

Advances
in
Aircraft Structures

Editor

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Chapter 15

Buckling of Composite Columns

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Abstract

This chapter deals with the experimental procedure to evaluate the critical load, failure load and predict the mode of failure for the column specimens made of composite material. The type of section that is being considered is rectangular and both woven roving fiber and chopped strand mats fiber types of glass fibers have been examined.

Keywords: Buckling, column, experimental, composites, critical load.

1. Introduction

Today composite material is widely being used in the industry. It is an attractive structural material because it provides a high strength-to-weight ratio and offers design flexibility. The composite can be adjusted to match the requirements of specific applications more efficiently. This chapter emphasizes the buckling phenomenon for column made of composite material. The aim of this chapter is to find the critical loading, the failure load and predict the mode of failure for the composite specimens. The type of section that is being used is a rectangular, long column. Two types of glass fibers have been examined, that is woven roving fiber