

ABSTRACT

Using of material composites recently have increased. It is followed not only by using synthetic fiber but also nature fiber. The problem of using nature fiber usually in interfacial strength of fiber/matrix because there are lignins on the fiber. The aim of this research are to analyze the influence of alkaline concentration and fiber immersion time on the interfacial shear strenght (IFSS) of sugar palm fiber/epoxy system.

Diameter of sugar palm fiber (0,22-0,55 mm) was soaking on alkaline concentration of 0; 2,5; 5; 7,5 and 10% during 0; 2; 4; 6 and 8 hours respectively. Therefore sugar palm fiber washed by fresh water and drying in room temperature before filled into epoxy with 105 mm, 20 mm and 8 mm dimensions. After that the specimens put on boundary condition fixed-fixed and tested by fiber pullout with Selter Weight Tronik machine to get tension value.

The analizis result showed that higher alkaline concentration, lower interfacial strenght matrix-epoxy. The highest shear strengt on concentration of 2,5; 5; 7,5 and 10 % during 6; 2; 2 and 2 hours are 3,87 MPa; 4,16 MPa; 4,39 MPa; and 4,11 MPa.

Keywords : *sugar palm fiber, alkaline concentration, immersion time, interfacial*