



**EFFECTIVENESS OF APPLICATION OF MODERN MELIORATIVE TECHNIQUES
IN CLEANING OF OPEN COLLECTORS AND DRINKS**

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ANNOTATION

The proposed workplace is a new JY230ELD, one of the foreign equipment entering our country. It is used as an interchangeable workstation for JY230E excavator. The new excavator for use in agriculture construction consists of the following main components and other parts. Exacerbation of the global food problem increase agricultural production and is known to make land use more efficient. At the same time, land reclamation works and the use of the most modern equipment are becoming increasingly important.

INTRODUCTION

The state has adopted a number of laws and decrease on the rational use of water resources, land reclamation, as a result of consistent policy to ensure their unconditional implementation, to improve the reclamation of irrigated lands in the country and thus increase crop yields is being achieved. In particular, the Decree of the First President of the Republic of Uzbekistan dated October 29, 2007 No. 3932 "On measures to radically improve the system of land reclamation" and April 19, 2013 "On further improvement of land reclamation in 2013-2017 and resolution №PQ-1958 "On measures for the rational use of water resources."

In order to implement this decision and ensure the effective operation of existing collectors and drains in the region, four state unitary enterprises specializing in land reclamation and other water



management activities have been established, which now have more than 50 different types of excavators used in cleaning and reconstruction of collector-drains.

Due to the lack of a systematic, comprehensive approach to the formation of projects for land reclamation, as well as specific sources of funding, the poor performance of water management systems and water consumers' associations in recent years has led to a decrease in reclamation, rising groundwater levels and increasing mineralization more than half of the land currently irrigated is saline to varying degrees. At the same time, more than 16% of irrigated lands belonging to farms are in unsatisfactory condition [1].

METHODS

The sown areas are designed to level the surface of the fields in irrigated and fallow areas. Leveling of agricultural lands is one of the most important conditions for the effective use of techniques and sustainable high yields. If the surface of the fields is uneven, the yield of cereals decreases by 15 or 20 %, and that of vegetable crops - even more. Leveling of irrigated areas is one of the factors that change the physical and mechanical properties of the fertile layer of the soil, in addition to leveling the surface of the field. The leveling process affects the soil in several ways simultaneously, including the friction of the tractor running gear and the soil pile, the shear forces, the running gear of the leveling device, pruning and transplanting the fertile biological part of the soil layer. The following have an unfavorable effect on the soil, i.e., the structure is broken, the top layer is compacted, the topsoil is displaced and the yield is reduced, so the quality of the agro-technical work is reduced by reducing the impact on the soil leveling is required. In order to perform the task perfectly, the goal is achieved by inserting a two-disc work tool into the structure of the leveler and using it to remove the soil to the design value in one pass of the machine and remove the soil from the machine dimensions. The proposed workplace is a new JY230ELD, one of the foreign equipment entering our country. It is used as an interchangeable workstation for JY230E excavators. The new excavator for use in aquaculture construction consists of the following main components and other parts. Exacerbation of the global food problem Increase agricultural production and is known to make land use more efficient. At the same time, land reclamation works and the use of the most modern equipment are becoming increasingly important [3]. That is why the government of our country pays great attention to the use of the most modern reclamation equipment produced in the world. JY230ELD, manufactured by JONYANG in the People's Republic of China and the first samples of which were brought to the Republic of Uzbekistan, JY230E chain hydraulic excavators are characterized by modernity, ease of operation and, in particular, the latest electronic equipment. It per hour 2.6 km and 4.6 km can move at speeds up to. The working capacity of the six-cylinder engine is 5.9 liters. Power 125 KW. Hydromoids are cooled by air. Dipper 0.65 m³ has a capacity. The length of the excavator hose is 7500 mm and 3310 mm can rise too.

Results

This excavator 8920 mm and looking at the basic design and capabilities of the excavator, we can see that it is equipped with the most modern control, monitoring and safety equipment. In particular, the



performance of all important components and equipment of the excavator is clearly displayed on a special monitor. For example, it shows the temperature of the engine cooling water on special equipment, and when the standard level changes, the lights also sound. Similarly, when the amount of fuel decreases by 10%, the lights come on and are recorded via text. Experts are well aware of the importance of the condition and temperature of hydraulic oils during the operation of the excavator. If the temperature of the hydraulic oil in this excavator rises or falls above 900, it will be immediately reported on the monitor. The number of revolutions of the engine is also expressed in terms of real-time lattice liquid crystal readings. Clogging of the air filter can be reported by ringing or texting [4]. Engine power is 125 KW. The issue of ignition and use of diesel in adverse climatic conditions was in the focus of the inventors of the car. Especially on very cold days it is planned to use special lubricating oils, hydraulic oils and fuel for driving the engine. A separate heating process is followed to avoid damaging the pump, motor and other equipment. Surrounding the water tank in severely cold areas is useful for heating the machine [3]. The use of liquid and fuel heaters, as well as the addition of an additional electric battery will help to start the engine. In order to be effective in the use of excavators in our extremely high temperature climate, special types of fuels and oils are provided, and their timely use is very effectively.

In conclusion, when using modern excavators from abroad, depending on the type of work performed, we can ensure that the equipment works in a constant state. Currently, the best way to improve the reclamation of agricultural lands is to regularly clean the collectors and make full use of modern techniques in their cleaning.

List of Sources Used

1. Proceedings of the traditional scientific-practical conference "Modern problems of agriculture and water management" Part II. Tashkent 2013 page
2. Instructions for use of JY230ELD, JY230E chain hydraulic excavators.
3. I.S.Hasanov, P.G.Hikmatov. Study of the effectiveness of the use of planning machines and the choice of the type of tool for farmers of Bukhara region. Reports of the international scientific-practical conference. Tashkent. Tashkent, 2003.
4. Yu.A.Shevnnin, G.G. Burmiysky. Ways to improve the efficiency of land-planning machines in construction and agriculture. Tashkent., 1990, p.27.
5. Contemporary scientific and practical conferences on "Modern problems of agriculture and water management" Part I. Tashkent, 1996, p. 96.
6. N.Rakhimov, R.Muradov. Manual on laser leveling and soil softening. Tashkent, 2012 p.p. 23-26.
7. Khikmatov P.G. The study of the qualitative and technological indicators of the work of the long-base scheduler in order to substantiate the optimal width and motion speed. Abstract of the Ph.D. Tashkent, 1978.
8. Vasilenko P.M. Elements of the method of mathematical processing of experimental results. Moscow, 1958.



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9. P .G Hikmatov and others. Theoretical prerequisites for determining the productivity of the shneck, working with the scheduler bucket. Russia. "Agrarian science" scientific-theoretical and industrial journal. № 6. 2015.

10. Khasanov I.S. and others. Determination of the productivity of a screw working body. Russia. "Agrarian science" scientific-theoretical and industrial journal. № 6.2016