

**CONTRACT NO.**

# **WATER AND SANITATION MANAGEMENT ORGANISATION GANDHINAGAR**

**(A WHOLLY OWNED GOVERNMENT OF GUJARAT UNDERTAKING)**



**BID DOCUMENT FOR CONSTRUCTION OF VARIOUS COMPONENTS INCLUDING TRANSPORTATION OF P.V.C PIPELINE, SPECIALS FOR FITTING, SERVICE SADDLE EXCAVATION, LOWERING, LAYING, JOINTING, REFILLING, JOB CONNECTION, ENCASING, VALVE, VALVE FITTING, VALVE CHAMBER OF DISTRIBUTION AND BORE TO SUMP PIPELINE, RISING MAIN SUMP TO ESR HDPE PIPELINE, R.C.C. E.S.R. 2,50,000 LITER CAPACITY AND 18.0 MT HEIGHT, HOUSE HOLD CONNECTION, TRANSPARENCY, WATER QUALITY BOARD AND SLOGAN PAINTING WORKS. AT. MOTA ZINZUDA VILLAGE WATER SUPPLY SCHEME. TALUKA: SAVARKUNDLA, DISTRICT: AMRELI. UNDER AUGMENTATION TAP CONNECTIVITY IN RURAL AREA GENERAL PROGRAMME.**

**Estimated Cost: Rs. 61,21,585.00**

## **VOLUME - IIC TECHNICAL DATA SHEETS CIVIL**

**CHIEF Engineer  
WATER AND SANITATION MANAGEMENT ORGANISATION  
WASMO - GANDHINAGAR.**

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<b>DATA SHEET FOR RCC ESR</b>				
<b>Sr. No.</b>	<b>Details</b>	<b>Parameter / Requirement</b>		
<b>1.0</b>	<b>GENERAL</b>			
1.1	<b>Item</b>	<b>Elevated Storage Reservoirs</b>		
1.2	Location	<b>As Per Below</b>		
1.3	Capacity	<b>As Per Below</b>		
1.4	Staging height	<b>As Per Below</b>		
	Location	Capacity	Height	No
i	Mota Zinzuda	2.50 Lakh	18.0	1
1.5	Type	RCC (M-30 ) As per Contractor Design		
<b>2</b>	<b>DESIGN DATA</b>			
<b>2.1</b>	<b>Control levels</b>			
	<b>a) Average ground level</b> <b>b) Bottom of tank</b> (Top of Outlet pipe) <b>c) Full supply Level</b>	As per Design		
2.2	Free Board	0.30 M min from beam bottom or lowest point of Dome for dome type roof.		
2.3	SBC at site	Contractor has to carryout test for SBC at proposed location for design Purpose.		
2.4	Water Table	Contractor has to carry out investigation for design purpose during monsoon season, retrieve data of last five years from concern Unit Manager and as per actual site condition during execution and maximum depth of water table should be consider for design purpose. The SBC found on site will be taken for designing propose accordingly and no minimum SBC Criteria should be followed.		
2.5	Seismic	As per latest IS code		
2.6	<b>Water Density</b>	9.81 kN/cum		
<b>3.0</b>	<b>DESIGN REQUIREMENT</b>			
3.1	IS	1) The design of RCC ESR shall be in accordance with IS-1893-(Part-I) "Criteria for Earthquake Resistant as per Seismic Zone – III Design of Structures" Part-I General provisions and Buildings and IS - 1893-(Part-II (2002) " Liquid Retaining Tanks (Elevated and Ground supported " and IS 875 Part-III, IS 13920, IS 4326. 2) As per IS : 11682 - 1985 page 25 Typical reinforcement details " The " Ties or "Links" jointing to vertical bars of shaft is highly needed. 3) IS 3370 Part I to IV 1995 or latest revised 4) IS 456-200 or latest revised 5) IS 875 Part i to iii or latest revised		

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		6) IS 10262-2009 or latest revised 7) IS 13920-1993 or latest revised		
3.2	Grade of concrete	M-30 (Minimum)		
3.3	Grade of Steel	Only TMT Fe-500 steel to be used		
3.4	Minimum Reinforcement	Design requirements as set out in relevant IS codes in respect of steel shall be fully satisfied		
3.5	Foundation	The foundation shall be designed for actual S.B.C. of strata Confirmed by plate load bearing test.- The total depth shall not be less than 2.0 m for individual footing.- Minimum thickness of 100mm to be considered for Levelling concrete.		
3.6	Vertical Staging	The RCC shaft support as per IS 11682 including door opening and suitable air ventilation as per Design and drawing. Also provide circular staircase inside shaft as per specification. The staging shall be Designed for ductile detailing.		
3.7	Container Wall	Minimum of 200 mm thickness		
3.8	Conical Wall	Minimum of 225 mm thickness		
3.9	Bottom Slab	Minimum of 200 mm thickness		
3.10	Top Slab	Minimum of 150 mm thickness (If dome is provided at the top the thickness shall not be less than 125 mm)		
3.11	Braces	The width of braces shall be minimum 250 mm. There shall be minimum distance of 75 mm Between two adjoining reinforcement bars provided in the braces as well as beams.		
3.12	Clear cover	Foundation-60mm Columns Braces, beams, slabs-40 mm & Other element as per latest IS code		
3.13	Dia of DI/CI pipe vertically Double flange	Dia in mm		
		Inlet	Outlet	Overflow
		Wash out		
		Only DI/CI pipe shall be used as per relevant IS code. The Dimensions of Inlet, Outlet, Overflow & Washout pipes are to be considered as per design for a maximum velocity constrain of 1.5 m/s. with extra outlet of 100 mm dia DI pipe		
3.14	Length of pipes	As per Contractor Design From container to GL (vertically) upto Duck foot Bend, and minimum 5.0 meter along ground after edge of shaft/ column (Horizontally)		
3.15	Size of Sluice Valve (IS- 13095)	Same size for Outlet & Washout pipe ,extra outlet (Total 4 No. Or AS Per Design)		
3.16	Air Ventilation	Proper ventilation as per Specification shall be Provided		

