AUTOMOBILE USED BRAKE DISC FAILURE ANALYSIS

ABSTRACT

Vehicles are driven by the combustion of the fuel, and the conversion of this heat energy into motion by mechanical systems. Controlling or reducing this speed is provided by the brake system. Brakes are categorized of design, brakes power transmission system and function. As well as drum brakes, which were commonly used in the past, disc brake applications have also become widespread today, usually disc brakes are used in the front wheels, and drum brakes in the rear wheels. Development of technology and the high performance that is expected from the cars have generalized the use of disc brakes. Disc brakes conduct heat better compared to drum brakes and discharge water better. As a result of the increase in the importance that is given to vehicle safety and increase of vehicle's speed, efforts in developing more effective brake systems have been intensified. In this study; a car’s disc brake system failure analysis of the investigation, material properties, chemical alloys are mentioned. Also damaged brake disc was observed with the finite element method, the obtained results were evaluated and results are discussed.

KEYWORDS: Disc brake failure analysis, brake system, disc brake material properties, disc brake finite element stress.