



An ISO 9001
Company

Bharat Heavy Electricals Limited

(High Pressure Boiler Plant)

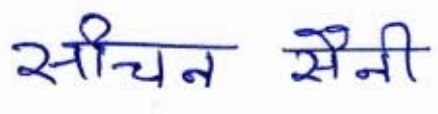
Tiruchirappalli – 620014, TAMIL NADU, INDIA

MATERIALS MANAGEMENT

TITLE Supply of Coal Handling Plant	Phone: +91 431 257 7897 Fax : +91 431 252 0719 Email : sachinsaini@bheltry.co.in
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	Reference Number: Enquiry 1801601090	Enquiry Date: 10.09.2016	Due date for submission of quotation: 03.10.2016
You are requested to quote the Enquiry number date and due date in all your correspondences. This is only a request for quotation and not an order			

BHEL/Trichy seeks e-tender for Supply of “Coal Handling Plant as per attached specifications and drawings.”

BHEL commercial terms & conditions with Price Bid formats and all annexure can be downloaded from BHEL web site http://www.bhel.com or from the Government tender website http://tenders.gov.in (public sector units) Bharath Heavy Electricals Limited) under enquiry reference “XXXXXXXXXX ”	
Tenders should be submitted online through EPS before 12:30 hours on the due date Technical bid will be opened at 13:00 hours on the due date.	Yours faithfully, For Bharath Heavy Electricals Limited  Sachin Saini /Sr. Engineer/MM/BOI



TRICHY, BHEL, TRICHY, POSTAL CODE :620014, TIRUCHIRAPALLI, TAMIL NADU, INDIA

RFQ/NIT HEADER DETAIL

ORGANIZATION NAME	TRICHY, BHEL	RFQ FLOATED UNDER THE	PURCHASE POLICY
RFQ/NIT REFERENCE	1801601090 (OPEN TENDER)	POLICY	
CODE/ENQUIRY NO		RFQ OWNER/NIT	MR Sachin Saini(ENGR/PUR)
NUMBER OF ITEMS ALREADY	1	OFFICER/ENQUIRY OWNER	
ATTACHED			
CURRENCY	ANY		
DESCRIPTION	Supply of Coal Handling Plant		
DETAILED DESCRIPTION	Supply of Coal Handling Plant to BHEL Jhansi		
NUMBER OF BID PART(S)	2	PUBLISHED DATE	10 Sep , 2016 10:24:25 AM

ATTRIBUTE(S)

ATTRIBUTE NAME	ATTRIBUTE VALUE
Delivery at	FOR BHEL Jhansi UP
Inspection By	BHEL QC or BHEL TPIA
Validity of the Offer	PRICE SHOULD BE FIXED AND VALID FOR 60 DAYS FROM THE DATE OF OFFER
Inspection	AT VENDOR WORKS

DATE-TIME DETAIL(S)

BID START DATE	10 Sep , 2016 10:30:00 AM	BID DUE DATE	3 Oct , 2016 12:30:00 PM
BID OPEN DATE	3 Oct , 2016 1:00:00 PM		
(SCHEDULED)			

PRE-BID DISCUSSION DETAILS

PRE-BID DISCUSSION TYPE NOT REQUIRED

ALTERNATE BID DECRYPTOR(S)

USER DETAILS
MR B. SANJEEVI (DGM/PUR)
MR Sachin Saini (ENGR/PUR)
MR RADHAKRISHNAN M (SM/PUR)

SELLER DETAIL(S)

CODE	ORGANIZATION NAME
023505	TEST (Mr test ot test)

TERM AND CONDITION DETAIL(S) - SPECIAL TERM(S)

SL. NO.	CATEGORY	DESCRIPTION
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1	SPECIAL TERM(S)	SPECIAL TERM(S) NOTE:- 1) The offer has to be submitted in two part bid system i.e technical bid along with Section VII to XII, XV of TED and price bid as per Section VIII of TED separately through e-procurement route only. Section XV THIRD PARTY NON-DISCLOSURE AGREEMENT is mandatorily to be submitted along with technical bid. 2) Price should be quoted on FOR BHEL Jhansi UP basis only. 3) The tender will be evaluated on total package cost to BHEL basis for ordering. MSE Clause is applicable as Section XIV 4) Any Purchase Order resulting from this enquiry shall be governed by all terms and conditions listed in attached tender enquiry document (TED) and special/commercial terms and conditions, if any, along with this enquiry of Bharat Heavy Electricals Limited, BHEL HPBP, Trichy-620014 (hereinafter referred to as BHEL Trichy). 5) BHEL representative from unit or Corporate Quality is authorised to carry out audits alongwith Third Party Inspection Agency at vendor's works before clearing the items for despatch 6) Documents submitted with the offer shall be signed and stamped in each page by authorized representative of the bidder. Documents not signed & stamped by the authorized signatory of the bidder shall not be accepted and considered for registration / evaluation of the bid etc. 7) BHEL reserves the right to make alteration to this specification before opening price bid and such changes will be extended only to the supplier who had responded positively with details for the enquiry. 8) Fraud Prevention Policy - The bidder along with its associate / collaborators / sub-contractors / sub-vendors/consultants/service providers shall strictly adhere to BHEL Fraud prevention Policy displayed on BHEL website http://www.bhel.com and shall immediately bring to the notice of BHEL Management about any fraud or suspected fraud as soon as it comes to their notice. Nodal officer under Fraud Prevention Policy is as follows Mr Maruthamuthu A General Manager/MM Fourth Floor, Building 24 BHEL Trichy Phone: 0431-2577706 Email: maruthu@bheltry.co.in
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RFQ SPECIFIC REQUIRED ATTACHMENT(S)

PREQUALIFICATION

SL. NO.	SUPPORTING DOCUMENT NAME	MANDATORY	ALLOW EXEMPTION	GROUP
1	Supply proof for at least 2 no. of Coal Handling Plants (min 10 TPH) using conveyor belt	YES	NO	EXPERIENCE

RFQ/NIT ITEM DETAILS

SL. NO.	CODE	DESCRIPTION	QUANTITY	RFQ/NIT U.O.M	OFFER U.O.M
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10	L55181470050100 1	Consisting of Grizzly Hopper(1 no), Vibratory Feeder(1 no), BeltConveyor(1 set), Coal Crusher(1 no), Vibratory Screen(1 no), RecycleBucket Elevator(1 no), Product Bucket Elevator(1 no), MagneticSeparator(1 no), EC&I Equipments (1 set), Structural Support(1 set),Commissioning Spares & Misc item (1 set) and Erection Supervision.	01.00	SET	SET
	ATTRIBUTE DETAILS	ATTRIBUTE NAME		ATTRIBUTE VALUE	
		MATERIAL CODE:		L551814700501001	
		MATERIAL GROUP:		48CHP	
		KILOGRAM PER UNIT:		15000.0	
		Cenvatable (Yes / No)		No	
		Delivery Location		UTTAR PRADESH	
		Vatable (Yes / No)		Yes	
		Delivery Date (i) :		03-FEB-2017	
		Delivery Qty (i) :		1	



IMPORTANT NOTICE

PLEASE READ THE FOLLOWING ATTACHMENT(S) [SEPARATELY DOWNLOADABLE] ALONG WITH THIS RFQ/NIT/ENQUIRY .

RFQ/NIT/ENQUIRY - ATTACHMENTS

LABEL	FILE NAME
Enclosers	Enclosers 36 Pages.pdf
Tender Enquiry document	TED CHP Jhansi 39 pages.docx



TENDER ENQUIRY DOCUMENT

(Through e-Procurement route)

FOR THE PURCHASE OF

Coal Handling Plant

BY BHEL TRICHY

For BHEL Jhansi

ENQUIRY NO: 1801601090 DATED 10.09.2016



**BHARAT HEAVY ELECTRICALS LTD,
TIRUCHIRAPALLI-14**

(A GOVERNMENT OF INDIA UNDERTAKING)

PHONE: 0431 257 7897

FAX: 0431 2520719

EMAIL: sachinsaini@bheltry.co.in

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Enclosures:-

1. Coal Handling Plant Specification No.:
PCPS:48CHP:JHANSI:01:Rev00 -5 Pages
2. Annexure-A (Project Related Data) -1 Page
3. Annexure-B (Schematic Flow Diagram) -1 Page
4. Annexure-C (Plot Plan) -2 Pages
5. Annexure-D (Boiler Bunker Arrangement) -1 Page
6. Annexure-E (Guarantee Schedule) -1 Page
7. Annexure-F (Data Sheet) -2 Pages
8. Annexure-G (Check List) -1 Page
9. Annexure-H (EC&I Specification for Coal
Handling Plant, Spec no: PCPS:CI:5518:CHS) -1 Page
10. Technical Delivery Conditions C&I -TDC:TCI:140 -6 Pages
11. Standard Quality Plan for LT motors QA:CI:STD:QP:24 -9 Pages
12. Standard Packing procedure QA:CI:STD:PR:03 -4 Pages
13. BHEL QP Format -1 Page

Note to Bidder: BHEL reserves the right to make alteration to this specification before opening price bid and such changes will be extended only to the supplier who had responded positively with details for the enquiry.

SECTION I**NOTICE INVITING E-TENDER (NIT)**

from

BHARAT HEAVY ELECTRICALS LTD, TIRUCHIRAPALLI-14**(A GOVERNMENT OF INDIA UNDERTAKING)**

PHONE: 0431 257 7897

FAX: 0431 252 0719

EMAIL: sachinsaini@bheltry.co.in

For

BHEL Jhansi

Enquiry No: 1801601090 date 10.09.2016**NOTICE INVITING e-TENDERS (NIT)**

- 1) Material Management/BOI, invites online tenders, from eligible and qualified tenderers for supply of Coal Handling Plant to BHEL Jhansi.

Sr. NO	Enquiry No	Item Name	Department	Quantity	EMD
1	1801601090	Coal Handling Plant	MM/BOI	1 Set	Nil

- 2) Enquiry No: 1801601090 date 10.09.2016

Sr. No	Description	Schedule
1	Cost of the Tender Enquiry Document	NIL
2	Pre-bid meeting date, time& Venue	NIL
3	Closing date & time for submission of tender fee and EMD in physical form	NA
4	Closing date & time for submission of online bids	03.10.2016 12:30 hrs IST
5	Time and date of opening of online bids	03.10.2016 13:00 hrs IST
6	Venue for :- a. Submission of tender fee, EMD in physical form. b. E-Tender Opening-Tech Bid	NA

BHEL Trichy has implemented e-Procurement (www.bheleps.buyjunction.in) and it is going to be the way of working in future.

The Requirement:

1. A PC with Internet connectivity &
2. DSC (Digital Signature Certificate)(**Class 3- SHA2- 2048 BIT- SIGNING & ENCRYPTION**)

The following are the benefits of e-Procurement Process.

1. Ensuring no offer is missed due to last minute submission, postal delays etc.
2. Reduced Tendering & ordering cycle time
3. Economical, smoother & speedy communication
4. Greater Transparency
5. Big step towards paperless procurement process, Minimal human error
6. No geographical barriers
7. Vendor gets alerts regarding issue of new tender enquiry, amendments, clarifications etc
8. Submission of offer from the comforts of their office from any location
9. on line clarifications
10. Direct Cost Savings such as reduced Paper costs, reduced printing costs, reduced mailing costs, reduced telephone costs and reduced fax costs.

BHEL has finalized the e-procurement service Provider

M/s mJunction services Limited, Kolkata

Godrej Water Side, 3rd Floor, Tower-1, Plot-V, Block - DP
Sector - V, Salt Lake, Kolkata-700091, West Bengal, INDIA

Please get in touch with them immediately. The contact details of the service provider is given below:

- a. DHANARAJ.P email: panneer.dhanaraj@mjunction.in, Cell 9500199108
- b. HELPDESK email: eps.customercare@mjunction.in, Phone No: 033-66106426/6217/6013/6046/6176, 9163348283 / 9163348284 / 9163348285 / 9163348286 / 8584008116

The process of utilizing e-procurement necessitates usage of DSC (Digital Signature Certificate)(**Class 3- SHA2- 2048 BIT- SIGNING & ENCRYPTION**) and you are requested to procure the same immediately, if not presently available with you. Please note that only with DSC, you will be able to login the e-procurement secured site and take part in the tendering process. The contact details of the DSC Certifying Authority as given below

1	e-Mudhra	http://www.e-Mudhra.com	5	NIC	www.safescrypt.com
2	GNFC	www.ncodesolutions.com	6	Safescrypt	www.safescrypt.com
3	IDRBT	www.idrbtca.org.in	7	TCS	www.tcs-ca.tcs.co.in
4	MTNLTrustline	www.mtnltrustline.com			

Vendors are requested to go through seller manual available on www.bheleps.buyjunction.in

SECTION - II

GENERAL INSTRUCTIONS TO TENDERERS (GIT)

1. Definitions and Abbreviations

The following definitions and abbreviations, which have been used in these documents shall have the meanings as indicated below:

a. Definitions:

- i. **“Purchaser”** means BHEL Trichy.
- ii. **“e-Tender”** means Bids / Quotation / Tender received from a Firm / Tenderer / Bidder online. And **“Tenderer”** means Bidder/ the Individual or Firm submitting tenders/ Bids / Quotation / e-Tenders.
- iii. **“Supplier”** means the individual or the firm supplying the goods and services as incorporated in the contract.
- iv. **“Goods”** means the articles, material, commodities, livestock, furniture, fixtures, raw material, spares, instruments, machinery, equipment, industrial plant etc. which the supplier is required to supply to the purchaser under the contract.
- v. **“Services”** means services allied and incidental to the supply of goods, such as transportation, installation, commissioning, provision of technical assistance, training, after sales service, maintenance service and other such obligations of the supplier covered under the contract.
- vi. **“Earnest Money Deposit”** (EMD) means Bid Security/ monetary or financial guarantee to be furnished by a tenderer along with its tender.
- vii. **“Contract”** means the written agreement entered into between the purchaser and/or consignee and the supplier, together with all the documents mentioned therein and including all attachments, annexure etc. therein.
- viii. **“Performance Security”** means monetary or financial guarantee to be furnished by the successful tenderer for due performance of the contract placed on it. Performance Security is also known as Security Deposit.
- ix. **“Consignee”** means the site/stores/ person to whom the goods are required to be delivered as specified in the Contract. If the goods are required to be delivered to a person as an interim consignee for the purpose of dispatch to another person as provided in the Contract then that “another” person is the consignee, also known as ultimate consignee.
- x. **“Specification”** means the document/standard that prescribes the requirement with which goods or service has to conform.
- xi. **“Inspection”** means activities such as measuring, examining, testing, gauging one or more characteristics of the product or service and comparing the same with the specified requirement to determine conformity.
- xii. **“Day”** means calendar day.

b. Abbreviations:

- (i) “TE Document” means Tender Enquiry Document
- (ii) “NIT” means Notice Inviting Tenders.
- (iii) “GIT” means General Instructions to Tenderers
- (iv) “SIT” means Special Instructions to Tenderers (SIT not applicable for this enquiry)
- (v) “GCC” means General Conditions of Contract

- (vi) "SCC" means Special Conditions of Contract
- (vii) "DGS&D" means Directorate General of Supplies and Disposals
- (viii) "NSIC" means National Small Industries Corporation
- (ix) "PSU" means Public Sector Undertaking
- (x) "CPSU" means Central Public Sector Undertaking
- (xi) "LSI" means Large Scale Industry
- (xii) "SSI" means Small Scale Industry
- (xiii) "LC" means Letter of Credit
- (xiv) "DP" means Delivery Period
- (xv) "BG" means Bank Guarantee
- (xvi) "ED" means Excise Duty
- (xvii) "CD" means Custom Duty
- (xviii) "VAT" means Value Added Tax
- (xix) "CENVAT" means Central Value Added Tax
- (xx) "CST" means Central Sales Tax
- (xxi) "RR" means Railway Receipt
- (xxii) "BL" means Bill of Lading
- (xxiii) "FOB" means Free on Board
- (xxiv) "FCA" means Free Carrier
- (xxv) "FOR" means Free On Rail
- (xxvi) "CIF" means Cost, Insurance and Freight
- (xxvii) "CIP (Destinations)" means Carriage and Insurance Paid up to named port of destination. Additionally the Insurance (local transportation and storage) would be extended and borne by the Supplier from ware house to the consignee site for a period including 3 months beyond date of delivery.
- (xxviii) "DDP" means Delivery Duty Paid named place of destination (consignee site)
- (xxix) "INCOTERMS" means International Commercial Terms as on the date of Tender Opening
- (xxx) "EPS" – BHEL's e-procurement system (<https://bheleps.buyjunction.in>)

2. Introduction

2.1 The Purchaser has issued these TE documents for purchase of goods and related services as mentioned in Section – V – "List of Requirements", which also indicates, *interalia*, the required delivery schedule, terms and place of delivery.

2.2 This section (Section II - "General Instruction Tenderers") provides the relevant information as well as instructions to assist the prospective tenderers in preparation and submission of tenders. It also includes the mode and procedure to be adopted by the purchaser for receipt and opening as well as scrutiny and evaluation of tenders and subsequent placement of contract.

2.3 ~~The tenderers shall also read the Special Instructions to Tenderers (SIT) related to this purchase, as contained in Section III of these documents and follow the same accordingly. Whenever there is a conflict between the GIT and the SIT, the provisions contained in the SIT shall prevail over those in the GIT. Not applicable for this tender enquiry.~~

2.4 Before formulating the tender and submitting the same to the purchaser, the tenderer should read and examine all the terms, conditions, instructions, checklist etc. contained in the TE documents. Failure to provide and/or comply with the required information, instructions etc. incorporated in these TE documents may result in rejection of its tender.

3. Availability of Funds

3.1 Expenditure to be incurred for the proposed purchase will be met from the funds available with the purchaser/consignee.

4. Language of Tender

4.1 The tender submitted by the tenderer and all subsequent correspondence and documents relating to the tender exchanged between the tenderer and the purchaser, shall be written in the English language, unless otherwise specified in the Tender Enquiry. However, the language of any printed literature furnished by the tenderer in connection with its tender may be written in any other language provided the same is accompanied by an English translation and, for purposes of interpretation of the tender, the English translation shall prevail.

4.2 The tender submitted by the tenderer and all subsequent correspondence and documents relating to the tender exchanged between the tenderer and the purchaser, may also be written in the Hindi language, provided that the same are accompanied by English translation, in which case, for purpose of interpretation of the tender etc, the English translations shall prevail.

5. Eligible Tenderers

5.1 This invitation for tenders is open to all Indigenous supplies who fulfil the eligibility criteria specified in these documents.

6. Eligible Goods and Services

6.1 All goods and related services to be supplied under the contract shall have their origin in India or any other country with which India has not banned trade relations. The term “origin” used in this clause means the place where the goods are mined, grown, produced, or manufactured or from where the related services are arranged and supplied.

7. Tendering Expense

7.1 The tenderer shall bear all costs and expenditure incurred and/or to be incurred by it in connection with its tender including preparation, mailing and submission of its tender and for subsequent processing the same. The purchaser will, in no case be responsible or liable for any such cost, expenditure etc regardless of the conduct or outcome of the tendering process.

8. Content of Tender Enquiry Documents

8.1 In addition to

Section I	Notice Inviting e-tender
Section II	General Instructions to Tenderers (GIT)
Section III	General conditions of contract (GCC)
Section IV	Special conditions of contract (SCC)
Section V	List of Requirements
Section VI	Technical and Quality Specifications
Section VII	Tender Form
Section VIII	Price bid Formats
Section IX	Reverse Auction
Section X	Bank Guarantee Format for Performance (PBG)
Section XI	Loading Criteria
Section XII	Special & Commercial terms
Section XIII	Supplier Registration Form
Section XIV	MSE Clause
Section XV	Non-Disclosure Agreement

8.2 The relevant details of the required goods and services, the terms, conditions and procedure for tendering, tender evaluation, placement of contract, the applicable contract terms and, also, the standard formats to be used for this purpose are incorporated in the above-mentioned documents. The interested tenderers are expected to examine all such details etc to proceed further.

9. Amendments to TE documents

9.1 At any time prior to the deadline for submission of tenders, the purchaser may, for any reason deemed fit by it, modify the TE documents by issuing suitable amendment(s) to it.