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3.17	Size of Valve Chamber	As per design valve chamber should be water Tight and 0.5m above Ground level. No outside water Should be Come inside valve Chamber
	i) Internal Dimension	1.0 mts. Depth (Average)
	ii) Thickness of Masonry	23 cm
	iii) Type of Masonry	Brick Masonry in C.M. 1:6
	iv) Plaster and pointing	15 mm thick C.M. 1:3
	v) Foundation	as per Design
	vi) Manhole Frame and Cover for chamber	R.C.C Precast 100 mm thick
	vii) RCC Slab or Precast slab	as per Design
3.18	Minimum Reinforcement for all Members	Design requirements as set out in relevant IS codes in respect of all Reinforcements shall be Strictly followed.
3.19	Painting	For Exterior weather proof exterior emulsion paint (Two coat) of approved brand and of required shade of wall Surface to give an even shade after thoroughly brushing the surfaces clean of all grease, dirt, loose pieces of scales and For internal Wall painting (two coats) with plastic emulsion paint of approved brand and manufacture on undecorated wall surface to give an even shade including thoroughly brushing the surface free from mortar droppings and other foreign matter and sand papered smooth.
3.20	Cowl type ventilator	100 mm dia. 2 No. minimum or as per design (Minimum vent should be provided as per design criteria) 15Kg/No
3.21	CI MH Frame and cover at top of Container	0.90 x 0.60 m (54 Kg) 2 Nos
3.22	Inside Plaster	20 mm thick CM 1:1.5 niru fin shed water proofing compound for container and for remaining portion 12 mm thick C.M. – 1:4 niru finished cement mortar plaster.
3.23	Water Level Indicator	Water Level Indicator & lighting arrestor top to bottom copper strip up to 1 mt. below G.L.
3.24	Other Requirement	All other Requirement as per Price bid & specifications Including all obligatory requirement of department. Approved brand whither coat paint, SS pipe railing ,water level indicator ,lightening arrestor etc.

Sign of Contractor

Unit Manager  
D.W.S.U.- (WASMO)  
Amreli

# **DATASHEETS**

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<b>SLUICE VALVE</b>			
<b>Name of Village Works: Mota Zinzuda</b>			
<b>Sr. No.</b>	<b>Particulars</b>	<b>Departmental Requirement</b>	<b>Bidders' Data</b>
<b>1.0</b>	<b>GENERAL</b>		
1.1	Type	Both Ends Flanged / Non-Rising Spindle Type	
1.2	Make	As per Vendor List	
1.3	Rating	PN 1.5	
1.4	Manufacturing Standard	IS: 14846 - 2000 (For Valve) & IS: 1538 -1976 (For Flanges Drilling Standard)	
1.5	Sizes and Quantity	As per Tender Specifications	
1.6	Mode of Operation	1) Manual Through Hand Wheel Up to 400 mm Dia. Size & 2) Manual Through Spur Gear Box Above 400 mm Dia. Size	
1.7	Weight of Complete Valve	Bidder to Specify	
1.8	Dimensions of Complete Valve (L x B x H in mm)	Bidder to Specify	
<b>2.0</b>	<b>MATERIALS OF CONSTRUCTION</b>		
2.1	Body, Bonnet, Wedge, Stuffing Box & Gland	Ductile Iron IS: 1865 Grade 400/15 / Cast Steel ASTM A 216 Gr. WCB	
2.2	Non-Rising Stem	Stainless Steel AISI - 410	
2.3	Renewable Body Seat / Wedge Face Ring	High Tensile Bronze Grade IS: 318 LTB II / Stainless Steel 304 / ASTM A217 Gr. CA 15	
2.4	Stem & Wedge Nut	SS 304	
2.5	Gland Packing	Jute & Hemp IS: 5414	
2.6	Hand Wheel	CI - IS 210 Gr. FG - 260	
2.7	Bonnet Nuts	Carbon Steel as per IS - 1367 CL 4.0	
2.8	Bonnet Bolts	Carbon steel as per IS - 1363 CL 4.6	
2.9	Bonnet Gasket	EPDM / Nitrile / Neoprene Rubber	
<b>3.0</b>	<b>HYDROSTATIC TEST</b>		
3.1	Body	As per IS 24 Kg/Cm <sup>2</sup>	
3.2	Seat	As per IS 16 Kg/Cm <sup>2</sup>	