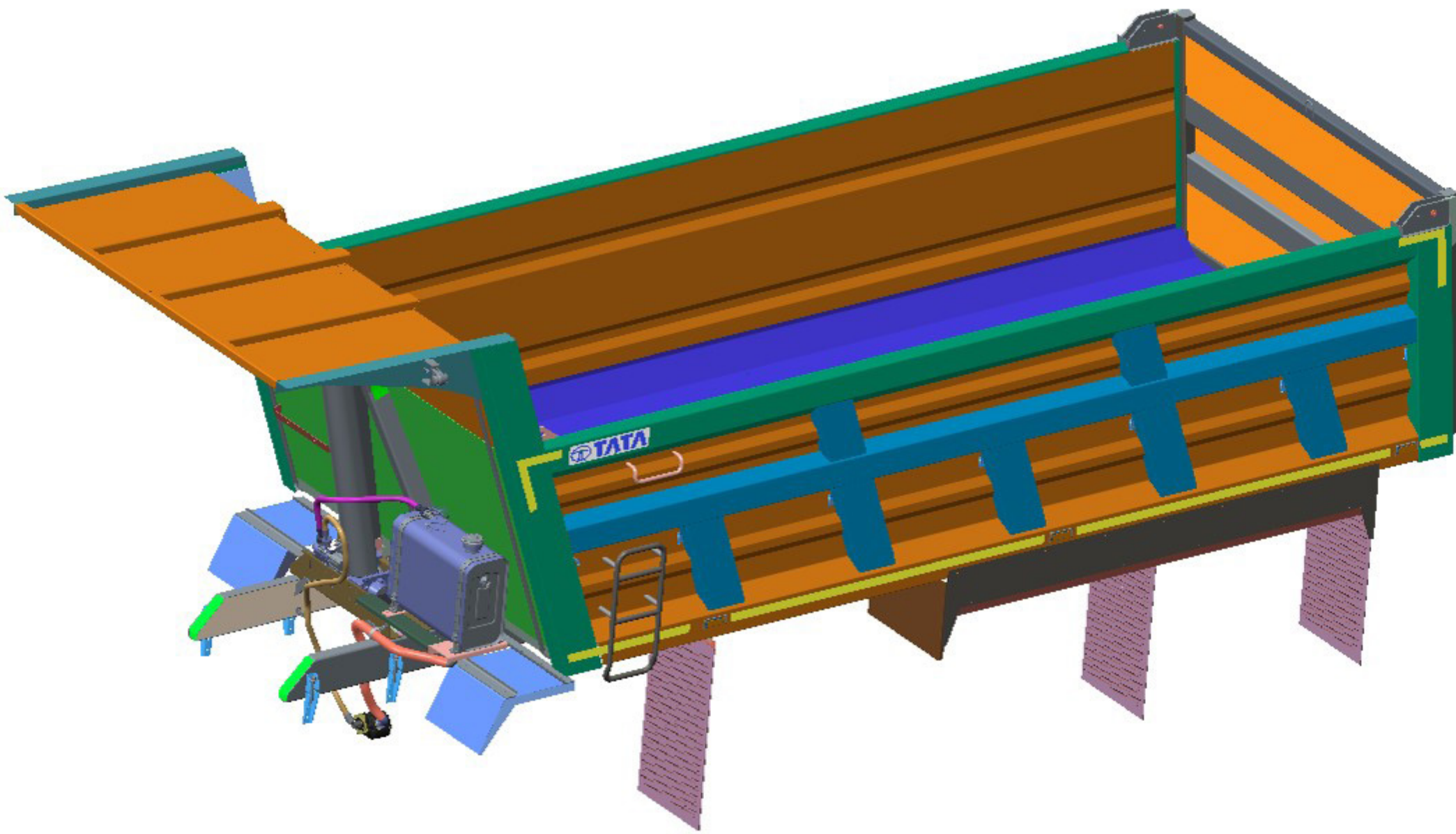


2016 Enlighten Award Nominee



Tata Motors Lightweight Tipper Bodies



Tata's Tipper Bodies are used to carry loads such as sand, gravel, coal, etc while transporting from one place to another. These are hydraulically operated and can be tipped while unloading using front end tipping hydraulic system. To reduce weight, design optimization techniques were deployed to find the optimal cross section thickness for numerous parts within the structure. High strength steels were used to allow for significant material thickness reduction across the tipper bodies.

Category:
Module

Application:
2016 Tata Motors Prima

Weight Savings:
2204lbs when compared to
previous models

Methodology:
Topology Optimization

Presented in collaboration with:

CAR
CENTER FOR AUTOMOTIVE RESEARCH