

PALEMVAGU RESERVOIR PROJECT

SALIENT FEATURES

Project

Name of the project	:	Palemvagu Reservoir Project
Location	:	Village: Mallapuram Mandal: Venkatapuram District: Khammam
Estimated cost	:	Rs.70.99 cr
Ayacut proposed	:	5350 ha (13221 acre) [Khariff Wet: 4100 ha – paddy: 3000 ha & chilly: 1100 ha] [Rabi ID: 1250 ha – groundnut: 750 ha & pulse: 500 ha].
Longitude	:	80° - 35' – 23" E
Latitude	:	18° - 20' - 24" N
Nature of terrain	:	Folded Quadzite Rocky
Technical classification of soil	:	Sandy loam
No. of villages benefited	:	32 in Venkatapuram (M) & 7 in Wazeedu (M) of Khammam district

Hydrology

Catchment area at reservoir	:	144.52 sq.km. (55.80 sq.mile)
Maximum flood discharge at res. site	:	1,416 cumec (50,000 cusec)

Reservoir

Gross storage capacity at FRL (+132.50 m)	:	35.600 M.cum. (1259 M.cft.) (1.26 TMC)
Dead storage capacity at +110.00 m.	:	3.21 M.cum. (113.36 M.cft.)
Live storage capacity after silt	:	32.39 M.cum. (1145.64 M.cft.)
Life of reservoir	:	75 years
Area of submergence at FRL +132.50 m.	:	243 ha
F.R.L.	:	+ 132.50 m.
M.W.L.	:	+ 134.50 m.
Top of dam (T.B.L.)	:	+ 136.00 m.

Spillway

Maximum Flood Discharge	:	86,000 cusec
Type of Gates	:	Radial Crest Gates
No. of Vents	:	4 Nos. (3+1 inoperative condition)
Size of Vents	:	9.00 m X 8.00 m

Length of Spillway	: 45.00 m
Crest Level	: + 124.50 m
FRL	: + 132.50 m
TBL	: + 136.00 m
Maximum TWL	: + 96.80 m
Crest level of spillway	: +132.50 m.
Length of spillway	: 230 m.

Earth Dam

Top width of dam	: 6.00 m.
Deepest bed level at site	: + 90.00 m.
Length of dam	: 590 m.
Maximum height of dam from stream bed level	: 46.00 m.

Head Regulator

Ayacut	: 4,100 ha (10,132 acre)
Discharge	: 5.974 cumec (Required) / 6.101 cumec (Designed)
Sill level	: + 108.00 m.
Vent (1 No.)	: 2.2 m. x 1.80 m.
Canal Bed Width	: 3.50 m.
Location of head regulator	: RF Regulator at km.0.380
Length of Canal	: RF Canal length 13.50 km
No. of distributaries	: 15
No. CD&CM works	: 43
F.S.D.	: 1.60 m.
Canal Bed Level	: + 108.00 m.
Canal F.S.L.	: + 109.60 m.
Free Board	: 0.60 m.
Side Slopes	: 1.5:1 / 2:1
Bed fall	: 1 in 6500
Co-efficient of Rugosity (value of 'n')	: 0.018
Velocity	: 0.663 m/sec
Top width of banks	: 2.50 m / 4.0 m