Design and Experiment of Test Platform for Brake by Wire System

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ABSTRACT

Following with vigorous and development of the vehicle technology industry that people become paying much attention to traffic safety, brake system related to drivers the safety directly, it also raises the importance for studies.

This study focuses on test platform, actuation of response and performance test for the brake system. Using situation of brake system to design a test platform and according to this platform architecture based to use the control plans of LabVIEW software to design a set of dynamic real-time monitoring interface and exploring of the response for brake-by-wire system.

Accordance to the different acting rate of brake pedal, and the trigonometric function logic of the relationship, the three models of brake action are setted, firstly. Second, according to the three models and LabVIEW software combined with C language control response for brake-by-wire system. Finally, comparing the test results of with the FMVSS NO.122 of braking regulations. The test results show that the response of brake action can follow the brake pedal modulation variation rates.

Keywords : brake test platform、Brake by wire

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