

SALIENT FEATURES

1. LOCATION

i)	State	:-	Arunachal Pradesh
ii)	District	:-	East Kameng
iii)	Town	:-	Seppa (about 40 km from project area)
iv)	Access	:-	Seppa-Sede-Paling Road
v)	Nearby village	:-	Paling
vi)	Geographical Coordinates	:-	Latitude = 27°16'42" N Longitude = 93°07'33" E
vii)	Toposheet Reference	:-	83E/03
viii)	Nearest Railhead	:-	Naharlagun (140 Kms)
ix)	Nearest Airport	:-	Guwahati (412 Kms)

2. HYDROLOGY

i)	Name of the Stream	:-	Pero Nala
ii)	River Basin	:-	Papu River
iii)	Catchments Area	:-	8 km ²
iv)	Type of Stream	:-	Perennial
v)	Design Flood	:-	100 m ³ /s
vi)	Average Annual Inflow	:-	20.20 MCM
vii)	75% dependable inflow	:-	17.0 MCM
viii)	Design Discharge	:-	0.35 m ³ /s

3. TRENCH WEIR

i)	Shape	:-	Rectangular drop type
ii)	Length	:-	12 m
iii)	Width	:-	1 m
iii)	Discharge	:-	0.554 m ³ /s
iv)	Top level of trench	:-	EL 852 m
v)	Size of gate	:-	1.0 m (H) x 1.0 m (W)
vi)	Invert Level of Intake	:-	EL 850.50 m

4. POWER CHANNEL

i)	Length	:-	5 m
ii)	Shape	:-	RCC Rectangular Section
iii)	Size	:-	0.7 m (W) x 0.8 m (H)
iv)	Full Supply Depth	:-	0.6 m
v)	Discharge	:-	0.462 m ³ /s
vi)	Bed Slope	:-	1 in 500

5. DESILTING-CUM-FOREBAY

i)	Size	:-	8.0 m long x 4.0 m wide
ii)	Desilting length	:-	6.0 m
iii)	Storage	:-	3 Minutes
iv)	Capacity	:-	48 m ³
v)	Full Supply Level	:-	EL 851.27 m
vi)	Max. Draw Down Level	:-	EL 849.77 m
vii)	C/L of penstock	:-	EL 848.72 m

6. PENSTOCK

i)	Size	:-	450 mm (ID) trifurcating into 300 mm (ID)
ii)	Length (main penstock)	:-	157 m
iii)	Discharge	:-	0.385 m ³ /s
iv)	Liner Thickness		Varies from 8 mm to 10 mm

7. POWER HOUSE

i)	Type	:-	Surface
ii)	Head	:-	
	Gross		68.0 m
	Design (net)		63.0 m
iii)	Design Discharge	:-	0.385 m ³ /s (Including 10% overload)
iv)	Size of Power House	:-	
	Length	:-	22 m
	Width	:-	7 m
	Height from Machine Floor Level	:-	8 m
	Machine Floor Level	:-	EL.786 m

v)	Installed Capacity	:-	150 KW
vi)	Turbines		
	Type	:-	Francis (Horizontal)
	Number	:-	3 Nos.
	Capacity	:-	50 kW each
vii)	Generator		
	Type	:-	Synchronous
	Voltage	:-	415 V
	Frequency	:-	50 Hz

8. TAIL RACE CHANNEL

i)	Type	:-	Open RCC Channel
ii)	Shape	:-	Rectangular
iii)	Size	:-	1.3 m (W) x 0.8 m (H)
iv)	Design discharge	:-	0.385 m ³ /s
v)	Length	:-	15 m

9. LAND REQUIREMENT

i)	Submergence	:-	NIL
ii)	Permanent Land Requirement	:-	0.407 Ha.
iii)	Temporary Land Requirement	:-	0.27 Ha.

10. GENERATION

i)	Annual Generation in 75% Dependable Year	:-	0.94 MU
ii)	Annual Energy Generation at 95 % plant Availability	:-	0.89 MU
iii)	Annual Load Factor (%)	:-	67.73%
iv)	Generation in Lean Period (Nov.-Mar.)	:-	0.22 MU

11. COST ESTIMATE & FINANCIAL PROJECTIONS

i)	Land & Preliminary expenses	:-	Rs. 0.49 Cr.
i)	Civil and HM Works	:-	Rs. 3.46 Cr.
ii)	Electro-mechanical works	:-	Rs. 3.29 Cr.
iii)	Evacuation	:-	Rs. 0.13 Cr.
iv)	Total Project Cost	:-	Rs. 7.37 Cr.
v)	IDC and Escalation	:-	Rs. 1.56 Cr.
vi)	Project cost (including escalation and IDC)	:-	Rs. 8.93 Cr.

vii)	Cost per KW	:-	Rs. 5.95 Lacs
	Cost of generation (Rs/ kWh)		
viii)	a) 1 st Year	:-	Rs. 18.08/ Unit
	b) Levelised Cost	:-	Rs. 13.92/ Unit

12. SCHEDULE

i)	Pre construction Activities	:-	9 months
ii)	Construction Period	:-	12 months