

TENDER SPECIFICATION
NO: BHE/PW/PUR/ SAKHM-GEO/1097

FOR

**CARRYING OUT TOPOGRAPHICAL SURVEY, SOIL INVESTIGATION WORKS
AND WATER DIVING TESTS AT POWER EQUIPMENT FABRICATION PLANT
OF BHEL**

AT

SAKOLI, DIST. BHANDARA, MAHARASHTRA

VOLUME :II – PRICE BID

BOOK NO.



BHARAT HEAVY ELECTRICALS LIMITED

(A GOVERNMENT OF INDIA UNDERTAKING)

POWER SECTOR - WESTERN REGION

SHREEMOHINI COMPLEX

345, KINGSWAY - NAGPUR 440 001

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Tender Specification Issue Details

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EARNEST MONEY DEPOSIT: Please see Notice Inviting Tender.

LAST DATE FOR: Please see Notice Inviting Tender.

TENDER SUBMISSION:

THESE TENDER SPECIFICATION DOCUMENTS CONTAINING **VOLUME-I-Tech Bid**, TECH SPEC FOR SOIL INVESTIGATION, **VOLUME- II-Price Bid** AND VOLIME-IBCD ARE ISSUED TO:

M/s.

PLEASE NOTE:

THESE TENDER SPECS DOCUMENTS ARE NOT TRANSFERABLE.

For Bharat Heavy Electricals Limited

AGM (Purchase)

Place: Nagpur

Date:

VOL-II-PRICE BID (SCHEDULE OF RATES AND QUANTITIES)
T.S. NO. BHE/PW/PUR/SAKHM-GEO/1097

BHARAT HEAVY ELECTRICALS LIMITED

TIRUCHIRAPPALLI - 620 014

BILL OF QUANTITIES

SECTION A							
Name of Work: Topographical & contour survey and quantity calculation for site levelling work at Power Equipment Fabrication Plant, BHEL, Sakoli, Bhandara District in Maharashtra State.							
SECTION	SR.No.	Description of work	Unit	Qty	Rate		Amount In Rs
					In Figures	In Words	
SEC A	1	Carrying out Topographical survey and preparing contour mapping with grid of 30m x 30m demarking the boundary with dimensions, incorporating all existng features like electrical and telephone distribution network, water tank, canals, ponds, roads, etc., as per scope of the work given below. (202.34 Ha = 500 Acres)	Ha	202			
SEC A	2	Carrying out bench mark from the nearest GTS bench mark or any other available source as approved by the engineer-in-charge to different locations in the project area including clearing of jungles and/or cutting trees and any other works required for completion of the said item etc all complete as per specification and instructions of the engineer-in-charge. (Construction of bench mark pillar to be paid separately)	km	5			
SEC A	3	Construction of bench mark pillar/reference pillar/grid pillar at different locations including clearing of jungles, excavation, supply of materials, pillar marking, backfilling, white washing, painting on MS plate etc all complete as per specification, drawings and instructions of the engineer-in-charge. (coordinates & bench mark to be established on the top of pillar)	Each	10			
SECTION A TOTAL OF SECTION A							

SECTION B							
Name of Work: Soil investigation works at Power Equipment Fabrication Plant, BHEL, Sakoli, Bhandara District, Maharashtra State.							
SECTION	SR. No.	Description of work	Unit	Qty	Rate		Amount
					In Figures	In Words	
SEC B	1	Transporting Plants, machineries, personnels, etc. to the site of work and withdrawing the same after completion of work in all respect.	LS	1			
SEC B	2	Drilling 150mm dia Bore holes through sand/clay/silt starata at the locations decided by the Engineer-in-charge by auger drilling up to 8.0m depth below the existing ground level or up to the hard starata with N value over 50 whichever is encountered earlier. The entire drilling work shall be done in the presence of technically qualified and experienced supervisor as per BIS code (latest) and or other relevant ASTM standards and as directed by the Engineer-in-charge.	R.M.	80			
SEC B	3	Carrying out standard penetration test in bore hole at various depths as per IS 2131-latest edition and or other relevant ASTM standards. All as per the standard specifications and instructions of Engineer-in-charge.	Each	10			

DATE
PLACE

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SECTION	SR.No.	Description of work	Unit	Qty	Rate	Amount In Rs
SEC B	4	Collection of disturbed soil sample in 100mm nominal dia tube at every 1.50m or changes of strata including packing and handling all complete as per IS 2131-latest edition and or other relevant ASTM standards. All as per the standard specifications and instructions of Engineer-in-charge.	Each	10		
SEC B	5	Collection of undisturbed soil sample in 100mm nominal dia tube wherever necessary including packing and all complete as per IS 2131-latest edition and or other relevant ASTM standards. All as per the standard specifications and instructions of Engineer-in-charge.	Each	10		
SEC B	6	Drilling bore holes using diamond bit in hard rock including collection and preservation of cores in core boxes, determination of core recovery, RQD and field test wherver applicable all as per standards.	Each	8		
SEC B	7	Collecting water samples and performing chemical analysis for determination of its pH values, sulphate & chloride contents and suitability for usage in RCC work as per IS 465-2000.	Each	10		
SEC B	8	Carrying out the following laboratory tests as per BIS - latest edition in the approved laboratory				
	a	Particle / Grain size analysis	Each	15		
	b	Liquid limit, plastic limit & Plasticity index	Each	10		
	c	Natural moisture content	Each	15		
	d	Specific gravity	Each	15		
	e	Classification of soils	Each	30		
	f	Proctor Compaction Test	Each	25		
	g	Bulk / dry density	Each	5		
	h	Shear charecteristics of disturbed / undisturbed samples using direct shear test.	Each	10		
	i	Unconfined compression test	Each	10		
	j	Consolidation test	Each	5		
	k	Swell test	Each	10		
	l	CBR test	Each	10		
	m	Dynamic shear modulus	Each	15		
	n	Moisture density relation	Each	10		
SEC B	9	Expert's Site visit	Each	3		
SEC B	10	Submitting detailed report alongwith definite recommendation of corresponding safe bearing capacity for depths of foundation system (report shall be submitted in quadruplicate including settlement calculation)	LS	1		
TOTAL OF SECTION B						

DATE
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SEALED AND SIGNED OF THE BIDDER

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SECTION	SR.No.	Description of work	Unit	Qty	Rate		Amount In Rs
SECTION C	Name of Work : Water diving and yield test (5 nos. of bores)						
SECTION	Sr.no.	Description of work	Unit	Qty.	Final Rate		Amount
					In Figures	In Words	
SEC C	1	Study of sites for availability of water in the plot area of BHEL, Bhandara Land -500 acre (202.34 Ha.) 5 nos. of bores (65 m. depth of bore drilling for each borewell)	per Rmt	350			
SEC C	2	Casing pipes erected in the bores. MS-B class 4 mm thick 150 mm dia @ depth of 65 m per bore.	per Rmt	350			
SEC C	3	Yield test for bores.	per bore	5			
SEC C	4	Drilling of bore wells by electrical resistivity Geophysical method.	per bore	5			
TOTAL OF SECTION C							
SUMMARY							Total In Rs
SEC A	Topographical & contour survey and quantity calculation for site levelling work at Power Equipment Fabrication Plant, BHEL, Sakoli, Bhandara District in Maharashtra State.						
SEC B	Soil investigation works at Power Equipment Fabrication Plant, BHEL, Sakoli, Bhandara District, Maharashtra State.						
SEC C	Water diving and yield test (5 nos. of bores)						
GRAND TOTAL (IN Rs.) (Sec A + Sec B + Sec C)							
In Words Rs.....Only							

DATE
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