

# TENDER SPECIFICATION

NO. BHE/PW/PUR/GFI-MECH+MMS/644

FOR

RECEIPT/COLLECTION, UNLOADING, HANDLING, STACKING, VERIFICATION OF ENTIRE PROJECT MATERIALS INCLUDING ELECTRICAL, CONTROL & INSTRUMENTATION EQUIPMENTS / ITEMS AND OTHER MATERIALS IN BHEL/CUSTOMER'S STORES/STORAGE YARD AS RECEIVED BY ROAD FROM MANUFACTURING UNITS/ TRANSPORTERS GODOWN UNDER MATERIALS MANAGEMENT, RECEIPT / COLLECTION / LOADING / UNLOADING/ TRANSPORTATION OF MATERIALS FROM BHEL / CLIENT'S STORES / STORAGE YARDS TO SITE OF WORK, ERECTION, TESTING, COMMISSIONING, FINAL PAINTING AND HANDING OVER OF 1X62 TPH HEAT RECOVERY STEAM GENERATOR WITH AUXILIARIES, STACK/ STEEL CHIMNEY WITH ASSOCIATED AUX, 1 XFr6 GAS TURBINE-GENERATOR SET WITH THEIR AUXILIARIES, BALANCE OF PLANT EQUIPMENTS / SYSTEMS WITH RELATED AUXILIARIES, INTEGRAL PIPING, FIELD / POWER CYCLE PIPING AND APPLICATION OF THERMAL INSULATION OF EQUIPMENTS / PIPING/VESSELS & TANKS ETC. FOR 1X33.3 MW COGENERATION POWER AND STEAM PLANT UNIT

AT

1X33.3 MW COGENERATION POWER AND STEAM UNIT  
GUJARAT NARMADA VALLEY FERTILIZERS COMPANY LIMITED  
DISTT. BHARUCH  
(GUJARAT)

PART II – PRICE BID

BOOK NO.



**BHARAT HEAVY ELECTRICALS LIMITED**  
(A GOVERNMENT OF INDIA UNDERTAKING)  
POWER SECTOR - WESTERN REGION  
345, KINGS WAY - NAGPUR 440 001

**BHARAT HEAVY ELECTRICALS LIMITED**  
(A GOVERNMENT OF INDIA UNDERTAKING)  
POWER SECTOR - WESTERN REGION  
SHREEMOHINI COMPLEX  
345, KINGS WAY - NAGPUR 440 001

**TENDER SPECIFICATION NO. BHE / PW / PUR / GFI- MECH+MMS/644**

NAME OF THE WORK:

RECEIPT/COLLECTION, UNLOADING, HANDLING, STACKING, VERIFICATION OF ENTIRE PROJECT MATERIALS INCLUDING ELECTRICAL, CONTROL & INSTRUMENTATION EQUIPMENTS / ITEMS AND OTHER MATERIALS IN BHEL/CUSTOMER'S STORES/STORAGE YARD AS RECEIVED BY ROAD FROM MANUFACTURING UNITS/ TRANSPORTERS GODOWN UNDER MATERIALS MANAGEMENT, RECEIPT / COLLECTION / LOADING / UNLOADING/ TRANSPORTATION OF MATERIALS FROM BHEL / CLIENT'S STORES / STORAGE YARDS TO SITE OF WORK, ERECTION, TESTING, COMMISSIONING, FINAL PAINTING AND HANDING OVER OF 1X62 TPH HEAT RECOVERY STEAM GENERATOR WITH AUXILIARIES, STACK/ STEEL CHIMNEY WITH ASSOCIATED AUX, 1 XFr6 GAS TURBINE-GENERATOR SET WITH THEIR AUXILIARIES, BALANCE OF PLANT EQUIPMENTS / SYSTEMS WITH RELATED AUXILIARIES, INTEGRAL PIPING, FIELD / POWER CYCLE PIPING AND APPLICATION OF THERMAL INSULATION OF EQUIPMENTS / PIPING/VESSELS & TANKS ETC. FOR 1X33.3 MW COGENERATION POWER AND STEAM PLANT UNIT AT 1X33.3 MW COGENERATION POWER AND STEAM UNIT GUJARAT NARMADA VALLEY FERTILIZERS COMPANY LIMITED, DIST. BHARUCH (GUJARAT)

EARNEST MONEY DEPOSIT: Please see Special Conditions of Contract.

