

Open Tender Enquiry

ITEM NAME: - “FINISH MACHINED END SHIELD”

Details of items covered in Bid are as below: -

Item No	Material Code		Drawing	Quantity (Lot Wise)	Delivery Schedule
1.	W90413910024	FINISH MACHINED END SHIELD (EXCITER END) TO DRAWING NO. 01393701049 AS PER DOC. NO. TDC-F-01393701049. 800 MW	01393701049 REV: 04	1 1 1 1 1 1	30.06.2026 30.10.2026 30.11.2026 30.12.2026 30.03.2027 30.06.2027
2.	W90413910016	FINISH MACHINED END SHIELD (TURBINE END) TO DRAWING NO. 01393701051 VAR00, AS PER DOC. NO. TDC-F-01393701051. 800 MW	01393701051 REV: 06	1 1 1 1 1 1	30.06.2026 30.10.2026 30.11.2026 30.12.2026 30.03.2027 30.06.2027

QUALITY REQUIREMENTS:

- CUSTOMER CONTROLLED ITEM W.R.T. CUSTOMER INSPECTION AT VENDOR WORKS AND NAME OF VENDORS TO BE INFORMED TO CUSTOMER. On informing the vendors names, if customer demanded for vendor credentials (like manufacturing facilities, testing facilities, previous experience etc.), same shall be provided vendor. Ordering shall done on customer accepted vendors, if required.
- VENDOR TO submit detail QP covering raw material stage, in process checks & final inspection for BHEL & Adani customer approval (QP format attached).
- Pre-dispatch inspection by BHEL / BHEL TPIA & Adani customer will be done as per BHEL & Adani customer approved QP. Vendor to confirm the same.
- All raw material (Plate, pipe etc) shall be procured after PO placement. Date of manufacturer's TC must be of after PO placement. Vintage material shall not be accepted by customer. Vendor to confirm.

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- Vendor to provide filled list of BHEL accepted vendors for raw material procurement, Machining, bending and stress relieving (as applicable) as agreed during technical offer acceptance from BHEL Engg and WT/FT. This will become the part of QP as Annexure-1. Format of annexure-1 is attached.
- Before PO Placement, Approval of Manufacturing plans (consisting sequences of welding) to be taken by vendor from BHEL. Vendor to confirm.
- There will be surveillance checking by BHEL during manufacturing. Vendor to inform BHEL the start date of welding and expected completion date of welding. Also, as applicable, inform expected start date and completion of sequential welding. BHEL will visit the vendor works without prior information to vendor for surveillance checking for following:
 - Raw material being used from BHEL accepted vendors and BHEL clearance taken for induction of Raw material.
 - Related BHEL approved WPS/PQR/WPQ.
 - Related Approved Manufacturing Plan with sequence of welding
 - Sequence of welding are being done as per BHEL approved sequences of welding.
 - Deployment of qualified welders.
 - As applicable, only Baked Electrodes are being used for welding with maintaining the required temperature of electrodes during welding.
 - Availability of welding gauge and its calibration certificate.
 - Calibration of Measuring instruments including measuring tape.
 - NDT qualified personnel and its valid certificate. (in case of in-house facility).
 - NDT equipment and its calibration certificate. (in case of in-house facility).
 - Complete furnace calibration certificate (in case of in-house facility).
- For PPX, Customer clearance to be obtained as per customer approved QP at vendor works.
- Vendor to submit TC QP clause wise with clear marking of QP clause on each page. No page shall be submitted without QP clause marking.
- Painting and packing shall be done as per customer approved procedures/schemes. Customer contract requirement regarding painting shall be complied by vendor along with customer approved painting schedule. Paint shall be procured from customer approved vendors only. Same brand

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of paint is to be applied for primer, intermediate coat and finish coat (refer special instruction of the indent).

EMD: As per clause 5A.1 & Clause 5B.1 of Amendment no. 04 of Purchase Policy-2013, EMD of Rs. 6 Lacs (refundable) & minimum 5 % Performance Security (form successful bidder) is applicable from bidders for this enquiry. (except Micro and Small Enterprises (MSEs) or Start-ups as recognized by Department for Promotion of Industry and Internal Trade (DPIIT)).

Price bid to RA shall be conducted for only those bidders who qualifies PQR and whose techno-commercial bid is acceptable to BHEL. RA shall be conducted with option of RA with elimination of H1 bidder in line with BHEL Reverse Auction Guideline (SS&P Circular No. 08 of 2024-25 - RA Guidelines 2024).

BHEL will reserve the right to inspect/test the material during/after manufacturing at suppliers' works, and/or at BHEL Site. In case of rejection at any stage, Supplier/Vendor shall be liable to replace the materials at his own cost.

Procedure for Bid submission: - Offer shall be submitted by the bidders in two parts

Bid Part - I Technical cum Commercial bid

Bid Part - II Price bid

Both Part - I & Part - II of the offer to be uploaded on BHEL e-procurement site using Class III digital signature. Bidders to mandatorily put sign and seal on all the uploaded documents. The quotation should be uploaded on the site before due date / time.

Part-I of the bid shall contain complete details of the product offered, PQR qualification, MII certificate, FCA, acceptance to the specification and all techno commercial terms & conditions. Vendor can specify for separate Minimum quantity to be supplied against each PO, the acceptance to vendor quoted Minimum quantity to be supplied against each PO shall be as per BHEL's discretion.

Part – II comprises BOQ/Price bid (GST extra).

Bid opening – Techno commercial bid (Part-I) of the offers shall be opened on the due date of tender opening on e-procurement portal. Clarifications if required on this part may be obtained from the bidders for their evaluation. The Price bid Part-II of such bidders alone shall be opened on a later date on e-procurement portal whose PQR qualification and techno-commercial bids are found acceptable. The date of 'Price bid- Part- II' shall be intimated to technically qualified bidders later.

Pre-qualification Criteria (mandatory for further consideration of offers)

Please note that offers of only those bidders who meet pre-qualification criteria shall be considered. Bidders to submit all supporting documents in compliance with each requirement.

MI preference shall be proposed to local suppliers as per revised 'Public Procurement (Preference to Make in India), Order, 2017 issued by DPIIT vide OM No. P-45021/2/2017- PP(BE-II) Part (4) Vol. II dated 19.07.2024 and subsequent order(s).

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Bid evaluation: - The bids shall be evaluated on item wise total delivered cost to BHEL considering all duties/taxes/Cess etc. as could be applicable.

NOTE: In the course of evaluation, if more than one bidder happens to occupy L-1 status, effective L-1 will be decided by soliciting discounts from the respective L-1 bidders. In case more than one bidder happens to occupy the L-1 status even after soliciting discounts, the L1 bidder shall be decided by a toss/draw of lots, in the presence of the respective L1 bidder(s) or their representative(s). Ranking will be done accordingly. BHEL's decision in such situations shall be final and binding.

Delivery Period: - Vendor to quote delivery in weeks, quoted delivery period shall be used to place regularizing PO. The material is required at BHEL Haridwar and Bidders shall commit suitable delivery period on FOR destination basis. Delivery period in the purchase order shall be as per accepted delivery period quoted by the vendor or required delivery period by BHEL, whichever is later. Bidders may note that delivery beyond committed schedule will attract penalty for delayed performance.

Guarantee/Warranty certificate and Test Certificate to be provided along with the supply.

10. Non-Disclosure Agreement

Unregistered vendors at BHEL Haridwar for this item may avail the soft copies of relevant specification / drawing by submitting the endorsed copy of attached 'Non-Disclosure Agreement' to either of the following e-mail IDs:

1. Virendra Singh- v_singh@bhel.in
2. Ghulam Shabbir- ghulam.shabbir@bhel.in

TECHNO- COMMERCIAL OFFER :

Bid should be free from correction, overwriting, using corrective fluid, etc. Any interlineation, cutting, erasure or overwriting shall be valid only if they are attested under full signature(s) of person(s) signing the bid else bid shall be liable for rejection. In the event of any Technical or Commercial queries, the same may please be addressed to the following BHEL concerned e-mail IDs before Part- I opening. -

1. Virendra Singh- v_singh@bhel.in
2. Ghulam Shabbir- ghulam.shabbir@bhel.in

Bidder to submit Techno- Commercial offer along with bid.

SCOPE OF SUPPLY & PRICE BASIS:

VENDORS TO QUOTE FIX/FIRM RATE WHICH SHOULD BE ON ALL- INCLUSIVE BASIS i.e. LOCAL LEVIES/TRANSPORTATION/LOADING- UNLOADING, P&F CHARGES AND NABL CHARGES ETC. UPTO FOR BHEL- HEEP HARIDWAR.

TRANSIT INSURANCE: BY BHEL.

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NO PVC (PRICE VARIATION CLAUSE) SHALL BE CONSIDERED FOR THIS ENQUIRY AND SHALL BE PROCESSED WITH FIX/FIRM RATES i.e. INR/ Pieces.

Taxes & Duties: - Applicable 'GST' shall be extra.

TAXES AND DUTIES: -

Bidder to inform % of EXCLUSIVE GST- _____ %

The admissibility of GST, taxes and duties referred in this chapter or elsewhere in the contract shall be limited to direct transactions between BHEL & its Supplier/Vendor. BHEL shall not consider GST on any transaction other than the direct transaction between BHEL & its Supplier/Vendor.

Supplier/Vendor shall obtain prior written consent of BHEL before billing the amount towards such taxes. Where the GST laws permit more than one option or methodology for discharging the liability of tax/levy/duty, BHEL shall have the right to adopt the appropriate one considering the amount of tax liability on BHEL/Client as well as procedural simplicity with regard to assessment of the liability. The option chosen by BHEL shall be binding on the Contractor for discharging the obligation of BHEL in respect of the tax liability to the Supplier/Vendor. Supplier/Vendor has to submit GST registration certificate of the concerned state. Supplier/Vendor also needs to ensure that the submitted GST registration certificate should be in active status during the entire contract period.

Supplier/Vendor has to issue Invoice/Debit Note/Credit Note indicating HSN/SAC code, Description, Value, Rate, applicable tax and other particulars in compliance with the provisions of relevant GST Act and Rules made thereunder.

Supplier/Vendor has to submit GST compliant invoice within the due date of invoice as per GST Law. In case of delay, BHEL reserves the right of denial of GST payment if there occurs any hardship to BHEL in claiming the input thereof. In case of goods, Supplier/Vendor has to provide scan copy of invoice & GR/LR/RR to BHEL before movement of goods starts to enable BHEL to meet its GST related compliances. Special care should be taken in case of month end transactions. Subject to other provisions of the contract, GST amount claimed in the invoice shall be released on fulfilment of all the following conditions by the Supplier/Vendor: - a) Supply of goods and/or services have been received by BHEL. b) Original Tax Invoice has been submitted to BHEL. c) Supplier/Vendor has submitted all the documents required for processing of bill as per contract/ purchase order/ work order. d) In cases where e-invoicing provision is applicable, Supplier/Vendor is required to submit invoice in compliance with e-invoicing provisions of GST Act and Rules made thereunder. e) Supplier/Vendor has filed all the relevant GST return (e.g. GSTR-1, GSTR-3B, etc.) pertaining to the invoice submitted and submit the proof of such return along with immediate subsequent invoice. In case of final invoice/ bill, contractor has to submit proof of such return within fifteen days from the due date of relevant return. f) Respective invoice has appeared in BHEL's GSTR - 2A for the month corresponding to the month of invoice and in GSTR-2B of the month in which such invoices has been reported by the contractor along with status of ITC availability as "YES" in GSTR-2B. Alternatively, BG of appropriate value may be furnished which shall be valid at least one month beyond the due date of confirmation of relevant payment of GST on GSTN portal or sufficient security is available to adjust the financial impact in case of any default by the Supplier/Vendor. g) Supplier/Vendor has to submit an undertaking confirming the payment of all due GST in respect of invoices pertaining to BHEL.

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Any financial loss arises to BHEL on account of failure or delay in submission of any document as per contract/purchase order/work order at the time of submission of Tax invoice to BHEL, shall be deducted from Supplier/Vendor's bill or otherwise as deemed fit.

TDS as applicable under GST law shall be deducted from Supplier/Vendor's bill.

Supplier/Vendor shall comply with the provisions of e-way bill wherever applicable. Further wherever provisions of GST Act permit, all the e-way bills, road permits etc. required for transportation of goods needs to be arranged by the contractor.

Supplier/Vendor shall be solely responsible for discharging his GST liability according to the provisions of GST Law and BHEL will not entertain any claim of GST/interest/penalty or any other liability on account of failure of Supplier/Vendor in complying the provisions of GST Law or discharging the GST liability in a manner laid down thereunder.

In case declaration of any invoice is delayed by the vendor in his GST return or any invoice is subsequently amended/alterd/deleted on GSTN portal which results in any adverse financial implication on BHEL, the financial impact thereof including interest/penalty shall be recovered from the Supplier/Vendor's due payment.

Any denial of input credit to BHEL or arising of any tax liability on BHEL due to non-compliance of GST Law by the Supplier/Vendor in any manner, will be recovered along with liability on account of interest and penalty (if any) from the payments due to the Supplier/Vendor.

In the event of any ambiguity in GST law with respect to availability of input credit of GST charged on the invoice raised by the contractor or with respect to any other matter having impact on BHEL, BHEL's decision shall be final and binding on the Supplier/Vendor

VARIATION IN TAXES & DUTIES:

Any upward variation in GST shall be considered for reimbursement provided supply of goods and services are made within schedule date stipulated in the contract or approved extended schedule for the reason solely attributable to BHEL. However downward variation shall be subject to adjustment as per actual GST applicability. In case the Government imposes any new levy/tax on the output service/goods after price bid opening, the same shall be reimbursed by BHEL at actual. The reimbursement under this clause is restricted to the direct transaction between BHEL and its Supplier/Vendor only and within the contractual delivery period only. In case any new tax/levy/duty etc. becomes applicable after the date of Bidder's offer but before opening of the price Bid, the Bidder/ Supplier/Vendor must convey its impact on his price duly substantiated by documentary evidence in support of the same before opening of price bid. Claim for any such impact after opening the price bid will not be considered by BHEL for reimbursement of tax or reassessment of offer.

Income Tax: TDS/TCS as applicable under Income Tax Act, 1961 or rules made thereunder shall be deducted/collected from Supplier/Vendor's bill.

Delivery period (in weeks) from PO date: _____

Bidders are requested to quote the best delivery meeting the delivery requirements. BHEL reserves the right to reject the offers not meeting BHEL's delivery requirement.

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PAYMENT TERM:

FOR NON MSME Bidders- 100% payment shall be released within 90 days from the date of acknowledged receipt & acceptance of material at HEEP- BHEL stores and submission of billing documents.

FOR MSME Bidders- 100% payment shall be released within 45 days from the date of acknowledged receipt & acceptance of material at HEEP- BHEL stores and submission of billing documents.

FOR MEDIUM ENTERPRISES Bidders, 100% payment shall be released within 60 days upon receipt & acceptance of material at HEEP- BHEL stores and submission of billing documents.

No interest shall be payable on the security deposit or any other money due to the contractor”.

MICRO AND SMALL ENTERPRISES (MSE):3 Any Bidder falling under MSE category shall furnish the following details & submit documentary evidence/ Govt. Certificate etc. in support of the same along with their techno-commercial offer.

Type under MSE	SC/ST owned	Women owned	Others (excluding SC/ ST & Women Owned)
Micro			
Small			

Note: If the bidder does not furnish the above, offer shall be processed construing that the bidder is not falling under MSE category. a) MSE suppliers can avail the intended benefits in respect of the procurements related to the Goods and Services only (Definition of Goods and Services as enumerated by Govt. of India vide Office Memorandum F. No. 21(8)/2011-MA dated 09/11/2016 office of AS & DC, MSME) only if they submit along with the offer, attested copies of either Udyam Registration. Date to be reckoned for determining the deemed validity will be the last date of Technical Bid submission. No benefits shall be applicable for this enquiry if the above required documents are not uploaded at the time of bid submission. Documents submitted by the bidder shall be verified by BHEL for rendering the applicable benefits.

BREACH OF CONTRACT, REMEDIES AND TERMINATION:

The following shall amount to breach of contract: I. Non-supply of material/ non-completion of work by the Supplier/Vendor within scheduled delivery/ completion period as per contract or as extended from time to time.

II. The Supplier/Vendor fails to perform as per the activity schedule and there are sufficient reasons even before expiry of the delivery/ completion period to justify that supplies shall be inordinately delayed beyond contractual delivery/ completion period.

III. The Supplier/Vendor delivers equipment/ material not of the contracted quality.

IV. The Supplier/Vendor fails to replace the defective equipment/ material/ component as per guarantee clause. V. Withdrawal from or abandonment of the work by the Supplier/Vendor before completion as per contract.

VI. Assignment, transfer, subletting of Contract by the Supplier/Vendor without BHEL's written permission resulting in termination of Contract or part thereof by BHEL.

VII. Non-compliance to any contractual condition or any other default attributable to Supplier/Vendor. VIII. Any other reason(s) attributable to Vendor towards failure of performance of contract. In case of breach of contract, BHEL shall have the right to terminate the Purchase

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Order/ Contract either in whole or in part thereof without any compensation to the Supplier/Vendor.

IX. Any of the declarations furnished by the contractor at the time of bidding and/ or entering into the contract for supply are found untruthful and such declarations were of a nature that could have resulted in non-award of contract to the contractor or could expose BHEL and/ or Owner to adverse consequences, financial or otherwise.

X. Supplier/Vendor is convicted of any offence involving corrupt business practices, antinational activities or any such offence that compromises the business ethics of BHEL, in violation of the Integrity Pact entered into with BHEL has the potential to harm the overall business of BHEL/ Owner.

Note-Once BHEL considers that a breach of contract has occurred on the part of Supplier/Vendor, BHEL shall notify the Supplier/Vendor by way of notice in this regard. Contractor shall be given an opportunity to rectify the reasons causing the breach of contract within a period of 14 days.

In case the contractor fails to remedy the breach, as mentioned in the notice, to the satisfaction of BHEL, BHEL shall have the right to take recourse to any of the remedial actions available to it under the relevant provisions of contract.

REMEDIES IN CASE OF BREACH OF CONTRACT.

i) Wherein the period as stipulated in the notice issued as mentioned above has expired and Supplier/Vendor has failed to remedy the breach, BHEL will have the right to terminate the contract on the ground of "Breach of Contract" without any further notice to contractor.

ii) Upon termination of contract, BHEL shall be entitled to recover an amount equivalent to 10% of the Contract Value for the damages on account of breach of contract committed by the Supplier/Vendor. This amount shall be recovered by way of cashing the security instruments like performance bank guarantee etc. available with BHEL against the said contract. In case the value of the security instruments available is less than 10% of the contract value, the balance amount shall be recovered from other financial remedies (i.e. available bills of the Supplier/Vendor, retention amount, from the money due to the Supplier/Vendor etc. with BHEL) or the other legal remedies shall be pursued.

iii) wherever the value of security instruments like performance bank guarantee available with BHEL against the said contract is 10% of the contract value or more, such security instruments to the extent of 10% contract value will be cashed. In case no security instruments are available or the value of the security instruments available is less than 10% of the contract value, the 10% of the contract value or the balance amount, as the case may be, will be recovered in all or any of the following manners:

iv) In case the amount recovered under as mentioned above is not sufficient to fulfil the amount recoverable then; a demand notice to deposit the balance amount within 30 days shall be issued to Supplier/Vendor.

v) If Supplier/Vendor fails to deposit the balance amount within the period as prescribed in demand notice, following action shall be taken for recovery of the balance amount:

a) from dues available in the form of Bills payable to defaulted Supplier/Vendor against the same contract. b) If it is not possible to recover the dues available from the same contract or dues are insufficient to meet the recoverable amount, balance amount shall be recovered from any money(s) payable to Supplier/Vendor under any contract with other Units of BHEL including recovery from

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security deposits or any other deposit available in the form of security instruments of any kind against Security deposit or EMD.

vi) In-case recoveries are not possible with any of the above available options, Legal action shall be initiated for recovery against defaulted supplier/Vendor.

vii) It is an agreed term of contract that this amount shall be a genuine pre-estimate of damages that BHEL would incur in completion of balance contractual obligation of the contract through any other agency and BHEL will not be required to furnish any other evidence to the Supplier/Vendor for the purpose of estimation of damages.

viii) In addition to the above, imposition of liquidated damages, debarment, termination, de-scoping, short-closure, etc., shall be applied as per provisions of the contract.

Note: 1) The defaulting Supplier/Vendor shall not be eligible for participation in any of the future enquiries floated by BHEL to complete the balance work. The defaulting contractor shall mean and include:

(a) In case defaulted Supplier/Vendor is the Sole Proprietorship Firm, any Sole Proprietorship Firm owned by same Sole Proprietor.

(b) In case defaulted Supplier/Vendor is The Partnership Firm, any firm comprising of same partners/ some of the same partners; or sole proprietorship firm owned by any partner(s) as a sole proprietor.

LD AGAINST DELAY IN EXECUTED SUPPLY IN CASE OF TERMINATION OF CONTRACT:

LD against delay in executed supply shall be calculated in line with LD clause mentioned below, for the delay attributable to Supplier/Vendor. For limiting the maximum value of LD, contract value shall be taken as Executed Value of supply till termination of contract. Method for calculation of “LD against delay in executed supply in case of termination of contract” is given below. i. Let the time period from scheduled date of start of supply till termination of contract excluding the period of Hold (if any) not attributable to contractor = T1

ii. Let the value of executed supply till the time of termination of contract= X iii. Let the Total Executable Value of supply for which inputs/fronts were made available to Supplier/Vendor and were planned for execution till termination of contract = Y iv. Delay in executed supply attributable to Supplier/Vendor i.e. $T2 = [1 - (X/Y)] \times T1$ v. LD shall be calculated in line with LD clause of the Contract for the delay attributable to Supplier/Vendor taking “X” as Contract Value and “T2” as period of delay attributable to Supplier/Vendor.

LIQUIDATED DAMAGE:

Liquidated Damages, wherever referred under this Tender/Agreement, shall mean and refer to the damages, not in the nature of penalty, which the contractor agrees to pay in the event of delay in delivery of supplies, breach of contract etc. as the case may be. Liquidated Damages leviable upon the Supplier/Vendor is a sum which is agreed by the parties as a reasonable and genuine pre-estimate of damages which will be suffered by BHEL on account of delay/breach on the part of the Supplier/Vendor.

If the Seller/Service Provider fails to deliver any or all of the Goods/Services within the original/re-fixed delivery period(s) specified in the contract/PO, the Buyer/BHEL will be entitled to

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deduct/recover the Liquidated Damages for the delay, unless covered under Force Majeure conditions aforesaid, @ 0.5% of the contract value of delayed quantity per week or part of the week of delayed period as pre-estimated damages not exceeding 10% of the contract value of delayed quantity without any controversy/dispute of any sort whatsoever.

ACTION AGAINST BIDDERS / VENDOR / SUPPLIER / CONTRACTOR IN CASE OF DEFAULT:

In order to protect the commercial interests of BHEL, BHEL shall act against supplies / contractors by way of suspension of business dealings, who either fail to perform or are in default without any reasonable cause, cause loss of business/ money/ reputation, indulge in malpractices, cheating, bribery, fraud or any other misconduct or formation of cartels so as to influence the bidding process or influence the price etc.

