

NOMINEE



Mahindra&Mahindra New BIW Structure for XUV500

Vehicle body systems consists of several sheet metal panels of different sizes. Panels are stamped and welded together using spot weld, seam welding, etc to form a cabin structure used for passenger seating. Achieving higher stiffness with lesser weight is the major design challenge here in the body system.

Optimization technique been used including Topology, Topography, and gauge optimization to achieve optimize design and weight of the structure with desired modal performance.



- Weight saving of about 25kg from baseline model with improved modal frequency performance
- Higher stiffness values while lowering component weight as the most significant factor in achieving weight reduction
- Optimization techniques used included topology, topography and gauge
- Topology optimization proved here as a key innovative step in getting the concept design suitable for Crash, NVH and Durability solution



Presented in collaboration with:

