

<b>Thesis</b>	Flow characteristics in a small engine combustion chamber
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### **ABSTRACT**

This paper deals with the study of flow characteristics in combustion chamber. A PIV method was adopted to measure the in-cylinder flow in an engine. The engine used for this study has a clear cylinder. The continuous wave beam of 1500 W halogen lamp was formed into a thin light sheet. The particles were supplied to the intake air stream. A still camera recorded the particle path lines. The shutter speed was varied to match with the range of flow velocity. The velocity fields inside the combustion chamber were calculated from the length of path line and the camera exposure time. In this paper, six types of piston crown and tree types of intake port were installed in a test engine. Effects of the combustion chamber and intake port configuration on flow characteristics are examined. In this paper, three types of piston crow with stright port were installed in a test engine. The power in case of the flat bowl piston increases upto 8.7 KW compared with 8.06 KW incase of the conventional engine.