Monitoring of Pressure in a Two Wheeler Tubing Tyre under Motion (Ref no: 37S1297)

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In partial fulfilment

Submitted by

Maneesh R	**1KG10ME026**
Mohamad Umar	**1KG10ME030**

Under the Guidance of

Mr. Yuvaraja Naik
Asst Professor
Department of Mechanical Engineering
K.S. School of Engineering and Management
Bangalore - 560062

Department of Mechanical Engineering
K.S. School of Engineering and Management
No. 15, Mallasandra, off Kanakapura Road, Bangalore - 560062

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Abstract

The tubing tyre pressure in automobiles needs to be monitored for better road grip and mileage. When the tubing tyre is punctured, it must be immediately attended to reduce the complete wearing & tearing, so that vehicle can be brought to halt and the damaged tubing tyre wheel can be fixed.

A major contributing factor to this high rate of tire failures due to under inflation and gradual pressure loss is that many people do not know whether or not their vehicle's tires are properly inflated.

Tire manufacturers contend that high tire air temperatures are usually a result of operating with underinflated tires, and that warning for under inflation would eliminate the need for a high temperature warning. Significantly elevated tire air temperatures can damage the tires by evaporating the water content in the natural rubber that forms the tire carcass liner.

Tire pressure monitoring technology is decades old. However, only recently has technology made these systems affordable and reliable for passenger vehicles. As a result, most of the systems available for evaluation were first generation systems or prototypes.

There is a lot of research work going on in this field but most of the systems that are being developed have been majorly concentrated on tubeless tyres that are employed in cars. But not much research and development work is being done on tyres of a Two – Wheeler and moreover the tubing tyres have been reluctantly neglected

In the present project a system is being developed to sense the pressure of tubing type (even during motion) and display the same for the review by the rider. It is intended to adopt this technology for a two wheeler due to ease of adoption. Once the technology is proven, this can be extended to a four wheeler also.