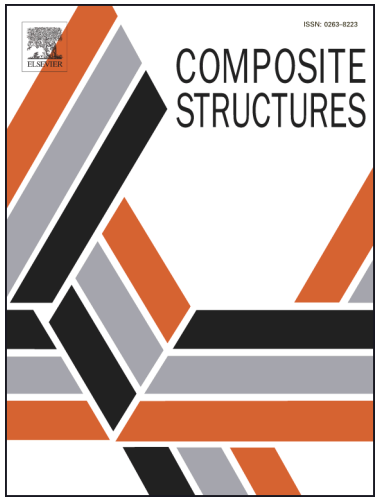


# Beam on Elastic Foundation Analysis of Sandwich SCB Specimen for Debond Fracture Characterization

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Title :

# Beam on Elastic Foundation Analysis of Sandwich SCB Specimen for Debond Fracture Characterization

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Abstract

Sandwich single cantilever beam (SCB) test has attracted attention as one of the best candidates for evaluating the debond fracture toughness between face sheet and core in sandwich panels under mode I type loading. To theoretically analyze the sandwich double cantilever beam specimen, a beam on Vlasov foundation model has been proposed. In this study, the Vlasov foundation model is applied to the analysis of SCB specimen. Then, the experimental data reduction method of sandwich SCB test is examined based on the semi-analytical solution obtained by the Vlasov foundation model. The validity of the Vlasov foundation model for the analysis of sandwich SCB specimen is confirmed by comparing it with finite element analysis. The influences of the material properties and the thicknesses of face sheet and core on the data reduction method are clarified.

Keywords:

Sandwich; SCB; Fracture; Beam; Analysis; Vlasov