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PRODUCTION OF SYNTHETIC LIQUID FUEL

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INTRODUCTION

The term" synthetic fuel " itself is unusual. Usually, when a product is made of petroleum, or, petroleum products, it is called a synthetic product. If the product is made, say, of wood, or, so to speak, of something unrelated to oil, it is called a natural product. However, when something is said about fuel, this rule changes to the opposite. That is, if the fuel is made of oil, it is - natural, on the contrary, fuels made of something other than oil are called Artificial, that is, synthetic.

Almost 100 years ago, in the 10s of the 20th century, fuel products obtained by oil refining began to take over the whole world and became the main energy tool, first for vehicles, and later, for other industries. The reason for this is not just the fact that oil production and processing is established on an industrial scale. The main factor of oil's occupation of the world transport and energy market is the extraordinary ease of use, storage and transportation of petroleum products, that is, liquid hydrocarbons. Liquid hydrocarbons can be stored for as long as desired, and it does not lose its quality. On top of the base, it is also very convenient to transport liquid hydrocarbons. Liquid hydrocarbons can be broken down into components and each component can be used in a separate way, for other-other purposes (gasoline, kerosene, paraffin and ho kazo). Any type of fog internal combustion engine designed by engineers, when powered by liquid hydrocarbon, exhibits a very large useful coefficient of performance and uses its resources maximally. The concentration of energy that is concentrated in liquid hydrocarbons, that is, their capacity to generate heat, is a huge amount compared to solid fuels, such as coal or, wood. Among fuel products, so far, none can match liquid hydrocarbons.

The history of the production of synthetic fuels developed head-to-head in two different directions. The first of these was the so-called alternative fuel sources, and the route was previously considered as a replacement for liquid hydrocarbons, an alternative fuel with its own name. Its purpose was, for example, to rid vehicles of internal combustion engines and instead offer some other alternative engine and suitable cheap fuel. Attempts to obtain such fuel have continued almost since those times (since the 1910s). In fact, the first examples of internal combustion engines did not work on liquid hydrocarbons derived from oil, but instead worked on coal dust, or, alcohol. Both of these fuels lag far behind liquid hydrocarbons in terms of efficiency. Researchers working in this direction are still found today. The second direction in the production of synthetic fuels is hydrogen energy. Of course, many have heard about this. Is there any if, like natural gas networks in cities, hydrogen networks are pulled out and hydrogen is used as fuel! This would have been a tremendous success, both in terms of energy efficiency and in terms of Ecology. Because, while the amount of energy obtained from hydrogen combustion is very large, no harmful emissions are released into the environment as a result of its combustion. After all, when hydrogen burns, ordinary water is formed, and it will be possible to use it for irrigation purposes, or, as drinking water. Perhaps, in the future, hydrogen energy will have its solid place in the world energy market. But so far, the promising results in this regard are not visible. On the contrary, Hydrogen Energy also cannot compete with liquid hydrocarbon energy at the moment. Both of these routes of attempts, which have produced synthetic alternative fuels, have their own number of other disadvantages.

For example, hydrogen gas, the main element of hydrogen energy, is an extraordinary explosive. The risk of hydrogen explosion is 10,000 (ten thousand!) times higher. The energy capacity of alternative fuel types referred to as biofuels, such as alcohols, vegetable oils, or, while their cross-mixtures are very low. On top of the boom, the energy efficiency of biofuels from different

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sources will never be the same. Oil liquid hydrocarbons are the exact opposite. In particular, the same gasoline can be obtained from the processing of oil extracted from any part of the Earth's surface. However, it is impossible to get exactly the same biofuel from a variety of oils and alcohols. This makes it impossible to standardize the fuel extracted from them, even if it is decided to apply such fuels with low energy power in cars. That is, it remains a must to constantly refuel only this type of fuel in a car, which runs on fuel derived from a type of alcohol or oil. The great variety of types of alcohols and oils, and the fact that their sources are limited throughout the different geographical areas of the Earth's surface, does not allow this. Thus, none of these two different directions in creating alternative sources of fuel that can replace liquid hydrocarbons have so far been more effective than oil liquid hydrocarbons.

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