



“Gheorghe Asachi” Technical University of Iasi, Romania



OPTIMIZATION OF THE STRENGTH STRUCTURE FOR 10 kW WIND TURBINE BLADES

Viorel Bostan, Marin Gutu*

Technical University of Moldova, 168 Ștefan cel Mare Str., 2004 Chișinău, Republic of Moldova

Abstract

This technical paper presents some aspects concerning the static finite element analysis of a wind turbine blade. For the manufacturing of the blades for a 10 kW wind turbine elaborated at the Technical University of Moldova composite materials made up of polyester matrix reinforced with fiber glass are being used. In order to determine the mechanical properties of the proposed composite materials 10 different samples of laminated composite plates were numerically simulated in ANSYS 11.

Key words: composite laminate, deformations, strain, strength structure, stress

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* Author to whom all correspondence should be addressed: e-mail: gutumarin@ymail.com; Phone: 069060054