Design of Anti-fail Brake System for Vehicles

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ABSTRACT

The rapid development of technology industries vehicle, it is very important to road safety, if you are related to the safety of the driver directly upward trend by the brake system, therefore, the study of brake systems, the has improved relative importance. In this study, simulation test platform in order to establish the vehicle brakes, with the aim to explore the mutual recognition and intelligent control and braking systems. Using the design principles of a dynamic braking system simulation test platform for the production of a single wheel brake, a form of action plans, processes, and real-time window target for establishing a data collection software MATLAB / Simulink commercial use of, capture the NI data acquisition as well as data from additional key components of hardware circuitry and can be completed by comparison of experimental data on the actual platform, take a card from the data. Redundant braking systems , brake, the second set and its dynamic response to the ever-changing so that you can quickly adjust the brake pressure, the feasibility of the controller and the control law, in order to confirm it. FMVSS105 regulations related to the issue of more brakes, braking distance and vehicle speed estimation based on the table, and more.

Keywords : hardware in loop、test platform for the simulation of a single wheel brake、a second set of brake systems

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