

TESTING THE BENDING STRENGTH OF CARBON FIBERGLASS WITH POLYESTER RESIN

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ABSTRACT

Currently, composite materials are alternative materials for metal replacement, therefore new breakthroughs are expected to be a way out for the continuity of engineering activities. This can not be separated from the world of shipping engineering as technology and science develop a lot of new research on how to make a ship that is effective, efficient and effective. One of them is research on fiberglass boats using composite carbon fiber with polyester resin. In this case, it is necessary to test the material using a pressure test to find out whether the material has good quality standards. On the of research on fiberglass with polyester resin. Making specimens using the hand lay up method using the bending test. Based on the tests that I have done, the stress values obtained on the angle orientation specimens corner 0° is 803.531 N/MM^2 , corner 45° is 504.449 N/MM^2 and corner 90° is 254.70 N/MM^2 . So the highest stress value is angle 0° . With the modulus of elasticity values obtained at the angle specimens corner 0° is 25070.825 N/MM^2 , corner 45° is 19541.473 N/MM^2 and corner 90° is 12401.359 N/MM^2 . So the modulus value the hihgest elasticity is angle 0° .

Key words : Carbon fiber, fiberglass, composite, ASTM, compressive strength.