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RESEARCH ON THE COMBUSTION OF CRUDE VEGETABLE OILS FOR ENERGETIC PURPOSES

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Abstract

The paper highlights the combustion possibilities of crude vegetable oils as fuels for stationary application. This is an opportunity of a new utilization in Romania of the vegetable oils, for electricity production and heating systems, instead of the current situation of using in transportation as biodiesel fuel. The research focuses on crude vegetable oils obtained from some indigenous cultures: rape, soy, sunflower. An overview of the agricultural potential of oleaginous plants is made, the feedstock and the costs being essential in choosing the energy crops sort. The typical properties of some crude vegetable oils are presented, and the first experiments on their ignition conditions are reported. The results of crude sunflower oil combustion in an experimental 55 kW boiler are presented and discussed.

Keywords: combustion, crude vegetable oil, electricity, heating

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