

OPEN TENDER CHECKLIST

Sl. No.	Document Name	Vendor Confirmation (Signed copy to be submitted along with Techno Commercial Offer)
01	Annexure A	Submitted ☐ Not Submitted ☐
02	Annexure B	Submitted ☐ Not Submitted ☐
03	Annexure C	Submitted ☐ Not Submitted ☐
04	Annexure D	Submitted ☐ Not Submitted ☐
05	Annexure E	Submitted ☐ Not Submitted ☐
06	CEBG	Submitted ☐ Not Submitted ☐
07	BHEL's Specification	Submitted ☐ Not Submitted ☐
08	Online SRF	Submitted ☐ Not Submitted ☐

	BHEL :: BAP :: RANIPET				
	PURCHASE DEPARTMENT				
	NOTICE INVITING TENDER				
ANNEXURE-A TO OPEN TENDER (Frame Work Agreement)					
Tenders are invited from prospective manufacturers for supply of Electrically operated Hoist (EOH) as per Specification TECI:EOH:GEN:REV: 00 Dated 01.12.2012					
Set	ENQ SNO	Material Code	Material Description	Qty	UNIT
Set 1	001	962501000011	3T EOH 35 MTR HIGHT	82	ST
	002	962501000012	63 A SWITCH FUSE UNIT	82	NO
	003	962501000017	RAIN HOOD FOR HOIST MOTOR	82	ST
	004	962501000018	GREASE GUN WITH GREASE	82	NO
	005	962501000023	TRAILING FLEXIBLE COPPER CABLE 4 CORE 4 SQMM	7380	MTR
	006	962501000024	GALVANISED LINK CHAIN 77 MTR	6314	MTR
	007	962501000025	CABLE TROLLEY ASSEMBLY	2460	ST
	008	962501000026	AUXILIARY GIRDER ASSEMBLY	5740	MTR
Set 2	009	R79536710001	3T EOH ASSEMBLY INCLUDING BRAKES DRUM WITH ROPES, ELECTRICAL CONTROL PANEL, PENDENT PUSH BUTTEN WITH CONTROL CABLE WITH LINK CHAIN	48	ST
	010	R79536710002	63A SWITCH FUSE UNIT HAVING 3 NOS 63 A HRC FUSE WITH ENCLOSURE SUITABLE FOR OUTDOOR INSTALLATION	48	NO
	011	R79536710003	TRAILING FLEXIBLE COPPER CABLE FOR POWER SUPPLY	4320	MTR
	012	R79536710004	GALVANISED LINK CHAIN	3696	MTR
	013	R79536710005	CABLE TROLLEY ASSEMBLY	1440	ST
	014	R79536710006	AUXILIARY GIRDER ASSEMBLY FOR TRAILLING CABLE FOR A CROSS TRAVEL LENGTH OF 70 MR	3360	MTR
	015	R79536710007	RAIN HOOD FOR HOIST MOTOR CROSS TRAVEL MOTOR AND CONTROL BOX	48	ST
	016	R79536710008	GREASE GUN WITH GREASE	48	NO
	017	R79536710009	10 % SPARE LUBRICANT FOR HOIST	48	ST
	Note:				
1. Pointwise specific confirmation to BHEL SPECIFICATION to be given in the Techno-Commercial Bid without fail; otherwise offer may not be considered.					
2. In case of supplies from any new foreign suppliers, who are not in BHEL Product Material Directory, material inspection shall be carried out by Third Party Inspection Agency like Lloyds or SGS or BVQI prior to shipment at Supplier's work and total inspection charges shall be borne by the supplier only. (Quoted price shall be inclusive of TP inspection charges). For indigenous suppliers, first inspection will be carried out by BHEL only and subsequent inspections will be by BHEL/BHEL approved Third Party Inspection Agencies.					
3. Offer to be submitted through Enterprise Procurement System (EPS) only .In case of direct hard copy offers, the same will be returned to the supplier without opening.					
4. Pre Qualification Criteria - (1) The supply shall be as per our Technical Specn: TECI:EOH:GEN:REV: 00 Dated 01.12.2012 drawing and quality requirement as QP:E:810 Rev 06, deviation if any, the “deviation summary “ shall be submitted for our technical evaluation. (2) The new supplier/First time supplier to BHEL Ranipet shall fill all the details as called in the Supplier’s Registration Form through online as stated above.					
5.BHEL reserves the right to verify the information provided by vendor. In case the information provided by vendor is found to be false / incorrect, the offer shall be rejected.					
6. Enquiry serial number 001 to 008 is to be considered as SET 1 (NON NTPC requirement) and serial number 009 to 017 (NTPC Requirement) is to be considered as set 2. Evaluation shall be done on set basis.					
7. Quantity split in the ratio 70:30 is applicable as per Annexure 'F'					
8. Delivery requirement will be within one year from the date rate contract purchase order. However exact delivery date will be intimated along with the firm purchase order					
Incase of any clarification, kindly email to gravi@bhelrpt.co.in / psureshkumar@bhelrpt.co.in / 04172 284031 / 284958 between 0830 hrs to 1630 hrs					



ANNEXURE –B
GENERAL TERMS & CONDITIONS
(FOR GUIDANCE TO THE SUPPLIERS)

A] Submission of Offer

a) Invitation for bid

Tenders are invited through electronic mode from eligible suppliers in case of open tenders and from suppliers to whom the enquiry is addressed in case of Limited / Single Tender.

The offers shall be posted into the system before the date and time specified in the tender.

The offer shall be sent on single part / two part / three part basis as specified in the main tender document.

Bids shall be submitted through e-Procurement portal, <https://bheleps.buyjunction.in>, of M/s mJunction Services Limited who are our solution provider.

b) Hardware and Software requirements for participating in e-tender

Requirement for participating in e-Procurement is as under:

- i) A Computer with internet connectivity (Internet Explorer Version 9 and above).
- ii) Digital Signature Certificate (Class 3- SHA2-2048 BIT- with both Signing and Encryption component separately).
- iii) JAVA (Version 1.8 Update 45).

c) Instructions for Registered Suppliers

For all types of tenders (Single / Limited / Open) an automated email alert regarding issue of the Tender will be sent by the e-procurement portal to all Suppliers registered with BHEL, Ranipet for the item/s for which the tender is issued.

In case of open tenders, Registered suppliers with registered DSC will have to login with their user id/password & DSC and search for the Open Tender. On clicking the “Interest” button, they will get attached to that particular Open Tender.

Registered suppliers without DSC will have to first register themselves in <https://bheleps.buyjunction.in> as new supplier by clicking the “New Supplier” button.

To know the procedure for obtaining Digital Signature Certificate (DSC), suppliers who are not having the DSC are advised to visit our website www.bhel.com → Tender Notifications → Sample Checklist.

d) Instructions for new suppliers wishing to bid against open tenders

New, unregistered suppliers wanting to bid against open tender/s will have to first register themselves in <https://bheleps.buyjunction.in> as new supplier by clicking the “New Supplier” button.

After entering the Income Tax Permanent Account Number (PAN) details and pressing “Enter”, they have to click the “Interested” button against the respective BHEL Unit for which they want to participate in the Open Tender and also fill up other relevant Company information as a one-time activity.

Then, a box for filling in a “preferred login id” will appear at the top of the page. After giving the “preferred login id” and then clicking the “Next” button, Supplier would have to map their DSC (which will be activated by M/s mJunction Services Limited), if available. Or else, by pressing “skip” button and selecting relevant procurement category from the list available in the next page and “agreeing” to the BHEL’s terms & conditions, user id and password will be generated/activated once in 2 hours and mailed to their registered



email id. Using this user id and password, Supplier has to login and map the Digital Signature Certificate they have purchased to their code. The DSC will then be activated by M/s mJunction Services Limited.

As required by the tender, the necessary documents have to be filled-in online, in the provided template. Additional documents required are to be scanned and uploaded as .pdf file. Suppliers are advised to take note that the maximum space that is provided for uploading the documents that are to be attached is 300 MB. However the size of an individual document cannot exceed 10 MB. For any clarification on submission of offer on line, attention of the Supplier/s is invited to our document "Supplier Manual" hosted in the home-page of the e-procurement portal. During normal business hours, helpline maintained by the service provider mJunction is available for clarifying any doubts of supplier/s. The helpline numbers are 09840704941 or 09500199108.

Typical documents that would be required as part of tender submission would be

- a) **Complete technical Offer** with details, catalogues, as applicable.
- b) **Un-priced bid** (i.e. Bid without the Price) as per given format, if any.
- c) **Filled-in BHEL's Standard Terms & Conditions** as per Annexure enclosed with the Tender Document,
- d) **Deviation summary** submitted in two parts – giving the summary of technical deviations separately and the commercial deviations separately, if any and
- f) **Supporting documents** to substantiate equivalent material specifications / sections, where quoted for.
- g) Where asked for, **Client list** with their full address including detail of contact person with phone no., fax no. & e-mail ID (if any) to whom the same / similar items are supplied in the past two years. The date of supply may also be indicated, against each client.
- h) **Bidders who are not already registered with BHEL Ranipet** are requested to submit the Supplier Registration Form (SRF) online. The Supplier Development Cell (SDC) of BHEL, Ranipet would process the SRF for evaluation / registering the Supplier.

Suppliers can also upload their credentials by way of submission of Performance certificate/s issued by their customer/s detailing the quantity supplied and specification along with the un-priced PO copies and proof of supply along with the offer.

Technical acceptance of offer by BHEL shall be based on the evaluation of offer and the submitted documents.

Note

- (i) The materials offered, shall conform to the specification and scope attached in the tender.
- (ii) In case the offered materials are not conforming to the Enquiry material Specification, such offers would not be considered for evaluation and would be rejected.

Where equivalent specifications are offered, considering such offers will be at the sole discretion of BHEL. Wherever alternative standards / specifications are offered by Bidder, the Bidder shall provide sufficient documentary evidence to ensure equivalence to the designated standards / specifications, failing which the offer would be considered as not technically acceptable and hence shall stand rejected.

- (iii) All taxes and duties payable as extra to the quoted price should be specifically stated in offers (as appearing in the online template).



Offer/s from within India shall be submitted along with CST & TIN No. / Tariff No. etc, failing which the purchaser will not be liable for payment of such taxes and duties. Our TIN No. 33024364741, CST No. 1141686/01.07.2014, BHEL ECC No. AAACB4146PXM008.

(iv) The un-priced bid shall be used to indicate relevant commercial terms such as scope of freight and insurance, applicability of duties and taxes etc. All Commercial terms are to be indicated clearly in the offer.

(vi) No changes shall be entertained once the bid is opened unless otherwise specifically agreed to in writing by BHEL.

(vii) Money values other than for those items appearing in the un-priced bid template shall not be indicated anywhere in the un-priced bid.

(viii) Time required for inspection (at Supplier's works), should be clearly given in terms of numbers of working days.

(x) **Offers sent by FAX / E-mail:** would not be entertained.

Price Bid in conformance with the specification and terms as given in the Un-Priced bid document.

Caution:

The suppliers are severely cautioned to note that the price bid document accepts the price in figures only. It does not allow the supplier to write the value by words. Therefore all care shall be exercised by the supplier while filling in the figures. Once the price bid is opened no option is available for the supplier to retract the offer under any grounds. If a supplier, for any reason whatsoever approaches BHEL with a request for change in the price, it would be treated as going back on the offer submitted. In such cases, action would be initiated by BHEL for suspending further business dealings with such suppliers as per policy of BHEL which prevails at that point of time.

Foreign / Overseas suppliers are hereby informed that offers with differential currencies are not permitted for a given tender document.

Note

(i) The price break-up should be in line with technical specification / scope of the tender. (Cost of material, packing charges, forwarding charges, freight and insurance charges shall be shown appropriately, as applicable).

(ii) Unless otherwise specified as a part of the tender condition, No Price Variation Clause will be entertained and No advance payment will be made by BHEL.

(iii) In case, there is a discrepancy in the term quoted in techno-commercial bid and price bid, the term as per the techno-commercial bid (Part I) shall hold good and the commercial term quoted in the Price Bid (Part II) shall not be considered.

