

EK 20-27 IMPROVING THE WORKING EQUIPMENT OF SINGLE BUCKET
HYDRAULIC EXCAVATOR

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Annotation: *This article provides information on weeding and repair of drainage ditches. It also details the lack of existing equipment and the proposed upgraded equipment.*

Keywords: *bucket, excavator, canal, collector, hydraulic cylinder, bracket, reclamation, object, technique, technology.*

Today, our country occupies a leading position among the agriculturally developed countries. The reason for this is that he uses his fertile land in a timely manner and brings the level of productivity to a higher level by cultivating it with modern land cultivators and agricultural techniques and technologies. This indicator of Uzbekistan connects the developed countries of the world to cooperation in the field of agriculture with Uzbekistan without any objection.

The fertility of the land depends on water. Timely cleaning of ditches and ditches with modern melioration machines helps to fully achieve water supply to the crops of the irrigated land. For this reason, we would not be mistaken if we say that the service of our current technologies is very great. Because without these techniques, the possibility of digging and cleaning reclamation objects will not be sufficiently provided. There is a big difference between old-fashioned techniques and currently imported and domestically produced ones. The main ones are fuel cost, time delay, quality of work and so on. If we return to our current state-of-the-art durable machines, their quality of work is very high, fuel consumption is moderate depending on the work, and time is saved. The ability to fully use our outdated agricultural machinery is not sufficient in terms of demand. The head of state has given a lot of benefits to our agricultural entrepreneurs. We can see that our entrepreneurs are making full use of such opportunities. It is worth noting that our farmers can easily export their crops to foreign countries and bring foreign equipment and technologies to their income, and they are not only limited to this, but they also study their skills in this field based on mutual cooperation in developed countries. These works have given clear results of extensive development in the field of agriculture [1].

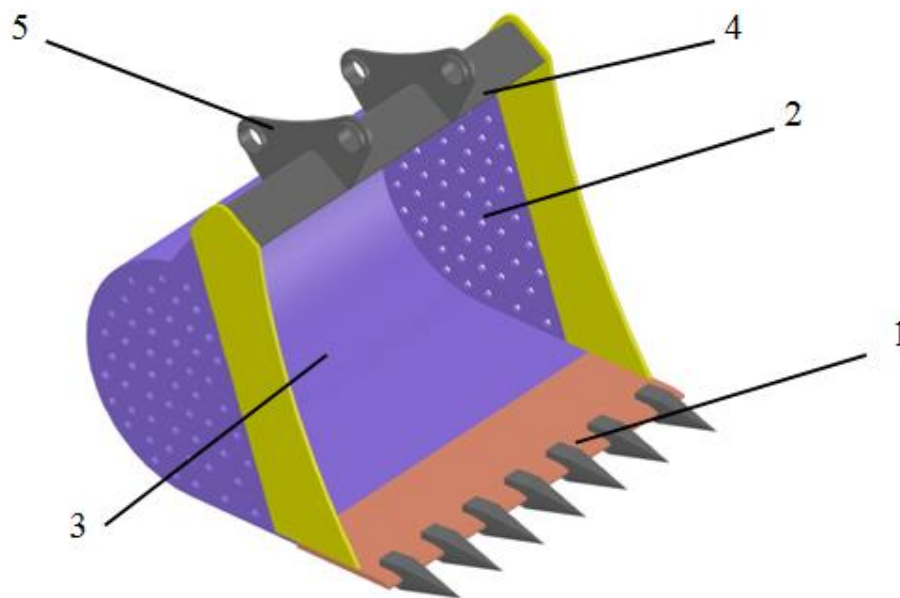
As we know, during the process of using ditches, some grass grows on their surface. At the bottom, sediments sink and form a layer of clay, which reduces the

cross-section of the trench and limits its effective use. These grasses and sediments must be cleaned in the specified periods. These works are mainly carried out using single-bucket excavators. A bucket excavator is a self-propelled earthmoving machine that works cyclically. Its working process consists of the following: It separates the soil from the massif with a single bucket of a specific design and capacity, brings it to the place of discharge and discharges it to a special place or a vehicle [3].

Cleaning of ditches built and used in our country is carried out mainly with the help of draglines and hydraulic excavators. Grass and reeds are harvested and harvested using special machines. These machines have simple, active (milling or rotor) and mixed working equipment. When checking the technical condition of collector drainage networks in the Bukhara region, it is observed that in most cases they grow with coarse-stemmed plants (reeds, sedges, etc.) and the volume of cleaning and repair works increases from year to year [2].

The use of single-bucket general construction excavators in the current technology of cleaning the channels of drainage networks leads to changing the channel indicators (dimensions). From the bottom and sides of the canal, mainly plant roots are dug up to 0.5 meters thick (large lumps connected by dense veins) [2].

It is necessary to develop specialized working equipment for high-quality cleaning of sewage network channels from plants without changing their shape and cross-sectional dimensions. This is the main issue for the development of research and development in the field of complex mechanization of cleaning and repair of irrigation systems. Based on the above problems, we recommend an improved solution.



1- picture. Improved working equipment

1 – incisor teeth, 2 – hollow side wall, 3 – the back wall of the cavity, 4 – sledge hammer, 5 – bracket.

It is known that there are a number of problems in the cleaning of water ditches and ditches with existing buckets. In particular, in the process of cleaning watery and muddy ditches, more water-mixed clods enter the ditch. As a result, up to 30% of the volume of the bucket can be occupied by water. In order to solve this problem, we have improved the search engine. The improved kovsh consists of the following construction. It consists of 1 bucket teeth, 2 bucket side walls, 3 bucket rear walls, 4 bucket bars and 5 brackets.

Cleaning of dirt with an improved scoop is carried out as follows. With the help of a hydraulic cylinder, the bucket is immersed in the slurry through the bracket. The bucket teeth provide easy access to the slurry and cutting of the layer. Kovsh ensures that the water contained in the slush mud flows out of the holes in the side wall during the shearing process. As a result, a more sheared turbidity layer settles in the cavity. As a result of this, the efficiency of using the bucket increases.

Improved working equipment allows to increase productivity by 12-17% compared to existing excavators. It is possible to repair such a car at any regional factory.

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