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ANALYSIS OF SCAVENGING PARAMETERS IN TWO STROKE ENGINE

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ABSTRACT

The SI engines are of extreme importance to the automobile industry. The efficiency of the SI engine depends on several complicated processes, including induction, mixture, preparation, combustion, and exhaust flow. Externally scavenged engine is developed in I.C. Engine laboratory to eliminate short-circuiting losses and reduce the pollutant emitted by engine cylinder. This work deals with comparative experimental investigations carried out on a single cylinder two stroke S.I. Engine in carburetor mode with normal and modified scavenging system. The focus of the research presented in this paper is to estimate the scavenging parameters of a two-stroke externally scavenged engine by measuring various factors such as delivered charge, scavenging efficiency, retained mass, swept volume, delivery ratio, etc. Effects of external scavenged system on performance and emissions of two stroke engine are investigated at different loads and speeds by scavenging parameter calculations. Performance of externally scavenged engine is compared with crank-cased scavenged engine. Result show that scavenging efficiency and delivery ratio of modified engine is improved due to supply of leaner air-fuel mixture to the engine. The most outstanding result of using the external scavenged system is the significant reduction in the retained mass from engine.

KEYWORDS: *SI Engines, Scavenging Efficiency, Scavenging Parameters, Exhaust Emission*

Article History

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