

Abstract Submitted
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Plasma assisted combustion of paraffin mixture OLEG NEDYBALIUK, VALERIY CHERNYAK, EUGENE MARTYSH, OLENA AKTAN, Taras Shevchenko National University of Kyiv, SVITLANA ORLOVSKA, Odessa National University, NATALIA BELENOK, National Technical University of Ukraine “Kyiv Polytechnic Institute”, TAMARA LISITCHENKO, Taras Shevchenko National University of Kyiv — The question of the additional activation of paraffin based solid fuels is examined. The use of plasma stimulation for this purpose is proposed. The mixture of n-paraffin and stearin in the solid state as the model of the solid paraffin based fuel is used. The plasma assisted combustion of this model is experimentally investigated. The voltage-current characteristics of discharge at the different regimes are measured. The emission spectrums of a flame and the plasma torch emission spectrum are obtained. The population temperatures of excited rotational levels and the flame temperature are determined.

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