(iv) In their own interest, all Tenderers are advised to double check their prices, applicable duties and taxes.

(v) The quotation should be valid at least for a period of 90 days from the tender opening date.

(vi) Indian bidders should submit the prices in Indian Rupees only.

(vii) Foreign bidders may submit their bid in foreign currency. The currency for quoting shall be selected from the drop-down menu provided.



(x) Indian Suppliers shall quote on FOR Destination basis only. Destination is BHEL, Ranipet Stores or BHEL Project Site as specified in the tender requirement. Foreign Suppliers shall quote on CFR Chennai Seaport Delivery and Insurance will be in BHEL's scope. No other delivery terms shall be acceptable. Shipment shall be arranged by the Seller on *Liner in / Liner out basis*. As per Government of India guidelines, BHEL Ranipet being a Government of India Undertaking the Bill of Lading shall be made with the Shipper as "Government of India". This shall be specifically confirmed by the Bidder.

(xi) Where the cargo is containerized, Container washing charges, stuffing charges and / or any other such charges would be to the account of the supplier, where the containers are to be stuffed at the works of the supplier.

B] Opening of Offers

a) **Tenders can be submitted up to 1400 Hours on tender opening due date. Part I will be opened on the same day at 1430 Hours. Results of the tender opening will be available for viewing for upto 7 days from the date of opening.**

b) Requests by Bidders for extension of due date will not be entertained by BHEL.

c) Price Bid opening will be done through e-mode / Reverse Auction method (English method) **which will be decided after techno-commercial bid evaluation is completed.** All tenderers would have to specifically give their acceptance for this in their bid/s.

Note

(i) Bids including all enclosures and supporting documents like catalogues, pamphlets, etc., shall be provided in ENGLISH language only.

(ii) In exceptional circumstances, at its option, BHEL may consider extending the due date/s for the tender openings for reasons such as (but not limited to) paucity of offers etc. However, sufficient notice would be given by BHEL for such extension.

(iii) Deviations shall be summarized and provided in a "Deviation Statement", listing the points and the deviation against each point.

(iv) BHEL reserves the right to increase or decrease the tendered quantity and to order on more than one vendor at the lowest acceptable price to BHEL. In ordering on more than one source, the ratio of quantity split will be as specified in the tender terms.

If not explicitly specified, BHEL reserves the right to split the quantity of the enquiry as follows: 70% quantity being ordered on the original lowest bidder (L1) and balance 30% on the next higher bidder/s excluding H1, who accepts the L1 price. However, the final decision to split the order rests with BHEL only.

In the event that the other than L1 suppliers do not accept the L1 price, then the balance will be reverted to the original L1 and the original L1 shall be bound to accept the balance of the enquiry quantity kept reserved for order splitting. This decision would be given by BHEL within 60 days of the price bid opening.

Notwithstanding the quantum of split that may be indicated in the main body of the enquiry, bidders are advised to note that the splitting of the orders will be decided by BHEL after the evaluation of the techno-commercial and price bids.

(v) Offers for part quantities on item level basis are not acceptable to BHEL. While tenderers can quote for some or all the tendered items, no supplier shall quote for partial quantity of any given enquiry item. Such



partial offer would not be considered in the enquiry for that item. Suppliers are to note that the evaluation unless otherwise specified will be on item level and not for the tendered items as a whole.

C] Evaluation of Offers

- a) The price bids including the impact price (if any) of the technically acceptable offers alone shall be opened.
- b) Offers with pre-conditions (like conditional discounts) for price are liable to be not considered / rejected. For evaluation such conditions would be removed and only the base offer would be considered for evaluation and comparison.
- d) In the event of any change in scope / quantity arising out of the discussions, offerers would be given a chance to submit their revised offer / Impact bids. The option for the revised offer / impact offer will be triggered by BHEL. The Supplier then will have the facility to feed-in the revised price / impact price as per the provision given by BHEL. The impact price can be positive or negative (or nil). The impact price option shall contain only the price addition / deletion for such change in the scope / quantities, over and above the original scope and price quoted. The original price quoted would remain unchanged. The total price would then be computed by the arithmetic addition of the original price and the impact price. Where BHEL gives the option of submitting the revised offer, the impact would be computed as the arithmetic difference of the revised price and the original price.
- e) For evaluating the overseas offers, CFR Chennai Sea Port price quoted will be taken into account. The cost to BHEL will be arrived at by loading the applicable customs duty project wise, insurance charges, inland transportation charges to BHEL stores and LC charges etc.,
- f) For suppliers within Tamil Nadu state, as per prevailing VAT Act, VAT input credit is currently 5%.
- g) BHEL reserves the right to reject without assigning any reasons / load any offer with factors other than already specified for such offers having deviations to BHEL Specifications, Standard Terms & Conditions at its discretion. The decision of BHEL in this regard shall be final.
- h) BHEL reserves the right to reject an offer due to unsatisfactory past performance during tender finalisation / execution of a contract at any of BHEL projects / units or if unsatisfactory performance report is received from the party/s referenced by the supplier at any time during tender finalisation.
- i) BHEL reserves the right to operate Purchase / Price preference to Government of India Undertakings, which shall be given as per the guidelines of Government of India given from time to time and / or relax the Terms and Conditions of the tender.
- j) For the purpose of comparing prices, tender prices shall be converted to Indian rupees and the conversion shall be made by using the TT Selling rate of State Bank of India (SBI) prevailing on the date of opening of Techno-Commercial / Unpriced bids. If the relevant day happens to be a bank holiday, then the forex rate as on the previous bank (SBI) working day shall be taken. This exchange rate will be followed till placement of order. Tenderers may please note that even if an impact price is taken as in (d) for purpose of price evaluation and arriving at the rank; the exchange rate will be taken as explained above.
- k) Unless otherwise specified, evaluation will be on individual line item basis only and ordering will be on respective L1 vendors.



l) BHEL reserves the right to conduct negotiations on the “Price” and “Other Commercial Terms and Conditions” with the lowest ranked offerer at any time after the bid opening but before the release of the Purchase Order and If so required by BHEL, Supplier may have to share their costing sheet with BHEL.

m) Bidders are required to confirm in writing in their techno-commercial document that other than themselves (the bidder) none of its group companies, concerns or affiliates etc., are participating in the tender either directly or indirectly or through any other agency under the same proprietor / common partner(s)/ common Directors. If during the evaluation of the bids it is found that the bidder has submitted the offer in violation of this condition then all the offers received from the group companies would stand rejected. If such relationship is found at a later date where the Purchase Order has been issued, then BHEL would cancel the Purchase Order and initiate suitable action/s under the contract/s including but not limited to invoking the Risk Purchase clause of the order and other applicable legal provisions / guidelines of BHEL including guidelines on suspension of business dealings. (Please see clause L sub-clause c).

D] Execution of the Order

a) BHEL will have the option to pre-inspect the materials at Supplier's works by BHEL's own inspector or by third party agency appointed by BHEL or BHEL's end customer/s. The mere act of the pre-dispatch inspection (PDI) does not absolve the Supplier from giving the specifications as agreed upon in the Purchase Order. In the case of inspection being carried out by a third party inspector (TPI) as per the extant practice, the TPI would forward the Inspection Report (IR) along with Test Certificates and other related documents to the Quality Assurance (QA) Department of BHEL. The QA department after scrutinising the report/s submitted by the TPI would issue the Material Dispatch Clearance Certificate (MDCC). Suppliers are hereby informed that materials should be dispatched only after getting the MDCC, failing which the materials may be rejected on receipt at BHEL Stores.

b) In the case of overseas suppliers Inspection call for carrying out the inspection shall be given 30 days before the scheduled contract delivery date. The Inspection date/s given by the Supplier shall be on firm basis. For local Suppliers the Notice period of Inspection shall be 10 working days.

c) Deviations, if any pointed out by the visiting Inspection team of BHEL shall be corrected and the items as per specification shall be dispatched on or before the contract delivery date after getting the MDCC.

d) The final inspection for acceptance will, however be carried out at BHEL's works at Ranipet.

e) The contract delivery date is the date of receipt at BHEL Stores for suppliers in India, applicable in the case of FOR Destination Contracts.

For ex-works contracts or FOR dispatching station indigenous contracts, the date of the Lorry way bill issued by the authorised transport carriers of BHEL / Railway Receipt / Courier Way bill / Airway bill or any such dispatch documents of carriage approved by BHEL would be considered as the Contract Delivery Date. In the case of CFR contracts with overseas suppliers, the B/L date shall be taken as the Contract Delivery Date

f) Travel & other local stay cost for the Inspectors sent by BHEL will be to BHEL account, but other Inspection Charges, if any shall be to the account of the Seller only.

g) The supplier shall arrange for packing suitably in all respects for normal transport by sea / rail / road and Materials shall be suitably protected against effect of tropical salt laden atmosphere in the event of shipment being delayed at ports / store yards and as per BHEL TDC.



h) Foreign suppliers shall dispatch on CFR agreed Sea-Port basis, according to the contract conditions. Indian suppliers shall dispatch on free delivery (door-delivery) at BHEL stores basis only. Unloading the materials at BHEL Stores would be to the account of BHEL only.

i) In the event of any short supply, it shall be the responsibility of the supplier to deliver such short supplied/ missing items on Free-of-Cost basis at BHEL stores, including customs clearances at Indian Ports in the case of foreign suppliers.

k) Terms of payment:

k.1) For Indigenous Suppliers: Unless otherwise agreed to by BHEL, the standard payment terms of BHEL shall be: For non-MSE suppliers 100% payment made directly through EFT within 90 days from the date of receipt and acceptance of materials at BHEL Stores, Ranipet or 90 days from the date of acknowledgement of receipt of materials at destination specified. If any supplier asks for payment terms other than the above specified, then suitable loading on cost will be considered. **Loading of any deviation in the payment terms w.r.t tender terms will be “Base rate of State Bank of India (SBI) (as applicable on the date of bid opening: Techno-commercial bid opening in case of two part bids) + 6%, will be considered for loading for the periods of relaxation sought by bidders.**

k.2) For MSE vendors (under Micro & Small category alone) 100% payment will be made within 45 days from the date of receipt and acceptance of materials at BHEL Stores, Ranipet or 45 days from the date of acknowledgement of receipt of materials at destination specified.

l) NOTE:

Where the destination specified is other than BHEL Stores Ranipet, for claiming payment, Supplier has to submit proof of receipt of the materials at the destination by furnishing a copy of the acknowledged despatch document (LR/RR/Courier receipt etc.) .

If the Bidder is bidding for the first time and wants to be considered as an MSE then, the Bidder shall submit document evidencing that they are an MSE along with a certificate from a Chartered Accountant certifying the status of their Unit / Works clearly specifying the address of the works which is to be considered as MSE and send the same to BHEL, Ranipet either before the tender opening date or upload it as a part of the tender document in the e-procurement portal. Where the document is submitted electronically a hard copy shall invariably be sent within a reasonable period (not exceeding 30 days) from the bid opening date for the purpose of BHEL's records. If the hard copy is not received within this specified time, then the supplier would be treated as a non-MSE. BHEL will not be responsible for any postal / courier / delivery delays.

For approved vendors the status as on the date of the bid opening as available with BHEL Ranipet's records shall be used for reckoning the status of the Bidder as an MSE or otherwise.

Offer/s received without these documents will be treated as non-MSE and order finalization will be done based on this premise. Documents submitted after Bid-opening will not be considered in this tender. This provision for MSE will apply subject to the condition that the participating MSE meets the tender requirements.

For approved suppliers, in case of any change in the MSE status, it shall be the responsibility of the Bidder to notify the change as a part of the Bid document. If at a later date it comes to the knowledge of BHEL, Ranipet that the change in the status has not been intimated by the Bidder and the order is obtained under the premise of an MSE then BHEL would cancel the pending order against this tender and take necessary steps for suspension of the business dealing with the Bidder as per the procurement policy of BHEL. Similarly if a supplier claims MSE status after the Part I bid opening, then the same would not be considered in the tender.

