ENGINE SPEED MODEL EXPERIMENTAL IDENTIFICATION OF MITSUBISHI 4G63 ENGINE WITH SPARK ADVANCE AND FUEL CONSUMPTION INPUT

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ABSTRACT

In every control system design, a model is always needed to replace the existence of the real plant. Identifying is needed to make a model from the plant. Inexact identification causes inappropriate controller design. Therefore, to get a model of mitsubishi 4g83 engine we need to identify the engine directly by experimenting in idle speed condition. The experiment is done by comparing spark advance and fuel consumption which are determined previously to the engine speed. The experiment give a first order model of the engine, with at least 0.157347 error in RMSE value for modelling the spark advance and 0.06635891 error for modelling the fuel consumption input.

Keyword : idle speed, spark advance, fuel consumption