

ANALYSIS ON THE HARDNESS CHARACTERISTICS OF SEMI-METALLIC FRICTION MATERIALS

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ABSTRACT

In this work, seven samples of newly developed friction material formulations were subjected to Rockwell hardness tests in accordance with Malaysia standard MS 474, Part 2. 2003. The samples were developed through powder metallurgy technique consisting of the following processing stages; powder selection, weighing, compaction, post baking and finishing. The Rockwell hardness of the samples was measured before and after the swell and growth tests. The indentation spots after the hardness tests were also observed using scanning electron microscope (SEM) and the elemental compositions on that area were analyzed using Energy Dispersive X-ray (EDX). This paper will discuss the hardness characteristics of the friction materials with regard to the microstructure and elemental composition.

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