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Enquiry No.655002E			Dt.22.11.2016
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SECTION – I

NOTICE INVITING TENDER (NIT)

(This is only a request for an offer and not a Contract)

Sealed Tenders are hereby invited from experienced Contractors to finalise the Rates for entering into Annual Rate Contract for the year 2016-17 for SURFACE PREPARATION BY BLAST CLEANING EQUAL TO SA 2½ FINISH on Boiler Components in accordance with the Technical Specification/BHEL Engineering Drawings/Quality Documents out of components to be supplied by BHEL, Ranipet.

Enquiry No. & Date	655002E Dt. 22-11-2016
Due Date & Time for Submission Of Offer	15-12-2016 Prior to 14.00 Hrs
Date & Time for Tender Opening (Other than Price Bid)	15-12-2016 by 14-30 Hrs
Place for Submission Of Offer	At Tender Box located in Outsourcing department, Third Floor, Administrative Building, BAP/BHEL/Ranipet-632406.
Place Of Tender Opening	MDP Hall At Third Floor/BAP/BHEL/Ranipet

This tender specifies a set of prequalification criteria defining the eligibility for the vendors to quote against a particular Rate Schedule of this tender. The Bidders are advised to go through all the enclosed Tender documents terms & conditions detailed under **Sections I to XII, Annexures- A to L**, and Rate Schedules carefully before submitting their Offer.

All the **Annexures A to L** should be filled, wherever applicable by the bidders without fail for evaluation of their offer and **all necessary / Self attested copies of the supporting documents** as required are to be attached.

The bid shall be submitted in three parts namely (1) EMD or Valid MSME certificate (2) Techno Commercial Bid and (3) Price Bid.

Kindly refer to the **Section-IV** – General Terms and Conditions of the tender for detailed procedure for submission of offers and details of exemption from submission of EMD for vendors registered with MSME

Kindly refer to Section-II to Section-IV for detailed scope. Sealed Tenders are hereby invited from experienced Contractors for the above scope.

Contact details / address for any clarification and for Offer submission.

Senior Manager-(Contracts)

Outsourcing Department, Boiler Auxiliaries Plant

Bharat Heavy Electricals Limited, ,Ranipet-632406

Phone : 04172-284030, 284158, 241170

E-Mail : mkmoorthy@bhelrpt.co.in, anvmani@bhelrpt.co.in

Senior Manager(Contracts)/OS

	Bharat Heavy Electricals Limited (A Government of India Undertaking)		☎: 04172-284030, 284158, 241170
	Boiler Auxiliaries Plant, Ranipet – 632 406		
AN ISO 9000 COMPANY	OUTSOURCING DEPARTMENT		E-Mail : tenderoutsourcing@bhelrpt.co.in
Enquiry No	655002E	Due Date & Time for submission of offers	Prior to 14.00 Hrs On 15-12-2016
Enq-Dated	22-11-2016	Date & Time of Tender opening	By 14-30 Hrs On 15-12-2016
<u>SECTION II</u> Techno Commercial Terms & Conditions of the Annual Rate Contract 2016-17 for OS- Main-BLAST			

Scope of the enquiry is to finalise the Rates for entering into Annual Rate Contract for the year 2016-17 for SURFACE PREPARATION BY BLAST CLEANING EQUAL TO SA 2½ FINISH on Boiler Components in accordance with the Technical Specification/BHEL Engineering Drawings/Quality Documents out of components to be supplied by BHEL, Ranipet.

1.0 Contract period for this Enquiry is One Year from the date of finalization of the contract.

- 1.1 For study and quoting of rates for the Rate Schedule indicated in the **ANNEXURE-C** is made available for downloading.
- 1.2 **The offer has to be submitted Only in ANNEXURE-C** duly signed therein by the authorized person of the Contractor with rubber stamp in the space provided in. No deviation or change from the Tender conditions will be entertained and BHEL reserves the right to reject such offers.
- 1.3 Based on the Rate contract, to be finalized, the Firms shall accept and undertake all jobs awarded to them and execute them to the satisfaction of BHEL. Failure to comply with this requirement will be viewed seriously.
- 1.4 BHEL will conclude that the offer has been submitted by the firm, fully understanding all the requirements both explicit and implied and other conditions and accepting the same. After tender opening, contractors do not have any right to change / alter any of the conditions either partly or fully. Offers of any such firms doing so, will be rejected.
- 1.5 Vendors are requested to refer to **SECTION-IV** of this tender for (a) the applicability of EMD, (b) waiver available for EMD for MSME vendors and (c) procedure involved in submitting the offer in three parts.

2.0 FIRM RATES :

- 2.1 Please quote **FIRM** rates **per Square Meter.**, etc. as called for in **Price Bid format ANNEXURE-D** which are applicable to the firm.
- (a) All Painting charges including Red Oxide painting / application of rust preventive oil as applicable shall be payable extra as per applicable extra Rate Schedule.
- (b) Stenciling of Finished Product for Identification as per **Clause 8.3**

- (c) Offering the jobs for inspection to BHEL /Customer or its authorized inspection agency is in Contractors scope and the quoted rate shall include the same.
- 2.2 The rates shall be FIRM and not subject to any variation/escalation on any account during the validity of this Contract period. The rates are operative for placement of job work orders valid for **One Year from the date of finalization of the contract** on Rate Contract basis to be entered into between BHEL and the Contractor.
- 2.3 The total available load will be distributed to the Contractors from time to time with whom Contract is entered into and to that contract the addenda shall be placed in a phased manner subject to the rank L1,L2,L3..,availability of potential and also depending upon vendor performance such as collection of materials in time, manufacture according to our plans/requirements, meeting quality requirements, sequential and timely dispatch of components, Prompt & Quick response, Settlement of outstanding dues if any, and also the maintaining of minimum required facilities available at the Contractor's works to meet the job requirements and submission of such other reports as called for then and there.
- 2.4 The L1, L2 and L3 Vendors will be loaded for more quantum, subject to other performance criteria specified above.
- 2.5 BHEL does not guarantee ordering of any minimum quantity or does not guarantee more share for the lowest tenderers. However, if the L1-contractors are performing well in terms of sequential dispatches and required tonnage interalia meeting the requirements laid down above, the same will be considered during loading.
- 2.6 "Notwithstanding anything to the contrary, including, but not limited to, provisions relating to extension of time and compensation/or delay, time shall be the essence of the Contract."
- 2.7 In case if the quantum of load is beyond the capacity of vendors in the opinion of BHEL or for shorter delivery requirements, BHEL reserves the right to extend/award the contract for manufacture of items covered herein to other probable new or alternative sources, without prior intimation to the contractors and BHEL's decision is final in this regard.
- 2.8 The Contractors are responsible till the Finished/Semi-finished components are safely deposited to BHEL, Ranipet.
- 2.9 Job Work orders will be issued after entering into Rate contract with the Sub-Contractors. Discrepancy in the JWOs if any, has to be settled immediately then and there within 10 days from the date of Job Work Order.

3.0 Raw Material Issues and Accounting :

- 3.1 The weight indicated in GMS/DRG/ and or as per Scope indicated in the PO addendum will be the basis for accounting of raw materials issued. For billing conversion / transportation charges if any the weight indicated in GMS/Drawing only will be considered.

Cleared material shall be collected by the Contractors at the earliest without any delay. If BG limit becomes a constraint to issue the cleared materials, vendor shall arrange for additional BG within 2 weeks' time from JWO date/material cleared date, prior to material collection.

- 3.2 Wherever firm comes across receipt of excess material due to the error in GMS/Drawings that is to be brought to the notice of AGM/OS immediately. Since material is issued on weight basis, any excess material received on account of section weight variation or otherwise, the

same is the property of BHEL, notwithstanding the status of MAS. Such information shall be declared by the supplier to BHEL immediately.

- 3.3 Inventory statement has to be submitted every month by the firm for the free issued materials. If the Fabricator fails to produce or properly account the materials so issued, BHEL, Ranipet will have the right to take further action as deemed fit including recovery of the value of the materials along with the respective administrative charges and statutory levies from the running bills of the Fabricator / temporary suspension of load / termination of contract / de-listing.
- 3.4 Any act of Contractor resulting in dishonest misappropriation or conversion of the materials so issued for his own use shall constitute the offence of Criminal Breach of Trust under Indian Penal Code and /or such other offences under any other provisions of law and the Contractee shall have every right to proceed against the Contractor under Criminal Law in order to ensure proper punishment to such perpetrator/s for the said offence/s. In such cases, BHEL shall take all necessary steps to recover the material available with those firms.
- 3.5 Movement of BHEL materials from Contractor's premises to any other Firm(s), if necessary, for the purpose of production related work shall be documented properly, signed by the sender & receiver and the same to be authenticated by the concerned OS official, otherwise such materials will be treated as shortage by BHEL Accounts.
- 3.6 Protecting the material issued by BHEL under safe custody until completing the delivery as required is vendor's responsibility.

4.0 Working Allowance: Not Applicable

5.0 Scrap / OFF-Cut Norms : Not Applicable

6.0 Disposal of Scrap and Return/Accounting of Balance Materials:

- 6.1 The materials rejected as PDO due to reasons attributable to vendors like (a). Faulty workmanship, (b). Improper storage of raw material issued by BHEL (c) improper handling (d) improper packing etc.. Will entail recovery at prime material's cost as per Cl. 6.6.
- 6.2 The materials rejected due to other than reasons u/cl.6.1 shall be returned to BHEL, Ranipet Stores failing which recovery will be made as per Cl. 6.6.
- 6.3 The material supplied by BHEL, Ranipet shall properly be utilized as per the Scope in Contract/drawings/QWIs in job work order to meet the design and quality requirements of the product.
- 6.4 Failure to return the materials (prime/off-cut) will entail recovery of the value of the materials plus departmental/administrative charges fixed from time to time. Currently the departmental/administrative charges are 25% for indigenous material and 50% for imported materials on the material value. In addition, statutory taxes, duties & levies as applicable will also be recovered and no claim for refund will be admitted by BHEL, Ranipet. The rate of departmental and administrative charges as applicable from time to time irrespective of the date of failure will be applicable. Besides penal interest will be levied on the material value, for the period starting from date of issue of material.

- 6.5 For the purpose of material accounting after completion of a particular WO, BHEL/OS department will issue a Preliminary Material Accounting Statement thro' E-mail, the next day of completion.
- (a) The Contractor shall respond within 7 days of receipt of Preliminary MAS, Either by Accepting the Pre-MAS OR submit their own MAS (Contractor/Firm-MAS) in the case if the Pre-MAS is not in line with the requirement.
 - (b) Any discrepancy Like weight correction, DU correction, variation in off-cut /scrap quantum etc., as indicated in Pre-MAS will have to be reconciled with the Material Accounting Section with necessary proof of documents within a week from the date of issue of Pre-MAS. If reconciliation is not done within a week, it will be treated that Pre-MAS is correct in all respects.
 - (c) If the Pre-MAS is accepted by the Contractor, BHEL will prepare, within 7 days, the Final-MAS.
 - (d) In case if Pre-MAS is not accepted by the Contractor, the Contractor/Firm-MAS submitted, if any, by the Contractor will be considered and if no such Contractor/Firm-MAS is submitted also, BHEL will prepare a Provisional-MAS and send through email, within a week.
 - (e) If the material (CS/AS) to be recovered as per BHEL MAS working is within plus or minus 10 Kgs with respect to Contractor/Firm-MAS, then Final MAS will be released with out Pre-MAS acceptance.
 - (f) For Deleted /Diverted Job Work orders, Final Material Accounting should be settled within 14 days time, after deletion/diversion. Otherwise, BHEL will prepare Final-MAS on completion of 14 days of IOM date on suo-motto basis. For exceptional cases with reasons attributable to BHEL, a further relaxation of 1 week will be given on the certification of respective field officers (Please Refer **Section VI** on work-flow for details).
 - (g) The response if any received from the Contractor, will be studied and considered and Final MAS will be prepared. In case if no response is received, the Provisional MAS will be treated as 'Final' MAS and accordingly, Final Material Accounting Statement (FMAS) will be issued. BHEL will prepare the FINAL MAS within **30 days** of DC control.
 - (h) After completion/cancellation of (Issue Position) IP the Contractor has to submit Contractor/Firm MAS comprising material issue cum working details, contract and receipt statement as per the format specified by BHEL for entire IP within 7 days from the date of delivery of last despatch or on date of submission of 100% invoice whichever date falls earlier of the respective IP. Further to, Contractor should certify the submission of bills with 4 (5)(a) Chelan's duly signed with seal in part II including completion of all transactions like Cutting Plan approvals, return of BHEL Material on RSV, IUWTV controls and submit along with MAS.
 - (i) Once the IP is closed as mentioned above no re-opening of IP except recovery from running bills will be entertained.
 - (j) The contractor shall be bound by the accounts, statements acknowledgement of materials, BHEL material issue documents, receipts etc., wherever signed by their representative.
- 6.6 Recovery towards non-return of balance material as per FMAS will be done as per Contract norms along with statutory taxes, duties & levies as applicable from any one of the running bills OR from other means of recovery available. Hence, any correction after the issue of FMAS, the job work order will be treated as closed in all respects thereby any requests towards refund of recovery, if any, will not be entertained.

- 6.7 Wherever MAS not required to be submitted, in case if the material (CS/AS) to be recovered as per our MAS is within (+) or (-) 10 Kg and there is no material collection is involved, BHEL will prepare Final-MAS on suo-motto basis and Recover/Net-weight credit will be provided accordingly.
- 6.8 Please note that the Contractor is responsible for prompt material accounting and settlement of outstanding dues towards non-return of balance material. Repeated occurrence of inordinate delay in settling the material accounting / outstanding dues will entail BHEL the right to terminate the contract forthwith or to impose temporary suspension on further loading at the discretion of BHEL, Ranipet. Also in case of non-return of material or non-submission of Material Accounting Statement, BHEL reserves the right to en-cash the Bank Guarantee / Fixed Deposit Receipt submitted by the Contractor and initiate legal action against the Contractor against this contract OR any other contract, in addition to the other means of recovery from contractor, available with BHEL.
- 6.9 The material issued to the Contractor as free issue shall remain the property of BHEL, Ranipet. The Contractor shall use the above material only for the execution of BHEL'S contract/addenda and for no other purpose whatsoever. The Contractor shall be responsible for the full value thereof to be assessed by BHEL, Ranipet whose decision shall be binding on the Contractor, The Contractor shall be liable for the loss or damage to such property while such property is in the possession or under the control of the Contractor, their employees, workmen, representatives or agents or any other person connected with the Contractor. The Contractor should execute an agreement in **Rs. 100/-** non- judicial stamp paper and maintain the secrecy of the design, know how of BHEL products.
- 6.10 All the materials of BHEL, Ranipet shall under no circumstance be hypothecated/leased/liened /encumbered to any bank or to any lending Institution or to any party whomsoever. It should not also be shown as the Contractor's assets in any of the statements of the Contractor to any party.
- 6.11 The Contractor shall, whenever required, produce the materials supplied as free issue by BHEL, Ranipet in the form of raw material, semi-finished or fully completed boiler components to BHEL officials visiting the Contractor's unit for verification purposes. If the Contractor fails to produce or properly account the material so issued, BHEL, Ranipet will have the right to take further action as deemed fit including recovery of the value of materials along with the respective administrative charges and statutory levies from the running bills of the Contractor (with BHEL, Ranipet and with other Units of BHEL) and also any or all of the actions such as, Suspension of business dealing, temporary suspension of loading, termination of Contract, holding the payment due etc., Similarly for the claim made by any units of BHEL (on account of such vendor) to the BHEL, Ranipet, the Bank Guarantee submitted to BHEL, Ranipet will be encashed.
- 6.12 As and when required/applicable, BHEL, Ranipet will transfer(or advice for returning u/RSV) the balance material available including scrap size available for which PO/Issue Position(IP) is not closed, from one Contractor to the other contractor/other IP of the same contractor. For this, necessary credit will be given in material accounting, the material transfer emanating from Outsourcing, BHEL, Ranipet is to be honored by the Contractor within 15days or otherwise recovery will be made at the prime material cost., Any difficulty for effecting such transfer shall be brought to the knowledge of OS/ BHEL, Ranipet officials immediately.

- 6.13 The Contractor is responsible for submission of CLEAR Material Accounting Statement (MAS) ie. ensure that all transactions are completed (including IUWTV/RSV, supplementary material collection, submission of cutting plan, etc) within 7days from the date of completion of work order & failing, without prejudice to other rights under Contractor, law or otherwise, which MAS will be closed suo motto basis and recovery of the scrap/off-cut will be effected after adjusting of balance payment due to the Contractor from any of the running bills. Delay in settling the Material Accounting will entail BHEL the right to terminate the contract forthwith or to impose a temporary suspension on further loading at the discretion of BHEL, Ranipet.
- 6.14 Materials will be loaded by BHEL, Ranipet either in lorries/trailers/ bullock carts and can be overseen by Contractor's representative at BHEL Stores / Shop. Shortage or variation in quantity, size and weight shall not be accepted once the material leaves BHEL, Ranipet Stores. Materials will be issued by BHEL, Ranipet, only after the receipt of necessary Bank Guarantee as per **Cl.20.0 and Cl.21.0.**
- 6.15 Where an entity (whether a proprietorship, partnership, company, Hindus Undivided Family or otherwise) commits a default or breaches the Contract and the proprietor/ partner/ director/ member of such entity is also a proprietor/ partner/ director/ member of another entity that is registered with BHEL (in Ranipet or any other unit of BHEL), BHEL shall have the right to recover losses due to the default or breach, whether direct, indirect or consequential, either from the defaulting/ breaching entity or the other said entity or both. Such right shall also include the right to encash any security (in any form such as but not limited to bank guarantee, demand draft, FDR, etc.) furnished by either or both entities. Without limiting the applicability of the foregoing, it shall not be a defence to the other said entity for enforcement of such a right that:
- (a) Both entities are legally distinct/ separate entities, or
 - (b) The management of the entity/ partners/ directors/ members of such other entity were not aware that the proprietor/ partner/ director/ member of the defaulting/ breaching entity was also a proprietor/ partner/ director/ member of the other said entity.
- 6.16 The Contractor shall be bound by the accounts, statements acknowledgement of materials, receipts etc., wherever signed by their representatives.
- 6.17 The value of the materials and statutory levies towards non-return of off-cut/scrap wherever applicable will be calculated at the rate prevailing as on the date of accounting and demand thereof by BHEL irrespective of the date of failure for return of the off-cut/scrap by the Contractor.
- 7.0 Surface Preparation:** Surface preparation to a cleanliness level of Swedish Standard Protective Coating (SSPC) SA 2 ½ (near white metal finish) i.e " Removal of loose mill scale and loose paint, to the degree specified, by the impact of abrasive blast propelled through nozzles or by centrifugal wheels. Near white metal blasted surface shall be free of all visible oil, grease, dirt, mill scale, rust, paint, oxides, corrosion products, and other foreign matter, except for staining limited to not more than 5% of the surface area. Such staining may consist of light shadows, slight streaks or minor discoloration caused by stains of rust mill scale, or stains of previously applied paint.
- 8.0 PAINTING:** ALL PAINTING CHARGES (PRIME/FINISH/SPECIAL PAINTS ETC) PAYABLE EXTRA AS PER EXTRA RATE SCHEDULES.
- 8.1 For all painting, applicable QWIs/CIS shall be applied.

- 8.2 For painting of Extra Coating thickness with reference to coating thickness mentioned in the extra rate schedule description, pro-rata charges shall be payable extra based on IOM issued by BHEL/OS.
- 8.3 Unless stated specifically Foundation material, columns up to zero level need not be painted with red oxide. Further, the fabricated semi-finished components shall be legibly stenciled with the Project Name, Work Order Number, DU Number, quantity, weight, Sub-contractor's code Number, match mark no., etc., for identification and dispatched as may be advised.
- 8.4 Sub-contractor code number alone shall be punched using ½ inch letter punch and bordered suitably for easy identification. All the identification marks shall be coated with an overcoat of transparent varnish to protect against weather.
- 8.5 In respect of works contract Sale Tax as per TN VAT please **refer 27.0**
- 8.6 Application of one coat of the specified primer painting is to be done immediately after Blast cleaning as per the stipulated Dry Film Thickness (DFT) normally varies from 35 microns to 100 microns.
- 8.7 Whenever blasting by Grit/shot for surface preparation is to be done, the allied To & Fro Transport charges are also payable extra as per the respective extra Rate Schedule and a self certified declaration from the fabricator (certified by Field officer) is to be enclosed by the concerned fabricator, along with their respective invoices to the effect that the components are blasted not in their works but else where.

9.0 UT/RT/HT/SR: Not Applicable

10.0 EXTRA RATES FOR CONVERSION:

Rates for the special requirements like Special Painting, Heat Treatment, Transport Cost for Intermittent Operations etc. other than RS specified in this tender are to be payable extra through Extra Rate Schedules.

Rates as per extra rate schedules shall be payable extra as per remarks in the IR. The extra Rate Schedules are applicable for all the contractors. The rate finalized for RS-NO. 185A for "Surface preparation equal to shot blasting" will also be operated under Extra Rate Schedule-E08.

Any other extra work not covered under extra RS, but incidental to the completion of fabrication job till handing over to BHEL, shall be deemed to be part of the main fabrication rates.

10.1 Conversion of Sections: Not Applicable

11.0 TRANSPORT CHARGES : Tender calls for the offers on EX-Works basis. Hence Transport Charges payable extra for the Materials / Components collected from BHEL and return of finished items vice-versa as per the Extra Rate Schedules available in the Annual Rate Contract.

