

**Project:** Harangi Dam Mini Hydel Project - 9 MW

**Overview:**

Harangi Irrigation Project has been built on Harangi River with the Harangi Dam forming the Reservoir and the Right bank and left Bank Irrigation canals feeding a command area of 8000 Hectares. The left bank canal is the major canal and the discharge into this major canal is controlled by the Head Regulator structure in the dam. The level difference between the FRL of the reservoir and the bed level of the canal is 14 meters. At the minimum draw down level of the reservoir, the level difference is 6 meters. The Reservoir surpluses, every year. This surplus water and canal discharge is utilized to generate power in the Harangi Dam Power House Scheme. The Scheme with an installation of 9 MW was formulated and implemented by M/s EDCL Calcutta. The EPC Contractor for implementation of the Scheme was M/s Sulzer Flovel Ltd., who were also the manufacturers and suppliers of the generating equipment. Design Group handled the Detail Design Engineering of all the Civil Engineering structures of the scheme and completed the assignment in the year 2000.

**The Scheme involved Construction of:**

- 1) A well type intake structure along with an approach channel on the upstream of the left bank hill mass, and with the control gates,
- 2) A 5 m Dia and 97.5m long. RCC lined headrace tunnel driven through the left bank hill mass and ending in the Single MS steel penstock bifurcating in to two at the power house
- 3) A RCC surface power house structure housing the two vertical axis Kaplan turbine generators of 4500 kW Capacity each
- 4) Tail race stop log gates
- 5) Tail pool discharging into the left bank canal, with a discharging capacity of 56 cumecs.

Since during the monsoon period when the reservoir is full, the surplus water is also utilized for power generation, the excess water over and above the capacity of the left bank canal is surplussed, through a surplus weir, back to the Harangi River downstream.

**Specifications:**

<b>HARANGI DAM MINI HYDEL SCHEME -SALIENT FEATURES</b>		
<b>1. LOCATION</b>		
i) State		Karnataka
ii) District		Coorg
iii) Taluk		Kushalnagar
<b>2. APPROACH CHANNEL</b>		
i) Length		70 m
ii) Bed Level		EL 856.00 to EL 843.00 in approach pool
iii) Bed Width		6 m
iv) FSL		EL. 871.42 m
v) Top of Embankment		EL.873.00 m
vii) Lining		Concrete
<b>3. INTAKE STRUCTURE</b>		
i) Top Width		8 m
ii) Top of Intake		EL 874.50 m
iii) Foundation level		EL 709.00 m
iv) Bottom Width		9 m Circular
<b>4. BY - PASS ARRANGEMENT</b>		
i) Type of gate		Ungated weir
ii) No of gate		---
iii) Size of the gate		---
iv) Top of by - pass arrangement		EL.848.70 m

v) Crest of the weir EL. 847.71 m

#### 5. POWER HOUSE

i) Design head 27.98 m  
 ii) Design discharge 42.47 cumecs  
 iii) Generator floor level EL 843.10 m  
 iv) Installed capacity 9000 KW (2 x 4500 kw)  
 v) Unit type Vertical shaft full Kaplan  
 vi) Size of power house 18.40 m x 19.00 m  
 vii) Annual Generation 32 GwHr

#### 6. TAIL RACE CHANNEL

i) Length 28.00 m  
 ii) Bed level EL 837.50 to 844.90  
 iii) Bed width 12 m  
 iv) Tail water level Maximum EL.847.71 m  
 v) Tail water level Minimum EL.845.40 m

Thanks for your interest in our services.  
 Please do reach us at...

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