

# NUMERICAL SIMULATION AND EXPERIMENTAL VALIDATION OF NONLINEAR DEFORMATION OF GLARE

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## Abstract

*GLARE (GLAss REinforced), is a fibre metal laminate that consists of aluminum layers and glass fibre/ epoxy composites. The analysis of this composite structure is non-linear and very complex. Its analysis can be carried out through simulation exercises employing numerical tools/techniques such as finite element modeling. The present paper describes finite element modeling of the GLARE laminates. The deformation characteristics of such hybrid materials are non-linear. In this paper, the numerical analysis based on finite element modeling is used to predict the deformation behavior of various GLARE configurations. The results of numerical analysis obtained are then compared with experimental results for verification and validation.*

**Keywords:** *Laminate, Glass fiber, Composite, Hybrid, Glass reinforced*

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