- 11.1 Incase of transfer of materials/semi-finished/finished items from one vendor to another vendor, through IUWTV, the responsibility for collection of materials including the cost of transportation and handling etc. shall rest with Second Vendor (fabrication vendor dispatching the finished goods).

- 11.2 **Additional Transport Charges:** Transport Charges incurred by the vendor for any special intermittent operations other than specified in the Rate Schedule or any additional movement requested by BHEL officials in writing, the transport charges payable extra as per the Extra Rate Schedules available in the Annual Rate Contract.
- 11.3 For return of PDO materials thro RSV (PDO other than reasons u/cl.6.1 like issue of faulty materials, non suitable materials, any drawing revision etc), TO & FRO transport charges as per applicable extra rate schedule shall be payable extra.
- 11.5 The Rate payable against the Extra Rate Schedules are inclusive of Toll charges, if any.
- 12.0 **Recovery of Transport Charges:** If the materials are delivered/collected by BHEL/BHEL approved transport contractor when the scope of transport is with vendor, the freight charges incurred by BHEL will be recovered from the vendors.
- 12.1 If Purchase Order is placed with delivery destination other than BHEL-Ranipet, the respective transport charges for delivering the finished job is to BHEL's Account and the amount of transport charges (already included in the rates finalized for the RS) for delivering to BHEL-Ranipet is deductible.
- 12.2 **Dispatch of finished goods Direct to Site (DTS):** Wherever necessary, BHEL may advise fabricators to dispatch finished goods directly to site with transport charges to BHEL's Account. The scope includes loading of finished products on truck for dispatch to respective BHEL-site offices/BHEL's-Customer. In such cases the cost of transportation from Contractor's works to BHEL, Ranipet, not incurred by the vendor shall be recovered from the vendors.

For all the above, the recovery of Transport Charges will be made as per Extra RS E07X, E07Y and E07Z which is operated under ARC.

- 13.0 **PAYMENT FOR EXTRA CHARGES :** 100% Payment will be made for extra charges against Invoice supported by acknowledged Delivery Chelan and Inspection Report (IR) issued by BHEL Inspector/agency. **The payment of extra charges will be made only to the Extra RS Nos, UNIT, Qty mentioned in the IR duly concurred by BHEL Field Officers.**
- 14.0 **SAFE DELIVERY:** The Contractor shall do at his cost the necessary packing for easy & safe handling and transportation as per BHEL drawing wherever specific packing arrangements are applicable and normal packing for the other items required for transit by rail/road transport wherever necessary.
- 15.0 **TERMS OF DELIVERY:** The price should be on "EX-Works" basis only.
- The finished components on acceptance by BHEL, Ranipet inspector or by their authorized inspection agency shall be delivered to BHEL, Ranipet Stores / Shipping or to BHEL Sites / Customer as the case may be immediately.
- 16.0 **TECHNICAL REQUIREMENTS :**
- 16.1 The machining / fabrications shall strictly confirm to the dimensions and tolerances indicated in the drawings/QWI. Care must be taken to adhere strictly to the NOTES given in the drawings/Contract. It should be ensured that actual dimensions, and deviations if any, are recorded properly in the D.R. books and preserved at least for 5 years. The same shall be made available to BHEL Officials or their authorized agencies.
- 16.2 Any other work carried out outside the requirements of drawings/QWIs shall have the prior approval of the competent authority of Outsourcing / BHEL, Ranipet.

- 16.3 Adequate facilities as called for, must be available with the Contractor for the manufacture of boiler components. All the above basic facilities/equipments must be under working condition and the same be made available for verification by the BHEL officials or their authorized agencies whenever they are called for.
- 16.4 For various Rate Schedules, the manufacturing, handling and testing facilities requirement as specified by BHEL from time to time shall be available with the Contractor.

17.0 INSPECTION:

- 17.1 Inspection of blasted items shall be by BHEL Quality control department and/or by the customers and/or by an agency or persons authorized by BHEL, Ranipet at the Contractor's works including Self Inspection firms. Selected firms shall be approved by competent authority authorizing self inspection. The concerned Engineer/supervisor/Authorized Official of the firm authorized by the firm to carry out all Inspection activities and their authority/activities shall be on par with any other Inspection agency approved by BHEL (like TUV/IRS/INTERTEK etc.,).
- 17.2 BHEL representatives/authorized agencies will have free access to the Contractor's works at any time during the execution of job work orders as well as for verification of requisite documents/materials. (The requirement of Customer approved quality plan will be indicated in the PO/Addenda).
- 17.3 The semi-finished components are deemed to have been accepted as ready for delivery only after IR is released by the Inspecting Agency.
- 17.4 Statutory inspection requirements if any, are to be met by the Contractor.
- 17.5 The paint quality will be checked by BHEL Ranipet at regular intervals. Samples will be collected from vendor works and will be tested at BHEL to ensure quality as per relevant standards. In case of discrepancy in meeting our specification the job may be rejected/vendor may be put under suspension of business. **The vendor shall ensure mentioning of the details of paint applied, no of coats, coating thickness on the respective IR of the job.**

18.0 PAYMENTS :

- 18.1 Payment will be made for IP wise 100% for the supplies made against submission of Vendor invoices in duplicate to Finance section furnishing the job work order Sl. No., W.O., IR & DC No. along with IR, giving details of work carried out as per Extra Rate Schedule applicable, if any supported by
- (a) Stores Receipt Voucher in case of Stock Work Order items.
 - (b) Delivery Chelan acknowledged by BHEL Stores/Shipping.
 - (c) Inspection Report (IR)
 - (d) If the claim is made for more than one job work order Sl. No., only one invoice have to be submitted with annexure giving the above details.
 - (e) Contractor MAS with chelan duly signed with seal in part II.
 - (f) finished goods are dispatched directly to site (DTS) from fabricators works as per BHEL instructions, necessary formalities to be followed as per BHEL conditions stipulated from time to time . Also in such DTS cases, the documents like copy of DC, Lorry Way Bill etc shall be submitted along with their invoices for payment purposes.

- 18.2 The amount due to BHEL, Ranipet, if any, will also be recovered from the Contractor's running bills. No request for the refund of penalty/recovery will be entertained after Final Material Accounting is done. Payment will be made only through 'Electronic Fund transfer(EFT)/RTGS Transfer'. Acceptance for the same may be submitted in the prescribed format if not done already.
- 18.4 Payment will be restricted to two bills per Work Order or Job Work Order Sl. No. only. Excise Duty as applicable for Contractor's covered under **clause 28.0**, can be claimed along with documents / certificates mentioned therein. However, one more bill per month against any one of the pending Work Orders will also be permitted as a special case and this should have the prior approval by competent authority.
- 18.5 The Contractor shall ensure that ALL claims including extra charges, if any, as per **Cl. 4.0** are made against the particular work order before the issue of Final-MAS since BHEL will not be able to reopen the case after issue of Final-MAS.
- 18.6 The payment shall be subject to the deduction of any amount for which the fabricator is liable indirectly under this contract or any other contract of the fabricator or any other fabricator's contract where the proprietor / any of the partners / directors of the present fabricator is / are proprietor/director/s/partner/s, in respect of which BHEL / Ranipet is a contractee.
- 18.7 Request for delivery extension is to be made if there is a valid reason, in the format for that particular job work order Sl. No., failing which liquidated damages will automatically be levied as per **Cl. 23.0**. No request for extension/refund of penalty will be entertained there after.
- 18.8 Payment will be made in about 45 days after receipt of valid invoices raised in accordance with **Cl. 18.1** and supported by full set of necessary documents at Accounts Department. No interest shall be payable by BHEL on any money due to the Contractor by BHEL.
- 18.9 For the purpose of payment, only the unit rates are to be considered based on the RATE SCHEDULE NUMBERS. The description of the item is only indicative and it is not binding. Any description given in the item column is only for the purpose of clarity for manufacturing the item. (the description may change designer to designer and/or drawing to drawing).

19.0 PROGRESS REPORT:

The Contractor shall submit progress report from time to time and also discuss with our officials concerning the progress of the work and commitment as may be required by BHEL, Ranipet. The submission, receipt and acceptance of such reports shall not prejudice the rights of BHEL, Ranipet under the Contract nor shall operate as an estoppel against BHEL, Ranipet merely by reason of the fact that they have not taken notice of or objected to any information contained in such reports. Action as deemed fit will be taken if the progress of the work is not satisfactory.

20.0 BANK GUARANTEE :

- 20.1 The Contractor shall execute a Bank Guarantee value not less than **Rs.20.00 Lakhs** from any one of the Scheduled or Nationalized banks on behalf of the Contractor for the safe custody of the materials supplied by the BHEL, Ranipet as free issue and for the satisfactory performance of the Contracts. The guarantee shall be executed on a non-judicial stamp paper or value Rs. 100/- as per our standard Bank Guarantee clauses and shall be kept valid for the full contract period & Claim period of additional THREE MONTHS over the contract period and extensible till final settlement of supply and payment **and BG to be submitted directly by Bankers to BHEL in a Standard format as per Section XII. BG format will be given by BHEL and it has to be filled by Bankers in that format only.**

- 20.2 In place of Bank guarantee, Fixed Deposit Receipt (FDR) drawn in favour of BHEL Ranipet a/c, can also be furnished. In any case BG/FDR shall be available at the time of signing the contract.
- 20.3 The Bank Guarantee should cover the recoveries to be made by BHEL towards Safe custody of Material Supplied, Scrap / Faulty workmanship, etc. also for which proper material accounting is not made within the stipulated time and shall cover all Contracts past, present and future placed / to be placed by the BHEL, Ranipet. If the recovery amount is more than the pending bills, the difference amount to be settled immediately submitting Demand Draft in favour of BHEL/ Ranipet.
- 20.4 Loading on the vendor shall be restricted in such a way that the value of the materials to be issued and the stock of BHEL materials already available with the vendor.

21.0 BANK GUARANTEE NORMS:

- 21.1 Necessary Bank Guarantee (BG) / Fixed Deposit Receipt(FDR) should be furnished. The Bank Guarantee value applicable for the Firm is indicated in **Section XII** enclosed. The BG shall be kept **valid throughout the contract period PLUS 3 Months as claim period** and must be renewed in-time. It is also to be noted that the BG for the value indicated shall be made available with BHEL at the time of entering into ARC, failing which Firm will not be considered for entering into contract with BHEL.

The required Bank Guarantee shall be submitted within 15 Days of finalization of the contract, else the non submission of BG will be treated as "*not honoring his own offer or any of the condition*" stated/agreed in the tender and declared fit for taking penal action by BHEL as per "*Suspension of Business dealings vide Clause S of section IV*"

- 21.2 The release of Contract by BHEL, Ranipet shall be on the strength of Bank Guarantee for the safe custody of components issued by BHEL, Ranipet as free issue in line with **CL. 20.1.**
- 21.3 Based on the capacity declared by the firm, the Sub-contractor may decide the maximum BG value over the base BG value, and the same shall be submitted to BHEL before ordering.
- 21.4 **BG shall be given by bidders for 100% of value of materials** to be issued to the vendor against Job Work Order. The value of materials shall be as per BHEL calculation, which is final.
- 21.5 JWO / Loading on the vendor shall be restricted in such a way that the value of the materials to be issued and the stock of BHEL materials already available with the vendor together do not exceed twice the value of BG at any point of time.
- 21.6 BHEL reserves the right to increase the value of BG/FDR depending on the material availability with the contractors from time to time. For placement of PO/addendum, if available BG is short of the required BG value, the same will be intimated to the vendor to submit additional BG. The vendor shall arrange for the required BG within 15 days from the date of receiving such intimation from BHEL. If the vendor does not submit the required BG within 15 days, then the loading quantity may be reduced / diverted to other firms. After completion of that particular order, the vendors can request for return of BG (other than base BG) and the same shall be considered by BHEL.
- 21.7 The base BG shall be returned by BHEL after 90 days from the date of final bill submission or ARC validity period whichever is later.

22.0 GUARANTEE OF FABRICATION / MACHINING:

The Contractor shall warrant that the conversion work comply fully with the drawings and other technical conditions. If the jobs are found defective owing to reasons attributable to the vendors like faulty workmanship / incomplete work within a period of eighteen months from the date of handing over to BHEL, the Contractor shall make good of it / replace the same at free of cost. Alternatively, the rework / replacement charges will be recovered from the Contractor.

23.0 LIQUIDATED DAMAGES and RISK PURCHASE:

- 23.1 The semi-finished jobs/fabrications on acceptance by BHEL, Ranipet inspector or by their authorized inspection agency, shall have to be delivered to BHEL, Ranipet Stores / Finishing Bay immediately on or before the delivery date stipulated in the addendum. Where the Contractor supplied the finished machining / fabrications beyond the delivery date stipulated in the addendum, liquidated damages at the rate of **1/2%** of the value (Conversion Cost) of the assemblies delayed for each week or part thereof will be levied subject to a maximum of **10%** value of the particular Work Order in the addendum to the Contract without prejudice to any other relief or compensation to the BHEL, Ranipet under any other conditions of the Contract.
- 23.2 Further, BHEL, Ranipet will get these items fabricated/blasted elsewhere, without notice to the Contractor on the account and at the cost and risk of the Contractor, the jobs not so delivered without canceling the Contract in respect of installments of machining / fabrications not yet due for delivery or cancel the Contract or a portion thereof and, if so desired, fabricate elsewhere at the cost and risk and account of the Contractor. Any additional expenditure incurred by BHEL on this account shall be recovered from the Contractor.
- 23.3 In general, delivery period for each JWO shall be 3 Months from JWO Date/Last material clearance date including further materials, whichever is later. However actual delivery shall be fixed by BHEL for each JWO on project requirement and product lead time.
- 23.4 Where delivery extension is sought with waiver of penalty, the same should be applied to OS with justification and approval to be obtained before delivery to BHEL Stores/Shipping and two copies of such letters (One for Accounts & One for OS Department) are to be enclosed along with all the bills. Failure to comply with this requirement will result in recovery of penalty while processing the bills for payment as stated in **Cl. 23.1** from the same bill and no claims for refund of liquidated damages will be entertained there after.
- 23.5 Reasons like power cut, Labour Issue, Machine Break-down etc., which are controllable by the vendors shall not be accepted as reasons for delay for delivery extension purposes. No compensation shall be given to the Contractors, in case of cancellation/diversion of PO'S beyond the delivery Due Date, even if the Jobs have been processed partly.

24.0 ACTION AND COMPENSATION IN CASE OF BAD WORKMANSHIP:

If any work has been executed with unsound, imperfect or bad workmanship or with materials of inferior quality, the Contractor shall on demand in writing from BHEL specifying the work, material/articles complained of, notwithstanding that the same may have been passed, certified and paid for, forthwith, rectify the work so specified in whole or in part as the case may require, at their own cost and in the event of his failure to do so within reasonable period. BHEL will rectify or remove and re-execute the work at the risk and expense of the Contractor.

25.0 COMPENSATION AGAINST DAMAGE OF MACHINERY/TOOLS AND GAUGES SUPPLIED:

- 25.1 BHEL reserves the right to claim adequate compensation from the Contractor on account of any damage caused to the machinery / equipment / tools and gauges supplied to them for execution of work, due to careless or faulty handling or negligence on the part of the Contractor. The total cost of recovery will be decided by BHEL.
- 25.2 BHEL shall have general supervision and direction over the work, BHEL has the authority to stop the work, whenever such stoppage may be necessary to ensure the proper execution of the Contract. BHEL shall also have the authority to reject all the works which do not confirm to the specification, to direct the application of forces to any portion of the work as, in their judgment is required, and order the force increase or decrease and to decide on the issues which arise in the execution of the work.
- 25.3 BHEL reserves the right to suspend the work or part thereof put a hold on further loading to the Contractor at any time for any reason at its discretion and no claim whatsoever on this account will be entertained.

26.0 SUBLETTING :

- 26.1 The Contractor shall not sublet or assign this Contract or any part thereof without the written permission of BHEL, RANIPET. Subletting or assigning this Contract or any part thereof without such permission BHEL, Ranipet shall be entitled to cancel the Contract and to execute the conversion work elsewhere at the risk and cost of the Contractor and the Contractor shall be liable for any loss or damage which BHEL, Ranipet may sustain in consequence of or arising out of such machining / fabrication elsewhere and also cancellation of registration/temporary suspension of further loading.
- 26.2 However, if the PO/PGMA loading demands part processing / Special Process (like Heat Treatment, Machining, Bending, Shearing, Threading, etc..) of certain items at, other BHEL OS-approved Contractor's works, the same may be allowed with the prior permission of BHEL in writing, indicating the period of returning.
- 26.3 "Movement of BHEL materials from our Contractor's premises to any other Firm(s), if necessary, for the purpose of production related work shall be documented properly, signed by the sender & receiver and the same to be authenticated by the concerned OS official, otherwise such materials will be treated as shortage by Accounts".
- 26.4 The vendors will be allowed to indicate alternate sources for carrying out these intermediate operation, wherein the said other sources shall seek approval from BHEL for carrying out these operations.
- 26.5 These intermediate operations are to be carried out only at the approved sources and addition/deletion to this list will be indicated to the vendors then and there.

27.0 TAXES AND DUTIES:

- 27.1 Works Contract VAT exemption certificate as per Form 'S' under section 13 (1)(C) of TN VAT Act as amended from time to time is to be obtained from Commercial Tax Officer by Contractors and submitted to BHEL, failing which appropriate Work Contract VAT will be recovered from the running bills of the Contractor.

- 27.2 In respect of fabrication contracts, as the Contractor is fabricating the material issued by BHEL and the fabricated component is painted by the subcontractor, works contract TDS will be recovered on the value of the works contract @ 5% or as applicable under TN VAT act. Fabricator has to provide TIN number to enable BHEL to deduct and remit the applicable Works contract TDS. BHEL will issue form "T"(Works contract TDS certificate) periodically. Alternatively Contractor can submit Form "S" received from assessing officer, Commercial Taxes, of the respective circle for non-deduction of Works contract TDS by BHEL.
- 27.3 Taxes applicable if any will be reimbursed at actual on submission of necessary tax invoice mentioning the TIN/ registration number and proof of payment to the statutory authorities.
- 27.4 BHEL will recover applicable Excise Duty and VAT along with cost of prime material, off cut, scrap including Turning & Boring (T and B) as per clause 5.1 at the time of finalizing MAS wherever the property in the goods passed on to the Contractor. An Invoice will be issued under relevant rules of Excise and VAT.
- 27.5 BHEL will reimburse applicable VAT @ 5%/14.50% (or as applicable under TNVAT Act) for painting schedule against ORIGINAL TAX INVOICE as per TN VAT Rules and a Certificate of Payment as given below:-
- "We certify that TN VAT of Rs. _ _ _ _ charged in our Invoice No _____ dt _____ has been paid to the Credit of Commercial Tax Officer _____ Circle , Govt. of Tamilnadu on _____:-"
- 27.6 Fabrication of components of ESP, APH, Fans, Gates and Dampers etc. amount to manufacturing activity and hence service tax is not applicable under Negative list (Section 66D (f)). If Fabrication along with Sand Blasting and Painting are carried out by a single fabricator, it will amount to manufacturing activity and no service tax is applicable under Negative list (Section 66D (f)).
- 27.7 Where the process carried out by the Contractor does not amount to manufacture as per Central Excise Act, 1944, service tax is applicable as given below:-**
- 27.7.1 In respect of the processes where there is no transfer of Property in goods for eg: Sand Blasting, Heat treatment, Nitriding etc. carried out separately by a Contractor, the entire service tax has to be paid by Contractor.
- 27.7.2 In respect of the processes where there is transfer of Property in goods for eg. Painting, galvanizing, chrome plating, etc. carried out separately by a Contractor, it is treated as Works contract service and Contractor is charging VAT on 70% of contract price, service tax is applicable for the balance portion of 30% of contract price which is to be paid by fabricator @ 50% and balance 50% will be paid by BHEL as receiver of service, if the subcontractor is individual, HUF, Partnership Firm, Association of persons. In case of Limited Companies (Public or Private) 100% service tax is to be paid by Contractor.
- 27.7.3 Provided where the Paint is issued by BHEL 100% of service tax is to be paid by Fabricator on painting charges.
- 27.7.4 In respect of projects where excise duty paid by BHEL, Contractor is exempt from payment of service tax for these projects under Notification 25/2012 ST dt 20.6.2012 sl No 30 (c)
- 27.7.5 In case of Small service providers where the annual total service value is up to Rs 10 lakh, service tax is exempted under Notification 33/2012 ST dt 20.06.2012 as amended from time to time.

27.7.6 Wherever service tax is claimed by Contractor as above BHEL shall reimburse the applicable service tax @ 14% presently against submission of the following documents:-

- i. Service Tax Registration Certificate (Self attested copy)**
- ii. Original Service Tax Invoice (as per Service Tax Rules)**
- iii. Certificate for payment of Service Tax**
- iv. Service Tax challan (Self attested Copy)**

27.8 For Transport Charges under extra rate schedule number **E17 SERIES**, the entry tax if any will be to Contractors account as the same is available as Input Tax Credit. This rate is inclusive of service tax on transportation.

27.9 Income Tax deduction and surcharge on IT at source at such percentage as prescribed in the Income Tax Act from time to time will be made on the value of the invoices in the absence of Income Tax Exemption Certificate from the concerned Income Tax Officer received and submitted by the Contractor. Contractor has to submit photocopy of PAN Card along with original for verification.

