

35. PERFORMANCE INVESTIGATION OF MODIFIED JATROPHA OIL FUEL IN DI DIESEL ENGINE

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The performance of kirloskar, AV1 model, Single cylinder, Water cooled, Vertical, Direct injection diesel engine is evaluated using modified jatropha oil as fuel. This performance is compared for the same engine using mineral diesel as fuel. The exhaust emission parameters are also compared for these two fuels. The various fuel properties of jatropha oil and biodiesel like calorific value, flash point, fire point, viscosity, cetane index, ash residue, etc., were determined. The engine is loaded using alternator and rheostat. Biodiesel is tested in engine with various combinations. It was found out that the brake thermal efficiency for biodiesel was slightly higher than the brake thermal efficiency for diesel. Additional observation is less emission.

KEYWORDS: Jatropha oil, Transesterification, I.C.engines, Brake thermal efficiency, Specific fuel consumption.

Journal of Science and Innovative Engineering & Technology