

**AQUEOUS EMULSION MIXTURE PREPARATION DEVICE**

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**ABSTRACT**

In the article, issues related to the justification of the technical characteristics and parameters and structural structure of the device for preparing the aqueous emulsion mixture are studied.

**Keywords:** Emulsion, bearing, housing, pulley, plate, cylindrical vessel, belt.

**Introduction**

The increase in the number of people in our country leads to an increase in their requirements for housing. Based on this, it can be concluded that in the future, the reform and rapid development of the construction industry in our country is one of the main tasks [1-4].

In particular, the words of the President of our country, referring to the construction industry, and saying, "One of the areas of our economy that has not been fully utilized and has great potential is the construction industry" [3-7].

**The Main Part**

The reform of the construction sector requires, first of all, abandoning the existing old patterns in the design of buildings and structures and starting with research on projects based on innovative approaches in accordance with world standards. Therefore, it should include requirements aimed at ensuring the spiritual sustainability of buildings built for the population's residence, which are based on the following principles:

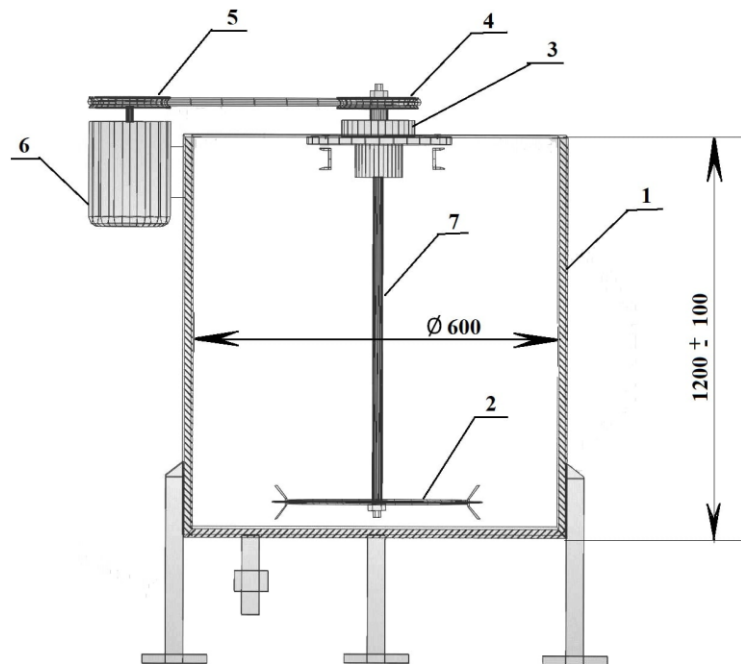
- the ability of buildings to be used for various purposes and adapted to frequent replacement of communication technologies, including having constructive solutions;
- environmental compatibility with the external environment;
- the architectural appearance of the buildings, which is compatible with the level of social and cultural development of the society;

Therefore, the large-scale development of the construction industry leads to an increase in the need for construction materials.

At present, a lot of work is being done in the field of construction. These include new projects of construction buildings, new building materials, new paints and new techniques and devices related to the construction industry. We know that the population is increasing day by day, and their demands for housing are also increasing. This leads to an increase in the demand for construction materials. In our country, based on the requirements of entrepreneurs and small enterprises that produce various materials related to the construction industry, domestically produced, cheap and mobile devices are being produced [8-12]. One such device is an aqueous



emulsion mixing device. In the field of construction, the role of bricks is also very important. Therefore, an aqueous emulsion mixing plant is proposed to meet the requirements of the paints. The purpose of the water emulsion mixing plant is to produce paints used for painting construction buildings, industrial buildings and other buildings. This device is mainly intended for entrepreneurs and other similar manufacturers.



**Figure 1. Aqueous emulsion preparation device**

*1-Cylindrical container; 2- propeller; 3-Bearing housing; 4-Drive pulley; 5-Leading pulley; 6- Electric motor; 7-Val.*

#### **The principle of operation of the device**

To prepare an aqueous emulsion in the device, the following should be done: Liquid raw materials are poured into the 1st container, and the 2nd filter is used to mix the poured liquid raw materials.

In turn, the blade is attached to the 7th shaft, and the shaft is driven by the 6th electric motor. 4.5 pulleys are installed on the electric motor and shaft for transmission of motion. These pulleys transmit motion and control speed. The prepared aqueous emulsion is poured through the pipe under the vessel 1. The size of the container in the device can be changed to different capacities.

Depending on the size of the cabin, the electric motor is selected.

The advantage and convenience of the device is that, firstly, it is mobile, and secondly, it is simple in its construction, and in fact, the details of the device are made from local raw materials, and the technology of its preparation is also easy.

**Table 1. Technical characteristics of the device**

<i>No</i>	<i>Parameters</i>	<i>Amount</i>
1	Vessel diameter, PH, mm	600
2	Cabin length, h, mm	1200
3	Blade diameter, $\Phi$ , mm	300
4	The number of revolutions of the blade, $\eta$ , rev/min	1000
5	Electric motor:	
	Number of revolutions, $\eta$ , rpm	1000
	Power, N, kW	3.0

### Conclusion

Taking into account the capacity of the device's container and its mobility, the device can be introduced to small and medium-sized production enterprises.

At the same time, it is possible to change the production volume of the device by changing its container, that is, by increasing the capacity of the container. The device has been tested and put into production based on experience.

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