The Effect of Mahogany and Brass Powder Mesh Variations with Polyester Matrix on the Mechanical Properties of Composites

Nicko Dwi Prakoso
Automotive Machinery Study Program, Department of Engineering, Jember State Polytechnic

ABSTRACT

There are two types of motor vehicle brake pads, namely asbestos and non-asbestos brake pads. The composition of the material used to make brake pads with mesh sizes of 60, 80, and 100 is made from 30% mahogany sawdust, 10% brass powder, 10% activated carbon, 5% aerosil, and 45% polyester resin. M 100 lining specimens with mesh 100 variation treatment against brass powder and mahogany sawdust have an average hardness value of 77.9 HD, the lowest specific wear value with a specific wear value of 8.65×10-8 mm2/kg, and the M 100 lining specimen using the. 100 mesh variation achieved a friction coefficient value of 0.3207 which is close to the comparison brake lining. Thus, it can be concluded that the variation in particle size of brass powder and mahogany sawdust affects the hardness value, specific wear, and friction coefficient of composite brake linings.

Keyword*: Composites, mesh variations, mahogany, brass, hardness, specific wear, coefficient of friction*