사용설명서

BETA-RAY THICKNESS TESTER BTC-55





CONIENIS

I.				3
	1.	••		3
	2.	가	/	5
	3.			(
II.		•••••		8
	1.	•••••		
		Ape rture s		
	3.	pe ivare s		
	4.	가		
	5.	•		
	6.			
	0.			1
III.				1 2
Ш.				
	1.			
	2.			
	3.			
	4.			
				18
	5.	•••••		2
			(&)	2
				22
				24
				25
			가	20
	6.			26
				20
				27
				28
	7.		(C% N%)	28
			(%)	28

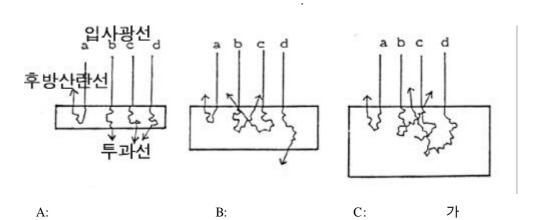
		(%).	 29
	8.		
	9. Lot numb	ber	 3 1
	10.	•••••	 32
	11		 32
	12. Sub key	····	 33
	13.	•••••	 34
	14.	•••••	 37
IV.	•••		 40
	1. RAM	가	 40
	2. ROM	가	 40
	3.	가	 40
	4.	가	 40
V.	•••••		 41
	1.	•••	 4 1
	2.		 43
	3. 가		 45

Ι.

1.

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. ,

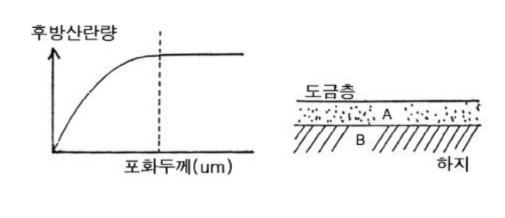


Α .

B 가 , ,

· C 가 .

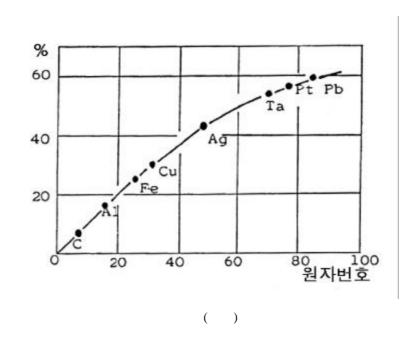
· 가 · 가

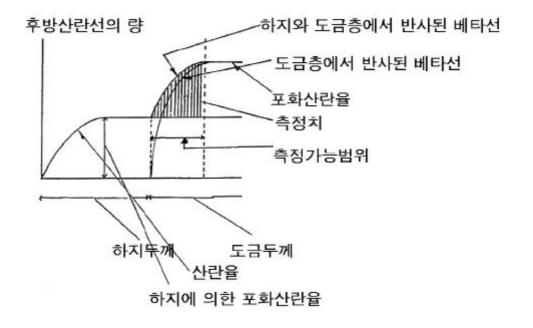


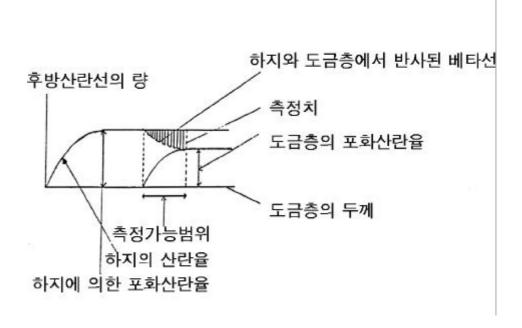
B카 A 가 , B 카 0 A , , A , (B카

) B .

A B







:

 $I = IA (1 - e - \mu g) = IBe - \mu g$

IA:

IB:

G:

μ:

(constant)

BTC-55 , (standard)

2. 가 /

BTC-55

가 , 가 가

/ 가 90%

. Ag/Cu plating Cu 47 . 47 90% 42.3 , 29 42.3

/ 가 .

29, Ag

SN/Pb 7\ 60% 40% , Sn 50 Pb 82 . , $Z = 50 \ X \ 0.6 \ + \ 82 \ X \ 0.4 \ = \ 62.8$

가 / .

, / .

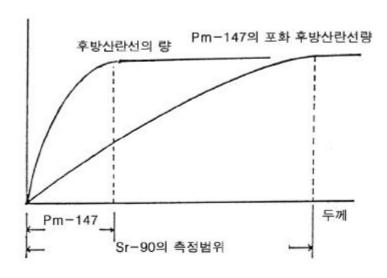
3. 가

, 0.01um

. , 가 가 가 .

/	(μ m)		
/	• '		
	0.01 - 1.1	C*	
Au / Cu	0.02 - 2	Pm	
Au / Br	2 - 8	Ti	
Au / Ni	3 - 11	Ra	
	5 - 28	Ti	
	0.01 - 1.5	C*	
Au / Ag	0.02 - 2	Pm	
	2 - 8	Ti	
	0.01 - 1.1	C*	
Au / Fe	0.02 - 1.8	Pm	
Au / Co	1.5 - 8	Ti	
Au / Inval	3 - 11	Ra	
	5 - 28	Sr	
	0.02 - 1.8	C*	
Ag / Cu	0.02 - 3	Pm	
Ag / Ni	3 - 15	Ti	
	5 - 28	Ra	
A - / E - A - / C -	0.02 - 3	Pm	
Ag / Fe · Au / Co	3 - 15	Ti	
Au / Inval	5 - 28	Ra	
	0.01 - 1.4	C*	
Rh/Ni · Rh/Cu	0.02 - 2.8	Pm	
	2.2 - 25	Ti	
A / DI	0.02 -2	C*	
Au / Rh	0.05 - 4.5	Pm	
Sn- Ni Alloy / Cu	5 - 30	Ti	(Sn:Ni=65:35)
Cr. / Cr.	0.1 - 12	Pm	
Cr / Cu	10 - 35	Ti	
Deintine / Dless	0.1 - 15(25)	C*	
Painting / Plastic	0.1 - 25(50)	Pm	

/	(μm)		
Dointing / Dloatio	0.1 - 15(25)	C*	
Painting / Plastic	0.1 - 25(50)	Pm	
	0.02 - 2	Pm	
Solder / Cu	3 - 22	Ti	(Sn: Pb= 60:40)
	5 - 36	Ra	
Solder alloy ratio	90% - 30% (Tin) 10% - 70%	Pm	
Cd / Fo Cd / Cv	0.05 - 4	Pm	
Cd / Fe · Cd / Cu	3 - 18	Ti	
	0.02 - 2.6	C*	
Sn/Fe	0.05 - 3.5	Pm	
	3 - 22	Ti	
	0.02 - 5	C*	
Sn / Cu	0.05 - 3.5	Pm	
	3 - 22	Ti	
Cu / Epoxy rasin	002 - 5	Pm	
/ Phenol rasin	5 - 20	Ti	
Ni / Epoxy rasin	8 - 35	Ra	
/ Phenol rasin	25 - 120	Sr	
	0.02 - 5	Pm	
Cu / Al	5 - 20	Ti	
Cu / Ai	8 - 30	Ra	
	25 - 100	Sr	
Photoresist / Ni	0.1 - 15(25)	C*	
/ Cu	0.1 - 25(50)	Pm	
Zn / Fe	5 - 40	Ti	
Rh / Al	0.1 - 10	Pm	
Cu / Epoxy	12 - 70	Sr	
Teflon / Monel metal	0.1 - 20	Pm	



가

.

Pm

Sr

II.

1.

