

عنوان مقاله:

A Comparative Study Between ABS and Disc Brake System Using Finite Element Method

محل انتشار:

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خلاصه مقاله:

This paper, refers to the history of the rise of brake system and describe its importance in passenger's lives. The Anti-lock Braking system (ABS), is the safety of vehicle systems to achieve maximum braking and decelerating in terms of increasing the stability and balance of the car and reduces the braking distance is designed. The performance of disc brake system and the Anti-lock Braking System (ABS) are also compared with each other by the kinetic analysis of the braking system and evaluate the impact of each parameters is checked on the vehicle stopping distance. In this research, we use Finite Element software Abaqus 6.14 and we found some interesting result; For example: the effect of temperature on the performance and braking system efficiency. The Anti-lock Braking System (ABS) is one of the most important feature that affect on vehicle safety and for this research much effort have been made to improve this system. One of the aims of this paper is to compare system performance between disc brake system and ABS system with the help of modeling in different conditions (rainy, snowy, etc). The objectives of ABS system are as follow: Preventing the wheels from locking, achieving maximum technical momentum in terms of braking, stability increase, reducing stopping distances.

کلمات کلیدی:

Anti-lock Braking System, Car Stability, Disc Brake System, Finite Element Method, Stopping Distance, Tire-Slip

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