9.2 Such an amendment will be notified only online through E-procurement (www.bheleps.buyjunction.in) along with amendment notifications on BHEL (www.bhel.com) / government (www.tenders.gov.in) tenders website.

9.3 In order to provide reasonable time to the prospective tenderers to take necessary action in preparing their tenders as per the amendment, the purchaser may, at its discretion extend the deadline for the submission of tenders and other allied time frames, which are linked with that deadline.

10. Clarification of TE documents

10.1 A tenderer requiring any clarification or elucidation on any issue of the TE documents may take up the same with the purchaser in writing. The purchaser will respond in writing to such request provided the same is received by the purchaser ON OR BEFORE THE PRE BID MEETING (unless otherwise specified in the GIT). Representation sent after the pre bid meeting date will not be taken into cognizance.

11. Documents Comprising the e-Tender

11.1 The tender shall be submitted online ~~ONLY EXCEPT TENDER FEE & EMD (in physical form)~~ as mentioned below:

- (i) **Technical Bid** (Consisting of Eligibility Criteria & Technical Specifications viz. Product Specification Sheets/Brochures, OEM Certificate etc.) Bidders may name the files indicating the nature of content in pdf/zip format which would be required to be attached in e-tender.
- (ii) **Price Bid** (To be filled up in the Proforma, Signed, Stamped, and Scanned to pdf mode & attach under PRICE BID.

DO NOT'S

Bidders are requested **NOT** to submit the hard copy of Financial Bid along with the physical form of tender. In case the hard copy of financial bid is submitted in physical form, the tender may be rejected. Also, uploading of the price bid in prequalification bid or technical bid may RESULT IN REJECTION of the tender.

A) Technical Tender (UN priced Tender)

All Technical details (eg. Eligibility Criteria requested (as mentioned below)) should be attached in e-tendering module, failing which the tender stands invalid & may be REJECTED. Bidders shall furnish the following information along with technical tender (preferably in pdf format):

- ~~(i) Earnest money Deposit (EMD) furnished in accordance with GIT clause 16.1 alternatively, documentary evidence as per GIT clause 16.2 for claiming exemption from payment of earnest money.~~
- (ii) Technical Bid (without indicating any prices).
- (iii) Tenderer/Agent who quotes for goods manufactured by other manufacturer shall furnish Manufacturer's Authorization Form. While giving authorization

to agent, to quote on their behalf, manufacturer has to give the reasons for not quoting directly against this tender.

B) Price Bid:

1. Prices are to be quoted in the attached Price Bid format online on e-tender portal in pdf format & apply digital signature certificate.

2. The price should be quoted for the accounting unit indicated in the e-tender document.

Note: It is the responsibility of tenderer to go through the TE document to ensure furnishing all required documents in addition to above, if any. Any deviation would result in REJECTION of tender and would not be considered at a later stage at any cost by BHEL.

11.2 A person signing (manually or digitally) the tender form or any documents forming part of the contract on behalf of another shall be deemed to warrantee that he has authority to bind such other persons and if, on enquiry, it appears that the persons so signing had no authority to do so, the purchaser may, without prejudice to other civil and criminal remedies, cancel the contract and hold the signatory liable for all cost and damages.

11.3 A tender, which does not fulfil any of the above requirements and/or gives evasive information/reply against any such requirement, shall be liable to be ignored and rejected.

11.4 In case of e-Tender, offer sent by fax/telex/cable/electronically shall be ignored.

12. Tender currencies

12.1 The tenderer supplying indigenous goods or already imported goods shall quote only in Indian Rupees (INR).

12.2 For imported goods if supplied directly from abroad, prices shall be quoted in any freely convertible currency say US Dollar, Euro, GBP or Japanese Yen. As regards price(s) for allied services, if any required with the goods, the same shall be quoted in Indian Rupees only (INR), if such services are to be performed /undertaken in India. Exchange rate for converting such offers to INR will as SBI TT selling rate as on the date of Technical/Un-priced bid opening date.

13. Tender Prices

13.1 The Tenderer shall indicate on the Price bid format provided under Section VIII all the specified components of prices shown therein including the unit prices and total tender prices of the goods and services it proposes to supply against the requirement. All the columns shown in the price bid should be filled up as required. If any column does not apply to a tenderer, same should be clarified as "NA" by the tenderer.

13.2 While filling up the columns of the Price Schedule, the following aspects should be noted for compliance:

13.3.1 For domestic goods or goods of foreign origin located within India, the prices in the corresponding price schedule shall be entered separately in the following manner:

- a. The price of the goods, quoted ex-factory/ ex-showroom/ ex-warehouse/ off-the-shelf, as applicable, including all taxes and duties like sales tax, CST VAT, CENVAT, Custom Duty, Excise Duty etc. already paid or payable on the components and raw material used in the manufacture or assembly of the goods quoted ex-factory etc. or on the previously imported goods of foreign origin quoted ex-showroom etc;
- b. Any sales or other taxes and any duties including excise duty, which will be payable on the goods in India if the contract is awarded;
- c. Charges towards Packing & Forwarding, Inland Transportation, Insurance (local transportation and storage), and Loading & Unloading etc. would be borne by the Supplier from ware house to the consignee site.

13.3.2 For goods offered from abroad, the prices in the corresponding price schedule shall be entered separately in the following manner:

- a. The price of goods quoted FOB/FCA port of shipment, as indicated in the List of Requirements and Price Schedule;
- b. Freight and insurance charges.
- c. The price of goods quoted CIP (name port of destination) in India as indicated in the List of Requirements, Price Schedule and Consignee List
- d. The charges for Insurance (local transportation and storage) would be extended and borne by the Supplier from ware house to the consignee site for a period including 3 months beyond date of delivery. Other local costs and Incidental costs, as specified in the List of Requirements and Price Schedule;
- e. The charges for Incidental Services, as in the List of Requirements and Price Schedule;

13.4 Additional information and instruction on Duties and Taxes:

13.4.1 If the Tenderer desires to ask for excise duty, sales tax/VAT, Service Tax, Works Contract Tax etc. to be paid extra, the same must be specifically stated. In the absence of any such stipulation the price will be taken inclusive of such duties and taxes and no claim for the same will be entertained later.

13.4.2 Excise Duty:

- a) If reimbursement of excise duty is intended as extra over the quoted prices, the supplier must specifically say so also indicating the rate, quantum and nature of the duty applicable. In the absence of any such stipulation it will be presumed that the prices quoted are firm and final and no claim on account of excise duty will be entertained after the opening of tenders.
- b) If a Tenderer chooses to quote a price inclusive of excise duty and also desires to be reimbursed for variation, if any, in the excise duty during the time of supply, the tenderer must clearly mention the same and also indicate the rate and quantum of excise duty included in its price. Failure to indicate all such details in clear terms may result in rejection of that tender.
- c) Subject to sub clauses **13.4.2** (a) & (b) above, any change in excise duty upward/downward as a result of any statutory variation in excise duty taking place within contract terms shall be allowed to the extent of actual quantum of excise duty paid by the supplier. In case of downward revision in excise duty, the actual quantum of reduction of excise duty shall be reimbursed to the purchaser by the supplier. All such adjustments shall include all reliefs, exemptions, rebates, concession etc. if any obtained by the supplier.

13.4.3 Sales Tax:

If a tenderer asks for sales tax/ VAT, Service Tax and Works Contract Tax to be paid extra, the rate and nature of sales tax applicable should be shown separately. The sales tax / VAT, Service Tax and Works Contract Tax will be paid as per the rate at which it is liable to be assessed or has actually been assessed provided the transaction of sale is legally liable to sales tax / VAT, Service Tax and Works Contract Tax and is payable as per the terms of the contract. If any refund of Tax is received at a later date, the Supplier must return the amount forth-with to the purchaser.

13.5.4 Octroi Duty and Local Duties & Taxes: Normally, goods to be supplied to government departments against government contracts are exempted from levy of town duty, Octroi duty, terminal tax and other levies of local bodies. However, if such taxes/duties are applicable same shall be clearly mentioned in the price bid/offer.

13.4.5 Customs Duty: The Purchaser will pay the Customs duty wherever applicable provided was mentioned the price bid/offer.

14. 14 Payment of Agency Commission to Indian Agent (for foreign purchase):

- I. BHEL shall deal directly with foreign vendors, wherever required, for procurement of goods. However, if the foreign principal desires to avail of the services of an Indian agent, then the foreign principal should ensure compliance to regulatory guidelines - which require mandatory submission of an Agency Agreement.
- II. It shall be incumbent on the Indian agent and the foreign principal to adhere to the relevant
- III. Guidelines of Government of India, issued from time to time.
- IV. The Agency Agreement should specify the precise relationship between the foreign OEM / foreign principal and their Indian agent and their mutual interest in the business. All services to be rendered by agent/ associate, whether of general nature or in relation to the particular contract, must be clearly stated by the foreign supplier/ Indian agent. Any payment, which the agent or associate receives in India or abroad from the OEM, whether as commission or as a general retainer fee should be brought on record in the Agreement and be made explicit in order to ensure compliance to laws of the country.
- V. Any agency commission to be paid by BHEL to the Indian agent shall be in Indian currency only.
- VI. Tax deduction at source is applicable to the agency commission paid to the Indian agent as per the prevailing rules.
- VII. In the absence of any agency agreement, BHEL shall not deal with any Indian agent (authorized representatives / associate / consultant, or by whatever name called) and shall deal directly with the foreign principal only for all correspondence and business purposes.
- VIII. The supply and execution of the Purchase Order (including indigenous supplies/ service) shall be in the scope of the OEM/ foreign principal. The OEM/ foreign principal should submit their offer inclusive of all indigenous supplies/ services and evaluation will be based on 'total cost to BHEL'. In case OEM/ foreign principal recommends placement of order(s) towards indigenous portion of supplies/ services on Indian supplier(s)/ agent on their behalf, the credentials/ capacity/ capability of the Indian supplier(s)/ agent to make the supplies/ services shall be checked by BHEL as per the extant guidelines of Supplier Evaluation, Approval & Review Procedure (SEARP), before opening of price bids. It will be the responsibility of the OEM/ foreign principal to get acquainted with the evaluation requirements of Indian supplier/ agent as per SEARP available on www.bhel.com OR <http://vis.bheltry.co.in/olsa>.
- IX. The responsibility for successful execution of the contract (including indigenous supplies/ services) lies with the OEM/ foreign principal. All bank guarantees to this effect shall be in the scope of the OEM/ foreign principal.

15. **Firm Price**

15.1 Unless otherwise specified in the GIT, prices quoted by the tenderer shall remain firm and fixed during the currency of the contract and not subject to variation on any account.

15.2 However, as regards taxes and duties, if any, chargeable on the goods and payable, will be paid extra as applicable on the date of dispatch.

16. **Earnest Money Deposit (EMD)**

~~**16.1** Pursuant to GIT (i) the tenderer shall furnish along with its tender, earnest money for amount as shown in the List of Requirements. The earnest money is required to protect the purchaser against the risk of the tenderer's unwarranted conduct as amplified under sub-clause 16.7 below.~~

~~**16.2** The tenderers who are currently registered and, also, will continue to remain registered during the tender validity period with Directorate General of Supplies & Disposals or with National Small Industries Corporation, New Delhi for the specific goods as per tender enquiry specification shall be eligible for exemption from EMD. In case the tenderer falls in these~~

categories, it should furnish copy of its valid registration details (with DGS&D or NSIC, as the case may be).

~~16.3 The earnest money shall be denominated in Indian Rupees or equivalent currencies as per GIT clause 12.2. The earnest money shall be furnished in one of the following forms:~~

- ~~i) — Account Payee Demand Draft~~
- ~~ii) — Banker's cheque and~~
- ~~iii) — Bank Guarantee~~

~~16.4 The demand draft or banker's cheque shall be drawn on any commercial bank in India or country of the tenderer, in favour of the "Bharat Heavy Electricals Limited" payable at Trichy India. In case of bank guarantee, the same is to be provided from any commercial bank in India or country of the tenderer as per the format specified under Section XI in these documents.~~

~~16.5 The earnest money shall be valid for a period of forty-five (45) days beyond the validity period of the tender. As validity period of Tender as per Clause 17 of GIT is 60 days, the EMD shall be valid for 105 days from Techno — Commercial Tender opening date.~~

~~16.6 Unsuccessful tenderers' earnest money will be returned to them without any interest, after expiry of the tender validity period, but not later than thirty days after conclusion of the resultant contract. Successful tenderer's earnest money will be returned without any interest, after receipt of performance security from that tenderer.~~

~~16.7 Earnest Money is required to protect the purchaser against the risk of the Tenderer's conduct, which would warrant the forfeiture of the EMD. Earnest money of a tenderer will be forfeited, if the tenderer withdraws or amends its tender or impairs or derogates from the tender in any respect within the period of validity of its tender or if it comes to notice that the information/documents furnished in its tender is incorrect, false, misleading or forged without prejudice to other rights of the purchaser. The successful tenderer's earnest money will be forfeited without prejudice to other rights of Purchaser if it fails to furnish the required performance security within the specified period.~~

~~16.8 In the case of Bank Guarantee furnished from banks outside India (i.e. foreign Banks), it should be authenticated and countersigned by any nationalized bank in India by way of back-to-back counter guarantee and the same should be submitted along with the bid.~~

17. Tender Validity

17.1 If not mentioned otherwise in the GIT, the tenders shall remain valid for acceptance for a period as mentioned in the commercial terms later in this document, after the date of tender opening prescribed in the TE document. Any tender valid for a shorter period shall be treated as unresponsive and rejected.

17.2 In exceptional cases, the tenderers may be requested by the purchaser to extend the validity of their tenders up to a specified period. Such request(s) and responses thereto shall be conveyed by e-mail/EPs message or by fax/ telex/cable. The tenderers, who agree to extend the tender validity, are to extend the same without any change or modification of their original tender and they are also to extend the validity period of the EMD accordingly. A tenderer, who may not agree to extend its tender validity after the expiry of the original validity period the EMD furnished by them shall not be forfeited.

17.3 In case the day up to which the tenders are to remain valid falls on/ subsequently declared a holiday or closed day for the purchaser, the tender validity shall automatically be extended up to the next working day.

18. Digital Signing of e-Tender

18.1 The tenderers shall submit their tenders as per the instructions contained in GIT Clause 11. Tenders shall be uploaded with all relevant PDF/zip format. The relevant tender

documents should be uploaded by an authorized person having Class 3- SHA2- 2048 BIT-SIGNING & ENCRYPTION digital signature certificate (DSC).

19. **Submission of Tenders**

19.1 The tender shall be submitted online only at <https://bheleps.buyjunction.in>.

(i) Pre-qualification and Technical compliance as per following documents (ONLY Online submissions for all the documents.)

- a) Manufacturer's authorization in case bid is submitted by an Indian agent (A declaration must be attached here in case directly quoted by a manufacturer or a document establishing the relation of the Indian office with the manufacturer in case quoted by Indian office of the manufacturer).
- b) Tender Form as per section VII.
- c) Compliance of all terms and conditions of TED like- warranty, delivery period, delivery terms, payment terms etc
- d) Declaration regarding Fall Clause and Deregistration, debarment from any Govt. Dept/ Agencies

(ii) PRICE BID (ONLY ONLINE).

19.2 The tenderers must ensure that they submit the on-line tenders not later than the closing time.

20. **Late Tender**

20.1 There is NO PROVISION of uploading late tender beyond stipulated date & time in the e-tendering system.

21. **Alteration and Withdrawal of Tender**

21.1 The tenderer, is permitted to change, edit or withdraw it's bid on or before the end date & time only.

22. **Opening of Tenders**

22.1 The purchaser will open the e-tenders at the specified date and time and at the specified place as indicated in the NIT. In case the specified date of tender opening falls on / is subsequently declared a holiday or closed day for the purchaser, the tenders will be opened at the appointed time and place on the next working day.

~~**22.2** Authorized representatives of the tenderers, who have submitted tenders on time may attend the tender opening provided they bring with them letters of authority from the corresponding tenderers.~~

22.3 Two - Tender system will be as follows. The Techno - Commercial Tenders are to be opened in the first instance, at the prescribed time and date as indicated in NIT. These Tenders shall be scrutinized and evaluated by the competent committee/ authority with reference to parameters prescribed in the TE document. ~~During the Techno - Commercial Tender opening, the tender opening official(s) will read the salient features of the tenders like brief description of the goods offered, delivery period, Earnest Money Deposit and any other special features of the tenders, as deemed fit by the tender opening official(s).~~ Thereafter, in the second stage, the Price Tenders of only the Techno - Commercially acceptable offers (as decided in the first stage) shall be opened for further scrutiny and evaluation on a date notified after the evaluation of the Techno - Commercial tender. The prices, special discount if any of the goods offered etc., as deemed fit by tender opening official(s) will be read out.

23. **Basic Principle for Tender evaluation**

23.1 Tenders will be evaluated on the basis of the terms & conditions already incorporated in the TE document, based on which tenders have been received and the terms, conditions etc. mentioned by the tenderers in their tenders. No new condition will be brought in while scrutinizing and evaluating the tenders.

24. Scrutiny of Tenders

24.1 The Purchaser will examine the Tenders to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed stamped and whether the Tenders are generally in order.

25. Discrepancies in Prices

- i If, in the price structure quoted for the required goods, services works, there is discrepancy between the unit price and the total price (which is obtained by multiplying the unit price by the quantity), the unit price shall prevail and the total price corrected accordingly, unless in the opinion of the purchaser there is an obvious misplacement of the decimal point in the unit price, in which case the total price as quoted shall govern and the unit price corrected accordingly.
- ii If there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and
- iii If there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject of (i) and (ii) above.
- iv If there is such discrepancy in an offer, the same shall be conveyed to the bidder with target date upto which the bidder has to send his acceptance on the above lines and if the bidder does not agree to the decision of the purchaser, the bid is liable to be ignored.

SECTION - III**GENERAL CONDITIONS OF CONTRACT (GCC)****26. 1. Application**

26.1 The General Conditions of Contract incorporated in this section shall be applicable for this purchase to the extent the same are not superseded by any Special Conditions of Contract prescribed anywhere in this TE document.

27. Use of contract documents and information

27.1 The supplier shall not, without the purchaser's prior written consent, disclose the contract or any provision thereof including any specification, drawing, sample or any information furnished by or on behalf of the purchaser in connection therewith, to any person other than the person(s) employed by the supplier in the performance of the contract emanating from this TE document. Further, any such disclosure to any such employed person shall be made in confidence and only so far as necessary for the purposes of such performance for this contract.

27.2 Further, the supplier shall not, without the purchaser's prior written consent, make use of any document or information mentioned in GCC sub-clause 27.1 above except for the sole purpose of performing this contract.

27.3 Except the contract issued to the supplier, each and every other document mentioned in GCC sub-clause 27.1 above shall remain the property of the purchaser and, if advised by the purchaser, all copies of all such documents shall be returned to the purchaser on completion of the supplier's performance and obligations under this contract.

28. Patent Rights

28.1 The supplier shall, at all times, indemnify and keep indemnified the purchaser, free of cost, against all claims which may arise in respect of goods & services to be provided by the supplier under the contract for infringement of any intellectual property rights or any other right protected by patent, registration of designs or trademarks. In the event of any such claim in respect of alleged breach of patent, registered designs, trademarks etc. being made against the purchaser, the purchaser shall notify the supplier of the same and the supplier shall, at his own expenses take care of the same for settlement without any liability to the purchaser.

29. Country of Origin

29.1 All goods and services to be supplied and provided for the contract shall have the origin in India or in the countries with which the Government of India has trade relations.

29.2 The word "origin" incorporated in this clause means the place from where the goods are mined, cultivated, grown, manufactured, produced or processed or from where the services are arranged.

29.3 The country of origin may be specified in the Price bid format.

30. Technical Specifications and Standards

30.1 The Goods & Services to be provided by the supplier under this contract shall conform to the technical specifications and quality control parameters mentioned in „Technical Specification and „Quality Control Requirements as mentioned in this document.

31. Packing and Marking

31.1 The packing for the goods to be provided by the supplier should be strong and durable enough to withstand, without limitation, the entire journey during transit including transshipment (if any), rough handling, open storage etc. without any damage, deterioration etc. As and if necessary, the size, weights and volumes of the packing cases shall also take into consideration, the remoteness of the final destination of the goods and availability or otherwise of transport and handling facilities at all points during transit up to final destination as per the contract.

