

TENDER

(NIT NO. TA/TCL/**35**/22-23)

FOR

**ANNUAL REPAIR AND MAINTENANCE OF
SUBMERSIBLE PUMPS & PANELS IN BHEL
TOWNSHIP & WATER FILTRATION PLANT,
JAIL HILL, BHOPAL.**

PRICE BID

SECTION - VI



**TOWNSHIP CIVIL MAINTENANCE
BHARAT HEAVY ELECTRICALS LIMITED**

**(A Government of India Undertaking)
BHOPAL - 462 022 (M.P)**

PREAMBLE OF PRICE BID

1.0. This Price Bid consists of three Schedules:

1.1 Schedule A

Schedule A consists of two Annexures:

1) Annexure-I includes items based on previous work order.

Bidders are requested to quote their rate in Percentage above/below/at Par for Annexure-I.

2) Annexure-II – Scope of work

1.2 Schedule B

Schedule B gives the details of free issue materials given by BHEL.

1.3 Schedule C

Schedule C gives the details of Tools & Tackles provided by BHEL on Chargeable Basis.

2.0 The work to be carried out under the contract shall, except as otherwise provided in tender conditions, include all labour, materials, tools, plant, equipment, and transport which may be required in preparation of and for full & entire execution and completion of the Works. The descriptions given in the Schedule of Quantities shall, unless otherwise stated, be held to include waste on materials, carriage and cartage, carrying in return of empties, hoisting, setting, fitting and fixing in position and all other labours necessary in and for the full and entire execution and completion as aforesaid in accordance with good practice and recognized principles as laid down in Technical Specification & elsewhere in Tender Specification.

3.0 The price bid should not contain any condition. Conditional price Bids shall be summarily rejected.

4.0 The bidder should not leave any column blank in Price Schedules.

5.0 Price Quoted shall include all taxes, & duties except GST.

6.0 **Unless otherwise specified in the items involving cement or reinforcement steel, these items shall be issued free of cost by BHEL.**

**TOWNSHIP CIVIL MAINT. & CONST. DIVISION****SCHEDULE 'A'****Annexure: I**

Name of work : Annual repair and maintenance of Submersible pumps & Panels in BHEL Township & Water filtration plant, Jail Hill, Bhopal.

S.No	Description of items	Qty.	Unit	Rate	Amount
	Part-I				
1.1	Labour charges for:-				
a	Drawing pump set from borewell	1500.00	Rm	32.11	48165.00
b	Installation of pump set in borewell at site township	1500.00	Rm	32.11	48165.00
c	Cable to Cable jointing	150.00	No	40.12	6018.00
d	Panel servicing ,testing etc.	40.00	No	501.57	20062.80
e	Machining, Grinding & Balancing of rotor	40.00	No	401.27	16050.80
f	Disassembly & assembly of Motor	40.00	No	254.14	10165.60
g	Disassembly & assembly of pump	40.00	No	247.44	9897.60
h	Drawing & installation of open sub-pump set up to 5 Mtr. Depth of Raw water	25.00	No	1,070.05	26751.25
	Part-II				
2.1	Supplying & fixing of new rotor suited to desired capacity of pump	2.00	No	2,073.21	4146.42
2.2	Supplying & fixing of new Stator suited to desired capacity of pump	2.00	No	2,875.73	5751.46
2.3	Winding of motor				
a	Above 3 to 5..5 HP	20.00	No	1,605.06	32101.20
b	6 to 8 Hp	20.00	No	1,922.73	38454.60
c	8.5 to 12 HP	20.00	No	2,273.84	45476.80
d	12.5 to 15 HP	20.00	No	2,340.72	46814.40
e	16 to 20 HP	10.00	No	3,912.34	39123.40
f	21 to 25 HP	2.00	No	4,831.91	9663.82
2.4	Pressing, Clearing, Cutting, machining & balancing of stators & rotors				
a	Above 3 to 5.5 HP	20.00	No	244.11	4882.20
b	6 to 8 HP	20.00	No	244.11	4882.20
c	8.5 to 12 HP	20.00	No	244.11	4882.20
d	12.5 to 15 HP	20.00	No	244.11	4882.20
e	16 to 20 HP	10.00	No	244.11	2441.10
f	21 to 25 HP	2.00	No	244.11	488.22
2.5	Supply & fixing of thrust bearing housing	2.00	No	50.16	100.32
2.6	Supply & fixing Lower bearing housing.	20.00	No	203.97	4079.40
2.7	Supply & fixing Upper bearing housing	20.00	No	158.83	3176.60
2.8	Supply & fixing Adopter piece	20.00	No	147.13	2942.60
2.9	Supply & fixing Revolving disc	20.00	No	317.67	6353.40
2.10	Supply & fixing Thrust bearing exile (GRAPHITE)	20.00	No	210.67	4213.40
2.11	Supply & fixing Thrust Bearing exile (Tilting Pad Type)	2.00	No	215.68	431.36
2.12	Supply & fixing Motor bearing bush	50.00	No	127.07	6353.50
2.13	S/F a set of rubber parts	20.00	No	73.56	1471.20
2.14	S/F Flange lower	20.00	No	86.94	1738.80
2.15	S/F flange upper	30.00	No	210.67	6320.10
2.16	S/F sand guard	20.00	No	48.48	969.60
2.17	S/F Sleeve for rotor	80.00	No	76.91	6152.80
2.18	S/F motor Base	20.00	No	284.23	5684.60
2.19	S/F bearing bush top	30.00	No	137.10	4113.00
2.20	S/F cable gromat	10.00	No	2.17	21.70