SUSPENSION OF BUSINESS DEALINGS WITH SUPPLIERS / CONTRACTORS:

The offers of the bidders who are under suspension as also the offers of the bidders, who engage the services of the banned firms / principal / agents, shall be rejected. The list of banned firms is available on BHEL web site www.bhel.com. If any bidder / supplier / contractor during pre-tendering / tendering / post tendering / award / execution / post-execution stage indulges in any act, including but not limited to, malpractices, cheating, bribery, fraud or and other misconduct or formation of cartel so as to influence the bidding process or influence the price or tampers the tendering process or acts or omits in any manner which tantamount to an offence punishable under any provision of the Indian Penal Code, 1860(Bhartiya Nyaya Samhita 2023) or any other law in force in India, or does anything which is actionable under the Guidelines for Suspension of Business dealings, action may be taken against such bidder / supplier / contractor as per extant guidelines of the company available on www.bhel.com and / or under applicable legal provisions. Guidelines for suspension of business dealings is available in the webpage: http://www.bhel.com/vender_registration/vender.php.

CONFLICT OF INTEREST:

"A bidder shall not have conflict of interest with other bidders. Such conflict of interest can lead to anti-competitive practices to the detriment of Procuring Entity's interests. The bidder found to have a conflict of interest shall be disqualified. A bidder may be considered to have a conflict of interest with one or more parties in this bidding process, if:

a) they have controlling partner (s) in common; or b) they receive or have received any direct or indirect subsidy/ financial stake from any of them; or c) they have the same legal representative/agent for purposes of this bid; or d) they have relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the bid of another Bidder; or e) Bidder participates in more than one bid in this bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all bids in which the parties are involved. However, this does not limit the inclusion of the components/ sub-assembly/Assemblies from. one bidding manufacturer in more than one bid; or f) In cases of agents quoting in offshore procurements, on behalf of their principal manufacturers, one agent cannot represent two manufacturers or quote on their behalf in a particular tender enquiry. One manufacturer can also authorise only one agent/dealer. There can be only one bid

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from the following: 1. The principal manufacturer directly or through one Indian agent on his behalf; and 2. Indian/foreign agent on behalf of only one principal; or g) A Bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the contract that is the subject of the Bid; or

h) In case of a holding company having more than one independently manufacturing units, or more than one unit having common business ownership/management, only one unit should quote. Similar restrictions would apply to closely related sister companies. Bidders must proactively declare such sister/ common business/ management units in same/similar line of business. "

COMPLIANCE TO RESTRICTIONS UNDER RULE 144 (XI) OF GFR 2017:

I. Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority. The Competent Authority for the purpose of this Clause shall be the Registration Committee constituted by the Department for Promotion of Industry and Internal Trade (DPIIT). II. "Bidder" (including the term 'tenderer', 'consultant' or 'service provider' in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency branch or office controlled by such person, participating in a procurement process. III. "Bidder from a country which shares a land border with India" for the purpose of this Clause means: - a. An entity incorporated established or registered in such a country; or b. A subsidiary of an entity incorporated established or registered in such a country; or c. An entity substantially controlled through entities incorporated, established or registered in such a country; or d. An entity whose beneficial owner is situated in such a country; or e. An Indian (or other) agent of such an entity; or f. A natural person who is a citizen of such a country; or g. A consortium or joint venture where any member of the consortium or joint venture falls under any of the above. IV. The beneficial owner for the purpose of (III) above will be as under: 1. In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together or through one or more juridical person, has a controlling ownership interest or who exercises control through other means. Explanation a. "Controlling ownership interest" means ownership of or entitlement to more than twenty-five per cent of shares or capital or profits of the company. b. "Control" shall include the right to appoint majority of the directors or to control the management or policy decisions including by virtue of their shareholding or management rights or shareholders agreements or voting agreements. 2. In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership. 3. In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person has ownership of or entitlement to more than fifteen percent of the property or capital or profits of the such association or body of individuals. 4. Where no natural person is identified under (1) or (2) or (3) above, the beneficial owner is the relevant natural person who holds the position of senior managing official; 5. In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership. V. An Agent is a person employed to do any act for another, or to represent another in dealings with third person. Note: (i) The bidder shall provide undertaking for their compliance to this Clause, in the format provided (as attached). (ii)Registration of the bidder with Competent

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Authority should be valid at the time of submission of bids and at the time of acceptance of the bids.

SETTLEMENT OF DISPUTE:

If any dispute or difference of any kind whatsoever shall arise between BHEL and the Supplier/Vendor, arising out of the contract for the performance of the work whether during the progress of contract termination, abandonment or breach of the contract, it shall in the first place referred to Designated Engineer for amicable resolution by the parties. Designated Engineer (to be nominated by BHEL for settlement of disputes arising out of the contract) who within 60 days after being requested shall give written notice of his decision to the contractor. Save as hereinafter provided, such decision in respect of every matter so referred shall forthwith be given effect to by the Supplier/Vendor who shall proceed with the work with all due diligence, whether he or BHEL desires to resolve the dispute as hereinafter provided or not. If after the Designated Engineer has given written notice of this decision to the party and no intention to pursue the dispute has been communicated to him by the affected party within 30 days from the receipt of such notice, the said decision shall become final and binding on the parties. In the event the Supplier/Vendor being dissatisfied with any such decision or if amicable settlement cannot be reached then all such disputed issues shall be resolved through conciliation in terms of the BHEL Conciliation Scheme 2018.

CONCILIATION:

Any dispute, difference or controversy of whatever nature howsoever arising under or out of or in relation to this Agreement (including its interpretation) between the Parties, and so notified in writing by either Party to the other Party (the "Dispute") shall, in the first instance, be attempted to be resolved amicably in accordance with the conciliation procedure as per BHEL Conciliation Scheme 2018. The proceedings of Conciliation shall broadly be governed by Part III of the Arbitration and Conciliation Act 1996 or any statutory modification thereof and provided in - "Procedure for conduct of conciliation proceedings" (as available in www.bhel.com)).

Note: Ministry of Finance has issued OM reference No. 1/2/24 dated 03.06.2024 regarding "Guidelines for Arbitration and Mediation in Contracts of Domestic Public Procurement. In the said OM it has been recommended that Government departments/ Entities/agencies are to encourage mediation under the Mediation Act. 2023. The said Act has not yet been notified by the Government. Therefore, the clause "Settlement of Disputes" shall be modified accordingly as and when the Mediation Act 2023 gets notified.

ARBITRATION:

Except as provided elsewhere in this Contract, in case Parties are unable to reach amicable settlement (whether by Conciliation to be conducted as provided herein above or otherwise) in respect of any dispute or difference; arising out of the formation, breach, termination, validity or execution of the Contract; or, the respective rights and liabilities of the Parties; or, in relation to interpretation of any provision of the Contract; or, in any manner touching upon the Contract (hereinafter referred to as the 'Dispute'), then, either Party may, refer the disputes to Arbitral Institution (e.g. "IIAC" (India International Arbitration Centre) (identified by the contract issuing agency- HEEP- BHEL Haridwar) and such dispute to be adjudicated by Sole Arbitrator appointed in accordance with the Rules of said Arbitral Institution. A party willing to commence arbitration proceeding shall invoke Arbitration Clause by giving notice to the other party in terms of section 21 of the Arbitration & Conciliation Act, 1996 (hereinafter referred to as the 'Notice') before

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referring the matter to arbitral institution. The Notice shall be addressed to the Head of the Region, Unit, BHEL, executing the Contract and shall contain the particulars of all claims to be referred to arbitration with sufficient detail and shall also indicate the monetary amount of such claim including interest, if any. After expiry of 30 days from the date of receipt of aforesaid notice, the party invoking the Arbitration shall submit that dispute to the Arbitral Institutions (by the contract issuing agency) and that dispute shall be adjudicated in accordance with their respective Arbitration Rules. The matter shall be adjudicated by a Sole Arbitrator who shall necessarily be a Retd Judge having considerable experience in commercial matters to be appointed/nominated by the respective institution. The cost/expenses pertaining to the said Arbitration shall also be governed in accordance with the Rules of the respective Arbitral Institution. The decision of the party invoking the Arbitration for reference of dispute to a specific Arbitral institution for adjudication of that dispute shall be final and binding on both the parties and shall not be subject to any change thereafter. The institution once selected at the time of invocation of dispute shall remain unchanged.

The fee and expenses shall be borne by the parties as per the Arbitral Institutional rules. The Arbitration proceedings shall be in English language and the seat and venue of Arbitration shall be (identified by the contract issuing agency)- HEEP- BHEL Haridwar. Subject to the above, the provisions of Arbitration & Conciliation Act 1996 and any amendment thereof shall be applicable. All matters relating to this Contract and arising out of invocation of Arbitration clause are subject to the exclusive jurisdiction of the Court(s) situated at HEEP- BHEL Haridwar. Notwithstanding any reference to the Designated Engineer or Conciliation or Arbitration herein, a. the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree. Settlement of Dispute clause cannot be invoked by the Contractor, if the Contract has been mutually closed or 'No Demand Certificate' has been furnished by the Contractor or any Settlement Agreement has been signed between the Employer and the Contractor. It is agreed that Mechanism of resolution of disputes through arbitration shall be available only in the cases where the value of the dispute is less than Rs. 10 Crores. In case the disputed amount (Claim, Counter claim including interest is Rs. 10 crores and above, the parties shall be within their rights to take recourse to remedies other than Arbitration, as may be available to them under the applicable laws after prior intimation to the other party. Subject to the aforesaid conditions, provisions of the Arbitration and Conciliation Act, 1996 and any statutory modifications or re-enactment thereof as amended from time to time, shall apply to the arbitration proceedings under this clause. In case, multiple arbitrations are invoked (whether sub-judice or arbitral award passed) by any party to under this contract, then the cumulative value of claims (including interest claimed or awarded) in all such arbitrations shall be taken in account while arriving at the total claim in dispute for the subject contract for the purpose. Disputes having cumulative value of less than 10 crores shall be resolved through arbitration and any additional dispute shall be adjudicated by the court of competent jurisdiction.

JURISDICTION:

Subject to as mentioned above of this bid / contract, the Civil Court having original Civil Jurisdiction shall alone have exclusive jurisdiction in regard to all matters in respect of the Contract.

GOVERNING LAWS: The bid / contract shall be governed by the Law for the time being in force in the Republic of India.

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FORCE MAJEURE:

"Force Majeure" shall mean circumstance which is: a) beyond control of either of the parties to contract, b) either of the parties could not reasonably have provided against the event before entering into the contract, c) having arisen, either of the parties could not reasonably have avoided or overcome, and d) is not substantially attributable to either of the parties And Prevents the performance of the contract, Such circumstances include but shall not be limited to: i. War, hostilities, invasion, act of foreign enemies. ii. Rebellion, terrorism, revolution, insurrection, military or usurped power, or civil war. iii. Riot, commotion or disorder by persons other than the contractor's personnel and other employees of the contractor and sub-contractors. iv. Strike or lockout not solely involving the contractor's personnel and other employees of the contractor and sub-contractors. v. Encountering munitions of war, explosive materials, ionizing radiation or contamination by radio-activity, except as may be attributable to the contractor's use of such munitions, explosives, radiation or radio- activity. vi. Natural catastrophes such as earthquake, tsunami, volcanic activity, hurricane or typhoon, flood, fire, cyclones etc. vii. Epidemic, pandemic etc.

The following events are explicitly excluded from Force Majeure and are solely the responsibilities of the non-performing party: a) any strike, work-to-rule action, go-slow or similar labor difficulty (b) late delivery of equipment or material (unless caused by Force Majeure event) and (c) economic hardship.

If either party is prevented, hindered or delayed from or in performing any of its obligations under the Contract by an event of Force Majeure, then it shall notify the other in writing of the occurrence of such event and the circumstances thereof within 15 (fifteen) days after the occurrence of such event. The party who has given such notice shall be excused from the performance or punctual performance of its obligations under the Contract for so long as the relevant event of Force Majeure continues and to the extent that such party's performance is prevented, hindered or delayed. The Time for Completion shall be extended by a period of time equal to period of delay caused due to such Force Majeure event. Delay or non-performance by either party hereto caused by the occurrence of any event of Force Majeure shall not v) Constitute a default or breach of the Contract. vi) Give rise to any claim for damages or additional cost expense occasioned thereby, if and to the extent that such delay or non-performance is caused by the occurrence of an event of Force Majeure. BHEL at its discretion may consider short closure of contract after 1 year of imposition of Force Majeure in line with extant guidelines. In any case, Supplier/Vendor cannot consider deemed short-closure after 1 year of imposition of Force Majeure.

CARTEL FORMATION:

The Bidder declares that they will not enter into any illegal or undisclosed agreement or understanding, whether formal or informal with other Bidder(s). This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process. In case, the Bidder is found having indulged in above activities, suitable action shall be taken by BHEL as per extant policies/ guidelines.

FRAUD PREVENTION POLICY:

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.

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In the event of any ambiguity or conflict between the Tender Documents, the order of precedence shall be in the order below:

- a. Amendments/Clarifications/Corrigenda/Errata etc. issued in respect of the tender documents by BHEL.
- b. Buyer Added Bid Specific ATC
- c. NIC Bid Technical Conditions of Bid/Contract (TCC)

NOTE: 1. In the event of our customer order covering this tender being cancelled /placed on hold /otherwise modified, BHEL would be constrained to accordingly cancel / hold / modify the tender at any stage of execution. 2. BHEL may negotiate the L1 rate, if not meeting our budget / estimated cost. BHEL may re-float the tender opened, if L1 price is not acceptable to BHEL even after negotiation. Any deviation from the conditions specified in TECHNO-COMMERCIAL TERMS AND CONDITIONS, will lead to rejection of offer. 3. Any change in applicable rates of Tax or any other statutory levies (Direct / Indirect) or any new introduction of any levy by means of statute and its corresponding liability for the deliveries beyond the agreed delivery date for reasons not attributable to BHEL will be to vendors account. BHEL will not reimburse the same and any subsequent claim in this respect will be summarily rejected. 4. BHEL reserves its right to reject an offer due to unsatisfactory past performance by the respective Vendor in the execution of any contract to any BHEL project / Unit. 5. The offers of the bidders who are under suspension and also the offers of the bidders, who engage the services of the banned firms /principal/agents, shall be rejected. The list of banned firms is available on BHEL web site www.bhel.com. 6. Recovery / deduction as applicable as per Direct and Indirect taxes as notified by Govt. Of India from time to time will be made and information/certificate for such deduction/recoveries shall be provided by BHEL to the vendor.

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PRE-QUALIFICATION REQUIREMENT

Item: Finish Machined End Shield (800 MW) Drg No-01393701051 Matcode (W90413910016)
Finish Machined End Shield (800 MW) Drg No-01393701049 Matcode (W90413910024)
Finish Machined End Shield (660 MW) Drg No-01393701014 Matcode (W90413910032)
Finish Machined End Shield (660 MW) Drg No-01393701011 Matcode (W90413910040)

	Pre-Qualification Requirement	Required	Offered
1.0	Experience: 1.1 Vendors should have experience of fabricating (cutting/bending/assembly/welding/pre-fabrication machining) or machining, supplying of atleast 1 no. Fabricated Assembly in last 15 year from the date of enquiry as per the following details: (i) Dimensions of job: LXBXH = 2mtX2mtX1mt and above. (ii) Weight: 10 Tons and above 1.2 Vendor to furnish certificate or documentary evidence against clause 1.1 from Customer/end user duly confirming that fabricated or machined assembly was supplied and used for Hydro/Thermal/Nuclear Power plant/ Capital goods/ Infrastructure application OR 1.3 Vendor to furnish name of customer with complete contact details along with PO copy, type of manufacturing facility used for fabrication (assly/welding/pre-fabrication machining) or machining, supply documents, payment details and inspection documents of supplied fabricated assembly.	Vendor to Comply & submit suitable evidence including technical specifications, drawings etc.	
2.0	Facility: 2.1 Vendor should have facilities for at least one of the below set in-house:- (a) Fabrication facilities as per Clause 3.1.2 to 3.1.5 of applicable TDC. (b) Machining facilities as per Clause 3.2.2 to 3.2.3 of applicable TDC. 2.2 Vendor has to submit relevant supporting documents for both the cases of in-house facilities and facilities allowed at sub-contractor's/sub-vendors works according to clause 3.0 of TDC.	Vendor to Comply & submit suitable evidence including technical specifications, technical brochure, photographs etc. of the in-house facilities. Or of facilities at sub-vendor works.	
3.0	Vendor to provide clause wise confirmation of the TDC specification.	Vendor to sign and submit clause wise confirmation of TDC.	
4.0	All PQR documents are to be stamped and signed in original by Vendor. In case documents and official stamp is in language other than English, documents and details of official stamp are to be translated in English and duly certified by Government agency/approved agency of Government/Embassy.	Vendor to Comply & submit suitable documents	
5.0	BHEL reserves the right to visit manufacturing facilities of vendor/vendors who provides relevant documents satisfying Cl 1.0 to 2.0 , to verify the information provided. In case the information provided by vendor is found to be false/ incorrect, their offer is liable to be rejected.	Vendor to provide consent during submission of documents.	

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Finish Machined End Shield (Exciter End) for 800 MW TG as per DRAWING No.01393701049-00

1.0 SCOPE OF SUPPLY:

1.1 Finish Machined End Shield as per drawing no. -01393701049-00:

End Shield (Machining) as per BHEL drawing no. 0-13937-01049 Var 00 with all components (except exclusions as per clause 1.2) including materials as per Combined Bill of Material No. 01393701049 Var 00. It also includes fabrication of following Assemblies:

1.1.1 Lower Half End Shield EE (welded) as per BHEL drawing no. 01393601013 Var 00 along with all components including materials as per Combined Bill of Material i.e. CBOM no. 01393601013 Var 00. No additional weld joints are allowed (apart from those mentioned in the drawings).

1.1.2 Upper Half End Shield EE (welded) as per BHEL drawing no. 01393601012Var 00 along with all components including materials as per Combined Bill of Material i.e. CBOM no. 01393601012 Var 00. No additional weld joints are allowed (apart from those mentioned in the drawings).

Scope includes procurement of materials, all stage operations including stress relieving, pre-fabrication machining of components, hydraulic & pneumatic testing during fabrication and also final machining of End Shield and testing.

1.2 Exclusions:

1.2.1 Holes of size $\Phi 2$ as per Section-JJ (Drg. No. 01393701049 sheet 3).

1.2.2 Holes of $\Phi 40$ & $\Phi 22$ as per section B-B (Drg. No. 01393701049 sheet 1).

1.2.3 Holes M6 as per Section N1-N1 (Drg. No. 01393701049 sheet 2).

These holes mentioned above, shall be drilled at BHEL works after final hydraulic and pneumatic testing of End Shield with Stator Frame.

1.2.4 Technical requirements no. 12.

2.0 MATERIAL:

2.1 Material of components shall be as per BHEL specifications given in respective CBOMS mentioned in clause 1.

2.2 Any alternate material from CBOM, if proposed, shall be informed to BHEL along with offer for review. BHEL may accept or reject the alternate material proposal.

2.3 All materials (plates/forgings) shall be procured from list of supplier/sources provided with enquiry.

2.4 For materials from other than the list of supplier/sources provided with enquiry, prior approval has to be taken from BHEL before start of production. In this case, vendor has to submit test certificates of the raw materials for approval. Additionally, if required, vendor may be asked to carry out repeat testing of the raw materials, witnessed by BHEL/BHEL authorized agency.

2.5 Shot blasted plates/ channels / angles shall be used for fabrication.

2.6 Plates of grade AA10119 above 12mm thickness must be in normalized condition.

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3.0 MANUFACTURING REQUIREMENTS

3.1 Fabrication of End Shield –

- 3.1.1. Vendor should have in house adequate Heavy Welding & testing facilities/Setup capable of supporting the welding requirements facilities for fabrication of End Shield. In case, these facilities are not available in-house with the vendor and the fabrication is sub-contracted by the vendor, the vendor shall furnish details of Sub-Vendor and fabrication facilities available at sub-contractor's works and get approval from BHEL along with offer. BHEL reserves the right for rejection, if the facility is not up to the mark.
- 3.1.2. Vendor works should have in house EOT crane of 20 Tons and above with Sufficient Hook height to suit job requirements.
- 3.1.3. Vendor must in house have levelled bed plate having size: Length= 4000 mm, Breadth=2000 mm and above to fabricate the job (either levelled machined bed plate or bed plate constructed by steel plates is allowed but concrete floor not allowed).
- 3.1.4. Vendor must have in-house cutting facility to cut plates of thickness 150mm and above.
- 3.1.5. Qualification of Procedure & Manpower
 - 3.1.5.1. Welding shall be carried out by qualified welders as per approved procedure from any of the following third-party agencies Lloyds, TUV, BVQI, EIL and RITES and as per ASME section-IX. Records of qualified welders, WPQ, are to be submitted to BHEL, Haridwar along with the offer.
 - 3.1.5.2. Procedure Qualification Records (PQR) and Welding Procedure Specification (WPS) as per ASME Section-IX, approved from any of the following third-party agencies Lloyds, TUV, BVQI, EIL and RITES, are to be submitted to BHEL along with the offer.
 - 3.1.5.3. BHEL approved welding consumables are to be used.
- 3.1.6. Vendor should have rolling/bending facility of plate thickness 90 mm and above at width of 900 mm and above. In case, rolling/bending facility is not available in-house with the vendor and it is sub-contracted by the vendor, the vendor shall furnish details of Sub-Vendor and facilities available at sub-contractor's works and get approval from BHEL along with the offer. BHEL reserves the right for rejection, if the facility is not up to the mark.

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- 3.1.7.** Vendor must have Suitable pre-fabrication machining facility to fulfill machining requirement of item no.12, 14, 21, 37 of CBOM 01393601013 00 END SHIELD LOWER HALF (EE). item no: 13, 22, 36 of CBOM 01393601012 00 i.e. END SHIELD UPPER HALF EE (WELD) In case, machining facility is not available in-house with the vendor and it is sub-contracted by the vendor, the vendor shall furnish details of Sub-Vendor and facilities available at sub-contractor's works and get approval from BHEL along with offer. BHEL reserves the right for rejection, if the facility is not up to the mark.
- 3.1.8.** The vendor must have suitable furnaces capable of stress-relieving the fabricated components as per standard HW0641699. These furnaces must be large enough to accommodate the End Shield. The vendor should furnish details of furnaces and their calibration certificates along with offer from BHEL review and approval. In case Stress relieving facility is not available in-house with the vendor and the is sub-contracted, the vendor shall furnish details of Sub-Vendor and the facilities available at sub-contractor's works and get approval from BHEL along with offer. BHEL reserves the right to reject it, if the stress relieving facility is not up to the mark.
- 3.1.9.** Lower Half End Shield EE (welded) as per drawing no. 01393601010 var 00 and Upper Half End Shield EE (welded) as per drawing no. 01393601011 var 00 are to be stress relieved as per standard HW0641099 (soaking temperature at 560-580 °C for 10 hours minimum) and shot blasted at vendor's works.
- 3.1.10.** Pneumatic and Hydraulic testing of End Shields:
Lower Half End Shield EE (welded) as per drawing no. 01393601013 var 00 and Upper Half End Shield EE (welded) as per drawing no. 01393601012 Var 00 are to be pneumatically tested as per BHEL standard no. – TG40116 (Annexure-5,6,7; Clause no – 6.1 to 6.9) at vendor's works. Weld seams are to be tested during fabrication and also after stress relieving as per Annexure -5 of specification TG40116.

