THE EFFECT OF VACUUM INFUSION METHOD ON FORGED CARBON FIBER REINFORCED COMPOSITE MATERIALS ON IMPACT STRENGTH

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ABSTRACT

A composite is a combination of two or more different materials as a unified condition. Currently, fiber-reinforced composite materials are engineering materials that are widely used because they have high strength and stiffness, light weight, are resistant to corrosion and have a flexible design, one of which is forged carbon fiber. In this study the author discusses the effect of the vacuum infusion method on forged carbon fiber reinforced composite materials on impact strength along with the addition of volume fractions of 45%, 55% and 65% with BQTN 157 polyester resin matrix. From the research data that has been carried out, the average values obtained are The highest average impact price is at a volume fraction variation of 55% with an average impact price value of 0,4391 J/mm^2 and the lowest average impact price value is at a volume fraction of 65% with an average impact price value of 0,2017 J/mm^2. This is because the 55% volume fraction is a good fraction variation between the 45% and 65% fraction variations.

Keywords: *Composite, Forged Carbon Fiber, Vacuum Infusion Method, Impact Test.*