2.21	S/F rocker	30.00	No	31.78	953.40
2.22	S/F a set of O'Ring	30.00	No	28.42	852.60
2.23	S/F Nylock nut	80.00	No	8.70	696.00
2.24	S/F Balancing ring for motor	20.00	No	48.48	969.60
2.25	S//F Allen Screw	70.00	No	5.34	373.80
2.26	S/F Cable Connecting Piece	50.00	No	150.48	7524.00
2.27	S/F Cable Terminal Plate	30.00	No	9.36	280.80
2.28	S/F seal	30.00	No	51.82	1554.60
2.29	S/F Diaphragm pressure aqualizer	2.00	No	53.51	107.02
2.30	S/F Drain plug	60.00	No	8.18	490.80
2.31	S/F Screw for Cable Guard	10.00	No	2.43	24.30
2.32	S/F Dust Cover	20.00	No	66.88	1337.60
2.33	S/F Rotor Nut	20.00	No	41.80	836.00
2.34	S/F plate for motor base	2.00	No	93.63	187.26
2.35	S/F Motor Cupling	30.00	No	147.13	4413.90
2.36	S/F PVC CABLE				
a	3c X 1.6 sq. mm	20.00	Rm	50.16	1003.20
b	3c X 2.5 sq. mm	20.00	Rm	58.52	1170.40
c	3c X 4.0 sq. mm	100.00	Rm	78.59	7859.00
d	3c X 6.0 sq. mm	100.00	Rm	98.64	9864.00
2.37	S/F Pin for TB housing	2.00	No	4.10	8.20
2.38	S/F Circlip	40.00	No	16.72	668.80
2.39	S/F stud	10.00	No	6.02	60.20
2.40	S/F copper ring for rotor	10.00	No	55.84	558.40
2.41	S/F End Lamination	2.00	No	61.86	123.72
2.42	S/F Play Adjust Top Bush	2.00	No	26.74	53.48
2.43	Cable jointing to motor terminal	60.00	No	115.36	6921.60
	Part-III				
3.1	S/F Diffuser(PVC)	150.00	No	95.31	14296.50
3.2	S/F Diffuser (ALLU./BRONZ)	40.00	No	212.34	8493.60
3.3	S/F Sucting housing	20.00	No	155.49	3109.80
3.4	S/F stage case	80.00	No	234.07	18725.60
3.5	S/F non return valve Gun Metal Non return valve on G.I. pipe line out side bore well	10.00	No	127.07	1270.70
3.6	S/F Bush for NRV	30.00	No	60.19	1805.70
3.7	S/F Sleeve for suction housing	20.00	No	66.88	1337.60
3.8	S/F Connecting piece	20.00	No	60.19	1203.80
3.9	S/F Discharge outlet	10.00	No	245.78	2457.80
3.10	S/F Thruct screw	10.00	No	42.64	426.40
3.11	S/F Wear ring	10.00	No	108.68	1086.80
3.12	S/F Distance bush	30.00	No	51.82	1554.60
3.13	S/F Key for impellers	20.00	No	3.01	60.20
3.14	S/F seat for NRV	2.00	No	19.40	38.80
3.15	S/F Cone for NRV	2.00	No	12.70	25.40
3.16	S/F Ring for NRV	2.00	No	7.02	14.04
3.17	S/F stem for NRV	2.00	No	10.36	20.72
3.18	S/F Plate for NRV	2.00	No	10.36	20.72
3.19	S/F Locking strips	10.00	No	3.68	36.80
3.20	Rectification of shaft	10.00	No	10.36	103.60
3.21	S/F Thrust bearing housing	10.00	No	147.13	1471.30
3.22	S/F D.O. sleeve	30.00	No	55.18	1655.40
3.23	S/F locking ring for:				
a	50 mm outlet	10.00	No	17.39	173.90
b	80 mm outlet	2.00	No	20.07	40.14
3.24	S/F Impellers	180.00	No	326.03	58685.40
3.25	S/F Bushes	120.00	No	66.88	8025.60
3.26	S/F Key for Shaft	2.00	No	8.53	17.06