G.M

G.M

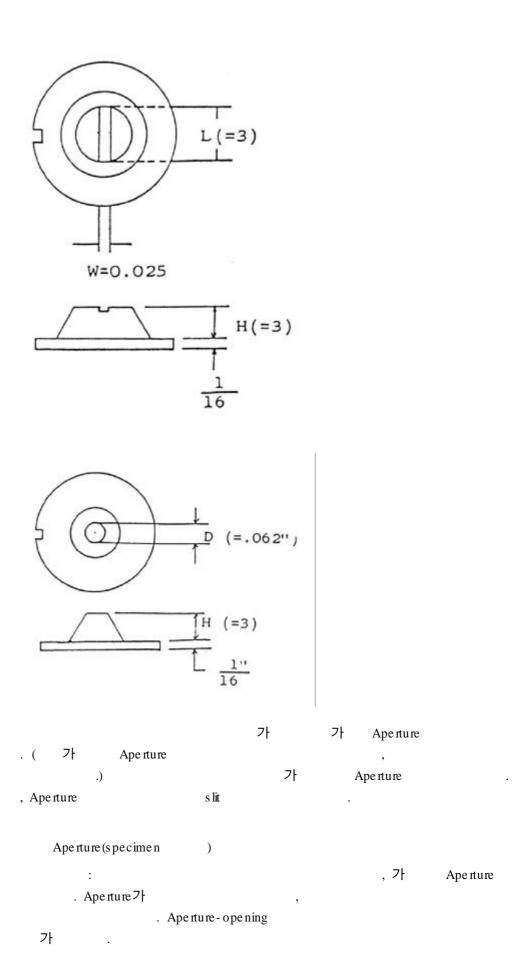
. (: 147Pm, 204Tl, 90Sr)

Aperture: plate

2. Apertures Specimen Masks

가 plate Probe system H-5, MS-11 . 가 , 가

DETA DAY THOUSING TROTTED DIG 55 / 0



BETA-RAY THIC KN ESS TESTER BIC-55 $\,/\,$ 10

Ape rture $W = \frac{1}{100} \sqrt{4.7D - 0.36}$ D=mmØ 가 Aperture (specimen curvature가 가 가 BTC-55 Ape rture . 가 opening 가 a pe rture 가 가 3. , C, Pm, Tl, Ra, Sr 가 tip a pe rture tip 가 4. 가 가 Ape rture , G.M MS - 11 H- 5 가 ProbeMS - 11 #180

BTC-55

BETA-RAY THICKNESS TESTER BTC-55 / 11

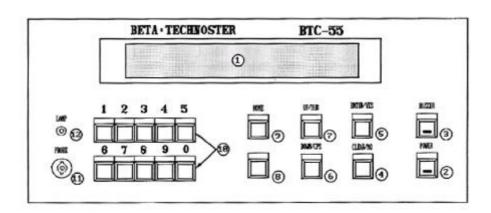
가 . 가 probe . (±0.1mm)

#120

, 가 . Apenture

5.

6.



POWER

BUZZER : .

CLEANNO : ,

ENTER/YES : , .

DOWN/CPS :

.

•

UP/SUB : (SUB)

DECIMAL : .

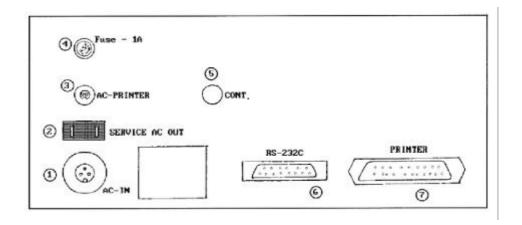
HOME : 'Channel Setting(

)' .

1 0 :

PROBE : BNC .

LAMP : GB-3 가 .



(3 pin connector): AC 100V

AC PRINTER CONNECTOR

FUSE (1A)

:

가 ()

RS232C:

PRINTER(): Data Cord

III.

1.

B- RAY THICKNESS TESTER model BTC-55
ELEC FINE INSTRUMENTS CO LTD

BTC- 55 5

B- RAY THICKNESS TESTER model BTC-55

DIAGNOSIS RUNNING CHECK ON RAM, ROM, HIGH VOLTAGE AND PROBE

가 , . . .

가 가 .

DIAGNOSIS PASSED

16 .

. UP/DOWN

.

2.

CH TYPE H RANGE L UNIT MINOR MAJOR

СН

TYPE:

H RANGE L: (H)/ (L)

UNIT : MINOR : MAJOR :

CH COAT BASE PROBE MASK I UNIT CT MT C

CH:

COAT : BASE :

PROBE :

MASK: aperture specimen

I. :

UNIT:

CT:

MΓ:

C: 가 ?

.

```
CH COAT BASE PROBE MASK I. UNIT CT MT C
 0 -0 -0
                                     0 0
 MEASURED DATA ( )
 ACCEPT THIS CHANNEL AS CHOSEN?
               ?) Y/N
                   , CLEAR/NO
              ENTER/YES
 1: COPY FORM ANOTHER CHANNEL (
 2: MODIFY CHANNEL ITEM (
 3: MEASURE ( )
 4: CALIBRATE ( )
 ENTER NUMBER(
)
1 + Enter 'Channel Copy'
2 + Enter 'Channel
3 + Enter
4 + Enter
          가
 1: CONTINUE MEASURING (
2: CALIBRATION ONLY ( )
 3: CHANGE MEASURING TIME ONLY (
 ENTER NUMBER(
```

UP DOWN

7

```
가
      가
                                                                               . (
  1: μm
                2: mil
                          3: MI
                5: C%(CON)
  4: N%
  PREVIOUS(
  ENTER NUMBER OF UNIT(
                                                )
                      가
                                              가
          micron meter(
1: \mu m
2:mil
          =1/1000
                        =25.4 \mu m
3 : MI
                                 ) = 1/1000 \text{ mils} = 0.0254 \ \mu\text{m}
          microinch(
          Normal Count Rate (infinitive (=100)
4 : N%
                                                   (=0)
5 : C%
          Percent Composition(
    가 µm, mil, MI
                            N%, C%
                                                                가
                                                  (:\mu m)
1 + Enter
  1: Au
           2: Ag
                    3: Pt
                             4: Pb
                                      5: Sn
                                                6: Ni
  7: Cu
           8: Zn
                    9: Rh
                             10: Cr
                                      11: Al
                                                12: Mg
  13: Fe
           14: Mo
                    15: W
                                      17: Si
                             16: C
                                                18: Ti
  ENTER NUMBER OF COATING
                                     PREVIOUS:
  (
                                        48가 가
```

3.

BETA-RAY THICKNESS TESTER BIC-55 / 16

```
) 1 + Enter ( )
```

1: Au 2: Ag 3: Pt 4: Pb 5: Sn 6: Ni 7: Cu 8: Zn 9: Rh 10: Cr 11: Al 12: Mg 13: Fe 14: Mo 15: W 16: C 17: Si 18: Ti 19: V 20: Mn 21: Co 22: B 23: Ge 24: Se 25: Zr 26: Pd 27: Cd 28: Kv 29: Br 30: So 31: A1 32: A1 33: A2 34: A3 35: A4 36: A5 37: Pr 38:: P1 39: P2 40: P3 41: P4 42: P5 43: PR 44: S1 45: S2 46: S3 47: S4 48: S5		
3: Pt 4: Pb 5: Sn 6: Ni 7: Cu 8: Zn 9: Rh 10: Cr 11: Al 12: Mg 13: Fe 14: Mo 15: W 16: C 17: Si 18: Ti 19: V 20: Mn 21: Co 22: B 23: Ge 24: Se 25: Zr 26: Pd 27: Cd 28: Kv 29: Br 30: So 31: A1 32: A1 33: A2 34: A3 35: A4 36: A5 37: Pr 38:: P1 39: P2 40: P3 41: P4 42: P5 43: PR 44: S1 45: S2 46: S3 47: S4	1: Au	
3: Pt 4: Pb 5: Sn 6: Ni 7: Cu 8: Zn 9: Rh 10: Cr 11: Al 12: Mg 13: Fe 14: Mo 15: W 16: C 17: Si 18: Ti 19: V 20: Mn 21: Co 22: B 23: Ge 24: Se 25: Zr 26: Pd 27: Cd 28: Kv 29: Br 30: So 31: A1 32: A1 33: A2 34: A3 35: A4 36: A5 37: Pr 38:: P1 39: P2 40: P3 41: P4 42: P5 43: PR 44: S1 45: S2 46: S3 47: S4		
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7: Cu 8: Zn 9: Rh 10: Cr 11: Al 12: Mg 13: Fe 14: Mo 15: W 16: C 17: Si 18: Ti 19: V 20: Mn 21: Co 22: B 23: Ge 24: Se 25: Zr 26: Pd 27: Cd 28: Kv 29: Br 30: So 31: Al 32: Al 33: A2 34: A3 35: A4 36: A5 37: Pr 38:: Pl 39: P2 40: P3 41: P4 42: P5 43: PR 44: S1 45: S2 46: S3 47: S4	5: Sn	
8: Zn 9: Rh 10: Cr 11: Al 12: Mg 13: Fe 14: Mo 15: W 16: C 17: Si 18: Ti 19: V 20: Mn 21: Co 22: B 23: Ge 24: Se 25: Zr 26: Pd 27: Cd 28: Kv 29: Br 30: So 31: A1 32: A1 33: A2 34: A3 35: A4 36: A5 37: Pr 38:: P1 39: P2 40: P3 41: P4 42: P5 43: PR 44: S1 45: S2 46: S3 47: S4	6: Ni	
9: Rh 10: Cr 11: Al 12: Mg 13: Fe 14: Mo 15: W 16: C 17: Si 18: Ti 19: V 20: Mn 21: Co 22: B 23: Ge 24: Se 25: Zr 26: Pd 27: Cd 28: Kv 29: Br 30: So 31: Al 32: Al 33: A2 34: A3 35: A4 36: A5 37: Pr 38:: Pl 39: P2 40: P3 41: P4 44: P5 43: PR 44: S1 45: S2 46: S3 47: S4	7: Cu	
10: Cr 11: Al 12: Mg 13: Fe 14: Mo 15: W 16: C 17: Si 18: Ti 19: V 20: Mn 21: Co 22: B 23: Ge 24: Se 25: Zr 26: Pd 27: Cd 28: Kv 29: Br 30: So 31: Al 32: Al 33: A2 34: A3 35: A4 36: A5 37: Pr 38:: Pl 39: P2 40: P3 41: P4 42: P5 43: PR 44: S1 45: S2 46: S3 47: S4	8: Zn	
11: Al 12: Mg 13: Fe 14: Mo 15: W 16: C 17: Si 18: Ti 19: V 20: Mn 21: Co 22: B 23: Ge 24: Se 25: Zr 26: Pd 27: Cd 28: Kv 29: Br 30: So 31: Al 32: Al 33: A2 34: A3 35: A4 36: A5 37: Pr 38:: Pl 39: P2 40: P3 41: P4 42: P5 43: PR 44: S1 45: S2 46: S3 47: S4	9: Rh	
12: Mg 13: Fe 14: Mo 15: W 16: C 17: Si 18: Ti 19: V 20: Mn 21: Co 22: B 23: Ge 24: Se 25: Zr 26: Pd 27: Cd 28: Kv 29: Br 30: So 31: A1 32: A1 33: A2 34: A3 35: A4 36: A5 37: Pr 38:: P1 39: P2 40: P3 41: P4 42: P5 43: PR 44: S1 45: S2 46: S3 47: S4	10: Cr	
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35: A4 36: A5 37: Pr 38:: P1 39: P2 40: P3 41: P4 42: P5 43: PR 44: S1 45: S2 46: S3 47: S4	33: A2	
36: A5 37: Pr 38:: P1 39: P2 40: P3 41: P4 42: P5 43: PR 44: S1 45: S2 46: S3 47: S4	34: A3	
37: Pr 38:: P1 39: P2 40: P3 41: P4 42: P5 43: PR 44: S1 45: S2 46: S3 47: S4	35: A4	
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44: S1 45: S2 46: S3 47: S4	42: P5	
45: S2 46: S3 47: S4	43: PR	
46: S3 47: S4	44: S1	
47: S4	45: S2	
	46: S3	
48· S5	47: S4	
10. 55	48: S5	

```
1:
 7:
 13:
 ENTER NUMBER OF COM. PREVIOUS: NEW:
       ) ( ) ( )
 (COM
            UP DOWM
 ) 5 + Enter
 1: Au 2: Ag 3: Pt
                    4: Pb 5: Sn 6: Ni
                     10: Cr 11: Al 12: Mg
 7: Cu
       8: Zn
               9: Rh
 13: Fe 14: Mo 15: W 16: C 17: Si
                                  18: Ti
 ENTER NUMBER OF BASE PREVIOUS:
                                 NEW:
                                 가 . UP
                       48
                                                DOWN
 ) 6 + Enter
                         4: MS-10 5: MS-11
9: S-2
 1: H-3 2: H-4 3: H-5
6: MS-12 7: MS-13 8: S-1
 PREVIOUS:
                  NEW:
 ENTER NUMBER OF BASE (
                         9 가
                                                  . *8:S-1
          가 'H
                       , 'MS
*9: S-2
 ) 5 + Enter
         2: .8D 3: 1.2D 4: 1.6D 5: 2.4D 7: .36D 8: .5W 9: .64W 10: .9W
 1: .5D
         7: .36D 8: .5W
 6: .25W
 11: 1.2W
         12: S1
                  13: S2
 PREVIOUS:
 ENTER NUMBER OF MASK:
                                 NEW
                                aperture specimen
       (W) 가 , (D)
                               가 가
```

BETA-RAY THICKNESS TESTER BIC-55 / 18

```
'12: S 1', '13: S2'
            ,
가 가
 ) 4 + Enter
 1: C 2: Pm 3: Ti 4: Cs 5: Ra 6: Sr 7: S1 8: S2
                         NEW:
 PREVIOUS:
 ENTER NUMBER OF ISOTOPE
C:
                Pm:
Ti:
                Cs:
Ra:
                Sr:
'7: S1' '8: S2' 가
) 3 + Enter
 CH COAT. BASE PROBE MASK I. UNIT CT MT C
 1 Au-0 Ni-0 Ms-11 1.60 Ti μm 60 10
 SET STATISTICS IFEM?
                       Y/N
               ?) ( / )
             'CLEAR/NO'
'ENTER/YES'
 1: N 2: N-1 3: NOT USE ( )
 PREVIOUS:
                         NEW*
 ENTER NUMBER OF STATISTICS TYPE
1: N
2: N-1
3: NOT USE
) 1 + Enter
```

4.