LAST DATE FOR TENDER SUBMISSION: Please obtain updated information from web page  
"http://www.bhel.com" → Tender Notifications → View Corrigendums.

THESE TENDER SPECIFICATION DOCUMENTS CONTAINING **PART-I** AND **PART- II** ARE ISSUED TO:

M/s. ....

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PLEASE NOTE:  
THESE TENDER SPECS DOCUMENTS ARE NOT TRANSFERABLE.

For Bharat Heavy Electricals Limited

Dy. General Manager (Purchase)  
Place: Nagpur  
Date:

**Bharat Heavy Electricals Limited (PSWR, Nagpur)**  
**Tender Specification no.BHE/PW/GFI-MECH+MMS/644**  
**I : Schedule of Quantities and Applicable Rate per Unit of Measurement**

**SECTION-A : HRSG & AUX**( Refer items under Sl. No. “AA” of Appendix-I & Appendix-II of Tender Specification)

Sl no	Description/Item of work	Quantity	Unit of Measurement	Applicable Rate per Unit of measurement
A-1	Structures	<b>219</b>	MT	100% of 'X'
A-2	Non Pressure Parts, Steel Stack/chimney	145+268 = 413	MT	100% of 'X'
A-3	Lining & Insulation	125	MT	80% of 'X'
A-4	Pressure Parts	358	MT	125% of 'X'
A-5	Piping(CARBON STEEL, ALLOY STEEL, SS PIPING (IBR & NON IBR))	92	MT	250% of 'X'

Note:

1. Rate per Unit of measurement as calculated above shall be rounded off to the nearest Rupee
2. X : is the Single Notional Rate per MT quoted by Bidder in the Price Bid
3. Details of the “Description/Items of work” are detailed in the Annexure-I of this price bid specifications.

**Example:-**

Say Rs 10,537.77 is the notional rate (“X”) in Rupees per MT quoted by the bidder in the price bid.

The applicable rate per UOM for sl nos A-1 to A-5 of above table shall be as calculated below:

Sl No	Description/Item of work	Applicable rate per UOM (rounded off to nearest integer)
A-1	Structures	100% of Rs 10,537.77 = Rs 10,538/-
A-2	Non Pressure Parts, Steel Stack/chimney	100% of Rs 10,537.77 = Rs 10,538/-
A-3	Lining & Insulation	80% of Rs 10,537.77 = Rs 8,430/-
A-4	Pressure Parts	125% of Rs 10,537.77 = Rs 13,172/-
A-5	Piping(CARBON STEEL, ALLOY STEEL, SS PIPING (IBR & NON IBR))	250% of Rs 10,537.77 = Rs 26,344/-

Date:

Signature & Official Seal of Bidder

**Bharat Heavy Electricals Limited (PSWR, Nagpur)**  
**Tender Specification no.BHE/PW/GFI-MECH+MMS/644**  
**I : Schedule of Quantities and Applicable Rate per Unit of Measurement**

**SECTION-B : MATERIAL HANDLING & MATERIAL MANAGEMENT**( Refer items under Sl. No. "BB" of Appendix-I & Appendix-II of Tender Specification)

Sl no	Description/Item of work	Quantity	Unit of Measurement	Applicable Rate per Unit of measurement
B-1	Receipt, unloading/handling of materials, stacking, verification, preservation etc	2800	MT	100% of 'Y'
B-2	Shifting/re-arranging/re-stacking the components at storage yard	50	MT	80% of 'Y'

Note:

1. Rate per Unit of measurement as calculated above shall be rounded off to the nearest Rupee
2. Y : is the Single Notional Rate per MT quoted by Bidder in the Price Bid
3. Details of the "Description/Items of work" are detailed in the Annexure-I of this price bid specifications.

**Example:-**

Say Rs 10,537.77 is the notional rate ("Y") in Rupees per MT quoted by the bidder in the price bid.