27.10 All statutory documents required for execution of contract to be finalized against this enquiry and required from time to time by State/central Govt. Authorities shall be submitted to BHEL, failing which appropriate recovery/actions as deemed fit will be levied from the running bills of the contractor.

28.0 EXCISE DUTY:

(A) CONTRACTORS WHO USE BHEL MATERIAL FREE OF COST AND FINISHED COMPONENTS RETURNED TO BHEL STORES OR DESPATCHED DIRECTLY TO CUSTOMER SITE:

- (i) Contractors are exempted from payment of excise duty as they are job workers under Government of India Notification No.214/86 CE dt.25.3.86 as amended from time to time for the purpose of free issue of raw materials/semi finished goods to them for carrying out necessary operation and return the finished components without payment of duty to the BHEL RANIPET's factory for further processing. They are bound to comply with the requirements of the said notification. This is subject to subsequent statutory modifications and amendments in force from time to time. Contractors shall comply with the requirements of the said Notification. This is subject to subsequent statutory modifications and amendments in force from time to time. Besides, Taxes, duties, levies and any other govt. special levies as applicable from time to time, through notifications/amendments to original notification/orders, during the tenure of the rate contract, shall be extra as applicable against valid documentary evidence. Any increase or decrease in this regard will be effected accordingly against valid documentary evidence.
- (ii) The required raw materials will be issued under the cover of Cenvat Credit Rule (CCR) 4 (5)(a) and / or Notification 214/86 Challans. The Contractor receiving the materials under CCR 4 (5)(a) and / or Notification 214/86 Excise Challan have to complete the work order and return the finished components and scrap within 3 months from the date of first issue of materials unless otherwise extended by BHEL and all materials shall be fully accounted for in FMAS. For this purpose Duplicate (Green) copy of all the Excise Challan shall be returned back to BHEL after duly signing in PART II with seal with FMAS and DC copy. If the materials are not returned/ fully accounted for within three months or such extended period as may be allowed by BHEL, any Loss of CENVAT credit to BHEL will be recovered from the Contractor's bills.

- (iii) In case of failure of non submission of challan due to reasons not attributable to Contractor, (like non matching of materials, hold informed by BHEL, delay due to cycle time etc.,) is to be intimated to BHEL every month by the Contractor.
- (iv) Incase of direct dispatch to customer site after approval by Asst Commissioner of Central Excise, necessary Excise formalities have to be complied with by Contractor. Necessary records as per Central Excise rules have to be maintained by the Contractor.
- (v) FMAS is to be prepared immediately on dispatch in all cases based on which applicable Duty/VAT on scrap/Off cut will be recovered from Contractor and paid to Excise Dept.

(B) CONTRACTORS WHO USE BHEL MATERIALS FREE OF COST FOR DEFENCE PROJECTS & DESALINATION PROJECTS (EXEMPTED FROM EXCISE DUTY IN THE HANDS OF BHEL) AND FINISHED COMPONENTS RETURNED TO BHEL STORES .

- (i) Central Excise duty will be extra as applicable under notification 8/2003 CE dt 1/3/2003 (without Cenvat Credit) as amended from time to time , as given below, as per of the option of BHEL against proof of duty paid as per EXCISE INVOICE.

Value	Without Cenvat Credit (Notification 8/2003)
First Rs.150 lakhs	Nil
Balance	10.3% or as applicable/Prevailing

- (ii) Raw materials or Components will be issued free of cost from BHEL under the cover of EXCISE INVOICE.
- (iii) The Contractors shall observe all the Excise formalities as per the Excise Act and Rules framed there under from time to time as applicable to them.
- (iv) All clearances of finished components shall be made under the cover of EXCISE INVOICE with Nil Duty under Notification 8/2003 or on payment of duty under Notification 9/2003 as above .
- (v) The "Duplicate for Transporter" copy of Excise Invoice shall be handed over to BHEL Stores along with the finished components. The "Original for Buyer" copy shall be submitted along with bills.

(C) CONTRACTORS WHO USE BHEL MATERIAL FREE OF COST FOR WEG AND FINISHED COMPONENTS RETURNED TO BHEL STORES :

- (i) Manufacturing of Wind mills/Parts of Wind mills and any specifically designed device which run on Wind mills are exempted from payment of EXCISE duty under Notification 12/2012 CE Dt. 17-03-2012 Sl.No. 332 as amended.
- (ii) Thus Manufacture of wind mill and parts thereof by Contractors would be covered under Notification 12/2012 CE Dt. 17-03-2012 Sl.No. 332 as amended from time to time.
- (iii) All clearances of wind mill and parts thereof from the Contractors would refer the Notification reference given above and no Excise duty is payable on such removal .Hence BHEL will not reimburse any amount of ED paid at any point of time by the Contractor for the manufacture of wind mill parts.
- (iv) Wind mill parts would be cleared under NIL DUTY EXCISE INVOICE falling under Excise Tariff 84.12.90

- (v) Raw material or components will be issued free of cost from BHEL under the cover of EXCISE INVOICE.
 - (vi) Prime material and the scrap generated out of Raw materials and components supplied by BHEL are to be returned to BHEL .Otherwise cost and tax thereon will be recovered.
 - (vii) A certificate as follows should also be produced along with the invoice :

"We certify that the excise duty charged in our invoice has been paid to the credit of Government of India Central Excise Department and the goods have been cleared vide Excise Invoice No:----- dt. ----- vide PLA/CC A/c. Sl.No.....dt..... We agree to refund the excise duty amount collected from you if the above items are exempted from levy of excise duty at a later date."
 - (viii) The "Duplicate for Transporter" copy of Excise Invoice shall be handed over to BHEL Stores along with the finished components. The "Original for Buyer" copy shall be submitted along with bills.
- 28.1 BHEL, RANIPET will not be responsible for payment of any taxes and duties wrongly paid on account of ignorance of law or otherwise and also duty paid at a later date based on litigation.

29.0 GENERAL :

- (a) BHEL reserves the right to recover the dues if any, from the contractor from any one of the running bills of this contract or any other contract with the contractor or from any other division of BHEL. Vendors disqualify themselves to be an approved vendor of BHEL, in the event , it is found that they carryout activities / business which are in direct competition to BHEL business and accordingly they will be delisted. Vendors / Firms indulging in business practices detrimental to BHEL, will be severely dealt with by the due process of law. In addition to the above conditions the following specific conditions also bound under this contract.
- (b) It is preferred that the Proprietor/Managing Partner/Director as applicable to the company should be easily accessible to BHEL official for day to day interaction and to have the residence within 30 KM from BHEL/BAP for the firms located in and around Ranipet. Any change in the constitution of the Contractor's unit or in shifting of works to a new location, the same shall be made only after getting specific approval from Outsourcing BHEL RANIPET. Any deviation found later will be dealt with as deemed fit including cancellation of registration. Also change of Banker requires the prior approval of BHEL, Ranipet.
- (c) Partnership firms should have the latest Form A (Rule 5) Declaration filed with the Registrar of Firms and private Limited firms should have the current MOA and the copy of the same should be produced at the time of signing the Contract.
- (d) The Contractor is liable for all statutory obligations, including but not limited to taxes and duties, ESI, PF, ED/ST, Labour Acts, Factories Acts, Workmen Compensation Act, etc., for their workers. BHEL, RANIPET will have no liability in respect thereof. Notwithstanding the above, if any demand notice is served by the concerned Statutory authorities for recovery of any of their dues on BHEL, BHEL shall have the right to pay the same without notice to the Contractor and recover the same plus administrative charges of 15% of such amount from the Contractor either from the pending/future bills of the Contractor or otherwise. Such act of repeated default is liable for suspension/stoppage of further business till such time the default/violations get vacated. Notwithstanding anything to the contrary, BHEL shall not be liable for any penalty or interest imposed by any statutory authority due to the action of the Contractor or his employees, workers, agents, etc.

- (e) The Contractor has to devise suitable scheme whereby the employment of child labour should be regulated in line with the child Labour Act (prohibition and Employment Act 1986).
- (f) All the safety precautions and use of safety equipments are to be followed while carrying out the fabrication and despatch of the same. The Contractor must have proper tools and handling equipments. There should always be a responsible person available at the Contractor's works to oversee the operation and compliance of safety regulations. If any non-compliance with respect to proper safety conditions/requirements, BHEL may withhold visit/inspection, instruct stoppage of work till such time the desired safety requirements/conditions are met with.
- (g) All the documents (Inclusive of Drawings, GMS and Standards) of BHEL made available to the Contractor should be kept in a strict confidence and under no circumstance be made available to others or allow others to make use of them for any other commercial purpose whatsoever. This secrecy clause is binding on the employees of the Contractors also. Any contravention will be subjected to legal action besides suspending business with BHEL. Such documents should be returned to the BHEL, RANIPET destroyed with the prior approval of Outsourcing, BHEL, RANIPET.
- (h) Unauthorized act of engagement of any individual who is a full time employee of BHEL for part time/full time work by the Contractor will be viewed very seriously and such act is liable for suspension/total stoppage of further business dealings with the Contractor by BHEL, RANIPET.
- (i) Should a Contractor has a relation or relations in the case of a firm or a company of the Contractor, one or more of its shareholders or relation or relations of the shareholders employed in BHEL or any ex employee who has retired/resigned within a period of two years as on date of the Contract or at any subsequent date after award of this contract, BHEL shall be informed of the fact at the time of signing the contract and thereafter as applicable and obtain the permission of BHEL for such engagement, failing which BHEL may in its own discretion rescind the contract.
- (j) The Contractor shall not attempt any unethical acts and if they are found indulging in such acts, they are liable to be blacklisted apart from other actions. Contractors indulging in any business practices detrimental to BHEL either directly or Indirectly, will be dealt with severely by the due process of law.
- (k) In case of any internal dispute of the Contractor, such as but not limited to disputes between partners of the Contractor, dispute between Contractor and its employees, the same shall be intimated to BHEL within One Month from the date of dispute. Notwithstanding anything to the contrary, BHEL shall not be made a party any suit or legal proceeding in respect of such internal dispute. In case BHEL is made a party to the same, the Contractor and other party(ies) to the dispute, if signatories to this Agreement, shall indemnify BHEL for (a) all direct and indirect costs expended towards such legal proceedings immediately on the issue of a claim notice to that effect from BHEL and (b) any liability that may be imposed in such legal proceedings against BHEL.
- (l) Payment for all the invoices shall be effected by a crossed A/C payee cheque /EFT/RTGS in favor of the Banker which should be indicated in all invoices of the Contractor.
- (m) In order to ensure safe custody of our materials, leasee of those firms under lease shall ensure that their lease period is valid for minimum of 3 years (from date of signing the contract).
- (n) In addition to the above, our standard General Conditions enclosed shall also apply.
- (o) The entire terms and Conditions contained in this tender shall be deemed to form an integral part of the Contract to be entered.

30.0 BHEL reserves the right to :

- (a) Negotiate with the Contractor who has submitted the Lowest offer for "Payment Rate Schedules" and Highest offer for "Recovery Rate Schedules"
- (b) Distribute the requirements on more than one contractor at the Lowest (for Payment RS) / Highest (for Recovery RS) acceptable rate.
- (c) The rates and other terms and conditions in this contract are applicable for the job work orders likely to be placed by other Departments/Units of BHEL also, for similar items.

31.0 Primary e-Mail-ID: Contractors are requested to indicate their own email-Id as "Primary e-Mail-ID", which will only be used for all correspondences (like for MAS and Payment etc..)

32.0 Integrity Pact: Not Applicable

33.0 Arbitration and Jurisdiction:

- (a) Any dispute between BHEL and the Contractor arising out of or in connection with this Contract, other than those for which BHEL decision is final, shall be referred to arbitration by a sole arbitrator.
- (b) The parties hereto agree that the Sole Arbitrator shall be the Unit Head of BHEL, BAP, Ranipet or his nominee. The venue of Arbitration shall be Ranipet, Tamil Nadu. The arbitrator may hold meetings for convenience at such places as per his discretion.
- (c) The award of the Arbitrator shall be final, conclusive and binding on both parties to the Contract.
- (d) Subject to the above, the courts at Ranipet alone have the jurisdiction to decide any dispute arising out of or in respect of the Contract.

Vendors are requested to quote only for the Rate Schedules/Group of Rate Schedules applicable to their firm as per the Technical Bid (**Annexure-C**) and Price Bid format (**ANNEXURE-D**) enclosed.

The offers should be submitted as detailed in **Section I to Section XII and Annexures A to L**

BHEL, Ranipet is not responsible for any type of delay in receipt of tender.

BHEL, Ranipet reserves the right to reject any or all the tenders either in full or part thereof at their discretion without assigning any reason thereof.

Thanking you,

Yours truly,

For and on behalf of
BHARAT HEAVY ELECTRICALS LIMITED,

SR.MANAGER (CONTRACTS) / OS

 AN ISO 9000 COMPANY	Bharat Heavy Electricals Limited (A Government of India Undertaking) Boiler Auxiliaries Plant, Ranipet – 632 406		☎: 04172-284030, 284158, 241170
	OUTSOURCING DEPARTMENT		E-Mail : tenderoutsourcing@bhelrpt.co.in
Enquiry No	655002E	Due Date & Time for submission of offers	Prior to 14.00 Hrs On 15-12-2016
Enq-Dated	22-11-2016	Date & Time of Tender opening	By 14-30 Hrs On 15-12-2016
<u>SECTION III</u> Technical Description for OS-MAIN-BLAST Annual Rate Contract 2016-17			

Scope of the enquiry is to finalise the Rates for entering into Annual Rate Contract for the year 2016-17 for SURFACE PREPARATION BY BLAST CLEANING EQUAL TO SA 2½ FINISH on Boiler Components in accordance with the Technical Specification/BHEL Engineering Drawings/Quality Documents out of components to be supplied by BHEL, Ranipet.

1.0 The Total quantity tentatively for this Rate Contract is 2,60,000 Sq.Meter

2.0 Rate schedule: The requirements are given in the form of Rate schedule (RS). Rate Schedule contains Rate Schedule Number, Description of the scope of operation to be carried out, Unit and Quantity Anticipated in 2016-17 for ordering.

3.0 Extra Rate schedule: Extra works if any carried out as per drawing / QWI / JWO requirement shall qualify for extra payment, as per extra rate schedule listed in **Section IIID**.

Note: For reference purpose, the current running ARC rates for extra Rate schedule are indicated in Section IIID. Tender already floated for finalizing new extra rates and the same will be applicable for this tender also.

4.0 Scope of the Operation : Surface Preparation by Blast Cleaning equal to SA 2½ finish on Boiler Components in accordance with the Technical Specification/BHEL Engineering Drawings/Quality Documents out of components to be supplied by BHEL, Ranipet. The Rate Schedule contains descriptive details of items only.

5.0 Mandatory and General Facilities Required : To carry out the operations required on the job for the concerned Rate schedule, the manufacturing Facilities required are indicated in **Annexure-FB**.

6.0 Eligibility of Vendors : The vendors who are all having the Facilities required, mentioned in **Annexure – FB** can quote. **Production capacity of the firm shall be minimum 120MT per Month.**

7.0 Distance Eligibility Criteria- Vendors Location.

Vendors located within 350 KM from BHEL, Ranipet are only eligible to quote. (Shortest distance on Google Map).

8.0 Quantity : Tentative annual requirement is mentioned against Rate Schedule in the Tender- Technical Bid **Annexure – C**. This quantity may vary during the currency of the contract according to the receipt of orders by BHEL.

9.0 Technical Bid : Technical Bid Document for the Rate Schedule is available in the Technical Bid as **Annexure – C**.

Existing Vendors who are all executing the same operation in the running MAIN-ARC has to mention completed PO/IP number released in MAIN ARC 2015-16 against Rate Schedule.

10.0 Price Bid : Price Bid Document for Rate schedule is available as **Annexure – D**. Simultaneously Vendor has to download the Price Bid Format along with Technical Bid Document and fill the same.

Note: Unit rate only to be mentioned in the price bid. Any Rates indicated other than in Price Bid Cover III shall not be considered.

11.0 Quality Documents: Relevant Quality Work Instructions (QWI), Procedure of Quality Assurance (PR:QA) to be specified in **Annexure-X** to be followed.

Care: Offers received other than the format hosted in the web site will be summarily rejected. Vendor has to study carefully all the technical requirements before quoting.

SECTION IIID			
Enquiry No. 655002E		22.11.2016	
List of OS MAIN Extra RS rates applicable for ARC 2014-16 (For reference purpose)			
Extra RS No	Extra RS Description	Unit	Rate in Rs.
E01	CONVERSION CHARGES FOR FLAT OUT OF PLATES .	MT	800
E03	MAGNETIC PARTICLE INSPECTION/TESTING [MPI].	MR	60
E04	RADIOGRAPHY [RT]	MR	750
E08	SURFACE PREPARATION EQUAL TO SHOT BLASTING.	SM	61.5
E11	25 MIC OF EPOXYZINC RICH PRIMER [EXCEPT WM XXX]	SM	82
E13	25 MIC OF EPOXY ZINC PHOSPHATE PRIMER	SM	60
E14	40 MIC OF WHITE ENAMEL PAINT	SM	45.5
E16	25 MIC OF HEAT RESISTANT BLACK BITUMINOUS PAINT TO IS-158	SM	20
E17A	Transport charges for To and Fro Movement of semi-finished components from YOUR WORKS to the WORKS OF CONTRACTOR situated WITH IN 60 Kms from YOUR WORKS doing the intermittent operation such as Galvanizing/blast cleaning/Balancing/Heat-treatment/other specific operation as per Enquiry	MT	475
E17B	Transport charges for To and Fro Movement of semi-finished components from YOUR WORKS to the WORKS OF CONTRACTOR situated between 61 Kms and 160 Kms from YOUR WORKS doing the intermittent operation such as Galvanizing/blast cleaning/Balancing/Heat-treatment/other specific operation as per Enquiry	MT	1192
E17C	Transport charges for To and Fro Movement of semi-finished components from YOUR WORKS to the WORKS OF CONTRACTOR situated between 161 Kms and 350 Kms from YOUR WORKS doing the intermittent operation such as Galvanizing/blast cleaning/Balancing/Heat-treatment/other specific operation as per Enquiry	MT	2000
E18	40 MIC OF HIGH BUILD CHLORINATED RUBBER ZINCPHOSPHATE PRIMER.	SM	90
E19	5 MIC OF ETCH PRIMER/WASH PRIMER	SM	50
E20	20 MIC OF SYNTHETIC ENAMEL LONG OIL ALKYD TOIS-2932 [SMOKE GREY]	SM	26
E23	25 MIC RED OXIDE ZINC CHROME PRIMER TO IS 2074/RUST PREVENTIVE OIL.	SM	9
E24	20 MIC BLACK ENAMEL PAINT TO IS - 2932	SM	26
E27	50 MIC HIGH BUILD EPOXY PAINT DARK GREY.	SM	90
E28	30 MIC EPOXY FINISH PAINT LIGHT GREY	SM	70
E29	75 MIC INORGANIC ZINC SILICATE PRIMER	SM	70
E30	30 MIC CHLOROKOTE ZINC PHOSPHATE TO IS 8632.	SM	75
E40	TRIAL ASSY OF TOTAL INLET/OUTLET FUNNEL ASSY[PYRAMID SHAPE] COLUMNS, LONGITUDINAL ROOF BEAMS, TRUSSES (X55), SPIRALCASINGS, TURBINE HALL STRUCTURES, DUCTS ,SILENCERS (ASSEMBLED FROM MULTIPLE BLOCKS), BRACKETS IN X25, SUCTION HOOD OF FANS AND ROOF ASSEMBLY OF FANS ETC.	MT	675
E40A	TRIAL ASSY OF BOLTED DESIGN COLUMNS WITH COLUMNS/BRACINGS - HORIZONTAL FLOOR ASSEMBLY	MT	NEW
E40B	TRIAL ASSY OF BOLTED DESIGN COLUMNS WITH COLUMNS/BRACINGS - VERTICAL ASSEMBLY OF COLUMNS AND BRACINGS	MT	NEW
E41	RECOVERY RATE FOR CS/AS, ASBESTOS , WOOL , CAF SCRAP ETC.	MT	19000
E42	BIG SIZE SCRAP [CS/AS SHEETS/ PLATES]	MT	23500
E43	RECOVERY RATE FOR STAINLESS STEEL [NON-MAGNETIC], NON-FERROUS METAL SCRAP.	MT	95000

