Performance Test Of Washing Machine Motor As Induction Generator With Permanent Magnet Method

Agung Yusril Praditya
Study Program of , Department of Engineering
Politeknik Negeri Jember

ABSTRACT

In the automotive industry, there has been an increase in innovation through research conducted, especially in efforts to change the use of materials used. Fiberglass fiber has become a popular choice in this industry because it has lightweight properties and is easy to obtain. The research was conducted with the aim of knowing the effect of varying the amount of Poly Ethylene and e-glass laminates on Tensile and impact and knowing the comparison of variations in the number of Poly Ethylene and e-glass laminates on factory brake handle. This research was conducted at the University of Jember (UNEJ) and State Polytechnic of Malang (POLINEMA). The research method used was the vacuum infusion method. The results showed that at a pressure variation of 0.8 bar and 3 hours of time, the tensile test on composite specimens produced the highest value of 73.83 N/mm². Meanwhile, the lowest value occurred at a pressure variation of 0.4 bar and 3 hours of time, with a value of 50.14 N/mm². The highest average value of the impact test was obtained at a pressure variation of 0 bar and 2.5 hours of time, which was 0.2319 J/mm². While the lowest value was obtained at a pressure variation of 0.4 bar and 2.5 hours of time, with a value of 0.059 J/mm². According to the results of the study it is known that the variations in vacuum pressure are 0 bar, 0.4 bar, 0.8 bar and time 2 hours, 2.5 hours, 3 hours, the lowest tensile test value is obtained, namely with a pressure of 0.4 bar and 3 hours time . The results of the tensile and impact test values of the e-glass composite when compared with recycled piston materials are lower.

Keyword : E-glass, vacuum infusion, tensile test, impact test