The applicable rate per UOM for sl nos B-1 to B-2 of above table shall be as calculated below:

SI No	Description/Item of work	Applicable rate per UOM (rounded off to nearest Rupee)
B-1	Receipt, unloading/handling of materials, stacking, verification, preservation etc	100% of Rs 10,537.77 = Rs 10,538/-
B-2	Shifting/re-arranging/re-stacking the components at storage yard	80% of Rs 10,537.77 = Rs 8,430/-

Date:

Signature & Official Seal of Bidder

# **Bharat Heavy Electricals Limited (PSWR, Nagpur)**

**Tender Specification no. BHE/PW/GFI-MECH+MMS/644**

## **I : Schedule of Quantities and Applicable Rate per Unit of**

**SECTION-C : GT & AUX**( Refer items under Sl. No. "CC" of Appendix-I & Appendix-II of Tender Specification)

Sl no	Description/Item of work	Quantity	Unit of Measurement	Applicable Rate per Unit of measurement
C-1	E T AND C OF GT AND AUX.	1 SET	LUMP-SUM	As quoted by the bidder in the Price Bid

Note:

1. Bidder shall quote one lumpsum rate for item no. C-1
2. Details of the "Description/Items of work" are detailed in the Annexure-I of this price bid specifications.

Date:

Signature & Official Seal of Bidder

**Bharat Heavy Electricals Limited (PSWR, Nagpur)**  
**Tender Specification no. BHE/PW/GFI-MECH+MMS/644**  
**II: PRICE BID**

SN	Description / Item of Work	Rate Description	In Figures(Rs)	In words(Rupees)
1	Erection and Commissioning of HRSG and Aux for 1X 33.33MW Co-gen Power and Steam Plant unit at GNFC Bharuch, as per scope of work detailed in the Tender Specification : BHE/PW/PUR/GIF-MECH+MMS/644	Single notional Rate "X"		
2	Material Handling and Material Management Services for 1X 33.33MW Co-gen Power and Steam Plant unit at GNFC Bharuch, as per scope of work detailed in the Tender Specification : BHE/PW/PUR/GIF-MECH+MMS/644	Single notional Rate "Y"		
3	Erection and Commissioning of GT and Aux for for 1X 33.33MW Co-gen Power and Steam Plant unit at GNFC Bharuch, as per scope of work detailed in the Tender Specification : BHE/PW/PUR/GIF-MECH+MMS/644	Lumpsum Rate		

Note :

1. Notional Rate "X" and "Y" shall be quoted in Rupees and shall be up to a maximum of 2 decimal places; for example Rs 10,537.77
2. Final award value of the contract will be calculated by the summation of total amount arrived by the notional rate "X" for sl.no.1 (as explained in the example of Section A) + total amount arrived by the notional rate "Y" for sl.no.2 (as explained in the example of Section B) and the amount quoted by the bidder for sl.no. 3.

Date:

