TEESTA LOW DAM SPILLWAY, STAGE – III, WEST BENGAL

SALIENT FEATURES

Location                     : Dist. Darjeeling, West Bengal
River                        : Teesta
Power Generation             : 132 MW (33 x 4)
Maximum Discharge            : 10,430 m³/s
Type of dam                  : RCC Raft Barrage
Spillway                     : 7 Spans of size 14 m (W) x 14 m (H) with breast wall
Energy dissipator            : Stilling basin

MAJOR STUDIES

1: 60 scale 3-D comprehensive model

- Approach flow conditions upstream of spillway and power intake
- Assessment of discharging capacity, pressures and water profiles on spillway
- Performance of spillway and energy dissipator
- Performance of power intake and tail race channel.

RESULTS / BENEFITS

- Design of crest profile was modified
- The discharging capacity of the spillway is adequate
- Approach flow conditions in the vicinity of spillway and power intake are satisfactory
- Performance of stilling basin is satisfactory
- The trunnion elevation of radial gates was raised by 2 m
- The alignment of right bank of tail race channel was modified considering water level fluctuations, return velocities and silt deposition
- Design of extensive protection/training works upstream and downstream of spillway were reviewed.