

CALCULATION OF THE FUSE PLUG SPILLWAY OF DA BAC RESERVOIR IN HA TINH UNDER CONFIDENCE THEORY

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Summary

At irrigation headworks, spillways are responsible for flooding to ensure the safety of the system when floods occur in the reservoir with different frequencies, but the characteristics of flood over time have been changes and often larger than the original design increase the risk of reservoir system instability. Therefore, it is necessary to have structural or non-structural solutions for the system to operate safely, and to build emergency spillways to improve safety for reservoirs. The dam is a structural solution that is being widely used at irrigation headworks. In Vietnam, dam design standards are being used on a deterministic method, while many countries around the world already have construction design standards based on reliability theory as well as implemented. Calculate the construction according to random problems and analyze reliability. From assessing the status of the Da Bac reservoir - Ha Tinh, the study proposes to build more emergency spillways to ensure the safety of the headwork when the reservoir occurs extreme floods. Applying reliability theory level II to develop the problem of determining the size of flipping blocks over the overflow threshold and analyzing the extent of the random variables on the safety of the system as a basis for making predict the durability and stability of fuse plug spillway.

Keywords: *Fuse plug spillway, extreme flood, confidence function, problem probability, random variables.*