

# TENDER DOCUMENT

TENDER SPECIFICATION NO.: BAP:ERN:TTPS:ESP:MECH:C:227

**NAME OF WORK :**

REVAMPING OF ELECTROSTATIC PRECIPITATOR (ESP) INVOLVING HANDLING AT SITE STORES/ STORAGE YARD, TRANSPORTATION TO SITE OF WORK, DISMANTLING OF EXISTING ESP COMPONENTS TO THE EXTENT REQUIRED, ERECTION, TESTING AND COMMISSIONING OF NEW COMPONENTS IN UNIT- 3, TUTICORIN TPS, TANGEDCO, TUTICORIN, TAMILNADU USING CONTRACTOR'S OWN TOOLS AND PLANTS, CRANES , CONSUMABLES, MANPOWER ETC.

## PART - II ( PRICE BID )



ERECTION SERVICES DEPARTMENT

**BHARAT HEAVY ELECTRICAL LTD**

BOILER AUXILIARIES PLANT

RANIPET - 632 406

## SCHEDULE OF RATES AND QUANTITY

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**NAME OF WORK :**

REVAMPING OF ELECTROSTATIC PRECIPITATOR (ESP) INVOLVING HANDLING AT SITE STORES/ STORAGE YARD, TRANSPORTATION TO SITE OF WORK, DISMANTLING OF EXISTING ESP COMPONENTS TO THE EXTENT REQUIRED, ERECTION, TESTING AND COMMISSIONING OF NEW COMPONENTS IN UNIT- 3, TUTICORIN TPS, TANGEDCO, TUTICORIN, TAMILNADU USING CONTRACTOR'S OWN TOOLS AND PLANTS, CRANES , CONSUMABLES, MANPOWER ETC.

**THE DETAILED SCOPE FOR THE VARIOUS ITEMS OF WORK SHALL BE AS PER THE TENDER SPECIFICATION (AND ANNEXURE), SPECIAL CONDITIONS OF CONTRACT ETC.**

S.No.	DESCRIPTION OF WORK	QUANTITY	UNIT	RATE / UNIT IN RS.	AMOUNT IN RS.
A	REVAMPING OF THE COMPLETE ELECTROSTATIC PRECIPITATOR (ESP), CONSISTING OF A TOTAL OF 20 (TWENTY) FIELDS, IN UNIT-3, TUTICORIN TPS OF M/s TANGEDCO. THE BREAK-UP OF THE WORK INVOLVED IS AS GIVEN IN THE ITEM SCHEDULES HEREIN. THE WORK INVOLVES DISMANTLING OF EXISTING ESP COMPONENTS / MATERIALS AND ERECTION, TESTING AND COMMISSIONING OF THE NEW COMPONENTS / MATERIALS SUPPLIED BY BHEL. FOR THE DETAILED SCOPE OF WORK REFER TO THE TENDER SPECIFICATION. THE BROAD SCOPE OF WORK IS GIVEN BELOW				
	IT MAY BE NOTED THAT THE DISMANTLING AND RE-ERECTION / ERECTION OF THE CONNECTED HVR TRANSFORMERS, DISCONNECTING SWITCHES, GEARED MOTORS, PLATFORMS , RAILINGS ETC. OF ALL THE FIELDS FORMS PART OF THE WORK IN EACH FIELD .				
	DISMANTLING / REMOVAL , SHIFTING FOR SAFE STORAGE AND RE-ERECTION (TO THE EXTENT REQUIRED) OF ALL THE EXISTING ELECTRICAL COMPONENTS LIKE CABLES, CABLE TRAYS, JUNCTION BOXES, HEATERS, STRUCTURAL SUPPORTS ETC, WHICH ARE ON THE OUTER ROOF OF ESP IS INCLUDED IN THE SCOPE OF WORK. REMOVAL AND RE-TERMINATION OF CABLES ETC. HAVE TO BE CARRIED OUT WITH NECESSARY CARE (TO AVOID ANY DAMAGE ) AND AS PER INSTRUCTIONS OF BHEL ENGINEER AT SITE. LAYING AND TERMINATION OF NEW CABLES SUPPLIED BY BHEL DOES NOT FORM PART OF THE WORK.				
	THE SCOPE OF WORK ALSO INCLUDES SHIFTING AND PROPER STORAGE OF DISMANTLED MATERIALS AT TANGEDCO YARD WORK INCLUDES HANDLING OF ESP COMPONENTS AT SITE STORES / STORAGE YARDS, TRANSPORTATION TO SITE OF ERECTION, HANDLING AT SITE OF ERECTION, PREASSEMBLY, WATER WASHING ETC. COMPLETE AND HOOK UP OF THE ENTIRE SYSTEM AS PER DRAWINGS OF BHEL WITH CONTRACTOR'S OWN TOOLS AND PLANTS, CRANES , MACHINARIES, MAN POWER AND CONSUMABLES.				
	ANY DISMANTLING AND RE-ERECTION OF EXISTING MATERIAL/S THAT IS REQUIRED TO COMPLETE THE SPECIFIED WORK SHALL FORM PART OF THE WORK AND BE CARRIED OUT AT NO EXTRA COST TO BHEL.				
	HIRING OF A TELESCOPIC BOOM CRANE OF MINIMUM 120 MT CAPACITY FOR ERECTION IS INCLUDED IN THE SCOPE OF WORK.				
	THE DISTANCE OF BHEL / CUSTOMER STORES / STORAGE YARD WITHIN THE PLANT TO SITE OF ERECTION IS IN A RADIUS OF ABOUT 2.0 KM . ALL THE ABOVE ESP MATERIALS & COMPONENTS WILL BE SUPPLIED BY BHEL ON FREE ISSUE BASIS.				

