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(57) Abstract :
A design and built of an off- road race vehicles were disclosed. This invention relates to a novel method for decelerating the vehicle is designed, known as inboard braking system / axle braking system, in which a single brake disc will be mounted on the rear axle of the vehicle. The hydraulic braking system with fixed calipers is used to lock all the four wheels within the predetermined distance and time. The stopping distance of this vehicle at the speed of 40km/hr is found to be 1.5 m. The pedal actuates the master cylinder and is capable of locking four wheels in static condition and dynamically on paved and unpaved surfaces. This new braking method is designed to eliminate recurring problem often encountered. A customized inboard braking system is typically designed as a problem solution for disc deformation. Moreover, the axle braking is to slow down or stop the vehicle safely and effectively by converting kinetic energy into heat.

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