E51	HR ALUMINIUM PAINT [20 MIC] [UP TO 200 DEGREEEC] IS 13183 / 1991 GRADE - III	SM	26
E52	HR ALUMINIUM PAINT [20 MIC] [ABOVE 200 DEGREEEC] C]IS 13183 / 1991 GRADE - II	SM	60
E54	HR CHIMNEY BLACK PAINT [>250 DEGREE C] / FERROTOL BLACK CHIMNEY [50 MIC]	SM	48
E55	EPOXY HB MIO INTERCOAT [125 MIC]	SM	55
E56	ALIPHATIC PU FINISH OR EQVT. [75 MIC]	SM	130
E57	CHLORINATED RUBBER FINISH PAINT DARK GREY [40 MIC]	SM	74
E59	ETHYL ZINC SILICATE/ZINC DUST ETHYL SILICATE[75 MIC]	SM	62
E60	HB EPOXY ZINC RICH PRIMER [50 MIC]	SM	62
E61	CHLORINATED RUBBER BASED TITANIUM OXIDE PIGMENTED INTERMEDIATE PAINT [WHITE] - [50 MIC]	SM	104
E62	EPOXY RESIN BASED TWO PACK, TITANIUM OXIDEPIGMENTED INTERMEDIATE PAINT [WHITE] -[100 MIC]	SM	44
E63	ZINC CHROME PRIMER IS104 40 MICRONS	SM	23.5
E64	RED OXIDE ZINC PHOSPHATE PRIMER 80 MICRONS	SM	46
E65	UT OF WELD,BUTT JOINTS OR FILLET WELDS OF COLUMNBASE [ALL WELDS] THICKNESS 12 TO 32MM ASPER AWS D.1.1	MR	43
E68	LABOUR COST FOR ONE COAT OF PAINTING. [PAINT- BHEL SUPPLY].	SM	3.6
E69	SYNTHETIC ENAMEL TO IS 2932 GREY SHADE RAL 9002 [20 MICRONS].	SM	28
E71	ULTRASONIC TESTING [UT] OF PLATES / STRUCTURALS	SM	36.5
E72	CONVERSION CHARGES FOR EXPORT PACKING [FOR FINISHED COMPONENT WEIGHT [DU WEIGHT]]	MT	1053
E73	RECOVERY RATE FOR STAINLESS STEEL [MAGNETIC] SCRAP	MT	33700
E76	CONVERSION CHARGES FOR STRUCTURALS TO STRUCTURALS	MT	1500
E77	JOINTS OF CS/ HIGH TENSILE PLATES UPTO 4 MM/RM	MR	53
E78	JOINTS OF CS/HIGH TENSILE PLATES 5MM TO 10 MM/RM	MR	165
E79	JOINTS OF PLATES 12 TO 20 MM /RM	MR	288
E80	JOINTS OF BEAM/CHANNEL UPTO 200 MM /JT.	NO	90
E81	JOINTS OF BEAM/CHANNEL 201MM - 300 MM /JT.	NO	120
E82	JOINTS OF BEAM/CHANNEL 301- 450 MM /JT.	NO	208
E83	JOINTS OF ANGLES UPTO 75X75X8	NO	40
E84	JOINTS OF ANGLES ABOVE 75X75X8 UPTO 100X100X12	NO	70.5
E85	JOINTS OF ANGLES ABOVE 100X100X12	NO	155
E86	JOINTS IN BEAM /CHANNEL ABOVE 450 MM	NO	400
E87	ADDITIONA JOINTS FOR PLATES 21-25 MM/RM	MR	535
E88	ADDITIONAL JOINTS FOR PLATES 26-32MM/RM	MR	750
E89	ADDITIONAL JOINTS FOR PLATES 33-36 MM /RM	MR	856
E90	ADDITIONAL JOINTS FOR PLATES 37-40 MM/RM	MR	952
E91	ADDITIONAL JOINTS FOR PLATES 41 - 50 MM /RM	MR	1077
E92	ADDITIONAL JOINTS FOR PLATES 51-56 MM /RM	MR	1434
E93	ADDITIONAL JOINTS FOR PLATES 57 MM AND ABOVE/RM	MR	1500
E94	CHLORINATED RUBBER PAINT (RAL)- 40 MICRONS	SM	56
E95	TESTING CHARGES OF GATE ASSEMBLY ELECTRICALLY OPERATED UPTO 7 MT	NO	4500
E96	TESTING CHARGES OF GATE ASSY ELECTRICALLY OPERATED ABOVE 7 AND UPTO 10 MT	NO	5123
E97	TESTING CHARGES OF GATE ASY ELECTRICALLY OPERATED ABOVE 10 MT.	NO	9300



Enquiry Number: 655002E

Dt.22.11.2016

SECTION IV

GENERAL TERMS & CONDITIONS OF THE TENDER

Before preparing the offer, vendors are requested to go through the following details carefully

A] Vendor Classification

Vendors who are all having Blast Cleaning facility equal to SA 2½ finish, located within 350 KM from BHEL, Ranipet is classified as MAIN vendor in OS.

B] Eligibility of Vendors to Quote:

Firms who are having required Blast cleaning facility and able to meet Eligibility Criteria (Facility Requirement) mentioned in Annexure-FB is eligible to quote for this tender.

Firms already registered with Outsourcing (OS) BHEL/BAP/Ranipet shall indicate vendor code in their offer and indicate PO/IP number for the RS quoted if available. If vendor is new, then mention as "New" in the space provided for Vendor Code.

Vendors registered with any unit of BHEL for the similar jobs, shall give details of their registration along with the category registered for.

i) Evaluation Methodology For Eligibility Criteria :

- a. The Techno Commercial bids submitted by the firm will be scrutinized. The eligibility of the firms will be verified based on the pre-qualification criteria of the tender and compliance / confirmation to the tender requirements by BHEL vendor evaluation team including spot verification if necessary for approval. Only those firms complying with the pre-qualification criteria shall be considered for participation in the tender.
- b. Once the vendor is found to be technically suitable meeting all the technical and commercial requirements of BHEL, price bid of those qualified vendors will be considered for further processing.
- c. New vendor shall submit **Filled-in Vendor Registration form as in Annexure-K**

Note:

(i) The facilities indicated in the RS should be available in working condition as on date at the time of submission of offer and to be made available for the whole contract period. Vendors shall not quote for the ranges-which are beyond their manufacturing capacity.

(ii) Firm Land shall be owned either by the partners/ proprietor or registered in the name of the firm. In case of Leased land, the lease agreement shall be registered in the name of either by the partners/ proprietor or registered in the name of the firm and valid for a minimum period of 3 years from the date of Tender Opening. Self attested Copy of Lease agreement / own land document to be enclosed along with the tender.

C] Vendors Not Eligible to Quote

Vendors declared / notified as defaulters / poor performers on quality / delivery grounds are not eligible to quote. The vendors with whom the material shortages were found during stock verification and not settled at the time of tender opening will not be considered. Offers if any received such vendors shall not be considered.

Vendors under HOLD by BHEL are not eligible for such RS and vendor delisted/banned are not eligible for whole tender.

Vendors who have quoted in Open Tender for 2014-15 ARC in MAIN or LDPP, ranked L1 rate in any of the Rate schedule and not signed the Annual Rate Contract 2014-15 are not eligible to quote for this tender.



D] Distance Criteria for the New Firms

Vendors, located within 350 KM from BHEL Ranipet, are eligible to quote.

E] EMD (Earnest Money Deposit)

Non MSME Vendors has to submit EMD for Rs. 2.00 Lakh in the form of Demand Draft favouring “Bharat Heavy Electricals Ltd., Ranipet – 632 406” payable at Ranipet,

(i) No interest shall be payable by BHEL on Earnest Money Deposit (EMD).

(ii) EMD will be forfeited if

a) The Tenderer withdraws his Tender within the validity period,

b) After becoming L1, if the firm does not sign the contract or not submitting the required base BG within the specified period, the EMD will be forfeited.

(iii) The EMD submitted by the vendors will be returned within a month from the date of signing the contract.

F] Validity of Offer

Price validity shall be One Year from the date of finalisation of Annual Rate Contract; however the validity date of the offer is 180 days from the date of tender opening for ordering. (Note: If Supplier does not honour his own offer or any of its conditions within the validity period, penal action deemed fit as per Cl.”S” of Section IV - Suspension of Business Dealings with vendors).

G] Submission of Offer

TENDERS

The Bids shall be submitted in three parts namely (i) Earnest Money Deposit (EMD) fee Cover/ Micro Small Medium Enterprises (MSME) EM-II valid certificate (ii) Techno Commercial Bid Cover and (iii) Price bid cover. All these Three covers should be sealed individually and to be put in a single envelope.

Sealed tenders super-scribed with Tender Number with date, Due Date, ARC-MAIN-BLAST- 2016-17 & Supplier's Name, Vendor Code/**Reference Code as “New”** for new vendor shall be addressed to Senior Manager / Contracts, Outsourcing Department, Bharat Heavy Electricals Limited, Ranipet – 632 406, Tamilnadu, India, so as to reach him on or before the date and time specified in the tender.

The bidders are requested to submit the bids with double stapled on the left middle of the papers, and tied with file tag. Bidders are also advised strictly not to submit the bids with spiral binding & hard book binding, as it will hamper the evaluation of the offers.

The details of contents of the offer covers are as under:-

Sealed Single Envelope super-scribed, with ARC-MAIN-BLAST- 2016-17, Tender Number & Date, Tender Due Date, Vendor's Name & Vendor Code / Reference Code as “New”containing:

Cover I: EMD / MSME Requirements

Sealed Cover super-scribed “Cover I – EMD / MSME Requirements” with ARC-MAIN-BLAST- 2016-17, Tender Number & Date, Vendor's Name & Vendor Code / Reference Code as “New” containing:

a) **Check list for Cover-I**

b) **Earnest Money Deposit (EMD) Rs. 2.00 lakh** in the form of Demand Draft, as called for (for Non MSE supplier), **(OR)**

c) **MSME documents** to avail exemption from submission of EMD: –



- i. Self Attested Copies of either EM II (Entrepreneur Memorandum Part II) having deemed validity Five years from the date of issue of acknowledgement in EM II from the date of acknowledgement of the EM II certificate **(or)**
- ii. Valid NSIC Certificate **(or)**
- iii. EM II Certificate along with attested copy of a CA Certificate (Format enclosed as **Annexure-G** where deemed validity of EM II certificate of five years has expired) applicable for the relevant financial year (latest audited).

Date to be reckoned for determining the deemed validity will be the date of Tender opening. Non submission of such documents will lead to consideration of their bids at par with other bidders and MSE status of such suppliers shall be shifted to Non MSE supplier till the supplier submits these documents.

Note:

- (i) Cover I received without EMD or all Supporting MSE Documents as specified above will lead to rejection of the offer.
- (ii) The Cover II and the Cover III of such offerors shall not be opened and they would not be eligible to participate in the tender further.

Cover II: Qualifying Criteria, Techno-Commercial Bid

Sealed Cover super-scribed "Cover II – Qualifying Criteria Techno-Commercial Bid" with ARC-MAIN-BLAST- 2016-17, Tender Number & Date, Vendor's Name & Vendor Code / Reference Code as "New" containing:

- a) **Check list for Cover-II (Annexure-B)**
- b) **Signed in Standard Commercial Terms & Conditions format** given as **Annexure-E.**,
- c) **Signed in Technical Bid** for each Group quoted in this tender (without Price) as per **Annexure-C.**
- d) **Affidavit** in Stamp Paper value Rs.100 as per **Annexure-I**
- e) **Own land - Document copy / Lease Land – Self attested Copy of Registered Lease Agreement and Encumbrance Certificate covering past 20 years for Own/Lease land.**
- f) **Documents to be enclosed for Partnership Firm –Self Attested Copies**
 - i) Latest Form- A, issued after 01.04.2016.
 - ii) Partnership Deed Copy (AT WILL).
- g) **Documents to be enclosed for Limited Firm (Private Firm) – Self Attested Copies**
 - i) Latest resolution by Board of Directors.
 - ii) Memorandum of Article of Association.
 - iii) Company's Affidavit for existence
 - iv) Latest Annual Report.
 - v) Directors Share details
- h) **Vendor Registration Form** given as **Annexure-K** along with all necessary documents **(For New Vendor)**
- i) **Eligibility Criteria format** given in **Annexure-FB**



Note:

(i) All new firms shall submit vendor registration forms (**Annexure-K**) along with supporting documents. Price bids of firms failing to meet the Technical Qualification / Eligibility Criteria of the quoted Rate Schedule shall not be considered for further processing in the tender.

(ii) Offers shall be submitted along with PAN No., CST & TIN No. / Tariff No. etc, failing which BHEL will not be liable for payment. Our TIN No. 33243560005, CST No. 239383/11.06.91, BHEL ECC No. AAACB4146PXM008.

(iii) Money values shall not be indicated anywhere in the Technical Bid.

(iv) All Annexure to the Techno-Commercial bid should be serially numbered.

(v) Tenders not submitted in the prescribed formats given in the Annexures like *Standard Commercial Terms & Conditions, Technical Bid*, etc. and *incomplete offers* are liable for rejection.

vi) Documents shall be annexed in the order specified above (clause a to i of cover-II)

Cover-III : Price Bid

Sealed Cover super-scribed "Cover III – Price Bid" with ARC-MAIN-BLAST- 2016-17, Tender Number & Date, Vendor's Name & Vendor Code / Reference Code as "New" containing:

Price Bid - Price duly filled-in the Price Bid format provided in the tender document as **Annexure-D** for Rate Schedule in conformance with the commercial terms as per Cover-II.

The Prices shall be indicated in both figures and words. Unit rate only to be mentioned in the price bid.

Any Rates indicated other than in Price Bid Cover III shall not be considered.

Note:

i) The price should be on "EX-Works" basis only (Inclusive of packing, forwarding). No other delivery terms shall be acceptable.

ii) While quoting their rates, the Bidders are advised to take into account the likely expenditure, escalations, statutory requirements & levies, labour laws, safety requirements, taxes, etc during the operation of Rate Contract for one year from the date of award of Contract. No price escalation/variations shall be entertained during the ARC period on any account. The rates are operative for placement of orders for **ONE YEAR** on Rate Contract basis to be entered into between BHEL and the Contractor.

iii) Tenderer shall bear all cost incidentals to preparation, submission and negotiations of the tender.

iv) If BHEL withdraws the Tender before or after the receipt of offers, whether the offer is accepted or not, tenderer shall not be entitled to claim any costs, charges, expenses incidental or incurred by him through or in connection with the submission of the offer.

v) 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 (Cover II) shall hold good and the commercial term quoted in the Price Bid (Cover III) shall not be considered.

vi) In their own interest, all Tenderers are advised to double check their prices before submitting the offer.

vii) The quotation should be valid at least for a period of 180 days from the tender opening date.

viii) Offers should be submitted One Set in original only.

ix) The offers should invariably contain Signature (ink-signed) & Office Stamp of the Supplier. Any corrections / erasures in the offers should be initialled and stamped.

x) Bidders should submit the prices in Indian Rupees only.



H] Persons Authorized for Signing the Offers:

The Tender documents shall be signed by the Authorized Signatory Only.

i) **Proprietary Firm:** In case of Single Ownership / Proprietorship establishment, the Tender shall be signed by the Owner / Proprietor Only.

ii) **Partnership Firm:** In case the Bidder is a Partnership Firm under Partnership Act, the Tender shall be signed by all the Partners of the firm or by the Managing Partner who have Signature and Seal of the Firm authorized to do so **OR** by a person holding the Power of Attorney on behalf of the Partnership Firm. Power of Attorney attested by a **Public Notary** shall accompany the Techno-Commercial-Bid. Power of Attorney shall be submitted as per format given as **Annexure J** only.

iii) **Private Firm:** Authorized signatory shall be the person holding "Power of Attorney" on behalf of the firm/company/Bidder-concerned and authorized/empowered by MD or Board of Directors or owner of the firm, to act on behalf of the firm for quoting this Tender and all proceedings connected with, till finalization and execution of the Contract. Power of Attorney attested by a **Public Notary** shall accompany the Techno-Commercial-Bid.

I] Opening of Offers

a) Tenders (Offers) shall be received upto 14.00 Hours on the said due date and be opened on the same day at 14.30 Hours. Tenders received after 14.00 Hours would not be opened. The times indicated are Indian Standard Time (IST).

b) It is bidder's responsibility to ensure that the Tenders are submitted before the specified date and time. BHEL shall not be responsible for any postal delay.

c) If a Supplier submits only one envelope / cover containing all the bids or combined bids e.g. EMD/MSME documents, techno-commercial bid & price bid together, the bid is liable for rejection. The decision to accept such bids shall be the sole discretion of BHEL, which may be done by BHEL after segregating the bids so received.

d) First Cover I containing EMD / MSME documents shall be opened, only if EMD as mentioned above OR the valid MSME certificate is available, the respective Cover II - Techno Commercial bid will be opened subsequently.

e) Price bids – Cover III of Technically qualified bidders alone shall be opened on a later date. The date / time of Price Bid opening will be communicated to the technically qualified Bidders separately.

f) Witnessing the Tender opening

i) Such of those Tenderers who wish so, may participate in the Tender Opening by deputing their representatives. The representatives would be allowed to participate in the Tender opening only on submission of a signed and stamped authorization letter issued by the Supplier as per **Annexure-L**. Representatives without the Authorization Letter would not be allowed to participate in the Tender Opening.

ii) Representatives who turn up after the Tender opening time / start of the Tender opening would not be allowed to participate. After tender opening the details would not be given to such suppliers who choose to be absent at the Tender opening.

iii) Authorizations received by fax / e-mail would not be acceptable.

iv) Details of the vendors participated alone would be read out during Technical Bid opening and details of Price alone would be read out during Price Bid opening by the Tender Opening Officer.



Note

- (i) Bids including all enclosures and supporting documents like catalogues, pamphlets, etc., shall be provided in ENGLISH language only.
- (ii) Offers sent by e-mail / fax or any other mode other than the three cover system specified above shall be avoided. On an exceptional case offers may be e-mailed to tenderoutsourcing@bhelrpt.co.in.
- (iii) At its option, BHEL may consider extending the due date/s for the tender openings. Sufficient notice would be given by BHEL for such extensions.

J] Evaluation of Techno Commercial Offers

The Techno commercial bids submitted by the firm will be scrutinized. The eligibility of the firms will be verified based on the pre-qualification criteria of the tender and compliance / confirmation to the tender requirements for Rate Schedule quoted. Only those firms complying with the pre-qualification criteria shall be considered for participation in the tender. Once the vendor is found to be technically suitable meeting all the technical and commercial requirements of BHEL, price bid of those qualified vendors for respective category only will be considered for further processing.

- d) Offers of vendors not technically qualified will be rejected and the same will be communicated to the vendors with reasons.
- e) No deviation or change from the Tender conditions will be allowed and BHEL reserves the right to reject such offers.
- f) **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., 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.*

K] Evaluation of Price Bid

- i) The rates quoted shall be evaluated on the basis of "Total cost to BHEL".
- ii) If the rates of Two vendors are equal resulting in same ranking, among the equal ranked vendors, the sub-ranking will be done to differentiate (a) to decide the L1-vendor eligible for negotiation and (b) to decide H1-vendor for elimination of higher ranked vendors.

The sub-ranking will be done in-the-order by providing lower ranking for vendors

- (1) Nearer to BHEL by location
- (2) Earlier date of commencement of activity as in MSME certificate



- (3) Having OWN land,
- (4) Become Sole-L1 for more number of Rate schedule,
- (5) Earlier date of receipt of offer and /or
- (8) Draw of lots as a final measure (in presence of such vendors, who may like to be present).

iii) Tenderer contacted in this tender does not automatically qualify for consideration just because they are found to be the lowest in Tender. BHEL reserves the right to reject any offers without assigning any reasons. BHEL also reserves the right to negotiate or counter offer the rates to any of the parties at their discretion.

iv) If the L1 rate against rate schedule is found not acceptable to BHEL, then the L1 firms may be called for negotiation before finalizing the rate.

v) BHEL has the right to refloat or short-close the Tender if L1 price is not the lowest acceptable price, or for other reasons.

vi) Elimination of Vendors: In any case the H1 vendor will not be considered.

vii) The rates shall be quoted only in the Price Bid format for the concerned Rate Schedule / Group of Rate Schedule attached, both in words and figures. Wherever there is a difference between the words and figures, the following guidelines will be followed.

a) If there is a difference between unit price and the total price (which is obtained by multiplying the unit price by the quantity), the unit price shall prevail and the total price corrected accordingly, unless in the opinion of BHEL there is an obvious misplacement of decimal point in the unit price, in which case the total price as quoted shall govern and the unit price corrected accordingly.

b) If there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected.

c) If there is a discrepancy between word and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above.

d) If there is such discrepancy in an offer, the same will be conveyed to the bidder with target date up to which the bidder has to send his acceptance on the above lines and if the bidder does not agree to the decision of BHEL, the bid is liable to be ignored.

viii) All bidders shall submit their offers by filling-in the format of the BHEL tender documents. Offers received in any other format are liable to be rejected. Offers are asked in BHEL's format for purpose of standardisation - to help in the offer evaluation.

ix) Offer with any pre-conditions (like conditional discounts) for price is liable for rejection.

x) BHEL reserves the right to reject without assigning any reasons 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.

xi) In case of any discrepancy between the description of the Rate Schedule or quantities, specifications, drawings and for other tender documents, the decision of BHEL in writing is final, binding and conclusive for the purpose of this contract.

xii) 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.



xiii) BHEL reserves the right to conduct negotiations on the "Price" and "Other Commercial Terms and Conditions" with the lowest ranked offeror and

xiv) If so required by BHEL, Supplier may have to share their cost data / costing sheet with BHEL.

xv) BHEL reserves the right to restrict the number of parties for award of contract for any or all the Rate schedule and restrict the number of parties to be called for negotiation (if necessary) based on their competitive bidding, past performance etc.

L] Abnormally Low Offers

If the prices offered by L1 Bidders are found to be unrealistic, unworkable with respect to BHEL's estimate or prevailing market rates, BHEL will ask for justification also demand the break up cost element for such rates from the vendors with appropriate documentary evidence and if not submitted it will be construed that the vendor has offered the rates with an intention to sabotage BHEL Tender process/ tamper Tendering procedure, affecting the ARC process. In such cases, BHEL will have the discretion to reject the offer in line with BHEL procedures. Hence the bidders are advised to exercise abundant care in submitting a correct genuine offer.