In case after the bid opening it is seen that no MSE has become L1, then depending on the nature of the item, if it is not possible to split the tendered items / quantities on account of reasons like customer contract



requirements of supplying one make for a given project or technical reasons like the tendered item being a system etc. then BHEL would not counter offer the L1 prices even though there may be MSE bidders within the +15% band of L1.

Other concessions for MSEs / Reserved sectors

In addition to the concessions specified above, MSE suppliers will be eligible for such other concessions as per the MSME Act 2006 and any other benefits / concessions that may be announced by the Government of India from time to time.. However, such concessions as applicable at the time of tender opening alone will be applicable. Any concessions advised after tender opening will not be considered for the current tender.

Items that are reserved for MSE and for any other items for which reservations for Indian manufacturers are notified by the Govt. Of India, such concessions as prevailing on the date of tender opening shall apply as a part of this tender conditions.

ii) Foreign Suppliers “100% thru’ irrevocable & unconfirmed LC at sight within 3 weeks from the PO date through any one of our Bankers listed elsewhere in the tender conditions for 100% value (less Agency Commission, if any) valid up to the PO delivery period and 15 days thereafter for negotiation. All bank charges in India to BHEL's account and all other charges outside India to Supplier's account. **BHEL would load the price of foreign suppliers in order to bring them on common platform as per Indigenous Suppliers on the account of differential payment terms to Indigenous Suppliers. Loading of payment terms will be “Base rate of State Bank of India (SBI) (as applicable on the date of bid opening: Techno-commercial bid opening in case of two part bids) + 6%, will be considered for loading for the periods of relaxation compared to indigenous suppliers i.e. 90 days.**

m) Any incidence of tax like Income tax, Service Tax and Withholding any other similar tax / duties /levies imposed by the Government of India, or the State Government, where the BHEL Unit is located, deductible at Source, during the tenure of the Order shall be deducted by BHEL and necessary certification of the deduction (Tax deduction at Source) would be given. This is subject to the supplier fulfilling the necessary documentation as specified by the Government of India. (e.g. Tax Residency Certificate, PAN Number etc.)

n) The Guarantee period shall start from the “Date of receipt and acceptance of the materials at BHEL Stores.”

o) Where any bidder gives extended credit period over and above that offered by BHEL, then all other Non-MSE bidders and foreign bidders would have to match the extended period of payment terms. This information would be given to such bidders after opening of the techno-commercial bids; but before opening the price bids. However bidders would not be allowed to change their price bid for purpose of confirming the extended credit period. In the event such bidder/s do not accept the extended credit period for payment, then their offer would be loaded to the extent of the differential between their offered payment terms and the revised payment terms offered by BHEL as explained above.

E] Liquidated Damages Clause:

BHEL will levy penalty as Liquidated Damages (LD), for delay in delivery. The damages shall be at the rate of ½% per week or part thereof subject to a maximum of 10%. The contract delivery date for purpose of L.D is the date of receipt at BHEL Stores for suppliers in India for F.O.R. Destination Contract and the date of dispatch clearance given by BHEL for overseas suppliers. For ex-works or F.O.R dispatching station contracts, the date of the dispatch document will be reckoned as the date of delivery for computing the LD. Supplier shall deduct the applicable LD from the first payment when raising the claim for the same. The applicable LD if any would be communicated by BHEL along with the dispatch clearance. It is taken by BHEL that Foreign Suppliers have confirmed their acceptance to BHEL for opening the LC for value which



is the value of the order reduced by the applicable LD. The LD would apply on the undelivered portion only. In case of reasons attributable to BHEL for the delay in delivery (for e.g. delay in arranging the pre-inspection) then the delivery time would be reset to the extent of the time delay attributable to BHEL, with waiver of the LD. Delivery being the essence of BHEL's contract requirements, Unless otherwise specified the LD would apply on the undelivered portion of the contracted items. In the event that a **Supplier does not accept the LD condition above, the offer would be loaded to the extent of the shortfall with respect to upper limit specified above.**

F) Miscellaneous

i) Role of Agents:

BHEL will deal directly with indigenous manufacturers only.

BHEL strongly discourages the engagement of Agents in India by foreign principals, to deal with BHEL, in BHEL's tenders.

BHEL will not enter into any correspondence with an Indian Agent.

The Indian Agent will not be extended the privilege given to the principals, such as that of attending the tender openings, attending technical discussions, commercial discussions or price negotiations and such like. In case, in spite of the above, a foreign principal insists on engaging an Indian Agent, It is made clear by BHEL that:

It is the sole responsibility of the foreign principal to ensure the Agent does not represent any other foreign principal in a given tender.

An undertaking to this effect shall be given by the foreign principal that his / her Agent does not represent any other foreign principal in the tender. This document shall form a part of the techno-commercial offer.

If at any stage of the tender, BHEL finds that an Indian Agent has represented more than one foreign principal, all such offers of and all the foreign principals would be disqualified summarily in the tender inquiry.

BHEL will only give an intimation of notice of the disqualification. No correspondence would be entertained by BHEL, on their decision. Such decision of BHEL shall be irrevocable, firm and final and shall be binding on the tenderer.

BHEL, due to business reasons would ban, would have banned Indian agents from dealing with BHEL.

Any foreign principal who engages such a banned agent, or an employee of the banned agency, or any other person connected with the banned agency, at any time during the tender proceedings, would be disqualified from the tender proceedings. The decision of BHEL in this regard shall be final and be binding on the OEM. Hence in their own interests, prospective tenderers may check with BHEL, the status of their proposed agent vis-à-vis BHEL.

In view of the requirement of BHEL, it is strongly suggested that in their own interest, foreign principals may desist from engaging any Indian agent and deal with BHEL directly and it is stressed that any Main producer proposing to deal with BHEL by engaging and through an Indian Agent does so at their own risk.

BHEL shall in no way be responsible for any consequences that may arise to the foreign principal on account of the antecedents / actions of their Indian Agent.

In the event of the foreign principal engaging an Indian Agent:

a) **The Supplier shall furnish an authenticated copy of the Agency Agreement with his agent detailing the precise relationship between them and their mutual interest in the business along with techno-commercial bid.**

b) The Supplier shall furnish original authorization letter for the Indian Agent. The letter shall contain name, contact person, complete postal address including phone, fax and e-mail ID. It shall also spell out the type of services to be rendered by Indian Agent.

c) Indian Agent & Agency commission: An Indian Agent can represent only one Foreign Manufacturer against a particular Tender. The FOB price quoted by the foreign bidder shall include the agency commission. However, the agency commission component payable to their Indian Agents shall be shown separately in the Offer, either as a lump-sum or as a percentage of the quoted price. This will be paid by BHEL in Indian Rupees, on satisfactory receipt & acceptance of the materials. For calculation of Rupee



equivalent of Agency Commission, exchange rate as prevailing on the date of Purchase Order will be taken and

d) For all discussions, technical clarification and negotiations etc. only the principal would be authorized for interaction with BHEL. The Agent shall not be a party to the discussions / negotiations and would not be normally allowed to participate.

ii) Terms & Conditions of Letter of Credit (L/C) for overseas suppliers (indicated for acceptance).

a) Unconfirmed irrevocable Letter of Credit at Sight only will be opened by BHEL. Confirmation of L/C is not preferred by BHEL. Also L.C will be opened in Lots in line with the staggered delivery.

b) All Bank charges out side India are to the Supplier's account and within India to BHEL's account.

c) In case of L/C extension caused by delays attributable to the Supplier, the L/C extension / commitment charges are to be borne by the Supplier.

iii) Other terms & conditions for letter of credit: - Documents for negotiation

a) Signed Commercial invoice in quadruplicate, for a value not exceeding the draft amount, quoting the import Licence No and certifying goods evidencing shipment of the merchandise are as per Applicant's Purchase Order. The amount of invoice after deducting Indian Agent's commission, if any, should not exceed the Credit amount. (The Indian agent's commission, if any, is payable in India in Indian rupees only.)

b) Certificate of Country of Origin, from the country of manufacture, issued by the Chamber of Commerce.

c) One set of Original and two sets of Non-negotiable copies of 'signed', 'unmarked', 'clean on board' Ocean Bill of Lading, showing Shipper as "Government of India" Account M/s. Bharat Heavy Electrical Ltd, Unit: BHEL, Ranipet as consignee (The opening bank should not be notified as consignee), marked freight payable / prepaid at destination.

d) Packing list in 4 copies in English, indicating Size wise Number of bundles / pieces shipped and weight.

e) Certified copy of the fax / e-mail sent by the beneficiary to the applicant giving the following particulars of shipment, as the insurance is to be arranged by the Applicant in India: (a) Purchase Order Number & date; (b) Bill of Lading Number & date (c) Name of vessel; (d) Port of Loading; (e) Number of bundles / pieces and weight; (f) Invoice Number, date and value (g) Purchase Order item number's despatched. The cable / fax is to be sent within 2 working days of shipment.

f) Beneficiary's certificate showing the relevant airmail / courier reference no. and date that the following clauses have been complied with:

1] Beneficiary to forward by Registered Airmail / Courier one complete set of original documents and one set of non-negotiable documents within 3 working days of obtaining shipping documents to Regional Manager (ROD), Bharat Heavy Electricals Ltd, No. 165, Thambu-Chetty Street, Chennai – 600 001. India. (Phone: +91-44-25341249, 25341240 / Fax - +91-44-25340787; e-mail: raja@rodchn.bhel.co.in)

2] Beneficiary to courier at his cost 3 copies of complete set of non-negotiable documents to the Officer who released the Purchase Order.

3] Declaration by the Supplier certifying that the contents in each case are not less than those entered in the invoices / packing list and that the invoicing for the supplies effected is strictly in accordance with agreed rates as stipulated in the Purchase Order.

4] Declaration to the effect that all other documents as per purchase order has been couriered to the Purchase order releasing authority



- 5) The carrying steamer should be seaworthy, less than 25 years of age and approved by Lloyds / Classification Societies / General Insurance Corporation of India from time to time and
- 6) Copy of Dispatch Clearance / Instruction issued by BHEL.

iv) Documents to be sent directly to the Purchaser prior to shipment

- a) Manufacturer's Original Internal Inspection / Test certificate in triplicate.
- b) Manufacturer's Original Guarantee certificate as per Purchase Order. The material shall be guaranteed for a period of 12 months from the date of acceptance of the materials at BHEL stores or 18 months from the date of dispatch whichever is earlier. The acceptance would be evidenced by the Stores Receipt Voucher (SRV) which will be raised by BHEL.
- c) Inspection / Test Certificate issued by BHEL / Inspection agency specified in the Purchase Order. In the event that Inspection prior to dispatch is not carried out by the Engineers of BHEL, the Inspection certificate of the third party so authorized by BHEL and
- d) Any other documentation as specified in the Purchase Order.

v) Conditions for transportation:

- a) All shipping documents shall show the Purchase Order Number & Date, Import Licence Number & Date, and Letter of Credit Number & Date.
- b) Transshipment is to be avoided.
- c) Loading on deck is not permitted. The transport document must not contain a provision that goods may be carried on deck.
- d) A transport document which is produced or appearing to have been produced by reprographic, automated or computerized systems or as carbon copy will be accepted as an original document provided that it is marked as original and is ink-signed.
- e) The transport document must contain all the conditions of carriage on the original document.
- f) The transport document must not indicate the place of destination as being different from the port of discharge.
- g) The transport document must not contain the indication 'intended' or similar qualification in relation to the vessel or other means of transport or port of loading or port of discharge.
- h) The transport document must be issued by the carrier or his agent and not by any freight forwarder.
- i) Transport documents bearing reference by stamp or otherwise, to costs additional to the freight charges are not acceptable.
- j) The Bills of Exchange must be dated and presentation of documents for negotiation must not be later than 15 days after the date of shipment and in any case not later than the expiry date of the Credit.
- l) Indian suppliers shall dispatch the materials on freight prepaid and on door-delivery basis (FOR Destination – Destination: BHEL Stores) and
- m) In the event there is a delay by the Supplier in negotiating / submitting the document, any demurrage / wharfage arising out of the same shall be to the account of the Supplier and shall be deducted from the final payment. Also, in such cases, the Supplier shall authorize the Steamer / Shipping agent / transporter to freely release the consignment to BHEL by providing a “Surrender Bill of Lading”. Over-seas Suppliers have to

give a No-Objection Certificate to BHEL, authorizing BHEL to get the Delivery Order from the Steamer Agent without producing the Original Bill of Lading. This is required to ensure avoidance of incidence of demurrage at Chennai Sea-port that may arise in case of delayed presentation of documents by the Seller.

