ARL:UT in Acoustics Today

The following excerpt is from "Review of Air-Coupled Transduction for Nondestructive Testing and Evaluation," co-authored by Michael Haberman (ARL:UT Advanced Technology Laboratory), that appeared in the ASA's magazine Acoustics Today.

INTRODUCTION

Nondestructive testing (NDT) of structures and mechanical parts is increasingly receiving attention as the need to monitor the health of aging infrastructure and quality controls on the manufacturing of mechanical parts is becoming more apparent. NDT is defined as using various tools, whether they be acoustic, electromagnetic, or thermally based, to inspect the structural integrity of these objects without damaging the object as result of testing it. In the case of acoustic NDT techniques, a source transducer emits sounds/vibrational waves into the structure under test, and various techniques are then used to detect signatures of damage (such as micro or macro cracking, etc.). The future of nondestructive testing lies in the ability to efficiently generate waves in structures without contact.

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