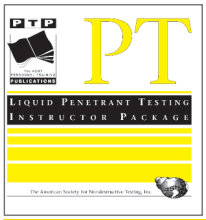

Liquid Penetrant Testing Lecture Guide

Errata – 6th Printing 10/10

The following text correction pertains to the *Liquid Penetrant Testing Lecture Guide*, which is part of the *Liquid Penetrant Testing Instructor Package*. Subsequent printings of the document will incorporate the corrections into the published text.

The attached corrected pages apply to the first through sixth printings. In order to verify the print run of your book, refer to the copyright page. Ebooks are updated as corrections are found.

Page	**Corrections**
16	Item 1. under Adequate Illumination, as follows: 1. Fluorescent rinse station requires ~~less than~~ about 100 lux (10 ftc) of ambient (white) light and ~~about~~ more than 100 µW/cm^2 of near ultraviolet radiation (UV-A).
18	Items 5. and 6. under Developer Application and Drying, as follows: 5. Form ~~D~~ E: Nonaqueous Type II (aerosol spray cans). 6. Form F: Specific application developers.

The same corrections will be applied to Version 7 (v.07) of the *Liquid Penetrant Testing Lecture Guide Level I and Level II PowerPoint® Presentations*, as follows:

Slide	**Corrections**
66	1. Fluorescent rinse station requires about 100 lux (10 ftc) of ambient (white) light and ~~less than~~ more than 100 µW/cm^2 of near ultraviolet radiation (UV-A).
80	5. Form ~~D~~ E: Nonaqueous Type II (aerosol spray cans). 6. Form F: Specific application developers.

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Application of Penetrant

Penetrant applications include the following.

1. Spraying.
2. Brushing.
3. Pouring.
4. Dipping.

Test surfaces should remain wetted the entire penetrant dwell time. Ultraviolet radiation sources may assist when using fluorescents.

Adequate Illumination

1. Fluorescent rinse station requires about 100 lux (10 ftc) of ambient (white) light and more than 100 $\mu W/cm^2$ of near ultraviolet radiation (UV-A).
2. Fluorescent evaluation station is typically 1000 $\mu W/cm^2$ of near ultraviolet radiation (UV-A) as measured at the test surface, and the ambient (white) light should not be greater than 20 lux (2 ftc).
3. Visible dye penetrant (color contrast) usually requires 1000 lux (100 ftc) at the test surface.

These levels should always be verified against the governing procedure, standard or specification.

Developer Application and Drying

The basic types of developer are as follows.

1. Form A: Dry powder (fine powder form).
2. Form B: Water soluble (liquid dip tanks).
3. Form C: Water suspendible (liquid dip tanks).
4. Form D: Nonaqueous Type I (aerosol spray cans).
5. Form E: Nonaqueous Type II (aerosol spray cans).
6. Form F: Specific application developers.

Dry Powder Developer Form A

Dry powder developers are applied to dry test object surfaces by the following methods.

1. Air suspension.
2. Electrostatic spraying (common in automated systems).
3. Test object immersion.
4. The powder is light and fluffy and clings to the test object surfaces in a fine film.
5. Dry powder is most useful on rough surfaces and automated processing using fluorescent penetrants.

Water Soluble Developer Form B

Developers consist of a powder dissolved in water and applied by the following means.

1. Dipping a test object in the solution.
2. Flowing the solution over a test object.
3. Spraying the solution onto the test object. This type of aqueous developer forms a translucent film.
4. Water soluble developer can be used for fluorescent dyes.
5. Not recommended for use with visible dye.

Slide 66:

Adequate Illumination

1. Fluorescent rinse station requires about 100 lux (10 ftc) of ambient (white) light and more than 100 μW/cm^2 of near ultraviolet radiation (UV-A).

Slide 80:


Developer Application and Drying
3. Form C: Water suspendible (liquid dip tanks).
4. Form D: Nonaqueous Type I (aerosol spray cans).
5. Form E: Nonaqueous Type II (aerosol spray cans).
6. Form F: Specific application developers.
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