

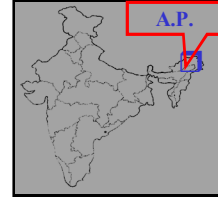


अनुसंधान के माध्यम से सेवा
Service Through Research

CENTRAL WATER AND POWER RESEARCH STATION

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TANGON LIMB DAM SPILLWAY OF ETALIN H.E. PROJECT, ARUNACHAL PRADESH



SALIENT FEATURES

Type	: Run-of-the-river H.E. Project
River	: Tangon river in Dibang Valley district of Arunachal Pradesh
Dam	: 80 m High concrete Gravity Dam near Etalin Village, A.P.
Spillway	: 6 Spans of 7.9 m wide X 14.0 m high with breast wall
Power House	: Underground near Etalin Village and Dam Toe Power House
Capacity	: 1235.4 MW (4 x 307 MW and 7.4 MW)

MODEL STUDIES

2-D Sectional (1:40 G.S.) and 3-D Comprehensive (1:60 G.S.) models of the dam spillway have been constructed to study:

- ❖ Discharging capacity of the spillway for ungated and gated operation
- ❖ Water and pressure profiles along the spillway surface
- ❖ Efficacy of the energy dissipation for entire range of discharges
- ❖ Flow conditions upstream of spillway and in the vicinity of power intake
- ❖ Flow conditions downstream of spillway and protection measures of river bed and banks



SIGNIFICANCE OF THE STUDIES

The model studies are in general, useful to evolve economic and safe hydraulic designs of spillways and energy dissipators. The studies for Tangon Limb dam spillway of etalin H.E. project will help in enhancing safety due to:

- ❖ Improved flow conditions in front of power intake after excavation at right bank of river.
- ❖ Improved ski-action with modified profile of spillway with extended divide walls upto the bucket lip and proposed extension of plunge pool leading to better energy dissipation

FURTHER STUDIES

- ❖ Modification of design of auxiliary spillway for improving flow conditions at the outlet
- ❖ Studies with proposed extension of plunge pool