



## PROBLEMS ARISING IN THE PROCESS OF CLEANING CLOSED HORIZONTAL DRAINS AND MODERN SOLUTIONS TO THEM.

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**Abstract:** The main problems that arise during the use of closed horizontal drains are given in detail, and recommendations are given on how to prevent and eliminate these problems.

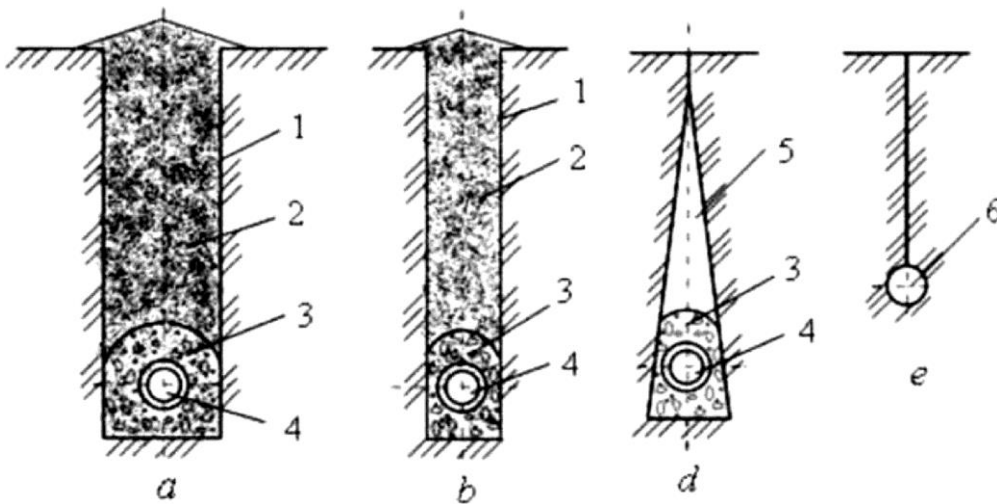
**Key words:** drainage, machine, mechanism, cleaning, pipe, horizontal, technology, open drainage, soil, construction.

Effective use of irrigated lands these days improvement of land reclamation is being carried out in the agriculture of our country is one of the main directions of economic reforms. For this reason improvement of land reclamation and water resources in the current period rational use and introduction of new water-efficient irrigation systems remains one of the issues of high importance in the field.

Medium and high salinity used in agriculture reducing the salinity level of the land by the method of salt washing and underground in order to prevent the rise of the water level effective use of networks or closed horizontal drains is necessary.

Open drains are less dense than subsoil, water drainage It was built in areas with good potential, and they were buried every two or three years and requires cleaning from various weeds. Open drains agriculture the total land area of the areas intended for planting crops leads to limitation. This, in turn, is land use causes the coefficient to decrease. That's why it's closed today Effective use of horizontal drains is an urgent issue that is waiting for its solution is one of the problems.

According to the closed horizontal drainage structure, the types of drainage are as follows:



a) trench (width 0.6...0.8 m); b) trench is narrowed (0.3 m wide); d) trenchless; e) hole 1-trench; 2-reburied grunt; 3-filter (filter); 4-drainage pipeline; 5) crack; 6) hole.

Closed horizontal in areas used for irrigated agriculture the depth of the drainage trench is 2.5...4.0 m, the diameter of the drainage pipe is 100...300 is mm. Conducted scientific research and experimental work, drainage trench construction shows that the method (Fig. 1,a) gives a good result. Because, around the drainage pipe the thickness of the standing filter material is the same, on average 0.15 m.

In order to increase the productivity of the drainage construction machine the width of the trench is narrowed (Fig. 1, b). But the drainage of the filter material non-uniform distribution around the pipe, that is, less on the sides of the pipe,

It is effective in drainage due to the large number of places on the lower and upper sides does not allow use. For effective use of closed horizontal drains, use them every 2-3 years regular cleaning is required during the period. Because different within the drainage pipes due to the use of closed horizontal drains the roots of foreign plants grow and the functioning of the drainage pipe under the soil complicates. Cleaning from weeds and other sediments

For this purpose, it is required to clean the drainage pipes every two to three years. From this In addition, monitoring wells are installed to check the operation of the drainage system it is necessary to preserve, clean and protect them.

