**Design and analysis of knuckle joint**

A knuckle joint is a mechanical joint used to connect two rods which are under a tensile load. A mechanical joint is a part of a machine which is used to connect one mechanical part to another. Mechanical joints may be temporary or permanent; most types are designed to be disassembled.

In this paper we generate the model of knuckle and perform the analysis with different materials to reduce the weight. The analysis has been carried out to find out the maximum stresses developed in the knuckle joint at different loads and materials. In this we generate the cad models in solid works premium 2014 and perform the analysis by solid works simulation tool.