

Flexural properties of sugarcane bagasse pith and rind reinforced poly(vinyl chloride)

Abstract

Sugarcane bagasse is divided into two major components. They are pith and rind. Pith is the inner part of sugarcane bagasse while rind is the outer part of it. In this study, the flexural properties of pith reinforced poly (vinyl chloride) composites were compared to that of rind composites with the same matrix in variation of fibre content. The composites were produced by compression moulding method. The fibre contents were 10%, 20%, 30%, 40%, and 50% in weight. Three-point bending tests were carried out to measure the flexural properties of the composites. It has been found that, in general, the addition of fibre improved the flexural modulus of the materials. Meanwhile, the rind composites were of superior flexural properties compared to the pith composites.