**57. Design of tractor trolley axle**

**Abstract**

Tractor trolley (or) trailers are very popular and cheaper mode of goods and transport in rural as well as urban areas. Most of the tractor trolley axle used today is rectangular cross section type which in turn leads to increase in the weight of tractor trolley and axle. First we have to find out the stresses, deformation and FOS of the existing axle analytically. Then find such shape which is having better properties than existing. Then do the analytical calculation for the suggested shape and find out its weight. Comparison is done on the basis of analytical calculation for existing shape of axle and weight with its suggested material. Then choose such a material which is having good result as compared to the existing one. Last phase of my dissertation is to compare the result of software generated and analytical one and on the basis of the comparison suggest the best possible shape for the present applications. In this work an attempt has made by replacing rectangular cross section with circular section as well as change in the material is also adapted, which result in reducing the deformation & stress of the axle and further the cost of the axle.