Applying Castigliano’s second theorem, we proved that the A-arms can be designed to act as a truss, which enabled the use of circular cross section tubes for the suspension’s A-arms and rods.

In previous years the team used magnesium rods for the suspension arms, however ongoing difficulties in pre-determining the quality of the magnesium provided by the team’s suspension arm manufacturer, put the choice of this lightweight material into question. To avoid the risk of using material of inconsistent quality (magnesium), the suspension arms are made of 4130 steel tubes.

Considering the forces acting on the A-arms we used two types of rods - 0.5” diameter and 0.625” diameter. With this configuration we manage to decrease weight while keeping the same factor of safety.

Components:
- Non-parallel double A-arm suspension with Push-rods, front and rear suspension.
- Front and rear rockers (bell cranks), designed to achieve high motion ratios.
- 4-way adjustable Ohlins TTX25 MKII dampers, with linear springs and 57mm travel.
- Anti-Roll mechanism, consisting of torsion bars and adjustable blades.

Production & Materials:
- Two sizes of 4130 steel tubes was chosen to ensure reliability and reduce weight.
- Weldments at rods and A-arms are jig-based, to ensure precision while welding.
- All Weldments work was made by the team members reducing the production costs.
- Rockers and Anti-Roll bars’ housings and blades are CNC fabricated.
- A-arms’ inserts, ball-joints’ housings and spacers are turned on a lathe, therefore significantly reducing the production costs.

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