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EXTRACTION, SEPARATION AND RHEOLOGICAL PROPERTIES OF CRUDE OIL FROM WASTE LDPE PLASTICS

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ABSTRACT

The readily available fuel has been an ever increasing global demand for energy in recent years. The demand, especially for liquid fuels is very high and the limited resources of fuel production have created bottlenecks leading to an energy crisis. Thiscrisis has led to exploring erstwhile resources for fuel production, one of which is plastic, being a non-degradable source, plastics disposed in the open environment as wastes pose a menace to the environment. Most of these waste plastics ends up at landfills. It can instead be used as a source for making fuel. This work describes a challenge to use the waste LDPE plastic to synthesize potential fuel called 'Pyrolysis Oil', since the process used in order to obtain the crude oil is Pyrolysis and separated with different grades. The obtained different graded oil from waste LDPE plastics is tested and analysed so as to validate its use as a blended fuel.

This manuscript deals with the extracting of pyrolysis oil from the waste polymers by fabricating a heating system to carry out pyrolysis at elevated temperatures.

KEYWORDS: *Waste Plastic, Pyrolysis, Pyrolysis Oil, Reactor*

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