

ATMOSPHERE AND ENVIRONMENT FROM TECHNOLOGICAL WASTE
PROTECTION

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Аннотация: *Мақолада замонавий технологик ва энергетик қурилмаларда қўлланиладиган ёқилги маҳсулотларидан фойдаланишидаги пайдо бўладиган иккиламчи маҳсулотлар, таркиби ва атроф муҳитга таъсири қилувчи асосий факторлар ҳамда вужудга келадиган экологик муаммолар, ёқилгини ёқиш жараёнида зарур шартларга оид масалалар кўрилган.*

Аннотация: *В данной работе рассмотрен вопрос образования вторичных продуктов при использовании различных топлив в современных энергетических и технологических установках, состав топлив и основные факторы, влияющие на окружающую среду, а также, рассмотрены вопросы возникновения экологических проблем и основные требования при тонке энергетических ресурсов.*

Abstract: *The article considers the question of the forming the secondary products which used in energy and technological installation, different fuels, their compositions and main factors influencing upon environment, also the article considers the questions of ecological problems, questions concerning main conditions of fireboxes fuel.*

Key words: *energy, optimal, ecology, electricity, resources, anthropogenic, toxicity, device, diesel, energy.*

Today, the use of modern technological devices, which are effectively used in industrial production, engineering and other fields, requires a certain limitation (referring to the negative impact on human life and the environment in our atmosphere), that is, compliance with the set requirements. For example, the extremely complex nature of thermodynamic processes in the most modern energy devices used in our lives requires taking into account many factors and strictly following the rules for their practical use. This will help to solve such problems as knowing how to effectively use devices for the use of energy reserves, finding a solution to existing environmental problems, using environmentally friendly technologies while it is deteriorating, and putting an end to the energy crisis.

One of the urgent tasks of modern production is to find an optimal solution to existing types of technological issues and problems related to them. 5640100-Life safety and 5111000-Vocational education (5310600 - Ground transport systems and their operation (automobile transport)) in the qualification requirements of each of the students studying at the bachelor's degree, they are required to be competent in searching for solutions to such problems and in the future responsible for effectively applying the results obtained on a scientific basis in their activities.

Today, the secondary products released from the technological devices for processing electricity, including heat engines and devices, which are used as necessary consumer products produced in modern thermal power plants, are considered to be the primary causes of the emergence of environmental problems in the atmospheric basin. Environmental protection remains one of the most problematic and urgent issues facing mankind today. It is known that ecology is the science of the interaction of organisms with each other and with the environment, and many general technical sciences are a necessary resource for specialists to find solutions to emerging problems in this regard and to solve them positively.

In the process of using fuel resources in energy devices, the result of the negative impact of the waste products they emit on the environment can be observed in the following consequences[1-2]:

- changes in atmospheric air and its chemical composition;
- pollution of water and earth's crust with waste products;
- poisoning of people under the influence of fuel products;
- acute air pollution with toxic products developed in technological devices;
- in the complexity of ecological balance recovery.

When it enters the organism even in small amounts, it is understood as a violation of the safety process of the normal life activity of the organism, even the toxicity of the product of poisoning.

Every fuel used is deliberately burned in all technological devices, regardless of the aggregate state of the products, and the necessary heat energy is obtained. Naturally, the composition of all types of fuels listed in the sources and consumed in practice consists of combustible and non-combustible (ballast) elements.

$(C_{daf} + H_{daf} + O_{daf} + N_{daf} + S_{daf} + A_i + W_i = 100 \%)$
formed [1].

As a result of the combustion of combustible elements included in the fuel composition, complex chemical compounds are formed, that is, toxic gases that have a negative effect on the life of living organisms, as noted above. The non-combustible elements involved in the process are ash (A_i - SiO_2 , Al_2O_3 , FeO , CaO , MgO , K_2O) and moisture (W_i - H_2O). The main combustible elements of the fuel product are C and H.

The procedure for assessing the quality of combustion products used in natural devices is related to taking into account the amount of elements (constituent percentage, %) that make up its working, dry, combustible and organic masses. In addition, organic substances used as fuel that meet the specified requirements must be harmless to living organisms and the environment. The toxicity of combustion products formed when fuel burns is divided into the following groups: elemental, group and fractional composition.

There are different active and passive ways to reduce the toxicity of the produced waste gas - the concentration of harmful products formed at the end of consumption [3-4].

The use of the first method is based on reducing the generation of toxic products during the operation of the device and using fuel that produces less of such products during combustion.

The second, passive method is based on the neutralization of toxic products produced in the exhaust system of technical devices.

The risk of combustion is determined by the risk of ignition and explosiveness of fuels and is characterized by the following quantitative indicators:

- vapor ignition temperature;
- fire and spontaneous combustion;
- at the same time, the upper and lower concentration limits of the fuel and air mixture.

At these limits, the mixture is explosive. These indicators do not have a constant value, but also depend on heat exchange and transfer rate, energy from the burning source and other factors.

Combustion of flammable fuels will definitely occur with an explosion. The explosiveness of one of the oil products (diesel) is slightly lower than the other (gasoline).

In the science of technology and thermodynamics, technological devices, fuels, the use of fuels, ways of obtaining heat by burning them, finding solutions to problems that occur in technological processes in the work of furnaces, burning fuels in thermal devices based on the achievements and the use of these types of products for mankind serious attention is paid to issues of normal activity, negative effects on living organisms and the environment, what necessary measures to implement and follow to eliminate them, relying on scientific foundations.

Students studying in all specialties dealing with technological devices and their operation often face such problematic issues in their future activities. As specialists, we believe that they should be able to solve these issues based on theoretical and practical knowledge and experience, and as a result, they should be able to completely eliminate the problem and find an effective solution to any problematic situation related to protection issues.

Despite the modern type of technological devices, these problems will always remain relevant and require an effective solution. On the part of people, the protection of nature, the rational use of its resources by man is an important social issue. Its protection is the duty and responsibility of every person. Success in this activity depends, first of all, on understanding the importance of this task, always, at every step, protecting mother nature, as well as knowing how to treat waste from cars and machinery, damage caused to people, skills and habits, skills and abilities acquired through science [5].

Therefore, it is effective to minimize the negative impact of burning fuels and the resulting combustion products on the environment, and to prevent the generation of harmful waste in finding a solution to the problems that occur during the combustion

processes of fuels that are effectively used on a large scale in technological devices. to find ways, to have the ability to strictly follow the mandatory requirements to reduce negative consequences.

Sokha's specialists are trained in the science of product preparation technology, effective use of devices widely used in all sectors of the economy, national economy, finding ways to improve devices, practical application based on the scientific results of accumulated theoretical and practical knowledge and experiments. can only be achieved through knowledge.

The anthropogenic impact on the environment is increasing year by year, emissions from cars and the stage of development of society lead to the emergence of a number of environmental problems. The teacher is recognized as a link in the study and implementation of systemic factors that are important for the formation of ecological culture in their person. Currently, the concept of teacher's environmental culture is not sufficiently defined[6].

We analyzed the scientific and social work of scientists who were engaged in methods of reducing the amount of certain products produced by the use of traditional energy sources used in such technological devices and cars, and in this regard we understood and received results related to the solution of some issues. Therefore, we came to the above conclusions. We will present the results of our research in our future works.

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