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Sommario/riassunto

Nondestructive testing of solid material using ultrasonic waves, for defects such as cavities, nonbonding, and strength variations, is treated in this book from the physical fundamentals of ultrasonics and materials up to the most sophisticated methods. The book is written at a level which should make it accessible to readers with some knowledge of technical mathematics. Physical laws are explained in elementary terms, and more sophisticated treatments are also indicated. After the fundamentals, instrumentation and its application is extensively reported. Tricks and observations from thirty years of experience in the field are included. The third part of the book presents test problems related to special materials or ranges of modern heavy industry, including recent applications such as those in nuclear power plants. This fourth edition features improved presentation of certain fundamental physical facts, updated reports on electronic instrumentation, and new applications in the nuclear and space industries.