G) Reverse auction (RA) / on-line bidding on internet:

Against this enquiry for the subject item/ system with detailed scope of supply as per 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.a. BHEL reserves the right to go for Reverse Auction (RA) instead of opening Part I 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.
2. b. Those bidders who have given their acceptance for Reverse Auction (quoted against this tender enquiry) will have to necessarily submit “online sealed bid” in the Reverse Auction. Non-submission of “online sealed bid” by the bidder 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 help to arrive at “Total Cost to BHEL” like 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 submitted and available with BHEL shall be opened as per BHEL “ s standard practice.

12. Bidders shall be required to read the “Terms and Conditions” section of 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 goes for reverse auction & depending on the number of bidders, the H1 bidders (whose quotes are highest in online sealed bid) may not be allowed to participate in further RA process. Further, in case of sufficient vendors, exclusion of H1 bidders may get extended up to 20%.

16. In order to bring more transparency and to address any queries of Bidders on Reverse Auction, an abridged version of BHEL’s “Common Guidelines for conducting Reverse Auction (RA)” has been hosted in BHEL’s web site www.bhel.com under the links “Supplier Registration Page” and “Tender Notification”. All Bidders are requested to visit the link and familiarize themselves with BHEL’s RA procedures and guidelines before submission of their bid/s. Submission of Bid shall mean that the Bidder has read and understood BHEL’s RA procedures and the bid is in agreement with the same.

H] Force Majeure

If at any time during the currency of this contract, the performance in whole or in part, by either party of any obligations under this contract shall be prevented or delayed by reason, of any war, hostilities, acts of the public enemy, civil commotion, sabotage, fires, explosions, epidemics, quarantine, restrictions or acts of GOD (hereinafter referred to as events), then provided notice of happening of any such events is given by either party to other within ten days from the date of occurrence thereof, neither party shall reason of such events be entitled to terminate this contract nor shall either party have any such non performance and delay is resumed as soon as practicable after such events has come to an end or ceased to exist. If the performance in whole or part of any obligation under this contract is prevented or delayed by reason or any such event claims for extension of time shall be granted for period considered reasonable by the purchaser subject to prompt notification by the seller to the purchaser of the particulars of the events and supply to the purchaser if required of any supporting evidence. Any waiver of time in respect of partial installment shall not be deemed to be a waiver of time in respect of remaining deliveries.

I] Cancellation of Order:

In the event of non-performance of the contract by the Supplier, BHEL reserves the right to cancel the order with issue of a written notice. BHEL would provide a curing period of 30 days, for the Supplier to rectify the situation. If the Supplier fails to rectify the reason/s that led to the issue of cancellation notice by BHEL, then the cancellation order would be issued automatically by BHEL, without further recourse to the Seller. BHEL will not pay any cancellation charges or any other charges / damages to the Supplier, arising out such cancellation. In the event of the non-performance of the supply contract, by the Supplier, the rights of BHEL include, in addition to cancelling the order, to take alternate purchase action at the cost and risk of the supplier. The additional expenditure to be incurred by BHEL in such alternate purchase would be to the account of the supplier. (Risk Purchase). This remedy would be in addition to the invoking of the CEBG on

grounds of failure of the Supplier in executing the Contract and any other legal remedies." BHEL reserves the right to initiate the alternate purchase action at the cost and risk of the erring supplier by issue of a simple notice of intention for the alternate purchase action duly sent by any electronic means and / or by a letter. The cancellation of the order would not be a pre-condition for initiation of the alternate purchase action.

J] Contract Execution Bank Guarantee:

To demonstrate the fidelity of the successful bidder, in executing the Contract, on receipt of the Letter of Intent / Purchase Order, the Supplier shall arrange to provide a contract execution bank guarantee (CEBG). The format of the CEBG is a part of this enquiry. The format may be downloaded and necessary stamping may be obtained from the Banker towards submission of the CEBG. The indigenous suppliers have to provide the CEBG from any one of the Nationalized Banks, listed in the annexure to these terms. Overseas suppliers can submit the CEBG from any of the reputed International / National Bankers. However the CEBG is to be confirmed by any of the Bankers listed by us. In the event of failure by the Supplier to execute the contract either fully or partially, BHEL would encash the entire CEBG. The CEBG shall be valid for the period covering the agreed delivery date of the order with a further claim period of 3 months on the last specified delivery date. In the event of the failure of delivery BHEL would proceed with encashing the CEBG without reference to the Supplier. In the event of BHEL granting extension of the delivery dates, then the CEBG validity shall also be got extended by the Supplier to the extent of the extended delivery times together with the claim period as specified elsewhere. **The CEBG shall be for a value of 2% of the Purchase order.**

Suppliers who are all already registered with BHEL and having a vendor performance rating of A or A+ grade would be exempted from submission of CEBG.

Performance Bank Guarantee

Where ever so required, the Supplier shall arrange to provide a Performance bank guarantee (PBG). The indigenous suppliers have to provide the PBG from any one of the Nationalized Banks, listed in the tender terms. Overseas suppliers can submit the PBG from any of the reputed International / National Bankers. However the PBG shall be confirmed by any of the Bankers listed by us. The PBG shall guarantee the performance of the equipment / materials / items supplied and shall cover the guarantee period. The PBG shall have a claim period of 3 months in addition to the guarantee period. In the event of failure of the supplies made within the guarantee period, BHEL would encash the entire PBG. **The PBG shall be for a value of 10% of the Purchase order.**

The supplier/s have to get the PBG format (pre-printed) from BHEL and get the same stamped by the Banker. Change of PBG terms either by the supplier's Banker or by the supplier, after servicing of the order is not acceptable. Similarly PBG prepared by the supplier (typed by them) will also not be acceptable to BHEL. The pre-printed form issued by BHEL shall be used for making the PBG.

K] Post-order submission of documents for approval

In the event of the release of Letter of Intent (LoI) / Purchase order/s (PO) against this tender, Bidders have to submit the applicable documents as called for in the tender / LoI / PO/s, such as drawings, data sheets, design calculations etc. These documents for approval have to be submitted within the agreed timelines between BHEL and Bidder. Normally the time period for submission for approval is 15 days from the date of receipt of the LoI / PO by the supplier. The actual time period within which the documents have to be submitted for approval would be specified in the LoI / PO.

Such documents would be subjected to evaluation and approval by BHEL and / or by BHEL's customer / Consultant / Customer's Consultant. Bidders have to give their specific acceptance for this.



After approval of such documents and after getting clearance from BHEL, only the items ordered can be taken up for manufacture.

Any changes required by BHEL / Customer etc. in the documents submitted for approval shall be incorporated by the Bidder and no extra cost would be payable by BHEL for such changes.

In the event that the Bidder does not carry out the required corrections, then the LoI / PO would be liable for cancellation by BHEL and BHEL would resort to alternate purchase action at the risk and cost of the Bidder under the Risk Purchase Condition of the Purchase Order.

Note: After receiving the LoI / PO, supplier shall also forward the acknowledgement / acceptance of the LoI / PO by signing and returning the second copy of the LoI / PO as the token of acceptance.

L] Others

a) In case of any contradiction in the terms and conditions given here and elsewhere in the other documents of the tender, it shall be the responsibility of the tenderer to get it clarified from BHEL. The officer authorized to provide such clarifications is the tender issuing officer.

b) Alterations to the conditions of the Tender can be done only by the authorized officer, at any time before the date and time of tender opening and would be duly communicated through a corrigendum.

c) Suspension of Business dealings with Suppliers:

(i) Before submitting offer, prospective bidders are advised to visit our web-site www.bhel.com / supplier registration to familiarize themselves with BHEL's policy and procedures of Suspension of Business Dealings with Suppliers.

Submission of offer shall be deemed to be evidence of the Bidder to have read and understood the above said policy.

ii) Treatment of Banned / Under-performing Vendors:

Any supplier who has been put on "Hold" or "Banned" from having business dealings with BHEL, Ranipet or any other unit of BHEL shall not submit their offer against this tender. If any such offers are received they would be summarily rejected and sent back. During the processing of tender, if any unit of BHEL puts a supplier on "Ban" then further processing of the offer will not be taken up and in case an order is placed, BHEL, Ranipet may resort at their discretion to cancel the PO either fully or partially.

If any of the supplier who is supplying similar material to BHEL, Ranipet has a Vendor Performance Rating (VPR) score of 'C' or below, then offer given by such parties will not be considered for ordering in this tender.

Offers of such of those bidders against whom action for suspension of business dealings has been initiated by BHEL, Ranipet or any other Units/Division of BHEL will also not be considered in this tender.

d) 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.

e) Applicability of Integrity Pact:-

IP is a tool to ensure that activities and transactions between the company and its Bidders/ Contractors are handled in a fair, transparent and corruption free manner. A panel of Independent External monitor (IEMs) have been appointed to oversee implementation of IP in BHEL.



The IP as enclosed with the tender is to be submitted (duly signed by authorized signatory who signs in the offer) along with techno-commercial bid. Only those bidders who have entered into such an IP with BHEL would be competed to participate in the bidding. In other words, entering into pact would be a preliminary qualification.

A detail of IEM for this tender is furnished below:

Name : Shri D.R.S Chaudhary, IAS (Retd.)

Address : Flat No. L-202 & L-203 (1st Floor)
Ansal Lake View Enclave
Shamla Hills
Bhopal- 462 013 (M.P.)

Email : dilip.chaudhary@icloud.com

Please refer section-8 of the IP for Role and Responsibilities of IEMs. In case of any complaint arising out of the tendering process, the matter may be referred to the IEM mentioned in the tender.

No routine correspondence shall be addressed to the IEM (phone / post/ email) regarding the clarifications, time extensions or any other administrative queries, etc. on the tender issued. All such clarification/issues shall be addressed directly to the tender issuing (procurement) department".

Integrity Pact are applicable for all the BHEL enquiries whose estimated value is equal to or more than Rupees 05 Crores.

Copy of Integrity Pact with applicable nominated IEM is attached along with the tender documents for ready reference of Suppliers.

If any Supplier attempts to bribe, or pay commission, gift or any advantage or bring in undue influence either by himself or on his behalf any one including a stranger to the tender, in addition to instituting legal proceedings as per the extant laws prevailing, will disqualify the supplier from this tender and all future tenders of BHEL. Decision of the Purchaser would be final in this matter.

f) The laws governing this transaction shall be the laws in India.

g) Wherever not specified, Inco terms 2010 shall be used to interpret the Commercial terms and conditions and

h) In the event of an order, Supplier shall agree to settlement of disputes or differences, if any, by way of arbitration, in accordance with the "Rule of Arbitration" of the Indian Council of Arbitration.

The language in the tender documents downloaded by the Bidders shall at no point of time be changed, altered or modified in any manner by the Tenderer. If such changes are made by any tenderer, it shall be considered as tampering with BHEL's terms and the offer shall be summarily rejected, whenever it is noticed by BHEL. Such Bidders would be disqualified from the Bidding Process and their offers would be forfeited / Bank Guarantees invoked. They would also not be allowed to participate in future tenders of BHEL.

Conditions for rejection of offers:

Following is the list of situations which would lead to rejection of offer/s.

This list is not exhaustive but only indicative.

BHEL reserve the right to reject one or all offers without assigning any reason. The decision of BHEL will be final in this regard.

