

**Coating thickness
measurement**

**F 1.6P
FN 1.6P
Powder Probe**



**Measure Powder
Before Baking**

- reduce setup time
- improve quality control
- eliminate rejects
- reduce powder consumption
- increase your bottom line

this patented probe is
compatible with:

MiniTest 4100, 3100, 2100, 1100

F1.6P
FN1.6P

Powder Probe
Powder Probe

(ferrous substrate applications)
(dual, ferrous and non-ferrous substrate applications)

Probes that measure the actual thickness of powder before baking

Innovative technology for precise and reliable measurements

Application

These probes allow the thickness of powder applied at the point of application to be measured prior to the baking process.

Until now, it has not been possible to economically measure the thickness of powder without damaging the part. But now with **ElektroPhysik's** patented Powder Probe you can measure the thickness of powder applied before baking.

Since the thickness of the powder applied directly affects the cured thickness, having the ability to monitor the amount of powder applied is invaluable.

It is commonly agreed that the thickness of the powder coating after baking has a "shrinkage" affect. By controlling the direct amount of powder applied, compensating for the shrinkage factor, the desired cured film thickness will be achieved every time.

A simple and fast measurement of the powder applied prior to baking compared to the cured thickness after baking allows you to plot and determine that shrinkage factor (illustration 1b. below). With this information you can directly adjust the amount of powder required to achieve the required cured thickness every time.

This greatly reduces setup time eliminates rejects and rework all of which are cost saving measures which add up to real dollars.

Furthermore, it will allow you to reduce and control the amount of powder used. This translates into improved quality control and cost reductions which will improve your bottom line. For example if you are applying anywhere from 4 to 5 mils of powder to achieve 2.50 mils cured thickness. When you bring that down to 4.0 mils consistently, you will realize a 11% reduction in powder consumption.

Multiply that reduction factor against your annual powder costs and you'll see just how valuable this device can be to your operations bottom line.

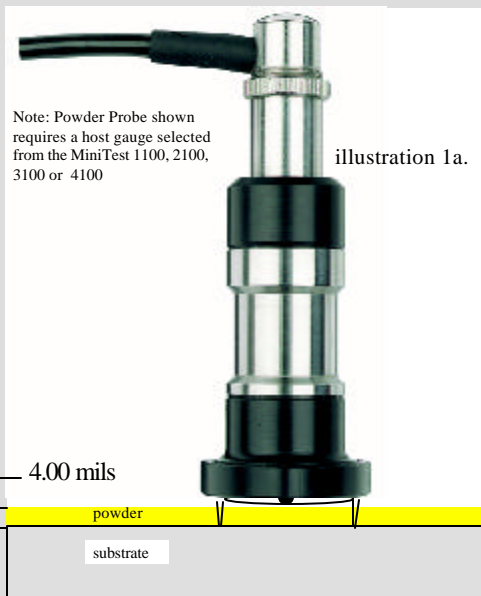
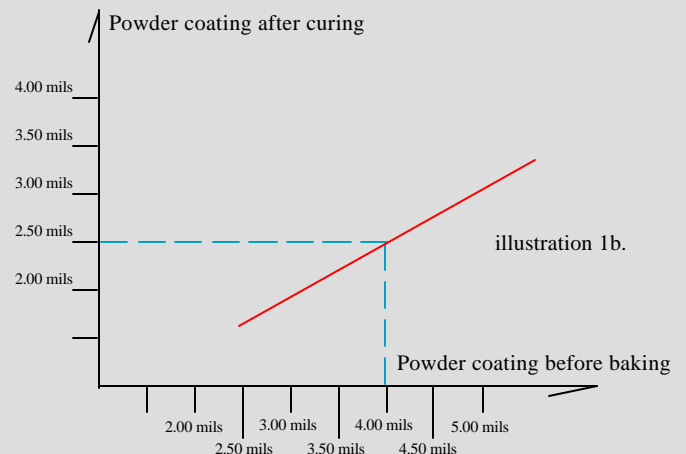


illustration 1a.

This illustration shows a 37.5% shrinkage factor

(2.5 mils cured / 4.00 mils applied powder before baking = .625 or 37.5%)
shrinkage may vary based on powder density and other factors



Description

The Powder Probe has three micro pins integrated into the probe head which penetrate the powder coating down to the substrate. (Any impression marks will virtually disappear during the curing process.)

During the measuring process, the probe is placed onto the powder and pressed down to the stop. The probe tip makes minor contact with a specially integrated precision deflection foil which is designed to displace the contact pressure at the point of contact with the powder.

The contact pressure is factory set at a constant non-over-ridable pressure setting of a approx. 0.10 N. It is at the point of contact that the thickness of the powder is captured and displayed on the MiniTest digital microprocessor coating thickness gauge.

The only maintenance between measuring cycles is to brush off an residual powder that might have transferred onto the deflection foil

Measuring Principle:	Mag. Induction	Eddy Current
Measuring Range:	0...60 mils	0...60 mils
Low Range Res.	..04 mils	.04 mils
Measuring uncertainty	± 1% +.04 mils	± 1% +.04 mils
Min. curvature	only flat surfaces	only flat surfaces
Min. area of measure	1.20" x 1.20"	1.20" x 1.20"
Min. substrate thickness	.020"	.002"

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