

Title: Evaluation of mixture formation to improve combustion efficiencies & reduced emission in internal combustion engine: a study

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Abstract: The call for decrease in contamination has been commanded by government arrangements around the world. This defiance the ic engine manufacturer to make balance between engine performance and emissions. However,with developing innovation in the field of mixture formation and fuel injection equipment, the task has become realizable. For recent years it has been the interesting issue to improve combustion efficiency and emission of internal combustion engine by improving the fuel injection approach and optimum mixture formation. For example spray characteristics, fuel injection pressure ,injection timing and nozzle configuration can enhance the atomization of fuel and after while increase the combustion performance and nox, proceeds high brake thermal efficiency ,resulting lower co, hc ,pm emissions .the aim of the present article is to complete review of various mixture formation parameters varying injection pressure ,injection timing ,spray characteristics, nozzle geometry for engine to improve the engine efficiency and emissions regulation .whereas each fuel injection approach has its particular benefits as well as negative marks ,they are clarified in particularity, in the prospect of ,advice investigator to select the good approach for the better combustion and emission of ic engine.

Keywords: injection pressure, injection timing, spray characteristics, nozzle geometry, emissions