**Design And Analysis Of Multi Plate Clutch**

**Abstract:**

 Multi plate clutch is one of the important part in the power transmission systems. Good design of clutch provides better engine performance. Multi plate clutch is most widely used in racing cars and heavy duty vehicle where high torque transmission required and limited space is available. In this project, we have designed a multi plate clutch by using empirical formulae. A model of multi plate clutch has been generated in CATIA V5 and then imported in ANSYS workbench for Automobile Applications. We have conducted structural analysis by varying the friction surfaces material and keeping base material as Steel. By observing the results, comparison is done for materials to validate better lining material for multi plate clutch by doing analysis on clutch with help of ANSYS Workbench software and FEM to find out which material is best for the lining of friction surfaces.

Keywords: Multi-plate clutch, Friction material, SF-MC2, ANSYS, CATIA V5.