1. *If the offer fails to meet the technical requirements/specifications of the tendered item/s.*



2. *If the offer does not meet the commercial terms & conditions, such as but not limited to delivery period specified in the tender, Delivery terms, payment terms, Liquidated damages, Risk Purchase, cancellation clause etc., including the load factors specified in the tender.*
3. *If the bidder fails to respond to clarification sought, within a reasonable period. In case of doubts / lack of clarity on the technical and commercial offer of the bidder, BHEL will seek clarifications. Bidders are required to respond completely to such BHEL's queries within 3 working days unless otherwise agreed to in writing by BHEL for period beyond 3 days. If supplier fails to respond within 3 working days or maximum 2 working days on a reminder thereon, the offer of such bidders will be automatically dis-qualified in the tender without further recourse to informing the bidder.*

Record of Revisions:

Revision No.	Revision Date	Modification
01	17.08.2016	Payment terms for Foreign suppliers modified wrt loading- Clause k.ii
02	29.08.2016	Treatment of banned vendors – Para 3 added - Clause L.ii
03	14.09.2016	Opening of offers – clause B – sub clause ‘b’ included and existing clause ‘b’ renamed as ‘c’.
04	14.09.2016	Opening of offers – Note – sub clause (ii) modified

**ANNEXURE - C****CHECK LIST STANDARD COMMERCIAL TERMS & CONDITIONS**

S No.	BHEL Standard Terms	Supplier Confirmation	Deviation (if any)
01	Terms of Delivery:		
(a)	Indigenous Supplies : BHEL Stores/ Ranipet, Tamilnadu [Packing & Forwarding, Freight & Insurance are in Supplier's scope i.e. included in the quoted prices. Unloading would be to the account of BHEL only].		
(b)	Foreign Supplies : CFR Chennai Sea Port Basis only and Insurance in BHEL's scope.		
02	Delivery Period: To mention clearly the exact delivery period and quantity per month as it attracts contractual penalty on delays. To be indicated in days/weeks/months from date of receipt of drawing approval/ manufacturing clearance		
03	Liquidated Damages (LD) : The applicable LD shall be at the rate of 0.5% per week to maximum of 10% for the undelivered portion and for the deliveries made beyond the agreed Delivery Period. Delivery being the essence of BHEL's contract requirements, in the event that a Supplier does not accept the above LD condition, the offer would be loaded to the extent of the shortfall with respect to upper limit specified above.		
4 (a)	Terms of payment for Indigenous Suppliers: 100% payment will be made directly thru' EFT within 90 days from the date of receipt and acceptance of materials at BHEL Stores, Ranipet for NON MSME vendors and within 45 days for MSME vendors. If any supplier is asking for payment terms other than the above specified, then suitable loading on cost will be considered. Loading of any deviation in the payment terms w.r.t tender terms will be "Base rate of State Bank of India (SBI) (as applicable on the date of bid opening: Techno-commercial bid opening in case of two part bids) + 6%, will be considered for loading for the periods of relaxation sought by bidders.		
4 (b)	Terms of Payment for Foreign Suppliers: "100% thru' irrevocable & unconfirmed LC at sight within 3 weeks from the PO date through any one of our Bankers listed elsewhere in the tender conditions for 100% value (less Agency Commission, if any) valid upto the PO delivery period and 15 days thereafter for negotiation. All bank charges in India to BHEL's account and all other charges outside India to Supplier's account. BHEL reserves the right to load the price of foreign suppliers in order to bring them on common platform as per Indigenous Suppliers on the account of differential payment terms to Indigenous Suppliers. Loading of payment terms will be "Base rate of State Bank of India (SBI) (as applicable on the date of bid opening: Techno-commercial bid opening in case of two part bids) + 6%, will be considered for loading for the periods of relaxation compared to indigenous suppliers i.e. 90 days.		
05	Whenever there is an Indian Agent to represent a Supplier, it is mandatory to give the details of services to be rendered by Indian Agent and / or the details of agreement between Supplier and Agent. Supplier to indicate the Agency Commission payable. Indian Agency Commission will be paid only in Indian Rupees, calculated at the rate of exchange prevailing on the date of price bid opening. This is payable on satisfactory completion of the contract. Agency agreement copy shall be submitted along with Annexure-C without fail. Note: In order to maintain sanctity of the tender system, it is mandatory that one Agent cannot represent two Suppliers or quote on their behalf in a particular tender enquiry. If any Agent represents more than one Suppliers all such offers will be rejected.		

**ANNEXURE - C****CHECK LIST STANDARD COMMERCIAL TERMS & CONDITIONS**

S No.	BHEL Standard Terms	Supplier Confirmation	Deviation (if any)
06	Guarantee Period: Guarantee regarding manufacturing defect should be for a period of 12 months from date of acceptance of the materials at BHEL Stores, or 18 months from the date of shipment whichever event occurs earlier.		
07	Contract Execution Bank Guarantee (CEBG): The Supplier shall submit a BG for 2% of the contract value valid for the agreed delivery period + 3 Months. Attached CEBG Format is to be signed and submitted along with Annexure-C as a token of acceptance. Please note no deviation is allowed.(As per annexure -B clause J)		
08	Validity: Supplier to mention clearly the validity date of the offer. Minimum 90 days from tender opening date and 60 days from the date of the Reverse Auction/Price bid opening date;		
09	Clientele List: Supplier to submit detailed clientele list with their full address including detail of contact person with phone no., fax no. & e-mail ID as per clause A]i) of Annexure - B (STANDARD TERMS & CONDITIONS).		
10	Reverse Auction (R/A) / Bidding through Internet: Supplier confirmation required.		
11	Taxes & Duties:		
(i)	Excise duty in % (for Indigenous supplier): As per annexure -A. ED invoice is required for availing Cenvat benefit		
(ii)	Sales tax in % (for Indigenous supplier): VAT / CST to be indicated by the supplier.		
12	Test Certificate: To be submitted. With Chemical and Mechanical properties and dimensions as per Standards and our Technical Delivery Conditions		
13	Risk Purchase Clause (as per clause-I of Annexure-B) (Supplier Confirmation Required)		
14	Firm price till completion of order		
15	Inspection before despatch at supplier's works by BHEL/TPI agency		
16	MSE /NON MSE STATUS WITH PROOF		
17	For Foreign Offers:		
(i)	Manufacturers' Name and address:		
(ii)	Country of Origin:		
(iii)	Mills Letter of Authority		
(iv)	Agency Agreement		
(v)	Approximate weight and cubage of the consignment.		
Signature & Office Seal of Vendor			

I – Rate Contract Terms and Conditions

- (i) This Enquiry is for entering into Rate Contract for the procurement of EOH (Electrically operated hoist) for various projects. Contractual period shall be one year (twelve months) from the date of LOI/PO.
- (ii) *Separate addendum will be issued against firm requirement as and when requirement arises.*
- (iii) *The rate contract quantity indicated is tentative only.* The qty indicated are not guaranteed requirement. It may increase / decrease. Also Delivery date indicated in the Enquiry is tentative.
- (iv) Rates shall be firm till completion of supplies and shall be valid for ordering for a period of twelve months from the date of Letter of Intent. This means the order can be released on the last date of the Contract period.
- (v) *Delivery is essence of the contract.* Vendor shall indicate the start-up period of the delivery from the date of Letter of Intent and also clearly indicate the quantity of heating element that can be supplied there after (First lot) each month in the offer.
- (vi) Vendor shall offer their prices on F.O.R .BHEL Stores, Ranipet basis i.e. price shall be inclusive of all ie. P&F and Freight & Insurance.

II - Special Terms and Conditions

- (i) Suppliers shall enclosed notarized MSE copy (in original) along the Chartered accountant letter (in original) to validate the MSE status . for MSE vendor who have submitted the above documents shall be considered for 45 days after SRV payment term , and for remaining all other vendor's it shall be 90 days.

ANNEXURE-E

Reverse auction (RA) / on-line bidding on internet:

Against this enquiry for the subject item/ system with detailed scope of supply as per 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.a. BHEL reserves the right to go for Reverse Auction (RA) instead of opening Part I 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.
2. b. Those bidders who have given their acceptance for Reverse Auction (quoted against this tender enquiry) will have to necessarily submit “online sealed bid” in the Reverse Auction. Non-submission of “online sealed bid” by the bidder 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 help to arrive at “Total Cost to BHEL” like 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 submitted and available with BHEL shall be opened as per BHEL's standard practice.

12. Bidders shall be required to read the "Terms and Conditions" section of 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 goes for reverse auction & depending on the number of bidders, the H1 bidders (whose quotes are highest in online sealed bid) may not be allowed to participate in further RA process. Further, in case of sufficient vendors, exclusion of H1 bidders may get extended up to 20%.

(TO BE STAMPED IN ACCORDANCE WITH STAMP ACT AND THE EXPIRY DATE OF BG MUST BE AFTER 3 MONTHS FROM THE DATE OF COMPLETION OF SUPPLIES)

CONTRACT EXECUTION BANK GUARANTEE

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 Boiler Auxiliaries Plant located at Ranipet – 632 406, (hereinafter called 'the Company') having entered into a contract with M/s.....
..... hereinafter 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, Ranipet and as per the Contract, the Contractor / Supplier is to furnish a Contract Execution Bank Guarantee for Rs.....in words.....
.....for the due performance of the contract and for the fulfillment of all the terms and conditions of the contract.

Sign and seal of issuing bank
Please affix Non Judicial Stamp
here, as per Stamp Act

Bank Guarantee No.....Date.....Banker Name.....
Bank Guarantee Value Rs.....

1. We.....
.....
.....(Bank's name, Branch, Place – address to be mentioned [herein after referred to as the Bank) at the request of.....
.....(Contractor(s)] do hereby undertake to pay the company an amount not exceeding Rs.....in words
.....
.....
.....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.....
.....
.....(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.....in words.....
.....

Sign and seal of issuing bank

Bank Guarantee No.....Date.....Banker Name.....
Bank Guarantee Value Rs.....

3. We undertake to pay conditionally 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.....(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 Purchase Department 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(date) (After 3 months from the date of completion of supplies) 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.

Sign and seal of issuing bank

Bank Guarantee No.....Date.....Banker Name.....
Bank Guarantee Value Rs.....

6. We.....(name of the 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. The guarantee herein contained shall not be determined or affected by the liquidation or winding up or insolvency of or change in the constitution of the Contractor, but shall in all respects and for all purpose be binding and operative until all payments of all moneys due or that may hereafter become due to the said company or settled irrespective of any liability or obligation of the Contractor under the said Contract.

9. 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 from the Contractor shall, at the time when proceedings are taken against the Guarantor hereunder be outstanding or unrealized.

10. Any claim or dispute arising under the terms of this document shall only be enforced or settled in the Courts at Ranipet, Tamilnadu Jurisdiction.

11. The Bank declares that it has powers to issue this Guarantee under the Bank's Memorandum and Articles of Association and the undersigned has full powers to do so on its behalf under the power granted to him by the proper authorities of the Bank.

12. We(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.....
(name of Bank) have hereunto setout Bank Seal the.....
day of.....month 20__.

Sign and seal of issuing bank.



