

MIDDLE MARSYANGDI HYDROELECTRIC POWER PLANT

Facts

City/Country

Udipur, Lamjung District / Nepal

Client

Nepal Electricity Authority, Lalitpur,
Kathmandu

Architect

Nepal Electricity Authority

Contract Value

€ 195,56 Mio.

Construction Period

6/2001 - 11/2008 (89 months)

Project Description

Construction of a hydroelectric power plant with an installed capacity of 72 MW, processed by two vertical Francis turbines at a gross head of approx 108 m. The mean annual production is planned to be approx. 400 GWh.

The contract included open cut excavation, construction of intake concrete structure, spillway concrete structure, upstream and downstream concrete wing walls, stilling basin, rockfill dam with clay core, control building, excavation and concrete / shotcrete lining of diversion tunnel, excavation and concrete lining for several tunnels and surge tank, valve chamber, powerhouse structure with tailrace outlet for Francis turbines.

PROJECT DATA:

- Excavation volume: 378,000 m³ common soil and 322,000 m³ quartzite rock
- Excavation of power tunnel (headrace tunnel) with diameter 6.40 m of approx. 5,133 m total length
- 3 underground desander caverns each of max. length of 160 m, max. width of 15 m and max. height of 27 m, headrace tunnel 5,300m long, diam. 5.4m
- Intake concrete structure, length 45 m, width 28, height 27 m
- Spillway concrete structure, height 63 m, width 58 m length 91 m
- Upstream and downstream concrete wing wall, height 32.5 m, length 74 m
- Stilling basin, length 33.5 m, width 47 m
- Rock fill dam with clay core, length 150 m, width at bottom 158 m, at top 10, height 20-60 m
- Control building, length 21.5 m, width 13 m, height 7.5 m
- Excavation and concrete / shotcrete lining of the diversion tunnel, length approx. 360 m, dia. 8.20 m
- Excavation of underground penstock tunnel and second stage concrete for penstock steel lining underground, length 259 m, diameter 5.40 m
- Open excavation of average cross section 583 m² for penstock and second stage concrete for penstock steel liner, length 144 m



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