

TTCS

(Tire Temperature Control System)

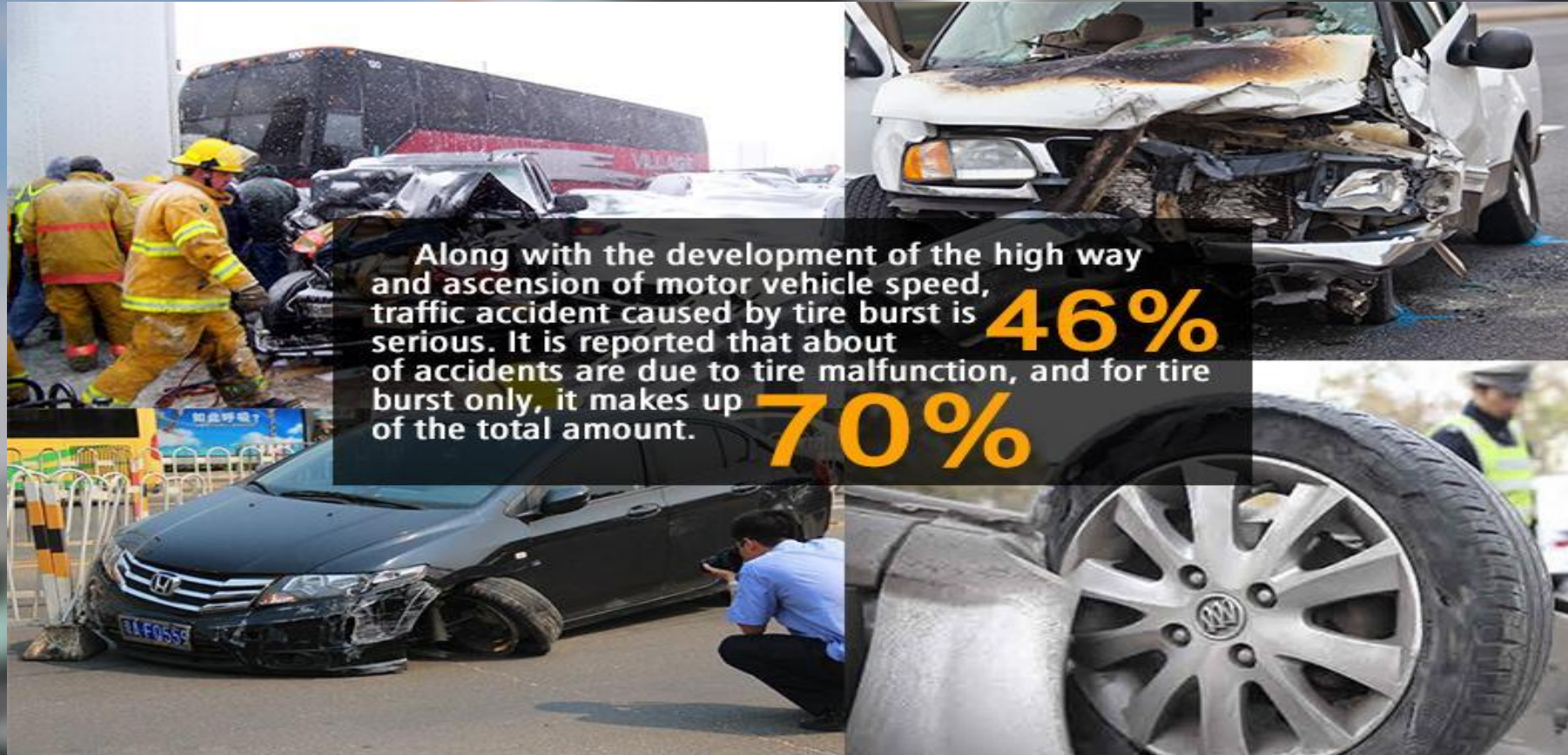




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Problem identification :-



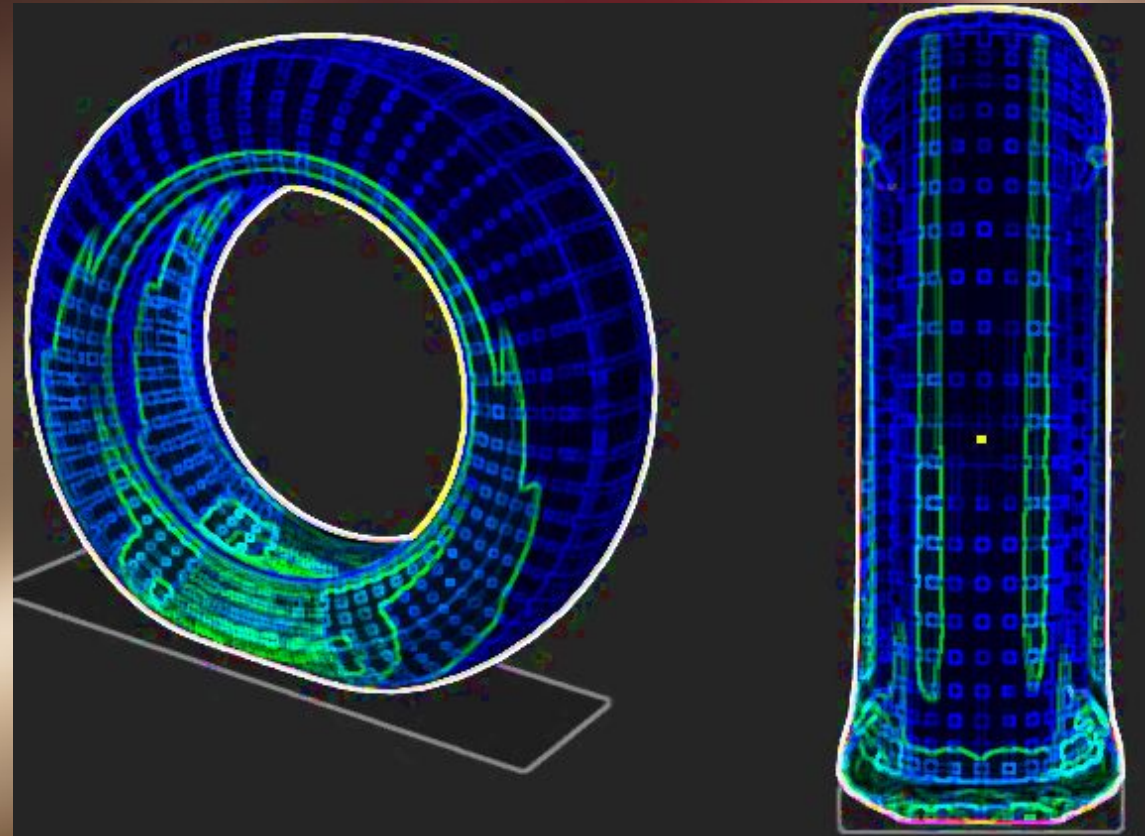
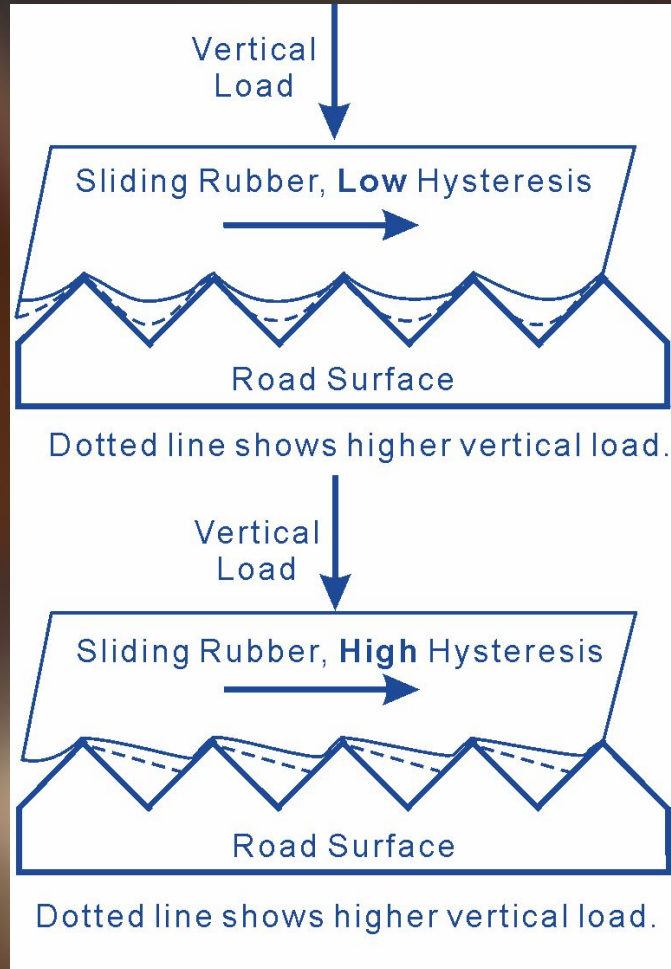
Along with the development of the high way and ascension of motor vehicle speed, traffic accident caused by tire burst is serious. It is reported that about **46%** of accidents are due to tire malfunction, and for tire burst only, it makes up **70%** of the total amount.

The condition of tires has a direct influence on the safety of automobiles, for an unusual pressure condition may lead to explosion of tires, or even result in uncontrollable situations, which probably could give rise to serious traffic accidents. According to statistics, most traffic accidents are because the tire screw, slow leakage, blow-out, etc. with the tire. The tire pressure monitoring can monitor tire pressure and tire temperature, effectively predict alarm, reduce security risks, preventive measures.

Cause Of Tire Temperature increase :-

- Hysteresis
- Vertical Load
- Rolling Resistance
- Road Temperature
- Condition of Road

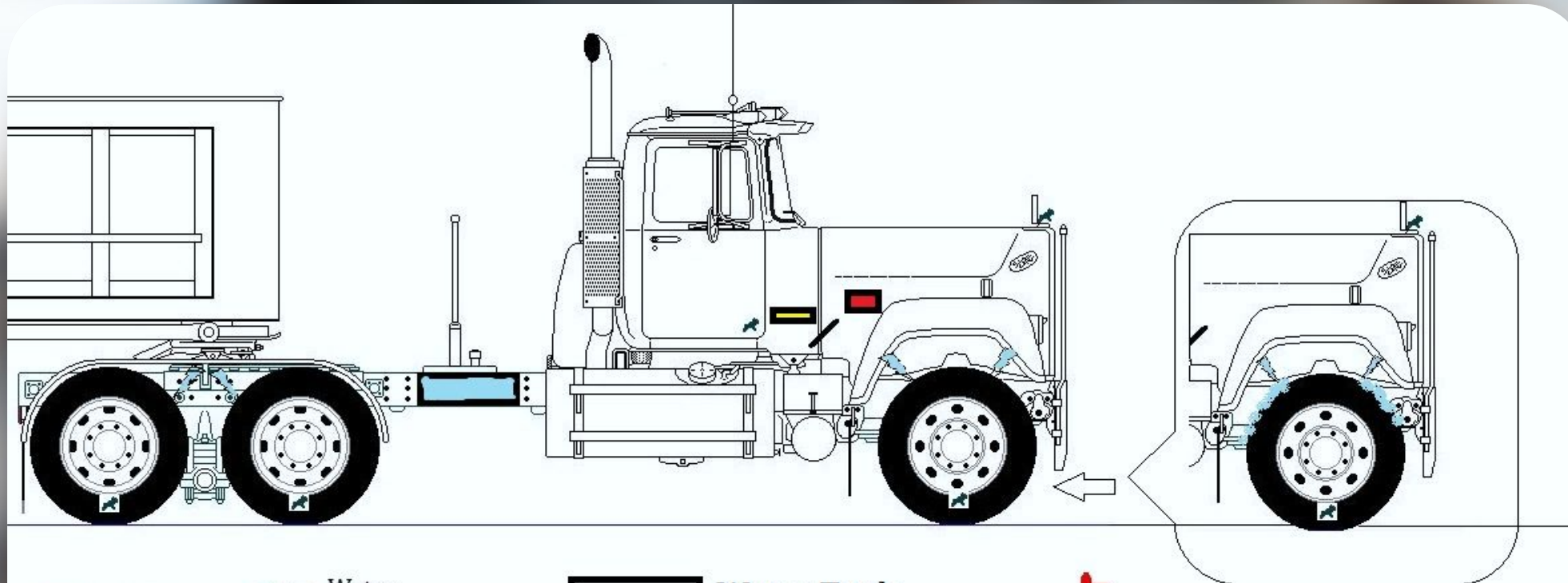
✓ Hysteresis :-










What We'll Do for Problem ?

- Research on TPMS (Tire Pressure Monitoring System)
- Properties of Tire.
- Programming Of ECM. (Engine Control Module)
- Skills of Driver.
- Properties of Air & Water.
- Immobilizing Of Truck Transmission.
- Nature of transport owner .
- Properties of Water Spray.

Line Diagram of Working System of TTCS :-



 ECM	 Water	 Water Tank	 when tire temperature is out of control
 TPMS Receiver	 Water Spray Device	 TPMS Sensors	

Working Of TTCS :-



- ❑ After Water spray if Tire temperature is not in our control
- ❑ ECM Give map light or sound to Stop The Truck.
- ❑ If driver Ignore the warning then
- ❑ ECM Immobilize the Truck Transmission.
- ❑ When the temperature is in our control.
- ❑ Driver can start the engine.

Why TTCS is Required ?



Drivers family

Truck Repair

Goods Repayment

Damage of opposite individual

Damage of road equipment



Advantage and Disadvantage :-

- 1. More Safety
- 2. Simple system



- 1. Water Wastage
- 2. Time Consuming

Driver Safety (Human Safety)

Road Safety

Truck Safety

Goods Safety

Object Safety

Thank You..!