'N'

```
NO TYPE H RANGE L UNIT MINOR MAJOR
1 N .000 .000 μm 0
                   NEW:
PREVIOUS: 0
ENTER NUMBER OF MAJOR STATISTICS
        )
) 50 + [mter] (50)
NO TYPE H RANGE L UNIT MINOR MAJOR
1 N .000 .000 μm 0 50
                  NEW:
PREVIOUS: 0
ENTER NUMBER OF MAJOR STATISTICS
) 10 + \text{Errer} (10)
 가
1: MAJOR STATISTICS ( )
2: MINOR STATISTICS ( )
IT'S OVER MAJOR STATISTICS (
CHOOSE EITHER TO MODIFY (
가
                                                  '2'
NO TYPE H RANGE L UNIT MINOR MAJOR
1 N .000 .000 μm
                          10 50
PREVIOUS: .000
                           NEW: \mum
ENTER NUMBER OF UPPER LIMIT
    )
) \boxed{1} \boxed{0} + \boxed{\text{Error}} (10 \mum)
NO TYPE H RANGE L UNIT MINOR MAJOR
1 N 10.00 .000 \mum
                                 50
PREVIOUS: .000
                           NEW: \mum
ENTER NUMBER OF UPPER LIMIT
) 5 + \text{Enter} (5 \mum)
```

BETA-RAY THICKNESS TESTER BIC-55 / 20

```
가 가
 1: UPPER LIMIT ( )
2: LOWER LIMIT ( )
 II'S OVER UPPER LIMIT(
 CHOOSE EITHER TO MODIFY (
                                               '2'
  NO TYPE H RANGE L UNIT MINOR MAJOR
 1 N 10.00 5.00 μm 10
                                  50
               Y/N
?) ( / )
 USE PRINTER?
'YES', 'NO'
               'ENTER/YES'
                     'CLEAR/NO'
                                       가
 ) Enter
'ENTER/YES'
  NO TYPE H RANGE L UNIT MINOR
                                    MAJOR
 1 N 10.00 5.00 μm 10
                                    50
  NEED HISTOGRAM? Y/N ( ?) ( / )
                  'ENTER/YES'
                      'CLEAR/NO'
 CH COAT. BASE PROBE MASK I. UNIT CT MT C
 1 Au-0 Ni-0 Ms-11 1.6D Ti μm 60 0
                            NEW:
 PREVIOUS: 0 SEC.
                                          SEC.
 ENTER CALIBRATING TIME
 ) \boxed{6} \boxed{0} + \boxed{\text{Enter}} (60 )
```

BETA-RAY THIC KN ESS TESTER BIC-55 $\,/\,\,\,\,21$

```
CH COAT. BASE PROBE MASK I. UNIT
                                        CT
                                             MT C
1 Au-0
          Ni- 0
                 Ms-11 1.6D
                               Ti μm
                                        60
                                            0
PREVIOUS: 0 SEC.
                               NEW:
                                             SEC.
ENTER MEASURING TIME
) \boxed{1} \boxed{0} + \boxed{\text{Enter}} (10 )
CALIBRATION DATE (MONTH/YEAR) ex.) 5. '96
( / )
                             ) 5. '96
COUNT CORRECTION
                                1
( )
FULL CALIBRATION?
                                Y/N
           가 ?)
                                ( / )
                    1996 5
             가
                      'CLEAR/NO'
                          'ENTER/YES'
          & )
           가
2, 3
                                        BTC-55
 PREVIOUS:
 ENTER "MONTH" OF CALIBRATION
) 8 : \boxed{8} + \boxed{\text{Enter}}
 PREVIOUS:
 ENTER "YEAR" OF CALIBRATION
) 1997 : 97 + Enter
```

5.

```
1: INFINITE(
    2: EITHOUT INFINITE ( )
    3: LINEAR(
                                        PREVIOUS:
             )
    ENTER NUMBER OF CALIBATION MODE.
                        가
  BTC- 55
                               가
1:
                  1-8
  1-8
2:
                                                 2
3:
                             가
      1-9
                          MASK I.
   CH COAT.
              BASE PROBE
                                     UNIT
                                           CT
                                               МΓ
                                                    C
    1 Au-0/
              Ni- 0
                     Ms - 11
                            1.6D Ti
                                      \mum
                                           60
                                               10
                                 NEW:
   PREVIOUS:
                      NUMBER
   ENTER
   CALIBRATING(3-10)
   (3-10)
                         )
   ) 4 + Enter
      , , , thickness ( )-1 thickness ( )-2
                                                       가
  가
             'n'
                                        'n + 2'가
                 2
```

BETA-RAY THICKNESS TESTER BTC-55 / 23

```
CH COAT. BASE PROBE MASK I UNIT
                                    CT
                                        МΓ
                                             C
         Ni- 0 Ms - 11 1.6D Ti
1 Au-0/
                              \mum
                                    60
                                        10
SET BASE STANDARD
AND PRESS ENTER
   ENTER
                      )
                      'ENTER/YES'
CH COAT. BASE PROBE MASK I UNIT
                                    CT
                                        МΓ
1 Au-0/
         Ni-0 Ms-11
                      1.6D Ti μm
                                    60
                                       10
REMAINING TIME: 60 SEC (calibrating) (
CH COAT. BASE PROBE MASK I UNIT
                                    CT
                                             C
                                        МΓ
1 Au-0/
         Ni- 0 Ms - 11
                     1.6D Ti µm
SET INFINITE STANDARD AND PRESS 'ENTER'
             'ENTER'
                      )
                      'ENTER/YES'
         BASE PROBE MASK I UNIT
CH COAT.
                                    CT
                                        МΓ
                                             C
1 Au-0/ Ni-0
             Ms-11 1.6D Ti
                              \mum
                                        10
REMAINING TIME:
             60 SEC
                        (now calibrating)
               (60)
- 1
CH COAT. BASE PROBE MASK I UNIT
                                    CT
                                        МΓ
1 Au-0/ Ni-0
               Ms-11 1.6D Ti μm
                                    60
                                        10
PREVIOUS:
                               NEW:
                                       \mum
                       \mum
ENTER THICKNESS OF STANDARD
               )
- 1
) \boxed{2} . \boxed{0} \boxed{8} + \boxed{\epsilon} (2.08 \mum)
                          'ENTER/YES'
CH COAT. BASE PROBE MASK I.
                             UNIT CT
1 Au-0/
         Ni- 0
             Ms-11 1.6D Ti μm
                                    60
SET STANDARD
AND PRESS 'ENTER'
         'ENTER'
                     )
CH COAT. BASE PROBE MASK I UNIT
                                    CT
                                             C
                                        МΓ
1 Au-0/ Ni-0 Ms-11
                     1.6D Ti μm
                                    60
                                        10
REMAINING TIME:
               60 SEC
                      (calibrating)
( )
              (60)
                         ( )
```