	3.27	S/F bearing sleeves	180.00	No	38.45	6921.00
	3.28	S/F pump shaft	80.00	No	42.46	3396.80
	3.29	S/F Discharge outlet bush	10.00	No	48.15	481.50
	3.30	S/F Discharge outlet sleeves	10.00	No	50.16	501.60
	3.31	S/F coupling	30.00	No	175.55	5266.50
	3.32	S/F upper lock sleeve	20.00	No	37.79	755.80
	3.33	S/F guide van	10.00	No	43.47	434.70
	3.34	S/F neck ring GM	20.00	No	112.01	2240.20
	3.35	S/F Ball bearing bush GM	10.00	No	128.74	1287.40
	3.36	S/F running sleeves SS	2.00	No	41.80	83.60
	3.37	S/F Adjust collar	10.00	No	17.72	177.20
	3.38	S/F Strainer	10.00	No	52.16	521.60
	3.39	S/F Top screw GM	10.00	No	95.64	956.40
	3.40	S/F body of reflux valve	2.00	No	183.24	366.48
	3.41	S/F full threaded stud	150.00	No	9.69	1453.50
	3.42	S/F ball adaptor	10.00	No	95.31	953.10
	3.43	S/F impeller allum. bronz	2.00	No	279.22	558.44
	3.44	S/F bore cap with nuts, bolts and washers complete				
	a	With hole	10.00	No	153.81	1538.10
	b	Without hole	2.00	No	153.81	307.62
	3.45	S/F of M.S. clamps with nuts, bolts complete				
	a	For 50 mm pipe	20.00	Pair	187.26	3745.20
	b	For 80 mm pipe	2.00	Pair	215.68	431.36
	3.46	S/F M.S. flanges with nuts, bolts & washers complete				
	a	For 50 mm G.I. pipe	5.00	No	162.18	810.90
	b	For 80 mm G.I. pipe	5.00	No	162.18	810.90
	3.47	S/F G.I. seamless heavy duty long socket				
	a	50 mm dia.	80.00	No	83.60	6688.00
	b	80 mm dia.	20.00	No	108.68	2173.60
	3.48	S/F Impeller Bronze for open well sub pump set up to 5 mtr depth of raw water	6.00	No	1,488.03	8928.18
		Part-IV				
	4.1	S/F Main switch 16 AMP	5.00	No	501.57	2507.85
	4.2	S/F Relay 11 HP	10.00	No	892.82	8928.20
	4.3	S/F Contactor 25 AMP	10.00	No	1,237.24	12372.40
	4.4	S/F Contactor 16 AMP	10.00	No	969.72	9697.20
	4.5	S/F Overload relay – 5 HP	10.00	No	835.97	8359.70
	4.6	S/F No volt coil	10.00	No	122.05	1220.50
	4.7	S/F moving contactor 15 AMP	10.00	No	1,103.48	11034.80
	4.8	S/F Contactor 32 AMP	10.00	No	1,872.57	18725.70
	4.9	S/F Overload relay	10.00	No	953.01	9530.10
	4.10	Complete overhauling with wiring	10.00	No	986.44	9864.40
	4.11	S/F Time delay relay	10.00	No	601.90	6019.00
	4.12	S/F Volt meter	10.00	No	96.97	969.70
	4.13	S/F Contactor kit	10.00	No	96.97	969.70
	4.14	S/F Indicating lamp	10.00	No	11.04	110.40
	4.15	S/F Ampere Meter	10.00	No	96.97	969.70
	4.16	S/F Main switch 32 Amp	10.00	No	742.34	7423.40
	4.17	S/F Water level out auto controller relay	2.00	No	1,136.92	2273.84
	4.18	S/F over load relay for 10 to 20 HP	10.00	No	1,160.32	11603.20
	4.19	S/F Internal Kit DOL	10.00	No	96.97	969.70
	4.20	S/F Terminal Kit star /delta	10.00	No	150.48	1504.80
	4.21	S/F Push Button	10.00	No	60.19	601.90
	4.22	S/F Single Phasing Protection Device	10.00	No	1,116.86	11168.60

	4.23	S/F Main Circuit Braker	10.00	No	969.72	9697.20
	4.24	S/F Control Pannel protection G.I. sheet metal Box size 60 X 60 X 25 cm with suitable mounting at site	5.00	No	2,073.21	10366.05
	5.00	Capping of well assembly. (1 x 20 = 20 Nos.) for old bore well	20.00	Each	84.66	1693.20
					Total Rs.	868810.23
		Percentage quoted by the Contractor	%	Above	Below	At Par
		Percentage quoted by the Contractor in words				
		1. The Tenderer/ Contractor is requested to visit the actual sites to here a general acquaintance before quoting his rate.				
		2. It is under the contractor's scope to bring all the required tools, plants and skilled workers for execution of work.				
		3. The old, damaged materials/parts/components of pumps and/or motors, panels, cables etc, if required, shall be replaced with new ones. But in such cases, the replaced /damaged materials/parts/components, except for winding wire , shall, as far as possible, be deposited back to the depts.				
		4.Warranty against materils/ parts/ components replacing damaged ones shall be 3 months from the date of successful operation of pump/panel for the respective installation.				
		5.A Logbook shall be maintained by Engineer- in- charge to keep a record of above said repair & maintenance activities.				
		Signature of Contractor				

	ANNEXURE-II
SCOPE OF WORK	
Name of work : Annual repair and maintenance of Submersible pumps & Panels in BHEL Township & Water filtration plant, Jail Hill, Bhopal.	
The scope of work shall, broadly, be inclusive of but not limited to the following activities	
S. No.	Description of Activities
1	Repair and maintenance of submersible pump sets of different capacities, cables control panels etc. installed at various places including supply and fixing of required materials/ parts/ components as described in Annexure-I and as per direction of Engineer-in-Charge..
<u>Note:</u>	The above scope of work may undergo some minor changes based on final requirement of BHEL.
	Signature of Contractor

SCHEDULE – “B”								
Name of work : Annual repair and maintenance of Submersible pumps & Panels in BHEL Township & Water filtration plant, Jail Hill, Bhopal.								
-----NIL-----								
SCHEDULE – “C”								
-----NIL-----								
Signature of Contractor								