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NONDESTRUCTIVE EVALUATION

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INTRODUCTION

Ultrasound is widely used in health care for noninvasive diagnostics and in industry for nondestructive testing. In the human body, it generates visual images from inside the test medium: the fetus, malignant tissue, stones, etc. In industrial applications, besides defect detection, ultrasound is also useful for determining significant material characteristics such as density, thickness, mechanical properties, and level sensing. Knowledge of ultrasonically analyzed information is important for human health as well as for cost-effective production of quality industrial materials.

Ultrasound operates on the same principle as other characterization methods also based on wave-material interactive phenomena, such as optical, X ray, infrared,