

WORLDWIDE

USEFUL COULOMETRIC THICKNESS TESTER



MODEL **CT-2**



ELEC FINE INSTRUMENTS CO., LTD.

The coulometric principle Thickness Tester meets the requirements of ISO (International Standard), ASTM (American Standard), MIL, DIN and JIS (Japanese Industrial Standard)

Operate by Direct Dialog System

1:Zn 4:Ni 7:Au 10:Co 13:BRS 16:BCr
2:Sn 5:Cr 8:Cd 11:Pb 14:SPb 17:PMA
3:Cu 6:Ag 9:Fe 12:In 15:NiP 18:SZn
SET THE PLATING Cr /Ni /Cu /

4 layers of coatings can be set.

1 : A + 1% '94 10 13 4 : D + 9% '94 10 13
2 : B - 2% '94 10 13 5 : WT
3 : C + 1% '94 10 13
SET GASKET OR WT MODE

Indicate the calibration % and date, after the gasket type.

Flourescent X-ray Coating Thickness Tester

The flourescent X-ray coating thickness tester employs a non-destructive system making it difficult to verify measured values. By checking the accuracy of obtained measurement value through the use of a Coulometric coating thickness tester, more reliable data can be obtained.

The flourscent X-ray coating thickness tester requires a special thickness standard that confirms to each material being measured. When it is difficult to obtain an accurate value using existing thickness standard, accurate data can be obtained using the suitable thickness standard made with a Coulometric coating thickness tester.

It is difficult to obtain accurate measurement values with the flourscent X-ray coating thickness tester when the instrument is used to measure multilayer plating comprising elements with similar atomic numbers, plating with rough surfaces, and plates that are somewhat uneven in terms of their alloy ratio, because such plates feature greater deviations in measurement values than normal plating. If an accurate Coulometric coating thickness tester is used together to ensure measurement stability the reliability of measured data will improve, thus increasing your clients' trust in your company.

Applications

1. Accurately measures the coating thickness of a range of plates (including multilayer, alloy, etc.)
2. Measures the coating thickness of not only flat plates but also round, angular rods (fine wires) and other irregular forms.
3. Measures a broad range of coating thicknesses, from $0.01\mu\text{m}$ ~ $300\mu\text{m}$.
4. Extremely accurately measures multilayer plating with at least three layers. It is difficult to obtain accurate data for this kind of plating using other methods.
5. Statistically processes the measurement data and provides joint control with the host computer.
6. Making thickness standards for non-destructive coating thickness testers.
7. Checks the accuracy of measurements value obtained by non-destructive coating thickness testers.

EVOLVED COULOMETRIC COATING THICKNESS TESTER

Compact Size with Excellent Function



Special Features

1. Using a built-in microcomputer, the measurement device, which includes a logic function, makes calculations and stores data.
2. All measurement operations are conducted in dialog form. Operation is simple because procedures are displayed based on present measurement conditions.
3. Up to 64 different measurement conditions can be stored in memory, so it is not necessary to set measurement conditions for each measurement. Up to 9999 pieces of measurement data can be stored for each measurement condition.
4. Four layers can be set, and each layer can be statistically processed. Measurement conditions, mean values, maximum values, minimum values, limits, and histograms are calculated, prepared and printed out, making report preparation easy.
5. The computer makes difficult selections automatically, such as choosing electrolytic solutions, sensitivities, and agitating levels for each coating.
6. Calculation and set-up of calibrated values for the thickness standard performed automatically, enabling easy operation.
7. Measurement data can be transmitted through the

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WITH ACCURATE COATING THICKNESS TESTER”**



communication circuits, enabling joint control of data with the host computer.

- 8. Dissolution speeds are finely classified, enabling quick measurement.
- 9. The device can separately measure the diffusion (alloy) layer of the tin (alloy) plating on copper

(alloy).

- 10. The surface activation function enables easy surface processing.
- 11. Our unique Measuring Table (patented) employs an arm spring method to enable easy operation.

PRINT OUT AS UNDER:

These printed items are useful in many ways; preparing an operation report (including daily report), measurement data control, etc.

Print Index & Measurement Data

CH: 2 LOT:56E231 BSE:Fe
 PLT: 16IRNGE:UNT:SN5 :STIR: P %:PB%:
 Cr IR-51 IA:0.1 um 15 : : : :
 Ni IR-54 IA:1.0 um 12 : 8 : : :
 Cu IR-44 IA:0.4 um 13 : 8 : : :

