

Technical Condition of Korakol Pumping Station

Jamolov F.N.

NRU TIAME associate professor of Bukhara Institute of Natural resources management (PhD)

fnjamolov@gmail.com

Jurayeva N.

NRU TIAME master of Bukhara Institute of Natural resources management

Abstract: This article describes the technical condition of the Karakol pumping station in the Bukhara region during its operation.

Key words: pump, water, unit, engine, energy.

- Pumping stations under the Amu-Bukhara Irrigation Systems Basin Department and the "Karakol" pumping station at the expense of the Department of Energy was put into operation in 1962. It supplies the land of Karakol district with water. The Karakol pumping station serves to supply water to 27,900 irrigated cotton, wheat and agricultural crops. In 2012, the Karakol pumping station was reconstructed and commissioned by foreign investors.
- Currently, 4 units of ZLT/1300 and 2 units of ZLT/1400 pumping units are installed at the "Korakol" pumping station. Total water discharge capacity is 38.2m³/s. The total capacity is 4250 kW. The water lifting height is 8.5m. The diameter of the pipes is 2020 mm, the total length is 160 m.
- Composition of the "Karakol" pumping station:
 - Lead channel
 - Front camera
 - Sediment trap
 - Pump chambers
 - Suction pipe
 - Pump station building
 - Pressure pipe



Pic-1. Pumping station

Technical condition of Karakol pumping station.

Avankamera - cloudy, suspended sediments occupy the surface of the water in front of the fence.

The pump unit - the working wheel is damaged, the impellers have finished their work, cavitation is occurring as a result of air mixing with water.

Pressure Pipe – Due to the high turbidity of the water in the delivery channel, the pressure pipe has been eroded.

Conveying channel - the slopes of the channel have been reeded, silted, and the slope coefficients have changed as a result of reeding.

- Recommendations for improving the operation of the pumping station
- - It is necessary to clean the leading channel from turbidity;
- - It is necessary to clean the reeds on the canal slopes;
- - It is necessary to regularly clean the mud in the front camera;
- - It is necessary to carry out current repairs of pumping units on time;
- - It is necessary to check the pressure pipes and repair or replace the corroded areas;
- - It is necessary to install a hydopost in the carrying channel. The reason is to measure the water consumption from the pumping station;
- - It is necessary to restore the slopes of the carrying channel based on the project;
- - It is necessary to constantly improve the qualifications of the working staff;
- - It is necessary to use foreign experiences in the processes of use.

References:

1. M.M.Muhammadyev, B.U.Uryshev. Design of pumping stations. Do not use. T., TDTU., 1998. - 74 p.
2. K.I.Lisov, M.A.Chayuk, G.E.Muskevich, exploitation of a reclamation pumping station. M., 1988. – 255 p.
3. V.F. Chebaevsky. Pump and pumping station. M., 1989. – 416 p.