31.2 The quality of packing, the manner of marking within & outside the packages and provision of accompanying documentation shall strictly comply with the requirements as provided in Technical Specifications and Quality Control Requirements. In case the packing requirements are amended due to issue of any amendment to the contract, the same shall also be taken care of by the supplier accordingly.

31.3 Packing instructions: Unless otherwise mentioned in the Technical Specification and Quality Control Requirements, the supplier shall make separate packages for each consignee (in case there is more than one consignee mentioned in the contract) and mark each package on three sides with the following with indelible paint of proper quality:

- a. Purchase Order number and date
- b. brief description of goods including quantity
- c. packing list reference number
- d. country of origin of goods
- e. consignees name and full address and
- f. suppliers name and address
- g. Any other information as per Purchase order/dispatch instructions.

32. Inspection, Testing and Quality Control

32.1 Goods/Materials shall be made ready as per the specifications mentioned in the purchase order and approved quality plan shall be followed in each stage of manufacturing the ordered materials. Ready materials shall be inspected by BHEL/BHEL TPI/ NTPC or BHEL Customer as per the purchase order. Tenderer shall inform well in advance the readiness of the materials so that the purchaser can arrange for Inspection, Testing and Quality evaluation of the ready materials. BHEL representative from unit or CQ is authorized to carry out audits along with TPIA at vendor's works before clearing the items for dispatch.

32.2 Goods accepted by the purchaser/consignee and/or its inspector at initial inspection and in final inspection in terms of the contract shall in no way dilute purchaser's/consignee's right to reject the same later, if found deficient in terms of the warranty clause of the contract, as incorporated under GCC Clause 34.

33. Terms of Delivery

33.1 Goods shall be delivered by the supplier in accordance with the terms of delivery and as per the delivery period specified in the schedule of requirement. Please note that the time shall be the essence of the contract.

34. WARRANTY

34.1 The supplier warrants comprehensively that the goods supplied under the contract is new, unused and incorporate all recent improvements in design and materials unless prescribed otherwise by the purchaser in the contract. The supplier further warrants that the goods supplied under the contract shall have no defect arising from design, materials, manufacturing or workmanship or from any act or omission of the supplier that may develop under normal use of the supplied goods under the conditions prevailing in India.

34.2 The warranty shall remain valid for the period as mentioned in the list of requirement/ General Technical specification, after the goods or any portion thereof as the case may be, have been delivered, installed and commissioned at the final destination.

- a. No conditional warranty will be acceptable.
- b. Replacement and repair will be under taken for the defective goods.
- c. Proper marking has to be made for all spares for identification like printing of installation and repair dates.

34.3 In case of any claim arising out of this warranty, the Purchaser/Consignee shall promptly notify the same in writing to the supplier. The period of the warranty will be as per G.C.C clause number 34.2 above irrespective of any other period mentioned elsewhere in the bidding documents.

34.4 Upon receipt of such notice, the supplier shall, within 8 hours on a 24(hrs) X 7 (days) X 365 (days) basis respond to take action to repair or replace the defective goods or parts thereof, free of cost, at the ultimate destination. The supplier shall take over the replaced parts/goods after providing their replacements and no claim, whatsoever shall lie on the purchaser for such replaced parts/goods thereafter. The penalty clause for non-rectification will be applicable as per tender conditions

34.5 In the event of any rectification of a defect or replacement of any defective goods during the warranty period, the warranty for the rectified/replaced goods shall be extended till the completion of the original warranty period of the main equipment.

34.6 If the supplier, having been notified, fails to respond to take action to repair or replace the defect(s) within 8 hours on a 24(hrs) X 7 (days) X 365 (days) basis, the purchaser may proceed to take such remedial action(s) as deemed fit by the purchaser, at the risk and expense of the supplier and without prejudice to other contractual rights and remedies, which the purchaser may have against the supplier.

34.7 During Warranty period, the supplier is required to visit at each consignee's site at least once in 6 months commencing from the date of the installation for preventive maintenance of the goods (if required).

35. ASSIGNMENT

35.1 The Supplier shall not assign, either in whole or in part, its contractual duties, responsibilities and obligations to perform the contract, except with the Purchaser's prior written permission.

36. PRICES

36.1 Prices to be charged by the supplier for supply of goods and provision of services in terms of the contract shall not vary from the corresponding prices quoted by the supplier in its tender and incorporated in the contract.

37. TAXES AND DUTIES

20.1 Supplier shall be entirely responsible for all taxes, duties, fees, levies etc. incurred until delivery of the contracted goods to the purchaser.

38. TERMS AND MODE OF PAYMENT

38.1 Payment Terms

Payment shall be made subject to recoveries, if any, by way of liquidated damages or any other charges as per terms & conditions of contract in the following manner.

For Indian Vendors –

- a. Payment term is 100% direct payment after 45 days from the date of dispatch against site acknowledgement. (or)

- b. Payment term is 90% direct payment after 45 days from the date of dispatch against submission of dispatch documents and balance 10% against site acknowledgement. For this option –(b), a loading of 2% on the 90% of the offered value shall be made.

For Foreign Vendors –

BHEL Payment term is 100% payment on CAD basis after 45 days from the date of receipt of documents, specified in PO, at BHEL bank. Respective bank charges to respective account.

Any deviation in the above payment term will attract loading as mentioned below.

“Base rate of SBI (as applicable on the date of bid opening. Techno-commercial bid opening in case of two part bids) + 6% shall be considered for loading for the period of relaxation sought by bidders.

- a. In the case of Usance LCs the loading will be considered @ 1.5% on the offered Value.
- b. For LC at sight the loading will be considered @ 3.5% on the offered Value.
- c. Normally CAD at sight and Confirmed LCs are liable for rejection.

39. Delivery

39.1 The supplier shall deliver the goods and perform the services under the contract within the time schedule specified by the Purchaser/Consignee in the List of Requirements and as incorporated in the contract. The time for and the date of delivery of the goods stipulated in the schedule shall be deemed to be of the essence of the contract and the delivery must be completed not later than the date (s) as specified in the contract.

39.2 Subject to the provision under GCC clause 26, any unexcused delay by the supplier in maintaining its contractual obligations towards delivery of goods and performance of services shall render the supplier liable to any or all of the following sanctions:

- (i) imposition of liquidated damages,
- (ii) forfeiture of its performance security and
- (iii) Termination of the contract for default.

39.3 If at any time during the currency of the contract, the supplier encounters conditions hindering timely delivery of the goods and performance of services, the supplier shall promptly inform the Purchaser/Consignee in writing about the same and its likely duration and make a request to the Purchaser/Consignee for extension of the delivery schedule accordingly. On receiving the supplier's communication, the Purchaser/Consignee shall examine the situation as soon as possible and, at its discretion, may agree to extend the delivery schedule, with or without liquidated damages for completion of supplier's contractual obligations by issuing an amendment to the contract.

39.4 When the period of delivery is extended due to unexcused delay by the supplier, the amendment letter extending the delivery period shall, inter alia contain the following conditions:

(a) The Purchaser/Consignee shall recover from the supplier, under the provisions of the clause 40 of the General Conditions of Contract, liquidated damages on the goods and services, which the Supplier has failed to deliver within the delivery period stipulated in the contract.

(b) That no increase in price on account of any ground, whatsoever, including any stipulation in the contract for increase in price on any other ground and, also including statutory increase in or fresh imposition of customs duty, excise duty, sales tax/ VAT, Service Tax and Works Contract Tax or on account of any other tax or duty which may be levied in respect of the goods and services specified in the contract, which takes place after the date of delivery stipulated in the contract shall be admissible on such of the said goods and services as are delivered and performed after the date of the delivery stipulated in the contract.

(c) But nevertheless, the Purchaser/Consignee shall be entitled to the benefit of any decrease in price on account of reduction in or remission of customs duty, excise duty, sales tax/ VAT,

Service Tax and Works Contract Tax or any other duty or tax or levy or on account of any other grounds, which takes place after the expiry of the date of delivery stipulated in the contract.

39.5 The supplier shall not dispatch the goods after expiry of the delivery period. The supplier is required to apply to the Purchaser/Consignee for extension of delivery period and obtain the same before dispatch. In case the supplier dispatches the goods without obtaining an extension, it would be doing so at its own risk and no claim for payment for such supply and / or any other expense related to such supply shall lie against the purchaser.

40. LIQUIDATED DAMAGES

40.1 Subject to GCC clause 26, if the supplier fails to deliver or install /commission any or all of the goods or fails to perform the services within the time frame(s) incorporated in the contract, the Purchaser/Consignee shall, without prejudice to other rights and remedies available to the Purchaser/Consignee under the contract, deduct from the contract price, as liquidated damages, as mentioned in the commercial terms later in this document. Once the maximum is reached Purchaser/Consignee may consider termination of the contract as per GCC 41. During the above-mentioned delayed period of supply and / or performance, the conditions incorporated under GCC sub-clause 39.4 above shall also apply.

41. TERMINATION FOR DEFAULT

41.1 The Purchaser/Consignee, without prejudice to any other contractual rights and remedies available to it (the Purchaser/Consignee), may, by written notice of default sent to the supplier, terminate the contract in whole or in part, if the supplier fails to deliver any or all of the goods or fails to perform any other contractual obligation(s) within the time period specified in the contract, or within any extension thereof granted by the Purchaser/Consignee pursuant to GCC sub-clauses 39.

41.2 In the event of the Purchaser/Consignee terminates the contract in whole or in part, pursuant to GCC sub-clause 41.1 above, the Purchaser/Consignee may procure goods and/or services similar to those cancelled, with such terms and conditions and in such manner as it deems fit and the supplier shall be liable to the Purchaser/Consignee for the extra expenditure, if any, incurred by the Purchaser/Consignee for arranging such procurement.

41.3 Unless otherwise instructed by the Purchaser/Consignee, the supplier shall continue to perform the contract to the extent not terminated.

42. FORCE MAJEURE

42.1 Notwithstanding the provisions contained in GCC clauses 39, 40 and 41, the supplier shall not be liable for imposition of any such sanction so long the delay and/or failure of the supplier in fulfilling its obligations under the contract is the result of an event of Force Majeure.

42.2 For purposes of this clause, Force Majeure means an event beyond the control of the supplier and not involving the supplier's fault or negligence and which is not foreseeable and not brought about at the instance of , the party claiming to be affected by such event and which has caused the non – performance or delay in performance. Such events may include, but are not restricted to, wars or revolutions, hostility, acts of public enemy, civil commotion, sabotage, fires, floods, explosions, epidemics, quarantine restrictions, strikes excluding by its employees , lockouts excluding by its management, freight embargoes and Acts of God.

42.3 If a Force Majeure situation arises, the supplier shall promptly notify the Purchaser/Consignee in writing of such conditions and the cause thereof within twenty one days of occurrence of such event. Unless otherwise directed by the Purchaser/Consignee in writing, the supplier shall continue to perform its obligations under the contract as far as reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

42.4 If the performance in whole or in part or any obligation under this contract is prevented or delayed by any reason of Force Majeure for a period exceeding sixty days, either party may at its option terminate the contract without any financial repercussion on either side.

42.5 In case due to a Force Majeure event the Purchaser/Consignee is unable to fulfil its contractual commitment and responsibility, the Purchaser/Consignee will notify the supplier accordingly and subsequent actions taken on similar lines described in above sub-paragraphs.

43. TERMINATION FOR CONVENIENCE

43.1 The Purchaser/Consignee reserves the right to terminate the contract, in whole or in part for its (Purchaser's/Consignee's) convenience, by serving written notice on the supplier at any time during the currency of the contract. The notice shall specify that the termination is for the convenience of the Purchaser/Consignee. The notice shall also indicate interalia, the extent to which the supplier's performance under the contract is terminated, and the date with effect from which such termination will become effective.

43.2 The goods and services which are complete and ready in terms of the contract for delivery and performance before the supplier's receipt of the notice of termination shall be accepted by the Purchaser/Consignee following the contract terms, conditions and prices. For the remaining goods and services, the Purchaser/Consignee may decide:

- a) To get any portion of the balance completed and delivered at the contract terms, conditions and prices; and / or
- b) To cancel the remaining portion of the goods and services and compensate the supplier by paying an agreed amount for the cost incurred by the supplier towards the remaining portion of the goods and services.

44. GOVERNING LANGUAGE

44.1 The contract shall be written in English language following the provision as contained in GIT clause 4. All correspondence and other documents pertaining to the contract, which the parties exchange, shall also be written accordingly in that language.

45. Notices

45.1 Notice, if any, relating to the contract given by one party to the other, shall be sent in writing or by cable or telex or facsimile and confirmed in writing. The procedure will also provide the sender of the notice, the proof of receipt of the notice by the receiver. The addresses of the parties for exchanging such notices will be the addresses as incorporated in the contract.

45.2 The effective date of a notice shall be either the date when delivered to the recipient or the effective date specifically mentioned in the notice, whichever is later.

46. RESOLUTION OF DISPUTES

46.1 If dispute or difference of any kind shall arise between the Purchaser/Consignee and the supplier in connection with or relating to the contract, the parties shall make every effort to resolve the same amicably by mutual consultations.

46.2 If the parties fail to resolve their dispute or difference by such mutual consultation within 30 days of its occurrence, then, unless otherwise provided in the contract, either the Purchaser/Consignee or the supplier may give notice to the other party of its intention to commence arbitration, as hereinafter provided the applicable arbitration procedure will be as per the Arbitration and Conciliation Act, 1996 of India. In the case of a dispute or difference arising between the Purchaser/Consignee and a domestic Supplier relating to any matter arising out of or connected with the contract, such dispute or difference shall be referred to the sole arbitration of an officer in BHEL Trichy, appointed to be the arbitrator by the General Manager/MM/RM BHEL Trichy. The award of the arbitrator shall be final and binding on the parties to the contract.

46.3 Venue of Arbitration: The venue of arbitration shall be the place from where the contract has been issued, i.e., BHEL Trichy.

46.4 Jurisdiction of the court will be from the place where the tender enquiry document has been issued, i.e., Trichy India

47. APPLICABLE LAW

The contract shall be governed by and interpreted in accordance with the laws of India for the time being in force.

48. Withholding and Lien in respect of sums claimed

Whenever any claim for payment arises under the contract against the supplier the purchaser shall be entitled to withhold and also have a lien to retain such sum from the security deposit or sum of money arising out of under any other contract made by the supplier with the purchaser, pending finalization or adjudication of any such claim. It is an agreed term of the contract that the sum of money so withheld or retained under the lien referred to above, by the purchaser, will be kept withheld or retained till the claim arising about of or under the contract is determined by the Arbitrator or by the competent court as the case may be, and the supplier will have no claim for interest or damages whatsoever on any account in respect of such withholding or retention.

49. Replacement of defective work or material

If during the progress of the work, the Purchaser or his representative shall decide and notify in writing to the contractor that the contractor has executed any unsound or imperfect work or has supplied any plant or material inferior in quantity or quality to those specified, the contractor on defects or deficiency shall, at his own expense, within fifteen days' of his receiving the notice, or otherwise within such time as may be reasonably necessary for making in good, proceed to alter, reconstruct, or remove such work, or supply fresh materials up to the standard of the particulars and in case the Contractor shall fail to do so, the Purchaser may, on giving the Contractor fifteen days' notice in writing of his intention to do so, proceed to remove the work or materials complained of, and at the cost of the Contractor perform all such work or supply all such materials, provided that nothing in this clause shall be deemed to deprive the purchaser of or affect, any rights under the contract which he may otherwise have in respect of such defects or deficiencies. BHEL reserves the discretion to levy storage charges for material not lifted within the reasonable period.

50. Rectification of Defects

Any defects which in the opinion of the Inspector may be apparent after erection and testing as mentioned in the specification, shall be rectified by the Contractor to the satisfaction of the Inspector at the expense of the Contractor and it shall be in his power to direct that further test shall be made at the expense of the Contractor after the said defects have been rectified to the satisfaction of the Inspector. If, after a reasonable time for rectifying defects shall have been allowed to the contractor the Inspector shall be of opinion that the defect cannot satisfactorily be rectified, and that the material/component/machinery supplied is unsuited for or incapable of performing the work required, the Purchaser may, if he shall think fit (without prejudice, and in addition to any other remedy he may have in the premises) determine this contract, and thereupon all money paid to the Contractor under the contract in respect thereof shall upon demand be repaid by them to the purchaser, and they shall be liable for all damages heretofore provided for non-fulfilment of contract

51. SECURITY

The contractor shall take all reasonable steps necessary to ensure that all persons employed in any work in connection with the contract, have full knowledge of the Official Secrets Act and any Regulations framed thereunder. Any information obtained in the course of the execution of the contract by the contractor, his servants or Agents or any person so employed, as to any matter whatsoever; which would or might be directly or indirectly of use to any competitor of BHEL or enemy of India must be treated as Secret and shall not at any time be communicated to any person. Any breach of the aforesaid condition shall entitle BHEL to cancel the contract and to purchase or authorize the purchase of the materials/goods at the risk and cost of the contractor invoking risk purchase clause.

52. Fraud Prevention

The bidder along with its associate / collaborators / sub-contractors / sub-vendors/consultants/service providers shall strictly adhere to BHEL Fraud prevention Policy displayed on BHEL website <http://www.bhel.com> and shall immediately bring to the notice of BHEL Management about any fraud or suspected fraud as soon as it comes to their notice.

53. Document submission & Signing

Documents submitted with the offer shall be signed and stamped in each page by authorized representative of the bidder. Documents not signed & stamped by the authorized signatory of the bidder shall not be accepted and considered for registration / evaluation of the bid etc.

54. Vendor Works/Location

Vendors having multiple works/locations shall indicate in the technical bid the location from where there are going execute the order if placed, and the said works/location must be approved by BHEL/BHEL customer as may be the case.

55. GENERAL/ MISCELLANEOUS CLAUSES

- i Any Purchase Order resulting from this enquiry shall be governed by these general terms and conditions listed above (1-53) and special terms and conditions, if any, along with this enquiry of Bharat Heavy Electricals Limited, BHEL HPBP, Trichy-620014 (hereinafter referred to as BHEL Trichy).
- ii Any of the terms and conditions not acceptable to supplier, shall be explicitly mentioned in the quotation. Otherwise, it will be treated as that all terms and conditions of this enquiry are acceptable.
- iii If counter terms and conditions are offered by supplier, BHEL Trichy shall not be governed by such terms and conditions, unless it is agreed and incorporated in the Purchase Order of BHEL Trichy.
- iv Any deviation to the terms and conditions not mentioned in the quotation by supplier in response to this enquiry will not be considered, if put forth subsequently or after issue of order, unless clarification is sought for by BHEL TRICHY and agreed upon in the Purchase Order of BHEL TRICHY.
- v BHEL TRICHY reserves the right to adopt Reverse Auction for the enquiry sent, at its discretion.
- vi BHEL TRICHY shall be at liberty to cancel the tender at any time, before ordering, without assigning any reason.

- vii The correspondence exchanged against the tender from both tenderer and BHEL through email are considered as valid document legally though it is not signed. It is treated as valid confirmations made on behalf of the respective company and very much comes under the legal ambit of the business transaction and hence it is binding on both the parties to the business.
- viii Banned Firms - The offers of the bidders who are on the banned list as also the offer of the bidders, who engage the services of the banned firms, shall be rejected. The list of banned firms is available on BHEL website www.bhel.com.
- ix Bidders participating in the tender should declare in their technical bid that whether they have been black-listed / kept on hold for a specified period / given Business holiday for a specified period by any Public sector undertaking or Government departments. The reasons for such action with details and the current status of such hold shall be clearly furnished to BHEL. If no such details are mentioned in the offer then it will be construed that the subject bidder is not under any such hold. But at a later date if it comes to the notice of BHEL about any such hold under enforcement on the subject bidder, BHEL will have every right to reject the offer of such vendors at any point of time and also under any stage of the finalization of the subject tender irrespective of the status of the subject bidder in that tender. Such bidders will not be permitted to participate in the further tender proceedings and will be communicated suitably. They will not be also considered for any ongoing tenders even if participated till the hold is officially lifted and confirmed in writing.
- x Risk purchase: - If the supplier fails to deliver the goods within the delivery specified in the Purchase Order, BHEL will be entitled to terminate the contract and to purchase elsewhere at the risk and cost of the seller either the whole of the goods or any part which the supplier has failed to deliver or dispatch within the delivery period mentioned in the Purchase Order. Any extra cost incurred in the procurement of the material from alternative source will be recovered from the Security Deposit / Bank Guarantee / Pending bills of the defaulting vendor.
- xi The court of the place from where the purchase order is issued shall alone have jurisdiction to decide any dispute arising out of or in connection with the purchase order.
- xii Cartel Formation: - All the firms should desist from forming cartel as the practice is prohibited under Section 3(3) (a) & (d) of the competition Act 2002. If any such instance is observed during this tender will attract disciplinary action as per BHEL policies.

