



## Liquid Penetrant Testing Lecture Guide second edition

### Errata – 1st printing 04/19

The following text correction pertains to the second edition of *Liquid Penetrant Testing Lecture Guide*. Subsequent printings of the document will incorporate the corrections into the published text.

The attached corrected page applies to the first printing 04/19. In order to verify the print run of your book, refer to the copyright page. Ebooks are updated as corrections are found.

<b>Page</b>	<b>Correction</b>
41	Under Light Meters, number 2, the unit of measurement should be $\mu\text{W}/\text{cm}^2$ .

### **Subdued White Light Inspection**

1. Improved penetrant materials have made it possible to test in less than total darkness.
2. Medium to large indications can be detected under fairly high ambient (white) light.
3. Fluorescent testing is possible outdoors.
4. Ambient (white) light requirements must be met using black cloth or other shielding.

### **Light Meters**

1. White light sensors measure in footcandles or lux.
2. Ultraviolet radiation sensors measure in microwatts per centimeter squared ( $\mu\text{W}/\text{cm}^2$ ).

### **Materials For Liquid Penetrant Testing**

Materials used in liquid penetrant testing include:

- penetrants
- emulsifiers
- removers
- cleaners
- developers

### **Precleaning and Post-cleaning Materials**

1. Materials must be compatible with the penetrant.
2. Manufacturers will recommend an approved cleaner for their products.

### **Water-washable Penetrants**

1. Highly penetrating, oily liquids containing a built in emulsifying agent that renders the oily media washable with water.
2. The simplest to use are visible penetrants or color contrast penetrants, because no fluorescent lighting is required.
3. Greater visibility is obtained if fluorescent penetrants are used and viewed under ultraviolet radiation.

### **Postemulsifiable Penetrants**

1. Postemulsifiable penetrants are available as either visible or fluorescent penetrants.
2. These penetrants have the advantage of eliminating some of the danger of over rinsing.