

**USED OR WORN HYDROTECHNICS OF IN SH OOTS SECURITY AND RELIABILITY TA '
MINLA SH**

O'. O'. Rajabov

Trainee teacher

*"Tashkent Institute Of Irrigation And Agricultural
Mechanism Engineers" National Research University Bukhara
Institute Of Natural Resources Management*

Abstract: *In this article, increasing the safety and reliability of modern hydrotechnical facilities of the Republic of Uzbekistan. It is assumed that as a result of many years of use of hydraulic structures, their physical and spiritual wear and tear and their technical capabilities and reliability are decreasing.*

Key words: *Hydrotechnical facilities, emergency situations, hydroelectric system, facility safety, reliability, operation*

As the leader of the Republic of Uzbekistan, Islam Karimov, our first president, since the first years of independence, the issues of maintaining and strengthening peace and stability and inter-ethnic harmony in our country have become the most important priorities, and this idea is an integral component of the idea of independence. It should be emphasized that it is expressed in two ways. Over time, structures, including hydrotechnical structures, wear out and corrode. Under the influence of various internal and external factors, the operation, mechanical, physical, chemical and other properties of facilities change. Non-stop operation of hydrotechnical structures is not constant and changes over time under the influence of geological, hydrological, climatic, operational and other factors. Currently, we can see that 4.3 million hectares of land are irrigated in our republic, more than 180 thousand km of irrigation networks, 75 large reservoirs with a capacity of 18.7 km³ of water are used to ensure water supply to all sectors of the economy, including agriculture. Today, it is important not only to maintain these structures in a stable and safe technical condition, but also to ensure their reliable and guaranteed service for many years has become the most important task of our country. Because they are used for agricultural and drinking water supply, industry, rural water supply, irrigation, energy, fisheries and flood protection.

The safety of hydraulic facilities, predicting their future condition is a very important, very complex and unique task. Among all the indicators for evaluating hydraulic structures, the problem of their reliability and safety is the most important. In particular, this became an even more urgent issue with the adoption of the Law of the Republic of Uzbekistan "On the safety of hydraulic facilities" on August 20, 1999. Hydrotechnical structures in our republic provide water for 90% of agricultural production and 10% for electricity production. In general, the stability of other sectors of the economy, and the safety of 50%

of the population living in those districts are related to the state of these hydrotechnical structures. Preventing unnecessary loss of water from irrigation networks and ensuring efficient use of water taken from the network; It is a very important task to take measures to increase the useful work coefficients (FIK) of networks, to create additional water resources, to ensure the reliable and safe operation of facilities and to reconstruct and improve them, to apply scientific and technical achievements to the practice of water management.



Fig. 1 Fig. 2 of the Saribazar-Uyghur canal. The part of the Uyghur canal is flooded with a muddy hydrogel

"Saribozor-Uyghur" canal in Karakol district was put into operation in 1962. Water consumption at the beginning of the canal is maximum 24 m³/sec, normal 13 m³/sec, length 2.4 km FIK 0.88

The water intake source of the "Saribozor-Uyghur" canal is the Amu-Karakol canal, and the area of land irrigated by the canal is 18,700 ha. As a result of the 40-50 years of use of the facility, their physical and spiritual condition has deteriorated, and due to silting, their technical capability and reliability are decreasing. The social and economic consequences of their damage and destruction, material damage and natural disasters are high. One of the main reasons for the aggravation of this situation is due to the fact that the following requirements arising from the laws and regulations on the safety of hydrotechnical structures are not fully fulfilled:

- 1) it is necessary to further improve the requirements for coordination with the special authorized bodies that exercise state control in the coordination of projects for the placement, design, construction and reconstruction of hydrotechnical structures;
- 2) due to failure or wear and tear of control-measuring equipment in a number of hydrotechnical facilities, non-conduct of regular monitoring works in a complete and appropriate manner;
- 3) due to the lack of funds in most hydrotechnical facilities, reserve materials designed to prevent accidents are not fully assembled;
- 4) in a number of cases, the qualifications of employees using hydrotechnical facilities are not up to the required level;
- 5) serious damage to a number of hydrotechnical structures as a result of illegal quarrying activities in streams and canals and illegal construction works in coastal regions;

б) occurrence of accidents at pumping stations as a result of regular power outages without warning.

In order to eliminate the above problems, it is recommended to perform the following main tasks for ensuring the safety of hydrotechnical structures.

- Developing and approving the safety declaration of hydraulic engineering facilities, ensuring the continuity of their use.

- Implementation of measures to ensure the safety of hydrotechnical facilities, as well as establishing safety criteria, equipping with technical means to ensure constant control of the state of hydrotechnical facilities.

- Ensuring that hydraulic facilities are serviced by workers with the necessary qualifications .

- Improving the technical system for monitoring the condition of hydraulic facilities.

- Determining the reasons for the possible decrease in the safety of hydraulic facilities and systematic analysis of observation data in natural conditions.

- Ensuring regular inspections of hydraulic facilities and monitoring their safety.

- Timely execution of the instructions in the approved safety declaration.

- Creation of financial and material reserves designed to eliminate possible failure.

- In order to ensure safety, constantly organize emergency repair gates, bags and sand reserves for emergency use near the hydroelectric or water distribution facilities.

Suggestions and recommendations

- To improve the working condition of the flat valves in the hydraulic system, change them to segmental valves.

- Repair of energy-extinguishing structures in Hydrozele.

- Hydrogel Concreting of the water softening channel due to the silt.

- In order to ensure the safety of the hydraulic system, the condition of the structure is constantly monitored, and the necessary measures are taken to equip it with the necessary technical means.

REFERENCES:

1. Law of the Republic of Uzbekistan "On the safety of hydraulic facilities", T., 1999.
2. Bakiev M.R. etc. "Hydrotechnical constructions". Textbook. T., Knowledge, 2008, Volume 1.
3. Bakiev M.R. et al. "Hydraulic constructions". Textbook. T., New century generation, 2009, volume 2.