SECTION – IV

SPECIAL CONDITIONS OF CONTRACT (SCC)

1. Price may be finalized thro “On line Reverse Auction Process” using internet. BHEL reserves the right to go for Reverse Auction (RA) instead of opening the sealed envelope price bid, submitted by the bidder. This will be decided after techno-commercial evaluation. All bidders to give their acceptance for participation in RA. Non-acceptance to participate in RA may result in non-consideration of their bids, in case BHEL decides to go for RA.
In case BHEL decides to go for Reverse Auction, only those bidders who have given their acceptance to participate in RA will be allowed to participate in the Reverse Auction. Those bidders who have given their acceptance to participate in Reverse Auction will have to necessarily submit online sealed bid” in the Reverse Auction. Non submission of online sealed bid” by the bidder will be considered as tampering of the tender process and will invite action by BHEL as per extant guidelines in vogue. **Refer section IX for details.**
2. Loading of Price Bids – Loading will be applicable for any deviations taken by **tenderer as per Section XI** to this TE document.
3. **Testing and Inspection by BHEL or BHEL TPIA for indigenous supply.** BHEL representative from unit or CQ is authorised to carry out audits along with TPIA at vendor’s works before clearing the items for despatch.
4. **Confirmation to BHEL Specifications.**
5. MSE Clause is applicable as per **Section XIV**

SECTION – V**List of Requirements****PART - I**

Sr. No	Item	Qty (Nos)
Package 1	Coal Handling Plant	1 SET

PART – II Required Delivery Schedule:

Delivery period will 90 days from the document & Quality plan approval after placement of order.

PART – III Delivery Location

Materials shall be delivered FOR BHEL Jhansi.

PART – IV Warantee

18 months form the date of receipt of materials or 12 months from the date of commissioning whichever is earlier.

PART – V Delivery Terms

FOR Bharat Heavy Electricals Limited, Khailar, Jhansi, Uttar Pradesh - 284120

PART – VI Offer requirements

Two part bid system to be followed. Part I – techno-commercial and Part II – Price bid.

Both parts shall be submitted in three breakups separately as follows:

- Offer for supply of equipment as per scope of supply as mentioned in the enquiry. This shall be considered for finalising L1 bidder.
- Offer for supervision of erection and commissioning on Man day basis / lumpsum basis (including travelling, boarding and lodging charges.)
- Offer for recommended spares for 2 years trouble free operation with unit price.

SECTION – VI

Technical and Quality Specifications

Materials shall be manufactured as per technical and quality requirements listed below

1. Coal Handling Plant Specification No.: PCPS:48CHP:JHANSI:01:Rev00	-5 Pages
2. Annexure-A (Project Related Data)	-1 Page
3. Annexure-B (Schematic Flow Diagram)	-1 Page
4. Annexure-C (Plot Plan)	-2 Pages
5. Annexure-D (Boiler Bunker Arrangement)	-1 Page
6. Annexure-E (Guarantee Schedule)	-1 Page
7. Annexure-F (Data Sheet)	-2 Pages
8. Annexure-G (Check List)	-1 Page
9. Annexure-H (EC&I Specification for Coal Handling Plant, Spec no: PCPS:CI:5518:CHS)	-1 Page
10. Technical Delivery Conditions C&I -TDC:TCI:140	-6 Pages
11. Standard Quality Plan for LT motors QA:CI:STD:QP:24	-9 Pages
12. Standard Packing procedure QA:CI:STD:PR:03	-4 Pages
13. BHEL QP Format	-1 Page

SECTION – VII

Tender Form

(to be submitted on company letterhead)

To

GM/MM/RM

BHEL Trichy

Ref. Your TE document No. 1801601090 dated 10.09.2016

We, the undersigned have examined the above mentioned TE document, including amendment/corrigendum No. _____, dated _____ (if any), the receipt of which is hereby confirmed.

We now offer to supply and deliver Coal Handling Plant in conformity with your above referred document for the sum as shown in the price schedules attached herewith and made part of this tender. If our tender is accepted, we undertake to supply the goods and perform the services as mentioned above, in accordance with the delivery schedule specified in the List of Requirements. We further confirm that, if our tender is accepted, we shall provide you with a performance guarantee or warranty in an acceptable form in terms of GCC clause 34, read with modification, if any, in Section - IV – “Special Conditions of Contract”, for due performance of the contract.

We agree to keep our tender valid for acceptance as required in the GIT clause 17, read with modification, if any as per clause 9 of GIT or for subsequently extended period, if any, agreed to by us. We also accordingly confirm to abide by this tender up to the aforesaid period and this tender may be accepted any time before the expiry of the aforesaid period.

We further confirm that, until a formal contract is executed, this tender read with your written acceptance thereof within the aforesaid period shall constitute a binding contract between us. We further understand that you are not bound to accept the lowest or any tender you may receive against your above-referred tender enquiry. We confirm that we do not stand deregistered/banned/blacklisted by any (GOI) Govt. Authorities/PSUs.

We confirm that we fully agree to the terms and conditions specified in above mentioned TE document, including amendment/ corrigendum if any

(Signature with date)

(Name and designation)

SECTION – VIII

Price bid Formats

Price bid must contain following

- a. Basic Cost of the entire set (detailed price breakup to be furnished)**
- b. Excise Duty, CST/VAT, Octroi, Any other applicable tax, Transportation**
- c. Foreign vendors must give breakup of Ex works, FOB, CIF Chennai Port charges. (Customs duty, Inland transportation and handling charges shall be loaded as applicable during price evaluation).**

Vendor Sign & Seal

SECTION – IX

Reverse Auction

Against this enquiry for the subject item/ system with detailed scope of supply as per Tender enquiry specifications, BHEL may resort to “REVERSE AUCTION PROCEDURE” i.e ON LINE BIDDING (THROUGH A SERVICE PROVIDER). The philosophy followed for reverse auction shall be English Reverse (No ties).

1. For the proposed reverse auction, technically and commercially acceptable bidders only shall be eligible to participate.
2. Those bidders who have given their acceptance for Reverse Auction (quoted against this tender enquiry) will have to necessarily submit sealed bid for any of the eligible items for which techno-commercially qualified, will be considered as tampering of the tender process and will invite action by BHEL as per extant guidelines in vogue.
3. BHEL will engage the services of a service provider who will provide all necessary training and assistance before commencement of on line bidding on internet.
4. In case of reverse auction, BHEL will inform the bidders the details of Service Provider to enable them to contact & get trained.
5. Business rules like event date, time, bid decrement, extension etc. also will be communicated through service provider for compliance.
6. Bidders have to fax the Compliance form (annexure IV) before start of Reverse auction. Without this, the bidder will not be eligible to participate in the event.
7. In line with the NIT terms, BHEL will provide the calculation sheet (e.g., EXCEL sheet) which will Packing & forwarding charges, Taxes and Duties, Freight charges, Insurance, Service Tax for Services and loading factors (for noncompliance to BHEL standard Commercial terms & conditions) for each of the bidder to enable them to fill-in the price and keep it ready for keying in during the Auction.
8. Reverse auction will be conducted on scheduled date & time.
9. At the end of Reverse Auction event, the lowest bidder value will be known on auction portal.
10. The lowest bidder has to fax/e-mail the duly signed and filled-in prescribed format for price breakup including that of line items, if required, (Annexure VII) as provided on case-to-case basis to Service provider within two working days of Auction without fail.
11. In case BHEL decides not to go for Reverse Auction procedure for this tender enquiry, the Price bids and price impacts, if any, already standard practice.
12. Bidders shall the auctions site of Service provider, using the Login IDs and passwords given to them by the service provider before reverse auction event. Bidders should acquaint themselves of the business rules of Reverse Auction, which will be communicated before the Reverse Auction.
13. If the Bidder or any of his representatives are found to be involved in Price manipulation/ cartel formation of any kind, directly or indirectly by communicating with other bidders, action as per extant BHEL guidelines, shall be initiated by BHEL and the results of the RA scrapped/ aborted.
14. The Bidder shall not divulge either his Bids or any other exclusive details of BHEL to any other party.
15. In case BHEL decides to go for reverse auction, the H1 bidder (whose quote is highest in online sealed bid) may not be allowed to participate in further RA process.

SECTION – X**Bank Guarantee Format for Performance (PBG)**

(TO BE STAMPED IN ACCORDANCE WITH STAMP ACT AND THE EXPIRY DATE OF BG MUST BE AFTER 60 DAYS FROM THE DATE OF COMPLETION OF WARRANTY PERIOD)

In accordance of M/s. Bharat Heavy Electricals Limited (A Government of India undertaking, a company incorporated under the Companies Act 1956 having its Registered Office at “BHEL House”, SIRI Fort, New Delhi 110 049) through its High Pressure Boiler

Plant Division located at Tiruverumbur, Tiruchirapalli- 620 014 (hereinafter called ‘the Company’) having entered into a contract withhereinafter called ‘ the said contractor ‘ which term includes ‘suppliers’ for the purpose of this Bond and under the terms and conditions of the contract No..... Dt Between BHEL, Trichy and as per the contract, the contractor / supplier is to furnish a performance Bank guarantee for Rs. for the due performance of the equipment to be supplied under the above referred contract and for the fulfillment of all the terms and conditions of the contract, We(indicate the name of the bank) (herein after referred to as the bank) at the request of (Contractor(s)) do here by undertake to pay the company an amount not exceeding Rs.....against any loss or damage caused to or suffered or would be caused to or suffered by the company by reason of any breach by the said contractor (s) of any of the terms and conditions contained in the said agreement.

2. We(indicate the name of the bank with full address), do hereby undertake to pay the amounts due and payable under this guarantee without any demur, merely on a demand from the Company stating that the amount claimed is due by way of loss or damage caused to or would be caused to or suffered by the Company by reason of breach by the said Contractor(s) of any of the terms and conditions contained in the said Agreement or by the reason of the contractor(s) ‘failure to perform’ the said agreement. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs._____.

3. We undertake to pay unconditionally to the Company any money so demanded notwithstanding any dispute(s) raised by the Contractor in any suit, or proceedings pending before any Court or Tribunal or Arbitration or before any other authority relating thereto our liability under this present being absolute and unequivocal. The payment under this guarantee would not wait till the disputes have been decided by any Court or Tribunal or in the arbitration proceedings or by any other authority. The payment so made by us under this Bond shall be a valid discharge of liability for payment thereunder and the Contractor(s) shall have no claim against us for making such payment.

4. We.....(indicate the name of Bank), further agree that the guarantee herein contained shall remain in full force and effect during the period that would

be taken for the performance of the said Agreement and that it shall continue to be enforceable till all the dues of the Company under or by virtue of the said Agreement have been fully paid and its claims satisfied or discharged or till _____ Office / Department/ Division of the Company certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the said Contractor(s) and accordingly discharges this guarantee.

5. (I) Unless a demand or claim under this guarantee is made on us in writing on or before the _____ we shall be discharged from all the liability under this guarantee thereafter. But where such claim or demand has been preferred by the Company with the Bank before the expiry of the said date, the claim shall be enforceable notwithstanding the fact that the said enforcement is effected after the said date.

(ii) For the purpose of this clause, any letter making demand on the Bank by M/s. BHEL dispatched by Registered Post with Ack.Due or by Telegram or by any Electronic media addressed to the above mentioned address of the Bank shall be deemed to be the claim / demand in writing referred to above irrespective of the fact as to whether and when the said letter reaches the Bank, as also any letter containing the said demand or claim is lodged with the bank personally.

6. We(indicate the name of Bank), further agree with the company that the Company shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said agreement or to extend time of performance by the said Contractor (s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the Company against the said Contractor(s) and to forbear or enforce any of the terms and conditions relating to the said Agreement and we shall not be relieved from our liability by any reason of any such variation or extension being granted to the said Contractor(s) or for any forbearance, act or omission on the part of the company or any indulgence by the company to the said Contractor(s) or by any such matter or thing whatsoever which under the law relating would, but for this provision, have effect of not so relieving us.

7. This guarantee will not be discharged due to the change in the constitution of the Bank or the Contractor(s).

8. It shall not be necessary for the company to proceed against the contractor before proceeding against the guarantor-bank and the guarantee herein contained shall be enforceable against them notwithstanding any security, which the company may have obtained or obtain from the Contractor shall, at the time when proceedings are taken against the guarantor hereunder be outstanding or unrealised.

9. Any claim or dispute arising under the terms of this document shall only be enforced or settled in the Courts at Tiruchirapalli.

10. The guarantor hereby declare that it has power to execute this guarantee and the executant has full powers to do so on its behalf under the proper authorities granted to him/them by the guarantor.

11. We(indicate the name of Bank) lastly undertake not to revoke this guarantee during its currency except with the previous consent of the company in writing.

In witness whereof we....., (indicate the name of Bank) have hereunto setout
Bank Seal the _____ day _____ month 200

BANK E-MAIL ID:

BANK PHONE NO.

BANK FAX NO:

SECTION – XI

LOADING CRITERIA

Payment Term (Indigenous)	
If materials are receivable at Project Sites without PBG	a) Payment term is 100% direct payment after 45 days from the date of dispatch against site acknowledgement. (or) b) Payment term is 90% direct payment after 45 days from the date of dispatch against submission of dispatch documents and balance 10% against stores acknowledgement. For this option –(b), a loading of 2% on the 90% of the offered value shall be made.

Payment Term (Imports) -
BHEL Payment term is 100% payment on CAD basis after 45 days from the date of receipt of documents, specified in PO, at BHEL bank. Respective bank charges to respective account.

Any deviation in the above payment term will attract loading as mentioned below.

“Base rate of SBI (as applicable on the date of bid opening. Techno-commercial bid opening in case of two part bids) + 6% shall be considered for loading for the period of relaxation sought by bidders.

- **In the case of Usance LCs the loading will be considered @ 1.5% on the offered Value.**
- **For LC at sight the loading will be considered @ 3.5% on the offered Value.**
- **Normally CAD at sight and Confirmed LCs are liable for rejection.**

Liquidated Damages / Penalty - To be incorporated in all NITs addressed to both Indigenous and Import Suppliers
Liquidated damages shall be 0.5% of the total order value per week or part thereof subject to a maximum of 10% of the total order value. For staggered delivery schedule, LD shall be 0.5% of the undelivered portion per week of the delay or part thereof subject to a maximum of 10% of the total order value. Any deviation from the above LD clause, loading will be applied to the extent to which it is not agreed by the bidder (at offered value).

SECTION – XII**SPECIAL & COMMERCIAL TERMS**

Special terms to Enquiry no: 1801601090 dt 10.09.2016		
Sl.no	Conditions	Vendor conformation
1	Offer shall be submitted in TWO PART bid system i.e Technical bid along with commercial conditions and price bid separately through BHEL e-Procurement route only.	
2	Tender will be finalized on the basis of “Total package cost basis to BHEL”.	
3	“Rate per number” to be quoted on “FOR BHEL Jhansi” basis with price breakup indicating basic price, FOB, CIF, P&F, ED,CST/VAT, freight charges separately. Insurance will be in BHEL scope.	
4	Materials shall be as per BHEL specifications enclosed with this enquiry document.	
5	If the vendor is taking any deviations, those must be given in writing along with technical offer mentioning the clause of specification where deviations have been taken.	
6	Lowest Prices received against BHEL tender need not be the technically acceptable one and in that case BHEL reserve the right not to consider the same	
7	BHEL reserves the right to increase or decrease the tendered quantity.	
8	Note: Offers for this enquiry will be accepted through e-procurement (EPS) route only. For EPS system vendors have to arrange their own digital signature (DSC). BHEL will not provide DSC to any vendor.	

Vendor Seal & Sign

Commercial Terms Enquiry no: 1801601090 dt 10.09.2016			
SL NO	CONDITIONS	BHEL TERMS	Accepted/Not Accepted
1	Delivery Terms	FOR BHEL Jhansi	
2	Delivery period	120 days from document approval.	
3	Excise Duty	(Mention Applicable %)	
4	CST/VAT	(Mention Applicable %)	
5	Freight	Vendor Scope. To be mentioned separately in price bid	
6	Insurance	BHEL Scope	
7	Liquidated damages (LD)	LD shall be 0.5% of the total order value per week of the delay or part thereof subject to a maximum of 10% of the total order value.	
8	Risk Purchase	Applicable	
9	Payment terms	Indigenous – 100% after 45 days from the date of dispatch against site acknowledgement. Foreign - BHEL Payment term is 100% payment on CAD basis after 45 days from the date of receipt of documents, specified in PO, at BHEL bank. Respective bank charges to respective account.	
10	Performance Bank Guarantee (PBG)	10% of the Basic cost of materials for warranty period in BHEL format as per section X. To be submitted at the time of invoice submission.	
11	Validity of offer	60 days from part I opening.	
12	Firm Price	Firm Price till order execution	
13	Price Variation Clause	Not Applicable	
14	Packing Forwarding	Vendor Scope (to be quoted separately)	
15	Guarantee/Warranty	18 months from the date of receipt of the material at Jhansi or 12 months from the date of commissioning.	
16	MSE Clause	Applicable as per Section XIV	
16	SECTION – XV NDA clause	Signed copy of THIRD PARTY NON-DISCLOSURE AGREEMENT attached to technical bid.	

*If vendor do not confirm to any of the conditions, their offer is liable for rejection.

Vendor Seal & Sign

SECTION – XIII**Supplier Registration Form**

Unregistered vendors may get registered with BHEL by filling SRF. Supplier Registration Form (SRF) has to be duly filled up online and send one copy with all the documents as mentioned in SRF.

URL for online Registration form is as below

<http://supplier.bhel.in/>

For any help regarding filling of SRF, you may contact following

<http://supplier.bhel.in/contact.jsp>

Name	Designation	Phone No.	Mail
Mrs. Nalini Subramanian	PURCHASE OFFICER	0431-2577301	nalini@bheltry.co.in
Mr. LJEYAPIRAGASH	SR MANAGER	0431-2577121	ljp@bheltry.co.in
Mr. M EBINESAN	DGM	0431-257448	ebi@bheltry.co.in
Mr. SIVASUBRAMANIAN P	SR MANAGER	0431-2577939	psivasub@bheltry.co.in
Mr. SEKAR V.M	SR MANAGER	0431-2574608	vmsekar@bheltry.co.in

Address

DGM / SDC & ADMN /MM / MFG
IV FLOOR, 24 BLDG
UNIT:HPBP, BHEL
TIRUCHIRAPALLI- 620014
TAMIL NADU

For any queries regarding tender you may contact

Mr. Sachin Saini
Engineer/MM/BOI
BHEL Trichy
0431-2577897

sachinsaini@bheltry.co.in

SECTION – XIV**MSE clause****Clause: Special Provisions for Micro and Small Enterprises (MSE):**

1. 20% of the tendered quantity is earmarked for MSE suppliers in this tender.
2. Out of the 20% tendered quantity reserved for MSE suppliers, 4% shall be earmarked for procurement from MSE owned by SC / ST entrepreneurs.
3. In tender, participating MSE suppliers quoting price within price band of L1+15 per cent shall also be allowed to supply a portion of requirement by bringing down their price to L1 price in a situation where L1 price is from someone other than a MSE supplier and such MSE shall be allowed to supply up to 20% of total tendered value. In case of more than one such MSE, the supply shall be shared proportionately.
4. MSE suppliers can avail the intended benefits only if they submit along with offer, attested copies of either EM II certificate having deemed validity (Five years from the date of issue of acknowledgement in EM II) or valid NSIC certificate or EM II certificate along with CA certificate (Format enclosed) applicable for the year, certifying quantum of investment in plant and machinery within the permissible limit as per the act for relevant status (Micro or small) where the deemed validity of five years for EM II is over. Date to be reckoned for determining the deemed validity will be the last date of technical bid submission. Non submission of such documents will lead to consideration of their bids at par with other bidders. No benefits shall be applicable for the enquiry if any deficiency in the above required documents are not submitted before price bid opening. If the tender is to be submitted through e-procurement portal, then the above required documents are to be uploaded on the portal. Documents should be notarized or attested by a Gazetted officer.