- 2

```
CH COAT. BASE PROBE MASK I UNIT CT
                                           МΓ
 1 Au- 0/
           Ni- 0
                         1.6D Ti
                 Ms - 11
                                  \mum 60
 PREVIOUS:
                 0.000
                                  NEW:
                       \mum
 ENTER THICKNESS OF STANDARD
                   )
 - 2
 ) \boxed{5} . \boxed{4} \boxed{6} + Enter
                 (5.46 \mu m)
 CH COAT. BASE PROBE MASK I UNIT
                                       CT
                                           МТ
                                                C
 1 Au-0/
          Ni- 0
                 Ms-11 1.6D
                               Ti μm
                                       60
                                           10
 SET STANDARD
 AND PRESS 'ENTER'
           'ENTER'
                         )
           -2 'ENTER/YES'
'n
       가
 CH COAT. BASE PROBE
                        MASK I. UNIT
                                      CT
                                          МΓ
                                               C
 1 Au- 0/
                       1.6D Ti
                                          10
          Ni-0 Ms-11
                                       60
                                 \mum
 SET BASE STANDARD
 AND PRESS 'ENTER'
             'ENTER'
                        'ENTER/YES'
 CH COAT. BASE PROBE MASK I. UNIT
                                      CT
                                          МΓ
                                               C
  1 Au-0/ Ni-0
                Ms-11 1.6D Ti
                                \mum
                                           10
  REMAINING TIME:
                 60 SEC
                        (now calibrating)
   ( )
                 (60)
                          ( )
 CH COAT. BASE PROBE MASK I. UNIT CT
                                          МΓ
                                               C
 1 Au-0/ Ni-0
                Ms-11
                       1.6D
                             Ti μm
                                       60
                 \mu_{
m m}
 PREVIOUS:
                                 NEW:
                                           \mum
 ENTER THICKNESS OF STANDARD
 (
 - 1
  - 1
                   (2.08 \mu m)
 ) 2 . 0 8 + Enter
```

```
CH COAT. BASE PROBE MASK I. UNIT
                                       CT
                                            МΓ
                                                 C
                Ms-11 1.6D Ti
1 Au-0/ Ni-0
                                  \mum
                                        60
                                            10
SET STANDARD
AND PRESS 'ENTER'
          'ENTER'
                     )
               'ENTER/YES'
          - 1
CH COAT. BASE PROBE MASK I.
                                 UNIT
                                                 \mathbf{C}
                                            МΓ
1 Au-0/ Ni-0
                Ms-11
                                        60
                                            10
                       1.6D Ti
                                  \mum
 REMAINING TIME:
                 60 SEC (now calibrating)
                 (60)
CH COAT. BASE PROBE MASK I.
                                 UNIT CT
                                            МΓ
                                                 C
1 Au-0/
         Ni- 0
                Ms-11
                        1.6D
                                  \mum
PREVIOUS:
                                  NEW:
                          \mum
                                              \mum
ENTER THICKNESS OF STANDARD
          )
- 2
- 2
) \boxed{5} . \boxed{6} \boxed{4} + \boxed{6} (5.64 \mum)
CH COAT. BASE PROBE MASK I.
                                 UNIT
                                       CT
                                            МΓ
                                                 C
1 Au-0/ Ni-0
                Ms-11 1.6D Ti
                                  \mum
                                        60
                                            10
SET STANDARD AND PRESS 'ENTER'
          'ENTER'
          -2 'ENTER;/YES'
            (liner range)
CH COAT. BASE PROBE MASK I.
                                 UNIT
                                       CT
                                            МΓ
                Ms- 11
                        1.6D Ti
1 Au-0/ Ni-0
                                  \mum
                                       60
                                            10
PREVIOUS:
                                  NEW:
ENTER NUMBER OF CALIBRATION(2-10)
(2-10)
                                             'n'
            'n+1'
) 2 + Enter
CH COAT. BASE PROBE MASK I. UNIT
                                       CT
                                            МΓ
1 Au-0/ Ni-0
                 Ms-11
                         1.6D Ti
SET BASE STANDARD AND PRESS 'ENTER'
              'ENTER'
                         )
```

BEIA-RAY THICKNESS TESTER BIC-55 / 26

'ENTER/YES'

```
CH COAT. BASE PROBE MASK I. UNIT CT MT C
 1 Au-0/ Ni-0 Ms-11 1.6D Ti μm 60 10
             60 SEC (now calibrating)
 REMAINING TIME:
 ( ) (60 )
                       ( )
 - 1
 CH COAT. BASE PROBE MASK I. UNIT CT MT C
 1 Au-0/ Ni-0 Ms-11 1.6D Ti μm 60 10
 PREVIOUS:
                            NEW:
                                   \mum
                    \mum
 ENTER THICKNESS OF STANDARD
 (
 - 1
 ) 5 . 6 4 + Enter
              (5.64 \mu m)
               - 1
                        'ENTER/YES'
               가
 CH COAT. BASE PROBE MASK I. UNIT CT MT
                                        C
                         Ti μm 60 10
 1 Au-0 Ni-0 Ms-11 1.6D
 CALIBRATION OD?
                         Y/N
 (OD
                         ( / )
         ?)
'ENTER/YES'
    가
                가
 CH COAT. BASE PROBE MASK I. UNIT
                                CT MT
 1 Au-0 Ni-0
             Ms-11 1.6D Ti μm
                                60 10
 CAN NOT CALIBRATE WITH THOSE STANDARDS!
 PRESS 'ENTER'
                   . ENTER
```

'ENTER/YES'

6.

가

```
CH COAT. BASE PROBE MASK I. UNIT CT MT C
  1 Au-0
         Ni- 0
                Ms-11 1.6D Ti μm
  NEED ADJUSTMENT OF (COAT/BASE)?
                                Y/N
  ( /
                 ?)
                              ( / )
                         가
'CLEAR/NO' :
                                  Lot. No
'ELTER/YES' :
                               가
 CH COAT. BASE PROBE MASK I. UNIT
                                     CT MI
                                              C
 1 Au-0 Ni-0 Ms-11 1.6D
                             Ti μm
                                     60
  ADJUST (COAT) ONLY?
                                Y/N
           ?)
                              ( /
'YES'
            'ENTER/YES'
'CLEAR/NO'
 CH COAT. BASE PROBE MASK I. UNIT
                                     CT
                                         МΓ
 1 Au-0 Ni-0 Ms-11
                      1.6D Ti μm
                                      60 10
  PREVIOUS:
                              NEW
  ENTER ADJUSTMENT NUMBER OF BASE
                         )
 ) 1 + Enter
 CH COAT. BASE PROBE MASK I.
                                UNIT
                                     CT
                                         МΓ
 1 Au- 0/ Ni- 0
               Ms-11 1.6D Ti
                                \mum
                                     60
                                         10
  SET YOUR BASE AND PRESS 'ENTER'
            'ENTER'
                         'ENTER/YES'
 CH COAT. BASE PROBE MASK I. UNIT
                                     CT
                                         МΓ
                                              \mathbf{C}
 1 Au-0 Ni-0
                Ms-11 1.6D
                             Ti μm
                                     60
                                         10
  REMAINING TIME:
                   60SEC
 ( )
                   (60)
        가
                  'CLEAR/NO'
(
                                      Lot No
 .)
 CH COAT. BASE PROBE MASK I. UNIT
                                     CT
                                              C
                                        МΓ
          Ni- 0
               Ms-11 1.6D Ti μm
                                     60
                                         10
  1 Au-0
  PREVIOUS:
  ENTER ADJUSTMENT NUMBER OF COAT
```

BEIA-RAY THICKNESS TESTER BIC-55 / 28

```
) 1 + Enter
                                         MASK I. UNIT
               CH COAT. BASE
                                PROBE
                                                         CT
                                                              МΓ
                                                                   \mathbf{C}
                1 Au- 1
                          Ni- 1
                                Ms-11
                                         1.6D
                                               TI \mum
                                                              10
                SET YOUR INFINITE COAT
                AND PRESS 'ENTER'
                               'ENTER'
                                                 )
                                                 'ENTER/YES'
               CH COAT. BASE
                                PROBE
                                        MAS K
                                               I.
                                                   UNIT
                                                              МΓ
                           Ni- 1
                                 Ms-11 1.6D
                                               ΤI
                                                   \mum
                                                         60
                                                              10
                1 Au- 1
                REMAINING TIME:
                                     60SEC
                                     (60)
                ( )
               CH COAT. BASE
                                PROBE
                                        MASK I.
                                                   UNIT
                                                         CT
                                                              МΓ
                                                                   C
                1 Au- 1
                                         1.6D
                          Ni- 1
                                 Ms-11
                                               ΤI
                                                   \mum
                                                         60
                                                              10
                PREVIOUS:
                                           1.000
                                                      NEW
                ENTER DENSITY OF SAMPLE
               ) 1
                    (g/cm3)
7.
                      (C% N%)
                                    )
                        (%)
                    (100\%)
                                   (0%)
               CH COAT. BASE
                                PROBE
                                                   UNIT
                                         MAS K
                                                         CT
                                                              МΓ
                1 Au-0 Ni-0
                                Ms-11
                                         1.6D
                                                              10
                                                    \mum
                SET YOUR BASE AND ENTER
                           'ENTER'
                                              'ENTER/YES'
               CH COAT. BASE
                               PROBE MASK I. UNIT
                                                         CT
                                                              МΓ
                                                                   C
                          Ni- 1
                                 Ms-11 1.6D TI \mum
               REMAINING TIME:
                                  60 SEC
                                            (calibrating)
                                    (60)
               ( )
                                            (
```

```
CH COAT. BASE PROBE MASK I. UNIT CT MT C
 1 Au-0 Ni-0 Ms-11 1.6D TI μm
 SET YOUR INFINITE COAT AND PRESS ENTER
             'ENTER'
                   'ENTER/YES'
 CH COAT. BASE PROBE MASK I. UNIT
                                CT MT
                                       C
 1 Au-0 Ni-0 Ms-11 1.6D TI μm
                                60 10
              60 S EC (calibrating)
(60 ) ( )
 REMAINING TIME:
( )
CH COAT. BASE PROBE MASK I. UNIT CT MT
                                       C
 1 Au-0 Ni-0 Ms-11 1.6D TI μm
                                60 10
CALIBRATION OK?
                       Y/N
( ?) ( / )
 가 'ENTER/YES' Lot No.
    (%)
 CH COAT. BASE PROBE MASK I. UNIT CT MT C
 1 Au-0/ Ni-0 Ms-11 1.6D TI C% 60 10
USE PURE STANDARD Y/N ( / )
                'ENTER/YES'
'CLEAR/NO'
                . , Solder(Sn-Pb)
100% 0%
                 Pb 100%
CH COAT. BASE PROBE MASK I. UNIT CT MT C
 1 Au-0 Ni-0 Ms-11 1.6D TI C%
SET PURE STANDARD OF SMALL ATOMIC NUMBER
 AND PRESS 'ENTER'
( 가
                      'ENTER'
                                  )
             가
                                  'ENTER/YES'
 CH COAT. BASE PROBE MASK I. UNIT CT
                                   MT C
 1 Au- 0/ Ni- 0
             Ms-11 1.6D TI C% 60
                                   10
 REMAINING TIME:
            60 SEC (calibrating)
              (60 )
 ( )
                         ( )
```

