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IMPROVING THE OPERATIONAL CONDITION OF THE AMU-KORAKOL CANAL

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Annotation
In this article, some information is given about the function of hydroelectric units and, at the same time, the importance of water distribution structures in water management, the role of hydroelectric units in distributing the water limit of hydrostations.

Keywords: hydronozzle, hydropost, water distribution, limit.

The Amu-Karakol canal is a canal in the Bukhara region. It starts at the foot of the rolling hills on the right bank of the Amu river. It was built in 1963. Its length is 55 kilometers. Water transfer capacity is 48 m³/s. It irrigates about 50,000 hectares of land in the Olot and Karakol districts of Bukhara region. The Amu-Karakol canal ends at the Karakol pumping station (the 16.2-kilometer long canal that supplies water to it passes through the irrigated area.
Hydrostructure of the Amu-Karakol canal. Launched in 1962. The author of the project is Yu.M.DANILOV.

Technical indicators

Intervals	2 piece
The width of the intervals	6.5 m
Height	8.1 m
Sizes of zatvor	6x2.5 m
Theft of everything	4.7 tonna
Water permeability	46 m³\sec

The water-carrying channel reaches the Dual water distribution facility of the Amu-Bukhara machine channel through a natural channel from the distance PK 137+70 of the water distribution facility of the Amu-Bukhara machine canal.
Sheath dam parts of the distribution structure are made of reinforced concrete in the open type, the structure consists of the components of the main flute bed:
- Dam construction;
- water impact part with risberm.
Ponur - 32.3 meters long, 36.0 meters wide, made of 20-30 cm monolithic reinforced concrete coating.

The concrete part of the dam is made in the shape of a rectangle. The side walls are 130 centimeters wide, and the intermediate columns are 100 centimeters wide. It consists of 4 prolyots (intervals) of 5 meters each. 6x2.2 meter flat shutters are installed in these intervals.

Shovva (vodoskat) - a 12.85-centimeter-long vodoskat begins after the sluice part of the dam.

The water impingement section with riser - the length of the riser is 35 meters, the slopes are reinforced with concrete, the total height of the slope cover is 8.9 meters.

Some deficiencies were discovered during the field observation work on the Amu-Karakol canal

The capital construction and reconstruction of the Amu-Karakol canal hydroelectric unit is planned for the end of 2021, and the structure has not yet been reconstructed. , the safety of the structure, agricultural land and population is ensured during floods, and the technical condition of the structure has been brought to a satisfactory level.

The operating organization must constantly monitor the old bed of the river, because it must take measures to use it in unexpected situations, i.e., in case of large floods, in order to ensure the safety of the population, areas and facilities.

On the day of inspection, on the canal: Amu-Karakol canal was partially cleared of silt at the border of the structure, the cleaning work should be completed, the construction of a water barrier structure on the canal should be started as soon as possible, because the condition of the canal does not meet technical requirements at all.

1. Control measuring devices (Control Measuring Devices): not planned in the channel according to the project.

2. The condition of the concrete part of the structure: It consists of a concrete structure, the condition is satisfactory, it has the capacity to carry water in the project, there is subsidence in the new part of the concrete structure, some work has been done to prevent it, it is developed in cooperation with the contractor, designer and operating organization. A person should take immediate measures to prevent it, otherwise unexpected dangerous situations may occur.

The reinforced concrete side of the structure was sinking. (backfilling) cause should be studied and prevented (inviting ODSP-24, designer and "Kogon water construction" Limited Liability Company managers) and the left and right bank of the structure in the water direction At the same time, the cases of turbidity in the lower part of the river are increasing, and it is necessary to take immediate measures to restore it.

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1.1-picture The state of washing of the banks of the building's supply channel

3. Extinguisher: Must comply with project requirements.

4. Drainage trough: The condition is not up to the standard, there are cracks in the concrete part on the left and right slopes, it should be prevented as soon as possible.

1.2- **picture** The condition of the Amu-Karakol drainage basin

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5. **Water protection zone**: The water protection zone has not been identified and no work has been carried out.

6. **Testing the actual transferability of the water transfer facilities**: The Amu-Karakol cannas of the upper and lower banks have not been tested.

7. **Power supply**: 170 kVa transformer, 400 kVa transformer does not have additional diesel supply.

1.3-Fig. Status of electric divergatels

8. Notification system: Schemes for the notification system are outdated, should be revised and approved in agreement with FVB and responsible organizations.
9. Action plan in the event of an emergency: In the event of an emergency, the local notification system is not complete, it needs to be reconfirmed in agreement with the responsible organizations.
10. Working and project documents: Project documents and documents on the protection of the population are incomplete, there are project documents on the additional construction of the structure.
11. Operating personnel: The total number of operating personnel of Gidrouzel is 22 people, there are no graduates.
12. In the water-carrying river - a part of the river is covered with plants (mainly reeds) and mud, washing occurred on the right bank, the coating of the right bank dam is eroded, the water discharge facility no stone has been spilled in the water impact well,

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the shutters are corroded, the mechanical equipment of the shutters is not up to standard.

1.4- picture The condition of the water-carrying core of the hydrogel

Requirements to be met for reliable and safe use of the Amu-Karakol canal hydroelectric unit.

(1.1- table)

O/N	Danger determining factors	Recommendations
1.	It is necessary to check the reducers of the shutters in each building.	In order to ensure the safety of the facility
2.	Checks are not installed on known shutter screws.	It should be regulated based on the requirements of PTB and PTE
3.	The concrete paddocks up to the lower bef hydropost have not been cleared of weeds.	It should be regulated based on the requirements of PTB and PTE
4.	Amu-Karakolkanali in the lighting system projectors are not working.	It should be regulated based on the requirements of PTB and PTE
5.	The front part of the Amu-Karakolkanal structure is covered with debris.	Need to clean up quickly
6.	The surroundings of the Amu-Karakol canal water-carrying structure have not been cleaned.	Cleaning work should be done quickly

7.	The electrical supply system of the facility should be re-examined before the season.	In order to ensure the technical condition and safety of the facility
8.	The part of the Yomonjar channel up to the hydropost is overgrown with grass.	Cleaning work should be done quickly
9.	The dam structure on the Yomonjarkanal does not meet the requirements of PTB and PTE.	In order to ensure the technical condition and safety of the facility
10.	It is necessary to ensure the implementation of the requirements of the Republic of Uzbekistan "Article 10 of the Law on the Safety of Hydrotechnical Structures".	It is necessary to develop the security declaration of the binary hydronode, and the developed declaration should be examined.
11.	It is necessary to overhaul the dispatch building and install surveillance cameras in the building.	In order to improve the operation of the facility
12.	Operational technical documents are not maintained and controlled based on PTB and PTE regulations.	It is necessary to maintain and control operational technical documents based on the rules of PTB and PTE
13.	There is no system for notification and warning when and if the threat of emergency situations arises.	A notification and warning scheme should be established as and when the threat of emergencies arises

Conclusion:

The analysis of experiments conducted in field conditions on Amu-Karakol shows that currently, the form of reports on exploitation services and activities by exploitation workers does not cover complete information. We suggest to do it in the following way.

It is necessary to provide daily information, ten-day or fifteen-day, monthly rapid reports on the implementation of operational activities to higher organizations. The head or chief engineer of the organization is responsible for the reliability of information and data.

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