Since 4% shall be earmarked for procurement from MSE owned by SC / ST entrepreneurs, all MSEs owned by SC/ST entrepreneurs are encouraged to submit supporting document to claim 4% of tendered quantity.

Non-submission of documents as per point no 4 above will disallow provisions under MSE clause mentioned above. These documents shall be submitted along with the techno-commercial/unpriced bid.

5. **Since this tender enquiry is being finalised on package basis, as per office memorandum ref: 22(1)/202-MA dt 20.02.2014 issued by Ministry of MSME, MSE quoting price within price band of L1+15% may be awarded for full / complete supply of total tendered value to MSE (provided they match the L1 prices), considering spirit of policy for enhancing Govt. procurement from MSE.**

Annexure - I**Certificate by Chartered Accountant on letter head**

This is to Certify that M/S
(hereinafter referred to as 'company') having its registered office at
is registered under MSMED Act 2006, (Entrepreneur
Memorandum No (Part-II) dtd:.....,
Category: (Micro/Small)). (Copy enclosed).

Further verified from the Books of Accounts that the investment of the company as per the latest audited financial year as per MSMED Act 2006 is as follows:

1. **For Manufacturing Enterprises:** Investment in plant and machinery (i.e. original cost excluding land and building and the items specified by the Ministry of Small Scale Industries vide its notification No.S.O.1722(E) dated October 5, 2006 :
Rs.....Lacs
2. **For Service Enterprises:** Investment in equipment (original cost excluding land and building and furniture, fittings and other items not directly related to the service rendered or as may be notified under the MSMED Act, 2006:
Rs.....Lacs

(Strike off whichever is not applicable)

The above investment of Rs.....Lacs is within permissible limit of Rs.....Lacs forMicro / Small (Strike off which is not applicable) Category under MSMED Act 2006.

Or

The company has been graduated from its original category (Micro/ Small) (Strike off which is not applicable) and the date of graduation of such enterprise from its original category is (dd/mm/yyyy) which is within the period of 3 years from the date of graduation of such enterprise from its original category as notified vide S.O. No. 3322(E) dated 01.11.2013 published in the gazette notification dated 04.11.2013 by Ministry of MSME.

Date:

(Signature)

Name -

Membership number -

Seal of Chartered Accountant

SECTION – XV**THIRD PARTY NON-DISCLOSURE AGREEMENT**

I, _____, on behalf of the _____ (Name of Company), acknowledge that the information received or generated, directly or indirectly, while working with BHEL, Trichy on contract is confidential and that the nature of the business of the BHEL, Trichy is such that the following conditions are reasonable, and therefore:

I warrant and agree as follows:

I, or any other personnel employed or engaged by our company, agree not to disclose, directly or indirectly, any information related to the BHEL, Trichy Without restricting the generality of the foregoing, it is agreed that we will not disclose such information consisting but not necessarily limited to:

- Technical information: Methods, drawings, processes, formulae, compositions, systems, techniques, inventions, computer programs/data/configuration and research projects.
- Business information: Customer lists, project schedules, pricing data, estimates, financial or marketing data,

On conclusion of contract, I, or any other personnel employed or engaged by our company shall return to BHEL, Trichy all documents and property of BHEL, Trichy, including: drawings, blueprints, reports, manuals, computer programs/data/configuration, and all other materials and all copies thereof relating in any way to BHEL, Trichy's business, or in any way obtained by me during the course of contract. I further agree that I, or any others employed or engaged by our company shall not retain copies, notes or abstracts of the foregoing.

This obligation of confidence shall continue after the conclusion of the contract also.

I acknowledge that the aforesaid restrictions are necessary and fundamental to the business of the BHEL, Trichy and are reasonable given the nature of the business carried on by the BHEL, Trichy I agree that this agreement shall be governed by and construed in accordance with the laws of country.

I enter into this agreement totally voluntarily, with full knowledge of its meaning, and without duress.

Dated at _____, this ____ day of _____, 20__.

Name

Company

Signature

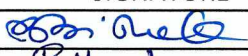
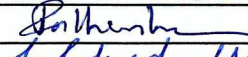
SPECIFICATION FOR COAL HANDLING PLANT FOR 1X12 TPH BHEL JHANSI BFBC BOILER

Spec No.: PCPS:48CHP:JHANSI:01:Rev00

COVER SHEET

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	NAME	SIGNATURE	DATE
PREPARED	ABHISHEK KAMAL		01-09-2016
CHECKED	F. JESUTHANKRAJ		01-09-2016
APPROVED	V. G. KADIRVELL		01-09-2016

Specification for Coal Handling Plant

Project: 1x12 TPH BFBC Boiler at BHEL Jhansi

1. Scope of Supply

1.1.1. Design, manufacturing, inspection, testing at manufacturer's works, painting, packing and forwarding, Erection Supervision at site of complete Coal Handling Plant for 1 X 12 TPH BFBC Boiler, BHEL Jhansi, UP. Technical parameters for design and selection of equipment for coal handling plant shall be as per detail below and Annexure-A, Schematic Flow Diagram (Annexure-B), Plot Plan (Annexure-C), Boiler Bunker Arrangement (Annexure-D), Guarantee Schedule (Annexure-E), Data Sheet (Annexure-F), Check list (Annexure-G) and specification for EC&I items (Annexure-H)

1.1.2 Supply of commissioning spares and special tools required for operation and maintenance of the equipments of the conveying system.

1.1.3. Supply of first fill of lubricants in a separate container.

1.1.4. Supervision for successful completion of erection & commissioning, conducting no load test trial runs and full load tests at site.

The extent of scope of supply stated herein is not necessarily exhaustive and shall not relieve the supplier from his responsibility to provide goods and services necessary to satisfy the performance criteria and guarantee specified.

Bidder can consider alternate offer for different / modified equipment w.r.t. bunker and Raw Coal Feeding Point layout. However terminal point elevations are to be maintained.

2. Pre-Qualification Criteria for the Bidders:

2.1. The bidder should have supplied earlier at least 2 no. of Coal Handling Plants (of minimum 10 TPH capacity or more) using Belt conveyor.

2.2. Bidder to submit experience list along with order copy and completion certificate issued by customer.

3. Brief Description of Equipment for Coal Handling Plant (CHP):

Major equipments in the coal handling plant are mentioned here. Any item/equipment not specifically mentioned below but essential for smooth and efficient functioning of the system shall also be included in the scope of supply.

3.1 Grizzly Hopper:

For feeding raw coal (Capacity -2M³), hopper made of MS plate, grizzly grid with 200 mm clear square openings made of suitable Flat / plates of minimum size 8x60 mm, manual rack & pinion gate, skirt with rubber and electromechanical vibratory feeders (EMVF) of suitable capacity below the hopper as required. The required support to the ground to be provided.

3.2 Raw Coal Carrying Belt Conveyor:

For feeding to Coal Crusher from Grizzly hopper, M-24 grade belt, Belt width minimum 600 mm, Trough type Carrying Idlers (3 roll, 35°, 88.9 mm dia, seize resistant bearings, self-lubricated, maximum spacing 1250 mm.), Return Idlers (3 roll, 35°, 88.9 mm dia, seize resistant bearings, self-lubricated, maximum spacing 2500 mm.), Impact Roller, Self-aligning carrying idlers, Self-aligning return idlers, Guide rollers, Pulley with frame, Short supports, Deck plate, Bearings Blocks, Plumber Block, Gear Box, Motor, Gravity take-up along with guide column, counter weight bend pulley frame etc. Skirt Board & Belt Cover, Internal & External Belt cleaner, Sway Switch, Pull cord Switch & Zero limit Switch, conveyor cover hood for rain protection. The design should meet the requirement of IS 11592. The required support to the ground to be provided.

3.3 Coal Crusher:

Raw coal size fed to coal crusher through Grizzly Hopper: 200X200 mm, Impact Type, MS fabricated body having body wear resistance plate/liner, heavy duty bearing & shaft and drive with screen for getting coal size of less than 6 mm with control of particle less than 1 mm to 20% max. The required support to the floor or structure to be provided

3.4 Vibrating Screens:

Circular motion type Vibrating Screen for screening Crushed coal of - 6mm, with SS or Hard Drawn High Carbon Steel Screen wires. The required support to the floor of crusher/screen house to be provided.

3.5 Recycle Elevator (Bucket Elevator):

Bucket elevator to feed oversize crushed coal to crusher, complete with motor & suitable Gear-box, Top pulley, Bottom pulley, Casing Enclosure- Top section, Bottom Section, intermediate sections, take-up arrangement, Platform with Railing and Monkey ladder for approach along with feeding arrangement from vibrating screen. Height of the Bucket Elevator shall be as per the Crusher and Vibrating Screen layout. The required support and restraints from structure and ground to be provided.

3.6 Bucket Elevator for Boiler Bunker Feeding:

Bucket elevator as above, to feed product coal (<6mm: 100%, <1mm: max 20%) to Boiler Bunker. Boiler bunker elevation to be considered as 16.8 mtr and fed through a chute to the centre of bunker as shown in sketch (Annexure-D). The chute is to be provided by vendor. The required support & restraint from structure and to the ground to be provided. The bucket elevator to be placed outside the bunker column line.

3.7 Magnetic separators:

Permanent magnet type to be provided, before the crusher inlet.

3.8 Hopper Isolation Gate:

Manual slide gates or rack & pinion gates etc, Crusher outlet and as required to be provided.

3.9 Electrical Control & Instrumentation (E C & I):

Electrical Control Panel with manual and sequential operation with safety & control interlock, Required control & instrumentation items for equipments, LT Motors with starter, Electrical power distribution board, Junction boxes, Local push button box, Belt sway switches, pull cord, Zero speed sensors & switches. Items shall be as per specification for EC&I items, refer Annexure-H.

3.10 Supporting Structures:

Supporting structure for belt conveyor from ground level, support / fixtures for Grizzly hopper from ground, Bucket Elevator, Crusher, Vibrating screens, chute and equipment. The belt conveyor should have rain protection hood over conveyor and a walkway of 700 mm width all along the side.

BHEL will provide the covered shed over Grizzly hopper and frame structure in crusher house. All the remaining structures with respect to Coal Handling Plant is in the scope of supplier. Foundation concrete will be done by BHEL.

3.11 Special Tools and Consumables:

Conveyor Belt Jointing consumable, First fill of lubricating oils/grease for the initial operation of the equipment till handing over, Commissioning Spares and Start-up Spares, as applicable. Complete lot of base plates, Anchor/foundation bolts, inserts, embedment, clamps, nuts, washers etc. as required for the system.

4. DESIGN REQUIREMENTS

4.1 Codes & Standards

In addition to the following latest revisions of codes and standards, the equipment shall be designed to the other governing standards as applicable and also meet with the local standards where the equipment is installed.

IS 11592	Code of practice for selection and design of Belt conveyors
IS: 4776	Specification for Troughed belt conveyors – Part I Troughed belt conveyors for surface installation.
IS: 7155	Code of recommended practice for conveyor safety
IS: 8531	Specification for Pulleys for Belt Conveyors

IS: 8598	Specification for Idlers and Idler sets for belt conveyors
IS: 1891 Part 1	Conveyor and elevator textile belting - Specification general purpose belting.
IS: 3612	Crushing and grinding equipment classification and methods for measuring capacity.
IS: 8723	Dimensions for vibrating conveyors and feeders with rectangular or trapezoidal trough.
IS: 11592	Code of practice for selection and design of Belt conveyors
IS: 12213	Code for Mechanical vibrating screen.
IS: 13148 Part1	Bulk handling equipment, mobile continuous type - rules for the design of structures.

4.1.2 Good engineering practices and supplier standards shall be followed at all other places where specific standards are not available.

4.2 Design Consideration

4.2.1 Coal handling plant equipment hopper, conveyor, crusher, screen, recycle and bunker feeding elevators shall be designed to cater **10 TPH** of desired coal feeding to boiler bunker.

4.2.2 The fuel crushing and screening system shall be designed considering the fuel distribution required for boiler (**<6mm, <1mm (fines) maximum 20%**).

4.2.3 All equipment shall be designed for continuous duty of 24 hours a day.

4.2.4 Dust generation should be minimum.

4.2.5 Valley angle for the chutes and hoppers should be kept such that free flow of coal is there always.

4.2.6 All hoppers and chutes shall be made of min. 6 mm thk plate and stiffened suitably.

5. Inspection & Testing:

5.1. At supplier's works

5.1.1. Machined / Fabricated component like shafts, pulley, idlers, crusher drums, casing etc, shall be offered by vendor for stage inspection by BHEL before taking up assembly.

5.1.2. All the equipment shall be inspected as per the BHEL approved Quality Plan.

5.1.3. "No load test" to be conducted for crusher, vibrating screen and vibratory feeders for a continuous duration of 30 minutes at works, before dispatch.

5.1.4. Over load protection test is to be demonstrated.

5.2. At site: To be done under the supervision of supplier

5.2.1. "No load test" for a continuous duration of 1 hour on all the equipment after erection.

5.2.2. Trial runs at full load of the conveyor system for a continuous duration of 8 hours for a continuous duration of 15 days.

5.2.3. Performance Guarantee Test as per schedule of Performance Guarantee as detailed in Annexure-E

5.2.4. Performance guarantee test is to be conducted by supplier. Necessary instruments are to be brought by supplier.

5.2.5. Power consumption test shall also be performed along with performance test.

5.2.6. During operation, the noise level shall be tested to a level less than 85 dB-A at 1.0 m distance from any part of rotating equipments.

6. Documents to be submitted along with Offer:

6.1. Point wise confirmation on the Specification.

6.2. General arrangement (GA) of the Coal Handling Plant, with major dimensions, Terminal point details, the floor space and height requirement with bill of materials. GA drawing shall be in line with the plot plan (Annexure- C) and Boiler Bunker Layout (Annexure-D).

6.3. Guarantee schedule as per Annexure-E.

6.4. Filled in data sheets as per Annexure -F.

6.5. Checklist in the form of Annexure-G.

6.6. Design calculations for: a) Capacity and b) KW rating of the drives.

6.7. Typical quality Plan as per BHEL format (format enclosed) including material, fabrication, assembly, functional test, no load test, bought out items etc.

6.8. Typical erection and commissioning procedure and one typical O&M Manual.

6.9. List of start-up / commissioning spares.

6.10. List of special tool required for erection and commissioning.

6.11. Catalogues for Conveyor belt, gearbox, drive and transmission coupling etc.

6.12. Supplier has to indicate clearly the exclusions under the heading 'exclusion' in the offer.

6.13. All deviations shall be brought under the heading 'deviations'. If, there is no deviation, 'No deviation certificate' shall be submitted by the bidder. Otherwise, it will be treated as incomplete and will not be evaluated. Deviations after the placement of order will not be entertained.

7. Documents to be submitted after award of Purchase Order (PO):

7.1. Detailed general arrangement drawing with dimension of complete coal handling plant with required view/ details, bill of materials and weight of individual parts, Bearing block arrangements, detail of tension head assembly etc

7.2. Design calculations for: a) Capacity; b) KW rating; c) Head and tail end Shaft & Pulley sizing; d) sizing of take-up arrangement. Values in the calculations are to be supported with formulae, data sheet, standard and catalogues. Design calculation shall be submitted for BHEL review and comments.

7.3. The drawing showing the supporting arrangement on floor including static and dynamic loading details at each point of support for BHEL's approval and Civil foundation Construction with in two week after placement of PO.

7.4. GA drawing, Electrical scheme, Data sheets of instruments & electrical equipments and Cable schedules.

7.5. Specifications for bought out items.

7.6. Erection and commissioning procedures.

7.7. Draft O & M manuals along with GA drawing and other documents are to be submitted for approval. The final O&M manuals incorporating BHEL's comments, if any, shall be dispatched to Trichy within 12 weeks from placement of order.

7.8. Part Inspection and final inspection certificates.

7.9. O&M Manuals generally should contain the following: Assembly drawings with part list, bill of materials, dimensioned drawings and other applicable details, Data sheet, Weight of each component, exploded view of assembly, sub assembly, all parts in sub- assembly, linking the parts with GA drawing,

relevant catalogues, Installation, storage and Operation, trouble-shooting methods, important instructions (do's & don'ts), Operation & Maintenance instruction (including lubrication, where necessary) and service, recommended spares for 2 years trouble free service, list of special tools, lubrication schedule and scheme.

7.10. Documents for BHEL's approval should be submitted in 4 sets. Others shall be submitted in two sets unless noted otherwise.

7.11. O&M Manuals should pertain only to the types or model supplied for the particular contract. O & M manuals shall be supplied as soft copy in "pdf" format in CD along with 3 set of hard copy. One set of hard copy has to be sent to site with each equipment in the same container. Complete O&M documents shall be in English language.

7.12. Quality Plan including material, fabrication, assembly, functional test, no load test, overload protection test, bought out items etc for BHEL's approval.

7.13. Selection chart/ calculation for motor.

7.14. Block interlock diagram for safety and sequential interlocks of complete coal handling plant.

7.15. Packing / shipping list.

8. Painting Specification:

Surface Preparation & surface profile: SSPC-SP3/Power Tool Cleaning

Primer coat: Red oxide zinc phosphate (Alkyd Base) to IS 12744, DFT=30µm per coat, No. of coat: 2

Finish coat: Syn. Enamel Paint (Long oil Alkyd) to IS2932, DFT=20µm per coat, No. of coat: 2

Shade: Smoke Grey, shade number 692 of IS 5.

9. Exclusion:

Supplier has to indicate clearly exclusions from their scope of supply under the heading 'Exclusion' in the offer.

10. Deviations:

All the deviation shall be brought under the heading 'deviations'. If there is no deviation, No deviation certificate to be submitted by the supplier. Offers without listed deviations or No deviation certificate will be treated as incomplete and will not be evaluated. Deviations after the placement of order will not be entertained.

11. Warranty & Guarantee:

11.1. The coal handling plant shall be guaranteed for its design and performance as per Guarantee schedule (Annexure-E).

11.2. Warranty is required for Coal Handling Plant against workmanship, materials used and quality for a period of 18 months from the date of final dispatch or 12 months from the date of commissioning whichever earlier. All warranty replacement during warranty period shall be supplied free of charge.

12. Offer Requirement:

The offer shall be submitted in three parts separately as follows:

12.1 Offer for supply of equipment as per scope of supply as mentioned above. This shall be considered for finalising L1 bidder.

12.2 Offer for supervision of erection and commissioning on Man Day basis / lump sum basis (including travelling, boarding and lodging charges).

