# STRUCTURAL ANALYSIS OF TRUCK CHASSIS USING FINITE ELEMENT METHOD

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## Abstract

This paper deals with the analysis of the chassis frame for structural strength to check for vulnerable points where stress will be high, evolves new creative area in which body is analyzed using finite element method for checking out the high point of von misses stress and bending of the frames. The results illuminate the new creative ways for optimum frame design which makes it more sustainable for structural concerns. In this paper we have analyzed the ladder frame for static load condition with the stress, deflection bending moment on truck chassis frames. The finite element analysis over Ansys is performed by considering the load cases & boundary conditions for the stress analysis of chassis. The truck chassis is being modeled in CATIA V5 R16 and then it is being imported in the Finite element Analysis software – Ansys. The side members of the chassis is considered as the beam as it help to simulate various attachments over the chassis, like fuel tank mountings, engine mountings, etc. The model is being analyzed on the basis of static load condition due to mountings. The stress is obtained more at the joints where the weld are present so to reduce this stress we have just check the design again with the cross members and the result obtained shows that the stress at the joints can be reduce if we distribute the load with the cross members.

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