BUILD AND DESIGN OF
ELECTROMAGNETIC DAMPER

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ABSTRACT
Suspension system technology has grown rapidly in the world of automotive, especially in shock absorber (damper) technology. Nowadays the general suspension system applied at vehicles is the suspension system which is using fluid as the media. Some of the feebleness of fluid media among other things are leakage, damage at spillway, etc. Derived from those problems, an electromagnetic damper by exploiting magnet force generated by bobbin coil is created.

The method was done in two ways to know the performance of electromagnetic damper, that are static testing and logarithmic decrement testing. Each of method being done by varying the load of testing mass and the current of electricity. The parameter result of testing are damping characteristics, that are values of damping constants (C) and damping ratios (ζ), which will be vary if the current of electricity is varied by varying electricity voltage.

The result of model and examination for variation of electricity current with the loads of testing mass of 5kg and 10kg has an error 2.96% and 5.55%. For the better design, furthermore, hence research is needed.

Key Word : Suspension, shock absorber (damper), magnetic damper, damping coefficient.