GASKET:A DIAMT:3.40mm CAL + .8%

CAL.DT:'95VY 2MM14DT

STD. :Ni /Fe R-54 12.50 um

MODE.....n-1

GRAND..... 20 SUB..... 10

UP LIMIT*.48000 um LOW LIMIT*.42000 um

UP LIMIT*3.2000 um LOW LIMIT*2.8000 um

UP LIMIT*2.5500 um LOW LIMIT*2.4500 um

PARTS .BUMPER CO.NAME...ABC

DATE.....'95VY 2MM14DT->'95VY 2MM14DT

SAMPUL NBR. 10

PLT-> Cr / Ni / Cu

UNIT-> um / um / um

1 .4500 3.000 + 2.440

2 + .4900 + 3.300 2.460

3 .4300 3.100 2.500

Data process & Histogram

CH.NO. 8

PLT:NI

NBR OF LOW LIMIT OUR..... 0

NBR OF UP LIMIT OUR..... 0

PASS DATA..... 30

TOTAL VALUE..... 89.1599 um

MAX.VALUE.....3.200 um

MIN.VALUE.....2.780 um

AVERAGE.....2.972 um

STD.DEVIATION......0980

CH.NO. 8

[um] PLT NI

2.799: [REDACTED] 1

2.837: [REDACTED] 2

2.875: [REDACTED] 3

2.914: [REDACTED] 4

2.952: [REDACTED] 5

2.990: [REDACTED] 6

3.028: [REDACTED] 3

3.066: [REDACTED] 3

3.105: [REDACTED] 2

3.143: [REDACTED] 0

3.181: [REDACTED] 1

SPECIFICATIONS

Measurement Range : 0.006 ~ 300 μ m
 Maximum Resolution : 0.001 μ m
 Accuracy (Main Unit) : \pm 1%
 Dissolution Speed : 250, 125, 50, 25, 12, 5, 2.5, 1.25 nm/Sec.
 Measurement Unit : μ m, nm, mil, MI
 Measurement Area : 1.7, 2.4, 3.4 mm ϕ
 Main : AC100V \pm 10%, 50/60Hz, 20W (OPTION: AC115V, 230V)
 Size : 300(W), 250(D), 150(H) mm
 Weight : 3Kg

COAT/BASE COMBINATIONS AND TEST SOLUTION APPLICATION

BASE	COAT																	
	Zn	Sn	Cu	Ni	Cr	Ag	Au	Cd	Fe	Co	Pb	In	BRS	SPb	NiP	BCr	PMA	SZn
Fe	46	47	44	54	51	44		45		54	55	59	44	44	57	51	54	47
Sn	46					48					55							
Cu	46	47		54	47	48	56	45	51	54	55	59		* 2		47	54	47
Ni	46	47	44	82	51	48G	56	45			55	59	44	44		51		47
Zn			52		58											58		
Ag	46		44				56				55	59						
Al	46	51	44	54	51	44		45	54	54	55		44	44	57	51		
Cd	46	47	44		47											47		
INS	46	47	44	54	51	44	56	45	54	54	55	59	44	44	57	51	54	47
Co	46	47	44		47	44	56				55	59	44	44		47		
Pb			52		47											47		
W	46	47	44	54		44		45		54	55	59	44	44	57			
BRS	46	47	52	54	47	48	56	45	54	54	55	59		* 2		47	54	47
U			44	54		44				54			44		57			
NiP	46	47	44			48G	56				55	59	44	44				
Mo	46	47	44	54		44				54	55	59	44	44	57			
PMA	46	47	44	54	51	44				54	55	59	44	44	57	51		47
SLS	46	47	44	54	51	44				54	55	59	44	44	57	51		
NS	46	47			47	48G	56					59	44	44		47		47
INC	46	47		54	51	48G	56				55	59	44	44		51		47
KOV	46	47	44	53		44				53	55	59	44	44	57			47
AIB	46	51	44	54		44				54	55		44		57			
BCu	46	47	52	54		48	56			54	55	59		* 2				
FeA	46	47	44	54		44				54	55	59	44	44	57			

* 1: Above numbers in frames are the kind of test solution.

* 2: Depend on alloy %, change the solution.

Pb (%)	0~30	30~50	50~90	90~100
SOLUTION	50, 49	44, 49	50, 49	55, 49

- BRS : Brass NS : Nickel Silver FeA : Ferrous Alloy
 NiP : Electroless Nickel INC : Inconel SPb : Solder
 PMA : Permalloy KOV : Kovar BCr : Black Chromium
 SLS : Stainless Steel AIB : Alumi Bronze SZn : Tin, Zinc Alloy
 INS : Insulator BCu : Beryllium Copper

Thickness Standards

Coat / Base	Thickness
Chromium / Brass	5~7μm
Chromium / Copper	5~7μm
Chromium / Steel	3~6μm
Chromium / Nickel	0.3~0.5μm
Cadmium / Steel	10~14μm
Cadmium / Brass	10~14μm
Cadmium / Copper	10~14μm
Copper / Steel	10~14μm
Copper / Zinc	5~7μm
Nickel / Steel	10~14μm
Nickel / Brass	10~14μm
Nickel / Copper	10~14μm
Silver / Steel	10~14μm
Silver / Brass	10~14μm
Silver / Copper	10~14μm
Tin / Steel	10~14μm
Tin / Copper	10~14μm
Tin / Brass	10~14μm
Tin / Steel	0.7~1μm
Zinc / Steel	10~14μm
Zinc / Brass	10~14μm
Zinc / Copper	10~14μm
Gold / Nickel	0.5~0.7μm
Gold / Brass	0.5~0.7μm
Gold / Copper	0.5~0.7μm

In addition to the above listed, other special standards will be prepared in accordance with specific request.

代理店(Distributed by)

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