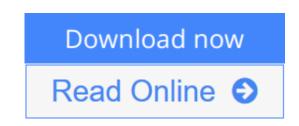


Automatic Ultrasonic Time-Of-Flight Diffraction Interpretation: Fundamentals and Applications

By Osama F. Zahran



Automatic Ultrasonic Time-Of-Flight Diffraction Interpretation: Fundamentals and Applications By Osama F. Zahran

Time-Of-Flight Diffraction (TOFD) is a new ultrasonic technique that gained popularity in ultrasonic NDT community as a precise sizing tool because of its ability to provide very accurate amplitude-independent positioning and sizing with a high probability of detection for a large variety of defects, with a relatively low false alarm rate and lower cost. This book addresses the problems associated with TOFD inspection, automatic data processing and interpretation of TOFD data as a comprehensive automatic interpretation aid for the detection, positioning, sizing and characterisation of defects in TOFD data and several innovative signal and image processing have been proposed and implemented to great success. Image processing, pattern recognition and artificial neural networks are combined to provide a near real-time pre-assessment of a given scan by applying the procedures and criteria recommended by the adopted standards and codes for detection, sizing, positioning and classification. In this book, TOFD is used for the inspection of welds in steel structures. Furthermore, the proposed inspection procedures for railway track is presented.

<u>Download</u> Automatic Ultrasonic Time-Of-Flight Diffraction In ...pdf

<u>Read Online Automatic Ultrasonic Time-Of-Flight Diffraction ...pdf</u>

Automatic Ultrasonic Time-Of-Flight Diffraction Interpretation: Fundamentals and Applications

By Osama F. Zahran

Automatic Ultrasonic Time-Of-Flight Diffraction Interpretation: Fundamentals and Applications By Osama F. Zahran

Time-Of-Flight Diffraction (TOFD) is a new ultrasonic technique that gained popularity in ultrasonic NDT community as a precise sizing tool because of its ability to provide very accurate amplitude-independent positioning and sizing with a high probability of detection for a large variety of defects, with a relatively low false alarm rate and lower cost. This book addresses the problems associated with TOFD inspection, automatic data processing and interpretation of TOFD data as a comprehensive automatic interpretation aid for the detection, positioning, sizing and characterisation of defects in TOFD data and several innovative signal and image processing have been proposed and implemented to great success. Image processing, pattern recognition and artificial neural networks are combined to provide a near real-time pre-assessment of a given scan by applying the procedures and criteria recommended by the adopted standards and codes for detection, sizing, positioning and classification. In this book, TOFD is used for the inspection of welds in steel structures. Furthermore, the proposed inspection procedures for railway track is presented.

Automatic Ultrasonic Time-Of-Flight Diffraction Interpretation: Fundamentals and Applications By Osama F. Zahran Bibliography

- Sales Rank: #4824251 in Books
- Published on: 2010-12-02
- Released on: 2010-12-02
- Original language: English
- Number of items: 1
- Dimensions: 8.66" h x .55" w x 5.91" l, .80 pounds
- Binding: Paperback
- 244 pages

<u>Download</u> Automatic Ultrasonic Time-Of-Flight Diffraction In ...pdf

<u>Read Online Automatic Ultrasonic Time-Of-Flight Diffraction ...pdf</u>

Editorial Review

About the Author

B.Sc, M.Sc, Ph.D (Liverpool, UK) in Non-Destructive Testing (NDT) Signal & Image Processing. Held an international post- experience certificate in ultrasonic NDT & member of British Institute of NDT since 2003. Current research involves development of signal & image processing techniques, pattern recognition & artificial intelligence.

Users Review

From reader reviews:

Heidi Fritz:

Often the book Automatic Ultrasonic Time-Of-Flight Diffraction Interpretation: Fundamentals and Applications has a lot of information on it. So when you make sure to read this book you can get a lot of benefit. The book was written by the very famous author. Mcdougal makes some research before write this book. This particular book very easy to read you will get the point easily after scanning this book.

Cindy Gross:

Do you have something that you want such as book? The guide lovers usually prefer to opt for book like comic, quick story and the biggest the first is novel. Now, why not trying Automatic Ultrasonic Time-Of-Flight Diffraction Interpretation: Fundamentals and Applications that give your enjoyment preference will be satisfied by means of reading this book. Reading routine all over the world can be said as the means for people to know world considerably better then how they react toward the world. It can't be mentioned constantly that reading addiction only for the geeky man or woman but for all of you who wants to be success person. So , for all of you who want to start studying as your good habit, you can pick Automatic Ultrasonic Time-Of-Flight Diffraction Interpretation: Fundamentals and Applications become your own starter.

Hope Giles:

In this particular era which is the greater man or woman or who has ability in doing something more are more valuable than other. Do you want to become among it? It is just simple way to have that. What you should do is just spending your time little but quite enough to get a look at some books. One of several books in the top record in your reading list will be Automatic Ultrasonic Time-Of-Flight Diffraction Interpretation: Fundamentals and Applications. This book that is certainly qualified as The Hungry Inclines can get you closer in becoming precious person. By looking upward and review this book you can get many advantages.

Jimmie Houck:

What is your hobby? Have you heard in which question when you got learners? We believe that that issue was given by teacher on their students. Many kinds of hobby, All people has different hobby. And also you know that little person just like reading or as examining become their hobby. You should know that reading is very important and book as to be the matter. Book is important thing to provide you knowledge, except your own teacher or lecturer. You discover good news or update regarding something by book. Many kinds of books that can you decide to try be your object. One of them is this Automatic Ultrasonic Time-Of-Flight Diffraction Interpretation: Fundamentals and Applications.

Download and Read Online Automatic Ultrasonic Time-Of-Flight Diffraction Interpretation: Fundamentals and Applications By Osama F. Zahran #KAIPZJVLH9D

Read Automatic Ultrasonic Time-Of-Flight Diffraction Interpretation: Fundamentals and Applications By Osama F. Zahran for online ebook

Automatic Ultrasonic Time-Of-Flight Diffraction Interpretation: Fundamentals and Applications By Osama F. Zahran Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Automatic Ultrasonic Time-Of-Flight Diffraction Interpretation: Fundamentals and Applications By Osama F. Zahran books to read online.

Online Automatic Ultrasonic Time-Of-Flight Diffraction Interpretation: Fundamentals and Applications By Osama F. Zahran ebook PDF download

Automatic Ultrasonic Time-Of-Flight Diffraction Interpretation: Fundamentals and Applications By Osama F. Zahran Doc

Automatic Ultrasonic Time-Of-Flight Diffraction Interpretation: Fundamentals and Applications By Osama F. Zahran Mobipocket

Automatic Ultrasonic Time-Of-Flight Diffraction Interpretation: Fundamentals and Applications By Osama F. Zahran EPub

KAIPZJVLH9D: Automatic Ultrasonic Time-Of-Flight Diffraction Interpretation: Fundamentals and Applications By Osama F. Zahran