M] Counter offer

i) Once the L1 rates for the rate schedule is finalized by BHEL, then the L1 rate shall be counter offered to the other technically qualified vendors for their acceptance.

ii) Based on the acceptance of vendors for the Rate Schedule, rate contract will be entered with them.

v) Counter offering will not be extended to top higher ranked (H1) eliminated vendors as per **clause K (vi).**

vi) If none of the vendors are accepting for the counter offer given by BHEL, then BHEL will place orders on the L1 ranked vendor for the tentative quantity mentioned against RS subject to the capacity availability indicated by the vendor.

N] Placement of Orders and Loading

a) ARC Contract will be entered only with the vendors who respond to this ARC-Enquiry. New vendors who have not responded to this ARC-Tender-but registered/approved later, if any will be permitted in the next year ARC (provided they respond to the next-year ARC).

b) Tentative quantity likely to be ordered against Rate Schedule is indicated in the Technical Bid. Tender quantity may increase/decrease during the rate contract period. BHEL does not guarantee any minimum load for any vendor.

d) The contract is to be signed in Rs.100/- stamp paper. Hence after getting a confirmation on signing of contract, vendor shall get a stamp-paper for a value of Rs. 100/- and submit to BHEL for contract preparation.

e) After finalization of tender, if the Contractor is awarded the Contract, Proprietor, Partners and Directors (as applicable) should physically present themselves and sign the contract in the presence of Head of OS Department with in the dates specified.

f) Orders would be placed as Addenda's on the Annual Rate Contract signed by the vendors.

g) *Lowest (L1) vendor will be given TWO splits of load, when all other vendors(other than L1) were given One(1) split , during every bulk loading cycle, subject to meeting all the basic requirements such as Capacity availability, BG, Delivery Performance, Quality Performance, Legal compliances, validity of lease documents, Validity of constitution etc., required as per contract.*



h) If none of the vendors are accepting for the counter offer given by BHEL, then BHEL will place orders on the L1 ranked vendor for the tentative quantity mentioned against RS subject to the capacity availability indicated by the vendor.

i) The total available load from time to time will be distributed to those Contractors with preference to L1, L2 and L3, with whom Contract is entered into and to that Contract, the addenda shall be placed in a phased manner subject to the availability of potential for BHEL and also depending upon vendor performance such as collection of Raw materials in time, manufacture according to BHEL plans/requirements, meeting quality requirements, prompt returning & accountal of balance materials and also the minimum required facilities available at the Contractor's works to meet the job requirements and submission of other reports as called for, then and there. BHEL does not guarantee ordering of any minimum quantity on any Contractor.

j) Purchase orders will be issued after entering into Rate contract with the Contractors. Discrepancy in the PO's if any, has to be settled immediately then and there within 10 days from the date of release of PO.

O] Execution of the Order

a) Once the order is released, vendor can view the orders in B2B portal of BHEL, Ranipet. However vendor has to collect hard copies of the Purchase order, IP(issue position), Engineering Drawings and relevant documents from BHEL through their authorised representative.

Based on the Rate contract, to be finalized, the Sub-Contractors shall accept and undertake all jobs awarded to them under various Rate schedule allotted to them and execute them to the satisfaction of BHEL. Failure to comply with this requirement will be viewed seriously.

b) Vendor has to collect Raw materials / Components from BHEL stores / Shop to their works on clearance.

c) Vendor has to study the Drawings, Welding Procedure Specification (WPS), Standard Quality Plan (SQP), any Customer Hold Points (CHP), any stage inspection requirement etc. carefully before start of manufacture.

d) Vendor has to submit Cutting Plan (CP) for the collected Raw Materials within a week of collection and shall get approval from CP section before proceeding for manufacture if applicable.

e) During manufacturing, wherever stage inspection is required, vendor has to offer for inspection to BHEL QC / BHEL approved Inspection Agencies for clearance to proceed further.

f) All measuring Instruments to be calibrated as per standards at BHEL Metrology / any approved Labs on chargeable basis and manufacturing / inspection will be carried out with calibrated instruments only.

g) On completion of Job, final inspection is to be offered to BHEL QC / BHEL approved Inspection Agencies with relevant Dimensional Report (DR). After clearance from the above agencies, Inspection Report (IR) has to be obtained for the same.

h) Painting of one coat Red Oxide / applying of Rust Preventive oil on machined surfaces is to be made on the job.

i) Despatch the items to BHEL, Shipping / Stores along with Delivery Chelan (DC), Inspection Report (IR), and Dimensional Report (DR) each 6 copies and shall get Inward Entry on Delivery Chelan (DC) from the Gate In charge.

j) On delivery, authorised representative of vendor shall follow Shipping / Stores to control the DC's/Stores Receipt Voucher(SRV).

k) Intimation of controlled DC's/SRV will be mailed by Finance to vendors for submitting the Invoices.

l) Vendors have to submit the invoice and relevant documents to finance in stipulated time for the release of payments.



m) In case of new vendors, The Inspection report on **First-of-trial** of First-addendum-PO shall be submitted. Further loading of jobs will only be considered after the successful completion of the First-addendum-PO.

n) The Contractors are responsible till the semi finished components are safely deposited with BHEL / Ranipet. They should carefully pack, Load, and stack as per QWIs, for avoiding damages during transit and lash the consignment properly at the time of dispatch so that the consignment reach the destination safely.

P] Risk Purchase

Alternatively, the BHEL at his option will be entitled the contract and to manufacture elsewhere at the risk and cost of the seller either the whole of the goods or any part which the supplier has failed to deliver or dispatch within the time stipulated as aforesaid or if the same were not available, the best and the nearest available substitute therefor. The supplier shall be liable for any loss which the BHEL may sustain by reason of such risk purchases in addition to penalty at the rate mentioned in LD clause.

In case those vendors do not execute the orders, BHEL may get the job done through other sources at the Risk and cost of those vendors and the extra expenditure involved shall be recovered from these vendors from any amount due to them.

Q] Liquidated Damages:

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%. Delivery for purpose of L.D, will be reckoned as the date of clearance of the items for dispatch by BHEL. Supplier should quote a definite delivery period and any delay in delivery will attract penalty.

The delivery period includes time involved in material collection, cutting plan approval, collection of further materials if any and handing over of the finished goods to BHEL-Shipping. Finished goods items shall be door delivered at Shipping/Stores inside the factory, BHEL, Ranipet.

R] Termination of Inquiry / Orders:

- a) BHEL reserves the right to cancel any inquiry before opening of the tender, without assigning any reason.
- b) BHEL reserves the right to cancel any tender and refloat a fresh tender, at any time after opening of the tender, in case it finds the response to its tender as not meeting its requirement. This shall be at the sole discretion of BHEL.
- c) 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 Vendor. BHEL will not pay any cancellation charges or any other charges / damages to the Supplier, arising out such cancellation.
- d) In the event of the non-performance of the contract, by the Supplier, the rights of BHEL include, in addition to cancelling the order, to take alternate action at the cost and risk of the supplier. The additional expenditure to be incurred by BHEL in such alternate action would be to the account of the supplier.
- e) BHEL reserves the right to cancel the order for delay in supply beyond penalty period without any monetary or legal obligations and at the risk and cost of the Supplier and
- f) 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%. Delivery for purpose of L.D, will be reckoned as the date of clearance of the equipment for dispatch by BHEL.

S] Suspension of Business Dealings with vendors

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.

T] Force Majeure

i) 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.

ii) If as a result of difficulty in procurement of raw materials or due to force majeure reasons or any other reasons what-so-ever the contractor is unable to keep the delivery schedule of the contractee, extension of time may be granted by the contractee at their discretion as may be necessary to the extent considered necessary should there be delay in supply beyond the extended date of delivery, it shall be open to the contractee to terminate the contract in part or full and make other arrangements for executing fabrication elsewhere at the cost and risk of the contractor.

U] Integrity Pact: Not Applicable

V] 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.

As per BHEL's Fraud prevention Policy, Nodal officers were nominated by BHEL Management. The details of such Nodal officers are furnished below:

Name	Designation	E-mail	Phone (Office)
C.P.Chengappa	GM - NP, Services & PC	chengappa@bhelrpt.co.in	04172-284587
Cyril R Fernandez	GM - MM	cyril@bhelrpt.co.in	04172-284450
S. Anilkumar	GM – C&M	sanil@bhelrpt.co.in	04172-284681
P.Ravikumar	GM – Operations & Engg.	pravi@bhelrpt.co.in	04172-284677
C. Ramiah	AGM – HR&IC	cramiah@bhelrpt.co.in	04172-284622
P.Jayakanth	AGM - OS	pjayakanth@bhelrpt.co.in	04172-284167
V. Mohan	AGM - Finance	vmohan@bhelrpt.co.in	04172-284518
B. Srinivasa Rao	AGM – Quality	bsrao@bhelrpt.co.in	04172-284945
M. Vijayakumar	AGM- P&D, Civil & HSE	vijay@bhelrpt.co.in	04172-284618

Any bidder / contractor who come across any fraudulent behaviour of BHEL's employees may communicate the same to any / all of these Nodal officers.

W] Others

- a) The Firms are advised to study and understand the scope of work and the entire process of Contract execution involved before quoting. Any technical clarifications required can be sought in person or by e-mail one week before the due date of Tender opening.
- b) In case of any contradiction in the terms and conditions given here and elsewhere in the other documents of the tender or any omissions in the Tender documents or for any clarifications in the tender conditions, it shall be the responsibility of the tenderer to get it clarified from BHEL. The officer authorized to provide such clarifications is the Manager / Contracts, Outsourcing Department, Phone: 04172 – 284030, e-mail mkmoorthy@bhelrpt.co.in, anvmani@bhelrpt.co.in
- c) 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. Such changes, if any, would be communicated in writing and / or hosted in the web-page.
- d) BHEL will conclude that the offer has been submitted by the firm fully understanding all the requirements both explicit and implied and other conditions and accepting the same. After tender opening, the bidders are not allowed to change / alter any of the conditions either partly or fully. Offers of any such firms doing so, will be rejected.
- e) Conditional and late Tenders, Tenders which are incomplete or otherwise considered defective with respect to Tender conditions and Tenders not in accordance with the Tender conditions herein contained and the Tenders not in original shall be rejected out rightly, at any point of time during the Tender processing.
- f) Should the tenderer or the contractor have a relation or relations in the case of a firm or company of contractors, one or more of its shareholders or relations or relations of the share holders employed in BHEL or any ex-employee who has retired / resigned within a period of two years as on date of quotations or at any subsequent date after the award of the contract, the authority inviting the Tender shall be informed of the fact at the time of submission of the tender and there after as applicable and obtain the clearance of BHEL for such engagement failing which, BHEL may in its own discretion reject the tender or rescind the contract.
- g) If a Bidder is found to have given false information / documents as a part of their offer, such offers shall be rejected / the contract shall be terminated and the firm shall be banned from getting business from all BHEL units.
- h) 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.
- i) The laws governing this transaction shall be the laws in India.
- j) The tenderer shall acquaint himself with the conditions/limitations and official regulations under which or conforming to which the jobs are to be performed and shall examine carefully at the information as may be furnished to them in writing from time to time.
- k) The tenderer shall acquaint himself with applicable Acts.



l) As a policy BHEL is not registering any power of attorney issued by Contractors/Contractors in favour of their bank for the collection of Invoice amounts on behalf of Contractors/Contractors and merely because BHEL had acted upon any such request by the party or their bankers does not constitute any legal right or binding on BHEL for any acts of omissions and commissions or failure to act upon it or for any payment made directly to the party. If any banker includes BHEL also as a party to any such dispute between the banker and the party, all legal and incidental expenses thereof will be recovered from the concerned parties only.

m) 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.

n) The offer/s of such of those bidders who do not accept for levy of liquidated damages (LD) for delay in delivery and who do not accept for submission of the BG for the value and period specified herein above is likely to be summarily rejected. No correspondence would be entertained by BHEL in this regard, on this subject. BHEL specifically draws the need of this mandatory requirement to the notice of all Bidders. The Price Bid of such of those offerers failing to meet this requirement, would not be considered for the Price-Bid Opening.

o) The language in the tender 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 specifications 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 not be allowed to participate in future tenders of BHEL.

X] General :

1.0 Definitions : Throughout these conditions and in the specifications the terms :

(a) **"The Contractee"** means the Bharat Heavy Electricals Limited, acting through the Additional General Manager, Outsourcing Department ,Boiler Auxiliaries Plant, Ranipet – 632 406 unless the context otherwise provides.

(b) **"The Contractor"** means the person, firm or company with whom the order for machining / fabrication is placed and shall be deemed to include the Contractor's successor (approved by the Contractee), representatives, heirs, executors and administrators, as the case may be, unless excluded by the terms of the Contract.

(c) **"The Drawings"** means the drawings exhibited or provided for the guidance of the Contractor.

1.0 Execution :

The whole contract is to be executed in the most approved substantial and workman like manner to the entire satisfaction of the contractee, or the inspecting officer, who shall have power to reject any of the fabrication of which he may disapprove; and his decision thereon and on any question as to the true intent and meaning of the specifications of drawings or of the work necessary for the proper completion of the contract, shall be final and conclusive. The contractee may require alterations if any to be made during the progress of machining /fabrication, and should these alterations be such that either partly to the contract considers an alteration in the changes justified such alteration shall not be carried out until amended cost of machining /fabrication charges have been submitted by contractor and accepted to fabricate without obtaining the consent of the contractee in writing to an amended cost of machining /fabrication charges, the contractor shall be deemed to have agreed to execute fabrication at such charges as may be considered reasonable by the contractee.

2.0 Interpretation :

Any dispute or difference of opinion in respect of the interpretation, effect or application of this particular condition of the contract or of the amount recoverable here under from the contractor shall be decided by the contractee and the decision shall be final and conclusive.

3.0 Book Examination Clause :

(a) The contractor shall, whenever required, produce or cause to be produced for examination by any officer of the contractee authorized in that behalf any cost or other account book or account voucher, receipt letter, memorandum, paper or writing or any copy of extract from any such document and also furnish information and returns verified in such a manner as may be required in any way relating to the execution of this contract or relevant for verifying, ascertaining, the cost of execution of this contract (the decision of such officer of the contractee on this question or relevancy of any document, information or return being final and binding on the parties). The obligation imposed by this clause is without prejudice to the obligation of the contract/Job-Work-Order or under any statutory rules or orders binding the contractor.

(b) The contractor shall, if the authorized officer of the contractee so requires (whether before or after the prices have been finally fixed), afford facilities to the officer of the contractee concerned to visit the contractor's works for the purpose of examining the process of manufacture and estimate of ascertaining the cost of production of the articles. If any portion of the work be carried out by a Contractor or any subsidiary or an allied firm or company, the authorized officer of the contractee shall have power to secure the books of such Contractor or any subsidiary or an allied firm or company shall be open to this inspection.

4.0 Set – Off Clauses :

BHEL shall have the right to recover any money which in the sole opinion of BHEL is due from the Contractor from any money due to the Contractor under this Contract or any other contract or from the Security Deposit furnished by the Contractor under this Contract or any other contract.

"For the sake of clarity, the phrases "from any money due to the contractor" and "from the Security Deposit furnished by the Contractor" shall include money due from and Security Deposit furnished to any other Unit/ Office of BHEL as the case may be".

5.0 Laws Governing the Contract :

(a) The contract shall be governed by the laws of Government of India in force.

(b) Irrespective of the place of execution of the contract, place of delivery, place of payment under the contract, the contract shall be deemed to have been made at Ranipet.

6.0 The Global Compact :

Global compact is a signature initiative of United Nations Security General and four United Nation Agencies

- Office of the High Commissioner for Human rights
- International Labour Organization
- United Nations Environment Programme
- United Nations Development programme

This is a board based initiative and engages:

- Individual Companies
- Business Associations
- International Labour
- Human Rights, Environment and development Organisations
- Academic & Public Policy Instructions and United Nations



The Contractee (BHEL) is a member of this Global Compact. As a participating Company, We have the obligation to

- ** Support and respect Human rights with in our spheres of influence.
- ** Make sure we are not complicit in Human right abuses.
- ** Make sure we are not employing forced or compulsory labour.
- ** Refrain from employing child labour
- ** Eliminate discrimination in our hiring and firing policies
- ** Support a precautionary approach to Health, Safety of employees and society and environmental challenges.
- ** Undertake initiatives to promote greater environmental responsibility
- ** Encourage development and diffusion of environmentally friendly technologies.

Contractor shall also ensure to fall in line with the above principles.

8.0 Occupational Health and Safety Management System (OHSAS 18001) and Environmental Management System (EMS 14001)

BHEL/BAP/RANIPET got accreditation Occupational Health and Safety Management System (OHSAS 18001) and Environmental Management System (EMS 14001). As per this, OS Contractors are requested to meet the requirements of EHS (Environmental Health & Safety) guidelines (mentioned below), while engaging and using Vehicles for incoming/outgoing transportation.

- To have valid Driving licence and RC book for the Transports
- To load the vehicle/bullock cart within the Safe Working Load (S.W.L.) The S.W.L. is to be displayed/painted on the vehicle/bullock cart.
- To load the material in such a way that it should not project outside the dimensions of the Vehicle/bullock cart.
- To stack the material in a manner that the material should not slide/fall during transportation.
- During manual lifting with an Adult, the weight should not exceed 50 kg.
- To attempt to adopt OHSAS 18001 / ISO 14001 requirements in their manufacturing process at Contractor's work place.
- To comply with applicable provisions of the Central Motor Vehicles Rules 1989 (Rule:136 and if any). List of important Phone Nos: (given by OS) should be available with the driver while transporting BHEL materials.
- To train drivers to handle emergency situation during transportation.
- To follow the Various Acts/Rules and Regulations (particularity Factories Act 1948 and Tamil Nadu Factory Rules 1950) applicable to them.
- To maintain valid PUC (Pollution Under Control) certificates and produce while vehicle is in this company premises.

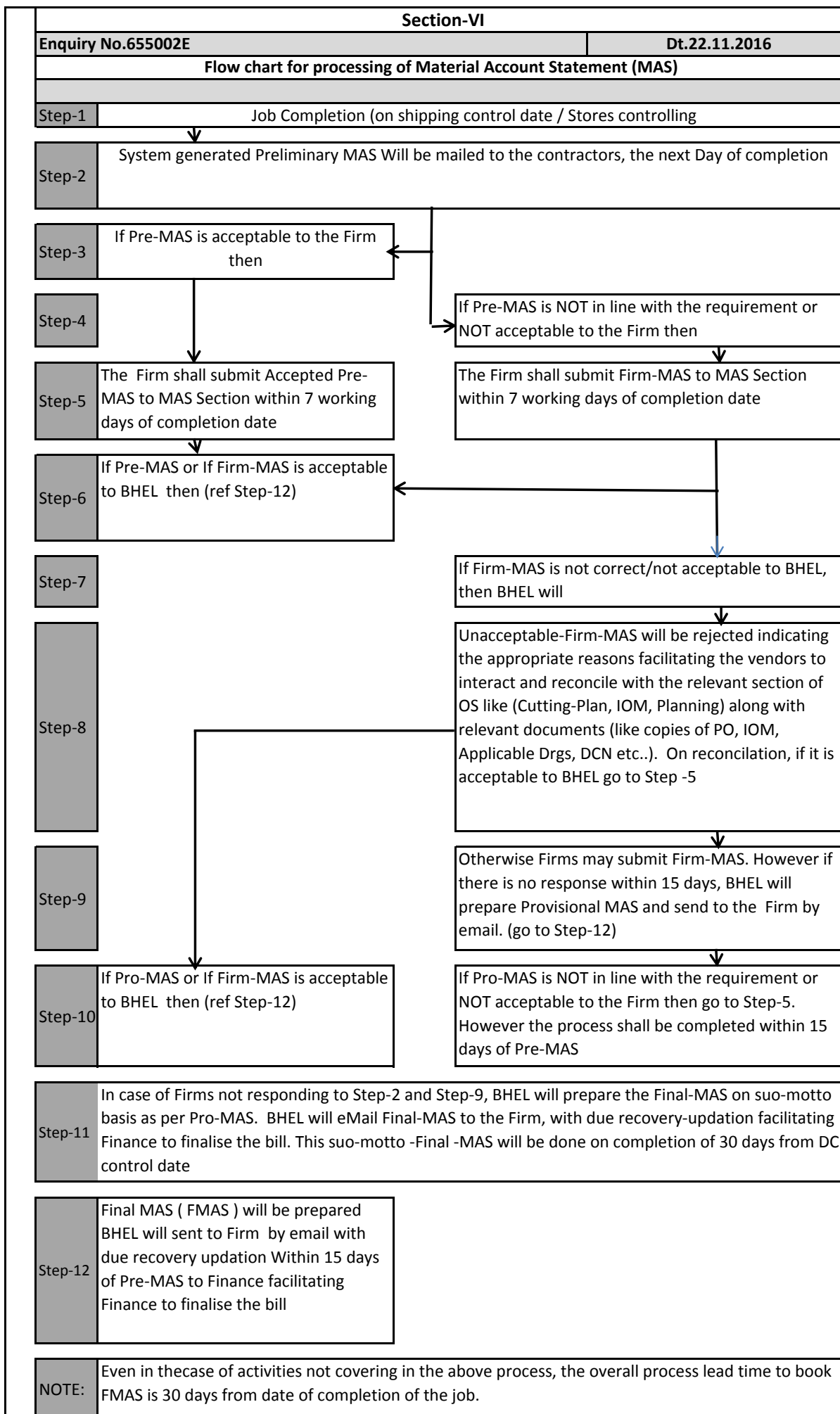
Contractors are requested to meet the requirements of OHSAS 18001 / ISO 14001 as given below:

- ** To adopt OHSAS 18001 / ISO 14001 requirements in their manufacturing process at Contractor's work place.
- ** To comply with applicable provisions of the Central Motor Vehicles Rules 1989 (Rule: 136 and if any).
- ** To follow the applicable Acts/Rules and Regulations (like Factories Act 1948 and Tamil Nadu Factory Rules – 1950) applicable to them.
- ** In addition to this, they should follow the day to day communication of OS on this regard.



