**Contribution à l’étude de l’influence des paramètres d’élaboration et optimisation du procédé de mise en œuvre de bio-composites en coques de cotonnier et polystyrène recyclé**

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**Abstract:**

Contribution to the study of the influence of parameters to formulation and optimization of process implementation of bio-composite at cotton hulls and recycled polystyrene The development of an eco-material requires further physico-chemical characterization of raw materials, control parameters of process of implementation used. This work is devoted to the study of the influence of processing parameters of a biocomposite injected cotton hulls and recycled polystyrene, in order to optimize the process of implementation and the properties of the final product. In the development process adopted, two methods are used: this is extrusion, which is used for the preparation of the compound and injection molding (aggregates from extrusion), which is used for fabricate specimens and final products. The objective is to identify the optimal parameter values for the implementation of these two methods for the development of quality products including having the required mechanical properties for various applications. Thus, after identification of optimized parameters for implementation, test pieces were produced with the optimized parametersand mechanical properties as: the modulus of elasticity (E) or Young's modulus, the breaking stress (σr ) the torsional spring or shear modulus (G), tensile stresses, the impact resistance of the material, also called resilience (R), determined by testing and characterization of the material produced better identified. The results obtained are reported in this paper through the curves, tables and figures that follow.