BEIA-RAY THICKNESS TESTER BIC-55 / 30

```
CH COAT. BASE PROBE MASK I. UNIT CT
                                     MT C
                          TI C%
1 Au- 0/ Ni- 0
             Ms-11 1.6D
SET PURE STANDARD OF LARGE ATOMIC NUMBER
AND PRESS 'ENTER'
( 가
                         'ENTER'
             가
                                  'ENTER/YES'
CH COAT. BASE PROBE MASK I. UNIT CT
                                         C
                                     МΓ
              Ms-11 1.6D
                         TI C%
1 Au-0 Ni-0
REMAINING TIME:
              60 SEC
                           (calibrating)
( )
               (60)
                           ( )
CH COAT. BASE PROBE MASK I. UNIT CT
                                         C
                                     МΓ
1 Au-0 Ni-0
              Ms-11 1.6D TI C%
                                     10
                                 60
CALIBRATION OK?
                         Y/N
                ?)
                        ( /
CH COAT. BASE PROBE MASK I. UNIT
                                 CT
                                     МΓ
                                         C
1 Au-0 Ni-0
              Ms-11 1.6D TI C%
                                     10
PREVIOUS:
                        NEW
ENTER NUMBER OF CALIBRATION(2-6)
( (2-6) )
                                     2
                                         6
) 2 + Enter
CH COAT. BASE PROBE MASK I. UNIT
                                 CT MT
1 Au-0 Ni-0 Ms-11 1.6D TI C%
PREVIOUS:
                     .000% NEW
ENTER % OF STANDARD OF LARGE ATOMIC NUMBER
가
CT
CH COAT. BASE PROBE MASK I.
                            UNIT
                                     МΓ
1 Au-0
         Ni- 0
             Ms-11
                    1.6D
                         TI C%
SET STANDARD AND ENTER
         ENTER
                    )
             가
                                 'ENTER/YES'
```

```
CH COAT. BASE PROBE MASK I. UNIT
                                            CT
                                                МΓ
            1 Au-0 Ni-0
                         Ms-11 1.6D
                                    TI C%
                                            60
                                                10
           REMAINING TIME:
                         60 SEC
           ( )
                          (60)
           CH COAT. BASE PROBE MASK I. UNIT
                                            CT
                                                МΓ
            1 Au-0 Ni-0 Ms-11 1.6D
                                     TI C%
                                            60 10
           PREVIOUS:
                                .000%
           ENTER % OF STANDARD OF LARGE ATOMIC NUMBER
           ( %
                     % (W)
           ) 5 0 + Enter
           CH COAT. BASE PROBE MASK I. UNIT
                                            CT
                                                МΓ
            1 Au-0 Ni-0
                         Ms-11 1.6D TI C%
                                                10
                                            60
           SET STANDARD AND PRESS 'ENTER'
                    'ENTER'
                                     'ENTER/YES'
           CH COAT. BASE PROBE MASK I. UNIT CT
                                                    \mathbf{C}
                                                МΓ
            1 Au-0 Ni-0 Ms-11 1.6D
                                     TI C%
                                                10
           REMAINING TIME:
                         60 SEC
           ( )
                          (60)
           CH COAT. BASE PROBE MASK I. UNIT CT MT
                                                   C
                         Ms-11 1.6D TI C%
                                            60
                                                10
           CALIBRATION OK?
                                    Y/N
                             ?)
                                    ( / )
           (
8.
                                            GM
           CH COAT. BASE PROBE MASK I. UNIT
                                            CT
                                                МГ С
            1 Au-0 Ni-0
                         Ms - 11 1.6D
                                     TΙ μm
                                                10
           SET BEST STANDARD
           AND PRESS 'ENTER'
           (BASE 'ENTER'
                                )
                                'ENTER/YES'
           CH COAT BASE PROBE MASK I. UNIT
                                             CT
                                                МΓ
                                                     C
           1 Au-0 Ni-0
                         Ms-11 1.6D TI μm
                                             60
                                                10
           REMAINING TIME:
                         60 SEC
           ( )
                           (60)
```

9. Lot number

BETA-RAY THICKNESS TESTER BIC-55 / 32

```
PREVIOUS LOT NUMBER
          NEW LOT NUMBER
          ENTER LOT NUMBER
          (lot number
                              )
                                        '0'
Lot No.
                . (lot no.가
                                            'ENTER/YES'
 ) 1 + Enter
 CH COAT
            BASE PROBE MASK I. UNIT CT MT
  1 Au-0
                         1.6D
                                 TΙ μm
            Ni-0 Ms-11
                                           60 10
                                  SEC()
 USE PRINTER?
                           Y/N
               ?)
                           ( /
                                  )
           'ENTER/YES'
               'CLEAR/NO'
         가
 CH COAT. BASE
                  PROBE MASK I. UNIT
                                          CT
                                               МΓ
                                                     C
  1 Au-0 Ni-0
                  Ms-11
                         1.6D
                                 TΙ μm
                                                10
 PRINT OUT STATISTICS TITLE? Y/N
                   ?)
                         ( /
                                  )
         가
                    'CLEAR/NO'
'ENTER/YES'
                                     가
    )
  MEASURE ITEM
  CH COAT BASE PROBE MASK I. UN. CT MT C
  1 Au-0/Ni-0 MS-11 1.60 Tl mil 60 10 o
  STATISTICS ITEM
  NO TYPE H LIMIT L UN. MINOR MAJOR
  1 N 10.00 .0010 mil 500 500
  LOT HUMBER
            12345678
  PARTS NUMBER
  COMPANY
 CH COAT. BASE
                  PROBE MASK I. UNIT
                                          CT
                                               МΓ
 1 Au-0 Ni-0
                                                10
                 Ms-11
                          1.6D TI μm
 SET SAMPLE & PRESS ENTER TO MEASURE
                'ENTER'
```

10.

11.