LIST OF BANKERS FROM WHOM BANK GUARANTEE IS TO BE OBTAINED

SEHEDULED COMMERCIAL BANKS

1. STATE BANK OF INDIA
2. STATE BANK OF BIKANER AND JAIPUR
3. STATE BANK OF HYDERABAD
4. STATE BANK OF INDORE
5. STATE BANK OF MYSORE
6. STATE BANK OF PATIALA
7. STATE BANK OF SAURASHTRA
8. STATE BANK OF TRAVANCORE

NATIONALISED BANKS

9. ALLAHBAD BANK
10. ANDHRA BANK
11. BANK OF INDIA
12. BANK OF MAHARASHTRA
13. CANARA BANK
14. CENTRAL BANK OF INDIA
15. CORPORATION BANK
16. DENA BANK
17. INDIAN BANK
18. INDIAN OVERSEAS BANK
19. ORIENTEL BANK OF COMMERCE
20. PUNJAB NATIONAL BANK
21. PUNJAB & SIND BANK
22. SYNDICATE BANK
23. UNION BANK OF INDIA
24. UNITED BANK OF INDIA
25. UCO BANK OF INDIA
26. VIJAYA BANK
27. BANK OF BARODA
28. KOTAK MAHINDRA
29. HSBC BANK
30. AXIS BANK

SCHEDULED PRIVATE BANKS (INDIAN BANK)

- 31. ICICI BANK
- 32. HDFC BANK LTD
- 33. IDBI BANK

SCHEDULED PRIVATE BANK (FOREIGN BANK)

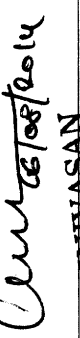
- 34. ABN AMRO BANK LTD
- 35. CITI BANK N.A.
- 36. DEUTSCHE BANK
- 37. STANDARD CHARTERED BANK
- 38. THE HONGKONG AND SHANGHAI BANKING CORPORATION LTD

NATIONALIZED BANKS

- 9. ALLAHABAD BANK
- 10. ANDHRA BANK
- 11. BANK OF INDIA
- 12. BANK OF MAHARASHTRA
- 13. CANARA BANK
- 14. CENTRAL BANK OF INDIA
- 15. CORPORATION BANK
- 16. COOCHIN BANK
- 17. GUJARAT BANK
- 18. HYDRABAD OVERSEAS BANK
- 19. ORIENTAL BANK OF COMMERCE
- 20. PUNJAB NATIONAL BANK
- 21. PUNJAB & SIND BANK
- 22. RESERVE BANK
- 23. SANKAR BANK OF INDIA
- 24. UNITED BANK OF INDIA
- 25. VISHVA BANK OF INDIA
- 26. YENKA BANK
- 27. BANK OF BARODA
- 28. KOTAK MAHINDRA
- 29. HSBC BANK
- 30. AXIS BANK

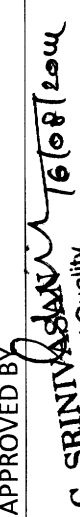
 QUALITY DEPARTMENT M/S BHEL RANIPET TAMIL NADU-632 406		STANDARD QUALITY PLAN								
Ranipet		ITEM/SUB SYSTEM:								
		STANDARD QUALITY PLAN								
		ELECTRICALLY OPERATED								
		HOIST								
Sl no 1	Component & operation 2	Characteristics 3	Class 4	Type of Check 5	Quantum of Check 6	Reference Documents 7	Acceptance Norms 8	Format Of Records 9	Agency 10 M B	Remarks 11

RAW MATERIAL									
1.0									
1.1	MS Plates for DRUM, Pulley, MS Beams and Channels	Chemical & Mech. Properties NDE	Major	Lab analysis UT*	Sample 100%	Specn as per Drawing SA 435	Raw Material TC	P	V
1.2	Castings for Bearing, Plates, Rope guide etc	Chemical & Mech. Properties	Major	Lab analysis	Sample	Specn as per Drawing	Manufacturer's TC	P	V
1.3	Forging for Wheel	Chemical & Physical properties NDE	Major	Lab analysis UT	100%	Specn as per Drawing SA388/ASME Sec.VIII Div 2 Cl:3.3.4	Manufacturer's TC	P	V
1.4	Forging for Shafts, axles and gears & pinions for Hoist.	Chemical & Mech. Properties NDE	Major	Document Review UT**	100%	Specn as per Drawing SA388/ASME Sec.VIII Div 2 Cl:3.3.4	Manufacturer's TC	P	V
1.4.1	Gears & Pinions (After final machining/grinding)	NDE	Major	MPI/LPI*	Sample	ASTM E709/E 165 or equivalent. No crack/linear indication	Lab TC	P	V

PREPARED BY  ANIL SINGH Asst. Engineer Gr. I / QA BHEL/BAP/ RANIPET - 632 406	REVIEWED BY  P. YASODAKRISHNA Engineer (Quality Control) (P-33) BHEL/BAP/ RANIPET - 632 406	APPROVED BY  C. SRINIVASAN Engineer / Quality BHEL/BAP/ RANIPET - 632 406
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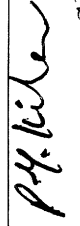
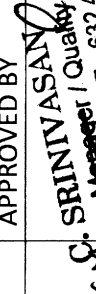
 QUALITY DEPARTMENT M/S BHEL RANIPET TAMIL NADU-632 406		STANDARD QUALITY PLAN								
Ranipet		ITEM/SUB SYSTEM: STANDARD QUALITY PLAN ELECTRICALLY OPERATED HOIST								
		Doc. Ref. No		QP:E:810						
		Rev. No		06						
		Date		16 08 2014						
		Page No		Page 2 of 4						
Sl no	Component & operation	Characteristics	Class	Type of Check	Quantum of Check	Reference Documents	Acceptance Norms	Format Of Records	Agency	Remarks
1	2	3	4	5	6	7	8	9	M B	11

1.4.2	Hook	Chemical & Mech. Properties	Major	Document Review	100%	IS-3815-1969 & IS 2004-1991	Lab TC	P	V	
		Soundness	Major	UT or RT, MPI@	100%	SA388/ASME Sec.VIII Div 2 Cl:3.3.4 or ASTM E466		P	V	@ No cracks are permitted
BOUGHT OUT ITEMS										
1.5	Trailing Cables	IR capacity	Major	Document Review	100%	IS:9968-1988 Part-1/IS:4289/BHEL/NFR SPEC	Raw Material TC	P	V	
1.6	Wire rope	Size/Surface Condition & Visual	Major	Dimensions, Destr. Test	10%	IS:2266-2002	Raw Material TC	P	V	
1.7	Motor	Make, type & Rating	Major	Review	100%	IS 325-1996 & BHEL Specification	TC	P	V	Motor TC/IR shall be reviewed by BHEL/BHEL TPI
		Routine test	Major	Electrical	100%	IS 325-1996 & BHEL Specification	MTC	V	V	
	Fasteners- Galvanized	Verification	Major	Visual	100%	IS:1367-2002		P	---	

PREPARED BY	REVIEWED BY	APPROVED BY
 Ch. A. V. Srinivasan Engineer / Quality Control BHEL/BAP/ RANIPET - 632 406	 P. Y. S. Srinivasan Engineer / Quality Control BHEL/BAP/ RANIPET - 632 406	 C. Srinivasan Manager / Quality Control BHEL/BAP/ RANIPET - 632 406

 QUALITY DEPARTMENT M/S BHEL RANIPET TAMIL NADU-632 406		STANDARD QUALITY PLAN ITEM/SUB SYSTEM:					
Ranipet		STANDARD QUALITY PLAN ELECTRICALLY OPERATED HOIST					
		Doc. Ref. No		QP:E:810			
		Rev. No		06			
		Date		16 08 2014			
		Page No		Page 3 of 4			
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		Quantum of Check		6			
		Type of Check		5			
		Class		4			
		Characteristics		3			
		Component & operation		2			
		Sl no		1			
		Remarks		11			

2.0 INPROCESS CONTROL									
2.1	Rope & drum assembly	Dimension	Minor	Measurement	100%	As per drawing	TC	P	V
	Welding	Welder Qualification	Minor	Verification	100%	AWS.D1.1/WPS	WQR		
2.2	Gear Box Housing	Leak Test	Major	Kerosene Test	100%	Fill test-No leakage allowed	TC	P	V
2.3	Wheel, Gears & Pinions	NDE		MPI	100%	As per BHEL Specification	TC	P	W
2.4	Hook	Proof Load test	Major	Load test	100%	IS 3815	TC	P	W
		Soundness after Load Test	Major	LPI	100%	ASTM E 165/No crack (linear indication to be ground)			
		Type	Minor	Verification	100%	BHEL Specification	TC	P	V
3.0 FINAL INSPECTION									
3.1	Control Panel	Electrical	Major	IR + HV test, Functional	100%	IS 8623 (LATEST)	TC	P	W
					100%	As per BHEL Specification/ Appd DRG			
		Paint	Minor	Shade, DFT, adhesion	100%	As BHEL specification , No peel off for adhesion	TC	P	W
		Enclosure	Minor	Degree of protection	--	As per BHEL specification	TC	P	W

PREPARED BY  CH. ANIL SINGH Asst. Engineer Gr. I / QA BHEL/BAP/ RANIPET - 632 406	REVIEWED BY  P. YASODAKRISHNA Engineer / Quality Control (QA) BHEL/BAP/ RANIPET - 632 406	APPROVED BY  S. SRINIVASAN Senior Manager / Quality BHEL/BAP/ RANIPET - 632 406
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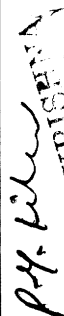
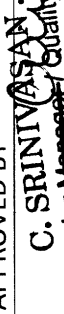
 QUALITY DEPARTMENT M/S BHEL RANIPET TAMIL NADU-632 406 Ranipet		STANDARD QUALITY PLAN ITEM/SUB SYSTEM: STANDARD QUALITY PLAN ELECTRICALLY OPERATED HOIST						Doc. Ref. No QP:E:810		
								Rev. No 06		
								Date 16 08 2014		
								Page No Page 4 of 4		
Sl no	Component & operation	Characteristics	Class	Type of Check	Quantum of Check	Reference Documents	Acceptance Norms	Format Of Records	Agency	Remarks
1	2	3	4	5	6	7	8	9	M B	11

3.2	Performance with control panel	Hoist	Major	Load test, Over load test, Speed control, Dimensions, Lift & Travel*	100%	IS:3938	TC	P	W	*including electrical interlock functional test.
3.3	Verification of Single Phasing Effect (If applicable)	Electrical	Major	Single phasing test	100%	At the time of single phasing, protection has to stop the motor	TC	P	W	
3.4	Painting and packing and stability	Appearance	Major	Visual	100%	BHEL specification		P	--	

Records of revision:

Rev 00	15 08 96	Original Issue
Rev 01	05 02 98	Revised based on letter ref.no: BAP:QA:97:2815 DT 14 10 97 and general review.
Rev 02	19 11 98	Revised based on SIMADRI QP:SIMH:862/00 & based on feed back received from QC/Proc.
Rev 03	03 02 99	Revised based on sub vendors feed backs and general review.
Rev 04	10 09 11	Revised based on sub vendors feed backs and general review
Rev 05	06 10 11	Revised based on sub vendors feed backs and general review
Rev 06	16 08 14	Revised based on sub vendors feed backs and general review

Legend: P=Perform, W=witness, V=Verification, M=Manufacturer/sub supplier, B=BHEL/BHEL TPI, TC=Test certificate, IR=Inspection Report

PREPARED BY  CH. ANIL SINGH Asst. Engineer Gr. I/ QA BHEL/BAP/ RANIPET - 632 406	REVIEWED BY  P. YASODAKRISHNAN Engineer / Quality Control BHEL/BAP/RANIPET-632 406	APPROVED BY  C. SRINIWASAN Senior Manager / Quality BHEL/BAP/ RANIPET - 632 406
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PRODUCT STANDARD
EDC-ECI
BAP/BHEL/RANIPET – 632 406

TECI:EOH:GEN:REV 00
EFFECTIVE DATE 01.12.2012

TITLE : TECHNICAL SPECIFICATION FOR BOUGHT ITEMS FOR ESP
ITEM : ELECTRICALLY OPERATED HOIST
CUSTOMER : GENERAL SPECIFICATION FOR NTPC & NON NTPC PROJECTS

	NAME	DESIGNATION	SIGNATURE	DATE
PREPARED	M.VIJAYALAKSHMI	JST	M. vijaya	01.12.2012
CHECKED	REMYA KUKKILLIYA	ENGINEER	Remya	01.12.2012
APPROVED	S.RANGARAJAN	DGM	S. R.	01.12.2012

ISSUED BY

EDC – ECI

REVISION NO:00

INITIAL RELEASE : 01.12.2012

1.0.0 **SCOPE:**

This specification covers the design, material constructional features, manufacture, testing, inspection, packing, erection supervision, commissioning and supply of electrically operated hoists assembly, with cross travel complete in all respect including control box, flexible trailing cable, cable trolleys, drag chain, auxiliary girder, FUSE-SWITCH unit etc. The assembly shall be complete in all respect ready for erection & commissioning. Operation & Maintenance manual in required number of copies shall be supplied.