12.3 Offer for Recommended spares for 2 years trouble free operation with unit price.

PROJECT RELATED DATA

Project Information

1	Owner	Bharat Heavy Electricals Ltd.-Jhansi
2	Contractor	Bharat Heavy Electricals Ltd.-Trichy
3	Project Title	1X12TPH BFBC Boiler BHEL-Jhansi
4	Location	Jhansi, Uttar Pradesh
5	Nearest railway station	Jhansi - Broad Gauge Line

Site Condition

S.N.	Parameters	Unit	Design	Range
1	Temperature of ambient air	°C	40	18-52
2	Relative Humidity	%	70	--
3	Height above MSL	m	285	
4	Seismic zone		Zone II	
5	Seismic design code		IS 1893-2002	
6	Wind speed	m/s	47	
7	Wind Design Code		IS 875-1987	

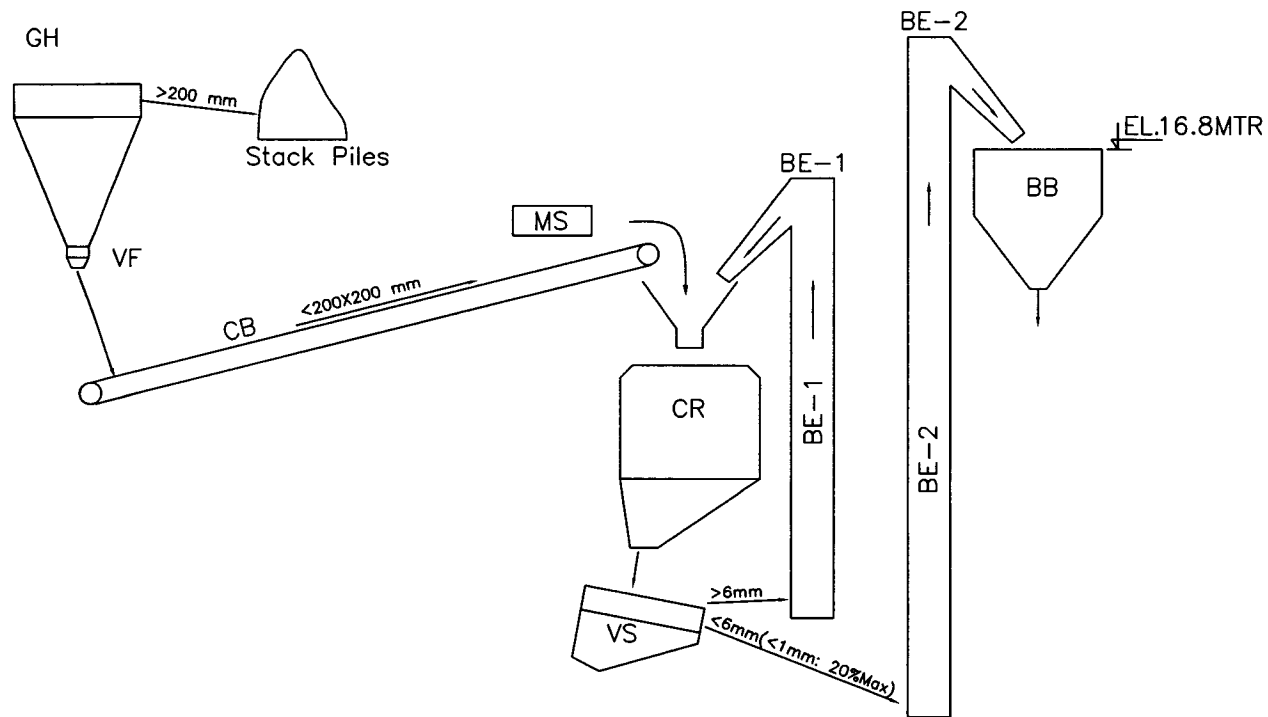
Technical Data

Sl.No.	Description	Unit	Value
1	Fuel High Heating Value	kcal/kg	3330
2	Fuel Bulk Density	kg/m³	800
3	Total Moisture	%	5.75
4	Product Coal Requirement	TPH	10
5	Grizzly Hopper Capacity	M³	2
6	Grizzly Hopper opening	mm	200 X 200 (Clear)

Fuel Analysis

Sl.No.	Description	Unit	Design Fuel-Indian Coal	Worst Fuel-Middlings
1	Fuel			
1.1	Proximate Analysis:			
	Fixed Carbon	%	30.27	18.09
	Volatile Matter	%	19.5	18
	Moisture	%	5.75	5.0
	Ash	%	44.48	58.91
	HHV	Kcal/Kg	3300	2225
1.2	Ultimate Analysis:			
	Carbon	%	36.89	23.2
	Hydrogen	%	1.91	2.02
	Sulphur	%	0.58	0.47
	Oxygen(by diff)	%	8.39	8.4
	Nitrogen	%	2.0	2.0
	Moisture	%	5.75	5.0
	Ash	%	44.48	58.91
1.3	Fuel size required after crushing & Screening	%	Size	
		100	< 6mm	
		≤ 20	< 1mm(fines)	

SCHEMATIC FLOW DIAGRAM: COAL HANDLING PLANT



BE-1: Bucket Elevator for
Crushed Coal Recycle

BE-2: Bucket Elevator for
Bunker Feeding

GH: Grizzly Hopper

CB: Conveyor Belt

CR: Crusher

VF: Vibratory Feeder

VS: Vibratory Screen

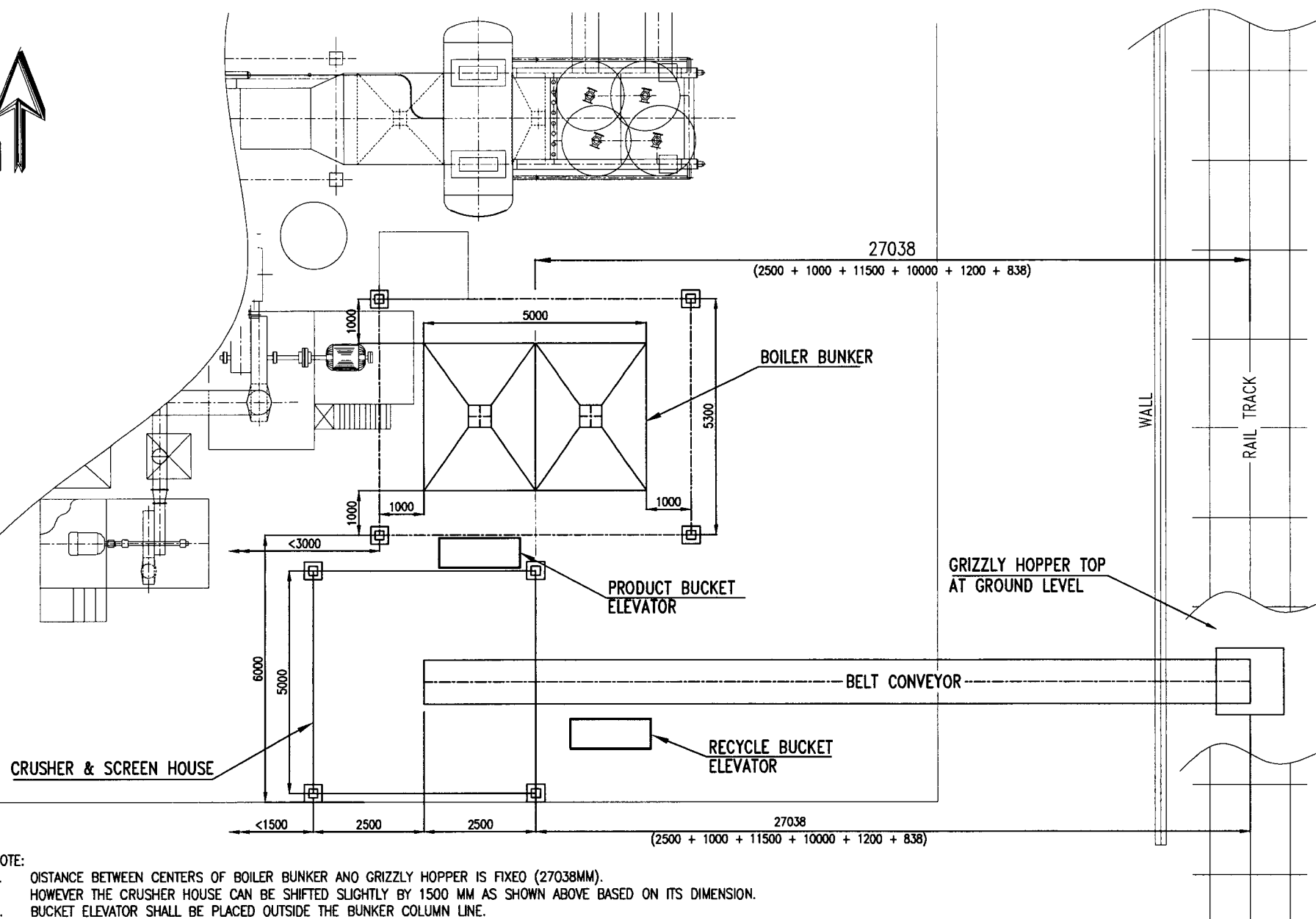
MS: Magnetic Separator

BB: Boiler Bunker

Note:

1. Supplier to include additional item that might be required for complete performance of the plant.

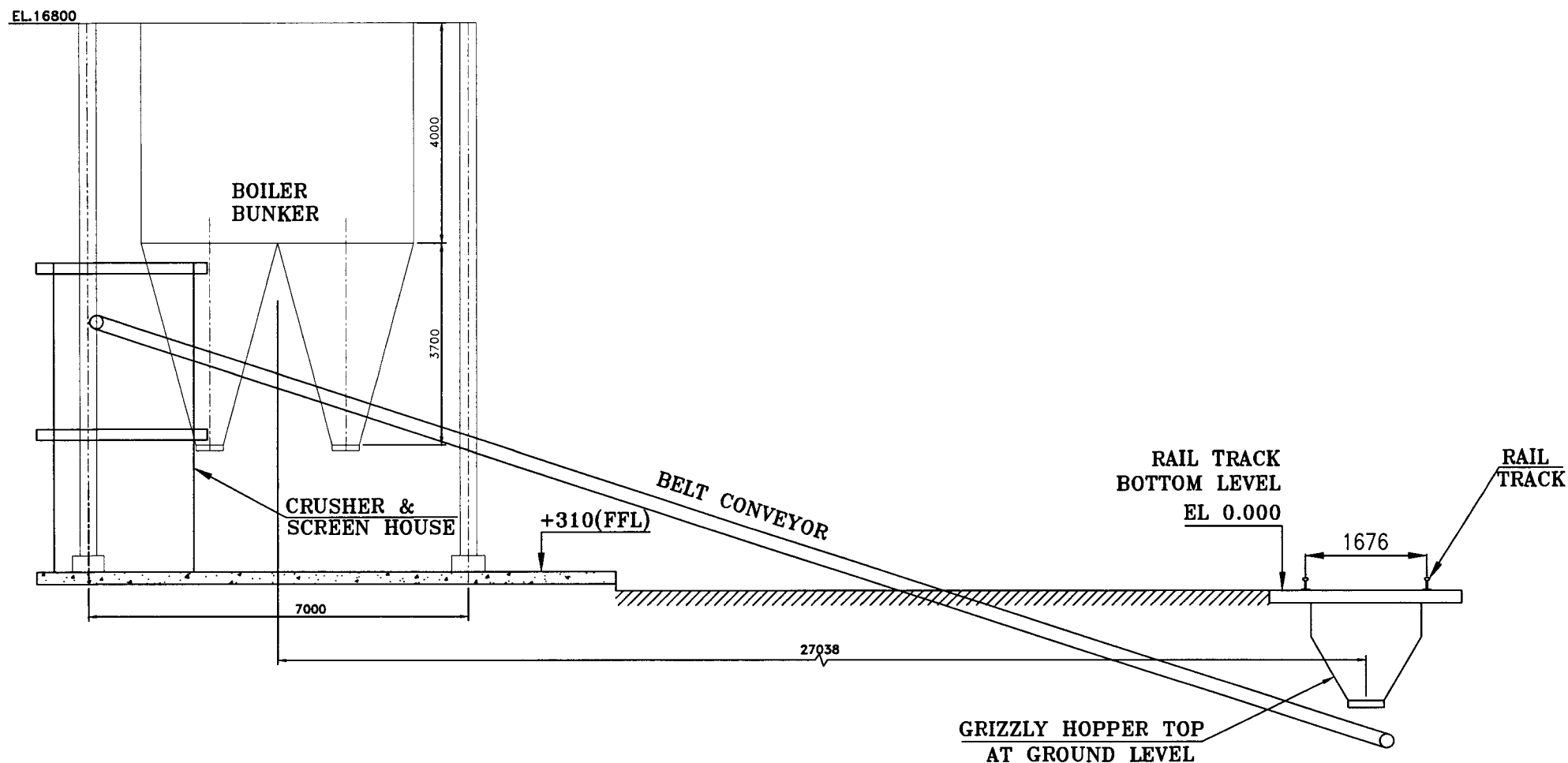
PLOT PLAN: CHP, 1X12 TPH BHEL JHANSI BFBC BOILER



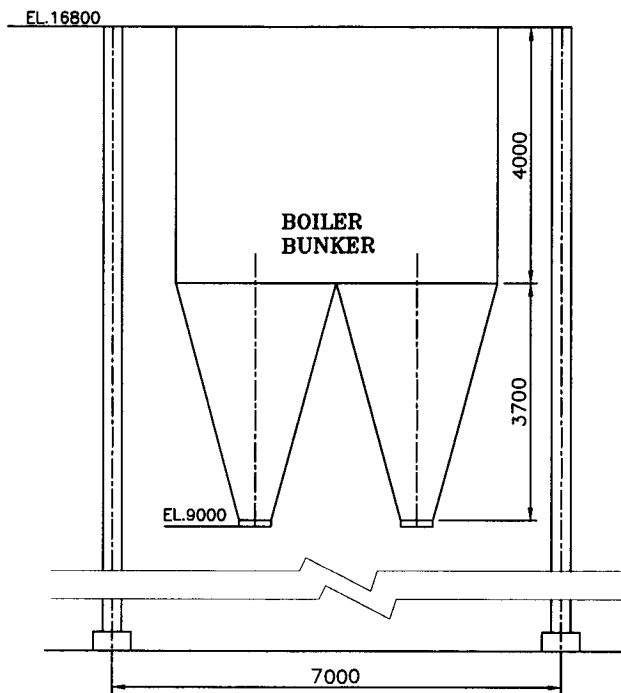
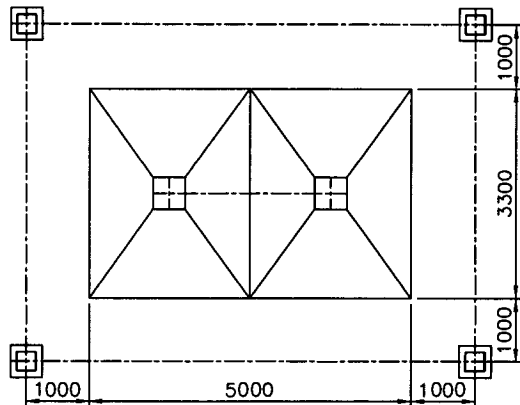
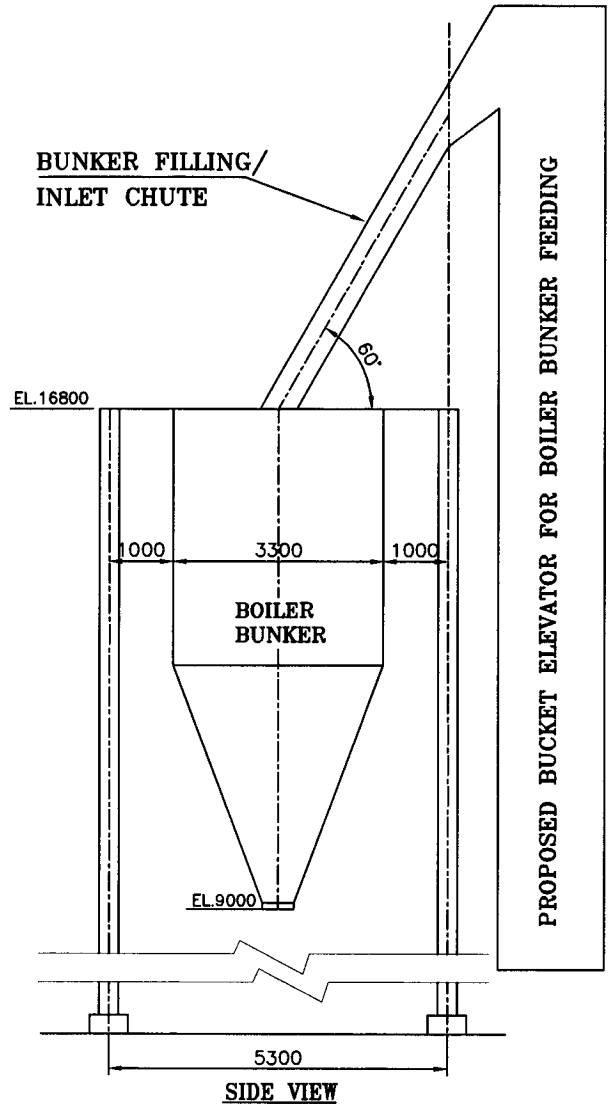
NOTE:

1. DISTANCE BETWEEN CENTERS OF BOILER BUNKER AND GRIZZLY HOPPER IS FIXED (27038MM). HOWEVER THE CRUSHER HOUSE CAN BE SHIFTED SLIGHTLY BY 1500 MM AS SHOWN ABOVE BASED ON ITS DIMENSION.
2. BUCKET ELEVATOR SHALL BE PLACED OUTSIDE THE BUNKER COLUMN LINE.
3. CRUSHER HOUSE DIMENSION & BUCKET ELEVATOR LOCATION CAN BE SUITABLY MODIFIED TO SUIT SUPPLIER DESIGN.

ELEVATION



* FINISHED FLOOR LEVE (FFL) IS 310 MM ABOVE RAIL TRACK BOTTOM LEVEL.

BOILER BUNKER ARRANGEMENT**PROJECT: 1X12 TPH BFBC BOILER, BHEL JHANSI****ELEVATION****PLAN****SIDE VIEW****NOTE:**

1. TOP OF BOILER BUNKER ELEVATION IS 16.8 MTR
2. BUNKER FILLING/INLET CHUTE INCLINATION IS 60°.
3. BUNKER FILLING / INLET CHUTE SHOULD FILL THE BUNKER AT CENTER.
4. PRODUCT BUCKET ELEVATOR TO BE INSTALLED OUT OF BOILER BUNKER COLUMNS.
5. ALL DIMENSIONS ARE IN MM.

Annexure-E

Guarantee Schedule

Coal Handling System:

- | | |
|--|---|
| 1. Product Elevator Capacity: | Min. 10 TPH |
| 2. Crusher Capacity: | To cater 10 TPH Product Coal |
| 3. Screen Capacity: | To Cater 10 TPH Product Coal |
| 4. Product Coal after Crushing & Screening : | <6mm, <1mm (fines) maximum 20% |
| 5. Noise Level: | 85 dB-A at 1 mtr distance from the equipment. |
| 6. While commissioning, minimum 30 days trouble free, smooth, continuous operation of Coal Handling System. | |

We hereby guarantee the above. Shortfall in any of the above will be set-right by us at our cost.

Signature of Authorised Signatory with Office Seal

Data Sheet

To be filled and submitted by bidder along with the offer.

S. No.	Description	Bidder to Specify	
1	BELT CONVEYOR		
1.1	Type of Conveyor		
1.2	Inclination		
1.3	Capacity Max.		
1.4	Speed		
1.5	Centers distance & Lift		
1.6	Motor rating & RPM		
1.7	Type of Gear Box & Reduction Ratio		
1.8	Input Drive Coupling		
1.9	Output Drive Coupling		
1.10	Conveyor Belt Grade, No. of ply		
1.11	Conveyor Belt Material		
1.12	Conveyor Belt Cover Thickness		
1.13	Belt Jointing Method		
1.14	Head Drum Diameter & Length		
1.15	Head Drum Rubber Lagging Thk		
1.16	Tail Drum Diameter & Length		
1.17	Snub Drum Diameter & Length		
1.18	Carrying Idler Type / Degree		
1.19	Carrying Idler Degree		
1.20	Carrying Idler Diameter & Length		
1.21	Carrying Idler Spacing		
1.22	Impact Idler Type/ Degree		
1.23	Impact Idler Rubber Type & Diameter		
1.24	Impact Idler Diameter/ Length		
1.25	Impact Idler Spacing		
1.26	Return Idler Diameter		
1.27	Return Idler Spacing		
1.28	Skirt Board Length (at Loading point)		
1.29	Belt Rain Hood Specification		
1.3	Guide Rollers Detail		
1.31	Self - Aligning Carrying Idler Detail		
1.32	Self - Aligning Return Idler Detail		
1.33	Discharge Chute Plate Thk		
1.34	Walkway width		
2	BUCKET ELEVATOR	PRODUCT (BE-1)	RECYCLE(BE-2)
2.1	Type of Bucket Elevator		
2.2	Filling Factor		
2.3	Capacity		
2.4	Speed		
2.5	Centers		
2.6	Motor rating & RPM		
2.7	Reduction Gear Type & Reduction Ratio		
2.8	Input Coupling Type		
2.9	Output Coupling Type		

2.10	Head Drum Diameter		
2.11	Tail Drum Diameter		
2.12	Tail Drum Bearing Type & Diameter		
2.13	Belt Width/ Grade		
2.14	Belt Material		
2.15	Belt Cover Thickness		
2.16	Breaking Load		
2.17	Take - Up Type		
2.18	Bucket Type & Size		
2.19	Bucket Thickness		
2.20	Bucket Capacity		
2.21	Bucket Spacing		
2.22	Casing Size		
2.23	Head Casing Thk		
2.24	Boot Casing Thk		
2.25	Hood Casing		
3	VIBRATING SCREEN		
3.1	Type		
3.2	Screen Area		
3.3	Design Moisture Content		
3.4	Amplitude of Vibration		
3.5	Efficiency of Screen		
3.6	Normal Rated Capacity		
3.7	Motor Rating & RPM		
3.8	Drive Transmission Type		
3.9	Screening Opening		
3.10	Body Material		
3.11	Screen Cloth Material		
3.12	Shaft Material		
4	Crusher		
4.1	Type & Capacity		
4.2	Crusher RPM		
4.3	Design Moisture Content		
4.4	Rotor Diameter & width		
4.5	Rotor MOC		
4.6	Casing MOC		
4.7	Drive Transmission Type		
4.8	Motor rating & RPM		
5	Magnetic Separator		
5.1	Type		
5.2	Max. and Minimum Size and Weight of Tramp Iron that can be Lifted		
5.3	Operating Height of Magnet		
5.4	Maximum Belt Speed		
5.5	Material of construction		

Signature of Authorised Signatory with office Seal

Annexure-G**Check List**

The following documents should be checked and signed by the authorised signatory with office seal. Offers not containing any of the documents will be liable for rejection without any further intimation. Bidder in their judgement may add further information, if required.

