Aditya College of Engineering & Technology

Aditya Nagar, ADB Road, Surampalem – 533437
Department of Mechanical Engineering

Academic Year: 2020-2021

Project Title:	Experimental Studies on the Effect of Oxygenated Additives on Spark Ignition Engine	
Guide Name:	Dr. P. Danaiah	
Students Name with Roll No.:	18P35A03B4	P.RAMA MANIKANTA
	18P35A03A5	V.SAI KOUSIK
	18P35A03A7	V.SAMPATH NIKHIL SAI
	17P31A0395	N.SAI PRASANTH
	17P31A03A2	P.AKHILESH
	17P31A03B1	Y.NAVEEN JAYDEV

Abstract	**PO's Mapping**	**PSO's Mapping**
The Petrol engines provide the major power source for the transportation needs of the mankind. However the emission from the engines threatens the environment seriously and they are considered as the major source of the ` gases and the acid rain. The addition of an oxygenating agent into fuel oil is one of the possible approaches for reducing this problem because of the obvious fuel oil constituent influences on engine emission characteristics. The main objective of this project is to work on available oxygenated additives and compares their effect on exhaust gas emission with help of conference papers and journals. During study of available material, it is found that oxygenated additives are an effective method for reducing CO and HC without significant increase in the NOx emission. The objective of this project is to investigate the effect of these oxygenated additives on spark ignition engine performance and emission characteristics at variable engine speed operating conditions.	PO1, PO2, PO4, PO5, PO6,PO7,\ PO9, PO10, PO11, PO12	PSO1, PSO3

PO1: Engineering Knowledge	**PO5:** Modern Tool usage	**PO9:** Individual & Team Work
PO2: Problem Analysis	**PO6:** Engineer & Society	**PO10:** Communication Skills
PO3: Design & Development of solutions	**PO7:** Environment & Sustainability	**PO11:** Project Management & Finance
PO4: Investigations on complex problems	**PO8:** Ethics	**PO12:** Life Long Learning
PSO1: Mechanical Engineers must be able to analyze, design and evaluate mechanical components and systems using cutting-edge software tools as required by the industries from time to time.	**PSO2:** The ability to work in manufacturing and other sectors' operations and maintenance plants	**PSO3:** As part of a team or individually, plan and manage activities in micro, small, medium and large enterprises

Aditya College of Engineering & Technology

Aditya Nagar, ADB Road, Surampalem – 533437

Department of Mechanical Engineering

Academic Year: 2020-2021

Relevance to PO's and PSO's

PO1	Applied the subject knowledge in calculation for experimental studies on spark ignition engine.
PO2	Studied and analysed the performance and emission characteristics of engine
PO4	Blending of oxygenated additives proportions with base fuel.
PO5	Using the Origin software plotting the graphs for analysis.
PO6	This project will be useful to the society by reducing the pollution to the environment
PO7	This experiments will reduce the pollution to the environment
PO9	Experimentation was by the team work for analysing the parameters of the engine.
PO11	Experimental plan and budget allotment was done for completing the project.
PO12	By analysing the results the blend can able to use as a alternative fuel.
PSO1	This experimentation can be able to analyse the results for the reduction of emissions
PSO3	Will be useful for industrial growth