ABSTRACT

Where ever conversion of motion from one form to another, i.e. reciprocating motion to rotation motion or vice versa, it carried through connecting rod and crank. Automobile sector is more demand of its use by volume, where reciprocating motion of the piston in L.C engine converted to rotational motion to drive the vehicle.

Increasing competition between automotive manufacturers has forced development of new products to focus upon more efficient design as well as with objective of at lesser costs. For this optimization become critically important area of application in the automotive industry.

In this work a connecting rod has been analysed, with main objective of weight and cost reduction. This can be achieved by calculating the various load possibilities and analysing them. Market available connecting rod is selected and modelled connecting rod imported to the analysis software ANSYS and analysed for stresses, strains and total deformation for the calculated load conditions. Same analysis carried with the materials forged steel, Aluminium 7068 and C 45 and results obtained.

Results interpreted and optimized design of connecting rod obtained.

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