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3.2. Machining of End Shields:

3.2.1 Vendor should have in-house facility for Machining of End Shield. In case, these facilities are not available in-house with the vendor and the machining is sub-contracted by the vendor, the vendor shall furnish details of machining facilities available at sub-contractor's works and get approval from BHEL along with offer. BHEL reserves the right for rejection, if the facility is not up to the mark.

3.2.2 Vendor works should have in house EOT crane of 20 Tons and above with Sufficient Hook height to suit job requirements.

3.2.3 The vendor shall furnish technical specifications of following machining facilities for machining fabricated End Shields available in-house or at sub-contractor's works.

- a) CNC Horizontal Boring machine with rotary table of 4Mx4M approx. or suitable arrangement and proper head travel for machining of End Shield.
- b) Radial Drilling Machine with Swivel Head
- c) CNC Vertical boring machine (VTL) with minimum table dia. 4M and proper head travel for machining of End Shield.

The vendor shall get approval from BHEL for machining facilities available in-house.

3.2.4 All fasteners and technological shims required during machining are to be arranged by the vendor.

3.2.5 All taper pins of each set of End Shield to be identified with locations on End Shield by punch marking like 1-1, 2-2, 3-3 etc. All taper pins of each set of End Shields are to be dispatched to BHEL with corresponding set of End Shields.

3.2.6 Hydraulic & Pneumatic testing of End Shields (machining):
End Shields (machining) as per drawing no. 01393701049 var 00 are to be hydraulically and pneumatically tested as per BHEL standard no.TG40116 (Annexure-5,6,7; Clause no – 6.1 to 6.9) at vendor's works after machining also. Format of log sheet for testing

3.3 Any non-conformity to any dimension or Technical Requirements of End Shield (welded) and End Shield (Machining) is to be informed to BHEL on document duly certified by vendor's Quality Control for the approval of BHEL. Vendor shall proceed with the work only after decision given by BHEL on the non-conformity. BHEL reserves the right for rejection of non-conformity and will be final and binding on the vendor.

3.4 Manufacturing Plan indicating assembly stages, sequence of welding, use of fixtures / special tooling, stage inspection etc. and Quality Plan is to be submitted to BHEL for approval along with the offer. BHEL reserves the

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right to identify customer hold points (CHPs) in Quality Plan which will be witnessed by BHEL / BHEL nominated agency and beyond which work will not proceed without clearance from BHEL.

4.0 QUALITY REQUIREMENT:

- 4.1 All dimensions and technical requirements as per BHEL drawings/standards are to be complied and recorded by vendor's quality control (QC) and to be submitted to BHEL for acceptance as per agreed stages. Vendor must ensure all technical requirements meets as mentioned in drawings/standards including surface finish, Size & Tolerances, geometrical accuracies, dimension mentioned as critical etc.
- 4.2 NDT shall be carried out by qualified person qualified by ASNT / ISNT or equivalent. (Minimum Level-II qualified personnel required) or in case it is outsourced details to be given along with offer.
- 4.3 No flaws like cracks etc., should open up during fabrication/machining. However, if any flaw opens up during fabrication/machining, supplier shall immediately intimate to BHEL the detail and location of flaw and corrective action proposed. Further fabrication/ machining will be carried out only after approval by BHEL.
- 4.4 All stage inspections should be followed as per quality plan/assembly requirement and its record should be kept by supplier.
- 4.5 After fabrication, detail dimension reports, Heat treatment report, Raw material test certificate, NDT report along with filled-up observation sheets should be submitted to BHEL. Machining of End Shields shall start only after inspection and clearance of End Shield (welded) by BHEL / BHEL nominated agency.
- 4.6 NDT (Non-Destructive Test) shall be carried out by personnel qualified by ASNT / ISNT or equivalent. (Minimum Level-II qualified personnel required).
- 4.7 All the testing has to be carried out as per enquiry drawing /applicable specifications.

5.0 INSPECTION AT VENDOR'S WORKS:

- 5.1 Inspection / stage inspection of End Shield (welded) and End Shield (Machining) shall be carried out by BHEL / BHEL nominated agency as per approved Quality Plan and drawings.
- 5.2 Stress relieving of the assembly/ Components shall be reviewed by BHEL representative at vendor's works.
- 5.3 Hydraulic and Pneumatic tests of End Shields (welded) as per standard – TG40116 (Annexure-5,6,7; Clause no – 6.1 to 6.9) at vendor's works shall

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be witnessed by BHEL representative at vendor's works during fabrication as well as after finish machining.

6.0 PAINTING & CONSERVATION AND IDENTIFICATION:

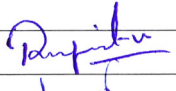
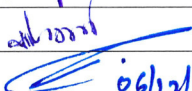
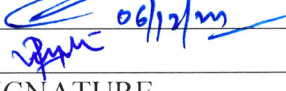
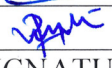
- 6.1 After fabrication, End Shield is to be thoroughly cleaned to prepare surface for painting by complete removal of rust, spatter, slag, oil / grease spots etc to meet requirements of Sa2.5 & surface profile of 50-60 microns.
- 6.2 After cleaning internal and external surfaces of End Shield are to be coated with Inorganic Zinc Silicate Primer coats as per specification with dry film thickness of 50 microns minimum. All external weld seams are not to be painted for detection of leaks, if any.
- 6.3 After machining all components are to be thoroughly cleaned. There should be no chips inside any pocket of the End Shield.
- 6.4 All machined surfaces are to be suitably protected against rusting, dents, scratches, damage etc during handling at vendor's works and during transit to BHEL.
- 6.5 All openings / holes are to be plugged by wooded or any suitable material to prevent accumulation of machining chips, dust etc.
- 6.6 Each set of finish machined End Shield comprising (upper half and lower half) to be identified suitably to avoid mixing.
- 6.7 Painting process & Quality instructions as per special instruction of the Indent/PO.

7.0 PACKING:

- 7.1 End Shields including End Shield Cover are to be packed in suitable packages with each half in separate package. These are to be packed in such a way that it is not damaged during transportation. Overseas vendors are required to make the package sea worthy.

8.0 TEST CERTIFICATES:

- 8.1 One hard copy and one soft copy of all test certificates like Material test certificates, NDT (Non-Destructive Test) reports, Dimensional reports, Hydraulic & Pneumatic test report, Painting report etc are to be submitted to BHEL for each assembly separately.

MTE	Ranjeet Kumar		06/12/24.
EMT	Kapil Sharma		06/12/24
WT	Ravi Deshwal		
EME	Pratibha Gupta		03/12/24
DEPTT.	NAME	SIGNATURE	DATE

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ANNEXURE-I

List of drawings / standards to be referred

1. Drg. No. / CBOM.....	0-13937-01014Var00
	0-13936-01010 Var00
	0-13936-01011Var00
2. CBOM.....	0-13937-01014Var00
	0-13936-01010 Var00
	0-13936-01011 Var00
3. Material Specification.....	As per CBOM
4. Classification of weld Groups.....	HW0620099
5. Test Scope.....	HW0850199
6. Hydraulic & Pneumatic test standard	TG40116
7. Paints for Conservation	AA56114
	AA56112
8. List of approved Suppliers (plates/forgings)	SL024

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RECORDS OF CHANGES					
SL. NO.	PARA NO. / ANNEXURE NO.	DOC. NO. / REV. NO.	REISSUE/ REV. NO.	REVISION DATE	NATURE OF CHANGE
1.					

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Finish Machined End Shield (Turbine End) for 800 MW TG as per DRAWING No.01393701051-00

1.0 SCOPE OF SUPPLY:

1.1 Finish Machined End Shield as per drawing no. -01393701051-00:

End Shield (Machining) as per BHEL drawing no. 0-13937-01051 Var 00 with all components (except exclusions as per clause 1.2) including materials as per Combined Bill of Material No. 01393701051 Var 00. It also includes fabrication of following Assemblies:

- 1.1.1 Lower Half End Shield TE (welded) as per BHEL drawing no. 01393601010 Var 00 along with all components including materials as per Combined Bill of Material i.e. CBOM no. 01393601010 Var 00. No additional weld joints are allowed (apart from those mentioned in the drawings).
- 1.1.2 Upper Half End Shield TE (welded) as per BHEL drawing no. 01393601011 Var 00 along with all components including materials as per Combined Bill of Material i.e. CBOM no. 01393601011 Var 00. No additional weld joints are allowed (apart from those mentioned in the drawings).

Scope includes procurement of materials, all stage operations including stress relieving, pre-fabrication machining of components, hydraulic & pneumatic testing during fabrication and also final machining of End Shield and testing.

1.2 Exclusions:

- 1.2.1 Holes of size $\Phi 2$ as per Section-JJ (Drg. No. 01393701051 sheet 3).
- 1.2.2 Holes of $\Phi 40$ & $\Phi 22$ as per section B-B (Drg. No. 01393701051 sheet 1).
- 1.2.3 Holes M6 as per Section N1-N1 (Drg. No. 01393701051 sheet 2).
These holes mentioned above, shall be drilled at BHEL works after final hydraulic and pneumatic testing of End Shield with Stator Frame.
- 1.2.4 Technical requirements no. 10.

2.0 MATERIAL:

- 2.1 Material of components shall be as per BHEL specifications given in respective CBOMS mentioned in clause 1.
- 2.2 Any alternate material from CBOM, if proposed, shall be informed to BHEL along with offer for review. BHEL may accept or reject the alternate material proposal.
- 2.3 All materials (plates/forgings) shall be procured from list of supplier/sources provided with enquiry.
- 2.4 For materials from other than the list of supplier/sources provided with enquiry, prior approval has to be taken from BHEL before start of production. In this case, vendor has to submit test certificates of the raw materials for approval. Additionally, if required, vendor may be asked to carry out repeat testing of the raw materials, witnessed by BHEL/BHEL authorized agency.
- 2.5 Shot blasted plates/ channels / angles shall be used for fabrication.
- 2.6 Plates of grade AA10119 above 12mm thickness must be in normalized condition.

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3.0 MANUFACTURING REQUIREMENTS

3.1 Fabrication of End Shield –

- 3.1.1. Vendor should have in house adequate Heavy Welding & testing facilities/Setup capable of supporting the welding requirements facilities for fabrication of End Shield. In case, these facilities are not available in-house with the vendor and the fabrication is sub-contracted by the vendor, the vendor shall furnish details of Sub-Vendor and fabrication facilities available at sub-contractor's works and get approval from BHEL along with offer. BHEL reserves the right for rejection, if the facility is not up to the mark.
- 3.1.2. Vendor works should have in house EOT crane of 20 Tons and above with Sufficient Hook height to suit job requirements.
- 3.1.3. Vendor must in house have levelled bed plate having size: Length= 4000 mm, Breadth=2000 mm and above to fabricate the job (either levelled machined bed plate or bed plate constructed by steel plates is allowed but concrete floor not allowed).
- 3.1.4. Vendor must have in-house cutting facility to cut plates of thickness 150mm and above.
- 3.1.5. Qualification of Procedure & Manpower
 - 3.1.5.1. Welding shall be carried out by qualified welders as per approved procedure from any of the following third-party agencies Lloyds, TUV, BVQI, EIL and RITES and as per ASME section-IX. Records of qualified welders, WPQ, are to be submitted to BHEL, Haridwar along with the offer.
 - 3.1.5.2. Procedure Qualification Records (PQR) and Welding Procedure Specification (WPS) as per ASME Section-IX, approved from any of the following third-party agencies Lloyds, TUV, BVQI, EIL and RITES, are to be submitted to BHEL along with the offer.
 - 3.1.5.3. BHEL approved welding consumables are to be used.
- 3.1.6. Vendor should have rolling/bending facility of plate thickness 90 mm and above at width of 900 mm and above. In case, rolling/bending facility is not available in-house with the vendor and it is sub-contracted by the vendor, the vendor shall furnish details of Sub-Vendor and facilities available at sub-contractor's works and get approval from BHEL along with the offer. BHEL reserves the right for rejection, if the facility is not up to the mark.
- 3.1.7. Vendor must have Suitable pre-fabrication machining facility to fulfill machining requirement of item no.12, 14, 21, 37 of CBOM 01393601010 00 END SHIELD LOWER HALF (TE). item no: 13, 22, 36 of CBOM 01393601011 00 i.e. END SHIELD UPPER HALF TE

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(WELD) In case, machining facility is not available in-house with the vendor and it is sub-contracted by the vendor, the vendor shall furnish details of Sub-Vendor and facilities available at sub-contractor's works and get approval from BHEL along with offer. BHEL reserves the right for rejection, if the facility is not up to the mark.

- 3.1.8.** The vendor must have suitable furnaces capable of stress-relieving the fabricated components as per standard HW0641699. These furnaces must be large enough to accommodate the End Shield. The vendor should furnish details of furnaces and their calibration certificates along with offer from BHEL review and approval. In case Stress relieving facility is not available in-house with the vendor and the is sub-contracted, the vendor shall furnish details of Sub-Vendor and the facilities available at sub-contractor's works and get approval from BHEL along with offer. BHEL reserves the right to reject it, if the stress relieving facility is not up to the mark.
- 3.1.9.** NDT shall be carried out by qualified person qualified by ASNT / ISNT or equivalent. (Minimum Level-II qualified personnel required) or in case it is outsourced details to be given along with offer.
- 3.1.10.** Lower Half End Shield EE (welded) as per drawing no. 01393601010 var 00 and Upper Half End Shield EE (welded) as per drawing no. 01393601011 var 00 are to be stress relieved as per standard HW0641099 (soaking temperature at 560-580 °C for 10 hours minimum) and shot blasted at vendor's works.
- 3.1.11.** Pneumatic and Hydraulic testing of End Shields:
Lower Half End Shield TE (welded) as per drawing no. 01393601010 var 00 and Upper Half End Shield TE (welded) as per drawing no. 01393601011 Var 00 are to be pneumatically tested as per BHEL standard no. – TG40116 (Annexure-5,6,7; Clause no – 6.1 to 6.9) at vendor's works. Weld seams are to be tested during fabrication and also after stress relieving as per Annexure -5 of specification TG40116.

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3.2. Machining of End Shields:

3.2.1 Vendor should have in-house facility for Machining of End Shield. In case, these facilities are not available in-house with the vendor and the machining is sub-contracted by the vendor, the vendor shall furnish details of machining facilities available at sub-contractor's works and get approval from BHEL along with offer. BHEL reserves the right for rejection, if the facility is not up to the mark.

3.2.2 Vendor works should have in house EOT crane of 20 Tons and above with Sufficient Hook height to suit job requirements.

3.2.3 The vendor shall furnish technical specifications of following machining facilities for machining fabricated End Shields available in-house or at sub-contractor's works.

- a) CNC Horizontal Boring machine with rotary table of 4Mx4M approx. or suitable arrangement and proper head travel for machining of End Shield.
- b) Radial Drilling Machine with Swivel Head
- c) CNC Vertical boring machine (VTL) with minimum table dia. 4M and proper head travel for machining of End Shield.

The vendor shall get approval from BHEL for machining facilities available in-house.

3.2.4 All fasteners and technological shims required during machining are to be arranged by the vendor.

3.2.5 All taper pins of each set of End Shield to be identified with locations on End Shield by punch marking like 1-1, 2-2, 3-3 etc. All taper pins of each set of End Shields are to be dispatched to BHEL with corresponding set of End Shields.

3.2.6 Hydraulic & Pneumatic testing of End Shields (machining):

End Shields (machining) as per drawing no. 01393701051 var 00 are to be hydraulically and pneumatically tested as per BHEL standard no.TG40116 (Annexure-5,6,7; Clause no – 6.1 to 6.9) at vendor's works after machining also. Format of log sheet for testing shall be as per Clause 8 of Specification TG40116.

3.3 Any non-conformity to any dimension or Technical Requirements of End Shield (welded) and End Shield (Machining) is to be informed to BHEL on document duly certified by vendor's Quality Control for the approval of BHEL. Vendor shall proceed with the work only after decision given by BHEL on the non-conformity. BHEL reserves the right for rejection of non-conformity and will be final and binding on the vendor.

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3.4 Manufacturing Plan indicating assembly stages, sequence of welding, use of fixtures / special tooling, stage inspection etc. and Quality Plan is to be submitted to BHEL for approval along with the offer. BHEL reserves the right to identify customer hold points (CHPs) in Quality Plan which will be witnessed by BHEL / BHEL nominated agency and beyond which work will not proceed without clearance from BHEL.

4.0 QUALITY REQUIREMENT:

- 4.1** All dimensions and technical requirements as per BHEL drawings/standards are to be complied and recorded by vendor's quality control (QC) and to be submitted to BHEL for acceptance as per agreed stages. Vendor must ensure all technical requirements meets as mentioned in drawings/standards including surface finish, Size & Tolerances, geometrical accuracies, dimension mentioned as critical etc.
- 4.2** NDT shall be carried out by qualified person qualified by ASNT / ISNT or equivalent. (Minimum Level-II qualified personnel required) or in case it is outsourced details to be given along with offer.
- 4.3** No flaws like cracks etc., should open up during fabrication/machining. However, if any flaw opens up during fabrication/machining, supplier shall immediately intimate to BHEL the detail and location of flaw and corrective action proposed. Further fabrication/ machining will be carried out only after approval by BHEL.
- 4.4** All stage inspections should be followed as per quality plan/assembly requirement and its record should be kept by supplier.
- 4.5** After fabrication, detail dimension reports, Heat treatment report, Raw material test certificate, NDT report along with filled-up observation sheets should be submitted to BHEL. Machining of End Shields shall start only after inspection and clearance of End Shield (welded) by BHEL / BHEL nominated agency.
- 4.6** NDT (Non-Destructive Test) shall be carried out by personnel qualified by ASNT / ISNT or equivalent. (Minimum Level-II qualified personnel required).
- 4.7** All the testing has to be carried out as per enquiry drawing /applicable specifications.

5.0 INSPECTION AT VENDOR'S WORKS:

- 5.1** Inspection / stage inspection of End Shield (welded) and End Shield (Machining) shall be carried out by BHEL / BHEL nominated agency as per approved Quality Plan and drawings.
- 5.2** Stress relieving of the assembly/ Components shall be reviewed by BHEL representative at vendor's works.

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- 5.3** Hydraulic and Pneumatic tests of End Shields (welded) as per standard – TG40116 (Annexure-5,6,7; Clause no – 6.1 to 6.9) at vendor's works shall be witnessed by BHEL representative at vendor's works during fabrication as well as after finish machining.

6.0 PAINTING & CONSERVATION AND IDENTIFICATION:

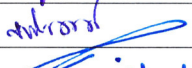
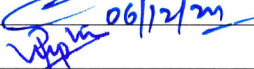
- 6.1** After fabrication, End Shield is to be thoroughly cleaned to prepare surface for painting by complete removal of rust, spatter, slag, oil / grease spots etc to meet requirements of Sa2.5 & surface profile of 50-60 microns.
- 6.2** After cleaning internal and external surfaces of End Shield are to be coated with Inorganic Zinc Silicate Primer coats as per specification with dry film thickness of 50 microns minimum. All external weld seams are not to be painted for detection of leaks, if any.
- 6.3** After machining all components are to be thoroughly cleaned. There should be no chips inside any pocket of the End Shield.
- 6.4** All machined surfaces are to be suitably protected against rusting, dents, scratches, damage etc during handling at vendor's works and during transit to BHEL.
- 6.5** All openings / holes are to be plugged by wooded or any suitable material to prevent accumulation of machining chips, dust etc.
- 6.6** Each set of finish machined End Shield comprising (upper half and lower half) to be identified suitably to avoid mixing.
- 6.7** Painting process & Quality instructions as per special instruction of the Indent/PO.

7.0 PACKING:

- 7.1** End Shields including End Shield Cover are to be packed in suitable packages with each half in separate package. These are to be packed in such a way that it is not damaged during transportation. Overseas vendors are required to make the package sea worthy.

8.0 TEST CERTIFICATES:

- 8.1** One hard copy and one soft copy of all test certificates like Material test certificates, NDT (Non-Destructive Test) reports, Dimensional reports, Hydraulic & Pneumatic test report, Painting report etc are to be submitted to BHEL for each assembly separately.

MTE	Ranjeet Kumar		06/12/24
EMT	Kapil Sharma		06/12/24
WT	Ravi Deshwal		06/12/24
EME	Pratibha Gupta		03/12/2024
DEPTT.	NAME	SIGNATURE	DATE

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ANNEXURE-I

List of drawings / standards to be referred

1. Drg. No. / CBOM.....	0-13937-01051Var00
	0-13936-01010 Var00
	0-13936-01011Var00
2. CBOM.....	0-13937-01051Var00
	0-13936-01010 Var00
	0-13936-01011 Var00
3. Material Specification.....	As per CBOM
4. Classification of weld Groups.....	HW0620099
5. Test Scope.....	HW0850199
6. Hydraulic & Pneumatic test standard	TG40116
7. Paints for Conservation	AA56114
	AA56112
8. List of approved Suppliers (plates/forgings)	SL024

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RECORDS OF CHANGES					
SL. NO.	PARA NO. / ANNEXURE NO.	DOC. NO. / REV. NO.	REISSUE/ REV. NO.	REVISION DATE	NATURE OF CHANGE
1.					



BHARAT HEAVY ELECTRICALS LIMITED

HEEP-HARIDWAR, UTTARAKHAND (249403)

General Instructions and Standard Terms & Conditions for bidding against Tender Enquiry (GISTC)

For Indian Bidders (Version May-2024, Rev: 07)

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1. GENERAL.

These general terms & conditions shall apply to all the Tender Enquiries, notice inviting tenders, request for quotations concerning the supply of goods and / or rendering of services to Bharat Heavy Electricals Ltd., HEEP, Haridwar (hereinafter referred to as BHEL or the Purchaser). In case of placement of order these conditions will become part of Purchase Order (P.O) until unless the deviations are specifically agreed by BHEL.

2. ORIGIN OF QUOTATION.

"A bidder shall not have conflict of interest with other bidders. Such conflict of interest can lead to anti-competitive practices to the detriment of Procuring Entity's interests. **The bidder found to have a conflict of interest shall be disqualified.** A bidder may be considered to have a conflict of interest with one or more parties in this bidding process, if:

- they have controlling partner (s) in common; **or**
- they receive or have received any direct or indirect subsidy/ financial stake from any of them; **or**
- they have the same legal representative/agent for purposes of this bid; **or**
- they have relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the bid of another Bidder; **or**
- Bidder participates in more than one bid in this bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all bids in which the parties are involved. However, this does not limit the inclusion of the components/ sub-assembly/ Assemblies from one bidding manufacturer in more than one bid; **or**
- In cases of agents quoting in offshore procurements, on behalf of their principal manufacturers, one agent cannot represent two manufacturers or quote on their behalf in a particular tender enquiry. One manufacturer can also authorise only one agent/dealer. There can be only one bid from the following:
 - The principal manufacturer directly or through one Indian agent on his behalf; and
 - Indian/foreign agent on behalf of only one principal;**or**
- A Bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the contract that is the subject of the Bid; **or**
- In case of a holding company having more than one independently manufacturing units, or more than one unit having common business ownership/management, only one unit should quote. Similar restrictions would apply to closely related sister companies. Bidders must proactively declare such sister/ common business/ management units in same/similar line of business. "

3. SUBMISSION OF TENDER.

- Bid / Quotation must be enclosed in sealed cover on which tender enquiry number and the due date MUST BE written and be invariably sent under REGISTERED POST / SPEED POST / COURIER / Dropped in the Tender Box: addressed as follows:

Quotation against Enquiry No. _____

Dated: _____

Due on: _____

To,

**THE HEAD OF MATERIALS MANAGEMENT,
Heavy Electrical Equipment Plant,
Bharat Heavy Electricals Limited,
HARIDWAR-249403 (Uttarakhand), INDIA.**

- TENDER ROOM is located at: Room No. - 415, 4th Floor, Main Admin. Building, BHEL-HEEP, Haridwar.



