BOOK REVIEW

Nondestructive Testing (Metallurgy and Materials Science)

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REFERENCE: Halmshaw, R., *Nondestructive Testing (Metallurgy and Materials Science)*, Edward Arnold, London, 1987.

Nondestructive testing (NDT) has become one of the multidisciplinary fields in increasing demand in all industrial environments. *Nondestructive Testing* covers the conventional and special techniques that have been developed through the years. The book includes visual, radiological, ultrasonic, magnetic, electrical, and penetrant, as well as special methods, in that sequence. While the author's descriptions are brief, they are sufficiently detailed to provide pertinent facts concerning the governing physical properties being measured. Also included is a section on acceptance standards, explaining the ways in which NDT is useful. This section details the necessity, in every instance, for an expert to make the ultimate decision as to the acceptance or rejection of specific criteria. Also, a wide variety of setups and techniques is briefly outlined along with pertinent standards from around the world.

Owing to the fact that the book is intended for use by engineers at the graduate and undergraduate levels, it is my suggestion that, for the second edition, more examples of practical problems be included as well as "problems to solve" sections.

The book is well written for use by NDT specialists such as designers and production and quality control personnel. However, it is the writer's opinion that errors, some of which are as basic as incorrect units on Lamb wave phase velocity plots and the equation shown below, present a problem:

$$f = c\lambda \text{ (Incorrect)} \qquad f = \frac{c}{\lambda} \text{ (Correct)}$$

where f = frequency (Hz), c = wave velocity (m/s), and λ = wavelength (m).

Overall, the book is an excellent reference for use in updating the NDT library; however, this first edition should include a list of errata.