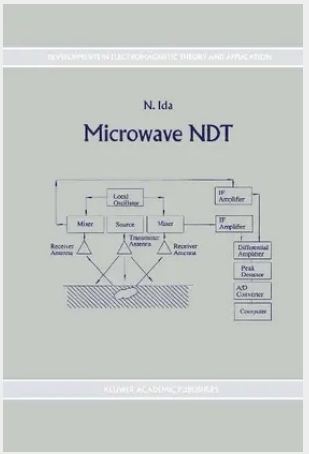
Ida

Microwave NDT

Microwave testing has been paid only scant attention in the literature as a method for nondestructive testing of materials, yet it offers some attractive features, especially for the testing of composite and other non-metallic materials.
Microwave techniques have been used in a large number of applications that can be classified as nondestructive testing applications, ranging from large scale remote sensing to detection of tumors in the body.
This volume describes a unified approach to microwave nondestructive testing by presenting the three essential components of testing: theory, practice, and modelling. While recognizing that each of these subjects is wide enough to justify a volume of its own, the presentation of the three topics together shows that these are interrelated and should be practiced together. While few will argue against a good theoretical background, modelling and simulation of the testing environment is seldom part of the NDT training in any method, but particularly so in microwave testing.
The text is devided in four parts. The first part presents the field theory background necessary for understanding the microwave domain. The second part treats microwave measurements as well as devices and sources and the third part discusses practical tests applicable to a variety of materials and geometries. The fourth part discusses modelling of microwave testing. Each chapter contains a bibliography intended to expand on the material given and, in particular, to point to subjects which could not be covered either as not appropriate or for lack of space.
For engineers, applied physicsts, material scientists.

Microwave testing has been paid only scant attention in the literature as a method for nondestructive testing of materials, yet it offers some attractive features, especially for the testing of composite and other non-metallic materials. Microwave techniques have been used in a large number of applications that can be classified as nondestructive testing applications, ranging from large scale remote sensing to detection of tumors in the body. This volume describes a unified approach to microwave nondestructive testing by presenting the three essential components of testing: theory, practice, and modelling. While recognizing that each of these subjects is wide enough to justify a volume of its own, the presentation of the three topics together shows that these are interrelated and should be practiced together. While few will argue against a good theoretical background, modelling and simulation of the testing environment is seldom part of the NDT training in any method, but particularly so in microwave testing. The text is devided in four parts. The first part presents the field theory background necessary for understanding the microwave domain. The second part treats microwave measurements as well as devices and sources and the third part discusses practical tests applicable to a variety of materials and geometries. The fourth part discusses modelling of microwave testing. Each chapter contains a bibliography intended to expand on the material given and, in particular, to point to subjects which could not be covered either as not appropriate or for lack of space. For engineers, applied physicsts, material scientists.



213,99 €
199,99 € (zzgl. MwSt.)

Lieferfrist: bis zu 10 Tage

Artikelnummer: 9780792320074
Medium: Buch
ISBN: 978-0-7923-2007-4
Verlag: Springer
Erscheinungstermin: 30.11.1992
Sprache(n): Englisch
Auflage: 1992
Serie: Developments in Electromagnetic Theory and Applications
Produktform: Gebunden
Gewicht: 1690 g
Seiten: 395
Format (B x H): 160 x 241 mm