BETA-RAY THICKNESS TESTER BTC-55 / 33

'ENTER/YES

		ENI	EK/IES	•
	CH COAT. BASE PROBE 1 Au-0 Ni-0 Ms-11 REMAINING TIME: ()	1.6D TI	μm 60 1 (now measurin	TT C
	CH COAT. BASE PROBE 1 Au-0 Ni-0 Ms-1 1 5.183 SET SAMPLE & PRESS ENT	1 1.6D TI +.1927 μm ER TO MEASUR	μm 60 1 Ε	П С 10
	('ENTER')	
•	'C	PS'	·	
	CH COAT. BASE PROBE 1 Au-0 Ni-0 Ms-11 1 7524 PRESS 'CLEAR' TO RETURN ('CLEAR' .)	1.6D TI +- 24.43 C		TT C
	sok		가 'C	LEAR/NO'
	Xolok	'I	НОМЕ'	
	·			
	•	CLEAR/NO'	•	, 'CLEAR/NO 'CLEAR/NO
	·	가		
	HO 00001 .1810 mi	1 ←.0056 mil		
12. Sub key				
	1: ADJUST COAT/BASE (3: COUNT CORRECTION (5: CHANGE MEASURING TIME) 4: SE	INTER SET(T STAT. ITEM)	()
	ENTER NUMBER ()		

BETA-RAY THICKNESS TESTER BIC-55 / 34

```
BTC-55
1:
2:
3:
4:
5:
'CLEAR/NO'
       가
 CH COAT. BASE
                  PROBE MASK I. UNIT
                                          CT
                                               МΓ
                                                    C
                          1.6D TI μm
            Ni- 0
                                          60
                                               10
  1 Au-0
                  Ms-11
      10
            5/064
                          +- .1887
                                   \mum
 FINAL DATA OF STATISTICS?
                                   Y/N
                                   ( /
                                          )
                                       가
'ENTER/YES'
'CLEAR/NO'
 CH COAT
            BASE
                  PROBE
                          MASK I.
                                    UNIT
                                          CT
                                               МΓ
  1 Au-0
            Ni- 0
                  MS-11
                          1.6D
                                 TΙ μm
                                          60
                                                10
  MINOR STATISTICS
  ( )
 1: ONLY MAJOR STATISTICS (major
 2: PRINT ALL DATA & STATISTICS (
 ENTER NUMBER (
                             )
1:
2:
     가
                         'HOME'
```

13.

BETA-RAY THICKNESS TESTER BTC-55 / 35

'HOME'

```
CH COAT. BASE
                 PROBE
                         MASK I.
                                    UNIT
                                          CT
                                               МΓ
1 Au-0
           Ni- 0
                 MS-11
                          1.6D
                                TI μm
                                               10
                                          60
PRINT OUT ALL DATA & STATISTICS?
                                       Y/N
                                         ( /
(
                                                )
```

가 'CLEAR/NO'

'ENTER/YES'

```
SERIAL NUMBER ( ) 1-5

MAXIMUM ( ) 4.938 \( \mu \) MEAN 3.817 \( \mu \)

MINIMUM ( ) 2.150 \( \mu \) ST DIVIATION 1.330

PRESS 'ENTER' ('ENTER' )
```

가 'ENTER/YES'

```
HO 99991
              .1810 mil +.9056 mil
100 000002
              .1872 mil ←.0060 mil
HO 00003
              .1911 mil +-.0061 mil
NO 60694
              .1879 mil +-.0060 mil
NO 00005
              .1921 mil +-.0061 mil
              .1861 mil +-.0060 mil
HO 00006
              .1902 mil +-.0061 mil
NO 00007
              .1871 mil +.0068 mil
NO 00008
             .1866 mil +-.0060 mil
NO 00009
              .1877 mil +-.0060 mil
NO 00018
LOWER LIMIT
                            0
UPPER LIMIT
                           0
TOTAL
                      95.7775 mil
                       .2024 mil
NAKIMUM DATA
MINIMUM CATA
                        .1807 mil
MEAN
                        .1916 mil
STANDARD DEVIATION
                       .0039 mil
```

```
100 00497
            .1874 mil +.0060 mil
NO 00498
            .1947 mil +-.0064 mil
HO 00499
            .1945 mil +-.0064 mil
NO 99599
            .1871 mil +.0060 mil
LOWER LIMIT
                        0
UPPER LIMIT
                        Ũ
TOTAL
                   95.7775 mil
MAKIMUM DATA
                    .2024 mil
MINIMUM DATA
                    .1897 mil
                    .1916 mil
STANDARD DEVIATION
                   .0039 mil
      (GRAND TOTAL)
                                        NO 66661
                                                   .1810 mil +.0056 mil
                                       HO 86992
MEASURE MIMBER
                   560
                                                   .1872 mil +.0060 mil
LOWER LIMIT
                       0
                                       NO 86662
                                                   .1911 mil +.0061 mil
                                       NO 88894
UPPER LIMIT
                       0
                                                   .1879 mil +-.8960 mil
                                       NO 99995
                                                    .1921 mil +-.0061 mil
TOTAL.
                   95.7775 mil
                                        LOWER LIMIT
                                                              0
MAKIMUM DATA
                    .2924 mil
                                         UPPER LIMIT
                                                              0
MINIMUM DATA
                    .1897 mil
                                         TOTAL
                                                          95.7775 mil
MEAN
                    .1916 mil
                                         MACHINUM DATA
                                                          .2824 mil
STANDARD DEVIATION
                   .0039 mil
                                                           .1807 mil
                                         MINIMUM DATA
                                         MEAN
                                                           .1916 mil
       [HISTOGRAM]
                                         STRIDERD DEVIATION
THICK HESS [ mil ]
                            HUMEER
                                         NO 99991
                                                     .1861 mil
.1812 :
                                3
                                                    .1902 mil
                                        NO 00002
.1823 IE
                               3
                                                    .1871 mil
                                        NO 86662
.1833 :
                               5
                                        NO 66664
                                                    .1866 mil
.1943 :
                               12
                                        NO 00005
                                                     .1877 mil
16
                                        LOWER LIMIT
.1864 EEEE
                               22
                                        UPPER LIMIT
                                                              8
.1874
                               38
                                                          95.7775 mil
                                        TOTAL
.1895
                               41
                                         MAKIMUM DATA
                                                           .2024 mil
.1895 | Dimension | 1895 |
                               39
                                        MINIMUM DATA
                                                           .1887 mil
                                                          .1916 mil
.1905
                               54
                                        MERN!
                                         STANDARD DEVIATION .0039 mil
.1916
                               52
.1926
                               51
                                             (6 RAND TOTAL)
.1936
                               38
                                        MEASURE MUMBER
                                                             500
.1947
                                         LOWER LIMIT
                                                              9
.1957 ETT. TENE
                               29
                                         UPPER LIMIT
                                                              0
.1967 | House Course
                              22
                                        TOTAL
                                                          95.7775 mil
.1978 153
                             16
                                         MAKIRUM DATA
                                                           .2024 mil
.1988 !
                                        MINIMUM DATA
                                                          .1987 mil
                            - 11
.1998 IM
                                        MEAN
                                                           .1916 mil
                              4
                                        STRADARD DEVIATION
                                                          .0039 mil
.2008
                              5
.2019 IE
                               3
```

14.

