



**THE STUDY ON WEAR PATTERN ON THERMAL AND TIME
DIFFERENCES OF BRAKE MATERIAL**

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ABSTRACT

This study focused on the wear pattern of brake pad at different temperature and time. The wear pattern was observed in term of weight loss and surface structure. Brake pad with known composition was getting from SIRIM. Brake pad was running using the test rig machine. This machine need to be serviced first prior to testing in order to achieve the objective of this project and to increase its performance. For the first testing to find the wear pattern at different temperature, the machine was running starting from room temperature about 30°C until 400°C. At starting temperature 50°C and for each interval or increment of 50°C of temperature, wear pattern was observed. For the second testing to find the wear at different time, the machine was run for 240 minutes. For every 30 minutes interval, wear pattern was observed. Wear rate also calculated using the information getting from test rig machine. The difference between the initial and the final weight of the specimen is the main criteria in order to determine the wear of the brake pad. The wear rate was plotted on graph in terms of weight loss over time. The surface structure of brake pad was observed using streozoom microscope. From the graph, it will show the highest point of wear rate occurs and the temperatures that brake pad will failure.

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