



## Characterization of destructive and non – destructive properties of plasticized epoxy resins and PMMA

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### Abstract

The intention of this work is mainly to verify the possibility of Non – Destructive Testing (NDT) method of ultrasonics to study problems of mechanics, such as determination of the moduli and the failure of a material due to discontinuities, (defects, inherent inclusions and porosity), where stress concentration exists.

Ultrasounds are mechanical elastic waves of very high frequency which can be used for the material testing.

By the use of ultrasounds the defects and discontinuities as well as the damage and moduli can be estimated. Here, we shall focus our investigation on plasticized epoxy resins and PMMA and apply this method in order to determine their mechanical properties. The results were correlated with those derived from destructive tests.