S. No.	Description	Vendor Confirmation
1	Point wise confirmation of specification (Spec no: PCPS:48CHP:JHANSI:01:Rev00)sheet 01 to 05	
2	Confirmation to Annexure-A, provide equipments as per Schematic flow diagram (Annexure-B) and Plot Plan (Annexure-C) and Annexure-D	
3	Submission of Genral Arrangement Drawing as per point 6.2 of the specification	
4	Product Elevator Height to Feed Boiler Bunker El. 16.8 mtr	
5	Product Coal Distribution: <6mm 100%, <1mm Max 20%	
6	Confirmation to Underground Location of Grizzly Hopper	
7	Point wise Confirmation to EC&I Specification Spec no: PCPS:CI:5518:CHS (Annexure-H)	
8	Supply of Structural Supports and Short supports from ground level above Concrete foundation for all equipments under scope of supply	
9	Supply of Vibration Isolator for Crusher and Screen	
10	Supply of Complete lot of base plates, Anchor/foundation bolts, inserts, embedment, clamps, nuts, washers etc. as required for the system	
11	Supply of Extra length of belt for jointing at site	
12	Supply of First fill of Lubricating Oil and Grease in separate container	
13	Supply of rain protection hood over conveyor	
14	700 mm Walkway along the side of Belt conveyor	
15	Belt Jointing Consumable	
16	Submission of documents as per point no 6 of the specification	
17	Submission of documents as per point no 7 of the specification	
18	Guarantee Schedule as per Annexutre-E	
19	Filled in Data Sheet As per Annexute-F	
20	List of Commissioning Spares	
21	Catalogue of Bought Out items	
22	Schedule of Deviation/No deviation Cert.	

Signature of Authorised Signatory with Office Seal

ANNEXURE-H

E,C&I SPECIFICATION FOR COAL HANDLING PLANT

1. Electrical Control Panel

Electrical control panel with manual & sequence operation shall be supplied. All operational sequential interlock to be provided. All safety switches should be interlocked with the panel.

2. LT motors shall be as per the following specification:

➤ Specification TDC:TCI:140/Rev.08

3. Safety Switches

All types of safety switches like Pull cord, Belt Sway and zero speed switches with pull cord wire on both sides of conveyors to be provided.

4. Electrical Power distribution board

Board shall be designed based on latest IS/IEC standards. One nos. of 3 Ph, 415Volts, 50Hz power supply will be provided by BHEL.

5. Local Push button station shall be as per the following specification

- All local PBs shall be weather & dust tight IP-55 as per IS-13947.
- All wiring to be done with 1.5 sqmm multistrand PVC insulated copper wire of voltage grade 650 / 1100 V. All wiring to be terminated with insulated crimping lugs & properly ferruled
- Cable glands & mounting hardware are to be supplied
- Cable glands shall be of double compression, weather proof, brass with nickel plated

6. Junction box as per following specification with required number of double compression cable glands.

- All JB's shall be IP-55, & provided with individual canopies to avoid ingress of water
- Terminals size shall be suitable for 0.5 Sq.mm to 2.5Sq.mm wire. JB shall have 10% additional spare terminals. Accessories like metal tag(SS),clamps,fixtures,bolts(ss),nuts(SS),gaskets(neoprene),lock&keys etc. shall be supplied.
- Separate Junction boxes shall be used for power and digital signal and also for signals with different voltages.
- Cable glands are to be supplied & shall be of double compression, weather proof, brass with nickel plated

BHEL Scope:

1. All power, control & Instrumentation cable.
2. Cable Trays & its accessories
3. Earthing Materials

Bharat Heavy Electricals Limited

HIGH PRESSURE BOILER PLANT, TIRUCHIRAPPALLI 620 014.

TECHNICAL DELIVERY CONDITIONS

FOR SUB - DELIVERY COMPONENTS OF
CONTROLS AND INSTRUMENTATION

TDC : TCI : 140 / REV 08

PAGE 01 OF 06

LT MOTOR (AC) (NON FLAME PROOF)

Rev. No.	DATE	DESCRIPTION	PREPARED	REVIEWED	APPROVED	
					ENGG	QAC
01 - 05	----	General Revisions	Sd/-	Sd/-	Sd/-	Sd/-
06	29/04/99	Revised for special improvement project	Sd/-	Sd/-	Sd/-	Sd/-
07	22/12/03	Revised after revisit	Sd/-	Sd/-	Sd/-	Sd/-
08	21/04/05	Revised as per MOM dated 06/04/05 between BHEL(T) and BAP(Ranipet) at BAP(Ranipet) and BAP(Ranipet) mail dated 09/05/05				

CI No.	CHARACTERISTICS	REQUIREMENT	VENDOR COMPLIANCE (Refer Note: 2)
1.0	<u>SITE CONDITIONS</u>		
1.1	Altitude above mean sea level	550 m.	
1.2	Ambient temperature condition	50°C.	
1.3	Relative humidity	100 %	
1.4	Atmosphere	Tropical ,Dusty, salty, corrosive & highly polluted.	
2.0	<u>GENERAL</u>		
2.1	Reference standards	IS 325, IS 1231, IS 4722, IS 6362, IS 2253, IS 12065, IS 12075 , IS 4691.	
2.2	Application	As per Enquiry & PO.	
2.3	Duty cycle	Continuous S1	
2.4	Rated voltage, frequency & Phases	415 V AC $\pm 10\%$; 50 Hz $\pm 5\%$; 10% absolute sum - 3 phase	
2.5	Minimum starting voltage	80% of the rated voltage	
2.6	Minimum voltage under which motor will run satisfactorily	75% of the rated voltage for 5 minutes	
2.7	Capacity to restart (at voltage specified in point No. 2.4)	i. One hot start from hot condition ii. Two successive starts from cold condition iii. Three equally spread start per hour	
2.8	High speed bus transfer withstand capability	Suitable to withstand 150 % of rated voltage	
2.9	Type of balancing for rotor	Dynamic balancing	
2.10	Direction of rotation	Suitable for both direction	
2.11	Direction of cooling air	Non-drive end to driving end	
2.12	Class of insulation	Class F with temperature rise limited to Class B.	
2.13	Winding treatment	The insulation shall be given tropical and fungicide treatment for successful operation of the motor in hot humid & tropical climate.	
2.14	Allowed temperature rise at continuous full load	60°C by thermometer method & 70°C by resistance method	
2.15	Starting current	Less than or equal to 600% full load current subject to tolerance as per IS.	
2.16	Starting time & locked rotor	The locked rotor withstand time at 110% rated	

CI No.	CHARACTERISTICS	REQUIREMENT	VENDOR COMPLIANCE (Refer Note: 2)
	withstand time	voltage under hot condition shall be at least 3 sec more than the starting time (at 80% of rated voltage)	
2.17	Vibration	The peak amplitude of vibration shall be as per IS 12075	
2.18	Noise level	Within the limits specified by IS 12065. (<80 db at full load condition.	
2.19	Type of enclosure	TEFC, IP 55 as per IS 4691	
2.20	Type of mounting	Horizontal foot mounted	
2.21	Bearings & Lubrication	Bearings shall be of ball or roller type effectively sealed against ingress of dust. The bearing shall be so constructed that the loss of lubricating grease is kept to minimum.	
2.22	Shaft extension	Motors shall be provided with key slotted bare shaft extension with key at the driving end.	
2.23	Terminal box		
2.23.1	Type	Weather proof IP 55 as per IS 4691, Capable of being turned through 360° in steps of 90°.	
2.23.2	Cable gland and lugs	Double compression type nickel plated brass cable glands and insulated tinned copper crimping lugs to suit the cable size shall be supplied along with the motor. i) Size of power cables will be intimated during approval. ii) For space heater cable glands and lugs suitable for 2CX2.5 to be provided	
2.23.3	Type of terminals	Stud / screw type with plain washers, spring washers / checknuts & lugs	
2.24	Fault level	40 KA for 0.25 Sec	
2.25	Painting	Epoxy based paint (Colour shade 631 as per IS:5, unless otherwise indicated specifically in the enquiry)	
2.26	Space heaters		
2.26.1	Motors above 30 kW	Separate space heater suitable for 240V, single phase AC.	
2.26.2	Motors below 30 kW	Winding shall be suitable for heating continuously	

CI No.	CHARACTERISTICS	REQUIREMENT	VENDOR COMPLIANCE (Refer Note: 2)
2.26.3	Terminals	at 24 V, single phase, AC Separately terminated with clear identification in main terminal box	
2.26.4	RTD for winding/bearing	For motor rated 160kW and above only unless specifically called for in the enquiry.	
2.27	Lifting Device	Eye bolt or lugs to facilitate safe lifting	
3.0	<u>INSPECTION & TESTING</u>	As per applicable quality plan QA:CI:STD:QP:24	
4.0	<u>DOCUMENTS</u> a) Along with offer: b) After placement of order	3 sets of technical data sheet as per the enclosed format and Motor general arrangement drawing giving foundation details, shaft details 6 sets of the following: 1. Technical Data sheet as per the enclosed format 2. Motor general arrangement drawing giving foundation details, shaft details 3. Motor characteristic curves 4. Guarantee certificate 5. O & M manuals.	
4.0	<u>PACKING</u>	As per Packing Procedure QA:CI:STD:PR:03 or as per Manufacturer's Standard Practice. The packing shall meet the Transport , Environment & Storage hazards.	

NOTE:

1. Refer current valid list for revision status of Quality Plan & Packing Procedure.
2. In 'Vendor compliance' column Vendor to indicate 'YES', 'NO' or 'NOT APPLICABLE'.
3. RTDs, if applicable, are to be provided two per phase (winding and bearing). RTDs shall be duplex type and terminated in a separate terminal box . Termination arrangement of RTD of winding and bearing shall be submitted alongwith offer.

DATA SHEET

CL. NO	CHARACTERISTICS	REQUIREMENTS
1.0	Application	IP55
1.1	Tag Numbers	
2.0	Manufacturer	
3.0	Type & frame size	
3.1	Degree of Protection	
4.0	Rated output in kW	415 V AC $\pm 10\%$; 50 Hz $\pm 5\%$; 10% absolute sum - 3 phase
4.1	Rated speed	
5.0	Rated voltage , frequency & phases	
6.0	Full load current	S1
7.0	Full load efficiency & power factor	
8.0	Duty Cycle	
9.0	Rated torque	
10.0	Starting current	
11.0	Starting torque in % of full load torque	600% of full load current
12.0	Pull up torque in % of full load torque	
13.0	Pull out torque in % of full load torque	
14.0	No load starting time	
15.0	Locked rotor withstand time at rated voltage	
16.0	Locked rotor withstand time at minimum starting voltage	a. Hot
		b. Cold
17.0	Locked rotor withstand time at 110% rated voltage	a. Hot
		b. Cold
18.0	Starting time at minimum starting voltage with mechanism coupled	
19.0	Starting time at rated voltage with mechanism coupled	
20.0	Maximum permissible starting time	
21.0	Stator thermal time constant	
22.0	Stator winding connection	
23.0	Class of insulation & temperature rise	Class F; 60°C by thermometer method / 70°C by resistance method
24.0	Type & number of terminals broughtout	
25.0	Resistance per phase (indicative) at 20°C	

CL. NO	CHARACTERISTICS	REQUIREMENT
26.0	Quantity and power consumption of space heater	Bi-Directional. Drive End; Non Drive End; Foot mounting; Horizontal. Suitable for 2CX2.5 sq.mm(armoured), if applicable.
27.0	Direction of rotation	
28.0	Bearing make & type	
29.0	Lubricant quantity , grade & recommended interval of lubrication	
30.0	Type of mounting & shaft orientation	
31.0	<u>Terminal Box</u>	
31.1	Location & angle of rotation	
31.2	Gland size for stator winding	
31.3	Gland size for space heater	
31.4	Cable entry	
32.0	GD ² of motor (kg-m ²)	
33.0	Total weight of motor (kg).	
33.1	Weight of stator (kg)	
33.2	Weight of rotor (kg)	
34.0	Total weight of motor (in kg)	
35.0	Anticipated bearing life	
36.0	Method of connection to driven equipment	
37.0	Limiting rotor temperature for determining safe stall time	
38.0	RTD for winding/ Bearing	
		Applicable ☐ YES ☐ NO Details:

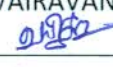
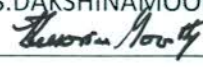
Ref .Specification - TDC TCI 140 / REV 08

Vendor's signature and seal.



CONTROLS AND INSTRUMENTATION/QA/FB

STANDARD QUALITY PLAN FOR LT MOTORS (FLAME PROOF)

Rev	Date	Prepared	Reviewed	Approved	Revision history
00	18/04/1996	--Sd--	--Sd--	--Sd--	Initial Release
01	16/06/1997	--Sd--	--Sd--	--Sd--	Format revised
02	21/03/2002	--Sd--	--Sd--	--Sd--	Department name changed, CTQ requirements added & General revision
03	07/12/2007	--Sd--	--Sd--	--Sd--	SQP is revised for Flame proof application
04	10/01/2015	V.AVINASH 	RM.VAIRAVAN 	S.DAKSHINAMOORTHY 	Revised to include EE motors. General revisions.



Sl. No.	Component & Operation	Characteristics	Class	Type of Check	Quantum of check		Ref Doc & Acceptance STD	Form of record	Agency			Remarks
					M	B/C			M	B	C	
A	BOUGHT OUT COMPONENTS											
01	Enamelled round copper wire	a. Overall diameter	Major	MEAS	OSPL		Mfr. Standard	LGB	P			
		b. Bare conductor dia	Major	MEAS	-do-	-	-do-	-do-	P	-	-	
		c. Peel off test (above 1mm dia Wire)	Major	VISU	-do-	-	-do-	-do-	P	-	-	
		d. Jerk test (below 1mm dia wire)	Major	VISU	-do-	-	-do-	-do-	P	-	-	
		e. Mandrel winding test	Major	VISU	-do-	-	-do-	-do-	P	-	-	
		f. Resistance to abrasion	Major	VISU	-do-	-	-do-	-do-	P	-	-	
		g. BDV i) at room temperature ii) at elevated temperature	Major	MEAS	-do-	-	-do-	-do-	P	-	-	
		h. Electrical resistance (up to 1 mm dia)	Major	MEAS	-do-	-	-do-	-do-	P	-	-	Above 1 mm dia, only diameter will be checked
		i. Heat shock test	Major	VISU	-do-	-	-do-	-do-	P	-	-	
		j. Elongation	Major	MEAS	-do-	-	-do-	-do-	P	-	-	
		k. Cut through test	Major	THER	-do-	-	-do-	-do-	P	-	-	
		l. Solvent test	Major	CHEM	-do-	-	-do-	-do-	P	-	-	
		m. Springiness	Major	MEAS	-do-	-	-do-	-do-	P	-	-	
		n. Continuity of insulation covering	Major	MEAS	-do-	-	IEC-60317 CL 14 IS 13730 Pt.3	-do-	P	-	-	
		o. Tan delta bending point test	Major	MEAS	-do-	-	IS 13778 Pt.5	Supplier TC	V	-	-	
02	Insulation material											
02.1	For taping brazed joints & end connection leads	a. Thickness & Width	Major	MEAS	OSPL		Mfr. Standard	LGB	P			
		b. Tensile strength	Major	MEAS	OSPL	-	Mfr. Standard	LGB	P	-	-	
		c. BDV at elevated temperature in air	Major	MEAS	-do-	-	-do-	-do-	P	-	-	
		d. Tear resistance	Major	MEAS	-do-	-	-do-	-do-	P	-	-	
		e. Compatibility with impregnating varnish	Major	CHEM	-do-	-	-do-	-do-	P	-	-	
		f. Thermal ageing test	Major	THER	-do-	-	-do-	-do-	P	-	-	



BHARAT HEAVY ELECTRICALS LIMITED
TIRUCHIRAPPALLI - 620014

QUALITY PLAN FOR
LT MOTORS (FLAME PROOF)

QA:CI:STD:QP:24

Rev: 04

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Sl. No.	Component & Operation	Characteristics	Class	Type of Check	Quantum of check		Ref Doc & Acceptance STD	Form of record	Agency			Remarks
					M	B/C			M	B	C	
02.2	Sleeve (over taping in brazed joints & end connection coil leads)	a. Bore diameter	Major	MEAS	-do-	-	-do-	-do-	P	-	-	
		b. Wall thickness	Major	MEAS	-do-	-	-do-	-do-	P	-	-	
		c. Bending before / after ageing	Major	VISU	-do-	-	-do-	-do-	P	-	-	
		d. BDV in air at room temperature	Major	MEAS	-do-	-	-do-	-do-	P	-	-	
		e. Insulation resistance	Major	MEAS	-do-	-	-do-	-do-	P	-	-	
		f. Stability of coating	Major	VISU	-do-	-	-do-	-do-	P	-	-	
		g. Burning test	Major	CHEM	-do-	-	-do-	-do-	P	-	-	
		h. Varnish compatibility	Major	CHEM	-do-	-	-do-	-do-	P	-	-	
02.3	Insulation used for slot wedge	a. Thickness & width	Major	MEAS	-do-	-	-do-	Supplier TC	V	-	-	
		b. Specific gravity	Major	MEAS	-do-	-	-do-	-do-	V	-	-	
		c. Water absorption	Major	MEAS	-do-	-	-do-	-do-	V	-	-	
		d. BDV test	Major	MEAS	-do-	-	-do-	-do-	V	-	-	
		e. Insulation resistance	Major	MEAS	-do-	-	-do-	-do-	V	-	-	
		f. Comparative tracking index	Major	MEAS	-do-	-	-do-	-do-	V	-	-	
		g. Tensile strength	Major	MEAS	-do-	-	-do-	-do-	V	-	-	
		h. Compression strength	Major	MEAS	-do-	-	-do-	-do-	V	-	-	
02.4	Slot insulation (slot liner, packing strip, coil separator on overhangs)	a. Thickness	Major	MEAS	OSPL	-	Mfr. Standard	LGB	P	-	-	
		b. Tensile strength & elongation	Major	MEAS	-do-	-	-do-	-do-	P	-	-	
		c. BDV before & after ageing	Major	MEAS	-do-	-	-do-	-do-	P	-	V	
		d. Temperature stability -as received -after folding in "U" shaped slot liner	Major	MEAS	-do-	-	-do-	-do-	P	-		
		e. Substance (specific gravity)	Major	MEAS	OSPL	-	Mfr. Standard	LGB	P	-		
02.5	Impregnation Varnish	a. Density	Major	MEAS	-do-	-	-do-	-do-	P	-		
		b. Viscosity	Major	MEAS	-do-	-	-do-	-do-	P	-		
		c. Non-volatile matter	Major	MEAS	-do-	-	-do-	-do-	P	-		
		d. Dry test	Major	PHYS	-do-	-	-do-	-do-	P	-		
		e. Compatibility with thinner % min	Major	CHEM	-do-	-	-do-	-do-	P	-		
		f. Re-softening	Major	VISU	-do-	-	-do-	-do-	P	-		
		g. Reaction of varnish with bare copper	Major	CHEM	-do-	-	-do-	-do-	P	-		
		h. Stability of varnish in air open vessel	Major	CHEM	-do-	-	-do-	-do-	P	-	-	
		i. Effect of varnish on enamelled wire	Major	MEAS	-do-	-	-do-	-do-	P	-		

