

CHACHADI LIFT IRRIGATION SCHEME OF MARKANDEYA RIGHT BANK CANAL

Brief note on the project

The Markandeya Dam is constructed across river Markandeya near village Shirur of Belgaum District. This dam have C.C. spillway dam and two dykes viz., Dyke No- 1 and Dyke No- 2. This project have two canals (1) Markandeya Right Bank Canal (2) Markandeya Left Bank Canal.

The Markandeya Right Bank Canal starts from Dyke No-1 with a head discharge of 262 cusecs. As per the project report this canal has command area of 18215 Ha. After conducting the detail survey of Markandeya Right Bank Canal, the available total area works out to 13558 Ha only. Hence there is a shortfall of 4657 Ha. In command area ultimately there is a savings of water due to shortfall in command area. Hence, two lift irrigation schemes are proposed viz., Chachadi and Murgod Lift Irrigation Scheme with an area of 2718 Ha. and 1939 Ha. Respectively as part of Markandeya reservoir project.

The proposals of these two lift irrigation schemes, were deliberated in 18th meeting of TSG, KNNL, held on 13.06.01 at Bangalore and recommended to take up these schemes out of saved water due to reduction in the irrigable command area under Markandeya Right Bank Canal (Please vide MD, KNNL, Bangalore ltr, No. KNN/TA-3/01/RBC/2001-02/952 dated 04.07.2001.

The proposed Chachadi Lift Irrigation Scheme envisages lifting of water from Markandeya Right Bank Canal at Ch: 33+650 KM near Midakanatti village to provide irrigation facilities for draught prone areas of 9 villages namely, Midakanatti, Keshapnatti, Yalapatti (Gokak Taluka) Mastmaradi, Sunnadakoppal, Vannur, Kalakuppi, (Bailhongal Taluk) and Chikkabudanur, Chachadi, (Savadatti Taluk) of Belgaum District by means of lifting of water in suitable stage up to RL 720 Mtrs with approximate head of 44.50 Mtr and ICA of 2718 Ha (fixed) The requirement of water is about 0.51 TMC.

The details of area is worked out from the detailed survey the length of raising main and total head is calculated. The cropping pattern and duty, considered for this L.I.S is as per the Markandeya Reservoir project. As per the Markandeya Reservoir Project Report. The total area of 18215 Ha is considered for irrigation through Right Bank Canal. Accordingly it is proposed to take up these schemes as a part of Markandeya Reservoir Project. A line estimate for

Chachadi LIS Irrigation Scheme costing Rs. 2460 lakhs at schedule of rates for year 2004-05 (vide Lr No-CEN: EST: Chachadi LIS:WBA:2007-08 dated 27 July 2007) is approved along with the salient features & map showing details of the scheme for taking of further needful action.

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SCOPE OF WORK

CHACHADI LIFT IRRIGATION SCHEME

1. Peak discharge	Q	=	1.104 Cumecs.
			RL 721.600
	(-)	=	RL 678.598
		=	43.002 M

Bidders to include all system losses to arrive at total head.

2. Mechanical works.

This scope includes design, supply, installation, testing and commissioning of horizontal centrifugal pumps required of equal capacity. The scope includes MS suction and delivery piping of suitable diameters with foot valves with strainer, sluice valve and non-return valves, motor shall be suitable for operation at 433 volts 50 Hz AC supply and SPDP type with with necessary bends, taper, tees etc., including M.S manifold with outlet for Rising main the L.T motor shall be of suitable capacity with addition 5% marginal power for operating above pumps class B isolation to withstand temperature rise over and above ambient temrature 42 C as per IS standard.

3. Electrical works.

The includes following:

Supply erecting, testing and commissioning of L.T pump panel board , Auto : transformer starters, capacitors bank L.T cabling and earthing.

4. Rising main

Bidders to consider M.S pipes of suitable dia for rising main of required length : including kinetic air valves, Zero velocity valves and including necessary anchor, block, thrust blocks, excavation and back filling etc.

