

Dam: Longtan (Stage 1)

Country China

River Hongshui

25°01'41.99"N 107°02'36.40"E

25.028332 107.043442

Owner/Client Longtan Hydropower Development Co. Ltd.

Designer/Engineer Mid-South Design Institute for Hydroelectric Projects, MOE & MWR

Contractor JV of 7th, 8th and Gezhouba Construction Bureaux (Right Bank) and Jiangnan Co. Ltd. (Left Bank)

Purpose (code) F H N W

Site start 01.07.2001

RCC start 08.10.2004

RCC completion 20.06.2007

Site completion 30.12.2009

Height (m) 192

Length (m) 832

Volume of RCC ( $m^3 \times 10^3$ ) 4623

Total volume ( $m^3 \times 10^3$ ) 7400

Reservoir capacity ( $m^3 \times 10^6$ ) 16210

Upstream slope V  
0.25

Forming of upstream face (code) (3')

Downstream slope 0.70

Forming of downstream face (code) (3')

Spillway slope 0.68

Forming of spillway face (code) (12)

Depth of layers (mm) 300

Depth of lifts (mm) 300

Cement content ( $kg/m^3$ ) 99  
86

Pozzolan content ( $kg/m^3$ ) 121  
109

Code for pozzolan (F)

RCCDAM Unique Serial No. RCCDAM0411

## Under Construction



RCCDAM0411UC

## Completed Dam



RCCDAM0411CD

## Google Earth



RCCDAM0411GE

# Guide to Abbreviations

## Purpose

- E Environmental
- F Flood control
- G Groundwater recharge
- H Flood control
- I Irrigation
- N Navigation
- P Pollution control
- R Recreation
- W Water supply

## Facing method

- (1) Traditional concrete against formwork
- (2) Traditional concrete against formwork with external geomembrane
- (3) RCC against formwork
- (4) RCC against formwork with external geomembrane
- (5) Traditional concrete against precast concrete panels
- (6) Traditional concrete against precast concrete panels with geomembrane
- (7) RCC against precast concrete panels
- (8) RCC against precast concrete panels with geomembrane
- (9) RCC against precast concrete panels with hot poured membrane
- (10) RCC against precast concrete blocks
- (11) Reinforced conventional concrete cast before RCC placement
- (12) Reinforced conventional concrete cast after RCC placement
- (13) Reinforced concrete cast against precast units or slip-formed facing elements
- (14) Slip-formed/extruded facing elements
- (15) RCC supported by fill shoulders
- (16) Mechanically compacted unformed face of RCC
- (17) Unformed face of RCC
  - ' GEVR/GE-RCC
  - \* Stepped face

## Pozzolans

- (-) No Pozzolan Used
- (C) High-lime flyash (ASTM Class C)
- (F) Low-lime flyash (ASTM Class F)
- (M) Milled sand
- (N) Natural pozzolan (ASTM Class N)
- (R) ROLAC (mixture of flyash and slag with or without limestone fines)
- (S) Ground-granulated blast-furnace slag
- (L) Mixture of GGBFS and limestone fines