

STUDY ON SINGLE PURPOSE DAM FOR FLOOD CONTROL WITH MINIMIZING ENVIRONMENT LOAD

Single purpose dam for flood control, taking environment aspects into consideration, draws attention recently. Ordinarily, this type of dam does not store any inflow discharge, however, in case of flooding it stores inflow discharge and releases small outflow through the outlet installed in the lower part of dam body near river bed to mitigate flood disasters downstream effectively. People's concern on environment problem caused by some flood disaster prevention projects becomes higher, so a progress of projects coordinating flood control on environment aspects is required; nevertheless, because of the structural limitation of dam facilities, further consideration on environment can not be taken for the present flood control dams. For the purpose of minimizing environment load, the studies from the different viewpoint on the design of dam structures and outlet facilities are indispensable.

This study focuses on a new type of single purpose dam for flood control. It does not block ordinal river flow, however, stores inflow discharge while large flooding so that it can minimize environment load and also utilize the flood control capacity of a reservoir. We have conducted the investigation on the size, shape and operation method of outlet facilities for this type of dam and also summarize the result the study from a viewpoint of feasibility for this type.

Key words : single purpose dam for flood control, environment load, gate facilities, gate operation, sedimentation in a reservoir