2.0.0 **PROJECT INFORMATION:**

2.1.1	Ambient Temperature	:	5 deg. C to 50 deg.
2.1.2	Design ambient temperature	:	50 deg.
2.1.3	Relative humidity	:	100% RH
2.1.4	Location	:	Outdoor
2.1.5	Atmospheric condition	:	The atmosphere is heavily dusty with abrasive dust and coal particles present in large quantity. The climate is tropical, conducive to fungus growth.
2.1.6	Supply	:	3 ph, 415V AC, 50Hz
2.1.7	Tolerance in voltage	:	±10%
2.1.8	Tolerance in frequency	:	±5%
2.1.9	Tolerance in Voltage & Frequency	:	±10% (absolute sum)

2.2.0 **APPLICATION**

The electrical hoist and trolley is meant for handling up High Voltage Transformer Rectifier (HVR) from ground level to the roof of the Electrostatic Precipitator (ESP), position the same on rail & vice – versa. Details are as under:

2.3.0 **HOIST DATA**

Capacity	:	3 tonnes
Speed of the hoist (range)	:	5 to 10 metres per minute
Speed of cross travel (range)	:	5 to 6 metres per minute

SL. NO.	DESCRIPTION	UNIT	VARIANT-1 QTY/EOH	VARIANT-2 QTY/EOH
01	3T EOH assembly for lifting & cross travel including brakes, drum with Ropes suitable for 35 MR Height of Lift , Electrical control panel, Pendant PB with control cable with link chain.	ST	1	1
02	63A FSU with enclosure suitable for outdoor installation, wall mounted.	NO	1	1
03	Trailing flexible copper cable for power supply	MR	55	90
04	Galvanized link drag chain.	MR	44	77
05	Cable trolley assembly.	ST	20	30
06	Auxiliary girder assembly for trailing cable for a cross travel length of	MR	40	70
07	Rain hood for Hoist motor, cross travel motor and control box.	ST	1	1
08	Grease gun with grease.	NO	1	1
09	10 % lubricant	ST	1	1

3.0.0 CODES AND STANDARDS

The applicable codes and standards are as given below (with latest amendments if any)/ equivalent international standards.

3.1.0	Electrical wire rope hoist	:	IS 3938
3.2.0	Service class	:	IS 807
3.3.0	Drum, Sheave	:	IS 3938
3.4.0	Gears	:	IS 3681, IS 7403
3.5.0	Rope	:	IS 2266
3.6.0	Hook	:	IS 3815
3.7.0	Bearings	:	IS 6455, IS 6457
3.8.0	Grease nipple	:	IS 4009
3.9.0	Motor	:	IS 325, IS 4691, IS 4729
3.10	Cables	:	IS 694 Part I&II, IS 3961, IS 1554, IS 9968, IS 6380

3.11	Structural materials	:	IS 2062
3.12	Earthing	:	IS 3043
3.13	Colour shade	:	IS 5
3.14	AC Contactors	:	IS 13947 Part - IV
3.15	HRC Cartridge fuse links up to 650V	:	IS 9224
3.16	Heavy duty air brake switches and composite units for air brake switches and fuses for voltage not exceeding 1000V	:	IS 4064
3.17	General requirements for switchgear and control gear for voltage not exceeding 1000V	:	IS 4237
3.18	Control switches for voltage up to and including 1000 V AC, 1200 V DC	:	IS 6875 (Part-I&II)

4.0.0 **DESIGN REQUIREMENT**

Electrical hoists and trolley shall be complete with hoisting and cross travel motor, wire rope drum, wire rope, hook, gear box for CTs hoist wheels with Trolley necessary gearing, sheaves, shoe type electromagnetic brakes for hoisting & cross travel, guides, weather and dust proof pendent push button station, & control panel, all wiring, 4 core trailing cable for power supply connection with complete supporting arrangement, pendent cable, limit switches, earthing terminals and other accessories to make system complete and ready for erection & commissioning. The hoist assembly shall be fully balanced. Limit switches shall be provided for over hoisting, over lowering and for cross travel limits at both extreme positions.

The supplier shall provide 63A fuse switch unit (FSU) with enclosure suitable for outdoor condition to receive the power supply. The FSU shall be provided with double compression cable glands and crimping type ATC lug to receive owner's Aluminium armoured/ un-armoured power cable. The FSU shall be located 5 meters away from the hoist. Control supply shall be 110V AC, 50Hz and the same shall be derived from 3ph, 415V, and 50Hz supply provided at 63A FSU. Suitable earthing terminals shall be provided in the FSU enclosure for terminating the earth conductor of the flexible trailing cable. All outdoor electrical equipments shall be suitable for IP 55 degree of protection.

5.0.0 **FEATURES OF CONSTRUCTION (MECHANICAL SYSTEM)**

5.1.0 **DRUM**

Rope drum shall be either cast/seamless/welded to sustain concentrated loads resulting from the rope pull. Drum shall be machine grooved right or left or both with grooves of a proper shape to suit the ropes used. Drum shall accommodate all the length of the rope required for the lift plus two dead wraps at each anchor point, without over lapping.

5.2.0 **SHEAVES**

Rope sheaves shall be of rolled or cast steel. Grooves shall be machined to the proper shape for the rope used. Sheaves shall be equipped with sheave guards to retain the rope in groove. Sheaves shall be fully guarded so that the rope cannot come off.

5.3.0 **GEARS& PINIONS**

Gears shall be cut from quality alloy steel of chromium& nickel and shall be heat treated suitably. Pinions shall be of heat treated alloy steel.

5.4.0 **BEARINGS**

Bearings shall comply with relevant IS/BS. Depending upon the capacity and loading conditions the manufacturer shall design suitable grease lubricated or oil lubricated bearings.

5.5.0 **ROTATING AND STATIONERY SHAFT**

Shafts and axles shall be of 080M40/EN8 as per BS 970.

5.6.0 **LUBRICATION**

Hoist shall be supplied with all required lubricant. One number grease gun shall be supplied per project.

5.7.0 **HOIST ROPE**

Hoist ropes shall be of extra flexible steel rope with a well lubricated and having six strands of minimum 36 wires per strands. The rope shall be of sufficient length so that two full wraps shall remain on the drum at the extreme low position of the hook. Number of falls shall be two. Braking loads for the hoist rope shall not be less than six times the calculated load in the ropes at the drum, based on rated load on hook plus the weight of the bottom block plus the weight of the rope. Hoisting rope shall confirm to IS 2266. The rope shall be hot dip galvanised. The rope shall be free from kinks and shall be continuous.

5.8.0 **HOOK**

Hooks made of 080M40/EN-8 as per BS 970 or 30C8/35C8 as per IS 2004 material. The hooks shall be solid, forged, heat treated, high tensile steel of tough construction and shall be provided with a standard depress type safety latch. It shall have swivels and operate on bearings with hardened race. Lock to prevent hooks from unscrewing shall be provided.

5.9.0 **BRAKES**

Hoisting motor and trolley motor shall be equipped with electrically released, spring set shoe type/ disc type/ electromagnetic type brakes. The brakes shall apply when either the motor starter or the main power switch is in OFF position or in the event of "power failure". The braking capacity of the brakes shall be 150% of the rating of the hoist.

5.10.0 **ROPE GUIDE**

Rope guides shall have wear resistant property. It shall prevent slack rope and retain wire rope in the barrel grooves.

5.11.0 **LINK (DRAG) CHAIN**

Hot dip galvanized link (drag) chain shall be provided for the Flexible Trailing Cable to avoid direct loading on the cable.

5.12.0 **AUXILIARY GIRDER FOR TRAILING CABLE**

Auxiliary girder system shall be provided for the support of Flexible Trailing Cable. The trolleys for the trailing cable shall be supported by the Auxiliary girder. The Auxiliary girder will be supported by the main beam (main beam of size ISMB 450 or ISMB 400 will be supplied by the purchaser). The hoist supplier shall provide necessary support materials to support the Auxiliary Girder on the main beam at intervals not exceeding 750mm. Complete structural materials required for Auxiliary Girder system shall be included in the scope of supply of the hoist supplier.

6.0.0 **FEATURES OF CONSTRUCTION (ELECTRICAL SYSTEM)**

Electrical system comprises of 63A Fuse Switch Unit, Control panel, Pendent Push Button Station, Trailing cable, Pendent cable, Hoist & Cross travel motors with electromagnetic brake etc., to make the system complete. All these items are included in the scope of supply of the vendor.

6.1.0 **MOTOR**

The motors shall meet IS 325 or equivalent international standards. The motor shall be designed for frequent reversal, braking and acceleration similar to crane duty. Frequency of reversal shall be minimum 125 times/hour. The motor shall be rated for S4 duty 40% cyclic duration factor. Maximum continuous rating shall have at least 10% margin over maximum load demand including voltage and

frequency variations, temperature rise and other variations. The body shall have two earthing points on opposite sides.

The motor shall be provided with an enclosure fully meeting the requirements of IP 55 as per IS 4691 meant for outdoor service. In addition rain-hood shall be provided for the motors. The motor shall be Totally Enclosed Fan Cooled (TEFC) type or Totally Enclosed Surface Cooled (TESC) type.

Motors shall have minimum class "F" type insulation with temperature rise limited to class "B". The winding shall be suitable for successful operation in hot, humid, & tropical climate with the ambient temperature of 50 degree centigrade. The temperature rise shall be limited to 70 degree C (by resistance method) over an ambient of 50 degree C. The insulation shall be given fungicidal and tropical treatment as per IS 3202. The frame shall be cast and rigid. The motors shall be designed for both directions of rotation. The terminal box shall be weather and water tight and suitable for outdoor service, having a degree of protection of IP 55. It shall be provided with removable front cover for making connections. Neoprene gaskets at cover joints shall be provided. The terminal box shall be suitable to withstand 31 MVA for 0.25 seconds without damaging the box with fuse protection. Nickel-plated brass double compression cables glands and ATC lugs shall be provided to receive the power cables. If the hoist motor is placed inside the rope drum, then the motor lead wires can also be taken out without necessity of a terminal box.

The motor vibration and noise shall be within the limits specified in IS 12065 and IS 12075. The noise level shall be limited to 85dB.

6.2.0 **SWITCHES**

Heavy-duty power switches with quick make and brake mechanism meeting relevant IS requirements shall be provided. The switches shall be adequately rated to get complete protection even under abnormal operating conditions.

6.3.0 **PUSH BUTTONS**

The Pendant Push Button station shall have the following Push Buttons: a) Hoist, b) Lower, c) Forward, d) Reverse & e) Emergency Stop. The Emergency stops Push Button shall be Lockable type. The Pendant Push Button station shall have the following LED clustered type indicating lamps: a) SUPPLY ON, b) HOIST MOTOR Raise/Lower, c) CT MOTOR Forward/Reverse, d) HOIST MOTOR TRIP and e) CT MOTOR TRIP.

The Pendant Push Button station shall be supported from the Control Panel with hot dip galvanized Link Chain. The Pendant Push Button Station shall be connected to the Control Panel using multi-core copper flexible control cable of 10 m length. The Enclosure of Pendant Push button station shall be designed for IP 55 degree of protection.

Push buttons shall be spring return type with 2NO+2NC self-reset contacts rated for 5A at 415volts AC. The push buttons for different operations like "HOIST/ LOWER, FORWARD / REVERSE", "STOP"

shall have different colours. All Push buttons shall be as per relevant IS. The Push buttons shall be properly shrouded so as to prevent water & dust entry.

6.4.0 **CONTACTOR**

All Contactors shall be suitable for DOL application with coils suitable for the control voltage provided by the supplier. Contactor construction shall be rugged.

For control purpose, only auxiliary contactors shall be used. Relays are not acceptable in place of Auxiliary Contactors.

The power contactors shall have Mechanical interlocking in addition to Electrical interlocking so that at any point of time only any one of the two Power contactors (either up or Down, Left or Right) will be energized.

The contactor shall be AC4 duty for inching operation.