Signature & Official Seal of Bidder

# Bharat Heavy Electricals Limited (PSWR, Nagpur)

## Tender Specification no. BHE/PW/GFI-MECH+MMS/644

### ANNEXURE- I-(Details of Items mentioned in Sl No. A-1 to A-5, B-1 to B-2 and C-1 of Price Bid)

<b>SECTION-A : HRSG WITH AUXILIARIES AND PIPING INCLUDING FIELD / EXTERNAL/POWER CYCLE PIPING, APPLICATION OF THERMAL INSULATION &amp; CLADDING OF HRSG &amp; GTG, BOP EQUIPMENTS, PIPING ETC.</b>		
<b>SN</b>	<b>DESCRIPTION</b>	<b>QUANTITY</b>
A	COLLECTION / LOADING / UNLOADING/ TRANSPORTATION OF MATERIALS FROM BHEL / CLIENT'S STORES / STORAGE YARDS TO SITE OF WORK, ERECTION, TESTING, COMMISSIONING, FINAL PAINTING AND HANDING OVER OF 1X62 TPH HEAT RECOVERY STEAM GENERATOR WITH AUXILIARIES, STACK/ STEEL CHIMNEY WITH ASSOCIATED AUX, ALIGNMENT, FITUP, WELDING, NDE/NDT, RADIOGRAPHY, HEAT TREATMENT, FINAL PAINTING ETC OF . INTEGRAL PIPING OF HRSG, FIELD / EXTERNAL / POWER CYCLE PIPING WITH VALVES, FITTINGS, HANGERS & SUPPORTS, APPLICATION OF THERMAL INSULATION & CLADDING ETC. OF HRSG WITH AUX., EQUIPMENTS, PIPING INCLUDING FIELD /EXTERNAL / POWER CYCLE PIPING, GTG AND BALANCE OF PLANT DEAERATOR, TANKS & VESSELS ETC. FITTINGS, HANGERS & S1 XFr6 GAS TURBINE-GENERATOR SET WITH THEIR AUXILIARIES, BALANCE OF PLANT EQUIPMENTS ETC.. FOR 1X33.3 MW COGENERATION POWER AND STEAM PLANT UNIT AT 1X33.3 MW COGENERATION POWER AND STEAM UNIT GUJARAT NARMADA VALLEY FERTILIZERS COMPANY LIMITED, DISTT. BHARUCH (GUJARAT) AS PER TENDER SPECIFICATION SHALL BE BROADLY AS UNDER:( REFER ITEMS UNDER SL. NO. "AA" OF APPENDIX-I& APPENDIX-II)	
A-1	<b>STRUCTURES:</b> SILENCER SUPPORTING STRUCTURES, MAIN STRUCTURALS, PLATFORMS, STRAIRWAYS, GALLELARIES, FLOOR GRILLS, HANDRAILS, BOILER ROOF SHEETING, ETC. {PG 24 (part), 35, 36}	219 MT
A-2	<b>NON-PRESSURE PARTS, CHIMNEY:</b> EXPANSION MOVEMENT MEASURING COMPONENTS, SAFETY VALVES , SILENCERS,BPS COMPONENTS, IGNITORS, GAS BURNERS, SEAL AIR SYSTEM, AUX. AIR SYSTEM, SCANNERS AIR SYSTEM, DUCTS, DAMPERS, EXPANSION PIECES, ETC. {PG 24 (PART), 28, 41 (PART) , 43, 48, HL(PART)} CHIMNEY IN SHELLS/SECTIONS, FOUNDATION PARTS/MATERIALS, PLATFORMS, LADDERS ETC AND PAINTING TROLLEY ETC. (PG 87 )	145+268 MT
A-3	<b>INSULATION :</b> FIXING COMPONENTS, RETAINERS, MINERAL WOOL, CERAMIC WOOL, OUTER CLADDING ETC. FOR BOILERS, DUCTS, PIPINGS, OUTER CASING, CHIMNEY, TANKS, VESSELS ETC. {PG 32, 33, 37, 87 (PART) } + BHEL HYD SUPPLY.	125MT
A-4	<b>PRESSURE PARTS:</b> BOILER DRUMS WITH INTERNALS, RISERS, SUPERHEATERS ETC. LINES & LINKS , ECO LINKS, PIPES, SUPPORT AND OTHER COMPONENTS, HEAT TRANSFER MODULES, SOOT BLOWER SYSTEM, TRIM PIPING, OIL SYSETM PIPINGS AND VALVES, TANKS & VESSELS, CHEM.DOSING PUMPS, PIPING ETC. {PG 04, 07, 08, 12, 19, 24(Part), 80, 81, HL}	358MT
A-5	PIPING WITH VALVES,, FITTINGS, SUPPORTS (FOR HRSG INTEGRAL AND GTG FILED /EXTERNAL /POWER CYCLE PIPING ETC. WITH WELDING, NDE/NDT,RADIOGRAPHY , HEAT TREATMENT (PG-41 (PART), 42, 80 AND HYD SUPPLY) AS APPENDIX-II , ITEMS f.1 & f.2)	
A-5.1	CARBON STEEL PIPING (IBR & NON-IBR)	24 MT
A.5.2	ALLOY STEEL PIPING (IBR & NON-IBR)	43MT
A-5.3	STAINLESS STEEL PIPING	25MT

Date:

