



EVALUATION, PERFORMANCE AND EMISSION CHARACTERISTICS OF HOUSE HOLD WASTE PLASTIC INTO WASTE PLASTIC OIL

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ABSTRACT

Domestic waste plastic consisting of polythene bags, milk cover and oil cover has been degraded into the plastic oil containing hydrocarbons using fly ash as the catalyst. This has been accomplished by using a waste pressure cooker as the reactor and waste plastic can as the condenser. The yield of the plastic oil obtained was 63.2%. Low boiling hydrocarbons were removed from the plastic oil by controlled heating at 100 °C for about 30 min. The properties of the resultant oil were compared to those of commercial diesel. This oil was tested as a fuel in the diesel engine. The fuel characteristics are quite comparable to those of diesel.

KEYWORDS: Domestic waste plastic, Plastic oil, Engine fuel, Fly ash, Emission