Record Nr. UNINA9910788258003321 Autore **Ensminger Dale** Titolo Ultrasonics: fundamentals, technologies, and applications // Dale Ensminger and Leonard J. Bond Boca Raton, Fla.:,: CRC Press,, 2012 Pubbl/distr/stampa 0-429-11948-8 **ISBN** 1-283-25723-8 9786613257239 1-4200-2027-7 Edizione [3rd ed.] Descrizione fisica 1 online resource (732 p.) Collana Mechanical engineering Classificazione SCI040000MAT003000TEC009000 BondLeonard J Altri autori (Persone) Disciplina 620.2/8 Soggetti Ultrasonic waves - Industrial applications Ultrasonics Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references and indexes. Nota di contenuto Front Cover; Contents; Preface to the Third Edition; Preface to the Second Edition: Preface to the First Edition: Acknowledgments: Chapter 1: Ultrasonics: A Broad Field; Chapter 2: Elastic Wave Propagation and Associated Phenomena; Chapter 3: Fundamental Equations Employed in Ultrasonic Design and Applications: Chapter 4: Design of Ultrasonic Horns for High Power Applications; Chapter 5: Basic Design of Ultrasonic Transducers; Chapter 6: Determining Properties of Materials; Chapter 7: Nondestructive Testing: Basic Methods and General Considerations Chapter 8: Use of Ultrasonics in the Nondestructive Testing and Evaluation of MetalsChapter 9: Use of Ultrasonics in the Inspection and Characterization of Nonmetals; Chapter 10: Imaging, Process Control, and Miscellaneous Low-Intensity Applications; Chapter 11: Applications of High-Intensity Ultrasonics: Basic Mechanisms and Effects; Chapter 12: Applications of High-Intensity Ultrasonics Based on Mechanical Effects; Chapter 13: Applications of Ultrasonics Based on Chemical

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Sommario/riassunto

"There have been significant advances in the science, the technology employed in commercial systems, and in both the scope and the range of applications of ultrasound since the second edition of this book was published in January 1988. The present edition includes discussion of many of these advances and improvements; additional figures and numerous new references are provided. In 1988 it became a requirement to write technical papers using SI (Standard International) units rather than British units. The parameters reported are now completely described by SI units: Meters now replace feet. Velocity is now in kilometers/sec. Frequency is in Hertz rather than cycles per second and so on. These up-dates and new material, combined with the core content developed for the 2nd edition make it, in effect, a new book"--