HYDRAULIC MODEL INVESTIGATION OF KOTMALE SURGE CHAMBER

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Prediction of accurate surge levels with conventional orifices is possible with known theory because the behaviour of all relevant parameters with regard to hydraulic phenomena and their inter-relationships are well understood. Following the modification to the surge shaft by locating an emergency gate inside the surge chamber, the behaviour of the systems was so modified that established theory could not accurately predict the surges. An attempt to analyse the problem using a mathematical model needed confirmation from a physical hydraulic model.

Consequently two models to geometric scales of 1/64 and 1/32 were tested and the necessary hydraulic design parameters established. The results of these model tests are presented in this paper along with the predictions of the mathematical model.