

## DESIGN AND EXPERIMENTAL INVESTIGATION OF MODIFIED FOUR STROKE TO SIX STROKE CAM PROFILE

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### ABSTRACT

The increasing demands for low emissions and low fuel consumption in modern combustion engines require improved methods for combustion process. In order to attain those conditions; a four stroke cam is modified into a six stroke cam by using various calculations. The camshafts and its associated parts control the opening and closing of the two valves. The associated parts are push rods, rocker arms, valve springs and tappets. This shaft also provides the drive to the ignition system. The camshaft is driven by the crankshaft through timing gears. Cams are made as integral parts of the camshaft and are designed in such a way to open the valves at the correct timing and to keep them open for the necessary duration. In this project, a six stroke camshaft is designed for a two wheeler engine by using theoretical calculations. Cam profile is designed by using the calculations. A 2D model of the Camshaft is created using modeling software AutoCAD. For manufacturing cam shaft following manufacturing method are used by Machining, Casting and Forging. From above processes we selected casting processes because it's used for bulk production. For the manufacture of Camshaft Core and Cavity is to be extracted from the model using manufacturing module in AutoCAD. Total Mould base is to be designed for the camshaft which is ready to go for production. CNC Program is to be generated for both core and cavity using roughing and finishing processes. This is also done in manufacturing module in AutoCAD. AutoCAD is the standard in 2D product design, featuring industry-leading productivity tools that promote best practices in design.

**KEYWORDS:** CAD/CAM/CAE, Auto CAD