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.

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