

## Design optimization of Lower suspension arm of a sedan car

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### **Abstract:**

The suspension is employed to separate the vehicle body from forces occurring from uneven paved surface, optimum style of suspension helps to supply higher safety and performance. In traveller cars freelance suspension is employed due to its inherent benefits over rigid suspension systems. Double wishbone system that is additionally referred to as Short Long Arm system consists of higher and lower wishbone arms. In actual running conditions forces like braking, cornering and vertical masses are unit taken by lower arm of suspension. thus, chance of failure of lower arm underneath these forces is additional. due to road irregularities, LSA is subjected to dynamic loading. during this paper the stresses are generated thanks to dynamic loading condition are unit thought-about and style is optimized by exploitation Topology Optimization Techniques. The double wishbone hyper works Opt struct module is employed for optimization. The analysis showed that twelve you rather than material may be saved by exploitation topology optimization while not moving expected lifetime of Lower suspension arm.

Keywords: Lower Suspension Arm, Hyper works, Topology optimization, Optistruct

