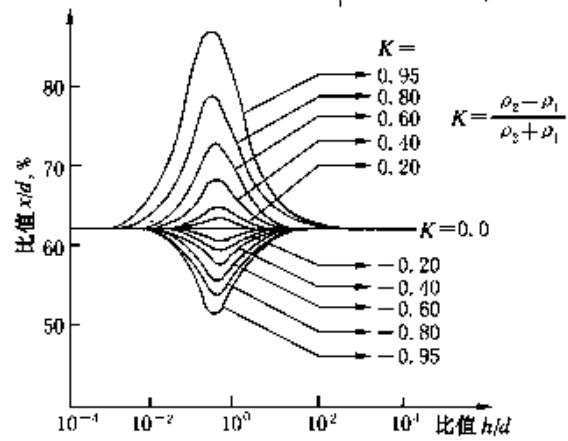
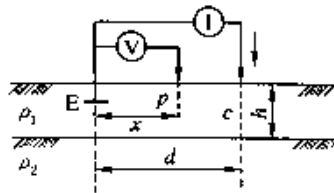
8.2.1.5 = B Z [

= B Z [4 0 { 4 6 , 7 [: G 4 , - > @ & 6 . k 6.5 1 , F , - . # , - >

= = @ @ ~ G 0



E = B N G = 6 N



A 10 W X ; < / = B N # * B

A 10 , = B N # * S x z] X x/d=0.618(E = B N

6 # [, * J . 8 1 ^ - . / R T =) I , 7 @ z # = =) I , J 0 J 5 , {
H .

8.4 H I

& 6 , - = > # H I t & 6 ; < = > ? # H I w S , p k l 2 Y 3 A 2 .

9

9.1 v = B L

G = 6 } , - N - m - 3 M 6 l , t = 6 M n 4 # v = B A T W A t = 6 M 4 5 . v
= B A S 4 w S # = B e , _ : * # M # v = B A V Y * 0 ; # " p = # . p , - N N
R , J U V (" p = #) A 8 & .

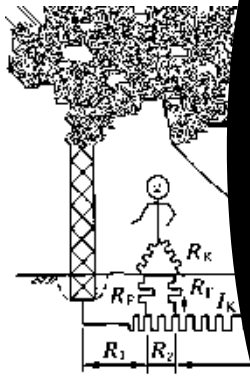
} , - N _ & 0 , - A g . & k # v = B A S # , A ? 0 { ` V 4 . ` V ' (: ; <
= > ? ~ , 4 I q - 5 , L , P M M , 1 { 2 , = @ 3 , 4 I F l - = 6 # J K - L v .

k 8 . 1 1 j , f , - = 6 0 T 6 # 0 = L M - 3 4 k = d . ` T 4 = 6 # 0
= L M y # - A = B U V x R ; < - A = B U V 5 . E g p 4 = I #) S 0 = L M / ,
s ; > _ | v = B L # 4 . ` 7)) F l & 6 , - N t J + % } - \$ # = > , [) 0 z
v = B L .

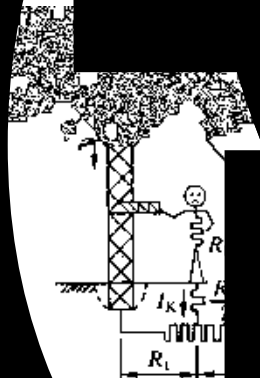
E v = B L z B , 6 p * 1 m y , v = B L S # = B e a n X G , - = 6 #
- . J P a , - h i + % # ; - p 6 l = 6 / , ; < = > ? . 4 4 .

9.

h: X ; <=> ? #
/ , S /



接地构架



接地构架

\$ = #

10

10.1 , - h i # C D , - >

10.1.1 F `

, - h i a F A • :

- > @ t C D = 6 # " 4 5 ,

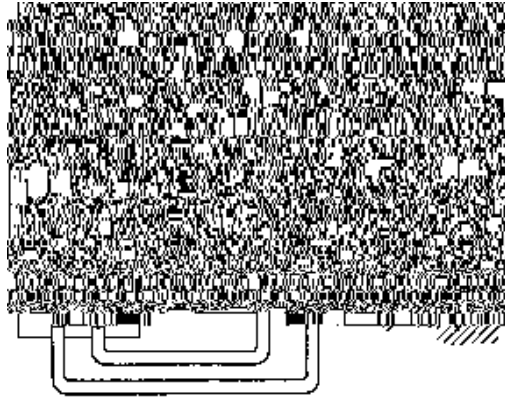
C D , - > @ # R L 9 a

, - N _ = < V ! 8 & , 0 A x i

h i # C D , - > @ X n : B [& k # > @

w " C D = 6 / ; <) g) = ; > .

E & 5 V " j # C D " 300 m s b # B } , - i n



1—& # C D = 6 g I ; 2—O & , - N ;

Es b ! B,] 6 * G = { t u 4 * # d e, [y L M:

(1) u v p 5 6 ~ = 6 / G = N N ; > # d e, H 4 6 = 6。

(2) , - N E F # = 6 V ~ G 0.1 A/cm²。

(3) = B N I O 4 # ϕ 3 # L, q k V) k l 3 mm。

(4) , - N E F F X Y o > , M o K j G ? 3 # g Y V , , - N E F] % 。 ' G
D , , - N E F {) l , 7 8 j l : 20 X Y v。

(5) = { # t u) ~ G , - N E F 8 t u # 5 , 7 / J d e ~ G p ; < & V c #
10%。

11.3 & 6 H I

E F ' G * # P (A 13):