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- c) In case of Three / Two Part Bid, technical bid containing technical offer, duly signed and un-priced copy of the Price Bid should be kept in one envelope. Price Bid containing only the price should be kept in a separate envelope. All envelopes indicating Part-1 or Part-2 or Part-3 as the case may be to be put in a bigger envelope. Please note that un-priced bid should be the exact replica of price bid but without prices.
- d) The bid / quotation must be posted before due date, keeping allowance for postal transit time. Quotations sent by any mode but not received in time will be ignored. Tender received through authorized E-mail is also acceptable. However, in time submission of tender in tender box shall be the responsibility of the bidder, sent through any mode. Documents submitted with the offer / bid shall be signed and stamped in each page by authorized representative of the bidder.
- e) Any additional documents submitted by supplier / bidder, during processing of registration application / tender or after placement of order shall not be accepted unless it is submitted with forwarding letter and duly signed and stamped.
- f) The bids of the bidders who are on the banned list and also the bids of the bidders, who engage the services of the banned firms, shall be rejected. The cutting / overwriting in the bid / offer must be duly attested by the signatories to the bid. The list of firms banned by BHEL is available on BHEL web site www.bhel.com.
- g) Being PMD vendor, if you are not quoting against this tender enquiry, please send your regret letter positively for our reference with valid reasons for not participating in the tender enquiry. Repeated lack of response on the part of bidder may lead to deletion such PMD vendor from BHEL's approved vendor list.
- h) The bidders will submit Integrity Pact, duly signed by its authorized signatory, along with their bids wherever estimated tender value is Rs. 2 Crore or more.
- i) In case of open tender, technically qualified unregistered bidders may apply online for registration through <http://www.bhel.com/index.php/vender>.
- j) BHEL reserves the right to award tendered quantities among more than one bidder (after acceptance of L1 price by the other bidders). BHEL can also consider awarding of part of the tendered quantity to other than L-1 bidder at L1 counter offered rates, if the quantity offered by the L-1 bidder is less than the quantity tendered for.
- k) In case of e-Tendering (Online bidding through e-portal), offline bid submitted in hard copy or in any other form by the vendor / supplier will not be accepted and will be rejected out rightly. Only e-portal bid will be accepted.

4. TENDER OPENING.

Tender opening is scheduled to start in the Tender Room at 2:00 PM, on the due date. Therefore, bid / quotations must reach this office / tender Box latest by 1:45 PM on due date. Only participating bidders are allowed to attend tender opening. **TENDERS RECEIVED AFTER THE SPECIFIED TIME OF THEIR 'SUBMISSION' WILL BE TREATED AS LATE TENDERS AND SHALL NOT BE CONSIDERED UNDER ANY CIRCUMSTANCES.** The bidders or their authorized representatives may be allowed to attend tender opening if duly authorized by their principals, through a tender specific letter on that particular day. General authorization letter is not acceptable.

Note: - Foreign bidders willing to attend the bid opening has to provide the requisite documents to the concerned Purchase executives for arranging gate pass for them.

5. SPECIFICATION, DRAWINGS & STANDARD.

- a) Bidders must give their detailed specification in the quotation along with relevant technical literature / catalogue etc. against the tender enquiry.
- b) The Bid should be accompanied with relevant copies of catalogues, drawings or specification as per tender enquiry.



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If these documents are not furnished, the offer is liable to be rejected.

- c) Wherever national / international (N/IN) standards are referred, the latest N/IN standards are to be followed. Mention year & date of standard revision that shall be followed for the supply.
- d) All Drawings and Standards are proprietary of BHEL. It must not be used in anyway detrimental to the interest of BHEL or without permission of BHEL.

6. PRICE SCHEDULE.

- a) Kindly quote your prices in figures and words both. In case of any discrepancy in value, the prices quoted in words shall be considered for evaluation and establishing L1 status.
- b) Prices quoted should not be more than the prices quoted to any other BHEL units / offices / divisions. Vendor to submit copy of latest Purchase Order placed by any unit of BHEL for similar items in the technical bid. In case no order has been placed on such items, specific confirmation that no order has been placed on such items should be provided.
- c) Prices should be quoted on F.O.R. Destination basis. Transit insurance shall be arranged by BHEL and not to be included in the prices. The offers quoted on other than F.O.R destination basis may result in non-consideration of such bids.
- d) In case BHEL accepts the EX-Works prices, such offers will be loaded by 1.5% of EX-Works value towards freight or with actual freight charges as per BHEL freight rate contract whichever is higher.
- e) In case of Indigenous items covered by DGS & D Rate Contract, the bidders should submit latest valid copy of the rate contract along with bid / quotation
- f) Applicable **IGST / CGST / SGST** and any other statutory levy should be indicated separately and clearly in the bid / quotation.

- g) Bidders can dispatch goods through any Indian Bank Association approved transporters having their branch at HARIDWAR / destination. If material is dispatched through other than Indian Bank Association approved transporter, material to be delivered on door delivery BHEL Stores basis.
- h) In case of dispatch of material through any other unapproved transporter, payment shall be made only after receipt of material and any additional charges payable to the transporter shall be to the bidder's account.
- i) Any demurrage / godown rent payable to the transporter / or to godown's owner due to any delay attributed by the supplier shall be recovered from supplier's account.
- j) Currency of Evaluation shall be INR.

NB: Financial evaluation of L1, L2Status will be on the basis of Landed Cost to BHEL.

7. REVERSE AUCTION.

Wherever RA is declared in the special terms and conditions of tender enquiry, following shall be applicable and Bidders to confirm the same:

"BHEL shall be resorting to Reverse Auction (RA) (Guidelines as available on www.bhel.com) for this tender. RA shall be conducted among all the techno-commercially qualified bidders.

Price bids of all techno-commercially qualified bidders shall be opened and same shall be considered as initial bids of bidders in RA. In case any bidder(s) do(es) not participate in online Reverse Auction, their sealed envelope price bid along with applicable loading, if any, shall be considered for ranking."

8. DELIVERY TERMS.

- a) Goods shall be delivered on 'FOR Destination' basis to the named destination unless otherwise called for in the tender enquiry.
- b) Loading on account of 3rd party inspection charges in case of Indian bidders shall be 0.20%.



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9. LIQUIDATED DAMAGES (LD) FOR LATE DELIVERY.

a) Where items of Purchase Order are independently usable.

Liquidated Damages (LD) for Late Deliveries shall be applicable @0.5% per week or part thereof on the value of respective delayed supplies subject to a maximum of 10% of the value of respective delayed supplies. Value of delayed supplies will mean the Gross Value payable to the vendor (Before LD) against such supplies excluding taxes and duties.

b) Where the total items are required for a main equipment and items are interdependent.

Liquidated Damages (LD) for Late Deliveries shall be applicable @0.5% per week or part thereof on total value of Purchase Order subject to maximum of 10% of the total value of Purchase Order. Purchase Order value for this purpose shall be the Total Gross Value payable to the vendor (Before LD) excluding taxes and duties.

c) Bidders are requested to quote the best delivery meeting the delivery requirements. BHEL reserves the right to reject the offers not meeting BHEL's delivery requirement.

d) Commencement of delivery period shall be reckoned from the date of PO / LOI or any other agreed milestone.

e) Bidder shall deliver the goods in the manner and schedule agreed under the terms and conditions of Purchase order.

f) DELIVERY IN CASE OF REJECTION: In case the material is rejected, then date of replacement will be considered as the actual date of delivery.

g) DELIVERY AGAINST BANK DOCUMENTS: In case payment terms quoted by bidder are documents through bank, and the delivery terms being "FOR Haridwar / FOR Transporter Go-down" then date of delivery will be date of intimation by transporter / bidder of delivery of material at Haridwar for the LD purpose.

h) Where the payments are through bank, the documents may be presented for negotiation to BHEL authorized / nominated bank.

i) Payment of Liquidated Damages (LD) shall not in any way relieve the vendor from any of its obligations & liabilities under the contract.

10. PAYMENT TERMS.

a) BHEL's standard payment term is Payment after receipt and acceptance of materials / items at HEEP, BHEL-Store or at desired destination unless otherwise specified in Special Terms attached to the tender enquiry.

b) BHEL reserves the right to accept or reject the offer of the bidder who quotes the payment term other than BHEL's standard payment term.

c) Loading on account of deviation in payment terms shall be done as per extant rules of BHEL-Haridwar.

d) 100% payment along with taxes, freight & insurance will be made after receipt and acceptance of material and within 75 days from the date of invoice subject to submission of non-discrepant documents within 15 days of supply as per terms and conditions of Purchase Order. In case any discrepancy found in the documents, BHEL will notify the same to vendor within 7 days of receipt. Vendor has to clear all the discrepancies in one go within 7 days thereafter else the payment of vendor may get delayed.

e) For MSEs (covered under MSME Act) which are registered and periodically renewed with BHEL, the payment will be made within 45 days or as prescribed in the relevant act.

f) Adherence to the above time schedule of payment is contingent upon Vendor complying with GST Rules w.r.t availment of Input Tax Credit by BHEL.

g) In case GST credit is delayed / denied to BHEL, due to non / delayed receipt of goods and / or tax invoice or expiry of the timeline prescribed in GST Law for availing such ITC, or any other reason not attributable to BHEL, GST amount shall be recoverable from Vendor along with interest levied / leviable on BHEL.

h) The taxes and duties that are reimbursed would be the ones applicable as on the contractual Purchase order delivery date or the amount actually paid whichever is less.



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i) **The loading criteria for the different payment terms shall be as under:**

Payment Terms	Days of Loading
After Receipt & Acceptance of material within 75 days of supply.	No Loading
Against Delivery at BHEL-Stores Haridwar.	45
Against documents through bank (CAD):	45
Letter of Credit (LC)	120
Usance LC	No Loading if usance period is > 120 Days.
	Loading of days' difference i.e. difference between 120 days and usance period if the usance period is < 75 days.
Advance	Delivery Period + 120 Days - Advance Payment Days.

11. TAXES & DUTIES.

- a) The bidder to specify in their offer (part 1 bid) the category of their registration under GST like Registered, Unregistered and composite dealer.
- b) The provisional GST registration number of Bharat Heavy Electrical Ltd, Heavy Electricals Equipment Plant, Ranipur, Haridwar is "05AAACB4146P1ZL" with state Code as "05" and State Name as "Uttarakhand".
- c) Please quote our provisional GST registration number in all invoices raised for supply of goods and services under GST regime and also ensure filing of timely return and payment of tax and compliance of other applicable provisions on supplier under GST regime.
- d) No GST will be reimbursed to unregistered or composite dealer. In the event, any GST is quoted by composite dealer, the same shall be added to the cost of supply in evaluating the bid.
- e) Since, input credit of GST will be available to BHEL-Haridwar only after correct filing of return and payment of applicable GST by supplier, reimbursement of GST shall be made by

BHEL-Haridwar on matching of vendor inputs at GST portal, ensuring availability of input credit to BHEL Haridwar. Payment of GST will be made to vendor after matching of input credit and vendor to ensure submission of their invoices along with consent to accept payment of tax after such matching in all cases where bills are submitted directly to BHEL-Haridwar or through bank or under LC or through any other mode.

- f) In the event of any disallowance of input credit or applicability of interest or any other financial liability arises on BHEL-Haridwar due to any default of supplier under GST, such implication shall be to supplier's account.
- g) In the event of any change in the status of the vendor after the submission of the bid but before the supply, GST applicable at the time of supply or in the bid, based on the registration status of the vendor, whichever is lower shall be payable.
- h) Where ever applicable If PAN (Permanent Account Number) of the recipient is not available, income tax is deductible either at the normal rate or at the rate of 20 percent, whichever is higher as per Section 206AA of Indian Income Tax Act 1961.
- i) The bidder shall clearly indicate HSN (*Harmonised System Nomenclature*) / SAC (*Service Accounting Code*), its description and applicable rate of GST for each item in his techno-commercial bid.
- j) Statutory Variation in Taxes & duties as applicable at the time of supply shall be payable. However, in the event of no change in law but bidder quoting certain tax structure in bid document which is lower than the applicable one, such amount shall be the maximum amount of tax that can be claimed by bidder.
- k) **IMPORTED GOODS OFFERED BY INDIAN BIDDERS AGAINST DEALER INVOICE:** Wherever the material being offered is imported, the bidder must quote the prices inclusive of IGST. The rate and value of IGST as included in the price must be indicated separately. In case quantum of IGST is not mentioned by the bidder the same will not be considered for



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evaluation. However, bidder will have to pass on the benefit of IGST to BHEL at the time supply.

- l) In case of directly dispatchable items to Customer's Site, BHEL-Haridwar will inform the GST registration number of the respective customer which must be mentioned on the vendor's invoice. Vendor to ensure availability of such information from BHEL-Haridwar before dispatch of any material. However, while filing GSTN-1, BHEL Haridwar GSTN number to be quoted.

Note: - Vendors must ensure compliance of all the applicable rules and procedure as envisaged in the GST Regime. Any loss to BHEL-Haridwar due to fault / non-compliance by the vendor will be to the vendor's account.

12. BANK GUARANTEE.

In case the bank guarantees are required to be deposited towards security deposit/performance guarantee or for any other purpose as per the terms of this tender enquiry, such bank guarantees of the requisite value in the denominated currency of the purchase order should be from one of the Indian branch of BHEL consortium banks and the bank guarantee should be in the proforma as prescribed by BHEL. The proforma of bank guarantee and the list of consortium banks are displayed at BHEL website www.bhelhwr.co.in. However, in case the bank guarantee is not from BHEL consortium banks, then the bidder has to get the bank guarantee confirmed from one of the Indian branch of BHEL consortium banks and the bank charges for such confirmation will be borne by the bidder.

13. GUARANTEE / WARRANTY AND CORRESPONDING REPAIRS / REPLACEMENT OF GOODS.

Goods shall comply with the specifications for material, workmanship and performance. Unless otherwise specified, the warranty shall be for a period of 18 months from the date of receipt. If the delivery is found non-compliant during the warranty period, leading to rejection, the Seller shall arrange free replacement / repair of goods, within one month from the date of intimation or any mutually agreed period. The rejected goods shall be taken away by the Seller at his cost and

replaced on Delivered Duty Paid (DDP) (FOR - BHEL Stores / designated destination basis) within such period. In the event of the Seller's failure to comply, Purchaser may take action as appropriate, including Repair / Replenish rejected goods & disposal of rejections, at the risk & cost of the Seller. In case the defects attributable to Seller are detected during processing of the goods at BHEL or at our subcontractor's works, the Seller shall be responsible for free replacement / repair of the goods as required by BHEL.

- b) **RETURN OF REJECTED MATERIAL FOR REPLACEMENT:** The bidder shall have to pay 5% incidental charges while taking back supplied material if it is found rejected on receipt. The rejected material shall be sent back only after receipt of replacement / submission of BG / refund of amount paid.

14. QUALITY REQUIREMENT.

Your bid / quotation should have specific confirmation regarding meeting all our quality requirements such as. (i) Test Certificate (TC), (ii) Guarantee Certificate (GC) / Warranty Certificate (WC), (iii) Quality Plan (QP) (if applicable); and (iv) Pre-Dispatch Inspection at your works (if applicable).

15. VALIDITY.

The quotation should be valid for a minimum period of 90 days effective from the date of opening of tender, unless otherwise specified in the tender enquiry.

16. RIGHT OF ACCEPTANCE.

- a) **BHARAT HEAVY ELECTRICALS LIMITED HARIDWAR** reserves the right to reject any or all the bids / quotations without assigning any reason thereof. BHEL also reserves the right to increase or decrease the tendered quantities. Bidders should be prepared to accept order for reduced quantity without any extra charges.
- b) Any discount / revised offer / bids submitted by a bidder on its own shall be considered, provided it is received on or before the due date and time of offer / bid submission (Part-1). Conditional discounts shall not be considered for evaluation of tenders.



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- c) Unsolicited discounts / revised offers / bids given after Part-1 bid opening shall not be accepted. No change in price will be permitted within the validity period asked for in the tender enquiry.
- d) In case of changes in scope and / or technical specification and / or commercial terms & conditions having price implication, techno-commercially acceptable bidders shall be asked by BHEL to submit the impact of such changes on their price bids. In case a bidder opts to submit revised price bid instead of impact called for then the latest price bid shall prevail. However, in both situations, original price bid will be necessarily opened.
- e) The bidder whose bid is technically not accepted will be informed & EMD wherever submitted shall be returned after finalization of contract. EMD shall be forfeited in the event of bidder opting out after tender opening.
- f) BHEL reserves the right to short close the existing Purchase Order / Rate Contract / Work Order or any extension thereof at any stage.

17. TRANSIT INSURANCE.

- a) Transit Insurance will be covered by BHEL under its open Insurance Policy. Seller shall inform dispatch particulars (Purchase Order, RR /GR, Invoice value etc.) to "Finance department (Store bill Section), BHEL Ranipur, Haridwar (Uttarakhand-India) with value of consignment to the Purchaser within 07 days of dispatch for BHEL to arrange insurance coverage in its policy. Failure on the part of seller to inform dispatch particulars will make him liable to pay for any transit damages / losses suffered by the Purchaser.
- b) If Quoted Prices are inclusive of transit insurance, no weightage shall be given while evaluating the bids for Cost of Insurance, being in BHEL Scope.

18. RISK PURCHASE.

In case of abnormal delays (beyond the maximum late delivery period as per LD clause) in supplies / defective supplies or non-fulfillment of any other terms and conditions given in Purchase Order, BHEL may cancel the Purchase Order in full or part thereof, and may also make the purchase of such material from elsewhere / alternative source at the risk and cost of the supplier. BHEL will take all reasonable steps to get the material from alternate source at optimum cost. If bidder does not agree to the above Risk Purchase Clause, BHEL reserves the right to reject the offer. In case for compelling reasons BHEL accepts the offer without acceptance of this clause by the bidder and in the eventuality of Risk Purchase, appropriate action will be taken as per BHEL extant rules. This will be without prejudice to any other right of BHEL under the contract or under General Law.

19. FORCE MAJEURE CLAUSE.

Notwithstanding any other thing contained anywhere else in the contract or PO (Purchase Order), In case the discharge of obligation under the contract by either party is impeded or made unreasonably onerous, neither party shall be considered in breach of the contract to the extent that performance of their respective obligation is prevented by an event of Force Majeure that arises after the effective date (PO date).

In the above clause, Force Majeure means an event beyond the control of the parties to the contract which prevents a party from complying with any obligation of the contract including but not limited to:

- a) Act of God (Such as but not limited to earthquake, drought, tidal waves, floods etc.).
- b) War (whether war be declared or not), Hostilities Invasion, Act of foreign enemy etc.
- c) Rebellion, revolution, insurrection, civil war etc.
- d) Contamination of Radio Activity from any nuclear fuel or from any other nuclear waste or any other hazardous materials.
- e) Riots, commotions, strike unless restricted to the employees of supplier.
- f) Acts of terrorism.



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- g) Other unforeseeable circumstances beyond the control of the parties and which the affected party cannot avoid even by using its best efforts.
- h) Cancellation of contract by customer.
- i) Change in law / government. Regulation making the performance impossible.
- j) Pandemic or Epidemic.

The party claiming to be affected by force majeure shall notify the other party in writing immediately without delay on the intervention and on the cessation of such circumstances.

Irrespective of any extension of time, if an event of force majeure occurs and its effect continues for more than 180 days the affected party shall have right to cancel the contract.

As soon as reasonably practicable following the date of commencement of a Force Majeure Event, and within a reasonable time following the date of termination of a Force Majeure Event, either Party invoking it shall submit to the other Party reasonable proof of the nature of the Force Majeure Event and of its effect upon the performance of the Party's obligations under this Agreement.

The party shall, and shall ensure that its Subcontractors shall, at all times take all reasonable steps within their respective powers and consistent with Good Operating Practices (but without incurring unreasonable additional costs) to:

- a) Prevent Force Majeure Events affecting the performance of the party's obligations under this Agreement.
- b) mitigate the effect of any Force Majeure Event and
- c) Comply with its obligations under this Agreement.

If the war like situation has developed in a country where a seller's works is located in this P.O. or there is political instability and Indian Embassy located in that country forbids or advises for not having any business dealing with the sellers located in such zone / region/ country, then BHEL reserves the right to cancel the order.

20. NON-DISCLOSURE AGREEMENT.

All Drawing and Technical Documents relating to the product or its manufacture submitted by one party to the other, prior or

subsequent to the formation of contract, shall remain property of the submitting party. Drawing, technical documents or other technical information received by one party, shall not without the consent of the other party, be used for any other purpose than that, for which they were provided. Such technical information shall not without the consent of the submitting party, otherwise be used or copied, reproduced, transmitted or communicated to a third party. Patterns supplied by BHEL will remain BHEL's property which shall be returned by the bidder on demand to BHEL. Bidder shall in no way share or use such intellectual property of BHEL to promote his own business with others or to gain a commercial advantage. BHEL reserves the right to claim damages from the bidder, or take appropriate action as deemed fit against the bidder, for any infringement of the provisions contained herein as available under law or equity.

21. SETTLEMENT OF DISPUTES / ARBITRATION.

In case of any dispute arising out of as in connection with this contract, the same shall be referred to arbitration under Arbitration & Conciliation Act 1996 of a sole arbitrator who shall be appointed by mutual consent of the parties. The seat & venue of arbitration shall be Haridwar.

The proceedings shall be conducted in English. The Governing law of contract shall be the substantive law of India.

22. WHARFAGE / DEMURRAGE RESPONSIBILITY.

In the event of delay in receipt of documents by Manager (Stores-Shipping) BHEL-Haridwar and in case where dispatches are made through Unapproved Transporter the sole responsibility for wharfage / demurrage for such delay shall be that of supplier.

23. CONDITIONS FOR AVAILING MICRO & SMALL ENTERPRISES (MSE'S) BENEFITS.

- a) "MSE Suppliers can avail the intended benefits only if they submit along with the offer, attested copies of either EM II certificate having deemed validity (**five years** from the date of issue of acknowledgement in EM II) or valid NSIC certificate or EM II certificate along with attested copy of a CA certificate



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(Format enclosed at annexure-1 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 bid opening (Part 1 in case of two-part bid) or vendor has to give Udyog Adhar Memorandum (UAM). Non submission of such documents will lead to consideration of their bid at par with other bidders. No benefit shall be applicable for this enquiry if any deficiency in the above required documents is found or the requisite documents are not submitted before price bid opening. If the tender is to be submitted through e-procurement portal, then the above required documents are to be uploaded on the portal. Documents should be notarized or attested by a Gazetted officer. **UAM need not required to be notarized or attested.**

b) Any new supplier will be eligible for registration with BHEL as MSE supplier provided at least any one of the following documents are submitted along with application for registration: -

1. Udyog Adhar Memorandum (UAM).
2. Valid National Small Industries Commission (NSIC) Certificate.
3. Entrepreneurs Memorandum part II (EM II) certificate (valid based on deemed validity of 5 years) or
4. EM II certificate along with attested copy of CA Certificate (as per prescribed format at annexure-A) applicable for the relevant financial year (latest audited), where the deemed validity of EM II is over.
5. However, credentials of all MSE suppliers will be verified before advancing the intended benefits.
6. MSE bidders claiming SC/ST status will have to submit SC/ST certificate of the Proprietor from competent authority. Attested (notarized or attested by Gazetted officer) copy to be submitted along with the offer.
7. In case techno-commercial accepted bidders include MSE source and their prices (based on landed cost – considering quoted prices) are within the price band of 15% w.r.t. L-1 bidder, then BHEL can offer **25%** of quantity of respective item (rounded off to nearest number) to MSE bidders at L-1 price and in case, more than one MSE bidder is in 15 % band and the same is accepted by more than one MSE bidders then **25%** quantities of respective items will be considered for ordering on proportionate basis amongst MSE bidders.

