

Abstract Details

Title: Crack Development and Its Dynamic Nature of Propagation through Structures: A Study on the Effect of Damped Oscillations of Elastic Plastic Shallow Shell

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Abstract: A simple but efficient method for the analysis of vibrations of elastic plastic shallow shells with damping due to crack generation and its propagation during vibrations is presented. The method is based on the concept of iso-deflection contour lines in conjunction with Ilyushin's method of small elastic-plastic deformation. The governing differential equations are derived and solved with illustration.

Keywords: Crack Development, Damped Oscillations, Propagation.