5. Outdoor transformer centre 11 K.V.

The scope includes following:

- I) Supply erection, testing and commissioning of step down transformer 11 KV/433 of suitable capacity out door mounting with off-circuit tap charger with Copper winding ONAN with initial fill of insulating oil, and fitted with standard accessories with bushing HV side and cable box LV side
 - II) Supply install connect test and commission *11 KV VCB KPTCL metering cubical with CT/PT divator motor including cabling earthing etc.
 - III) Providing earthing for transformer neutral and body, earthing for metering cubicle, Transformer GOS L.A fencing etc.,
6. The scope includes bringing power supply at 11 KV Approximate 5 kms from HESCOM station at Khanagaon including all materials & labour as per HESCOM requirement.

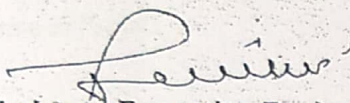
7. CIVIL WORKS


- I. Underground sump, RCC underground sump shall be constructed of suitable capacity with intake canal of suitable section with capacity of 126% discharge capacity. The intake canal shall be lined canal.
- II. Pump house: Pump house shall be RCC framed structure constructed adjacent to underground sump of suitable dimensions to house required centrifugal pumps with electrical panels with starters etc, RCC roof shall be provided. The floor shall be of

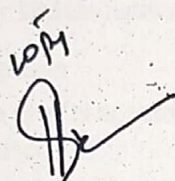
concrete with necessary raised foundation for installing pumps, rolling shutters/ steel doors/windows shall be provided. Internal/External light shall be provided.

III. **Delivery chamber:** Delivery chamber shall be a ground reservoir of RCC construction having storage capacity of 1.50 minutes of pumping capacity. The rising main shall enter at bottom and rise above FSD level at the centre of chamber with cascading arrangements and pipe outlet shall be covered with steel mesh necessary vents shall be provided for discharging to canal.

IV. Constructing main canal 0.00 to 5.00 km from delivery chamber, including earthwork, lining, CD work for main canal of Chachadi lift irrigation scheme under MRBC on lumpsum turnkey basis including operation and maintenance of scheme for ~~3~~ 5 years for date of completion.


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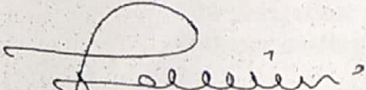

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
NAME OF WORK : - Design, supply, installation, testing and commissioning of Horizontal centrifugal pumps 3 nos connected to LT motors of required capacity and head, including LT panel, starters, 11 KV Transformer center including bringing power supply at 11kv for approximate length of 5.00 kms including civil works of Intake canal, UG Sump, Pump house, M. S. Pipe, Rising main, Delivery chamber and Design drawing on Lump sum turnkey basis, supply of spare parts and Tools including 2 years operation of scheme from the date of Completion for mechanical portion of CHACHADI lift irrigation scheme offtaking at 33.65 km of Markandeya right bank canal.

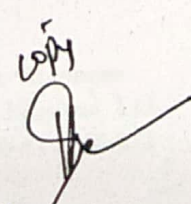
SALIENT FEATURES

1 Name of Project	: Chachadi Lift Irrigation scheme providing irrigation facility to 3 villages of Gokak taluk, 4 villages of Bailhongal Taluka and 2 villages of Saudatti taluk of Belgaum District.
2 Water source	: Markandeya Right Bank canal
3 Location	: Near Midakanatti at Ch : 33+650 of MRB Canal ✓
4 Purpose	: Irrigation This area is approximately 25 KM from Gokak of Belgaum ✓
5 Access	: District.
6 Irrigable command area	: 2718 Ha.
7 Head Discharge	: 1.104 Cumecs ✓
8 Total Head	: 45.00 mtrs ✓
9 Length of Rising main	: 300 mtrs. ✓
10 Dia of Rising main	: 885 mm MS pipe 8 mm thick ✓
11 Pump capacity	: 350 HP - 3 Nos. + 1 Spare motor
12 No. of pumps required	: 3 ✓
13 No. of stand by pumps	: -
14 Size of Delivery Chamber	: 5.00 x 7.00 x 3.00 mtr. ✓
15 Length of Canal	: 35 kms. ✓
16 Villages benefited	: Midakanatti, Keshappanatti, Yelapatti, Mastamaradi, Sunnadakoppi, Vannur, Kalakuppi, Chikkabudnur and Chachadi. ✓


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