

Abstract

Work - Supply, install and commission Electromagnetic Flow Meter (EMF) for Raw/Pure water with protection for size 1000 mm diameter rising main and 100 meter cable length at Kotgal Lift Irrigation Scheme, Kotgal, Dist.-Gadchiroli.

Description of Item

Full-Bore Electromagnetic

Supply, install and commission Electromagnetic Flow Meter (EMF) As Per ISO 4064, for Raw/Pure water with accuracy +/- 0.5% of measured value & protection as per given specifications for size 100 mm- 1000mm including sensor, transmitter surge arrestor, cable/GI duct if suitable size for 25 mtrs built in GSM/GPRS (with Simcard and its charges, valid for 36 months) including the pipe cutting, leveling and installation of flow meter in the pipelines with necessary tool tackles, cranes including 36 months guarantee etc complete, as may be required at site & based on technical specifications.

1000 mm Nominal Diameter Flowmeter

Mandatory Accessories:

- 1) The sensor should be as per IP-68 protection & with flanges of PN 10 rating from CS-1 No.
- 2) The sensor coil housing shall be IP-68. This protected against external magnetic field.
- 3) The transmitter shall have one current 4 m A-20 mA output
- 4) The current output shall be galvanically / optically isolated. transients without damage. It shall be fitted with switched mode power supply capability 85-260 V & 45-65 Hz to cope up with power transient without damage
- 5) Signal & power cables shall be of 50 Mtrs length/each.
- 6) Conduit pipe (PVC Plumbingschedule 4) 25 mm diameter with suitable rating of cable with digging, laying & concealed the duct - 25 mtrs/each
- 7) UPS working on 230 V AC, 50Hz power supply suitable for 12hrs continuous operation- 1 No.
- 8) Data storage capacity withn built in or separate for date time, actual flow rate, totaliser & error messages if any with storage capacity of 120 days -1 No.
- 9) Proper earthing shall be provided for protection against high voltage surge.

10) Suitable over voltage protection unit for protection of instrument from higher voltage (upto 275 V-300 V AC)

11) Fixing flow meter transmitter to internal walls of buildings in a suitably designed panel cabinet with proper locking arrangement with glass window on front door for seeing the readings of flow transmitter and data logger without opening of the panel cabinet. electrical power supply from near by apparatus. The panel cabinet shall be It should house complete ancillaries and including the provision for connection of prewired and with suitable gland entries.

Optional Accessories:

- 1) Providing and supplying DI/CI in-line adapters with mechanical joints & concentric
 - 2) Wireless communication device to communicate between central computer & flow transmitter installed at remote site with GSM based system
 - 3) DA Scheduler software for CSV file storage and data acquisition
 - 4) OPC Software to be installed in central PC for SCADA interface as may be necessary
- Working Condition & Specifications**
- a) Water Temp : 10 Deg to 50Deg
 - b) Water Quality: Raw water, turbid in nature. Potable
 - c) Operating pressure: 10-15 Kg./cm²

5) Sensor/Transmitter cable of following specification:

X 0.38 mm² PVC cable with common, braided copper shield (-7mm dia) and individually shielded cores- with empty pipe detection 9 EPD): 4X0.38 mm² PVC cable with common, braided copper shield (-7 mm dia) and individually shielded cores-conductor resistance: <=50 Ohm/Km-Capacitance: core/shield: <=420 pF/m.- permanent operating temperature:-20.....+80 Deg C

Quantity	Unit	Rate Rs.	Amount Rs.
1	Each	776780.00	776780.00

797346.6

797346.6

Name of Work
size 1000 m

Sr.

	Coil cable of following specifications : 3 X 0.75 mm ² PVC cable with common, braided copper shield (-7mm dia) Conductor resistance: ≤ 37 Ohm/Km-Capacitance: core/core, shield grounded: ≤ 120 pF/m.-permanent operating temperature: -20+/-80 Deg C				
2	Sensor/Transmitter cable of following specification: X 0.38 mm ² PVC cable with common, braided copper shield (-7mm dia) and individually shielded cores- with empty pipe detection 9 EPD): 4X0.38 mm ² PVC cable with common, braided copper shield (-7 mm dia) and individually shielded cores-conductor resistance: ≤ 50 Ohm/Km-Capacitance: core/shield: ≤ 420 pF/m.- permanent operating temperature: -20.....+80 Deg C	50.00	Mtr	207.06	10353.00
3	1 X 0.75 mm ² PVC cable with common, braided copper shield (-7mm dia) Conductor resistance: ≤ 37 Ohm/Km-Capacitance: core/core, shield grounded: ≤ 120 pF/m.-permanent operating temperature: -20+/-80 Deg C	50.00	Mtr	187.68	9384.00
4	Lowering, laying and jointing G. I. pipes and specials of following class and diameter including conveyance from stores to site of works, all labour, etc. complete either underground or in vertical position, as directed by Engineer-in-charge. b) Medium iii) 25mm. (2.4kg./m)	75.00	Rmt	226.60	16995.00
5	Transportation Charges for Material and Machinery Distance Between Kotgal LIS and Gadchiroli (To And Fro) = 30 km Transportation Charges of material and machinery by Bolero Maxx Pick Up, Camper Minimum 100 km (To & Fro)	2.00	Trip	2082.00	4164.00
834078.6		Sub Total Rs..		817676.00	
		Add 1% Insurance, Rs.		8176.76	
150134.15		Total, Rs.		825852.76	
150134.15		Add 18% GST, Rs.		148653.50	
984212.75		Total, Rs.		974506.26	
984213/-		Say Rs..		974506.00	

(Amount in words : Rupees Nine lakh Seventy Four Thousand Five Hundred Six only)

Estimate Prepared By

Nine lakh eighty four thousand two hundred thirteen only.

D.M.Dhole

Assistant Engineer Gr-II

N.B. Agashe

Deputy Engineer

Lift Irrigation Mechanical

Sub Dn No.3 Chandrapur

Sanctioned Estimate No. 19 Year 2020-21 Dt. 08-04-2021

Amount Rs. 984213 In Words. Nine lakh eighty

four thousand two hundred thirteen only.

Executive Engineer
Mechanical Lift Irrigation Dn No. 2
Chandrapur