Attention to Vendors

- **Attach only the documents mentioned above under Clause F – Submission of Offers.**
- **Write Vendor Code / Vendor reference Code (size 1 Sq. Inch) at the Left Top Corner of the Main Envelope and all the 3 Covers.**
- **Write Vendor Code / Vendor reference Code legibly in the offer wherever required.**
- **Write Vendor address in all the covers at the Left Bottom corner**



Section IX			
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<u>List Of Standard QWI</u>			
PROCEDURE NUMBER	Rev	Effective Date	Title Of The Procedure
A. GENERAL			
PR:QA:076	00	01/10/88	Kerosene Leak Test
QCP:002 A1(RP) A1(PP)	01	01/01/95 28/01/95 28/08/01	Fabrication Of Structural Part (Fabrication Of Non Pressure Parts)
SIP:NP:06	00	15/07/96	Procedure For Visual Inspection Of Non Pressure Parts
SIP:NP:07	00	15/07/96	Welding Qualification For Structural Application
SIP:PP:22	03	10/05/03	Procedure For Surface Preparation And Painting
BAP:NDT:RP:MT:01	02	14/08/99	Procedure For Magnetic Particle Examination Of Ferric Material And Welded Components
BAP:HT:001 A1	05	11/07/96 06/07/03	Heat Treatment Schedule
BAP:NDT:RP:PT:01	02	14/08/99	Procedure For Liquid Penetrant Examination
PR:QA:500	00	16/01/93	Procedure For Allowable For Deviations For Dimensions Without Specified Tolerances
PR:QA:502	00	21/04/93	Procedure For Restarting Of Furnace In Case Of Power Failurss
PR:QA:504	00	27/05/93	Procedure For Seaworthy Packing Of Components For Export Contracts
PR:QA:505	01	14/07/93	Procedure For Storage Of Shelf Life Items Like Rust Preventive Fluids, Paints, Rubber Components, Grease, Anti Seize Compounds And Similar Components/Items
PR:QA:506	00	10/08/01	Verification (Or) Checking Of Steel Measuring Tapes Used By Subcontractors (Or) Vendors
PR:QA:507	00	05/07/93	Procedure For Localised Heat Treatment On Structural Weld Joints
PR:QA:508	02	31/03/98	Procedure For Blast Cleaning
PR:QA:509	00	04/08/93	Guide Lines For Ndt Requirement On Gas Cut Edges
PR:QA:510	00	10/06/92	Measurement Of Internal And External Key Way Dimensions
PR:QA:512	00	31/04/94	Procedure For Control Of Surface Preparation And Painting Of Fabricated Components At Sub Contractors Works
PR:QA:514	03	24/07/99	Procedure For Color Coding Of Raw Material
PR:QA:516	00	24/04/95	Product Ncr Cause Codes
PR:QA:521	00	31/08/95	Codification Of Sars
PR:QA:590 A1 A2 A3	00	10/10/02 01/01/03 05/02/03 26/04/03	Procedure For Surface Preparation And Painting For Bap Products
SQW-01	00	10/06/93	Standard Qp For Welding
B. ELECTOSTATIC PRECIPITATORS			
QCP:E:002 A1	02	03/03/00 04/01/01	Splicing Norms For Sheets, Plates And Other Structural Items
QCP: E:009	00	05/10/88	Manufacture Of Packing Frames And Angle Irons For Collecting Electrodes
QCP:E:18 A1 A2	00 00 00	30/04/92 07/07/93 2801/95	Grip Coupling
SQP:ESP:201	00	20/01/01	Pin Wheel Assy
SQP:ESP:283	00	20/06/98	Esp Supporting Structure(Column And Bracing & Long And

Section IX			
BHEL/BAP/Ranipet ::: OS-MAIN-ARC ::: PAGE: 02 / 04			
List Of Standard QWI			
A1	00	17/08/00	Transverse Roof Beams)
A2	00	04/01/01	
A3	00	23/07/02	
SQP:ESP:284	00	20/06/98	Plate Formed Fabricated Components Side Panels , Casing Shell , Top Panel , Hopper Wall, Roof Panel, Funnel Assy And Its Splitters, Gd Housing Panels
A1	00	25/01/01	
SQP:ESP:285	00	20/06/98	Collecting And Emitting Electrodes Suspension Frames Of Esp
A1	00	25/01/01	
SQP:ESP:286	00	20/06/98	Rapping Shaft Foundation Bolts & Lifting Holders
SQP:ESP:287	00	20/06/88	Inner Arm,Outerarm,Shockbar,Vertical Stay,Vertical Beam,Supporting Beam.
A1	00	18/09/00	
A2	00	25/01/01	
SQP:ESP:288	00	20/06/98	Insulator Housing
A1	00	25/01/01	
SQP:ESP:289	00	20/06/98	Expansion Joint
SQP:ESP:290	00	20/06/98	Screen Sheet
A1	00	25/01/01	
SQP:ESP:260	00	31/01/94	Guillotine Gates
A1	00	05/11/97	
A2	00	15/02/02	
C. WEG AND CHIMNEYS			
QCP:W:001	00	20/07/96	Qcp For Wind Mill Structure
QCP:W:003	00	18/11/94	Qcp For Nacelle Cover Assembly
QCP:W:004	01	17/07/96	Qcp For Assembly For Nacelles Of Wind Generators(Nortex Design)
QCP:I:001	03	29/06/94	Qcp For Ipp Chimenys
A1		28/11/00	
A2		27/12/00	
PR:QA:518	00	27/05/95	Surface Preparation And Painting Of Weg Tower And Nacelle
PR:QA:542	00	09/03/99	Procedure For Trial Assy Of Cylindrical Steel Chimney Shells
D. GATES AND DAMPERS OF BOILER DUCTS			
SIP:NP:08	00	15/07/96	Quality Requirement For Manufacturing Of Seals For Louvers, Biplane Dampers And Gates
SQP:NP:03	01	01/02/95	Louvers And Biplane Dampers
A1		12/08/00	
A2		27/02/02	
SQP:NP:04	01	01/02/95	Guillotine Gates
A1		04/12/96	
ICL-DAM:502	00	28/02/02	Inspection Check List For Biplane Dampers
E. FANS			
QP:FAN:302	00	12/01/01	Rvc Assy
QP:FAN:304	00	29/10/01	Pent House Ventilation Fan/Seal Air Fan
QP:FAN:306	01	10/06/94	Seal Air Fan
QP:FAN:317	04	11/08/97	Radial Fan Impellers And Conical Cover Plate
A1		22/08/98	
A2		07/12/00	
QP:FAN:323	01	11/12/94	Connecting Ring And Supporting Ring
QP:FAN:324	01	15/11/93	Bush For Servo Motor
QP:FAN:326	01	26/07/95	Ap Fan Shaft Assy
QP:FAN:327	01	28/09/96	Piston With Adjusting Disc
QP:FAN:328	01	06/07/94	An Fan Impeller
QP:FAN:329	00	22/11/93	Ap Impeller Cover Plate

Section IX			
BHEL/BAP/Ranipet ::: OS-MAIN-ARC ::: PAGE: 03 / 04			
<u>List Of Standard QWI</u>			
A1		13/01/94	
QP:FAN:330 A1	00	22/11/93 13/01/94	Ap Hub With Supporting Body
QP:FAN:332	01	20/06/94	Blade Shaft
QP:FAN:333 A1	00	22/11/93 13/01/94	Cylinder Assy
QP:FAN:334 A1	00	22/11/93 13/01/94	Ap Hub Disc
QP:FAN:335 A1	00	22/11/93 13/01/94	Ap Fan Bearing Cover
QP:FAN:336 A1	00	22/11/93 13/01/94	Impeller Hub And Blade Bearing Assy
QP:FAN:338 A1	00	22/11/93 13/01/94	Supporting Body
QP:FAN:342 A1	01	29/11/94 11/08/03	Spiral Casing Of Ndv, Ndzv And Ndfv Fans
QP:FAN:343 A1 A2	03	22/07/95 09/05/01 02/01/03	Damper Control Assy
QP:FAN:345 A1	00	06/07/94 19/08/97	Radial Fan Shaft Of Tube With End Piping Design
QP:FAN:346	01	31/05/95	Solid Shaft Of Radial Fans
QP:FAN:347	02	20/06/95	Impeller Of Czech Design D1 Type
QP:FAN:348	00	10/06/96	Ap Fan Hsg And Hub Front Part
QP:FAN:350	00	05/06/95	Expansion Joint For Fans
QP:FAN:352	00	13/11/95	Shaft With Brg Assy(Tube Type)
QP:FAN:353 A1	01	09/12/95 15/02/00	Control Rod And Control Slide/Control Sleeve
QP:FAN:354 A1	00	03/02/96 05/12/00	Radial Fan Rotor Asssy
QP:FAN:355	00	26/04/96	Hub With Flange
QP:FAN:356	01	10/06/96	Outlet Guide Vane Assy
QP:FAN:357	00	05/12/00	Steel Compensating Weight Of Ap Fan
QP:FAN:358	00	05/12/00	Ap Fan Lever
QP:2:4:271 A1	00	18/05/81 22/08/94	Igv Assy (Nd Type Fans)
QP:2:4:272 A1	00	18/05/81 22/08/94	Igv Assy (An Type Fans)
QP:2:4:273 A1	00	18/05/81 22/08/94	An Static Fan Parts(Kkk Design)
QP:2:4:274 A1	00	18/05/81 22/08/94	Ap Static Fan Parts(Kkk Design)
QCP:F:002 A1 A2	00	16/05/88 22/08/94 03/09/98	Ap Fan Diffuser Assy
QCP:F:007 A1	00	16/05/88 20/08/94	Ap Fan Suction Chamber
QCP:F:010 A1	00	16/05/88 18/08/94	Brg Pedestal,Base Frame For Hydraulic Coupling,Base Frame For Moyer
SQP:312	01	12/01/02	Lube Oil System And Fittng
PR:QA:302	01	03/02/03	Requirements For Balancing Mandrel
PR:QA:304	01	03/02/03	Reblading/Repair Of Axialchezck Type/An Impellers
PR:QA:305	01	03/02/03	Trail Assy Of Ndzv Spiral Casing
PR:QA:309	04	03/02/03	Recommended Balancing Speeds For Fan Components
PR:QA:314	03	03/02/03	Verification Of Performance Of Balancing Machine With Master Rotor
PR:QA:321	03	03/02/03	Balencing Of Ap Fan Shaft

Section IX			
BHEL/BAP/Ranipet ::: OS-MAIN-ARC ::: PAGE: 04 / 04			
List Of Standard QWI			
PR:QA:323	02	03/02/03	Guidelines For Fixing Of Balancing Correction Masses
PR:QA:326	01	03/02/03	Hot Pressing Of An Impeller Blades, Root Stifners And Guide Vanes Of Ap, An Static Parts
PR:QA: 329	01	03/02/03	Assembly Of Functional Test Of Ndfv Shaft With Bearing Assy
PR:QA:333	01	03/02/03	Ensuring Specified Interference Fil Incase Of Deviation In Shaft In Tube Bore
PR:QA:341	01	03/02/03	Preservation And Packing Of Fan Rotor Assy
<u>F. AIR PREHEATERS</u>			
QCP:2:4:258 A1 A2	00	01/03/81 13/01/02 05/02/03	Cleaing Devices Of Aph
SQP:APH:104	01	27/01/03	Tubular Aph
SQP:APH:107	00	18/10/02	Heating Elements Basket Assembly
PR:QA:410	02	04/12/02	Procedure For Fabrication Of Extra Width Plates
<u>G. DESALINATION</u>			
QCP:D:001	00	15/05/97	Fabrication And Assembly Checks On And Desalination Plants
PR:QA:526	01	14/08/01	Surface Preparation And Painting Of Components & Desalination Plants

H. List Of Cross Referred Documents For Fan

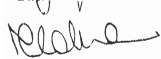
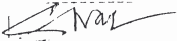
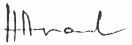
Sl. No	Sqp No.	Rev No.	Cross Referred	Superseded By
01	Fan:308	02	IS 2147	IS 13947
02	Fan:310	00	IS 2147	IS 13947
03	Fan:326	01	PR:QE:017/03 PR:QA:0173/00 PR:QA:061	PR:QA:337/00 PR:QA:341/00 PR:QA:338/00
04	Fan:331	00-A1	QCP:1600111530	PR:QA:328/00
05	Fan:336	00-A1	QCP:16000111529(4) PR:QA:082/00	PR:QA:332/00 PR:QA:331/00
06	Fan:339	00-A1	QCP:F:009/00-A1	PR:QA:320/01
07	Fan:341	00-A1	PR:QE: 017/03 QCP:F:004/00 PR:QA:173/00	PR:QA:337/00 PR:QA:321/00 PR:QA:341/00
08	Fan:345	00	PR:QE:017/03 PR:QA:173/00	PR:QA:337/00 PR:QA:341/00
09	Fan:346	00	PR:QE:017/03 PR:QA:173/00	PR:QA:337/00 PR:QA:341/00
10	Fan:354	00	PR:QA:061/00	PR:QA:338/00

Note: To view the quality documents specified in the Section X, Click “Quality Documents” button available in the Main Page. Vendors can view the documents at OS department also.

BHEL : BAP : RANIPET
QUALITY DEPARTMENT

Procedure for Blast cleaning of Boiler Auxiliaries components.

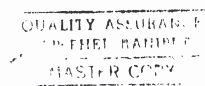
PR : QA : 508
REV NO. 02
Dt. 31-03-98
Page 01 of 05

	Name & Designation	Signature & Date
Prepared :	V.Jayaraman,MGR/QA	
Reviewed :	DGM/M&S	
	DGM/OP&C	
Approved :	H ANANTHANARAYANAN DGM / QA	

Issued by : DGM / QA

Controlled Copy No.

Issued To :



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Page 02 of 05

RECORD OF REVISIONS

REV NO	CLAUSE REVISED	REASON FOR REVISION
00	FRESH ISSUE	-----
01	CL 3.0,4.0 MODIFIED.C1 4.3.ADDED TABLE UNDER C1 4.4 REVISED. C1 5.0 MODIFIED. ANNEXURE I PARAMETER CARD REVISED. ANNEXURE II MODIFIED. ANNE- XURE III MODIFIED.	INCORPORATED SAND BLASTING IN ALL CLAUSES.
02	CL 4.4 TOTALLY REVISED SPLITING INTO CL 4.4.1 & 4.4.2	SURFACE CLEANLINESS & SURFACE ROUGHNESS REQUIREMENTS REFINED.

- 1.0 Scope
- 1.1 This procedure details out the nozzle blast cleaning process, its equipment, the controls exercised and qualification and training of the personal using the process.
- 2.0 Qualification and Training of the blast cleaning personal.

- 2.1 The personnel shall be trained and qualified to do the blast. Cleaning process. To this effect the blast shop/vendor should have a 'Training / Qualification record' for each blast cleaning personal with identify. (sample form enclosed in Annexure III)
- 3.0 Equipment

- The blast cleaning equipment, viz. the compressed air line, the silo, the valves, the abrasive, jet nozzels shall all be of such material as to give consistently same surface finish for the same set of process parameters viz, nozzle, air pressure, grit/shot/sand particle size distribution and the nozzle distance from the job.
- 4.0 Quality of shots/grits/sand

- 4.1 Where shot blasting is called for the shots shall be spherical and near spherical and shall meet. Us Screen

Size S330 or S390 made of chilled iron shots. With a cleaning rate of 0.72/0.67 sq. ft per minute at 80 psj gauge pressure and 5/16" diameter nozzle.

- 4.2 where crushed iron grits are used at : 80 psj gauge pressure and 5/16" dia nozzle SAE grit G 50 or a combination of

10% G50 and 90% misccl small grits. The cleaning rate shall

be 1.56/1.38 sq. ft per minute.

- 4.3 where sand blasting is required to be done the sand shall be river sand with not less than 95% silica sand. The sand should have low chloride content (not more than 0.03% by weight). The grain size of sand shall he between 1 mm and 0.7 mm with linear sharp edges and sharp corners.

4.4 Testing the area cleaned

4.4.1 The vendor/blasting shop shall qualify the grit/shot/sand pressure nozzle dia combination by actually doing blast cleaning on a medium rested steel test plate of 1'x1' square. The cleanliness of the surface shall be matching the surface cleanliness standard to be prepared for Sa2, Sa2.5 and Sa3 separately and kept as reference standard. QA shall certify the above surface cleanliness standard.

4.4.2 Where surface roughness measurement is also a requirement of the contract the same shall be checked. The roughness of the surface after blasting shall be compared visually against a standard test coupon. Whose roughness is measured by a surface roughness tester and fixed.

4.4 The vendor shall prepare a 'certificate for Qualification

of Blast cleaning process' duly signed by process. (sample form enclosed in Annexure IV)

5.0 Parameter Card:

The vendor/production bay shall maintain a parameter card as given in Annexure I after each qualification and do the blasting as per the parameter card. The inspector in the bay shall do periodic surveillance to verify and record in a register the satisfactory functioning of the sand/shot/grit blasting process as per the parameter card. The parameter card shall be prepared reviewed and approval by competent personal in the prodn. shop/vendor incorporating all the process variables actually used.

6.0 Maintenance of log book of work

The blast shop/vendor shall maintain a log book of all

operations duly verified and signed by the inspector in the bay/vendor's works and kept as a record of operations carried out.

7.0 Identification of job

The blast shop/vendor shall attach and identity card duly and firmly attached to the job indicating OPS NO., WO N0./PGMA/DU (in the case of shop) PO No. and who No./OGMA/DU (in the case of vendor)

Annexure - I

Annexure to PR : QA : 508 : Rev.02/31-03-98

PARAMETER CARD

Process : sand/shot/grit blasting

Nozzle type & size :

Pressure of air :

Sand/shot/grit size :

Certificate reference :

Equipment Name :

Prepared
by

Reviewed
by

Approved
by

ANNEXURE II

PR : QA : 508/REV 02/ 31-03-98

BLAST CLEANING GRIT NUMBERS AND SCREENING TO TOLERANCES
PERCENT OF TOTAL SAMPLE BY WEIGHT FO EACH PERTINENT SCREEN

SEA NO SYSTEM	HIGH LIMIT GRIT RETAINED % MAX	SCREEN SCREEN NO & APERTURE	NOMINAL GRIT RETAINED % MAX	SCREEN SCREEN ON & APERTURE % MAX	LOW LIMIT CRIT RETAINED % MAX	SCREEN SCREEN APERTURE
C-10	0	7 (.111)	80	10 (.0787)	10	12(.0661)
C-12	0	8 (.0937)	80	12 (.0661)	10	14(.0555)
C-14	0	10 (.0787)	80	14 (.0555)	10	16(.0469)
C-16	0	12 (.0661)	75	16 (.0469)	15	18(.0394)
C-18	0	14 (.0555)	75	18 (.0394)	15	25(.0280)
C-25	0	16 (.0469)	70	25 (.0280)	20	40 (.0165)
C-40	0	18 (.0394)	70	40 (.0165)	20	50 (.0117)
C-50	0	25 (.0280)	65	50 (.0117)	25	80 (.0070)
C-80	0	40 (.0165)	65	80 (.0070)	25	120(.0049)
C-120	0	50 (.0117)	60	120(.0049)	30	200(.0029)
C-200	0	80 (.0070)	55	200(.0029)	35	325(.0017)
C-325	0	120(.0049)	20	325(.0017)	-	-----

BLAST CLEANING SHOT NUMBERS AND SCREENING TO TOLERANCES
PERCENT OF TOTAL SAMPLE BY WEIGHT FOR EACH PERTINENT SCREEN

SEA NO SYSTEM	HIGH LIMIT GRIT RETAINED % MAX	SCREEN SCREEN NO & APERTURE	NOMINAL CRIT RETAINED % MAX	SCREEN SCREEN ON & APERTURE % MAX	LOW LIMIT CRIT RETAINED % MAX	SCREEN SCREEN APERTURE
S-1320	0	4 (.187)	85	6 (.132)	5	7 (.111)
S-1110	0	5 (.157)	85	7 (.111)	5	8 (.0937)
S-930	0	6 (.132)	85	8 (.0937)	5	10(.0787)
S-780	0	7 (.111)	80	10 (.0787)	10	12(.0661)
S-660	0	10(.0787)	80	12 (.0661)	10	14(.0555)
S-550	0	12 (.0661)	80	14 (.0555)	10	16(.0469)
S-460	0	14 (.0555)	75	16 (.0469)	15	18(.0394)
S-390	0	16 (.0469)	75	18 (.0394)	15	20(.0331)
S-330	0	18 (.0394)	75	20 (.0331)	15	30(.0232)
S-230	0	20 (.0331)	70	30 (.0232)	20	40(.0165)
S-170	0	30 (.0232)	70	40 (.0165)	20	50(.0117)
S-110	0	40 (.0165)	65	50 (.0117)	25	80(.0070)
S-70	0	50 (.0117)	65	80 (.0070)	25	120(.0049)

ANNEXURE -II
(PR : QA : 508/REV 02/31-03-98)

CERTIFICATE OF QUALIFICATION / EXPERIENCE
FOR BLAST CLEANING PERSONAL

Certificate No.

