FABRIKASI DAN KARAKTERISASI SIFAT MEKANIK SERAT DAUN LIDAH MERTUA DENGAN MATRIK EPOKSI RESIN SEBAGAI FIBERGLASS

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Abstract	The technology is made from fiberglass for polycarbonate production process has the disadvantage of expensive, environmentally unfriendly and not able to absorb some heat intensity. Though fiberglass materials can now be based on organic materials that are environmentally friendly and easy to obtain. One is the leaf fibers of the tongue-in-law. Fabrication and characterization of the mechanical properties of fiber-matrix leaves the tongue-in-law with an epoxy resin as fiberglass conducted to determine the mechanical properties or mechanical properties (compressive strength, tensile strength and impact) of the resulting composite material. In this paper we will discuss the compressive strength and tensile strength of fiber composite material that leaves the tongue-in-law berfiller. Composite specimens made with the two treatments, namely variations in the composition of leaf fibers and matrix as well as tongue-in-law variation of the thickness of the resulting composite material. Variation of the discuss the congue-in-law with a ratio of 0%: 100%, 20%: 80%, 35%: 65% and 50%: 50%, while the variation in thickness is 2 mm and 3 mm. The results showed that the addition of leaf fibers of the tongue-in-law and the resulting thickness variations can affect the compressive strength and tensile strength of the composite material. On the compressive strength the increasing changes in the ratio between the volume fraction of fibers and a thickness of 3 mm at 80 MPa, whereas for the fiberglass on the market obtained compressive strength and a thickness of 3 mm at 80 MPa. The resulting tensile strength is estength test on the composite increases and increases when the thickness of the composite and the volume fraction of fibers leaves the tongue-in-law and the resulting thickness of 2 mm is obtained for 39.4 MPa and a thickness of 3 mm at 89.6 MPa. The resulting tensile strength increases when the thickness of the composite and the volume fraction ratio increases. This is because the nature of the leaf fibers of the tongue-
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