

Investigation of the structuring process of cellulose-filled material

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Keywords: *inert material, physico-mechanical characteristics, cellulose, polyvinyl acetate.*

Abstract

Specific surface areas have been calculated for different types of cellulose: fibers, sawdust of conifers in the form of flakes and sawdust of forest coniferous trees of irregular shape, wood flour. The dependence of the structural and mechanical properties of the material on the type of pulp: shrinkage, tensile strength and elongation have been studied. It is shown that the required tensile strength of the material (16.3-22.5 MPa) is achieved using the fiber form cellulose.

We designed the composition of inert material based on cellulose and polyvinylacetate providing the processing conditions identical with the standard analog by the method of filtration molding and physico-mechanical properties and enabled verification of serviceability of functioning of the equipment.