

ABSTRACT

The writing of this Thesis followed a research in books and on the internet especially in the field of thermodynamics. The aim of this thesis is the study of the fuel blends and their role in the behavior of the gasoline internal combustion engine. Also as part of the thesis experiments were made with various blends and the results were analyzed to extract significant conclusions. The first part of the thesis includes the theory of gasoline internal combustion engine, how it started, its progression and the different parts as well as its operation. This part also includes the study conducted before carrying out the experiments on the various blends. The second part of the thesis presents the experimental results and their analysis as they are extracted from the appropriate software and experimental internal combustion engine system at the Cyprus University of Technology. Finally different conclusions concerning the change of efficiency in each case are presented.

Keywords: fuel blends, gasoline blends, gasoline, acidic fuel, acidic gasoline, methanol blends ,ethanol blends