8. There will be minimum of **3%** reservation for women owned MSEs within the above mentioned 25% reservation.
9. The reservation for MSEs owned by SC/ST will be **6.25%** { 25% out of target of 25% - refer para 4 of Public Procurement Policy for the Micro and Small Enterprises(MSEs)}.
10. The definition of MSEs owned by Women Entrepreneurs is clarified as under:
 - a) In case of proprietary MSE, proprietor shall be Woman.
 - b) In case of partnership MSE, the Woman partners shall be holding at least 51% of share in the unit.
 - c) In case of Private Limited companies, at least 51% share shall be held by Women promoters.
11. The definition of MSEs owned by SC/ST is clarified as under:
 - a) In case of proprietary MSE, proprietor(s) shall be SC/ST.
 - b) In case of partnership MSE, the SC/ST partners shall be holding at least 51% of shares in the unit.
 - c) In case of Private Limited companies, at least 51% share shall be held by SC/ST promoters.
12. While distributing the **25%** quantity amongst MSE bidders the decimal points in quantity shall be ignored for all the bidders except the L-1 amongst MSE bidders. Balance quantity after allocating the quantity to other MSE bidders ignoring the quantities in decimal, shall be given to L-1 (amongst MSE) bidder. However, if there are more than one MSE bidder at the same price level than preference for additional quantities due to ignoring off the decimal (as mentioned above) shall be given to the bidder offering favorable terms to BHEL and if the conditions offered are also same then preference will be given to the bidder having high SPR rating.
13. In case there are more than one MSE bidders (with different landed cost to BHEL) within 15% price band of lowest bidder and quantity to be offered is 1 no. only, then preference shall be given to the MSE bidder with lowest landed cost.
14. In case there are more than one MSE bidders (with same landed cost to BHEL) within 15% price band of lowest bidder and quantity to be offered is 1 no. only, then preference shall be given first, based on the favorable terms in the bid and in case terms are also same, the bidder with high SPR rating shall be given preference.
15. If L1 bidder is MSE bidder, entire quantity will be given to such MSE bidder only.



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16. Note: It may however be noted that MSE guidelines as on date (Date of Technical Bid Opening Part-1) shall prevail.

17. "As per the OM No. F.No. 1(2)(1)/2016-MA dtd. 09.02.2017 issued from the Office of Development Commissioner (Micro, Small & Medium Enterprises), "Traders and agents should not be allowed to avail the benefits extended under the PP Policy."

In view of this, it is clarified that benefits of MSE (such as EMD Waiver, Tender fee exemption, Price preference, Payment preference etc.) will be given only to those MSE Vendors who are manufacturers of offered items against the NIT. No MSE benefits shall be provided to Agents / Stockists / Dealers / Traders etc. for the items offered but not manufactured by themselves."

24. INFORMATION TO THE BIDDERS.

a) Purchase related information is available at our Business-to-Business (B2B) Portal available on our website <https://hwr.bhel.com>. The user ID & password can be obtained by sending a request to concerned purchase executives.

b) Intimate your change in mail address or communication address or changes, if any, by email to AGM (SDX/MM) giving your bidder Code.

c) Please resolve your rejections and unexecuted overdue purchase order immediately which are posted at our B2B Portal, which can be visited through our site <https://hwr.bhel.com>

d) Copy of this Tender Enquiry is being sent through the post.

e) The Bidder declares that they will not enter into any illegal or undisclosed agreement or understanding, whether formal or informal with other bidder(s). This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.

In case, the bidder is found having indulged in above activities, suitable action shall be taken by BHEL as per extant policies/guidelines.

f) Supplier must upload digitally signed e-Invoice on B2B portal for processing of Bills.

In other cases, inked signed hard copy of Invoice to be submitted for processing of Bills.

25. MAKE IN INDIA (GOVT-NOTIFICATION).

A. This tender enquiry shall be governed by notification no. P-45021/2/2017-PP (BE-II) dated 04.06.2020 of government of INDIA and subsequent circulars issued afterwards. Accordingly, the minimum local content, the margin of purchase preference and the procedure for preference to make in INDIA shall be adhered.

B. The margin of purchase preference shall be 20%.

- 'Class-I local Supplier' means a supplier or service provider, whose goods, services or works offered for procurement, has local content equal to or more than 50%, as defined under this order.
- 'Class-II local Supplier' means a supplier or service provider, whose goods, services or works offered for procurement, has local content more than 20% but less than 50%, as defined under this order.
- 'Non- local Supplier' means a supplier or service provider, whose goods, services or works offered for procurement, has local content less than or equal to 20%, as defined under this order.

C. Vendor to specifically confirm if they are Class-I or Class-II local supplier or not as per above mentioned notification.

Accordingly, the 'Class-I local supplier' / 'Class-II local Supplier' at the time of tender, bidding or solicitation shall be required to indicate percentage of local content and provide self-certification that the item offered meets the local content requirement for 'Class-I local supplier' / 'Class-II local Supplier', as the case may be. They shall also give details of the location(s) at which the local value addition is made.

D. In cases of Procurement for a Value in Excess of Rs. 10 Crores, the 'Class-I local supplier' / 'Class-II local Supplier' shall be required to provide a Certificate from the Statutory Auditor or Cost Auditor of the Company (in the case of companies) or from a practicing Cost Accountant or practicing Chartered Accountant (in respect of suppliers other than companies) giving the percentage of Local Content.



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E. Requirement of Purchase Preference:

Purchase preference shall be given to 'Class-I local supplier' in procurements undertaken by procuring entities in the manner specified hereunder -

- a. In the procurements of goods or works, which are covered by para 3(b) of mentioned Govt. circular and which are divisible in nature, the 'class-I local supplier' shall get purchase preference over 'Class-II supplier' as well as 'Non-local supplier', as per following procedure:
 - i. Among All qualified bids, the lowest bid will be termed as L1. If L1 is 'Class-I local supplier', the contract for full quantity will be awarded to L1.
 - ii. If L1 bid is not a 'Class-I local supplier', 50% of the order quantity shall be awarded to L1. Thereafter, the lowest bidder among the 'Class-I local supplier' will be invited to match the L1 price for the remaining 50% quantity subject to the class-I local supplier's quoted price falling within the margin of purchase preference, and contract for that quantity shall be awarded to such 'Class-I local supplier' subject to matching the L1 price. In case such lowest eligible 'Class-I local supplier' fails to match the L1 price or accepts less than the offered quantity, the next higher 'Class-I local supplier' within the margin of purchase preference shall be invited to match the L1 price for remaining quantity and so on, and contract shall be awarded accordingly. In case some quantity is still left uncovered on Class-I local supplier, then such balance quantity may also be ordered on the L1 bidder".
- b. In the procurements of goods or works, which are covered by para 3(b) of mentioned Govt. circular and which are not divisible in nature, and in procurement of services where the bid is evaluated on price alone, the 'class-I local supplier' shall get purchase preference over 'Class-II supplier' as well as 'Non-local supplier', as per following procedure:
 - i. Among all qualified bids, the lowest bid will be termed as L1. If L1 is 'Class-I local supplier', the contract will be awarded to L1.
 - ii. If L1 is not 'Class-I local supplier', the lowest bidder among the 'Class-I local supplier', will be invited to match the L1 price subject to Class-I local supplier's quoted price falling

within the margin of purchase preference, and the contract shall be awarded to such 'Class-I local supplier' subject to matching the L1 price.

- iii. In case such lowest eligible 'Class-I local supplier', fails to match the L1 price, the 'Class-I local supplier' with the next higher bid within the margin of purchase preference shall be invited to match the L1 price and so on and contract shall be awarded accordingly. In case none of the 'Class-I local supplier' within the margin of purchase preference matches the L1 prices, the contract may be awarded to the L1 bidder.

- c. 'Class-II local supplier' will not get purchase preference in any procurement, undertaken by procuring entities.

- F. For this procurement, the local content to categorize a supplier as a Class-I local supplier/ Class-II local supplier/ Non-local supplier and purchase preference to Class-I local supplier, is as defined in Public Procurement (Preference to Make in India), Order 2017 dated 04.06.2020 issued by DPIIT. In case of subsequent orders issued by nodal ministry, changing the definition of local content for the items of the NIT, the same shall be applicable even if issued after issue of this NIT, but before opening of Part-II bids against this NIT.
- G. Procurements where estimated value to be procured is less than Rs. 5 lakhs shall be exempted from GOI order No. P-45021/2/2017-PP (BE-II) dated 04.06.2020.
- H. For procurement of Goods & Services which are divisible in nature, following shall be operated for **MSE bidders** under Public procurement Policy for the Micro and Small Enterprises (MSEs) Amendment Order, 2019, Ref. No. AA: SSP: MSE: Amndt, dtd. 30.11.2018, Circular No. 44 of 2018-19;-
 - a. If L1 bid is not from "Class-I local Supplier" and price quoted by MSE bidder falls within the margin of Purchase preference (L1+15% for MSEs), then 25 % of total order quantity of respective item (rounded off to nearest number) shall be awarded to MSE bidder, subject to MSE bidder matching the L1 Price. Out of Remaining 75% quantity, distribution shall be operated as per below sub-clause (2) –
 - b. If "Class- I Local Supplier" (Next to L1, other than MSE) quoted price falling within the Margin of Purchase Preference, and "Class-I local supplier" matches the L1 price,



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then 50% of remaining Quantity (after allocation of 25% to MSE) i.e. 37.5% shall be awarded to local supplier and 37.5% shall be awarded to foreign bidder.

Note: L1 Price refers to lowest evaluated / landed cost to Company.

For Further details, please refer GOI order no. P-45021 / 2 / 2017 - PP (BE-II) dated 04.06.2020.

26. RESTRICTIONS UNDER RULE 144(XI) OF THE GENERAL FINANCIAL RULES (GFRs), 2017

All provisions of Order No. F.No.6/18/2019-PPD of Department of Expenditure (DoE) shall be applicable for this tender enquiry (Order copy is available at <https://doe.gov.in/procurement-policy-divisions>). Accordingly, any bidder from a country which shares a land border with India (except the countries to which the Govt. of India has extended lines of credit or in which the Govt. of India is engaged in development projects for which list is available at <https://www.mea.gov.in/>) will be eligible to bid in this tender only if the bidder is registered with the Competent Authority as specified in Annex I of the said Order of DoE.

Updated list of the countries to which lines of credit have been extended or in which development projects are undertaken are available on the Ministry of External affairs website (<https://www.mea.gov.in/>)

For the purpose of this order, definition of Bidder from a country which shares a land border with India shall be same as defined in the Annex III of the said order.

Registration with the competent authority as stipulated in the said order is responsibility of bidder. Bidder has to submit a certificate certifying following along with offer:

"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India;

I certify that bidder (.... Name of Bidder) is not from such a country or, if from such a country, has been registered with the Competent Authority. I hereby certify that bidder (.....Name of bidder) fulfils all requirements in this regard and is eligible to be considered"

If the bidder is from such country which shares a land border with India evidence of valid registration by the Competent Authority shall also be attached along with offer."

27. NOTE.

- Special conditions of enquiry, if enclosed by BHEL, will supersede the respective standard / general terms of enquiry.
- Any other Standard terms and Conditions of the bidder attached / referred against the tender enquiry will be treated as null and void ab initio.
- In order to protect the commercial interests of BHEL, it becomes necessary to take action against suppliers / contractors by way of suspension of business dealings, who either fail to perform or are in default without any reasonable cause, cause loss of business / money / reputation, indulged in malpractices, cheating, bribery, fraud or any other misconducts or formation of cartel so as to influence the bidding process or influence the price etc. Guidelines for Suspension of Business Dealings with Suppliers / Contractors shall prevail over which is available at BHEL website <http://www.bhel.com>
- 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.
- "BHEL shall recover the amount of compensation paid to victim(s) by BHEL towards loss of life / permanent disability due to an accident which is attributable to the negligence of contractor, agency or firm or any of its employees as detailed below;
 - Victim:** Any person who suffers permanent disablement or dies in an accident as defined below.
 - Accident:** Any death or permanent disability resulting solely and directly from any unintended and unforeseen injurious



BHARAT HEAVY ELECTRICALS LIMITED

HEEP-HARIDWAR, UTTARAKHAND (249403)

General Instructions and Standard Terms & Conditions for bidding against Tender Enquiry (GISTC)

For Indian Bidders (Version May-2024, Rev: 07)

occurrence caused during the manufacturing / operation and works incidental thereto at BHEL factories/ **offices and precincts** thereof , project execution , erection and commissioning, services, repairs and maintenance, trouble shooting, serving , overhaul, renovation and retrofitting , trial operation, performance guarantee testing undertaken by the company or during any works / during working at BHEL Units/ Offices/ townships and premises/ project sites.

3. Compensation in respect of each of the victims:

- (i) In the event of death or **permanent disability** resulting from **Loss of both limbs**: Rs. 10,00,000/-(Rs. Ten Lakh).
- (ii) In the event of **other permanent disability**: Rs. 7,00,000/- (Rs. Seven Lakh).

4. Permanent Disablement: A disablement that is classified as a permanent total disablement under the proviso to Section 2(l) of the Employees Compensation Act, 1923.”

f) The bidder shall be in compliance with applicable laws, rules and regulations throughout the terms of the contract for conducting its business generally and to perform its obligations under this contract.

Annexure-1

INTEGRITY PACT**Between**

Bharat Heavy Electricals Ltd. (BHEL), a company registered under the Companies Act 1956 and having its registered office at "BHEL House", Siri Fort, New Delhi - 110049 (India) hereinafter referred to as "The Principal", which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the ONE PART

and

_____, (description of the party along with address), hereinafter referred to as "The Bidder/ Contractor" which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the OTHER PART

Preamble

The Principal intends to award, under laid-down organizational procedures, contract/s for _____

_____ (hereinafter referred to as "Contract"). The Principal values full compliance with all relevant laws of the land, rules and regulations, and the principles of economic use of resources, and of fairness and transparency in its relations with its Bidder(s)/ Contractor(s).

In order to achieve these goals, the Principal will appoint panel of Independent External Monitor(s) (IEMs), who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

Section 1- Commitments of the Principal

- 1.1 The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles: -
 - 1.1.1 No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
 - 1.1.2 The Principal will, during the tender process treat all Bidder(s) with equity and reason. The Principal will in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential/ additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.
 - 1.1.3 The Principal will exclude from the process all known prejudiced persons.
- 1.2 If the Principal obtains information on the conduct of any of its employees which is a penal offence under the Indian Penal Code 1860 and Prevention of Corruption Act 1988 or any other statutory penal enactment, or if there be a substantive suspicion in this regard, the Principal will inform its Vigilance Office and in addition can initiate disciplinary actions.

Section 2 - Commitments of the Bidder(s)/ Contractor(s)

- 2.1 The Bidder(s)/ Contractor(s) commit himself to take all measures necessary to prevent corruption. The Bidder(s)/ Contractor(s) commits himself to observe the following principles during participation in the tender process and during the contract execution.

- 2.1.1 The Bidder(s)/ Contractor(s) will not, directly or through any other person or firm, offer, promise or give to the Principal or to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person any material, immaterial or any other benefit which he/ she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.
- 2.1.2 The Bidder(s)/ Contractor(s) will not enter with other Bidder(s) into any illegal or undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.
- 2.1.3 The Bidder(s)/ Contractor(s) will not commit any penal offence under the relevant Indian Penal Code (IPC) and Prevention of Corruption Act; further the Bidder(s)/ Contractor(s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
- 2.1.4 Foreign Bidder(s)/ Contractor(s) shall disclose the name and address of agents and representatives in India and Indian Bidder(s)/ Contractor(s) to disclose their foreign principals or associates. The Bidder(s)/ Contractor(s) will, when presenting his bid, disclose any and all payments he has made, and is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.
- 2.2 The Bidder(s)/ Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.
- 2.3 The Bidder(s)/ Contractor(s) shall not approach the Courts while representing the matters to IEMs and shall await their decision in the matter.

Section 3 - Disqualification from tender process and exclusion from future contracts

If the Bidder(s)/ Contractor(s), before award or during execution has committed a transgression through a violation of Section 2 above, or acts in any other manner such as to put his reliability or credibility in question, the Principal is entitled to disqualify the Bidder(s)/ Contractor(s) from the tender process, terminate the contract, if already awarded, exclude from future business dealings and/ or take action as per the separate "Guidelines on Banning of Business dealings with Suppliers/ Contractors", framed by the Principal.

Section 4 - Compensation for Damages

- 4.1 If the Principal has disqualified the Bidder (s) from the tender process before award / order acceptance according to Section 3, the Principal is entitled to demand and recover the damages equivalent to Earnest Money Deposit/ Bid Security.
- 4.2 If the Principal is entitled to terminate the Contract according to Section 3, or terminates the Contract in application of Section 3 above, the Bidder(s)/ Contractor (s) transgression through a violation of Section 2 above shall be construed breach of contract and the Principal shall be entitled to demand and recover from the Contractor an amount equal to 5% of the contract value or the amount equivalent to Security Deposit/ Performance Bank Guarantee, whichever is higher, as damages, in addition to and without prejudice to its right to demand and recover compensation for any other loss or damages specified elsewhere in the contract.

Section 5 - Previous Transgression

- 5.1 The Bidder declares that no previous transgressions occurred in the last 3 (three) years with any other company in any country conforming to the anti-corruption approach or with any other Public Sector Enterprise in India that could justify his exclusion from the tender process.
- 5.2 If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason or action can be taken as per the separate "Guidelines on Banning of Business dealings with Suppliers/ Contractors", framed by the Principal.

Section 6 - Equal treatment of all Bidder (s)/ Contractor (s) / Sub-contractor (s)

- 6.1 The Principal will enter into Integrity Pacts with identical conditions as this Integrity Pact with all Bidders and Contractors.
- 6.2 In case of Sub-contracting, the Principal Contractor shall take the responsibility of the adoption of Integrity Pact by the Sub-contractor(s) and ensure that all Sub-contractors also sign the Integrity Pact.
- 6.3 The Principal will disqualify from the tender process all Bidders who do not sign this Integrity Pact or violate its provisions.

Section 7 - Criminal Charges against violating Bidders/ Contractors /Subcontractors

If the Principal obtains knowledge of conduct of a Bidder, Contractor or Subcontractor, or of an employee or a representative or an associate of a Bidder, Contractor or Subcontractor which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the Vigilance Office.

Section 8 -Independent External Monitor(s)

- 8.1 The Principal appoints competent and credible panel of Independent External Monitor (s) (IEMs) for this Integrity Pact. The task of the IEMs is to review independently and objectively, whether and to what extent the parties comply with the obligations under this Integrity Pact.
- 8.2 The IEMs are not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the CMD, BHEL.
- 8.3 The IEMs shall be provided access to all documents/ records pertaining to the Contract, for which a complaint or issue is raised before them as and when warranted. However, the documents/records/information having National Security implications and those documents which have been classified as Secret/Top Secret are not to be disclosed.
- 8.4 The Principal will provide to the IEMs sufficient information about all meetings among the parties related to the Contract provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the IEMs the option to participate in such meetings.

- 8.5 The advisory role of IEMs is envisaged as that of a friend, philosopher and guide. The advice of IEMs would not be legally binding and it is restricted to resolving issues raised by a Bidder regarding any aspect of the tender which allegedly restricts competition or bias towards some Bidders. At the same time, it must be understood that IEMs are not consultants to the Management. Their role is independent in nature and the advice once tendered would not be subject to review at the request of the organization.
- 8.6 For ensuring the desired transparency and objectivity in dealing with the complaints arising out of any tendering process or during execution of Contract, the matter should be examined by the full panel of IEMs jointly, who would look into the records, conduct an investigation, and submit their joint recommendations to the Management.
- 8.7 The IEMs would examine all complaints received by them and give their recommendations/ views to the CMD, BHEL at the earliest. They may also send their report directly to the CVO, in case of suspicion of serious irregularities requiring legal/ administrative action. Only in case of very serious issue having a specific, verifiable Vigilance angle, the matter should be reported directly to the Commission. IEMs will tender their advice on the complaints within 30 days.
- 8.8 The CMD, BHEL shall decide the compensation to be paid to the IEMs and its terms and conditions.
- 8.9 IEMs should examine the process integrity, they are not expected to concern themselves with fixing of responsibility of officers. Complaints alleging mala fide on the part of any officer of the Principal should be looked into by the CVO of the Principal.
- 8.10 If the IEMs have reported to the CMD, BHEL, a substantiated suspicion of an offence under relevant Indian Penal Code / Prevention of Corruption Act, and the CMD, BHEL has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Vigilance Office, the IEMs may also transmit this information directly to the Central Vigilance Commissioner, Government of India.
- 8.11 After award of work, the IEMs shall look into any issue relating to execution of Contract, if specifically raised before them. As an illustrative example, if a Contractor who has been awarded the Contract, during the execution of Contract, raises issue of delayed payment etc. before the IEMs, the same shall be examined by the panel of IEMs. Issues like warranty/ guarantee etc. shall be outside the purview of IEMs.
- 8.12 However, the IEMs may suggest systemic improvements to the management of the Principal, if considered necessary, to bring about transparency, equity and fairness in the system of procurement.
- 8.13 The word 'Monitor' would include both singular and plural.

Section 9 - Pact Duration

- 9.1 This Integrity Pact shall be operative from the date this Integrity Pact is signed by both the parties till the final completion of contract for successful Bidder, and for all other Bidders 6 months after the Contract has been awarded. Any violation of the same would entail disqualification of the bidders and exclusion from future business dealings.
- 9.2 If any claim is made/ lodged during currency of this Integrity Pact, the same shall be binding and continue to be valid despite the lapse of this Pact as specified above, unless it is discharged/ determined by the CMD, BHEL.

