## conferenceseries.com

3<sup>rd</sup> International Conference and Exhibition on

## **AUTOMOBILE ENGINEERING**

September 28-29, 2017 Berlin, Germany

## Commercial vehicle aerodynamic drag reduction

Prakash Shakti, Sachin Patel and Satyavrat Patel KJIT, India

The main objective of this work is to design best roof deflector for tipper truck according to truck market. The all work is done T by 3D design and simulation software. By improving the tipper aerodynamic or drag force we can get better fuel efficiency, better tipper stability, improved road holding and reduction in wind noise level. The frontal and rear area of tipper has 25% of drag and 30% drag occur undercarriage and 20% in between the cabin & Container body and this all cause in high pressure on a tipper which effect the fuel economy of the vehicle. Aerodynamic is the investigation of a strong body traveling through the climate and connection which takes bind between the body surface and the encompassing air with changing connection speeds and wind course. Aerodynamic drag is generally immaterial at low vehicle speed yet the size of air resistance gets to be distinctly impressive with rising velocity. Heavy duty Commercial vehicles are considered efficiently wasteful contrasted with other ground vehicles due to their unstreamlined body shapes. A large commercial vehicle going at 75 km/h consumes about around 47% of the overall fuel to give energy to defeat the Aerodynamic drag. Interestingly, a traveler auto under a similar driving conditions, devours around 4 times less to beat drag. For the most part, an overwhelming commercial vehicle's yearly mileage can change between 120,000 km and 150,000 km. In this way, any reducing of Aerodynamic drag will bring about huge fuel saving funds. In spite of the fact that a critical exertion was made by specialists over the decade to create different fuel saving device for heavy commercial vehicles, there are still extensions to additionally decrease the aerodynamic drag. Keeping roof deflector aerodynamic drag decreases by 22 % which cosume fuel efficiency by 1.5 to 2 %.

prakash.shakti@kjit.org

Notes: