

NOMINEE



Autoliv India Pvt Ltd Optimization of Steering Wheel

The main function of the steering wheel is to transmit the torque from the driver to the vehicle. It will also support (without fracture) and contain driver air bag cushion during deployment and occupant ride down. The armature has a hub, a rim surrounding the hub, and radial spokes extending between the hub and the rim. The external component includes an over-lay providing a rim cover for the rim and a spoke cover for each of the two spokes.



- Shape and topology optimization in steering wheel for Suzuki Maruti Swift
- Stiffness of the steering wheel kept within upper and lower design bounds
- Mass reduced from 2.45 kg to 1.48 kg with shape optimization and further reduced to 1.43 kg with topology optimization
- In most of the region the thickness of the armature was reduced to 2.52mm from 5mm



Presented in collaboration with:

