

Reliability-Simulation of Composite Tubular Structure under Pressure by Finite Elements Methods

Authors : Abdelkader Hocine, Abdelhakim Maizia

Abstract : The exponential growth of reinforced fibers composite materials use has prompted researchers to step up their work on the prediction of their reliability. Owing to differences between the properties of the materials used for the composite, the manufacturing processes, the load combinations and types of environment, the prediction of the reliability of composite materials has become a primary task. Through failure criteria, TSAI-WU and the maximum stress, the reliability of multilayer tubular structures under pressure is the subject of this paper, where the failure probability of is estimated by the method of Monte Carlo.

Keywords : composite, design, monte carlo, tubular structure, reliability

Conference Title : ICAMAME 2016 : International Conference on Aerospace, Mechanical, Automotive and Materials Engineering

Conference Location : Barcelona, Spain

Conference Dates : February 15-16, 2016