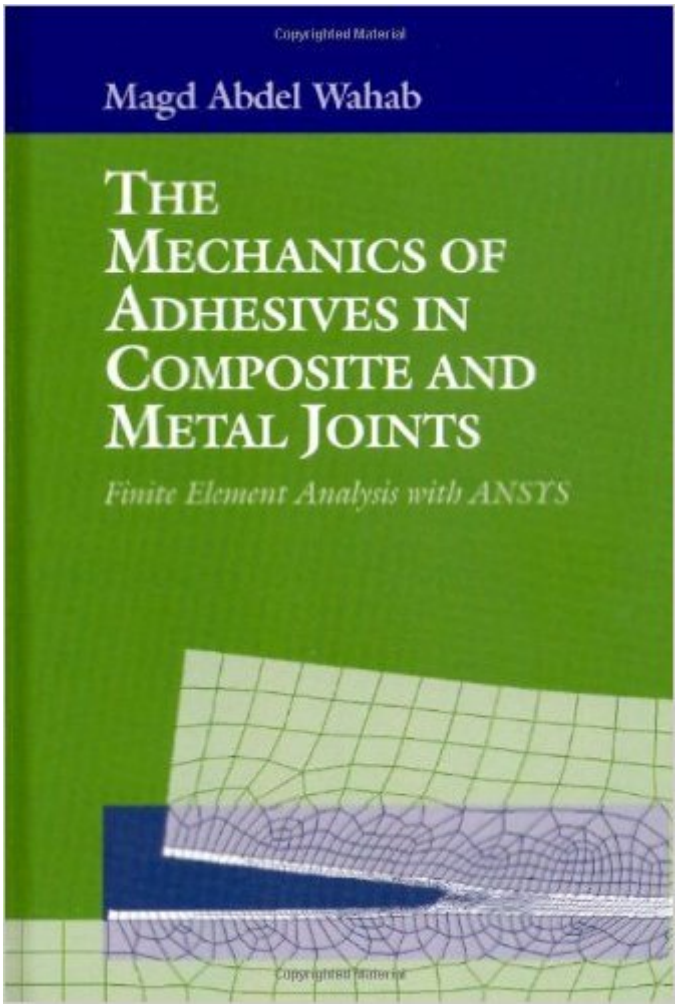
The Mechanics Of Adhesives In Composite And Metal Joints



Synopsis

Scientific background and practical methods for modeling adhered joints Tools for analyzing stress, fracture, fatigue crack propagation, thermal, diffusion and coupled thermal-stress/diffusion-stress, as well as life prediction of joints Book includes access to downloadable macrofiles for ANSYS This text investigates the mechanics of adhesively bonded composite and metallic joints using finite element analysis, and more specifically, ANSYS, the basics of which are presented. The book provides engineers and scientists with the technical know-how to simulate a variety of adhesively bonded joints using ANSYS. It explains how to model stress, fracture, fatigue crack propagation, thermal, diffusion and coupled field analysis of the following: single lap, double lap, lap strap/cracked lap shear, butt and cantilevered beam joints. Readers receive free digital access to a variety of input and program data, which can be downloaded as macrofiles for modeling with ANSYS.

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