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Annotation: *Efficient use of the proposed device in the laboratory, including the technology of alcohol production in the chemical and food industries, automatic control devices are of great importance in reducing the amount of heat consumed by polyethylene columns, speeding up the process of energy saving and quality products.*

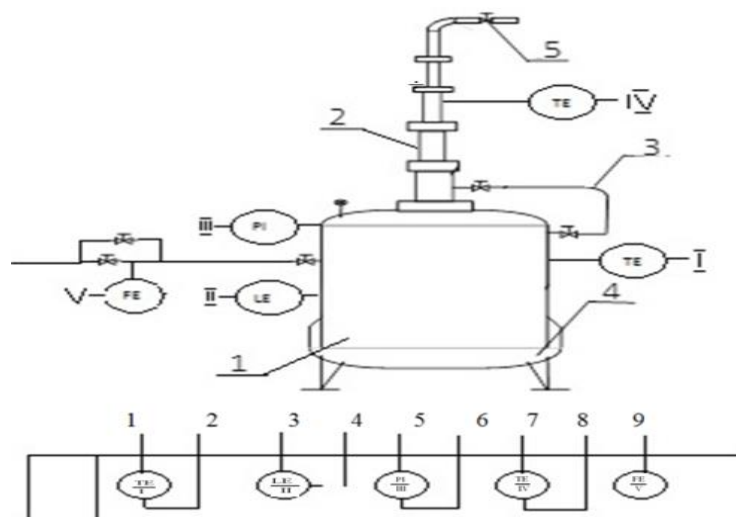
Keywords: *energy costs, column, capacity container, heat energy, pressure, level, consumption, steam.*

Achievements in the field of chemistry, food industry technology and other technologies are one of the main directions of technical development of the national economy, improving the welfare of the population, as well as automation of production processes, improving production efficiency, improving product quality. increase, reduce energy costs, improve working conditions, ensure safety in production and automation of production equipment in the service of environmental protection. ladi. As a result of research by several scientists, these simple alcohol distillers have been developed and patented in a variety of ways and designs. It is used in the laboratories of the chemical and food industries to produce high-quality alcohol raw materials. As a result of research with young talented students, a simple alcohol production test device was developed. By comparing similar devices and studying their operating conditions, it is more convenient to reduce the consumption of thermal energy in the environment through a series of experiments aimed at accelerating the process. Can be used in training laboratories. The container part of the device is provided with raw materials for alcohol production (can be wheat, barley or various vegetables), the heater is transferred to the container through the shell. heat is given, the vapor released from the raw material as a result of boiling is converted into alcohol during the passage through the columns. You can get alcohol from tap water. An additional pipe connecting the column and the container balances the process. This device was selected as the closest analog (prototype).

The difference from the closest analogue of the proposed utility model is that the columns in the device are made of polyethylene material. This increases the energy saving level and process speed of the device. The column and the tank are equipped with additional tubes connected to the tap, which helps to control the process of alcohol separation. consists of.

Function: The container part of the device is supplied with raw materials for alcohol production (can be wheat, barley or various vegetables) (1), heat is transferred to the container through the heating shell (2), as a result of boiling of the raw material, the vapor released from it is converted into alcohol during the passage through the column (3). Alcohol can be obtained from the tap (4). The process is controlled by an additional pipe (5) connected to the column and the tank. The modernization and creation of new enterprises in the chemical, food and other industries involves a large amount of work to address various issues of automation of production processes. The development and automation of automation systems is a multi-step process. Scientific research, design and installation work, as well as ensuring the reliable operation of automation systems in operation. Problems of automation of modern production processes. , in addition to work in the field of automation of technological processes, it also requires the acquisition of a common technical

language in which a clear and valuable exchange is possible. At the same time, all specialists should have a common understanding in the field of instrumentation of the automation system, implementation of the given laws of adjustment, methods of installation of instruments and automation tools, transmission of pulse and command lines. The proposed experimental device automation scheme consists of basic adjustable parameters.



TYe-I tank temperature, RI-III pressure, LE-II level, FE-consumption, TYe-IY column temperature control. is provided by changing the current consumption at the input. The scheme provides automatic adjustment of the ambient temperature by changing the consumption of the heating agent.

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