M-MANUFACTURE / SUB VENDOR; **B**-BHEL / TPI; **C**- CUSTOMER / TPI;
P-PERFORM; **W**-WITNESS; **V**-VERIFICATION



Sl. No.	Component & Operation	Characteristics	Class	Type of Check	Quantum of check		Ref Doc & Acceptance STD	Form of record	Agency			Remarks
					M	B/C			M	B	C	
		j. BDV test	Major	MEAS	-do-	-	-do-	-do-	P	-		
		k. Shelf life	Major	VISU	-do-	-	-do-	-do-	P	-		
03	Shaft Material	a. Dimensions	Major	MEAS	OSPL/ heat	-	Mfr. Drg	-do-	V	-		
		b. Chemical composition	Major	CHEM	-do-	-	Mfr. Standard	-do-	V	-		
		c. Hardness	Major	MEAS	OSPL/heat	-	Mfr. Standard	Supplier TC	V	-	-	
		d. Yield strength	Major	MEAS	-do-	-	-do-	-do-	V	-		
		e. Tensile strength	Major	MEAS	-do-	-	-do-	-do-	V	-	-	
		f. Elongation	Major	MEAS	-do-	-	-do-	-do-	V	-	-	
		g. Grain size inclusion rating	Major	MEAS	-do-	-	-do-	-do-	V	-		
		h. Heat treatment cycle	Major	THER	100%	-	-do-	-do-	V			
		i. Ultrasonic test	Major	NDT	-do-	-	-do-	-do-	P	-	-	
04	Stamping steel sheets	a. Specific core loss before / after ageing	Major	MEAS	OSPL	-	Mfr. Standard	Supplier TC	V	-	-	
		b. Magnetisation (Permeability)	Major	MEAS	OSPL	-	-do-	-do-	V	-	-	
		c. Insulation Resistance	Major	MEAS	-do-	-	-do-	-do-	V	-	-	
		d. Stacking factor	Major	MEAS	-do-	-	-do-	-do-	V	-	-	
		e. Ductility	Major	MEAS	-do-	-	-do-	-do-	V	-	-	
		f. Visual Check (waviness)	Major	VISU	-do-	-	-do-	LGB	V	-	-	
		g. Temperature withstand capacity	Major	MEAS	-do-	-	-do-	-do-	V	-	-	
		h. Thickness of stamping & thickness of varnish coating	Major	MEAS	-do-	-	-do-	-do-	V	-	-	
		i. Stamping Burr height	Major	MEAS	-do-	-	-do-	-do-	V	-	-	
05	Aluminium ingots	a. Chemical Composition	Major	CHEM	-do-	-	-do-	Supplier TC	V	-	-	
06	Casting: Body & End shields	a. Grade of casting (Chemical Composition)	Major	CHEM	1 sample from each melt	-	Mfr. Drg	-do-	V	-	-	
		b. Surface defects like blow holes / cracks	Major	VISU	100%	-	No blow holes & cracks	LGB	P	-	-	
		c. Hardness	Major	MEAS	OSPL/ heat	-	Mfr. Standard	Supplier TC	V	-	-	



Sl. No.	Component & Operation	Characteristics	Class	Type of Check	Quantum of check		Ref Doc & Acceptance STD	Form of record	Agency			Remarks
					M	B/C			M	B	C	
		d. Tensile strength	Major	MEAS	-do-	-	-do-	-do-	V	-	-	
		e. Dimensions	Major	MEAS	do-	-	Mfr. Drg	Inspection Record	P	-	-	
07	Fan	a. Dimensions	Major	MEAS	OSPL	-	Mfr. Standard	LGB	P	-	-	
		b. Protective paint	Major	VISU	100%	-	-do-	-do-	P	-	-	
08	Bearings	a. Type & Make	Major	MEAS	OSPL	-	-do-	LGB	P	-	-	
		b. Dimensions ID, OD and Width	Major	MEAS	OSPL	-	Mfr. Standard	-do-	V	-	-	
09	Terminal block	a. Dimensions	Major	MEAS	10%	-	Mfr. Drg	-do-	P	-	-	
		b. Tracking index	Major	MEAS	OSPL	-	Mfr. Standard	LGB	V	-	-	
		c. Chemical composition	Major	CHEM	-do-	-	Mfr. Drg	Supplier TC	V	-	-	
10	Gaskets	a. Hardness	Major	MEAS	OSPL	-	Mfr. Standard	LGB	P	-	-	
		b. Dimensions	Major	MEAS	Level-AQL-4.0%	-	Mfr. Drg	Supplier TC	V	-	-	
11	Space heater	a. Insulation resistance	Major	MEAS	-do-	-	-do-	LGB	P	-	-	Wherever applicable
		b. HV test	Major	MEAS	-do-	-	-do-	-do-	P	-	-	
		c. Resistance	Major	MEAS	-do-	-	-do-	-do-	P	-	-	
		d. Wattage	Major	MEAS	-do-	-	-do-	-do-	P	-	-	
12	Brazing alloy	a. Chemical composition	Major	CHEM	-do-	-	-do-	-do-	V	-	-	
13	Paints	a. Viscosity at 32 C	Major	MEAS	OSPL	-	Mfr. Standard	-do-	P	-	-	
		b. Drying time	Major	VISU	-do-	-	-do-	Supplier TC	V	-	-	
		c. Dry film properties	Major	VISU	-do-	-	-do-	-do-	V	-	-	
B INPROCESS INSPECTION												
01	Machined cast iron body	a. Blow holes/ cracks	Major	VISU	100%	-	No blow hole/crack on machined surface	LGB	P	-	-	No welding on the casting is permitted for below holes and cracks
		b. Surface finish	Major	MEAS	100%	-	-do-	LGB	P	-	-	
		c. Bore ID, concentricity & other flame path dimensions	Major	MEAS	100%	-	Mfr. Drg	LGB	P	-	-	



BHARAT HEAVY ELECTRICALS LIMITED
TIRUCHIRAPPALLI - 620014

QUALITY PLAN FOR
LT MOTORS (FLAME PROOF)

QA:CI:STD:QP:24

Rev: 04

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Sl. No.	Component & Operation	Characteristics	Class	Type of Check	Quantum of check		Ref Doc & Acceptance STD	Form of record	Agency			Remarks
					M	B/C			M	B	C	
2	Machined cast iron end shields, terminal box & covers	a. Blow holes/cracks	Major	MEAS	100%	-	No blow hole/crack	-do-	P	-	-	
		b. Dimensions	Major	MEAS	100%	-	Mfr. Drg	-do-	P	-	-	
03	Stator core	a. Core length, Diameter	Major	MEAS	100%	-	-do-	-do-	P	-	-	
		b. Core locking & skew	Major	VISU	100%	-	Mfr. Standard	-do-	P	-	-	
		c. Rigidity of core	Major	MEAS	100%	-	Mfr. Standard	-do-	P	-	-	
		d. De burring & Cleanliness	Major	VISU	100%	-	-do-	-do-	P	-	-	
04.1	Coil forming	a. Verification of copper wire size	Major	MEAS	100%	-	-do-	-do-	P	-	-	
		b. Number of turns	Major	MEAS	100%	-	-do-	-do-	P	-	-	
04.2	Wound Stator	a. Resistance	Major	MEAS	100%	-	-do-	-do-	P	-	-	
		b. HV Test	Major	MEAS	100%	-	IS 325	-do-	P	-	-	2KV for 1 minute
		c. Insulation resistance	Major	MEAS	100%	-	-do-	-do-	P	-	-	>2 mega Ohm
		d. Polarity	Major	MEAS	100%	-	Mfr. Standard	-do-	P	-	-	
		e. Surge Test(Coil short)	Major	ELEC	100%	-	-do-	-do-	P	-	-	
		f. Workmanship of joints, slot wedge tightness, coil end connection & overhang dimension	Major	VISU	100%	-	-do-	-do-	P	-	-	
04.3	Flood Impregnation	a. Dipping & Baking Cycles	Major	MEAS	100%	-	-do-	-do-	P	-	-	Process parameters: temperature, time, viscosity
04.4	Rotor & Shaft assembly	a. Press fitting	Major	VISUAL	100%	-	Mfr. Drg	-do-	P	-	-	
04.5	Rotor machining	a. Rotor OD, Concentricity w.r.t bearing Seating dia	Major	MEAS	100%	-	Mfr. Drg	LGB	P	-	-	
		b. Rotor & Fan Balancing	Major	MEAS	100%	-	ISO-1940 Gr-2.5	-do-	P	-	-	
04.6	Hydraulic pressure testing	a. Pressure withstand capacity (10 Kg/sq.mm for 1 minute)	Major	MEAS	100%	-	IS 2148*	-do-	P	-	-	*As per CMRI test report for Body, End shields, Terminal box and covers

M-MANUFACTURE / SUB VENDOR; **B**-BHEL /TPI; **C**- CUSTOMER / TPI;
P-PERFORM; **W**-WITNESS; **V**-VERIFICATION



BHARAT HEAVY ELECTRICALS LIMITED
TIRUCHIRAPPALLI - 620014

QUALITY PLAN FOR
LT MOTORS (FLAME PROOF)

QA:CI:STD:QP:24

Rev: 04

Page: 7 of 9

Sl. No.	Component & Operation	Characteristics	Class	Type of Check	Quantum of check		Ref Doc & Acceptance STD	Form of record	Agency			Remarks
					M	B/C			M	B	C	
C	FINAL ASSEMBLY											
		a. Determination of Air gap		MEAS	100%	-	Mfr. Drg	-do-	P	-	-	
		b. Proper fixing w.r.t * Gasket Fixing * Terminal Box fixing * Terminal Board fixing * Lead terminations * Provision of lugs	Critical	VISU	100%	-	Mfr. Standard	-do-	P	-	-	
D	FINAL INSPECTION											
01	Routine test	a. Marking on the Name plate details, legibility, painting & Appearance, Terminal Box Location & accessories, phase sequence & Ferrule marking	Critical	VISU	100%	-	IS:325/ Spec./ Appd Drg./ Data Sheets	TC	P	W	-	
		b. Provision of Flame proof cable glands make, type, rating	Critical	VISUAL	100%		Spec. / Appd Drg./ Data	LGB	P	W	-	Wherever applicable
		c. Dimension – Mounting & Overall	Critical	MEAS	100%	-	IS:325/ Spec./ Appd Drg./ Data Sheets	-do-	P	W	-	
		d. Measurement of stator winding Resistance & Space heater	Critical	MEAS	100%	-	-do-	-do-	P	W	-	
		e. H.V. Test on Winding and space heater	Critical	MEAS	100%	-	-do-	-do-	P	W	-	
		f. Reduced voltage running in both direction	Critical	MEAS	100%	-	-do-	-do-	P	W	-	
		g. No Load run test	Critical	MEAS	100%	-	-do-	-do-	P	W	-	
		h. Locked rotor test	Critical	MEAS	100%	-	-do-	LGB	P	W	-	
		i. Vibration test at rated Voltage & speed	Critical	MEAS	100%	-	-do-	-do-	P	W	-	
		j. Over speed test	Critical	MEAS	100%	-	-do-	-do-	P	W	-	
02	Painting	a. Paint shade	Critical	VISU	OSPL	-	-do-	-do-	P	W	-	

M-MANUFACTURE / SUB VENDOR; **B**-BHEL / TPI; **C**- CUSTOMER / TPI;
P-PERFORM; **W**-WITNESS; **V**-VERIFICATION



Sl. No.	Component & Operation	Characteristics	Class	Type of Check	Quantum of check		Ref Doc & Acceptance STD	Form of record	Agency			Remarks
					M	B/C			M	B	C	
03	Type test	a. All tests mentioned in routine test	Critical	ELEC	1 motor in a batch	-	-do-	TC	P	V	-	
		b. Full load run & temp. rise test	Critical	ELEC	-do-	-	IS:325/ Spec./ Appd Drg./ Data Sheets	TC	P	V	-	
		c. Load test at 125%,100%, 50%, 25% load	Critical	ELEC	-do-	-	-do-	-do-	P	V	-	
		d. Momentary O/L test	Critical	ELEC	-do-	-	-do-	-do-	P	V	-	
		e. Starting torque test	Critical	ELEC	-do-	-	-do-	-do-	P	V	-	
		f. Starting torque test	Critical	ELEC	-do-	-	-do-	-do-	P	V	-	
		g. Pull out torque test	Critical	ELEC	-do-	-	-do-	-do-	P	V	-	
		h. Statutory Certificates like i. BIS certificates ii. CPRI or CMRI Certificate iii. DGMS certificates iv. CCE certificates v. DGFASLI certificate	Critical	Review	100%		-do-	Statutory test certificates	P	V	-	
		i. Efficiency Calculation	Critical	Review	100%		IS 15999 (Part 2/Sec 1):2011	Inspection Report	P	V	-	Applicable only for Energy Efficient Motors



E.NOTESL:

1. LEGENDS:

PHYS	: Physical	MEAS	: Measurement
VISU	: Visual	ELEC	: Electrical
CHEM	: Chemical	MECH	: Mechanical
THER	: Thermal	OSPL	: 1 Sample / lot
TC	: Test Certificate	LGB	: Log Book
Mfr.	: Manufacturer	Drg.	: Drawing
Spec.	: Specification	Appd	: Approved

2. Vendor shall arrange all testing facilities at their work. Tests which are not available facilities at vendor's work, are to be carried out at recognised National test Houses like ETDC/ CIL/ NPL / ERTL etc., at vendor's cost.
3. Through Log book/ any other documents / Systems available at the vendor's works, it shall be possible to correlate the finished products with raw material & in process stage checks / Inspection carried out.
4. All measuring & Testing instruments shall be periodically calibrated from recognised test houses & certificates made available during inspection for verification
5. Packing procedure shall be as per Specification.
6. Type test certificate shall be submitted by vendor for BHEL verification. The validity shall be 5 years from the date of Purchase Enquiry.

F. REFERENCE STANDARDS:

IS 325	: Specification for three phase Induction Motor
IS 2148	: Specification for Flameproof enclosures for electrical apparatus
IS 15999 (Part 2/sec 1):2011	: Specification for rotating electric machines (Part 2- method of tests section 1) Standard methods for determining losses & Efficiency
IEC 60317 & IS 13730	: Specification for particular type of winding wires
IS 13778 Pt. 5	: Specification for winding wires test method
ISO 1940	: Mechanical vibration balance quality requirements for rotor in a constant (rigid) state

SQP24R4

**BHARAT HEAVY ELECTRICALS LIMITED
TIRUCHIRAPPALLI**

**CONTROLS AND INSTRUMENTATION / FB
QUALITY ASSURANCE**

**STANDARD PACKING PROCEDURE
FOR
ELECTRICAL ACTUATORS, POWER CYLINDERS AND
ELECTRICAL EQUIPMENTS**

Rev	Date	Prepared	Checked	Approved	Revision History
00	01.01.96	Sd/-	Sd/-	Sd/-	Initial History
01	28.03.02	A.J.OMPRAKASH Sd/-	R.VARADARAJAN Sd/-	G.MATHIYALAGAN Sd/-	Department name changed
02	26.02.07	RM.VAIRAVAN 	N. SRIDHAR 	S.SOMASUNDARAM 	Revised after discussion with Shipping Dept.

1.0 SCOPE

- 1.1 This procedure gives minimum guidelines to be complied with for packing of Electrical actuators, Power cylinders and other Electrical equipments. This packing shall be suitable for different handling operations and for the adverse conditions during transportation and during indoor / outdoor storage for periods more than one year.

2.0 WOOD SPECIFICATION FOR PACKING

- 2.1 Rubber wood as per manufacturer standard.
2.2 Silver Oak as per procedure PR:CHEM:017 or as per relevant International Standards.

3.0 PACKING

- 3.1 For Inland packing, rubber wood and export packing Silver Oak wood shall be used. The wood used shall be seasoned and treated.
3.2 The required wood case for the equipment to be packed shall be made out of individual planks of single length. The case should not have joints. Sufficient number of horizontal, vertical and diagonal planks (dimensions depending up on case size) shall be used for binding and strengthening runners have to be provided with metallic sling plates for handling.
3.3 Support planks are to be provided such that, no force is acting on the parts of equipment or its parts.
3.4 Power cylinders have to be packed with the piston in the closed condition.
3.5 Preservative chemicals are to be applied, wherever required.
3.6 Blank holes if any, shall be plugged.
3.7 Spring actuated equipments have to be de-energised before packing.
3.8 The equipments covered with a polythene sheet shall be kept inside the box, followed by coir, wooden bottoms, thermo coal, etc to prevent vibration effect during loading, transportation, etc.
3.9 The gap between job and the box shall be filled with suitable material like jute, coir, thermo coal, etc.
3.10 On all sides of the inner case, black polythene sheet shall be nailed.
3.11 Loose items of the equipment, if any, shall be packed separately.
3.12 Each case must have sufficient quantity of silica gel, packed in cotton cloth bags, shall be kept at different places as required.

The bags used shall have the following information marked on it.

Silica Gel activator type:

Blue: Active

Rose: Reduced active

White: No activity. To be replaced with fresh Silica gel.

4.0 MARKING

- 4.1 After completing the packing, Stencil marking, as per dispatch instructions and symbol marking as per Annexure – I shall be made. Please ensure the box is stenciled with “FRAGILE ITEM”, “HANDLE WITH CARE”

5.0 PACKING SLIP

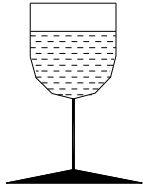
- 5.1 A copy of the packing slip, kept in a polythene cover shall be kept inside the box. Another copy of the packing slip, kept in a polythene cover shall be kept out side the box and covered with a metallic plate to the case.

6.0 CAUTION

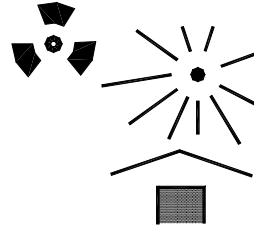
Do not pack any other Mechanical items with this case.

7.0 GENERAL

- 7.1 These packing procedures are the minimum requirements in addition to the standard instructions mentioned in the Purchase Order and Specification.
- 7.2 Deviation to meet the packing procedure requirements / non-clarity in packing approach in any quotation will be liable for rejection of offer.

ANNEXURE – 1TOPROCEDURE NO:CI:QAC:PR:02/00 ; PR:03/00 ; PR:04/00

FRAGILE, HANDLE WITH CARE



PROTECT FROM HEAT AND RADIOACTIVE SOURCES



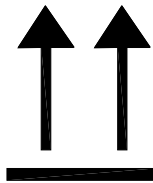
USE NO HOOKS

NOTE: The design of heavy goods packages cannot always resist top lifting by grabhooks.



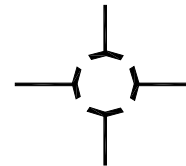
KEEP DRY

NOTE: Not all cases have waterproof internal liners: plywood used in the construction may not have a waterproof glue line.



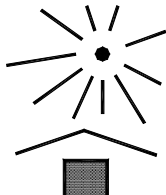
THIS WAY UP

NOTE: Certain designs of small cases make it difficult to distinguish top from bottom.



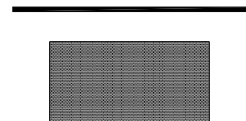
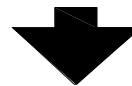
CENTRE OF GRAVITY

NOTE: This should be stencilled as a minimum on the two longest case sides (this information will normally be supplied by the manufacturer of the item(s) packed).

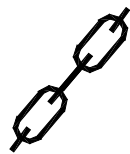


KEEP AWAY FROM HEAT

... kg max



STACKING LIMITATION



INTERNATIONAL "SLING HERE" SYMBOL

NOTE: The maximum load in kilograms should be marked above the arrow.

