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GENERALIZED WATER SUPPLY SYSTEM IN VILLAGES

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ABSTRACT

It is desirable to overthrow the generalized water supply system in villages where there is no source of drinking water. That is, water is supplied from the water source to dozens of villages located on the ridge through a single trunk water intake pipeline. In some cases, the self-sufficiency of such a trunk water transmission pipeline can reach 30-40 km and even more. Therefore, in such cases, it is desirable to divide the trunk water transmission pipe into several separate sections by water–retaining capacities (reservoirs) and pumping units.

We are all well aware that the provision of clean drinking water to the population is becoming an urgent issue for all countries today. A lot of work is being done in this direction under the leadership of the president of our republic. The implementation of the rural water supply system at the level of today's requirements requires great experience and qualification from engineer designers and builders. There are many technical literature, guidelines and jurisprudents on the design and construction of a municipal water supply system. But technical literature and recommendations on the rural water supply system although there will be no. For this reason, a group of scientists from the Samarkand State Institute of architecture and construction and Jizzakh Polytechnic Institute have been conducting scientific research on this issue for several years. We will dwell on some of the results of this work in this article.

It is desirable to overthrow the generalized water supply system in villages where there is no source of drinking water. That is, water is supplied from the water source to dozens of villages located on the ridge through a single trunk water intake pipeline. In some cases, the self-sufficiency of such a trunk water transmission pipeline can reach 30-40 km and even more. Therefore, in such cases, the collapse of the national water supply network does not correspond to the economic crisis. When water is absorbed into dozens of villages through a single trunk water transmission pipeline, the working pressure in the pipeline is very high, which leads to inconvenience both economically and in the use of technical equipment. Therefore, in such cases, it is desirable to divide the trunk water transmission pipe into several separate sections by water–retaining capacities (reservoirs) and pumping units.

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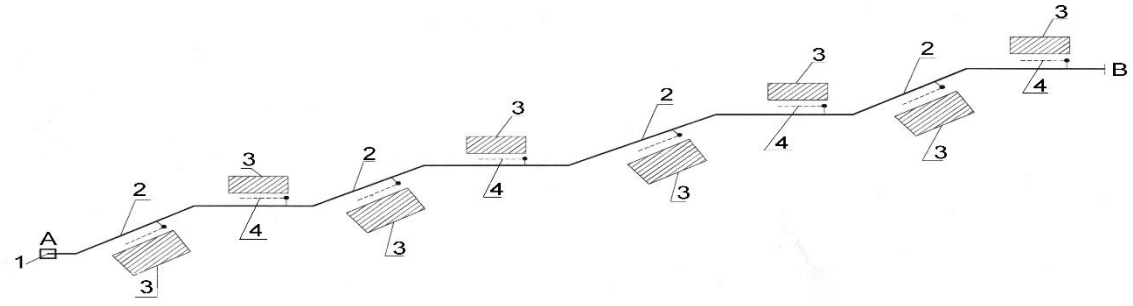
We recommend that you use water pumps that are sanded in water to drive water away, that is, deliver water to consumers. As a result, it will not be necessary to build a building in olokhida for the pumping station and heat it in autumn and winter. On the basis of the above-mentioned recommendations, the project, in which the water supply system of 20 villages belonging to the meeting of citizens of Polatchi village in Pakhtachi District of Samarkand region was used, was developed by the authors in 2008, was built and launched by the engineering company of the Samarkand region municipality at the beginning of 2009. As a source of water for the project, the main water supply pipeline "Damkhoja-Bukhoro" was purchased. The total length of the summarized trunk water intake pipeline was 18.5 km. Two pumping stations were built on the basis of the project for water transmission. The first water-lifting pump station "Damkhoja-Buxoro" was built next to the main water transmission pipeline. The second was built after 10 villages. For water storage, two 50 m^3, one 10 m^3 capacity (reservoir) were built, and four water-submersible pumps were installed. Polyethylene pipes were used for the generalized water absorption trunk pipeline. The diameter of the pipe at the initial plots of the trunk water intake pipe was 200 mm, at the last plots was 63 mm.

Water is supplied to 20 villages owned by the Polatchi village Citizens Assembly through a water supply system that has been generalized for 3 years. At the same time, the state of all devices, equipment, pumps and pipes in the water supply system is constantly being studied by the authors.

Often, several villages are served by a single generalized water supply system. For example, drinking water is supplied to several villages through water transmission networks, 2 with the help of pumps located "A" (picture - 1) in the water intake facility. In connection with the fact that the distance between the villages is quite long, the length of the water transmission network can be tens of kilometres. Therefore, at the 2 starting point of the water network, the pezometric elevation height of the water "A" will be much larger than the "B" at its end point, that is, Ha > Hв. In such cases, it is desirable to distribute water through pressure gauges from the 2 initial part of the water supply pipes to the 3/4 length part.



Picture -1

1-water intake facility, 2-water transmission pipeline, 3-villages, 4-water distribution network.

2 from the water supply pipes it is convenient to give each village through a separate water distribution network through a water meter. Firstly, if conditions are created to give water to a each village on a graphical basis, and secondly, the each village is easier to knit by regulating the

working pressure in the water distribution networks.

Currently, polyethylene pipes are used for almost all water transmission networks. When choosing polyethylene pipes, great attention should be paid to the working pressure that is formed in the water transmission pipes. If polyethylene pipes are used at high pressure for a short period of time, that is, if they are used at high pressure above the intended pressure, then the polyethylene pipes will quickly run out of work, and the service life will be sharply reduced. For this reason, when using polyethylene pipes, it is necessary to install flanges that do not allow increased pressure in the pumps.

The graph of water consumption in villages is often changed by hours. This in turn has a negative impact on the performance of the pumps. Therefore, in the pumps used in rural water supply, a special device should be used to keep the pressure at a norm after the pump. Observations on the operation of the pumps have shown that it is necessary to ensure that the height of the water in the water storage tanks is automatically turned off when the distance from the push part of the pump to the water level is reduced by 1 meter. It is necessary to ensure that the pumps fly automatically when changes (voltage increase or decrease) occur in the supply of electricity. As a result of the interruption of electricity or the graphic transmission of water in the villages, there will be no water left in the umulad trunk water transmission pipes, that is, the choke part of the trunk pipe will be drained. This has a negative effect on the pumps in the operation of reversing pumps. Therefore, after the pumps, it is necessary to install pressure sliders.

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