

# Construction and Implementation of Hybrid Vehicle Systems

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## ABSTRACT

Since the Industrial Revolution, the problem of global warming has become increasingly serious, expendable energy reserves are gradually depleting, how to reduce the pollution and energy consumption is becoming the top of the agenda of all countries. In Taiwan, most people have motorcycles with high density, so it caused serious pollution. Less pollution and energy-efficient hybrid locomotive will be extensively studied and discussed means of transport. Because the hybrid locomotive is helpful in solving pollution problem, this study constructed a hybrid vehicle platform, and a 125c.c. locomotive has been chosen. The motor drive module is a self-developed, and with a water cooling system. In order to read and control the experimental, the graphical programming software (LabVIEW) has been used. The design of the momentum mechanism between the internal combustion engine and the DC motor, can be used for the experimental platform. The development of the motor driver module and power combination has completed, and testing the hybrid vehicle platform. The operation has three test modes of hybrid vehicles, motor output mode, the internal combustion engine output mode and dual-power output mode. Followed by three modes of operation, has been verified the feasibility of platform.

Keywords : hybrid vehicles、 motor drive module、 planetary gear、 graphical programming software (LabVIEW)

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