

215-025

TENSILE STRENGTH OF POLYESTER COMPOSITES REINFORCED WITH PALF

Glória, G.O.(1); Altoé, G.R.(2); Gomes, M.(3); Teles, M.A.(1); Muylaert, F.M.(4); Vieira, C.F.(1); Monteiro, S.N.(5); Neves, A.C.C.(1);

Universidade Estadual do Norte Fluminense(1); Pontifícia Universidade Católica do Rio de Janeiro(2); Instituto Federal Fluminense(3); Universidade Estadual do Norte Fluminense Darcy Ribeiro(4); Faculdade Redentor(5); Universidade Estadual do Norte Fluminense Darcy Ribeiro(6); Instituto Militar de Engenharia(7); Universidade Estadual do Norte Fluminense Darcy Ribeiro(8);

The environmental concern is creating pressure for the substitution of high energy consumption materials for natural and sustainable ones. Compared to synthetic fibers, natural fibers have shown advantages in technical aspects such as flexibility and toughness. So there is a growing worldwide interest in the use of these fibers. PALF extracted from pineapple leaves, presents some significant characteristic, but until now only few studies on PALF were performed. This work aims to make the analysis of the tensile strength of polyester composites reinforced with PALF. The fibers were incorporated into the polyester matrix with volume fraction from 0 to 30%. The results showed increase in the tensile strength, elastic modulus and total deformation for specimens above 10%. After the fracture the specimens were analyzed by a SEM (scanning electron microscope) and indicates that PALF fibers act as reinforcement for the polyester matrix.