(1) o > # { g 7 }。

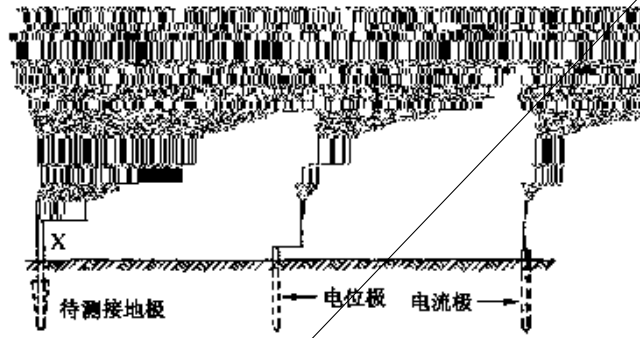
(2) p { g (J E N # X ; < # , m Y v E . s X Q p R - 1 S T) R
- , j k b # = > ? 。 k b X : E t u # U V s . E N。

(3)



Z,`7uH #]V

B Q



A 16 V 4 # I

^ H I (4 7 } { = X d . # e ~ , u e ~ 4 W , . k 7 , G 4 - 4 # I 7 ; = 6 #
 . , u 4 # I # 0 = 6 6 l = 6 N j 0 & - N

F l & j 0.1 Ω m 6 I # = # Z & 6 & ' = 6 , p = # & 6 = B N j 0 & , - N S # =
/ , ` 7 = 6 v & 7 = 6 。 [a X ? & 6 # 7 z , 7 A d e * o H #] V d
e j m 6 I 、 D I # X ? d e 。

12.5 T N

H I w x G - = & 6 。 a 7 5 : 9 G ; < = > ? j - = > & 6 # & ` a V 、 + + &
6 = M j = d # X S F H I 。

u H I X I j , Y I W l m Q , A 18 Q 。

X I j , Y I (= # j = 6) a = > r U # , 0 = ' G L S # U 9 4 5 > 。

12.5.1 X I

, Y I & 6 k M # F % X I # = 6 " C \$ y o , ` X I j , Y I S) * 5 , # =
@ c , 。 X I F l W } = N A 5 6 = 6 F ; < , B D A u = 6 % & (F n # " C z V w
E G = 6 F % + , 2 s , 4 s , 8 s) 。

12.5.2 , Y I

@ z # , Y I a & ` a V = M & 6 I m , * * / T N # ? 6 j ? = { ,
, Y I # :

(1) 0 . = B | } ;

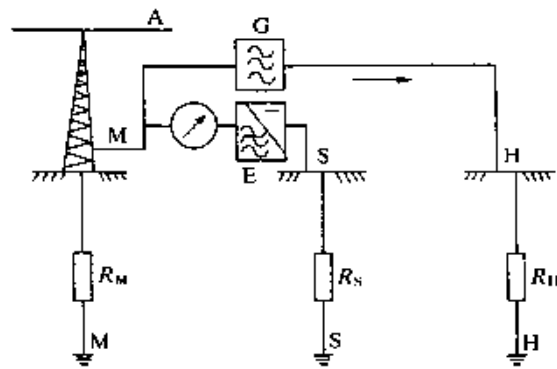
(2) Y 4 ~ o 4 6 n y # • (-) \$ +) " I ;

(3) 4 ~ o ? n y # L T W • g j . z m b j 0 。

A 18 T N

12.5.3 N

u D G ; < & 6 M L ! > , Y I , 3 / 7 W X I Y W , Y I , } P &
& 6 ? 。 G u # ~ o _ 4 n y 0 , p l = L M # g = n y d _ & 6 。 p) r
? = {



$M - P Q$; $A - J K - L$; $S - B N$; $R_M - P Q$, $- = >$; $H - 6 N$; $R_S - B N$
 $, - = >$; $G - \& \quad g I$;

Г

:

4 k)

D ~

G ~ V

13

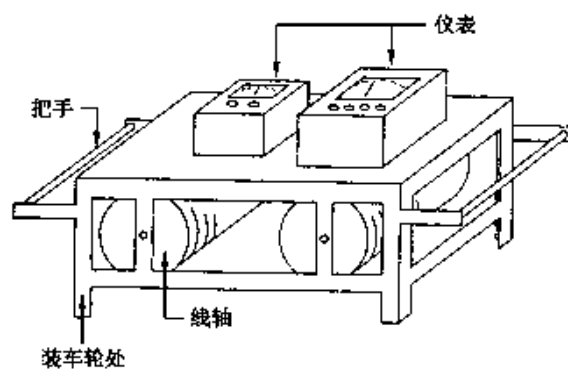
IV

H

=

) p A 1. / %

// H ≡ M % 1 % & # +



A 21 & ' ~

$$\begin{matrix} & \mathbf{A} \\ (\mathbf{P} \mathbf{Q} \# \mathbf{N} \mathbf{O}) \end{matrix}$$

$$\mathbf{A1}$$

$$\begin{matrix} \mathbf{W} \mathbf{X} ; < \mathbf{E} \mathbf{F} & \mathbf{y} (\mathbf{U} \mathbf{V} \quad \mathbf{Q} (\mathbf{A} \mathbf{A1}) ; \\ \mathbf{s} \mathbf{X} ; < \& \mathbf{V} \quad \hbar \\ \mathbf{s} \mathbf{X} ; < = > ? & \rho_1 \\ \mathbf{y} \mathbf{X} ; < = > ? & \rho_2 \\ \mathbf{K} \quad ! \mathbf{a} \mathbf{h} \mathbf{V} \end{matrix}$$

$$\mathbf{K} =$$

$$R = \rho_1$$

A z B

M^E 1 V^G # 1 [5 7 T 7 M # : < 1 K i = N T W 2 . A N O A)

C5

ϕ

$1/D = 1/2$