6.5.0 **THERMAL OVER LOAD RELAYS**

Thermal over load relays wherever provided shall be ambient temperature compensated with suitable setting ranges. The relay shall be auto reset type. The relay shall be provided with a door mounted hand reset push button. The O/L relay shall have inbuilt single phasing protection as built-in feature.

6.6.0 **FUSES**

Only HRC fuses of plug-in type with Class-4 AC duty shall be provided.

Fuse base shall be rugged. Adequate shrouding shall be provided for live accessible parts and it shall be possible to replace any fuse without damages of contacts when the circuit is alive.

6.7.0 **INDICATING LAMPS**

LED clustered type indicating lamps of low watt consumption with suitable built-in series resistor shall be used. LED and lenses shall be inter-changeable and easily replaceable from the front. The indication lamps shall be properly shrouded so as to prevent the dust and water entry. Indicating lamp shall be provided for "HOIST MOTOR ON", "CT MOTOR ON", "HOIST MOTOR TRIP", "CT MOTOR TRIP", "SUPPLY ON" ETC.

6.8.0 **WIRING**

The control panel wiring shall be complete in all respects and ready for connection of external power for terminating external cables. Necessary double compression Nickel plated Brass cable glands along with suitable terminal blocks and lugs to receive trailing cable and pendent push button cable shall be provided. The cable glands, lugs and terminal blocks shall not be supplied loose. Point to point wiring shall be adopted. Not more than two wires shall be terminated at each terminal. Wiring shall be neatly laid out and bunched together suitably. The wiring shall be done with minimum 2.5 sq.mm multi stranded copper, PVC insulated 1100V wires.

6.9.0 **TERMINATION**

All power and control wires shall be terminated on terminal block/component using crimping type Annealed Tinned Copper lugs/connectors. CLIP-ON type terminal block shall be used. The terminal blocks shall be used for control wiring. The terminal blocks shall be complete with insulated barriers, terminal studs, washers, nuts, lock nuts and identification strips with terminal numbering.

6.10.0 **CONTROL PANEL**

Control panel shall be provided to house the electrical components like fuses, contactors, relays, isolators, switches, and control supply transformers etc along with necessary wiring. The components shall be clearly identified by labels. The panel shall be made of sheet steel of minimum 2mm thick and shall be dust and vermin proof, suitable for outdoor condition. Adequate number of DOUBLE COMPRESSION type cable glands (heavy duty) of brass with nickel plating and Annealed Tinned Lugs shall be provided for incoming and outgoing power and control cables. The cable glands shall be provided with dummy plugs. The door, removable cover plates, and metal-to-metal joints shall be fully neoprene gasketed.

The control panel shall be pre treated in seven tank process and epoxy painted. Space heater with thermostat shall be provided for the control panel. The control panel shall be designed for IP 55 degree of protection.

6.11.0 **CONTROL SUPPLY TRANSFORMER**

Dry type, step down control supply transformer 415V / 110V AC shall be provided to derive control supply for starter operation & indication. The transformer shall have minimum class 'B' insulation. The rating of the transformer shall be decided based on maximum power consumption plus 25% margin. The transformer shall meet IS 12021.

6.12.0 **FUSE SWITCH UNIT**

Metal enclosed, FOUR POLE fuse switch unit (TPN) of 63A, 415V, 3 phase 4 wire AC, rating suitable for outdoor location shall be provided to receive purchaser's supply. The enclosure shall be suitable for IP 55 degree of protection. Suitable Nickel-Chromium plated brass DOUBLE COMPRESSION glands and crimp type ATC lugs to receive purchaser's 4C-16 sq. mm Al armoured/ un-armoured FRLS cable & vendor's 4C-4 sqmm copper un-armoured cable shall be provided. Cable glands and lugs shall also be provided for the flexible trailing cable. The FSU shall be provided with 2 No's of earthing terminals with M12 screws, nuts and washers. The FSU shall be located at a fixed location about 5 m away from the start position of the hoist.

6.13.0 **CABLES**

6.13.1 The trailing cable shall be 1100V extra flexible having 4 cores and shall carry the power supply to the hoist from FSU. The conductor cross section shall be minimum 4 sqmm multi stranded tinned copper of

class 5 of IS 8130. The insulation shall be heat resistant elastomeric compound based on ETHYLENE PROPYLENE RUBBER (EPR) with continuous withstanding temperature of 90 deg C. The inner sheath shall be heat resistant elastomeric compound with black colour. The outer sheath shall be heat resistant oil resistant & flame retardant heavy duty elastomeric compound. The outer sheath shall be marked with cable size, voltage grade by embossing the word FRLS at every 5 meters by embossing, sequential marking at every one meter of length by embossing.

6.13.2 The pendent cable and power cables between HOIST / CT MOTORS to control box shall be as per IS 1554. The conductor shall be stranded PLAIN ANNEALED copper with minimum cross section of 1.5 sqmm for control & 4 sqmm for power. The insulation shall be PVC. The inner sheath shall be extruded PVC and the outer sheath shall be FRLS-PVC. The outer sheath shall be marked with cable size, voltage grade by embossing the word FRLS at every 5 meters by embossing, sequential marking at every one meter of length by embossing.

6.14.0 **LIMIT SWITCHES**

Limit switches shall be provided for over hoisting, over lowering, extreme left & extreme right positions.

Necessary limit switch actuating arrangement shall be provided to actuate the limit switches at the above positions.

The limit switches shall have enclosures designed for IP 55 degree of protection.

Proximity switches are not acceptable in place of Limit Switches.

7.0.0 **EARTHING**

The structure, motor frames and enclosures of electrical equipment shall be effectively connected to earth complying with Indian Electricity Rules and IS 3043. The earthing materials from hoist to FSU shall be in supplier's scope.

8.0.0 **MAKE OF COMPONENTS:**

Only one of the following makes shall be used. Mix up of make for same item is not acceptable. Any deviation with respect to the makes given below is not acceptable.

Hoist/Cross travel motor	:AUTOLEC/SIEMENS/KEC/NGEF/ABB/CROMPTON GREAVES/BHARAT BIJLEE	
Cable	:INCAB/CCI/DELTON/FORT/GLOSTER/UNIVERSAL ASIAN CABLES/ NICCO	CABLES/
Fuse switch unit	:L&T/SIEMENS/CONTROLS & SWITCHGEAR (STROMBERG)/GE /SCHNEIDER	
Power switch	:L&T/ SIEMENS/CONTROLS & SWITCHGEAR/ SCHNEIDER/GE	

Power contactor	:L&T/SIEMENS/TELEMECHANIQUE/BCH/GE
Auxiliary contactor	:L&T/SIEMENS/TELEMECHANIQUE/BCH/GE
Thermal overload relay	:L&T/SIEMENS/TELEMECHANIQUE/BCH/GE
Fuse & Fuse base	:L&T/SIEMENS/GE/CONTROLS&SWITCHGEAR/BUSMANN/GE
Push button	:L&T/SIEMENS/TEKNIC/BCH/CONTROLS&SWITCHGEAR/ TELEMECHANIQUE/GE
LED type Indicating lamp	:L&T/SIEMENS/BCH/TEKNIC/RASS CONTROLS/GE
Internal wiring	:ISI CERTIFIED
Glands	:COMET/SUNIL&CO/QUALITYPRECISION/BRACCO/ARUP ENGINEERING
Lugs	:DOWELLS/3D
Terminal block	:ELMEX/TOSHA/CONNECTWELL/WAGO/PHOENIX
Control switch	:L&T/SIEMENS/KAYCEE/CONTROLS&SWITCHGEAR/ SCHNEIDER/GE
Selector switch	:L&T/ SIEMENS/KAYCEE/GE
Fuse carriers	:L&T/ SIEMENS/GE/CONTROLS&SWITCHGEAR/BUSMANN
Control supply transformer	:AE/KAPPA/INDCOIL/LOGICSTAT/PRECISE/ SOUTHERNELECTRICAL/STATIC TRANSFORMER/G&M
Limit switches	:SIEMENS/BCH/JAI BALAJI
Neutral link	:L&T/SIEMENS/GE/SCHENIDER/CONTROLS & SWITCHGEAR

Make of various components for NTPC projects are subject to NTPC approval. No additional delivery or price implication is acceptable due to NTPC comment on make of components. Mix up of make for same item is not acceptable in any enquiry.

9.0.0 **PAINTING**

The colour shade shall be Blue as per RAL 5012.

10.0.0 **DRAWINGS / DOCUMENTS TO BE SUBMITTED**

(A) Along with the offer:

1. Schedule A - Clause by clause confirmation for this TEP:
2. Schedule B - Deviations, if any, to be spelt out clearly. Any clarification furnished against any clause of the technical specification will be construed as compliance only.
3. Schedule C - BOM for the system.
4. Rating of cross travel and hoist motor

The bidders are instructed not to submit bidders' own technical specification and any other technical details.

(B) After placement of order, within three weeks.

1. Power and Control scheme
2. Bill of material indicating description of the item, rating, make, quantity, type reference etc., for
 - a) Panel mounted components
 - b) Pendent mounted components
 - c) Items covered in the system like trailing cable, trolley etc.
 - d) Hoist, Cross travel arrangement, Auxiliary Girder system, all cables under scope etc.
3. Detail drawings
 - a) OGA of Control panel
 - b) OGA of Pendent
 - c) Gasketting and locking arrangement of Control panel
 - d) EOH & trailing cable mounting arrangement.
4. Justification for
 - a) Motor rating selected
 - b) Rope selected
 - c) KVA rating of control transformer.
5.
 - a) List of items mounted in the assembly and list of loose item supplied along with weight.
 - b) Packing drawings.
6.
 - a) Data sheet for Hoist & cross travel motor
 - b) Data sheet for brake.
 - c) Data sheet for trailing & pendent cable.
7. Cable schedule for hoist indicating size, termination between which equipments. rating, quantity, make etc.

(C) Manufacturing shall proceed on obtaining BHEL approval.

(D) Shipping list indicating items, quantity, weight and package number to be submitted before inspection call is given. Despatch shall be maintained in line with the shipping list.

(E) All the drawings shall be prepared in AUTOCAD. After final approval the above documents shall be submitted in CD apart from hard copies.

- (F) The drawings and data sheet shall be submitting in SOFT MEDIA (PDF format, apart from 6 sets of hard copies for BHEL approval).

11.0.0 **INSEPCTION:**

The inspection will be carried out based on the following documents.

1. BHEL Purchase order
2. BHEL Technical specification
3. Quality plan or Quality checklist indicated in the enquiry.
4. BHEL approved supplier drawing & data sheets.

12.0.0 **O&M MANUAL:**

O&M instruction manual in the required quantity as in enquiry shall be supplied directly to BHEL. Ranipet in required numbers as per enquiry immediately after the despatch of the hoist. Instruction manual shall be submitted in soft media apart from hard copies. Hard copy of the O&M manual shall be sent along with the hoist.

The O&M manual shall include but not limited to the following.

- a) Dos & Don'ts during receipt, storage, erection & commissioning.
- b) Instruction to be followed on receipt, storage & erection.
- c) Construction details of the hoist assembly.
- d) Drawing indicating various parts of EOH assembly with part numbers.
- e) Recommended lubrication & maintenance schedule.
- f) Cut view drawing for the Gear box assembly.
- g) As built drawings, BOM, cable schedule.
- h) Disposal procedure for environmental hazardous material if any.

13.0.0 **PACKING:**

The ELECTRICAL HOIST and accessories shall be properly packed so as to avoid damage during transit and storage. Wooden crate shall be used for packing various equipment / items as per shipping list. Lining with plastic sheet shall be provided inside the crate to avoid water entry during transit / storage. Packing drawing shall be submitted for BHEL approval. Two sets of manual (hard copies) with drawing & data sheet shall be sent along with the packing box. Each packing shall be accompanied with packing slip & all relevant drawings.

14.0.0 **NAME PLATE**

The name plate shall be non corrosive material indicating manufacturer's name, serial number, rating, capacity type.

15.0.0 Deviation to any clause will not be accepted.

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