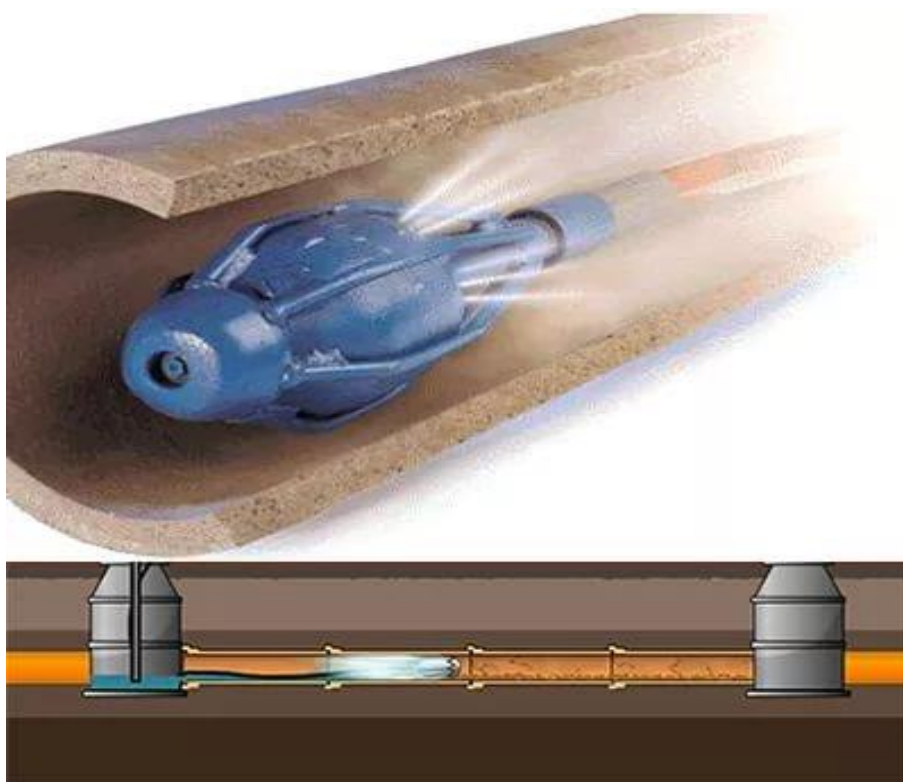
The task of control wells is to check the functioning of the drainage system and every consists of using it for cleaning drainage pipes in three years. Drainage special machines and mechanisms for cleaning pipes, specialists and scientists recommended by, and some of them have been applied to production, but due to the inconvenience of technical, technological and some organizational work is not widely used in production. One of them is PDT-125 is a machine that washes and cleans drainage pipes under water pressure. PDT-125 The disadvantages of the drain cleaning machine are as follows: currently control used in the cleaning of closed horizontal drains wells are closed every 100 meters due to some economic reasons monitoring wells of horizontal drainage pipes at a distance of 300-400 m is being installed, therefore the PDT-125 machine cannot be used. To this the reason is that the flexible pipe of the PDT-125 machine is up to 125 m long It just takes to clean the drain pipe.

Construction of closed horizontal drainage pipes according to new technology in the process, a resistant stainless steel rope is laid inside them, and this rope is made of it it is used in the cleaning of drainage pipes, i.e. when it is time to clean a special cleaner on the rope

inside the drainage pipe falling into the control well the device is installed. Rope from the pipe inside the pipe through a special device Drainage by pulling and moving the cleaning rope back and forth the pipes are cleaned. Clean the drainage pipes using the cable equipment the disadvantage is as follows: inside the pipe during the laying of drainage pipes High-quality stainless steel requires manual labor (at least two people), the efficiency in cleaning the pipe is low.

Despite the fact that this technology is complicated, the pipeline by using it during the cleaning process, a special steel rope is connected to the cleaning equipment and it drains leaving the pipeline for the next period of cleaning will leave. The first type is to clean the pipe using an abandoned steel rope technology.

Flushing and cleaning of drainage pipes is considered as a problem and a solution to this problem a new technology for cleaning drainage pipes has been developed.



The following is the modern technology of drainage pipe cleaning that we recommend has advantages: it is convenient and easy to use for cleaning the pipe, it requires a lot of hand strength not (used with a single operator), flexible special high pressure Chidami pipe allows you to clean the drainage pipe at a distance of 300-500 mand carry out cleaning work by transferring the mask technology in any conditions can be increased.

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