

SALIENT FEATURES

1. LOCATION

i)	State	:-	Arunachal Pradesh
ii)	District	:-	Lower Subansiri
iii)	Town	:-	Yachuli (about 24 km from project area)
iv)	Access	:-	Joram-Tallo village Road
v)	Nearby village	:-	Tallo
vi)	Geographical Coordinates	:-	Latitude = 27°31'08" N Longitude = 93°45'21" E
vii)	Toposheet Reference	:-	83 E/14
viii)	Nearest Railhead	:-	Naharlagun (100 Kms)
ix)	Nearest Airport	:-	Guwahati (490 Kms)

2. HYDROLOGY

i)	Name of the Stream	:-	Pein Nala
ii)	River Basin	:-	Panyor River
iii)	Catchments Area	:-	40 km ²
iv)	Type of Stream	:-	Perennial
v)	Design Flood	:-	295 m ³ /s
vi)	Average Annual Inflow	:-	75.20 MCM
vii)	75% dependable inflow	:-	64.20 MCM
viii)	Design Discharge	:-	1.49 m ³ /s

3. TRENCH WEIR

i)	Shape	:-	Rectangular drop type
ii)	Length	:-	10 m
iii)	Width	:-	1 m
iii)	Discharge	:-	2.36 m ³ /s
iv)	Top level of trench	:-	EL 1140 m

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|-----|------------------------|----|-----------------------|
| v) | Size of gate | :- | 1.3 m (H) x 1.3 m (W) |
| vi) | Invert Level of Intake | :- | EL 1137.90 m |

4. INTAKE CHANNEL

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|------|-------------------|----|-------------------------|
| i) | Length | :- | 10 m |
| ii) | Shape | :- | RCC Rectangular Section |
| iii) | Size | :- | 1.1 m (W) x 1.3 m (H) |
| iv) | Full Supply Depth | :- | 1.1 m |
| v) | Discharge | :- | 1.967 m ³ /s |
| vi) | Bed Slope | :- | 1 in 500 |

5. DESILTING BASIN

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|------|-------------------|----|--------------------------|
| i) | Size | :- | 18.0 m long x 6.0 m wide |
| ii) | Slope Height | :- | 1.5 m |
| iii) | Vertical Height | :- | 3.0 m |
| iv) | Silt Catch Drain | :- | 0.5 m x 0.5 m |
| v) | Full Supply Level | :- | EL 1139.356 m |

6. POWER CHANNEL

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|------|-------------------|----|-------------------------|
| i) | Length | :- | 442 m |
| ii) | Shape | :- | RCC Rectangular Section |
| iii) | Size | :- | 1.1 m (W) x 1.3 m (H) |
| iv) | Full Supply Depth | :- | 1.1 m |
| v) | Discharge | :- | 1.639 m ³ /s |
| vi) | Bed Slope | :- | 1 in 600 |

7. FOREBAY TANK

- | | | | |
|------|----------------------|----|--------------------------|
| i) | Size | :- | 20.0 m long x 5.0 m wide |
| ii) | Storage | :- | 3 Minutes |
| iii) | Capacity | :- | 200 m ³ |
| iv) | Full Supply Level | :- | EL 1138.61 m |
| v) | Max. Draw Down Level | :- | EL 1136.61 m |

vi) C/L of penstock :- EL 1135.11 m

8. PENSTOCK

i) Size :- 850 mm (ID) trifurcating into 500 mm (ID)
 ii) Length (main penstock) :- 61 m
 iii) Design Discharge :- 1.639 m³/s
 iv) Liner Thickness :- Varies from 8 mm to 10 mm

9. POWER HOUSE

i) Type :- Surface
 ii) Head :-
 Gross 38.0 m
 Design (net) 33.0 m
 iii) Design Discharge :- 1.639 m³/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.1104 m
 v) Installed Capacity :- 300 KW
 vi) Turbines :-
 Type :- Francis (Horizontal)
 Number :- 3 Nos.
 Capacity :- 100 kW each
 vii) Generator :-
 Type :- Synchronous
 Voltage :- 415 V
 Frequency :- 50 Hz

10. TAIL RACE CHANNEL

i) Type :- Open RCC Channel
 ii) Shape :- Rectangular
 iii) Size :- 2 m (W) x 1.1 m (H)
 iv) Design discharge :- 1.639 m³/s

v) Length :- 20 m

11. LAND REQUIREMENT

i) Submergence :- NIL
 ii) Permanent Land Requirement :- 0.684 Ha.
 iii) Temporary Land Requirement :- 0.27 Ha.

12. GENERATION

i) Annual Generation in 75% Dependable Year :- 2.03 MU
 ii) Annual Energy Generation at 95 % plant Availability :- 1.92 MU
 iii) Annual Load Factor (%) :- 73.21%
 iv) Generation in Lean Period (Nov.-Mar.) :- 0.66 MU

13. COST ESTIMATE & FINANCIAL PROJECTIONS

i) Land & Preliminary expenses :- Rs. 0.53 Cr.
 i) Civil and HM Works :- Rs. 4.98 Cr.
 ii) Electro-mechanical works :- Rs. 3.51 Cr.
 iii) Evacuation :- Rs. 0.09 Cr.
 iv) Total Project Cost :- Rs. 9.11 Cr.
 v) IDC and Escalation :- Rs. 1.94 Cr.
 vi) Project cost (including escalation and IDC) :- Rs.11.05 Cr.
 vii) Cost per KW :- Rs. 3.68 Lacs
 Cost of generation (Rs/ kWh)
 viii) a) 1st Year :- Rs. 10.74/ Unit
 b) Levelised Cost :- Rs. 8.51/ Unit

14. SCHEDULE

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