

STUDY OF SUPERHEAT AND CRITICAL PARAMETERS OF DIESEL FUEL WITH ADDING CASTOR OIL

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The extraction and use of non-renewable energy sources, such as oil and gas, are harmful to the environment. In this regard, alternative sources of energy are being developed, one of which is biofuel. It is a mixture of methyl or ethyl esters of fatty acids, and its production is based on the recycling of various vegetable oils. The use of biofuel as an additive to diesel fuel or its alternative in internal combustion engines can reduce carbon dioxide emissions, as well as nitrogen and sulfur oxides. In addition, such fuel is completely degraded in the environment by the action of bacteria, so it does not harm plants and animals.

The report will present the results of measurements of attainable superheat and critical parameters of castor oil solutions in diesel fuel at various concentrations of castor oil. The test samples are thermally unstable compounds. In this connection, the measurements were carried out by the method of pulse heating of a substance with a characteristic heating time of 1 millisecond.

This study was supported by the Russian Foundation for Basic Research (grant no. 16-08-00381-a) and by the Presidium of UB RAS Complex Program (grant no. 18-2-2-3).