

A Novel Combustion Engine, Design and Modeling

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Abstract : Nowadays, engine developments have focused on internal combustion engine design call for increased engine power, reduced engine size and improved fuel economy, simultaneously. In this paper, a novel design for combustion engine is proposed. Two combustion chambers were designed in two sides of cylinder. Piston was designed in a way that two sides of piston would transfer heat energy due to combustion to linear motion. This motion would convert to rotary motion through the designed mechanism connected to connecting rod. Connecting rod operation was analyzed to evaluate applied stress in 3000, 4500 and 6000 rpm. Boundary conditions including generated pressure in each side of cylinder in these 3 situations was calculated.

Keywords : combustion engine, design, finite element method, modeling

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