**SIGNATURE OF TENDERER**

S.No.	DESCRIPTION OF WORK	QUANTITY	UNIT	RATE / UNIT IN RS.	AMOUNT IN RS.
A. 01	REVAMPING OF FIELD OF ESP BY DISMANTLING OF THE COMPLETE INTERNALS AND ERECTION , ALIGNMENT, TESTING AND COMMISSIONING OF NEW ESP COMPONENTS / MATERIALS SUPPLIED BY BHEL. THE FIELD INTERNALS CONSIST OF COLLECTTING FRAMES AND ELECTRODES, EMITTING FRAMES AND ELECTRODES, SHOCK BAR GUIDE ASSEMBLY, RAPPING SYSTEMS AND THEIR DRIVES, HOPPER DEFLECTION PLATES ETC., INCLUDING ROOF BEAMS, SUPPORT AND SHAFT INSULATORS, INSULATION WOOL ON INNER ROOF, INNER ROOF PANELS, OUTER ROOF PANELS, PLATFORMS, STAIRS, LADDERS, RAILINGS ETC. FOR ESP FIELDS IN UNIT-3, TUTICORIN TPS. APPROX. WEIGHT OF MATERIALS TO BE REPLACED (WITH NEW MATLS) IN EACH FIELD IS APPROX. 48 MT. THIS IS ONLY AN INDICATIVE WEIGHT AND IS LIABLE TO VARY. FOR DETAILED SCOPE OF WORK REFER TO THE TENDER SPECIFICATION.	14.00	FIELDS		
A. 02	RECTIFICATION OF FIELDS OF ESP BY DISMANTLING OF THE DAMAGED INTERNALS AND ERECTION, ALIGNMENT , TESTING AND COMMISSIONING OF NEW COMPONENTS / MATERIALS SUPPLIED BY BHEL. SCOPE OF WORK INCLUDES REMOVAL AND RE-ERECTION OF INNER ROOF, OUTER ROOF ETC. TO THE EXTENT REQUIRED. RECTIFICATION OF INTERNALS INCLUDES REPLACEMENT OF SHAFT INSULATORS, EMITTING ELECTRODES, SHOCK BAR GUIDE ASSY, COMPLETE COLLECTING AND EMITTING RAPPING SYSTEM COMPLETE (INCLUDING GEARED MOTORS ETC.), HOPPER DEFLECTION PLATES ETC. COLLECTING ELECTRODES (700 Nos.) AND SHOCK BARS (200 Nos.) HAVE TO BE REPLACED, IN LOCATION INDICATED BY BHEL. THE APPROX. WEIGHT OF MATERIALS TO BE REPLACED (WITH NEW MATLS) IN EACH FIELD IS APPROX. 12 MT. THIS IS ONLY AN INDICATIVE WEIGHT AND IS LIABLE TO VARY.	6.00	FIELDS		
A. 03	RECTIFICATION AND REPLACEMENT OF INLET FUNNELS, GAS DISTRIBUTION (GD) SYSTEM AND PARTITION WALLS IN ALL THE PASSES OF ESP. DISMANTLING AND ERECTION NEW MATERIALS SUPPLIED BY BHEL IN THE INLET FUNNELS, GD SYSTEM AND PARTITION WALLS. THE MATERIALS TO BE REPLACED IN INLET FUNNELS INCLUDE TOP PLATE, STRUT TUBES, SPLITTERS ETC., IN GD SYSTEMS INCLUDE GD PRIMARY AND SECONDARY SCREEN SHEETS, SUSPENSION ARRANGEMENT, DEFLECTION PLATES COMPLETE , SUPPORTS ETC., AND IN PARTITION WALLS INCLUDE REPLACEMENT OF DAMAGED PLATES, PATCH WORK WELDING ETC. APPROX. WEIGHT OF MATERIALS TO BE REPLACED (WITH NEW MATLS) IN EACH PASS IS APPROX. 9.0 MT. THIS IS ONLY AN INDICATIVE WEIGHT AND IS LIABLE TO VARY. (A SET REFERS TO INLET FUNNELS, GD SYSTEM AND WALLS / PARTITION WALLS IN A PASS OF THE ESP - REFER TO TENDER SPECIFICATION FOR THE AREA OF WORK IN EACH PASS)	4.00	SETS		

SIGNATURE OF TENDERER

S.No.	DESCRIPTION OF WORK	QUANTITY	UNIT	RATE / UNIT IN RS.	AMOUNT IN RS.
<b>B</b>	<b>PROVIDING FOLLOWING MANPOWER SUPPLY ASSISTANCE .</b>				
B. 01	ROUND THE CLOCK WATCH & WARD FOR BHEL SITE OFFICE (02 months X 3)	<b>6.00</b>	<b>MAN MONTH</b>		
B. 02	01 NO. CLERK WITH KNOWLEDGE OF COMPUTER OPERATION. THE SCOPE OF THIS MANPOWER SUPPLY INCLUDES PROVIDING ONE NO. LATEST DESK TOP PERSONAL COMPUTER AND ONE LASERJET MULTIFUNCTION DEVICE WITH FAX CUM SCANNER CUM PRINTER FUNCTIONS FOR BHEL SITE OFFICE. (INCLUDING LICENSED OS , SERVICES , MAINTENANCE OF THE COMPUTER SYSTEM AND SUPPLY AND REPLACEMENT OF SPARES & PRINTER CARTRIDGES AS REQUIRED.)	<b>2.00</b>	<b>MAN MONTH</b>		
B. 03	01 NO. OFFICE BOY FOR BHEL SITE OFFICE.	<b>2.00</b>	<b>MAN MONTH</b>		
	<b>TOTAL</b>				
<b>TOTAL AMOUNT IN WORDS :</b>					

**SIGNATURE OF TENDERER**