BTC-55 CH COAT. BASE PROBE UNIT CTMASK I. МΓ C 1 -0 -0 0 0 COPY CALIBRATION ITEM? 'CLEAR/NO' 'ENTER/YES' 1 Au-0/Ni-0 MS-11 1.6D TI μ m 10 2 Ag-0/Cu-0 MS-10 1.2D Pm μm 20 (scrauling: ENTER NUMBER OF CHANNEL (UP DOWN) 1 + Enter CH COAT. BASE **PROBE** MASK I. UNIT CT МΓ C 1 Au-0 Ni- 0 MS-11 1.6D ΤI μ m 60 10 ACCEPT THIS CHANNEL AS CHOSEN? Y/N?) (/ 'ENTER/YES' 'CLEAR/NO' NO TYPE Η **RANGE** L UNIT MINOR MAJOR N 2 10.00 5.00 10 60 μ m COPY STATISTICS ITEM? Y/N (/ 'CLEAR/NO' 'ENTER/YES' 1 Ν 10.00 5.000 μ m 10 50 2 .000 .000 0 0 0 .000 .000 μ m (scrauling: ENTER NUMBER OF CHANNEL () DOWN

. UP

) 1 + Enter

CCLI I IIIS (CHANNEL AS C	000 CHOSENS		10 V/N	0	MAJ 60	
		?))		
,(CLEAR/NO'	,	•		'ENT	ER/YE	S'
2 Au-0	ASE PROBE Ni-0 MS-11 H THIS CHANN	1.6D		UNIT µm Y/N (/	CT 60	MT 10	С
		'CLEAR					
		'HC	ME'				
CLEAR/NO'							•
	ASE PROBE Ii-0 MS-11						С
DJ UST (COAT/	BASE) ONLY?		Y/N /				
'E	NTER/YES'	EAD/NO.					
	CL	EAR/NO'			•		
	ASE PROBE Ii-0 MS-11			UNIT µm	_	MΓ 10	С
DJ UST (COAT)) ONLY? ?)		(/	//N)			
·E	NTER/YES'	AR/NO'					
		AR/NO			•		
CALIBRATION (((/ HORT CALIBR))		5/'9	96			
(?)						
TULL CALIBRAT	TION? ?)		Y/1)		
	'ENTER/YES	1					

CH COAT. BASE PROBE MASK I. UNIT CT MT C 60 10 2 Au-0 Ni-0 MS-11 1.6D TI μm MEASURE ON THIS CAHNNEL? Y/N
(?) (/) (/)

'ENTER/YES' Lot No.

'CLEAR/NO'

IV. BTC-55 가 가 1. RAM RAM TROUBLE (가 PLEASE MAKE CONTACT WITH MAKER! 가 2. ROM ROM TROUBLE (가 .) PLEASE MAKE CONTACT WITH MAKER! 가 3. VOLTAGE TROUBLE (PLEASE MAKE CONTACT WITH MAKER! 가 4. 가 PROBE TROUBLE (PLEASE MAKE CONTACT WITH MAKER! 가 가? 1. connector가 가? 2. 가 가

V.

1.

Aluminium	Al	13	Mercury	Hg	80
Antimony	Sb	51	Molybde num	Mo	42
Arsenic	As	33	Nickel	Ni	28
Barium	Ba	56	Niobium	Nb	41
Be ryllium	Be	4	Nitrogen	N	7
Bis muth	Bi	83	Osmium	Os	76
Boron	В	5	Oxygen	О	8
Bromine	Br	35	Palladium	Pb	46
Cadmium	Cd	48	Phosphorus	P	15
Caesium	Cs	55	Platinum	Pt	78
Cakium	Ca	20	Postassium	K	19
Carbon	С	6	Rhodium	Rh	45
Chlorine	Cl	17	Selenium	Se	34
Chromium	Cr	24	Silicone	Si	14
Cobalt	Co	27	Silver	Ag	47
Copper	Cu	29	Sodium	Na	11
Florine	F	9	Strontium	Sr	38
Ballium	Ba	56	Sufur	S	16
Ge rma nium	Ge	32	Tantalum	Ta	73
Gold	Au	79	Te llurium	Те	52
Hydrogen	G	1	Thallium	Tl	81
Indium	In	49	Tin	Sn	50
Iodine	I	53	Titaninum	Ti	22
Iridium	Ir	77	Tungste	W	74
Iron L	Fe	26	Uranium	U	92
Lead	Pb	82	Vanadium	V	23
Lithium	Li	3	Yttrium	Y	39
Magnesium	Mg	12	Zinc	Zn	30
Maganese	Mn	25	Zirconium	Zr	40
•	-		•	-	

2.

(C^*) 7 promethium

/	(µm)		
Au / Cu Au / Br Au / Ni	0.01 - 1.1 0.02 - 2 2 - 8 3 - 11 5 - 28	C* Pm Ti Ra Ti	
Au / Ag	0.01 - 1.5 0.02 - 2 2 - 8	C* Pm Ti	
Au / Fe Au / Co Au / Inval	0.01 - 1.1 0.02 - 1.8 1.5 - 8 3 - 11 5 - 28	C* Pm Ti Ra Sr	
Ag / Cu Ag / Ni	0.02 - 1.8 0.02 - 3 3 - 15 5 - 28	C* Pm Ti Ra	
Ag / Fe · Au / Co Au / Inval	0.02 - 3 3 - 15 5 - 28	Pm Ti Ra	
Rh/Ni · Rh/Cu	0.01 - 1.4 0.02 - 2.8 2.2 - 25	C* Pm Ti	
Au / Rh	0.02 -2 0.05 - 4.5	C* Pm	
Sn- Ni Alloy / Cu	5 - 30	Ti	(Sn:Ni = 65:35)
Cr / Cu	0.1 - 12 10 - 35	Pm Ti	
Painting / Plastic	0.1 - 15(25) 0.1 - 25(50)	C* Pm	

/	(µm)		
Solder / Cu	0.02 - 2 3 - 22 5 - 36	Pm Ti Ra	(Sn:Pb = 60:40)
Solder alloy ratio	90% - 30% (Tin) 10% - 70%	Pm	
Cd / Fe · Cd / Cu	0.05 - 4 3 - 18	Pm Ti	
Sn/Fe	0.02 - 2.6 0.05 - 3.5 3 - 22	C* Pm Ti	
Sn / Cu	0.02 - 5 0.05 - 3.5 3 - 22	C* Pm Ti	
Cu / Epoxy rasin / Phenol rasin Ni / Epoxy rasin / Phenol rasin	002 - 5 5 - 20 8 - 35 25 - 120	Pm Ti Ra Sr	
Cu / Al	0.02 - 5 5 - 20 8 - 30 25 - 100	Pm Ti Ra Sr	
Photoresist / Ni / Cu	0.1 - 15(25) 0.1 - 25(50)	C* Pm	
Zn / Fe	5 - 40	Ti	
Rh / Al	0.1 - 10	Pm	
Cu / Epoxy	12 - 70	Sr	
Teflon / Monel metal	0.1 - 20	Pm	

3. 가

	Cd	Cr	Ni	Cu	Au	Fe	Pb	Pd	Pt	Rh	Aa	Ta	Sn	Zn		
Al	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
Be	0	0			0	0	0	0	0	0	0	0	0		\circ	
Brass	0	0			0		0	0	0	0	0	0	0		\circ	
Ni	0	0			0	\bigcirc	0	0	0	0	0	0	0		\circ	
Bronze	0	0		0	0	\bigcirc	0	0	0	0	0	0	0		0	
Cu	0	0			0	\bigcirc	0	0	0	0	0	0	0		\circ	
Iron	0	0	\bigcirc	\bigcirc	0	0	0	0	0	0	0	0	0	0	0	
Invar	0	0		\bigcirc	0		0	0	0	0	0	0	0	\bigcirc	0	
Kovar	0	0		\bigcirc	0		0	0	0	0	0	0	0		\circ	
Pb	0	0	0	0		0	0	0	0	0	0	0	0	0	0	
Mg	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
Ag		0	0	0	0	0	0		0			0		0	0	
Steel	0	\bigcirc		\bigcirc	0		0	0	0	0	0	0	0	0	0	
Sn		0	0	0	0	0	0	0	0	0		0		0	0	
Ti	0	\bigcirc	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Zn	0	0	\bigcirc		0	0	0	0	0	0	0	0	0		0	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0		

○ : 가 ♡ : 가 : 가

BETA-RAY THICKNESS TESTER BTC-55



1 : 1997 1 10

2 : 1998 6 2

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ELEC FINE Instruments



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