Signature & Official Seal of Bidder

# Bharat Heavy Electricals Limited (PSWR, Nagpur)

## Tender Specification no. BHE/PW/GFI-MECH+MMS/644

### ANNEXURE- I-(Details of Items mentioned in Sl No. A-1 to A-5, B-1 to B-2 and C-1 of Price Bid)

<b>SECTION-B: MATERIAL HANDLING &amp; MATERIALS MANAGEMENT(REFER ITEMS UNDER SL. NO. "BB" OF APPENDIX-I&amp; APPENDIX-II)</b>		
<b>SN</b>	<b>DESCRIPTION</b>	<b>QUANTITY</b>
B-1	RECEIPT, UNLOADING/ HANDLING OF MATERIALS, STACKING, VERIFICATION, PRESERVATION, GENERATION OF SHORTAGES/DAMAGES REPORT OF ALL MATERIALS RECEIVED BY ROAD AND FROM TRANSPORTER'S GODOWN OF HRSG WITH AUX., STEEL STACK WITH AUX., GT WITH AUX., BYPASS STACK, GAS TURBINE GENERATOR WITH AUX., BALANCE OF PLANT EQUIPMENTS WITH AUX., PUMPS, MOTORS, DEAEARTOR, TANKS, VESSELS, PIPING WITH FITTINGS, SUPPORTS, THERMAL INSULATION & CLADDING, CONSUMABLES, ELECTRICAL EQUIPMENETS WITH ACCESSORIES, SWITCHGEARS, BUSDUCT, CONTROL & INSTRUMENTATION ITEMS, PANELS, CABLE, CABLE TRAYS, STRUCTURAL MATERIALS AND OTHER PLANT MATERIALS AND ALL OTHER T&P MATERIALS INCLUDING THE HEAVY & VOLUMINOUS EQUIPMENTS LIKE HRSG DRUMS, GAS TURBINE, GAS TURBINE GENERATOR, GENERATOR TRANSFORMER, STATION TRANSFORMERS, LT AUX. TRANSFORMERS MATERIALS ETC. AND PROVIDING MATERIAL MANAGEMENT SERVICES ETC. OF 1X33.3NMW COGENERATION POWER AND STEAM PLANT AT GNFC BHARUC AS PER TENDER SPECIFICATION	2800 MT
B-2	SHIFTING/RE-ARRANGING/ RE-STACKING THE COMPONENT AT THE STORAGE YARD. THE CHARGES SHALL BE ALL INCLUSIVE OF LOADING, TRANSPORTATION, UNLOADING ETC, MANPOWER AND CONSUMABLES, TOOLS AND PLANTS INCLUDING SUITABLE CRANES, TRANSPORT ETC.	50MT
<b>SECTION-C: GT, GTG WITH AUXILIARIES AND BALANCE OF PLANT EQUIPMENTS</b>		
COLLECTION/ LOADING/ UNLOADING/ TRANSPORATION OF MATERIALS FROM BHEL/CLIENT'S STORES /STORAGE YARDS TO SITE OF WORK, ERECTION, TESTING, COMMISSIONING, FINAL PAINTING, CO-GENERATION OPERATION AND HANDING OVER OF Fr-6 GAS TURBINE-GENERATOR SETS & THEIR AUXILIARIES, BALANCE OF PLANT EQUIPMENTS WITH RELATED PIPING, PUMPS, DEAEARATORS, TANKS, VESSELS, INTEGRAL PIPING, EXTERNAL PIPING /CO-GEN PIPING WITH VALVES, SUPPORTS & FITTINGS ETC. FOR 1X33.3NMW COGENERATION POWER AND STEAM PLANT AT GNFC BHARUC AS PER TENDER SPECIFICATION		
<b>SN</b>	<b>DESCRIPTION</b>	<b>QUANTITY</b>
C-1	COLLECTION OF MATERIALS FROM BHEL/CUSTOMER STORES/STORAGE YARD, LOADING AND TRANSPORTATION TO SITE OF WORK, ERECTION, TESTING, COMMISSIONING, FINAL PAINTING, CO-GENERATION OPERATION AND HANDING OVER OF 1 XFr6 GAS TURBINE WITH AUX, GAS TURBINE WITH AUX, BYPASS STACK, BALANCE OF PLANT EQUIPMENTS WITH ASSOCIATED AUX., ACCESSORIES, HEAT EXCHANGERS, PUMS WITH AUX, MOTOR DRIVES ETC. DEAEARATOR WITH HEATER & APPROACH PLATFORM, TANKS, VESSELS, INTEGRAL PIPING WITH FITTINGS, HANGERS & SUPPORTS ETC. AS PER TENDER SPECIFICATION (REFER ITEMS UNDER SL. NO. "CC" OF APPENDIX-I& APPENDIX-II)	1SET

Date:

Signature & Official Seal of Bidder