

IB IRRIGATION PROJECT.

Salient Features

I. General.

i)	Nearest Village	: Katingidihi
ii)	River	: IB
iii)	Basin	: Mahanadi
iv)	District	: sundargarh
v)	Co-ordinates : Latitude	: 22 ⁰ -12'-N
	: Longitude	: 84 ⁰ -6'-E
vi)	Nearest Railway Station	: Rourkela
vii)	Topo Sheet reference	: 73 D/4
viii)	Nearest Railway Station	: Jharsuguda
ix)	Distance from	
	a. District Head quarters (Sundargarh)	: 12 Km.
	b. Nearest Town Sundargarh	: 13 Km.
	c. State Capital (Bhubaneswar)	: 420 Km.
	d. Nearest Police Station	: Sundargarh

2.Hydrology.

i.	Catchment Area IB at Dam Site	: 5.649 Km.
ii.	Reference , Toposheets	: 73 B/4,B/3,64 N/15,64 N/16,64 M/15.
iii.	Catchment inside Madhyapradesh	: 4,582 Sq. Km.
iv.	Catchment inside Bihar	: 132 Sq. Km.
v.	Catchment inside Orissa	: 935 Sq. Km
vi.	Catchment area of Talsara Irrigation Project	: 91 Sq. Km
vii.	Free catchment in Orissa	: 884 Sq. Km.
ix.	Catchment at Lawekera gauge site	: 3645 Sq.Km.
x.	Maximum Annual Rainfall	: 1971mm
xi.	Minimum Annual Rainfall	: 875mm
xii.	Mean rainfall	: 1263 mm

3.Reservoir and dam

i.	Type of Dam	: Composite Dam
ii.	Length of Dam	: 3.852 m.
iii.	Dead Storage level	: 252.50 m.
iv.	.Full Reservoir Level (F. R. L)	:272.50 m

V. Maximum water Level(M.W.L)	:272.50 m
VI. Top Bank Level (T.B.L)	:277.20m
VII. Bed level of river at dam site (Average)	: 233.2 m.
viii. Free Board	: 4.7 m.
ix. Height of Dam	: 44 m.
x. Top width of Dam	: 9.0 m.
xi. Gross storage	: 9.0 m.
a. At RL 272.5 m	: 1610.44Mm ³
B. At RL 266.00 m	: 904.37 Mm ³
xii. Dead storage (at RL 252.50 m.)	: 157.13 Mm ³
xiii. Live Storage	
a. At RL 272.5 m.	: 1453.31 Cum.
b. At RL 266.00 m.	: 747.24 Cum.
xiv. Water spread area (at RL 272.50 m)	: 12562 Ha.
xv. Deepest bed level	: RL 223.409 m.

4. Spillway.

i. Position of Spillway	: Centrally Location
ii. Type Of Spillway	:Ogee Shaped
iii. Crest Level of Spillway	: 262.50 m.
iv. Design Discharge of Spillway	: 35,443 m ³ /Sec
v. No. and Size of gates	:38 no's 15.55m x 10 m .
vi. Thickness of pier	: 3.0 m.
vii. Clear Waterway	: 581 m.
viii. Length of spillway	: 695 m.
ix. Type of gate	: Radial

5. Ayacut.

i. District	: Sundargarh
ii. G.C.A	: 1,45,588 Ha.
iii. C.C.A	: 1,06,279 Ha.
iv. Khariff	: 95,651Ha.
v. Rabi (52%)	:10,628 Ha.
vi.. CCA of Right Canal (Rampur Canal)	:47,504 Ha.
vii. CCA of left Canal (Kuchinda Canal)	: 58,775 Ha.
viii. Area irrigation annually	: 1, 06,279 Ha.

ix. Area irrigation annually in right canal	: 47,504 Ha.
x. Area irrigated annually in left Canal	: 58,775 Ha.
xi. District wise CCA	
	Sundargarh: :40,558 Ha.
	Jharsuguda : 56,745 Ha.
	<u>Sambalpur : 8,976 Ha.</u>
	1,06,279 Ha.

6.. DISTRIBUTION SYSTEM:

6.1 right main canal:

i. Head discharge	: 62,064 Cumecs
ii. Sill level of H.R	: RL 249.20 m
iii. Length of main canal	: 135.49 Km.
iv. FSL at Cana Head	: RL 252.00M.
v. Bed width and FSD at Head	: 26.10 m 2.80 m

6.2 LEFT MAIN CANAL

i. Head discharge	: 78.056 Cumecs
ii. Sill level of H.R	: RL 249.00 m
iii. Length of main canal	: 99.90 Km.
iv. FSL at Cana Head	: RL 252.20 m.
v. Bed width and FSD at Head	: 24.15 m3.20 m
vi. Total length of main canal	: 235.39 Km.
vii. Length of distribution system	: 1875.62 Km.

7. IRRIGATION.

i. Intensity of Khariff Irrigation	: 90%
ii. Intensith of Rabi Irrigation	: 10 %
III. Annual Intensity of Irrigation	:100 %
iv. Area Irrigation annual	:1,06,279 Ha.

8.(A) SUBMERGENCE : (ORISSA PORTION)

i. No of villages to be submerged	: 10Nos
ii. No of villages to be partly submerged (with population)	: 16Nos
iii. No. of village partly submerged (without population)	: 4 Nos.
TOTAL	: 30 Nos.

iv. No. of Families affected	: 5615 Nos.
a. General	: 5615 No's
b. S.T	: 3419 Nos
c. S.C	: 517 Nos
v. Population affected	: 14033 Nos
a. General	: 4192 Nos
b. S.T	: 8548 Nos
c. S.C	: 1293 Nos.
vi. Land submerged within reservoir area	
i. Forest land	: 1551 Ha.
ii. Govt. land (including river)	: 3450 Ha.
iii. Agricultural land	: 7285 Ha.
iv. Homeslead land	: 120 Ha.
vii .Tree within reservoir	: 4169 Nos
viii. Road communicated submerged	: 30 Kms

9. (B) SUBMERGENCE (CHATISGARH PORTION)

Govt of orissa has informed that total land submerged is 110.90 Ha. with the following breakup and that no population or habitation is affected.

i. Forest Land	: 67.38 Ha.
ii. Govt. Land	: 27.27 Ha.
iii. Private Land	: 16.26 Ha.
TOTAL	: 110.91 Ha.

10. Cost

1. Total Cost of Project	: Rs. 113998.24 Lakhs.
2. Cost of Head work	: Rs.72363.34 Lakhs.
3. Cost of Canal System	: Rs.41634.90 Lakhs
4. Benefit Cost Ratio at 10% interest	: 1.61
5. IRR	:13.30%

Reference:

pipe line project
20.03.09