Creep Behaviour of the Polymer Composite with False Banana's Fibres (Ensete Ventricosum)

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This study was focused on the analysis of creep behaviour of the polymer composite with continuous phase in the form of two-part epoxies and discontinuous phase (reinforcing particles) in the form of fibres of false banana (Ensete ventricosum). The aim of the experiment was to describe the short term flexural creep behaviour, flexural strength and Charpy impact strength of polymer composite reinforced by fibres of false banana. The fibres of Ensete ventricosum, originally from Ethiopian region Hawassa, were used for this experiment. Reinforcing fibres were prepared in size of length 1-2 mm with randomly fibres arrangement in matrix. The amount of reinforcing particles in the composite material was 0.5; 2 and 30 wt.%. Moulds for casting specimens were produced from the material Lukapren N regarding to the prepared models whose shape corresponds to the technical standard CSN EN ISO 3167. Composite which was used to prepare specimens according to CSN EN ISO 3167 (Plastics - Multi-purpose test specimens, English Standard Institution) was created by mixing of fixed rate of matrix and filler.

Keywords: agriculture, impact strength, flexural strength

Acknowledgement

This paper has been made with the assistance of the grant IGA TF CZU No. 2015:31130/1312/3104.

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Paper number: M201639