Section 10 - Other Provisions

- 10.1 This Integrity Pact is subject to Indian Laws and exclusive jurisdiction shall be of the competent Courts as indicated in the Tender or Contract, as the case may be.
- 10.2 Changes and supplements as well as termination notices need to be made in writing.
- 10.3 If the Bidder(s)/ Contractor(s) is a partnership or a consortium or a joint venture, this Integrity Pact shall be signed by all partners of the partnership or joint venture or all consortium members.
- 10.4 Should one or several provisions of this Integrity Pact turn out to be invalid, the remainder of this Integrity Pact remains valid. In this case, the parties will strive to come to an agreement to their original intentions.
- 10.5 Only those bidders / contractors who have entered into this Integrity Pact with the Principal would be competent to participate in the bidding. In other words, entering into this Integrity Pact would be a preliminary qualification.
- 10.6 In the event of any dispute between the Principal and Bidder(s)/ Contractor(s) relating to the Contract, in case, both the parties are agreeable, they may try to settle dispute through Mediation before the panel of IEMs in a time bound manner. In case, the dispute remains unresolved even after mediation by the panel of IEMs, either party may take further action as the terms & conditions of the Contract. The fees/expenses on dispute resolution through mediation shall be shared by both the parties. Further, the mediation proceedings shall be confidential in nature and the parties shall keep confidential all matters relating to the mediation proceedings including any settlement agreement arrived at between the parties as outcome of mediation. Any views expressed, suggestions, admissions or proposals etc. made by either party in the course of mediation shall not be relied upon or introduced as evidence in any further arbitral or judicial proceedings, whether or not such proceedings relate to the dispute that is the subject of mediation proceedings. Neither of the parties shall present IEMs as witness in any Alternative Dispute Resolution or judicial proceedings in respect of the dispute that was subject of mediation.

For & On behalf of the Principal
(Office Seal)

Place _____

Date _____

Witness: _____
(Name & Address) _____

For & On behalf of the Bidder/ Contractor
(Office Seal)

Witness: _____
(Name & Address) _____

Clause on IP in the tender

Integrity Pact (IP)

- (a) IP is a tool to ensure that activities and transactions between the Company and its Bidders/ Contractors are handled in a fair, transparent and corruption free manner. Following Independent External Monitors (IEMs) on the present panel have been appointed by BHEL with the approval of CVC to oversee implementation of IP in BHEL.

SI	IEM	Email
1.	Shri Otem Dai, IAS (Retd.)	iem1@bhel.in
2.	Shri Bishwamitra Pandey, IRAS (Retd.)	iem2@bhel.in
3.	Shri Mukesh Mittal, IRS (Retd.)	iem3@bhel.in

- (b) The IP as enclosed with the tender is to be submitted (duly signed by authorized signatory) along with techno-commercial bid (Part-I, in case of two/ three part bid). Only those bidders who have entered into such an IP with BHEL would be competent to participate in the bidding. In other words, entering into this Pact would be a preliminary qualification.
- (c) Please refer Section-8 of IP for Role and Responsibilities of IEMs. In case of any complaint arising out of the tendering process, the matter may be referred to any of the above IEM(s). All correspondence with the IEMs shall be done through email only.

Note:

No routine correspondence shall be addressed to the IEM (phone/ post/ email) regarding the clarifications, time extensions or any other administrative queries, etc on the tender issued. All such clarification/ issues shall be addressed directly to the tender issuing (procurement) department's officials whose contact details are provided below:

Details of contact person(s):

(1)
Name: VIRENDRA SINGH ____
Deptt: PPX-EM ____
Address: BHEL HARIDWAR ____
Phone: 01334-28-1644 ____
Email: v_singh@bhel.in ____
Fax: _____

(2)
Name: HARI SINGH MEENA ____
Deptt: PPX-EM ____
Address: BHEL HARIDWAR ____
Phone: 01334-28-1995 ____
Email: hsmeena@bhel.in ____
Fax: _____



BILL OF MATERIAL

Printed
On:21.01.2025

BOM No: 01393701051 Var: 00
Description: END SHIELD M/C TE

Revno: 12

Rev Date: 16.12.2024

Printed By:

Tot wt: 16000.0

Item No	Qty(Total)	Zone	Drawingno Var Mvar	Mat Code	Mat Spec	Weight
Typ	Cat		Description		Assy. Remarks	
			Var/Matl. Description		GRP	Fab Wt
0			01393701051 00			16000.0
1(1)			END SHIELD M/C TE			
MF	DR		THDF 125/67		N	
1			01393601011 00			7270.0
1(1)			END SHIELD UPPER HALF TE(WELD)		SEPARATE CBOM	
MF	DR	L16	THDF 115/67		Y	
2			01393601010 00			8450.0
1(1)			END SHIELD LOWER HALF TE(WELD)		SEPARATE CBOM	
MF	DR	E16	THDF 115/67		Y	
13			21393701027 00			302.0
1(1)			END SHIELD COVER (MACHINING)		CBOM01393701017	
MF	DR	J16			N	
13-1			21393701026 00			342.0
1(1)			END SHIELD COVER (WELDED)		N	
MF	DR					
13-1-1				AA1011819210	AA10119	322.0
1(1)			PLATE (ITEM-1 OF DRAWING)			
MF	DR		ST-FE410 WB-PLATE			
13-1-2				AA1011819236	AA10119	12.0
1(1)			PLATE (IT-2 OF DRAWING)			
MF	DR		ST-FE410 WB-PLATE			
13-1-3				AA1011819236	AA10119	12.0
1(1)			PLATE (ITEM-3 OF DRAWING)			
MF	DR		ST-FE410 WB-PLATE			
19				HW7121124629	AA7121124	0.335
34(34)			SCRU HEX B P-8.8			
SI	DR	C48	M36X120			
23				HW7121124610	AA7121124	0.879
20(20)			SCRU HEX B P-8.8			
SI	DR	C46	M30X120			
24				HW7121123738	AA7121123	0.258
4(4)			SCRU HEX A- 8.8			
SI	DR	C39	M20X80			
25				HW7121131897	AA7121123	0.178
21(21)			SCRU HEX A -8.8			
SI	DR	J16	M20X50			
28			41393601160 00 00	AA1020218177	AA10218	1.64
2(2)			TAPER PIN		CBOM91393601004	
MF	DR	B44				
29			41393701076 00 00	AA1020218169	AA10218	0.93
2(2)			TAPER PIN		CBOM01393701017	
MF	DR	B42				
30			41393601162 00 00	AA1020218126	AA10218	0.27
2(2)			TAPER PIN		CBOM91393601004	
MF	DR	B40				
34				HW7151198035	HW7151198	0.221
2(2)			NUT HEX B -8			
SI	DR	C44	M30			

ENGG

Initial Date

Worked By tgeasm 22.04.2015
Checked By tgeam 08.05.2015
Approved By tgerk 18.05.2015



BILL OF MATERIAL

Printed
On:21.01.2025

BOM No: 01393701051 Var: 00 Revno: 12 Rev Date: 16.12.2024
Description: END SHIELD M/C TE Tot wt: 16000.0

Item No	Drawingno Var Mvar		Mat Code		Mat Spec	Weight
Qty(Total)	Description		Assy. Remarks			
Typ	Cat	Zone	Var/Matl. Description	GRP		Fab Wt
35				AA7151115059	AA7151115	0.034
2(2)			NUT HEX. A-8			
SI	DR	C41	M16			
39				AA7161001110	AA7161001	0.053
2(2)			WASHER MCD-ST			
SI	DR	C44	31.0			
40				AA7161001080	AA7161001	0.011
2(2)			WASHER MCD-ST			
SI	DR	C41	17.0			

BOM - 01393701051 00

ENGG

Initial Date

Worked By tgeasm 22.04.2015
Checked By tgeam 08.05.2015
Approved By tgerk 18.05.2015



BILL OF MATERIAL

Printed
On:21.01.2025

BOM No: 01393601010

Var: 00

Revno: 27

Rev Date: 16.12.2024

Printed By:

Description: END SHIELD LOWER HALF TE(WELD)

Tot wt: 8450.0

Item No	Qty(Total)	Drawingno	Var	Mvar	Mat Code	Mat Spec	Weight
Typ	Cat	Zone	Var/Matl. Description			Assy. Remarks	Fab Wt
0			01393601010 00				8450.0
1(1)			END SHIELD LOWER HALF TE(WELD)				
MF	DR		THDF 115/67			Y	
12					AA1011819279	AA10119	2993.0
1(1)			PLATE (IT-12 ON SH-2)				
MF	DR	H8	ST-FE410 WB-PLATE				
14					AA1011819210	AA10119	1185.7
1(1)			PLATE (IT-14 ON SH-2)				
MF	DR	J9	ST-FE410 WB-PLATE				
15					AA1011819279	AA10119	610.0
2(2)			PLATE (ITEM-15 ON SH-2)				
MF	DR	L7	ST-FE410 WB-PLATE				
19					AA1011819210	AA10119	111.0
1(1)			PLATE (ITEM-19 ON SH-2)				
MF	DR	H14	ST-FE410 WB-PLATE				
20					AA1011819210	AA10119	99.0
1(1)			PLATE (ITEM-20 ON SH-2)				
MF	DR	H12	ST-FE410 WB-PLATE				
21					AA1011819279	AA10119	800.0
1(1)			PLATE (ITEM-21 ON SH-2)				
MF	DR	K9	ST-FE410 WB-PLATE				
23					AA1011819236	AA10119	420.0
1(1)			PLATE (ITEM-23 ON SH-2)				
MF	DR	J9	ST-FE410 WB-PLATE				
25					AA1011819236	AA10119	76.0
2(2)			PLATE (ITEM-25 ON SH-2)				
MF	DR	K12	ST-FE410 WB-PLATE				
31					AA1011819236	AA10119	94.0
1(1)			PLATE (ITEM-31 ON SH-2)				
MF	DR	J11	ST-FE410 WB-PLATE				
32					AA1011819236	AA10119	95.0
2(2)			PLATE (ITEM-32 ON SH-2)				
MF	DR	J13	ST-FE410 WB-PLATE				
37					AA1011819341	AA10119	300.0
1(1)			PLATE (ITEM-37 ON SH-2)				
MF	DR	K6	ST-FE410 WB-PLATE				
39					HW1011819953	AA10119	28.7
1(1)			PLATE (ITEM-39 ON SH-2)				
MF	DR	J11	ST-FE410 WB-PLATE				
40					AA1011819236	AA10119	66.0
1(1)			PLATE (ITEM-40 ON SH-2)				
MF	DR	F8	ST-FE410 WB-PLATE				
41					AA1011819210	AA10119	65.0
1(1)			PLATE (ITEM-41 ON SH-2)				
MF	DR	K7	ST-FE410 WB-PLATE				
43					AA1011819236	AA10119	66.0
1(1)			PLATE (ITEM-43 ON SH-2)				
MF	DR	F5	ST-FE410 WB-PLATE				

ENGG

Initial Date

Worked By tgerk 31.07.2002
Checked By tgerk 14.01.2003
Approved By tgercb 22.01.2003



BILL OF MATERIAL

Printed
On:21.01.2025

BOM No: 01393601010

Var: 00

Revno: 27

Rev Date: 16.12.2024

Printed By:

Description: END SHIELD LOWER HALF TE(WELD)

Tot wt: 8450.0

Item No	Drawingno Var Mvar			Mat Code	Mat Spec	Weight
Qty(Total)	Description				Assy. Remarks	
Typ	Cat	Zone	Var/Matl. Description		GRP	Fab Wt
44			31393601081 00	AA1011819236	AA10119	80.0
2(2)			PLATE			
MF	DR	E5				
45				AA1011819236	AA10119	62.5
1(1)			PLATE (ITEM-45 ON SH-2)			
MF	DR	E6	ST-FE410 WB-PLATE			
46				AA1011819236	AA10119	62.5
1(1)			PLATE (ITEM-46 ON SH-2)			
MF	DR	E8	ST-FE410 WB-PLATE			
50			41393601185 00 00	W96413903074	AA10740	0.4
1(1)			PROTECTIVE PIPE		CBOM01393601009	
BO	DR	H11				
52				AA1011819139	AA10119	39.4
2(2)			PLATE (ITEM-52 ON SH-2)			
MF	DR	K16	ST-FE410 WB-PLATE			
56				AA1011819139	AA10119	43.6
1(1)			PLATE (ITEM-56 ON SH-2)			
MF	DR	J16	ST-FE410 WB-PLATE			
57				AA1011819139	AA10119	14.7
1(1)			PLATE (ITEM-57 ON SH-2)			
MF	DR	J10	ST-FE410 WB-PLATE			
60			41393601158 00 00	AA1020218142	AA10218	0.4
4(4)			SCREW PLUG		FOR PRESS TEST	
MF	DR	F16				
61				HW1011819953	AA10119	14.0
1(1)			PLATE (ITEM-61 ON SH-2)			
MF	DR	D7	ST-FE410 WB-PLATE			
62				HW1011819953	AA10119	8.6
1(1)			PLATE (ITEM-62 ON SH-2)			
MF	DR	E7	ST-FE410 WB-PLATE			
63				HW1011819953	AA10119	8.6
1(1)			PLATE (ITEM-63 ON SH-2)			
MF	DR	E7	ST-FE410 WB-PLATE			
67			41393601180 00 00	HW1041055730	AA10455	3.0
2(2)			PIPE		CBOM01393601009	
MF	DR	K12				
79			21393601027 00 00	AA1041146108	AA10446	10.5
1(1)			PIPE		CBOM01393601009	
MF	DR	D7				
80			21393601028 00 00	AA1041146108	AA10446	10.5
1(1)			PIPE		CBOM01393601009	
MF	DR	D6				
81			21393601029 00 00	AA1041146108	AA10446	9.6
1(1)			PIPE		CBOM01393601009	
MF	DR	D7				
82			21393601030 00 00	AA1041146108	AA10446	9.6
1(1)			PIPE		CBOM01393601009	
MF	DR	D6				

ENGG

Initial Date

Worked By tgerk 31.07.2002
Checked By tgerk 14.01.2003
Approved By tgercb 22.01.2003



BILL OF MATERIAL

Printed
On:21.01.2025

BOM No: 01393601010

Var: 00

Revno: 27

Rev Date: 16.12.2024

Printed By:

Description: END SHIELD LOWER HALF TE(WELD)

Tot wt: 8450.0

Item No	Drawingno Var Mvar		Mat Code	Mat Spec	Weight
Qty(Total)	Description			Assy. Remarks	
Typ	Cat	Zone	Var/Matl. Description	GRP	Fab Wt
84			31393601180 00		5.5
1(1)			PIPE ASSEMBLY	CBOM01393601009	
MF	DR	J9		N	
84-1			AA1041055021	AA10455	0.5
1(1)			PIPE 88.9X4 L=56		
MF	DR		ST-B-HFS-PIPES		
84-2			41393601181 00	W96414900656	0.9
1(1)			BEND 54 DEG	TG60123	
BO	DR			CUT TO DRG	
84-3			41393601182 00	W96414900656	0.6
1(1)			BEND 36 DEG	TG60123	
BO	DR			CUT TO DRG	
84-4			AA1041055021	AA10455	3.686
1(1)			PIPE 88.9X4 L=440		
MF	DR		ST-B-HFS-PIPES		
87			41393601183 00	AA1011819279	0.9
2(2)			BRACKET	AA10119	
MF	DR	K14		CBOM01393601009	
90			41393601137 00 00	HW1011819953	3.0
2(2)			LIFTING LUG	AA10119	
MF	DR	L16		CBOM91393601003	
91			AA1011819236	AA10119	11.9
1(1)			PLATE		
MF	DR	K9	ST-FE410 WB-PLATE		
93			41393601184 00 00	HW1011819953	0.4
2(2)			PLATE	AA10119	
MF	DR	L6		CBOM01393601009	
99			AA1011819074	AA10119	0.2
18(18)			PLATE 50X50		
MF	DR	D7	ST-FE410 WB-PLATE		
100			31393601094 00	AA1011819210	21.3
1(1)			PLATE	AA10119	
MF		C15			
101			41350101395 00 00	AA1011819155	0.14
9(9)			EARTHING PIECE	AA10119	
MF				BOR.01350101054	

ENGG

Initial Date

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BOM No: 01393601011

Var: 00

Revno: 19

Rev Date: 16.12.2024

Printed By:

Description: END SHIELD UPPER HALF TE(WELD)

Tot wt: 7270.0

Item No	Qty(Total)	Drawingno	Var	Mvar	Mat Code	Mat Spec	Weight
Typ	Cat	Zone	Var/Matl. Description			Assy. Remarks	Fab Wt
0			01393601011 00				7270.0
1(1)			END SHIELD UPPER HALF TE(WELD)				
MF	DR		THDF 115/67			Y	
11					AA1011819279	AA10119	2960.0
1(1)			PLATE (ITEM-11 ON SH-2)				
MF	DR	M7	ST-FE410 WB-PLATE				
13					AA1011819210	AA10119	866.0
1(1)			PLATE (ITEM-13 ON SH-2)				
MF	DR	L9	ST-FE410 WB-PLATE				
17					AA1011819279	AA10119	590.0
2(2)			PLATE (ITEM-17 ON SH-2)				
MF	DR	J9	ST-FE410 WB-PLATE				
22					AA1011819236	AA10119	450.0
1(1)			PLATE (ITEM-22 ON SH-2)				
MF	DR	K9	ST-FE410 WB-PLATE				
27					AA1011819236	AA10119	93.0
2(2)			PLATE (ITEM-27 ON SH-2)				
MF	DR	L11	ST-FE410 WB-PLATE				
29					AA1011819236	AA10119	118.0
1(1)			PLATE (ITEM-29 ON SH-2)				
MF	DR	K11	ST-FE410 WB-PLATE				
30					AA1011819236	AA10119	118.0
1(1)			PLATE (ITEM-30 ON SH-2)				
MF	DR	K14	ST-FE410 WB-PLATE				
33					AA1011819236	AA10119	180.0
1(1)			PLATE (ITEM-33 ON SH-2)				
MF	DR	L7	ST-FE410 WB-PLATE				
34					AA1011819210	AA10119	175.0
1(1)			PLATE (ITEM-34 ON SH-2)				
MF	DR	L7	ST-FE410 WB-PLATE				
36					AA1011819341	AA10119	308.0
1(1)			PLATE (ITEM-36 ON SH-2)				
MF	DR	K7	ST-FE410 WB-PLATE				
42					AA1011819236	AA10119	58.0
4(4)			PLATE (ITEM-42 ON SH-2)				
MF	DR	C14	ST-FE410 WB-PLATE				
47					AA1011819236	AA10119	20.0
1(1)			PLATE (ITEM-47 ON SH-2)				
MF	DR	C13	ST-FE410 WB-PLATE				
48					AA1011819236	AA10119	58.0
1(1)			PLATE (ITEM-48 ON SH-2)				
MF	DR	C15	ST-FE410 WB-PLATE				
49					AA1011819236	AA10119	58.0
1(1)			PLATE (ITEM-49 ON SH-2)				
MF	DR	C11	ST-FE410 WB-PLATE				
51					AA1011819139	AA10119	34.7
2(2)			PLATE (ITEM-51 ON SH-2)				
MF	DR	K10	ST-FE410 WB-PLATE				

ENGG

Initial Date

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BILL OF MATERIAL

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On:21.01.2025

BOM No: 01393601011

Var: 00

Revno: 19

Rev Date: 16.12.2024

Printed By:

Description: END SHIELD UPPER HALF TE(WELD)

Tot wt: 7270.0

Item No	Qty(Total)	Zone	Drawingno Var Mvar	Mat Code	Mat Spec	Weight
Typ	Cat		Description		Assy. Remarks	
			Var/Matl. Description		GRP	Fab Wt
53				AA1011819139	AA10119	50.0
2(2)			PLATE (ITEM-53 ON SH-2)			
MF	DR	L11	ST-FE410 WB-PLATE			
54				AA1011819139	AA10119	62.6
1(1)			PLATE (ITEM-54 ON SH-2)			
MF	DR	M12	ST-FE410 WB-PLATE			
60			41393601158 00 00	AA1020218142	AA10218	0.4
2(2)			SCREW PLUG		FOR PRESS. TEST	
MF	DR					
65			41393601130 00 00	HW1041055676	AA10455	6.0
2(2)			PIPE		CBOM91393601003	
MF	DR	M12				
77			31393601076 00 00	AA1041146108	AA10446	6.52
2(2)			PIPE		CBOM01393601008	
MF	DR	B14				
85			31393601077 00			4.35
1(1)			PIPE ASSEMBLY		CBOM01393601008	
MF	DR	K9			N	
85-1				AA1041055021	AA10455	0.385
1(1)			PIPE 88.9X4, L=46			
MF	DR		ST-B-HFS-PIPES			
85-2				W96414900656	TG60123	1.5
1(1)			BEND 90 DEG 88.9X4			
BO	DR		BEND 90 DEG. 88.9X4 GR-1			
85-3				AA1041055021	AA10455	2.43
1(1)			PIPE 88.9X4, L=290			
MF	DR		ST-B-HFS-PIPES			
89				AA1011819139	AA10119	2.45
2(2)			PLATE (ITEM-89 ON SH-2)			
MF	DR	L4	ST-FE410 WB-PLATE			
90			41393601137 00 00	HW1011819953	AA10119	3.0
2(2)			LIFTING LUG		CBOM91393601008	
MF	DR	K16				
98				AA1011819139	AA10119	0.4
2(2)			PLATE 20 TKX50X50			
MF	DR	K4	ST-FE410 WB-PLATE			
99			41350101395 00 00	AA1011819155	AA10119	0.14
3(3)			EARTHING PIECE		BOR.01350101054	
MF						

ENGG

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BILL OF MATERIAL

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BOM No: 01393701014

Var: 00

Revno: 20

Rev Date: 16.12.2024

Printed By:

Description: END SHIELD MACHINING TE

Tot wt: 15000.0

Item No	Qty(Total)	Drawingno	Var	Mvar	Mat Code	Mat Spec	Weight
Typ	Cat	Zone	Var/Matl. Description			Assy. Remarks	Fab Wt
0			01393701014 00				15000.0
1(1)			END SHIELD MACHINING TE				
MF	DR					N	
1			01393601011 00				7270.0
1(1)			END SHIELD UPPER HALF TE(WELD)			SEPARATE CBOM	
MF	DR	L16	THDF 115/67			Y	
2			01393601010 00				8450.0
1(1)			END SHIELD LOWER HALF TE(WELD)			SEPARATE CBOM	
MF	DR	D16	THDF 115/67			Y	
11			21393701028 00 00		AA1011819112	AA10119	49.0
1(1)			PLATE				
MF	DR	D13					
13			21393701027 00				302.0
1(1)			END SHIELD COVER (MACHINING)			N	
MF	DR	J16					
13-1			21393701026 00				342.0
1(1)			END SHIELD COVER (WELDED)			N	
MF	DR						
13-1-1					AA1011819210	AA10119	322.0
1(1)			PLATE (ITEM-1 OF DRAWING)				
MF	DR		ST-FE410 WB-PLATE				
13-1-2					AA1011819236	AA10119	12.0
1(1)			PLATE (IT-2 OF DRAWING)				
MF	DR		ST-FE410 WB-PLATE				
13-1-3					AA1011819236	AA10119	12.0
1(1)			PLATE (ITEM-3 OF DRAWING)				
MF	DR		ST-FE410 WB-PLATE				
19					HW7121124629	AA7121124	0.335
34(34)			SCRU HEX B P-8.8				
SI	DR	C48	M36X120				
23					HW7121124610	AA7121124	0.879
22(22)			SCRU HEX B P-8.8				
SI	DR	C47	M30X120				
24					HW7121123738	AA7121123	0.258
4(4)			SCRU HEX A- 8.8				
SI	DR	C39	M20X80				
25					HW7121131897	AA7121123	0.178
21(21)			SCRU HEX A -8.8				
SI	DR	J16	M20X50				
28			41393601160 00 00		AA1020218177	AA10218	1.64
2(2)			TAPER PIN			CBOM91393601004	
MF	DR	B44					
29			41393701076 00 00		AA1020218169	AA10218	0.93
2(2)			TAPER PIN				
MF	DR	B43					
30			41393601162 00 00		AA1020218126	AA10218	0.27
2(2)			TAPER PIN			CBOM91393601004	
MF	DR	B41					

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On:21.01.2025

BOM No: 01393701014

Var: 00

Revno: 20

Rev Date: 16.12.2024

Printed By:

Description: END SHIELD MACHINING TE

Tot wt: 15000.0

Item No	Drawingno Var Mvar		Mat Code		Mat Spec		Weight
Qty(Total)	Description		Assy. Remarks		GRP		Fab Wt
Typ	Cat	Zone	Var/Matl. Description				
34			HW7151198035		HW7151198		0.221
2(2)			NUT HEX B -8				
SI	DR	C44	M30				
35			AA7151115059		AA7151115		0.034
2(2)			NUT HEX. A-8				
SI	DR	C42	M16				
39			AA7161001110		AA7161001		0.053
2(2)			WASHER MCD-ST				
SI	DR	C44	31.0				
40			AA7161001080		AA7161001		0.011
2(2)			WASHER MCD-ST				
SI	DR	C42	17.0				

BOM - 01393701014 00

ENGG

Initial Date

Worked By tgerk 31.10.2002
Checked By tgerk 27.01.2003
Approved By tgercb 27.03.2003



MAIN SUPPLIER'S EVALUATION REPORT OF THE PROPOSED SUB-SUPPLIER

1. Name of Main Supplier :

2. Project Name :

3. Package Name :

4. Name of item/equipment to be procure :
(with Rating/Type/Size)

5. .Brief specification of equipment to be procured :

6. Name of the proposed sub-supplier :

7. Address of sub-supplier's Regd. office :
(with phone no. Fax no. & Email)

8. Address of the sub-supplier's manufacturing unit :
(with phone no. Fax no., & Email)

9. Name of the contact person of the sub- supplier :
(with phone no. Fax no., Mob no. & Email)

Format No. ADANI/Q/F-01 Rev 01



10. Reference List :

(Extensive experience in particular type of equipment to be procured)

Name of customer with address	Name of the plant where equipment were installed	Type/ Rating/ Capacity	Date of dispatch of equipment	Date of Commissioning of equipment	Nos. of years in operation	Performance feed back from customer

11. Main supplier's to submit their own assessment report of the sub-supplier:

Attached / Not attached

12. Main supplier's recommendation:

Name

Designation
Dept. / Company

Signature

Date

List of enclosures :-

- 1.
- 2.
- 3.