Process : Shot/grit/Sand blasting

Pressure :

Nozzle size / type :

Hose size / classification :

Sand / grit / shot / particle size :

Test coupon size :

Time required for cleaning }

Test coupon }

Area cleaned per hour }

surface finish achieved : Sa2 / Sa2 1/2 / Sa3

(compare against standard

reference coupon)

Certified that the sand / shot / grit blasting process is qualified

for the parameter combination specified above.

OP & C / MSA / M & S

QA

BHEL::BAP::RANIPET
QUALITY DEPARTMENT

PR:QA:512
REV:00
Dt:31.1.94
Page 01 OF 04

PROCEDURE FOR

CONTROL OF SURFACE PREPARATION AND
PAINTING OF FABRICATED COMPONENTS
AT SUB-CONTRACTORS WORKS.

EFFECTIVE DATE

31.1.94

NAME

SIGNATURE & DATE

PREPARED BY

V JAYARAMAN

REVIEWED BY

H ANANTHANARAYAN

APPROVED BY

R V MISRA

ISSUED BY

QUALITY ASSURANCE

CONTROL COPY NUMBER

MASTER COPY

PROCEDURE FOR CONTROL OF SURFACE PREPARATION AND PAINTING OF
FABRICATED COMPONENTS AT SUB-CONTRACTORS WORKS.

1.0 SCOPE:

- 1.1 This procedure details out the requirement for surface preparation and painting of all fabricated components at sub-contractors works.

1.1.1 Surface preparation equipment:

The sub-contractor should have the minimum surface preparation equipment as mentioned below:

- a) Wire brush
- b) Emery sheets of rough type
- c) Power wire brush to be used with pneumatic or electrical motors
- d) Brush for cleaning the dust removed by wire brushing power tool cleaning

- 1.2 Whenever any special requirement for surface preparation and painting are required, the same shall be indicated in the drawing or shall be informed separately to sub-contractors.

- 1.3 This PRQA is in line with the requirement of Painting Schedule RP 0674199.

2.0 SURFACE PREPARATION:

2.1 CLEANING OF OIL, GREASE ETC

- 2.1.1 The entire outer surface of the fabricated components shall be thoroughly cleaned using mineral turpentine, wire wheel, grinding wheel to make it free from OIL, GREASE, RUST, MILL SCALES and weld spatters.

2.2 METHOD OF RUST REMOVAL

- 2.2.1 Wire brush, emery sheets of rough type, Power /rotary wire wheel may be used for removing the dust, rust and mill scales from the surface.

- 2.2.2 The "Rustkil" (rust remover/converter) shall be applied whenever the rust cannot be removed by using power tool cleaning.

- 2.2.3 Only after clearance of surface preparation by BHEL Inspection/BHEL Authorised Inspection Agencies the sub-contractor can proceed with painting.

0 PAINTING

1 Only paints from BHEL approved suppliers shall be applied.

2 After visual inspection and clearance by QC BHEL/Authorised Inspection Agency one coat of red oxide Zinc chrome primer as per IS 2074 shall be applied by brushing to a dry film thickness of approx 25 microns.

3 The paint shall be allowed to hard dry and thoroughly before applying the second coat. Second coat shall be applied only after 18 hours.

4 A second coat of IS 2932 Synthetic Enamel smoke grey paint shall be applied over the primer to a coating thickness of 20 microns approximately.

5 The small items shall be dipped in the paint tank.

The final inspection of the component shall be offered to QC BHEL/Authorised Inspection Agency only after hard drying of the enamel paint and stencilling of work order No, D.U.No, details.

All edge prepared areas for welding at shop/site at later stage shall be applied with one coat of weldable primer.

Any scratches and soil sticking on the surfaces during handling shall be repaired before despatch to BHEL/Shipping.

K. S. S. S.

RECORDS:

The firm shall record the make/brand name and batch number of the approved paint used in the dimension report.

1. The sub-contractors shall maintain records of the primer paints procured, the source of the primer paints namely dealer, the manufacturer of the primer paints, the batch number of the primer paints and the delivery chalan reference for the paint procured along with the quantity and also copy of the test certificates certifying the quality of the paint. These records shall be verified by BHEL inspector immediately on procurement of the paint by sub-contractor and shall be countersigned by BHEL inspector. This record is subject to audit by Quality Assurance.

4.2 The firm shall show the details/evidence for procurement of approved paints to QC personnel (BHEL)/Authorised Inspection Agency whenever required during surveillance checks/audits. The sub-contractor before use of primer paints shall verify the correctness of specification of the primer paints before opening the drums. The drum shall be rolled roughly 20 times before opening the seal and stirring the contents. The contents shall be thoroughly stirred using a steel rod and shall be checked for any settling of pigment. If any pigment settlement is observed the process of resealing, rolling, stirring thereby redispersal of the paint pigment into the medium is to be ensured. Now a small quantity can be transferred to painting cans and applied by neat brushes of width at least 3 inches.

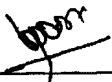
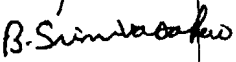
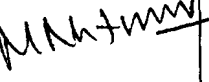
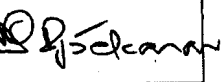
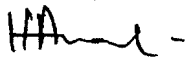
4.3 The sub contractor shall ensure that the required number of primer coats are given on the components as per the painting schedule RP 0674199. Visual inspection shall be done for checking damages, poor paints, improper finish. After the paint films dry the inspector will randomly check the coating thickness with coating thickness gauge for the correctness of the thickness of the paint in case of any doubt.

5.0 TESTING OF PAINT SAMPLES

5.1 QC BHEL personnel shall collect random samples of paint (approx 1 litre) and submit the same to Quality Assurance for testing. Such random samples may be collected whenever any doubt arises about the quality of paint while carrying out visual inspection. Alternately QC/OLI may scrape dried paint film from painted surfaces for testing at paint test lab.

5.2 In case any batch of paint is found not conforming to requirement, the concerned brand of paint shall be removed from the approved list of paint suppliers of BAP, Ranipet.

 RANIPET	<u>QUALITY ASSURANCE</u> SURFACE PREPARATION AND PAINTING PROCEDURE FOR DESALINATION COMPONENTS	PRQA: 526 REVISION: 01 DATE: 14.08.01 PAGE: 1 OF 5
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PROCEDURE FOR		<i>SURFACE PREPARATION AND PAINTING OF COMPONENTS OF DESALINATION PLANTS</i>	
EFFECTIVE DATE		14.08.2001	
PREPARED BY	NAME	DEPARTMENT	SIGNATURE
	K.RAJADURAI	QA	
REVIEWED BY	B.SRINIVASA RAO	QA	
	M.NATARAJAN	EDC/DCI	
	M.RAVINDRA	MSA	
	P.RAJASEKARAN	QC/OLI	
APPROVED BY	H.ANANTHANARAYANAN	QA	
REVISION NO.		01	
ISSUED BY		QUALITY ASSURANCE	
CONTROL COPY NO.			
ISSUED TO SHRI.			

 RANIPET	<u>QUALITY ASSURANCE</u> SURFACE PREPARATION AND PAINTING PROCEDURE FOR DESALINATION COMPONENTS	PRQA: 526 REVISION: 01 DATE: 14.08.01 PAGE: 2 OF 5
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RECORD OF REVISIONS		
REVISION NO.	DETAILS OF ISSUE	DATE OF ISSUE
00	ORIGINAL ISSUE	09.05.96
01	EDITORIAL CORRECTION	14.08.01

 RANIPET	<u>QUALITY ASSURANCE</u> SURFACE PREPARATION AND PAINTING PROCEDURE FOR DESALINATION COMPONENTS	PRQA: 526 REVISION: 01 DATE: 14.08.01 PAGE: 3 OF 5
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PROCEDURE FOR SURFACE PREPARATION AND PAINTING OF COMPONENTS OF DESALINATION PLANTS

1.0 SCOPE:

This procedure gives guidelines for surface preparation and painting of components of Desalination Plants.

2.0 The following are not under the purview of this procedure.

- 2.1 Masonry structures, PVC tubes, pipes & fittings, FRP vessels, pipes components and glass.

3.0 PROCEDURE:

- 3.1 The following components of Desalination Plants are under the purview of this procedure.

- (a) Membrane Racks
- (b) Valve supports and clamps, Pipe supports and clamps
- (c) Supporting Structures
- (d) Carbon steel filters, hand rails, platforms
- (e) Shed Structures
- (f) Handling Equipment
- (g) Cranes
- (h) Electric motors, base frame
- (i) Any other component specified in the drawings.

4.0 SURFACE PREPARATION SCHEME:

- 4.1 Except stainless steel pipes and fittings (and Aluminium if any) all other steel surfaces shall be sand / shot blasted to SA 2½ finish as per Swedish Standard SIS 055900 before painting.

 RANIPET	QUALITY ASSURANCE SURFACE PREPARATION AND PAINTING PROCEDURE FOR DESALINATION COMPONENTS	PRQA: 526 REVISION: 01 DATE: 14.08.01 PAGE: 4 OF 5
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5.0 PAINTING SCHEME:

See Table – 1 below.

TABLE – 1

Scheme	Paint Type
PS 1	Epoxy Zinc Phosphate Primer Paint
PS 2	Epoxy finish Paint

5.1 The probable paint supplier can be as follows:

- a. Asian Paint (India) Ltd.
- b. Bombay Paints
- c. Berger paints India Ltd.
- d. Goodlass Nerolac paints Ltd.
- e. Garware Paints
- f. Jenson & Nicholson
- g. Shalimar paints

Sl. No	Component	Surface Preparation	Primer	No. of Coats	DFT Total Microns	Finish Paint	No. of Coats	DFT Total Microns
01	Membrane Racks	SA 2 ½	PS 1	2	100	PS 2	2	100
02	Valve Supports and Clamps	SA 2 ½	PS 1	2	100	PS 2	2	100
03	Supporting Structures	SA 2 ½	PS 1	2	100	PS 2	2	100
04	Carbon steel filters (outer surfaces)	SA 2 ½	PS 1	2	100	PS 2	2	100
05	Hand Rails & Platforms	SA 2 ½	PS 1	2	100	PS 2	2	100
06	Shed Structures & Clamps	SA 2 ½	PS 1	2	100	PS 2	2	100
07	Handling Equipment	Leave greased/oiled surfaces free (for other follow scheme)	PS 1	2	100	PS 2	2	100
08	Cranes	- do -	PS 1	2	100	PS 2	2	100

 RANIPET	<u>QUALITY ASSURANCE</u> SURFACE PREPARATION AND PAINTING PROCEDURE FOR DESALINATION COMPONENTS	PRQA: 526 REVISION: 01 DATE: 14.08.01 PAGE: 5 OF 5
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6.0 GENERAL PRECAUTIONS:

- 6.1 Do not delay painting after Sand / Shot blasting. Maximum delay permitted is only half an hour.
- 6.2 Do not paint when the weather is rainy or the temperature is below 20⁰ C.
- 6.3 The epoxy primer and finished paints are two component paints. The components must be mixed in the proportions given by the manufacturer only. The application of epoxy paints shall be completed with in 2 hours of mixing.
- 6.4 The etch/wash primers are also two component paints, which must be mixed in proportions given by the manufacturer.

7.0 IMPORTANT:

If the components are to be painted at site one coat of EPOXY FINISH PAINT of DFT 50 Microns SHALL BE GIVEN.

Procedure for Surface Preparation and Painting

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Rev	01
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Procedure for Surface preparation and Painting

Prepared By	V SUNDARAM SEF/QA	<i>V Sundaram</i>
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Record of revision

Rev No.	Effective Date	Details of revision
00	10 10 02	RP0674199 Rev 05 requirements and PRQA 590 rev 12 requirements were fully reviewed and this document is released as Rev 00 taking care of painting requirements of BAP projects. For project specific painting schemes respective CIS or contract specific painting schemes to be referred.
01	22 05 07	Painting requirement are fully reviewed. Red oxide Zinc chromate for primer application (IS 2074) is corrected as Red oxide Zinc phosphate primer (IS 12744) and also number coats & DFT corrected.

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1.0 SCOPE

- 1.1. This procedure specifies requirements for surface preparation and painting and coating, for APH, Fan, ESP, Gates & Dampers and Chimney. (For WEG and Desalination, please refer PRQA: 518/Latest and PRQA: 526/Latest respectively).
- 1.2. Section I deals with surface preparation schedule and section II deals with painting and coating.
- 1.3. Special contractual requirements, if any, will be indicated through a separate contract specific documents with customer approval, when required. The linkage will be provided in the CQR issued by QA.

2.0 GENERAL

- 2.1 This procedure specifies painting requirements to provide adequate protection up to one year in open yard at site.
- 2.2 No painting shall be applied on the stainless steel, galvanized and any plated surfaces. For estimation of requirements of painting, the approximate area of coverage on non-absorbing surface is as given below: -

SL. No.	Generic nature of paint	Theoretical covering area (Sq.M/litre)	DFT /Coat (Min)	Shade
1	Red oxide zinc phosphate primer to IS 12744	10	30	Red oxide
2	Synthetic enamel paint to IS 2932	10	20	Smoke grey
3	Heat resistant aluminum paint to IS 13183	10	20	Aluminium

- 2.3 For bought out items, the painting scheme shall be as per purchase specification. If this is not specified in purchase specification, the following is the minimum requirement
 - a) Primer: One coat of red oxide zinc Phosphate primer to IS 12744- DFT 30 microns
 - b) Finish: Two coats of synthetic enamel to IS 2932 smoke grey shade No.692 of IS 5. -DFT 20 microns per coat

Section –I

3.0 SURFACE PREPARATION REQUIREMENTS FOR PAINTING AND COATING

- 3.1. The effectiveness and duration of the protection provided by organic, inorganic and metallic coatings for corrosion protection depends among other things decisively on proper surface preparation. This section deals with the methods of surface preparation, their effectiveness and fields of application.
- 3.2. This section largely based on ISO 8501 – 1: 1988 that in turn is based on the Swedish standard SS 05 59 00.

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3.3. SURFACE PREPARATION METHODS

3.3.1. Surface preparation depends on initial condition of uncoated surfaces. The details of rust level, rust removal methods and characteristics surfaces are given in table 1.0.

3.4. DEFINITIONS AND METHODS OF CLEANING

3.5. CLEANLINESS OF SURFACES.

3.5.1. Cleaning requirements and levels of cleanliness, contaminants such as dirt, oil that will interfere with the adhesion or effectiveness of the proposed coating must be removed. Coats of materials related to the metal (scale, rust) and coats of different materials (e.g. existing coating) should be removed until the agreed level of cleanliness is attained.

3.5.2. Contaminants/coats, both of related material and of materials different from the metal may be removed in one operation if the nature, level and thickness permit this. The required level of cleanliness depends on

- The corrosion protection system selected
- The type of corrosion exposure expected
- The initial condition of the surface being prepared
- The possible rust removal method
- Economic considerations

3.5.3. Generally, the standard levels of cleanliness as in table 1.0 should be used as a basis. This does not cover the removal of weld spatter, weld or flame cutting slag or chips, repair grinding of rolling defects (laminations) deburring and similar operations.

3.6. MECHANICAL METHODS OF REMOVING RUST

3.6.1. Manual rust removal:

3.6.1.1. This applies to standard levels of cleanliness St 2, St3 as per table 1.0 manual cleaning uses wire brush, stripping knife, Swedish scraper, rust removing hammer etc., The method must not damage the metal being derusted. Subsequent cleaning by sweeping or brushing off or by blowing off with dry air.

3.6.2. Mechanical rust removal:

3.6.2.1. This applies to standard levels of cleanliness St2, St3 as per table 1.0 cleaning can be done by mechanically driven rust removing tools viz., rotating wire brush, impact piston devices or rotary descalers, sanding discs etc. The surface areas where the power driven tool cannot enter, manual cleaning should be done. The method must not damage the metal being derusted. Subsequent cleaning by sweeping or brushing off or blowing off with dry air.

3.6.3. Blast cleaning

3.6.3.1. This applies to standard levels of cleanliness Sa 1, Sa 2½, Sa 3 as per table- 1.0. Chemically contaminated surfaces must be pre-washed. Surfaces having coarse rust must be pre-cleaned with impact tools prior to blast cleaning.

3.6.3.2. Compressed air blasting is generally recommended for our operations. It is a freely directed air blasting in blasting cubicles, Rooms or sheds with re-circulation of blasting abrasives.

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3.6.4. REMOVAL OF CONTAMINANTS/COATS OF MATERIAL DIFFERENT FROM THE METAL

3.6.4.1. Surface of metal contaminated with cutting fluid (machine coolant) oil or grease shall be wiped with mineral turpentine/tri-chloroethylene prior to applying any methods of mechanical surface preparation.

3.6.4.2. If any old paint film or rust preventive films are present they may be removed with paint removing jelly.

3.6.4.3. As far as possible the cleaning method should be so chosen that all the scale is removed from the metallic surface to be coated. For heavily scaled metallic surfaces either blasting or pickling may be adopted over and above the requirements called for in the table 1.0.

3.6.5. NOTES TO TABLE 1.0

3.6.5.1. Initial condition of uncoated surfaces (rust grade as per SS 05 59 00)

- Steel surface largely covered with adhering mill scale but little, if any rust.
- Steel surface, which has begun to rust, and from which the mill scale has begun to flake.
- Steel surface on which the mill scale has rusted away or from which it can be scrapped, but with slight pitting visible under normal vision.
- Steel surface on which the mill scale has rusted away and on which general pitting is visible under normal vision.

3.6.5.2. Standard level of cleanliness equivalent to steel structures painting council of US (SSPC) also given in brackets in table 1.0.

Table 1.0

Standard level of cleanliness	Rust removal method	Initial condition of steel surfaces (Uncoated ref.4.5)	Essential Characteristics of the prepared steel surface
St 2 (SSPC-SP 2)	Thorough hand and power tool cleaning	B, C, D	When viewed without magnification, the surface shall be free from visible oil, grease and dirt, and from poorly adhering mill scale, rust coatings and foreign matter.
St 3 (SSPC SP 3)	Very Thorough hand and power tool cleaning	B, C, D	As for St 2, but the surface shall be treated much more thoroughly to give a metallic sheen arising from the metallic substrate.
Sa 1 (SSPC SP 7)	Light blast cleaning	B, C, D	When viewed without magnification, the surface shall be free from visible oil, great and dirt, and from poorly adhering mill scale, rust, paint coatings and foreign matter.
Sa 2 (SSPC SP 6)	Thorough blast cleaning	B, C, D	When viewed without magnification, the surface shall be free from visible oil, grease and dirt, and from most of the mill scale, rust, paint coatings and foreign matter. Any residual contamination shall be firmly adhering.

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Standard level of cleanliness	Rust removal method	Initial condition of steel surfaces (Uncoated ef.4.5)	Essential Characteristics of the prepared steel surface
Sa 2 ½ (SSPC SP 10)	Very Through blast cleaning	B, C, D	When viewed without magnification, the surface shall be free from visible oil, grease and dirt, and from the mill scale, rust, paint coatings, and foreign matter. Any remaining traces of contaminations shall show only as slight stains in the form of spots or stripes
Sa 3 (SSPC SP 5)	Blast cleaning to visually clean steel.	A,B, C, D	When viewed without magnification, the surface shall be free from visible oil, grease and dirt, and from mill scale, rust, paint coatings and foreign matter. It shall have a uniform metallic colour.

