

RUNNER-UP



General Motors

Cadillac ATS/CTS Structure

For the Alpha architecture, innovative computer aided engineering (CAE) tools and methods were developed and used to create an efficient, lightweight, high-performance vehicle structure. These tools, which included immersive lattice topology optimization, strategic structural bulkhead placement, and multi-disciplinary loadcase optimization, were used, along with expert interpretation of the results, to lead the design development of the architecture structure.

- Every day, every part was scrutinized for each gram of mass savings.
- A total of 74 kg was saved from the vehicle.
- Overall the efficiency of the design led to the lightest weight in the segment.
- There was extensive use of structural adhesive on the CTS and ATS structures.



Cadillac

Presented in collaboration with:

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