ASSESSMENT OF SUPPLIER

Name of item/equipments for which assessment is required:-----

1.0 GENERAL INFORMATION :-

1.1) Name of the company	
1.2) Address of their Regd. office with telephone No., Fax No.& E-Mail	
1.3) Address of the Supplier's factory / works with telephone No., Fax No.& E-Mail a) Weekly off :- b) Shift working per day:-	a) ----- b) One/Two/Three
1.4) Address of the Supplier's Branch offices with telephone No., Fax No.& E-Mail	
1.5) Nature of the firm: (Govt. Undertaking / State Govt. Undertaking / Private Company / Co-operative society / Partnership Firm / Proprietorship / Any other)	
1.6) Nature of Business (Manufacturing Unit / Agent / Distributor / Stockiest)	
1.7) Year of establishment	
1.8) Year of commencement of manufacturing	
1.9) Name of the Chief Executive/ Proprietor & Plant Manager	
1.10) Contact Person	



ASSESSMENT OF SUPPLIER

(Name, Designation, Address, Telephone no. , Mob. No. Fax & Email)	
1.11) Total Nos. of employees (Attach organization chart)	i) Administration & Commercial ----- ii) Engineering & Technology ----- iii) Manufacturing ----- iv) Quality ----- v) Maintenance ----- vi) Site Management ----- vii) Other ----- viii) Total -----
1.12) Total area of the Factory a) Covered b) Uncovered	
1.13) Electrical Power and alternative arrangement for power: (Give Details)	

2.0 FINANCIAL INFORMATION:-

	Year 1	Year 2	Year 3
2.1) Share Equity Capital			
2.2) Long Term Debt			
2.3) Investment in :- i) Land & building ii) Plant & Equipment iii) Other Fixed Assets			
2.4) Net Current Assets			
2.5) Net Current Liabilities			
2.6) Sales			
2.7) Profit before tax			
NOTE:- Copies of annual Balance Sheet for the last three years along with audit report to be submitted.			

3.0: TECHNICAL INFORMATION :-



ASSESSMENT OF SUPPLIER

3.1 Manufacturing Capacity for the item / equipment for which approval is required

Sl. No	Name of Product	Licensed Capacity	Installed Capacity

3.2 Brief details of the item / equipment manufactured in the past three years:-

Sl. No.	Item Description	Specn/Grade/Size	Annual Production in the last three Years		

3.3 Manufacturing facilities including material handling facilities:-

Sl. No.	Description of machines used for manufacturing	Capacity, Size	Make	Yr of installation	Limitations	Remarks

3.4 Measuring, inspection, testing and heat treatment facilities (in house):-

Sl.No.	Description of equipment	Size, range, Capacity & accuracy	Make	Last date of calibration

3.5 Measuring, inspection, testing and heat treatment facilities (out sourced):

Sl. No.	Description of test	Name of the agency carrying out the test

3.6 Foreign collaboration, if any:



ASSESSMENT OF SUPPLIER

Product	Name & address of the Collaborator	Year of Collaboration	Whether current or not

3.7 Details same/ similar item supplied in the last three years:-

Item description	Specn.& size	Major Customer Name	Project Name	Po. No. & date	Qty	Year of Supply	Remark

3.8 Source of raw materials:-

Description of raw materials	Name & address of the suppliers

3.9 Copies of Qualification Approval / Type Test certificates / Test Reports for the item / equipment witnessed by any independent agency may be attached.

3.10 Furnish process flow chart including inspection stages

3.11 Details and experience of technical personnel (Head of various departments)

3.12 Performance feed back if any – Attach feed back certificates.

4.0 QUALITY MANAGEMENT SYSTEM:-

4.1 Furnish organization chart of Quality department including NDT (non destructive test) personnel

4.2 Whether QA system is certified as per ISO- 9001? If yes then attach a copy of the certificate.

4.3 Incoming material control:-

A formalized supplier rating, evaluation & certification programme which includes quality performance criteria.	i)Whether such procedure exist? ii) Whether system is effective? iii)Whether records are available?	Yes/No Yes/No Yes/No
Verification of incoming material prior to storage	i)Whether such procedure exist? ii) Whether system is effective? iii)Whether records are available?	Yes/No Yes/No Yes/No

4.4 Process control:-

Work instructions have been documented by the sub supplier and followed by the worker.	i)Whether such procedure exist? ii) Whether system is effective? iii)Whether records are available?	Yes/No Yes/No Yes/No
Required tools, jigs & fixtures are identified and used.	i)Whether such procedure exist? ii) Whether system is effective? iii)Whether records are available?	Yes/No Yes/No Yes/No
Procedure for qualification & revalidation of qualification of welder and NDT operator or any other special processes	i)Whether such procedure exist? ii) Whether system is effective? iii)Whether records are available?	Yes/No Yes/No Yes/No
Testing facilities for Chemical, Mechanical, Electrical and NDT tests. Trained personnel carry out the tests and records are maintained.	i)Whether such procedure exist? ii) Whether system is effective? iii) Whether records are available? iv) Whether details of trained personnel submitted?	Yes/No Yes/No Yes/No Yes/ No
Preventative maintenance activities are performed critical machines and records maintained.	i)Whether such procedure exist? ii) Whether system is effective? iii)Whether records are available?	Yes/No Yes/No Yes/No
Material identification and acceptance status is maintained throughout the manufacturing process and storage.	i)Whether such procedure exist? ii) Whether system is effective? iii)Whether records are available?	Yes/No Yes/No Yes/No
Identification / Preservation, & Packing procedures	i)Whether such procedure exist? ii) Whether system is effective? iii)Whether records are available?	Yes/No Yes/No Yes/No

4.5 Control of non-conformance:-



ASSESSMENT OF SUPPLIER

Record of rework /rectification	i)Whether such procedure exist? ii) Whether system is effective? iii)Whether records are available?	Yes/No Yes/No Yes/No
System of review and analysis of repeated non-conformities/ failures and their prevention in future.	i)Whether such procedure exist? ii) Whether system is effective? iii)Whether records are available?	Yes/No Yes/No Yes/No

4.6 Calibration of measuring & testing equipments:-

System of calibration of gauges, fixtures and instruments	i) Whether such procedure exist? ii) Whether system is effective? iii)Whether records are available?	Yes/No Yes/No Yes/No
Master gauges / standards are traceable to recognized national standards.	i) Whether such procedure exist? ii) Whether system is effective? iii)Whether records are available?	Yes/No Yes/No Yes/No

4.7 Inspection & testing of finish product:-

System of inspection and testing of finished product exits.	i)Whether such procedure exists? ii) Whether system is effective? iii)Whether records are available?	Yes/No Yes/No Yes/No
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4.8 System of recording, attending and monitoring customer complaint & corrective action.

System of recording, attending and monitoring customer complaint and corrective action exits.	i) Whether such procedure exist? ii) Whether system is effective? iii)Whether records are available?	Yes/No Yes/No Yes/No
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4.9 Any other information:-

Enclosures:-

Place:

Signature

Date:

Name and Designation

Seal



Bharat Heavy Electricals Limited
(A Govt. of India Undertaking)
HEEP, Ranipur Haridwar
MAIN CONTRACTOR's PROPOSAL

1.	Name of proposed vendor and factory location	
2.	Item details for which vendor approval is requested • Item/Equipment • Size • Capacity • Rating • Service (Steam/Water/Other) • Plant System (Application)	1. Item/Equipment: Specify the exact item or equipment name. 2. Size: Provide the dimensions or size specifications. 3. Capacity: Mention the capacity, such as volume, weight, or power. 4. Rating: Include any relevant ratings, such as voltage, pressure/temp class, or efficiency. 5. Service: Indicate the type of service (e.g., Steam, Water, Other). 6. Plant System (Application): Describe the plant system or application where the item will be used.
3.	Approval Status: Whether approved by NTPC for project supply? (No/Yes) If Yes , provide the following details: • Name of Project: • Plant Capacity: • Max Size/Rating of Item/Equipment Delivered: • Commissioning Date: • Operational Since: • Whether Supplied Through BHEL:	
5.	Project supply experience for clients other than NTPC • Name of Project: • Plant Capacity: • Max Size/Rating of Item/Equipment Delivered: • Commissioning Date: • Operational Since: • Whether Supplied Through BHEL:	
6.	Reason for additional vendor proposal	
7.	Additional information if any	

Signature:
Name:

Main Contractor (name and Signature)



Bharat Heavy Electricals Limited
(A Govt. of India Undertaking)
HEEP, Ranipur Haridwar
MAIN CONTRACTOR's PROPOSAL

1.	Name of proposed vendor and factory location	
2.	Item details for which vendor approval is requested • Item/Equipment • Size • Capacity • Rating • Service (Steam/Water/Other) • Plant System (Application)	1. Item/Equipment: Specify the exact item or equipment name. 2. Size: Provide the dimensions or size specifications. 3. Capacity: Mention the capacity, such as volume, weight, or power. 4. Rating: Include any relevant ratings, such as voltage, pressure/temp class, or efficiency. 5. Service: Indicate the type of service (e.g., Steam, Water, Other). 6. Plant System (Application): Describe the plant system or application where the item will be used.
3.	Approval Status: Whether approved by NTPC for project supply? (No/Yes) If Yes , provide the following details: • Name of Project: • Plant Capacity: • Max Size/Rating of Item/Equipment Delivered: • Commissioning Date: • Operational Since: • Whether Supplied Through BHEL:	
5.	Project supply experience for clients other than NTPC • Name of Project: • Plant Capacity: • Max Size/Rating of Item/Equipment Delivered: • Commissioning Date: • Operational Since: • Whether Supplied Through BHEL:	
6.	Reason for additional vendor proposal	
7.	Additional information if any	

Signature:
Name:

Main Contractor (name and Signature)

BTG & AUXILIARIES

	OWNER MAHAN ENERGEN LTD. (MEL)
	OWNER'S ENGINEER TATA CONSULTING ENGINEERS LIMITED
	BTG CONTRACTOR BHEL

		Categories: ☒ Cat-I Approved. Good for Manufacturing/Construction/Fabrication. ☐ Cat-I* Approved with minor comments. No resubmission is required. To be incorporated in As-Built. Good for Manufacturing/ Construction/ Fabrication subject to incorporation of comments. ☐ Cat-II Resubmission is required. Approved & Released for Manufacturing/ fabrication/ construction subjected to incorporation of comments. ☐ Cat-III Not Approved. Revise & Resubmit for Approval ☐ Cat-IV For Information & Records. ☐ Cat-IV* Incorporate Comments & resubmit for Information & records.
	Digitally signed by Bhavesh Patel Date: 2024.07.12 20:09:46 +05'30' Reviewer	
	Digitally signed by Anbu R Date: 2024.07.12 23:10:52 +05'30' Approver	Note: "Approval of this document does not absolve the Contractor/ Supplier/Fabricator from fulfilling Contractual obligations in any way"

PLANT	BHEL, HEEP HARIDWAR.
DOCUMENT TITLE	PAINTING SCHEME FOR STEAM TURBINE, TURBOGENERATOR, CONDENSER AND AUXILIARY SYSTEMS
OWNER DOC. NO.	552H-E-BTG-TGA-DM-N-V-0018
CONTRACTOR / SUPPLIER DOC. NO.	10868-ENGG-N001A
PACKAGE DISCIPLINE	STEAM TURBINE & GENERATOR
PREPARED BY	PRATEEK AGARWAL, SATENDER KUMAR & ANCHAL PANDEY
REVIEWED BY	DHRUV GARG
APPROVED BY	DHRUV GARG

TATA CONSULTING ENGINEERS LIMITED. CONTRACTOR DOCUMENT REVIEW STATUS	
☒ 1 Approved, Further work can Proceed ☐ 1* Approved with minor comments. No resubmission is required. To be incorporated in As-Built. Good for Manufacturing/Construction / Fabrication subject to incorporation of comments. ☐ 2 Approved with comments. Work can proceed subject to incorporation of comments ☐ 3 Not Approved. Revise according to comments & resubmit ☐ 4 Retained for Information ☐ 4* Incorporate Comments & resubmit for Information & records	Approval conveyed herein neither relieves CONTRACTOR of his contractual obligations and his responsibilities for correctness of dimensions, materials of construction, weights, quantities, design details, assembly fits, system / performance requirements and conformity of supplies with National/ international statutory laws as may be applicable , nor does it limit the Employer's rights under the contract. Reviewed by: <u>RS/PMJ</u> Date: <u>12-07-2024</u>

Revision Control History

Sr. No.	Revision No.	Date	Reasons for Change
1	00	04.12.2023	First issue
2	01	22.01.2024	Document revised in line with customer Comments. Changes are marked with Rev01.
3	02	14.02.2024	Document revised in line with customer Comments. Changes are marked with Rev02.
4	03	26.02.2024	Document revised & Change is marked with Rev03.
5	04	06.06.2024	Document revised & Changes are marked with Rev04.
6	05	10.07.2024	Document revised & Changes are marked with Rev 05.



**PAINTING SCHEME FOR STEAM TURBINE, GENERATOR,
CONDENSOR & AUXILIARIES**
PROJECT: MAHAN TPS UNIT-1 & 2 (2x800 MW)
CUSTOMER DOCUMENT NO.: 552H-E-BTG-TGA-DM-N-V-0012

**PAINTING SCHEME FOR STEAM TURBINES, GENERATOR,
CONDENSOR & AUXILIARIES**

Painting Scheme 1.

Paint (Coat)	Paint Type		No. of coat	Total DFT*
Primer Paint	: Epoxy base Zinc rich primer paint		1 Coat	75
Intermediate Paint	: High build epoxy MIO coating cured with polyamide hardener		1 Coat	100
Finish (Final) Paint	: Aliphatic Acrylic 2 Pack Polyurethane Finish paint		1 Coat	50
Total DFT				225

Details of Color Scheme:

(Legend: W- at BHEL works; V- at vendor's works; S- at site; N A -Not applicable)

No	Assembly	Shade as per IS-5 or	Prime r	Int. Paint	Final Paint	Touch-up	Remarks
a	Bearing pedestals with assembled parts (outer unmachined surfaces)	Light Blue RAL 5012	W	W	W	S	
b	Front walls & Side Walls of LPT. (Outer unmachined surfaces)	Light Blue RAL 5012	W	W	W	S	
c	Rupture Diaphragm Assembly	Light Blue RAL 9011	W	W	W	S	
d	Hydraulic Turning motor	Light Blue RAL 5012	V	V	V	S	
e	LP upper parts (outer unmachined)	Light Blue RAL 5012	W	W	W	S	
f	Suspension arrangement for LPBP & overload valves (unmachined)	Graphite Black RAL 9011	V	V	V	S	
g	Shaft Supports (IP & LP) & Casing Supports	Light grey ISC No. 631	W	W	W	S	
h	Assy fixture for HPT (unmachined)	Light Blue RAL 5012	W	W	W	S	
i	Turning over device (unmachined) for HPT	Light Blue RAL 5012	W	W	W	S	
j	Assy tools for main turbine (unmachined surfaces)	NA	W	W	W	S	TRP HE 1712 (Light Green/Light brown) (Rust preventive)

BHARAT HEAVY ELECTRICALS LIMITED, HARIDWAR

BHEL DOCUMENT NO. 10868-ENGG-N001



**PAINTING SCHEME FOR STEAM TURBINE, GENERATOR,
CONDENSOR & AUXILIARIES**
PROJECT: MAHAN TPS UNIT-1 & 2 (2x800 MW)
CUSTOMER DOCUMENT NO.: 552H-E-BTG-TGA-DM-N-V-0012

k	Assy device for valves & Support for valves	NA	W	W	W	S	Red oxide primer Grease TRP HE 1712 (Light Green/Light brown) (Rust preventive)
l	Support of Breech block (Valve support)	NA	W	W	W	S	TRP HE 1712 (Light Green/Light brown) (Rust preventive)
n	Mounting frame of bearing shell	Graphite Black RAL 9011	W	W	W	S	
o	Shaft Lifting device (LPT)	Light Blue RAL 5012	W	W	W	S	
p	Grating Coverings for LPT	NA	W	W	W	S	Red oxide primer Grease
q	Shaft seal lifting device & dev. Axial holding of I P shaft	Light Blue RAL 5012	W	W	W	S	
r	Stretching device for Breech Block & Breech Nut Heating Device	NA	V	V	V	S	
s	Hand barring gear	NA	W	W	W	S	TRP HE 1712 (Light Green/Light brown) (Rust preventive)

03

Note: Any type of Imported Item is transported in Sea worthy packing and painting is done as per C-4 Environment classification. Total DFT is of 225 Microns.

01

Following Items are not painted as these are of Stainless Steel Compensators



**PAINTING SCHEME FOR STEAM TURBINE, GENERATOR,
CONDENSOR & AUXILIARIES**
PROJECT: MAHAN TPS UNIT-1 & 2 (2x800 MW)
CUSTOMER DOCUMENT NO.: 552H-E-BTG-TGA-DM-N-V-0012

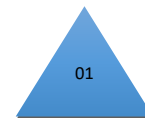
PAINTING SCHEME NO	TYPE OF PAINT	COMPONENTS
2.	Heat resistant Aluminum paint (IS 13183) No. of coats: -2, Total DFT- 40µm	1. Casing and covers of valves (outside) 2. HPT & IPT outer casing & IPT supporting arm for Push-Rod (Outer Unmachined) 3. HP & IP Stop & Control valve casings outer (Unmachined) 4. LP Shaft Seal Casings 5. Cross over pipe Assembly 6. Overload Valve & overload valve casing assembly. 7. Seal Steam Supply Valve 8. Leak-off Steam Valve



Note: Above components are exposed to steam from inside and are covered with insulation.

Surface Preparation:

- 1- It is necessary that the surface to be painted is free from loose dust, mill scale, rust, grease, oil, old film etc. Surface cleaning and preparation is to be done for all the components as per BHEL standard practice. The surfaces before painting should correspond to standard degree of purity SA 2.5.
- 2- Checking of surface preparation, / measurement of dry paint thickness, adhesion, gloss & finish of painted surface is done as per Adani's Technical Specification (Vol-II, Annexure-1) for Painting & Coating of Equipment & Structures (Clause 6.0, Inspection & Testing)



PAINTING SCHEME FOR
Condenser & Heat Exchangers (BHEL Hardwar)

1

02	Sl. No.	Paint (Coat)	Paint Type			No. of coat	Total DFT		
		Primer Paint	: Epoxy base Zinc rich Primer Paint			1 Coats	75		
		Intermediate Paint	: High build epoxy MIO coating cured with polyamide hardener			1 Coat	100		
		Finish (Final) Paint	: Aliphatic Acrylic 2 Pack Polyurethane Finish paint			1 Coats	50		
		Total DFT 225 microns min.							
		For Gland Steam Condenser:							
		Paint (Coat)	Paint Type			No. of coat	Total DFT		
		Primer Paint	: Epoxy base Zinc rich Primer Paint			1 Coats	75		
		Intermediate Paint	: High build epoxy MIO coating cured with polyamide hardener			1 Coat	100		
		Finish (Final)	: Heat Resistant Aluminum paint			1 Coats	50		
	Total DFT 225 microns min.								
A.	Details of Color Scheme (Outside Surfaces):								
	(Legend : W-at BHEL works; V- at vendor's works; S-at site; NA-Not applicable)								
01		Assembly	Shade as per IS-5 or Eq.	Primer	Int. Paint	Final Paint	Touch-up	Re-marks	
		Condenser	RAL 7001-Silver Grey	W	W	S	S		
		LP Heater	-- Do --	W	W	W	S		
		Hydrogen Coolers & Exciter Air Coolers.	Grey RAL 9002	W	W	W	S		
		Gland Steam Condenser	-- Do – and Heat Resistant Aluminum paint	W	W	W	NA		
		Air Exhauster for Gland Steam Condenser	Grey RAL 9002	V	V	V	S		

Following Items are BOI.

1. Condenser Air Evacuation Equipment:
2. Turbine Oil Coolers (PHE Type):

Painting is done as per C-4 Environment classification. Total DFT is of 225 Microns

PAINTING SCHEME FOR
Condenser & Heat Exchangers (BHEL Hardwar)

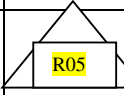
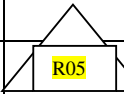
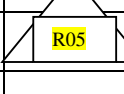
2

B.	Details of Painting (Inside Surfaces):						
01	Assembly	Shade as per IS-5 or Eq.	Primer	Int. Paint	Final Paint	Touch-up	Remark
	<u>Condenser</u>						
	# Cooling water side surfaces (water boxes inside)	Black	W (DFT 75 microns)	--	W (High Build Black Coal Tar Epoxide Paint, Total DFT 0.25mm)	NA	
	# Tube plate surface towards water box side.	-do-	S @	--	-do-	-do-	After tubing.
	# Shell side inside surfaces (steam side)	Shell side inside surfaces are supplied coated with Steam Washable Paint at Works. This paint is to be washed before commissioning.					
02	LP Heater & Gland Steam Condenser	Shell side & Water box inside surfaces are supplied coated with Steam Washable Paint at Works. This paint is to be washed before commissioning.					