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Section -II

4.0 SCHEDULE OF PAINTING AND COATING:

Table 2.0

Sl.No.	Component/PGMA	Surface preparation	Primer	DFT in µm (Min)	Finish	DFT in µm (Min)	Total DFT (Min)
1.0	Regenerative Air Pre-Heaters						
1.0.1	Heating element baskets (without elements) 52 010, 024, 025	Power tool cleaning to ST-3 (SSPC SP3)	One coat of red oxide zinc phosphate primer to IS 12744 (varnish medium alkyl)	30	NIL	--	30
1.0.2	Heating elements (with elements) 52 010, 024, 025	--	(*) Temporary rust preventive oil non dry type (Dipping)	--	NIL	--	--
1.0.3	Rotor post assembly machined items of (52 011), Pin rack assembly (52 012) seals (52 013,054,055), sector plates (52 041,042) and machined components of APH.	--	(**) Temporary rust preventive oil Dry type	20	NIL	--	20
1.0.4	Components in flue gas path and insulated Rotor post assy (52 011), T bars (52 013), Rotor housing assy. (52 030), Hot and cold connecting plate assy. (52 041,042),	Power tool cleaning to ST-3 (SSPC SP3)	Two coats of red oxide zinc phosphate primer to IS 12744 (varnish medium alkyl)	60	NIL	NIL	60

(*) Specification as per PRQA 522/Rev 00

(**) Specification as per PRQA 523/Rev 00



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Sl.No.	Component/PGMA	Surface preparation	Primer	DFT in μm (Min)	Finish	DFT in μm (Min)	Total DFT (Min)
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1.0.5	Components exposed to Atmosphere Rotor drive assy (52 100), Access door (52 210, Air seal piping (52 211), observation port other than glass part (52 212), Rotor stoppage alarm other than aluminum (52 217), Loose items of Air receiver (52 220), Guide bearing assy (52 261), Support bearing assy (52 262), Oil piping GB, SB (52 271,272) oil circulation unit (52 274), Deluge and wash pipe assy. (52 301,302,401,402) Cleaning device assy (52 325, 326), Cleaning device drive (52 329,429), Thermo couple pipe assy. Other than SS (52 360)	Power tool cleaning to ST-3 (SSPC SP3)	One coat of red oxide zinc phosphate primer to IS 12744 (varnish medium alkyl)	30	Two coats of synthetic enamel paint to IS 2932 shade 692 of IS 5 unless specified otherwise.	40	70
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2.0	TUBULAR AIRPREHEATER						
2.1	Side walls (external surfaces and internal surfaces).	Power tool cleaning to ST-3 (SSPC SP3)	Two coats of red oxide zinc phosphate primer to IS 12744 (varnish medium alkyl)	60	--	--	60
2.2	Machined surfaces, tubes of TAPH, Tube plates and intermediate plates	---	(**) Temporary rust preventive oil Dry type	20	NIL	NIL	20

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Sl.No.	Component/PGMA	Surface preparation	Primer	DFT in μ m (Min)	Finish	DFT in μ m (Min)	Total DFT (Min)
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3.0	Fans						
3.1	Foundation materials 55 0XX, 56 0XX	Power tool cleaning to ST-3 (SSPC SP3)	Temporary Rust preventive	20	--	--	20
3.2	<u>Components exposed to atmosphere</u> a) Bearing Pedestals, Base frame, Servomotor assy, shaft with Bearing assy, OGV, IGV (55-1XX, 55-2XX 55-3XX). b) Bearing Pedestals, Base frame, Shaft with bearing assy, RVC, IGV, Support for Seal, shaft protecting tube, Spiral casing (if no insulation is applicable), Damper (56-1XX, 56-2XX 56-3XX, 56-4XX) c) Coupling guard (56-8XX, 55-8XX). Tools (56-000, 55-000)	Power tool cleaning to ST-3 (SSPC SP3)	One coat of red oxide zinc phosphate primer to IS 12744 (varnish medium alkyl)	30	Two coats of synthetic enamel paint to IS 2932 shade 692 of IS 5 unless specified otherwise.	40	70
3.3	<u>Components in AIR/GAS and under insulation</u> a) Suction chamber, diffuser, housing, OGV, impeller (55-1XX, 55-2XX, 55-3XX), b) Spiral casing, damper, IGV, RVC, impeller, shaft (56-1XX, 56-2XX, 56-3XX 56-4XX). c) Silencer (56-9XX, 55-9XX)	Power tool cleaning to ST-3 (SSPC SP3)	Two coats of red oxide zinc phosphate primer to IS 12744 (varnish medium alkyl)	60	NIL	NIL	60
3.4	Journal area Of shaft (55-1XX, 56-1XX, 55-2XX, 56-2XX, 55-3XX, 56-3XX 56 4XX						
3.5	All machined surfaces shall be applied with rust preventive.						

Refer PRQA 341 / Latest

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Sl.No.	Component/PGMA	Surface preparation	Primer	DFT in μm (Min)	Finish	DFT in μm (Min)	Total DFT (Min)
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4.0 Electro static precipitator

4.1	GD drive Arrangement (7X X10), Drive arrangement for emitting system (7X X17), Inspection doors (7X X23), Drive arrangement for CE rapping (7X X26), Outer roof (7X X42), ESP pent House (7X X55), ESP test equipment (7X X61) Water washing system (7X X66) Tools and tackles (7X 996), Lifting beam (7X X20), Columns (7X X81) Hopper approach platform (7X X 65), Stringer and Guard plates (7X 610).	Power tool cleaning to ST-3 (SSPC SP3)	One coat of red oxide zinc phosphate primer to IS 12744 (Varnish medium alkyd)	30	Two coats of synthetic enamel paint to IS 2932 shade 692 of IS 5 unless specified otherwise.	40	70
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4.2	Insulator Housing assy.(7X X06), Gas distribution assy.(7X X08),GD rapping mechanism(7X X09), Gas screening (7X X11), Emitting system suspension (7X X13), Emitting electrode rapping (7X X16), Suspension arrangement for CE (7X X19), Frame of Emitting system Top & Bottom and Middle.(7X X21,X22,X32),Shock bars(7X X24), CE Rapping mechanism (7X X25), Ridges(7X X43), Hopper upper and Lower & Middle part (7X X44, X45),Insulator support panel (7X X46), Roof panel assy. (7X X47), Casing structure (7X X28, X48), Casing shell (7X X49), ESP Funnel (7X X50), Splitter&Guidevane (7X X57)	Power tool cleaning to ST-3 (SSPC SP3)	Two coats of red oxide zinc phosphate primer to IS 12744 (Varnish medium alkyd)	60	NIL	--	60
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Sl.No.	Component/PGMA	Surface preparation	Primer	DFT in µm (Min)	Finish	DFT in µm (Min)	Total DFT (Min)
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4.3	Hand rails, post, step treads, Floor grills (89 610,611,7X X65)	Power tool cleaning to ST-3 (SSPC SP3) *	One coat of red oxide zinc phosphate primer to IS 12744 (varnish medium alkyl)	30	Two coats of synthetic enamel paint to IS 2932 black shade	40	70
4.4	EE (7X X15)EE hook, EE suspension hook (7X X13), CE (7X X20)CE, CE suspension hook (7X X19), Foundation material foe ESP structures& ducts (7X X80).	--	(**) Temporary rust preventive oil Dry type	20	--	--	20

5.0	Gates and Dampers						
5.1	Gates and dampers temperature ≤ 95°C (57 XXX)	Power tool cleaning to ST-3 (SSPC SP3)	One coat of red oxide zinc phosphate primer to IS 12744 (varnish medium alkyl)	30	Two coats of synthetic enamel paint to IS 2932 shade 692 of IS 5 unless specified otherwise.	40	70
5.2	Gates and dampers temperature > 95°C (57 XXX)	Power tool cleaning to ST-3 (SSPC SP3)	Two coats of red oxide zinc phosphate primer to IS 12744 (varnish medium alkyl)	60	NIL	--	60
5.3	Gate blades, Machined components of G&D	---	(**) Temporary rust preventive oil Dry type	20	NIL	NIL	20

6.0	Chimney						
6.1	Foundation bolt (87 010)	Power tool cleaning to ST-3 (SSPC SP3)	(**) Temporary Rust preventive	20	--	--	20
6.2	Shells-Inside and Un insulated side, base plate (87 100),	Blast Cleaning to Sa 2 ½ (Near white metal with Surface profile 35 – 50 µm)	Two coats of Heat resistant aluminum paint as per IS 13183 (GR I -Up to 600°C,GR II 200°C to 400°C,GR III Up to 200°C)	40	NIL	--	40
6.3	Ducts un insulated, Strakes, (87 150), Painter trolley (87 200)	Power tool cleaning to ST-3 (SSPC SP3)	Two coats of Heat resistant aluminum paint as per IS 13183 (GR I -Up to 600°C,GR II 200°C to 400°C,GR III Up to 200°C)	40	NIL	--	40

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Sl.No.	Component/PGMA	Surface preparation	Primer	DFT in μm (Min)	Finish	DFT in μm (Min)	Total DFT (Min)
6.4	Shells –out side insulated (87 100), Ducts- Insulated (87 150)	Power tool cleaning to ST-3 (SSPC SP3)	Two coats of red oxide zinc phosphate primer to IS 12744 (varnish medium alkyl).	60	--	--	60
6.5	Ladders, Hand rails, floor grills, platforms (87 300)	Power tool cleaning to ST-3 (SSPC SP3)	One coat of red oxide zinc phosphate primer to IS 12744 (varnish medium alkyl)	30	Two coats of synthetic enamel paint to IS 2932 black shade	40	70

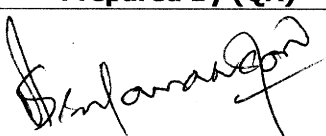
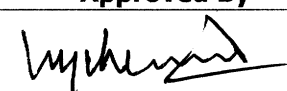
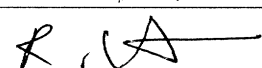
7.0	Products meant for overseas application						
7.1	Internal and External parts of APH, ESP, Fan and Gates and Damper	Blast Cleaning to Sa 2 ½ (Near white metal with Surface profile 35 – 50 μm)	Epoxy red oxide Zinc phosphate primer to IS 13238	30	Epoxy polyamide cured paint to IS 14209	30	60

Note: All components covered under different PGMA are to be painted .In case any component is left out, the same shall be deemed to be included under relevant section.

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QUALITY ASSURANCE	
QWI NO: PR:QA:590 Rev.01 Dtd.02.02.2008	
Amendment to Quality Work Instruction (QWI)	
Amendment No: A1	Date:11.10.2013
Title: <i>Procedure for Surface Preparation and Painting</i>	

Details of Amendment		
Clause No	Amended As	Basis for Amendment
Refer Clause no 4.0 – Table 2 and further clause no. 3.2 a) and 3.3 a) of Table.	AP Fan components like Servo Motor Assy, Shaft with Bearing Assy (refer clause 3.2 a) and impeller (refer clause 3.3 a) of table 2.0 Presently Existing Painting Scheme: 1. Primer: one coat of red oxide zinc phosphate primer to IS 12744 (varnish medium alkyd) DFT = 30 µm. 2. Two coats of synthetic enamel paint to IS 2932 shade 692 of IS 5 Unless specified otherwise Finish= 40 µm(Primer+Finish: total DFT- 30+40=70 µm) The above painting scheme has been modified as below - only for AP fan components like Servo Motor Assy, Shaft with Bearing Assy (refer clause 3.2 a) and impeller (refer clause 3.3 a) of table 2.0 • Epoxy based Zinc Phosphate Primer (Two Pack system) as per IS:13238 – Two coats and each coat min. 30µm and total DFT will be 60 µm • Finish Paint : Not Applicable	Feedback from RCA Sub-Committee Meeting. Dt- 14.05.2013 (For quick drying of paint)

Prepared By (QA)	Reviewed By	Approved By
	QC-Shop 197 	
	QA 	

 An ISO Company	BHARAT HEAVY ELECTRICALS LIMITED (A Government of India Undertaking) பாரதமிகுமின் நிறுவனம் BOILER AUXILIARIES PLANT, Indira Gandhi Industrial Complex, RANIPET- 632 406 (Tamil Nadu)	Ph: 04172-284030, 284158,, 241170 Email: mkmoorthy@bhelrpt.co.in
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BHEL-BAP-OS- MAIN-BLAST-ARC
SECTION – XI BANK GUARANTEE
(Instructions to Fill the Bank Guarantee Format to be issued by BHEL)

Minimum base BG value of Rs.20.00 Lakhs should be provided by the vendor at the time of signing the contract.

1. Bank Guarantee shall be issued by any one of BHEL's Bankers or any Nationalized Bank. Please refer to List of BHEL's Bankers enclosed.
 - a. If it is not possible, then BG can be issued by a Scheduled Commercial Bank with the prior approval of BHEL.
 - b. BG from Co-operative Banks are not acceptable.
2. Pre-printed BG Form of BHEL only shall be used. Should not retype the format.
 - a. Only the relevant information like Supplier Name, BG Value, Contract No., Validity etc. shall be typed in the pre-printed form and executed by Bank.
 - b. Special adhesive stamp of the required value shall be affixed on the 1st page of the Form.
 - c. If Special Adhesive stamps are not available, then applicable stamp duty shall be paid at the Bank / Agency nominated by the concerned State Government to collect stamp duty, who" will affix their signature, date and seal in the first page of the BG Form clearly marking it as "SPECIALADHESIVE" & "STAMP DUTY".
 - d. Stamp Duty for the BG shall be at the rate as applicable in the State where the BG is executed.
 - e. Bank seal shall be affixed on the special adhesive stamp.
3. The executing officer of the Bank shall indicate his name, designation and power of attorney number/signing power number etc. on the BG.
 - a. Any correction / overwriting on the BG shall be duly authenticated under the Seal and signature of the executing officer of the Bank.
 - b. Each page of the BG shall be duly signed/initialed by the executing officer of the Bank and the last page is to be signed with full particulars under the seal of the Bank.
 - c. Fax number, e-mail Address, contact person, phone number and complete postal address shall be indicated in the covering letter of the BG from Bank.
4. The validity of the BG shall cover a period of 18 months (or such other period as per purchase Order, if otherwise specified) from the last date of dispatch as per Purchase Order or actual date of last dispatch under the Purchase Order, whichever is later.

- a. The BG shall have a claim period of 3 months. If no separate claim period is indicated in the BG, then the validity shall be 18 months (or such other period as per Purchase Order, if otherwise specified) plus 3 months.
 - b. No clause of the BHEL BG Form shall be altered, deleted or new clauses added by the issuing Bank under any circumstances. Bank Guarantees with altered/deleted/added clauses will not be accepted by BHEL under any circumstances.
 - c. If the issuing bank wants to add any additional clauses, it shall be intimated to BHEL well in advance with exact text of clause, which shall be subject to approval by BHEL Law department. Those clauses specifically accepted by BHEL- Law department can be added in the last page of the BG form and executed by Bank.
5. Bank Guarantee shall be forwarded by issuing Bank directly to AGM(OS)/BHEL/BAP/Ranipet-632406.
 - a. If it is not directly forwarded to BHEL due to unavoidable circumstance, then the issuing bank shall send a letter directly to BHEL conforming the issue of the BG enclosing a photocopy of the original BG
 - b. The bank guarantee should not be routed through Bank along with other dispatch documents under any circumstances.
 6. In case of any extension of BG the same shall be executed on non-judicial stamp paper of the required value.
 - a. Only the due date and claim period shall be extended
 - b. The extension should not result in alteration of any material facts of the BG.
 7. Bank Guarantees executed as per the above instruction only shall be accepted at our end. Hence kindly ensure compliance with the above instructions for yearly processing of the bills and to avoid hold up of the bills

List of Bankers from whom Bank Guarantee is to be obtained.

	Nationalised Bank
1	Allahabad bank
2	Andhra bank
3	Bank of Baroda
4	Canara Bank
5	Corporation bank
6	Central bank
7	Indian Bank
8	Indian Oversea Bank
9	Oriental bank of Commerce
10	Punjab National Bank
11	Punjab & Sindh Bank
12	State Bank of India

13	State Bank of Hyderabad
14	Syndicate Bank
15	State Bank of Travancore
16	UCO Bank
17	Union Bank of India
18	United Bank of India
19	Vijaya Bank
	Public Sector Banks
20	IDBI
	Foreign bank
21	CITI Bank N.A
22	Deutsche Bank AG
23	The Hongkong and Shanghai

	Banking Corporation Limited
24	Standard Chartered Bank
25	The Royal Bank of Scotland N.V.
26	J P Morgan
	Private bank
27	Axis Bank
28	The Federal Bank Limited
29	HDFC
30	Kotak Mahindra Bank
31	ICICI
32	Indusind Bank
33	Yes Bank

Bank Guarantee No : Date..... Banker Name :

Bank Guarantee Value Rs.....Lakh(s)

FIRM CODE :

Please affix Rs.80/- Non Judicial
Stamp here

1. THIS DEED OF GUARANTEE made this.....day of.....20.....
by (hereinafter called the Bank) in favour of
M/s. BHARAT HEAVY ELECTRICALS LIMITED, BOILER AUXILIARIES PLANT,
RANIPET-632 406 having its Registered Head office at BHEL HOUSE, SIRI FORT, NEW DELHI,
Pin - 110 049.
2. WHEREAS M/s. BHARAT HEAVY ELECTRICALS LIMITED, hereinafter called the "COMPANY"
have placed Purchase Orders / Work Orders which are pending as on date and also future
Purchase Orders / Work Orders to be placed by the company upto the expiry of this Guarantee
(hereinafter called the "CONTRACT") for machining fabrication supply of pressure and non-
pressure parts with
..... (hereinafter called the
CONTRACTOR/SUPPLIER) and the said machining / fabrication / supply of pressure and non-
pressure parts shall be made from the supply of raw materials and components by the company
to the Contractor / Supplier in pursuance of the Contract(s) already placed but pending execution
as on date and the Contract(s) to be placed from time to time by the company on the contractor/
supplier.
3. AND WHEREAS one of the conditions for placing such Contract(s) is that contractor / supplier
shall provide the company with a Bank Guarantee to the extent of Rs.....
(Rupees.....) as a security for the raw
materials and components supplied and to be supplied in pursuance of the contract(s) already
placed and pending as on date/and the contract(s) to be placed from time to time upto the
expiry of this Guarantee and also for the satisfactory performance and completion of work/supply
and the terms and conditions of the said contract.
4. AND WHEREAS the contractor/supplier have approached the Bank and at their request and in
consideration of arrangements arrived at between the said contractor/supplier and the said
Bank. We, the Bank have agreed to give such guarantee as hereinafter mentioned in favour of
the aforesaid company.

Sign & Seal of issuing Bank

Bank Guarantee Value Rs.....Lakh(s)

5. NOW, THEREFORE, these present witness that we, the Bank by the hand of Branch Manager its lawfully and duly constituted attorney, do hereby undertake irrevocably and unconditionally to pay without demur to the aforesaid company a sum of Rs..... (Rupees.....) on demand being made by the said company and to keep the said company indemnified to the extent of Rs..... (Rupees.....) by virtue of this guarantee against any loss/damage caused to/suffered by the said company, by reason of any breach by the aforesaid contractor/supplier of any of the terms and conditions, stipulations or undertakings or any one of them contained in the said contract(s) and the tender documents if any attached there to and for the payment of any money payable by the said Contractor/Supplier to the said company under the terms and conditions of the said contract(s) (the decision regarding the breach, loss, damage or payment due being solely in the discretion of said company). We further undertake to pay the aforesaid amount in lumpsum on demand without demur or such part thereof as the company may demand from time to time, irrespective of the fact whether the said Contractor/Supplier admits or denies such claim or questions its correctness in any court, Tribunal Arbitrations proceedings or before any authority. The liability or obligation of Bank 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. It shall not be necessary for the said company to proceed against the Contractor / Supplier before proceeding against the Bank and its Guarantee herein contained shall be enforceable notwithstanding any security, which the said company may have obtained or obtain from the Contractor / Supplier. Further any payment made by the Bank to the company under this guarantee shall be deemed to have been duly and lawfully made.
6. The liability under this guarantee is a continuing one covering all contracts, already placed and pending as on date to be placed upto the expiry of this Guarantee and should any loss or damage occur on account of the breach of the terms and conditions of the said Contract(s) by the Contractor/Supplier or should any surplus raw materials and components become due to the Company under Contract(s) and remain undelivered to company, the Bank shall indemnify the Company for loss/damage for the value of raw materials and components, to an extent of Rs..... (Rupees.....) and this is without prejudice to any other remedies which may be otherwise available to the company against the Contractor/Supplier by way of deduction from any sum due or any sum which at any time hereafter become due from the Contractor/Supplier under this or any other contracts.

Sign & Seal of issuing Bank

Bank Guarantee Value Rs Lakh(s)

7. THE AFORESAID Guarantee will remain in force and the Bank shall be liable under the same irrespective of any concession or time being granted by the said company to the Contractor/Supplier in or for fulfilling the said contract(s) between Contractor/Supplier and the Company and the guarantee will remain in full force irrespective of any change of terms, conditions or stipulations or any variations in the terms of the said Contractor(s) and irrespective of whether notice of such change and/or variation is give to us or not and claim to receive such notice of any change and/or variation is given to us or not and claim to receive such notice of any change and /or variation of the terms and /or conditions of the said Contract(s) is hereby specially waived by us. Further, we shall not be released from this guarantee by any forbearance or the exercise or non exercise of any of the power or rights under the said contract(s) by the said company against the Contractor/Supplier irrespective of whether, notice of such forbearance enforcement or non enforcement of any powers or rights, modifications or changes made in the said contract(s) or concession shown to Contractor/Supplier by the Company is given to us or not.
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/Supplier and shall in all respects and for all purposes be binding and operative until all payments of all money due or that may hereafter become due to the said company are settled irrespective of any liability or obligation of the Contractor/Supplier under the said Contract(s).
9. A REFERENCE to this Bank Guarantee in the contract(s) placed already and pending as on date and to be placed upto the expiry of this Guarantee shall be sufficient to bind the Bank in respect of their liability under this Bank Guarantee and this Bank Guarantee shall be read as an integral part of the contract(s) already placed but pending as on date and to be placed upto the expiry of this Guarantee.
10. WE, THE 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 contract(s) and that it shall continue to be enforceable till all the dues of the company under or by virtue of the said contract(s) have been fully paid and its claims satisfied that the terms and conditions of the contract(s) have been fully and properly carried out by the said Contractor/Supplier and accordingly discharge the Guarantee, subject, however to the condition that the company shall have no rights under this guarantee unless a claim or demand in writing in respect of this guarantee has been preferred by the company with the Bank on or before/...../..... (including a claim period of 3 months). For the purpose of this clause any letter making the demand on the Bank by M/s.BHEL despatched by R.P.A.D. or by telegram or by FAX or by any electronic media addressed to the above mentioned address of the Bank shall be deemed to

Sign & Seal of issuing Bank

Bank Guarantee Value Rs.....Lakh(s)

be the claim/demand in writing referred to above irrespective of the fact as to whether or when the said letter reached the Bank, as also any letter containing the said demand or claim is lodged with the Bank personally.

11. Any CLAIM OR DISPUTE arising under the terms of this document shall only be enforced or settled in the Courts at Ranipet, Vellore District only.
12. THE BANK undertake not to revoke this Guarantee during the currency except with the previous consent of the Company in writing.
13. THE BANK declares that it has powers to issue this Guarantee 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.
14. Notwithstanding anything contained herein before, our liability under this guarantee shall be limited to a sum of Rs..... and stand completely extinguished and discharged if no demand or claim is made upon us in writing on or before/...../..... (including a claim period of 3 months).

DATE THIS..... DAY OF20

Seal of the Bank

Signature of the Bank Manager