

μP301 PELT®

Multi-Layer Ultrasonic Thickness Gauge



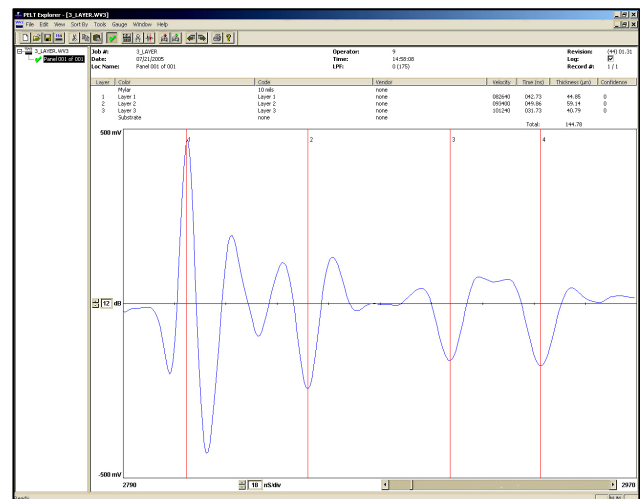
FEATURES

- Measures coatings on composites, metal, wood and rubber.
- Instantly measures up to 3 layers simultaneously. Reports individual thickness and total thickness.
- Direct, non-destructive measurements eliminate the need for destructive analysis or specially prepared test samples.
- Measures most coating types from composite metals to waterborne paints.
- Portable operation of up to 8 hours with a removable and rechargeable battery.

μP301 PELT

The μP301 model PELT gauge is a high resolution, ultrasonic coating thickness measurement system. This handheld gauge uses state-of-the-art technology and is capable of picosecond resolution. The result is unparalleled precision and accuracy.

This advanced technology can be used to effectively monitor coating uniformity and for verification that applied coatings are within specification. Since measurements are quick and easy, more locations per part can be measured and the number of parts tested can be increased. An increase in the part-to-production ratio can result in dramatic improvements in process control.



PELT Explorer host PC software (included)

PELT Explorer software is a Windows® based host PC program that provides a powerful and easy to use interface to the μP301. Calibration information and measurement data can easily be transferred to and from the gauge.

PELT

The leader in multi-layer coating thickness gauges

Measurement Specifications

Measurement Method

Contact ultrasonic in accordance with ASTM standard E797-95

Couplant

Application dependent, usually water

Max. Layers

Three (3)

Calibrated Accuracy

± 1.3 microns (+/- 0.05 mils) or $\pm 2\%$ of the coating thickness, whichever is greater.

Resolution *

1 micron (0.001 mm, 0.04 mils)

Minimum Thickness *

Mid coatings: 10 microns (0.010 mm, 0.4 mils)
Single coatings: 15 microns (0.015 mm, 0.6 mils)
Top coatings: 25 microns (0.025 mm, 1.0 mils)

Maximum Thickness **

Standard probe: 1.1mm (.044 in.)
Optional probe: 6.36mm (.250 in.)

Measurement Units

Metric / English selectable

Gage Repeatability and Reproducibility (% R & R)

< 10% for solvent and waterborne coatings

Supported transducers

Contact or Delay Line – 5 MHz and higher

Minimum radius of curvature for gauging surface

Convex surface radius = 6x probe diameter
Concave surface radius = 18x probe diameter

Using standard probe:

Convex surface: > 2.0" (50.8 mm) radius
Concave surface: > 6.0" (152.4 mm) radius



Imaginant Inc.
3800 Monroe Ave., Pittsford, NY 14534 USA
Tel. +1 585 264-0480 Fax +1 585 264-9642
www.imaginant.com
e-mail: peltsales@imaginant.com

Device Specifications

Data Storage

Non-volatile memory storage of all data and calibration files
Storage of ~ 1000 measurements

Power

10.8V Ni-MH rechargeable battery – 2 included
8 hours on one battery, 1 hour recharge time
100-240V; 50-60Hz power supply included

Dimensions

255mm x 191mm x 45mm (10" x 7.5" x 1.8")
Weight: 1.6kg (3.5 lbs) with battery

Environmental

Operating Temp: 0°C to 50°C (32 - 104°F)
Humidity: < 85% at all times

Case

Extruded aluminum – powder coated

Acceleration / Shock

Operational after 11 mins. of 10-500Hz, 1g sinusoidal vibration
Operational after single 11-ms. shock of 30g

Software Requirements

Operating System

Microsoft® Windows XP and higher

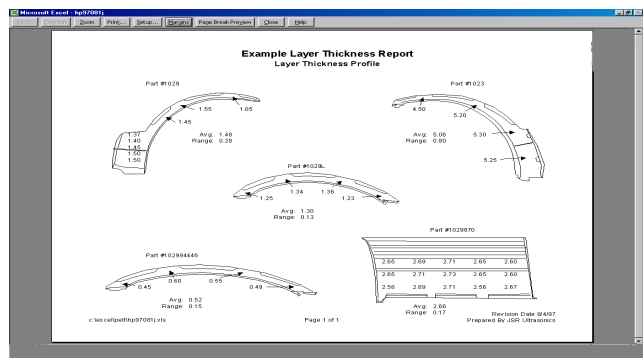
Thickness Data Reporting

Measurement Data Format

Delimited ASCII files generated by PELT Explorer software

Reporting Software

Standard: Custom job/part silhouettes or thickness vs. location chart. Depicts 1 layer per sheet. (Microsoft Excel® required)



* Minimum thickness and resolution are typical, based on: solvent, water-borne and powder paint coatings.

** Material dependent, value based on non-metallic example. Specifications are subject to change without notice.

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