

Article Influence of Nano Material Coating on the Automotive Brake Liner – An Investigational A...

# Influence of Nano Material Coating on the Automotive Brake Liner – An Investigational Approach

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It is very advantageous to have a solid grasp of the thermo-elasticity property of the material while designing an automobile brake at an early design stage. To ensure mechanical brakes' longevity and compactness, which are both crucial in this application, it is recommended that the accurate prediction technique of maximum structural stress be employed throughout the design process for mechanical brakes. As a consequence of this research, a practical and dependable analytical approach for the design of mechanical brakes has been developed, which makes use of modelling and analysis methodologies to accomplish its objectives. In this research, the stress analysis of an automobile's brake was carried out, with the purpose of minimising the stress and pressure created in the brake as a result of the braking. The complete investigation of the brake, as well as the modelling of the brake, will be carried out using the ANSYS software. The CAD software called CATIA will be used to do the clutch analysis. It is envisaged that this effort will also contribute to the creation of the most efficient and dependable mechanical brake design in the future. In this study, we investigate the structural, thermal and tribological aspects of brake shoe liners coated with nano composite coating materials such as ZrO<sub>2</sub> perform.

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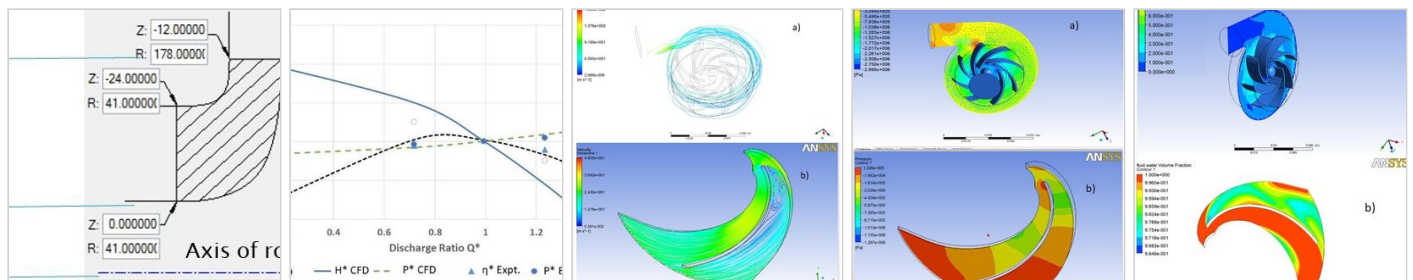
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