@ Tube plate surface is supplied painted with steam washable paint which is to be cleaned before applying Primer on water box side surface.



PAINTING SCHEME FOR TURBOGENERATOR AND AUXILIARY SYSTEMS

Sl No	Details							
01	The following are the details of painting scheme:							
	Paint (Coat)	Paint Type					No. of coat	DFT*
	Primer Paint	: Epoxy based Zinc rich primer paint					1 Coat	75
	Intermediate Paint	: High build epoxy MIO coating cured with polyamide hardener					1 Coat	100
	Finish (Final) Paint	: Aliphatic Acrylic 2 Pack Polyurethane Finish paint					1 Coat	50
							Total DFT	225
	* DFT – Dry Film Thickness (final) in microns.							
02	Details of Color Scheme :							
	(Legend : W-at BHEL works; S-at site; V-at vendor’s works; NA- Not Applicable)							
No	Assembly	Shade as per IS-5 or Eq.	Primer	Int. Paint	Final Paint	Touch-up	Identification Band Colour (For Piping)	Remarks
A	Turbogenerator (Stator, end-shields etc.)	Blue RAL 5012	W	W	W	S		
B	Exciter	NA	W	NA	NA	NA		
C	Exciter Cover	Blue RAL 5012	V	V	V	NA		
D	S.O. Unit	Grey RAL 9002	W	W	W	S		
E	S.O. Storage Tank	Grey RAL 9002	W	W	W	S		
F	Liquid Detector Rack	Grey RAL 9002	W	W	W	S		
G	S.O. Piping	Grey RAL 9002	W	S	S	NA	Light Brown ISC 410	Legend - SO
H	Gas Unit	Grey RAL 9002	W	W	W	S		
I	H2 Distributor	Grey RAL 9002	W	W	W	S		
J	CO2 Distributor	Grey RAL 9002	W	W	W	S		
K	N2 Distributor	Grey RAL 9002	W	W	W	S		
L	CO2 Vapouriser	Grey RAL 9002	W	W	W	S		
M	Refrigeration Gas Dryer	Grey RAL 9002	V	V	V	S		
N	H2 Piping	Grey RAL 9002	W	S	S	NA	Canary Yellow ISC 309	Legend - H
O	CO2 Piping	Grey RAL 9002	W	S	S	NA	Canary Yellow ISC 309	Legend – CO2
P	ACW Piping for H2 coolers	Grey RAL 9002	W	S	S	NA	Sea Green ISC 217	Legend - ACW

Q	Bearing Vapour Exhauster	Grey RAL 9002	V	V	V	S		
R	PW pump & filter unit	Grey RAL 9002	W	W	W	S		
S	PW coolers	Grey RAL 9002	V	V	V	S		
U	PW Piping & impulse piping	Grey RAL 9002	W	S	S	NA	Sea Green ISC 217	Legend - DMW
V	PW tank	Grey RAL 9002	W	W	W	S		
W	Hanger & Pipe supports	Black RAL 9011	W	S	S	NA		



NOTE: 1) Erection of generator piping and hangers / supports mentioned at sl. No. G, N, O, P, U & W is done at site. Hence, painting of these items (Int. paint & Final paint) shall be done at site by erection agency and paint shall be supplied by BHEL Haridwar.

As discussed and agreed, the final coat and Intermediate coat of painting is in BHEL scope and same shall be applied by BHEL at site.



Annexure - 1

TECHNICAL SPECIFICATION FOR PAINTING & COATING OF EQUIPMENT & STRUCTURES

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- 1.2 Definitions

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1.0 INTRODUCTION

1.1 Scope

This specification covers the minimum requirements governing surface preparation, selection, application & inspection of the protective coating system to be used on the interior and exterior exposed surfaces of all types of structural steel placed in thermal power plant to get high durability (above 15 years) in C5-M, C-4 & C-3 environment classified according to ISO 12944- 2.

Individual equipment specifications and /or drawings, when furnished, are to be used with these specifications. If conflict exists, the individual specifications and/or drawings shall govern.

Since maintenance –painting requirements are usually different from that necessary for new construction, salient points for each will likewise be addressed separately.

1.2 Definitions

The following definitions shall apply:

COMPANY shall mean Adani or the designated representative.

CONTRACTOR shall mean the party contracted to perform the work in accordance with the drawings, specifications & work scope.

2.0 CODES AND STANDARDS

2.1 Mandatory Statutory Requirements

This document has been prepared to the International Standards detailed within. The CONTRACTOR shall ensure that the Work is executed in accordance with international standards, Statutory & Regulatory requirements as per system application.

2.2 Codes and Standards & Regulations

The requirements of the latest published versions of the following listed Codes, Recommended Practices. Specifications and standards shall be met

2.2.1 Steel Structure Painting Council (SSPC)

SSPC-PA1 : Shop, Field and Maintenance Painting of Steel.

SSPC-PA2 : Measurement of Dry Coating Thickness with Magnetic Gauges

SSPC-SP1 : Solvent Cleaning

SSSC-SP2 : Hand Tool Cleaning

SSPC-SP3 : Power Tool Cleaning

SSPC-SP5 : White Metal Blast Cleaning

SSPC-SP6	:	Commercial Blast Cleaning
SSPC-SP7	:	Brush –Off Blast Cleaning
SSPC-SP10	:	Near White Blast Cleaning
SSPC-SP11	:	Power Tool Cleaning to bare metal
SSPC-SP12	:	Surface Preparation & cleaning of Steel and Other Hard Material by High and Ultra High Pressure Water Jetting Prior to recoating
SSPC-AB1	:	Mineral and Slag Abrasive
SSPC-SP20	:	Zinc rich coating Type-I (Inorganic) & Type-II (Organic)
SSPC-SP COM:		Surface Preparation and Abrasives Commentary, SSPC Painting Manual, Volume 2, "Systems and Specifications"
SSPC VIS-1	:	Visual Standard for Abrasive Blast Cleaned Steel
SSPC Vol.2	:	SSPC Painting Manual.
		Other equivalent Swedish, BS standard also applicable.

2.2.2 American Society for Testing and Materials (ASTM)

ASTM D4228:	Standard practice for qualification of coating Applicators for application of coating on steel surfaces.
ASTM B117 :	Salt Spray Test
ASTM G50 :	Standard practice for conducting atmospheric corrosion test
ASTM G53 (Part-B):	Weathering Test
ASTM D520 :	Zinc Dust (Metallic Zinc Powder)
ASTM D523 :	Specification for Gloss
ASTM D1200:	Viscosity
ASTM D1640:	Drying time
ASTM D1653:	Standard test method for evaluation of painted or quoted specimens subject to corrosive environment.
ASTM D2247:	Relative Humidity Test
ASTM D2697:	Volume of Solids
ASTM D4060:	Abrasion Resistance of Coating
ASTM D3359:	Standard test method for measuring adhesion by tape test
ASTM D5894:	Standard test method for evaluating drying or Curing during film. Corrosion resistance under Cyclic condensation/UV

2.2.3 Indian Standards

IS 5	:	Colours for Ready Mixed Paints and Enamels
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2.2.4 International Standards Organization

- ISO –8501 : International Standard for Preparation of Surface
- ISO-8502 : Preparation of steel substrates before application of Paints & related products
- ISO-8502 (1 to 10) : Tests for the assessment for surface cleanliness
- ISO –8504 : Preparation of steel substrates before application of Paints and related products-Surface preparation method Part – 1, 2 & 3
- ISO 14713 : Protection against corrosion of iron and steel structure-Zinc and aluminum coating.
- ISO 4624 : Adhesion test of paint
- ISO 12944 : Corrosion protection of steel structure by protective paint system part 1 to 8
- ISO 4628 : Evaluation of degradation of paint coating
- ISO 4628-6 : Paints & varnishes - Evaluation of degradation of paint coatings - Designation of intensity, quantity & size of common types of defect - Part 6: Rating of degree of chalking by type method.

2.2.5 Occupational Safety and Health Act

OSHA : Occupational Safety and Health Act

2.2.6 NACE Standards

- NACE RP0188: Discontinuity (Holiday) Testing of Protective coating
- NACE RP0287: Surface profile Measurement of abrasive blast Cleaned steel surfaces using a replica tape.

2.2.7 RAL COLOUR CHART

3.0 SURFACE PREPARATION

3.1 General

The surface preparation procedures and requirements except for galvanizing and Cadmium plating shall be in accordance with Steel Structural Painting Council SSPC and ISO–8501.

The method of surface preparation used shall be compatible with the priming coat of Paint and be one or a combination of the following:-

1. Solvent Cleaning- SSPC-SP1
2. Hand Tool Cleaning - SSPC-SP2

- 3. Power Tool Cleaning - SSPC-SP3
- 4. Blast Cleaning refer 3.2 as below

All fabrication and assembly shall be completed before surface preparation begins.

Blast and prime of structural items prior to assembly will be permitted. All bolt holes shall be drilled and their edges smoothed prior to blasting.

3.2 Requirements of Blasting

Only dry blasting procedures are allowed. Definitions and requirements for, the various methods of surface cleaning are given below:

- A) White Metal Blast: As per SSPC SP5, & visual reference Sa3 as per ISO 8501-1.
- B) Near-White Blast: As per SSPC SP10, & visual reference Sa2.5 as per ISO 8501-1.
- C) Commercial Blast: As per SSPC SP6, & visual reference Sa2 as per ISO 8501-1.
- D) Brush-off Blast: As per SSPC SP7, & visual reference Sa1 as per ISO 8501-1

3.3 Pre Blasting preparation

3.3.1 Rough Edges

Sharp edges, fillets, corners and welds shall be rounded or smoothed by grinding (minimum radius 2 mm). Hard surface layers (e.g. resulting from flame cutting) shall be removed by grinding prior to blast cleaning.

All surfaces should be washed with clean fresh water prior to blast cleaning.

Any major surface defects, particularly surface laminations or scabs detrimental to the protective coating system shall be removed by suitable dressing. Where such defects have been revealed during blast cleaning, and dressing has been performed, the dressed area shall be re-blasted to the specified standard. Surface pores, cavities etc. shall be removed by suitable dressing or weld repair.

3.3.2 Weld Flux and Spatter

Weld flux, slag spatter, slivers etc. shall be ground smooth before blasting.

Welding surface imperfections shall be removed and surface profile shall be prepared as per ISO 12944-3.

Any surface on which grinding is done shall be spot blast cleaned or power tool cleaned to obtain required anchor pattern.
All welds shall be inspected and if necessary repaired prior to final blast cleaning of the area.

3.3.3 Surface Cleaning

Prior to blasting, all deposits or grease or oil shall be removed from the surface in accordance with SSPC-SP1 Solvent Cleaning using biodegradable water soluble cleaner.

3.3.4 Chemical Contamination

All chemical contamination shall be neutralized and/or flushed off prior to any other surface preparation.

3.4 Blasting Operations

3.4.1 Weather conditions

Blast cleaning shall not be done on any surface that is moist, or that may become moist, before the application of a primer.

Blasting is not permitted when:-

- a) The temperature of steel is less than 3°C above the dew point, as measured by a sling hydrometer,
- b) The relative humidity of the air is more than 60 %.

Relative humidity shall be maintained by an adequately designed Dehumidification system and the record shall be maintained.

3.4.2 Preliminary Blasting

If blasting is performed at night, the surfaces shall be re-blasted the following day to provide the specified surface preparation standard and the anchor profile required for the specified coating system.

3.4.3 Blasting and Painting

Blasting shall not be done adjacent to painting operations or coated surfaces that are not fully dry. Blasting shall overlap previously coated surfaces by at least 150 mm.

Blasting and Painting shall be done in closed chamber only.

The record of atmospheric conditions (Temp, RH, Dew Point) before the blasting & painting shall be maintained.

The use of silica sand is strictly prohibited

3.4.4 Post – Blasting Procedure

The surface to be coated shall be clean, dry, free from oil/grease, and have the specified roughness and cleanliness until the first coat is applied.

Blast cleaned steel surfaces shall not be touched by bare hands. The blast cleaned surface shall be rendered dust free and coated with the specified primer as soon as possible to avoid formation of oxidation on the surface, but in any case, four one from the time of blasting, and at least one hour prior to sundown of the day it is blasted and before any rusting occurs.

Any steel surface not primed within these limits or that is wet shall be reblasted.

No acid washes or other cleaning solutions or solvents shall be used on metal surfaces after they are blasted. This includes washes intended to prevent rusting.

All areas around the intended paint surface shall be cleaned of blast material prior to coating. Drains shall be purged of blast material and flushed.

Biodegradable water – soluble cleaning solution used to clean previously painted surfaces shall not lift, soften or otherwise damage the existing coating.

For determination of chloride surface; relevant ISO 8502 part 2 & 5 shall be applicable. Chloride contamination shall be checked using SCM 400 / bresle patches / quanta strips. Maximum permissible limit is 10 micro gram / sq.cm. for external surface & 5 micro gram / sq.cm. for internal of vessels.

3.5 Blasting Equipment

3.5.1 Compressed Air

The air compressor shall be capable of maintaining a minimum of 700kpa (7 kg/cm² or 100 psi) air pressure at each blasting nozzle. The compressed air supply shall be free of water and oil. Adequate separators and traps shall be provided on the equipment, which shall be regularly purged of water and oil to maintain efficiency.

3.5.2 Nozzle

The nozzle shall be a 10 mm (maximum) internal diameter venturi style nozzle.

3.5.3 Power Tools

Power tools may be used to obtain a metal surface finish as per SSPC SP11 where blasting is not possible, or on items which might be damaged by blasting.

3.5.4 Shot Blasting Equipment

Shot blasting equipment may be used for specific applications. Shot shall be changed as required to maintain the angular profile requirement.

3.6 Blasting Abrasive

3.6.1 Abrasive

The abrasive shall be as per SSPC-AB-1. The abrasives shall be copper slag, steel balls shall be free of contamination of dust and chlorides to produce the required anchor profile and graded as to be free from clay, silt or other matter likely to become embedded in the steel surface. Abrasives which have a tendency to shatter and adhere or embed in the steel surface shall not be acceptable. Recycled abrasive shall not be used. The use of sand is prohibited.

3.6.2 Shot Blasting Material

Shot blasting material shall pass through a G-16 to G-40 mesh screen. At least 25% to 30% steel grit shall be mixed with the graded shot to remove any rust, scale or other impurities pined into the surface. Shot blasting material is limited to iron, steel or synthetic shot which is applied by compressed air nozzles or centrifugal wheels. Shot blasting material shall be checked at least two times a week for replacement of abraded material.

4.0 COATING APPLICATION

4.1 General Application

All application, inspection and safety procedures shall be carried out in accordance with SSPC Painting Manuals, Vol. 1 Chapter 14.2 and Vol. 2 Chapter 5) and as set out below.

4.1.1 Supply and Storage

All coatings shall be furnished, mixed and applied in accordance with manufacturer's recommendations and as specified here in. Mixing of different

Manufacturer's coatings or applications on the same surface are not permitted.

All coating materials and thinners shall be in original, unopened containers being the manufacturers label batch numbers and instructions. For materials having a limited shelf life, the date of manufacture and the length of life shall be shown. Materials older than their stated shelf life shall not be used.

Materials shall be stored in accordance with the manufacturers Recommendations.

Coating materials that have gelled, other than thixotropic materials or materials that have deteriorated during storage shall not be used.

4.1.2 Pot Life

If the coating requires the addition of a catalyst, the manufacturer's Recommended pot life for the application conditions shall not be exceeded.

When the pot life is reached, the spray pot shall be emptied, cleaned and a new material catalyzed. Manufacturer's recommendations to be followed

4.1.3 Mixing

Mixing and thinning directions as furnished by the manufacturer shall be followed. Only thinners specified by the manufacturer shall be used.

All coating materials shall be stirred with a power mixer use, until the pigments, vehicles and catalysts are thoroughly mixed and then strained while being poured into the spray pot. During application the materials shall be agitated according to the manufacturer's recommendations. Different brands or types of paints shall not be intermixed.

4.2. Cleanliness

All Surfaces shall be clean free from dust and dry. Any blast cleaning dust or grit remaining on the surfaces shall be removed by means of compressed air before priming or application of any coating. Any surface with a rust bloom shall be re-blasted as per ISO: 8504.

4.2.1 Temperature

Coating shall only be applied when the temperature of the steel is at least 3°C above the dew point; ambient air temperature must be within the limits specified by the manufacturer.

4.2.2 Weather Conditions

No coatings shall be applied during fog, mist or rain or when humidity is not greater than 60% or on to wet surfaces. In case the minimum temperature at the fabrication yard is below 5 deg C, the contractor shall propose alternate coating procedure for Company's approval at the binding stage itself.

The company has the right to suspend application of coating when damage to the coating may result from actual or impending weather condition.

4.2.3 Coats

Each coat shall be applied uniformly and completely over the entire surface. Each coat shall be allowed to dry for the time specified by the manufacturer before the application of a succeeding coat. To reduce the possibility of intercoat contamination and to assure proper adhesion between successive coats, all coats shall be applied as soon as possible after the minimum specified drying time of the preceding coat.

4.2.4 Brush Application (Stripe Coating)

A stripe coat shall be applied by brush or roller after the prime coat has been applied. The stripe coat shall be applied to edges, corners, welding seams, bolt holes, back side of piping, stiffeners, vent and drain holes, notches and any other area that is difficult to reach by spray gun.

4.2.5 Finish Coat

An additional layer of finish coat shall be hand brushed at edges, corners, welds and hard-to spray areas to eliminate holidays in the final coats.

4.2.6 Field Welds

No coating shall be applied within 150 mm of edges prepared either for field welds or to surfaces waiting non-destructive testing.

4.2.7 Inorganic Zinc Primer

It is preferred that intermediate/top coat for inorganic zinc primer coats be applied within minimum of seven (7) days after the primer coat.

4.3 Spray Application

4.3.1 Equipment

- (a) All equipment to be used for spray applications shall be inspected and tested before application begins.
- (b) All equipment shall be maintained in good working order and shall be equal to that described in the manufacturer's instructions.
- (c) All equipment shall be thoroughly cleaned before and after each use and before adding new material.
- (d) An adequate moisture trap shall be installed between the air supply and each pressure pot. The trap shall be of the type that will continuously bleed off any water or oil from the air supply.
- (e) Suitable pressure regulators and gauges shall be provided for both the air supply to the pressure pot and the air supply to the spray gun. Spray equipment and operating pressures shall comply with the recommendations of the manufacturer.
- (f) The length of hose between the pressure pot and spray gun shall not exceed 15 m.

4.3.2 Procedures

- (a) Pressure pot, material hose and spray gun shall be kept at the same elevation where possible. When spraying inorganic zinc, the elevation difference shall not exceed 3m.
- (b) The spray gun shall be held at right angles to the surface.
- (c) Each pass with the spray gun shall overlap the previous pass by 50%.
- (d) The spray width shall not exceed 300 mm.
- (e) All runs and sags shall be immediately brushed out or the surface re-coated.
- (f) Large surfaces shall receive two passes (except when applying inorganic zinc) at right angles to each other (crosshatched).

4.3.3 Airless Spray Equipment

- (a) Airless spray equipment may be used for applying inorganic zinc, epoxy or aliphatic polyurethane coatings.
- (b) The manufacturer's recommendations in selection and use of airless spray equipment shall be followed.

4.4 Brush Application

4.4.1 General Requirements

- (a) Coating shall be applied by brush on all areas, which cannot be properly spray coated such as corners, edges, and welds etc.,
- (b) Inorganic zinc primer coatings shall not be applied by brushing, not even for touch – up repairs.

4.4.2 Equipment for Brush Application

Brushes shall be of a style and quality that will permit proper application of coating. Round or oval brushes are most suitable for rivets, bolts, irregular surfaces and rough or pitted steel. Wide flat brushes are suitable for large flat areas. Brush width shall not be greater than 100 mm. No extension handles shall be used on brushes.

4.4.3 Procedure for Brush Application

- (a) Brushing shall be done so that a smooth coat, uniform in thickness, is obtained. There shall be no deep or detrimental brush marks.
- (b) Paint shall be worked into all crevices and corners.
- (c) All runs and sags shall be brushed out to prevent air pockets, solvent bubbles or voids.
- (d) When applying solvent type, coatings, care shall be taken to prevent lifting of previous coats.

4.5 Safety Equipment

Appropriate safety equipment shall be provided for blasters, painters and other workers involved in the preparation and application of coating systems as per recommendation of paint manufacturer. Work areas shall be adequately ventilated.

5.0 REPAIR OF DAMAGED AREAS

All areas of paintwork that are locally damaged during transportation, handling or erection shall be fully repaired to the satisfaction of the company.

Prior to the application of any coat, damage to previous coat(s) shall be touched-up by removing the damaged coatings, preparing the surface and reapplying the protective coat(s).

5.1 Repair Procedure for Damaged coating

Surfaces where coating is damaged after application of the finish coat shall be repaired as follows;

5.1.1 Top Coat

The top coat damaged, but base coat undamaged and the metal substrate is not exposed:

- (a) Damaged coating shall be removed with a hand file and abraded back to the sound coating using emery paper or a fine grinder.
- (b) The damaged area shall be wiped with a suitable solvent to remove debris. The periphery of repair area shall be feathered back for a minimum distance of 25 mm into the adjacent undamaged coating by light abrasion or grinding to produce a smooth chamfered surface profile.
- (c) Apply a new topcoat as specified.

5.1.2 Base Coat

Coating damaged to base metal

- a) The damaged area greater than 0.2m² in area, the surface of exposed metal shall be prepared to the original specified standard prior to repairing by power tool cleaning as per SSPC-SP3 or spot blasting to SSPC-SP5 and applying primer, intermediate coat and final coat as specified. Alternatively, high solid surface tolerant epoxy coating such may be used in place of primer & intermediate coats, followed by specified topcoat.
- b) The damaged areas less than 0.2 m² in area may be repaired as per manufacturer's recommendation or by preparing the surface of exposed metal by power tool cleaning as per SSPC-SP11 to the original specified standard.

A primer, intermediate and final coat shall be applied as specified. Alternatively, high solid surface tolerant epoxy coating such may be used in place of primer & intermediate coats, followed by specified topcoat. Brush application is acceptable. Even appearance and smooth feathering into surrounding coating in addition to correct dry film thickness and holidays must be achieved. Coating and surrounding repaired areas shall not be damaged and complete tie-in of the coating with surrounding areas shall be obtained. Zinc based products shall not be applied without Blast Cleaning to Sa 2 ½, instead Surface tolerant epoxy such at 100 microns shall be used as a primer in case blast cleaning is not possible or practical.

6.0 INSPECTION AND TESTING

6.1 Quality Control

Procedures for testing and documenting quality control shall be prepared prior to the initial start up of any work covered by this specification & submitted to company for approval. The procedures shall include methods to assure the specification requirements are met and forms to document environmental conditions, surface temperature, coating applicator, surface(s) being coated, coating applied and status of required examinations and tests.

Testing and inspection shall be carried out in accordance with Table-6.2. Surfaces shall be accessible until final inspection is carried out.

6.2 Inspection and testing requirement

Test type	Test Method	Test Frequency	Acceptance criteria	Consequence
Environmental conditions	Ambient and steel Temperature. Relative Humidity. Dew point.	Before start of each shift + minimum twice per Shift.	In accordance with Specified requirements	No blasting or coating
Visual examination	Visual for sharp edges	100 % of all surfaces	No defects, see Specified	Defects to be repaired

	weld spatter slivers, rust grade, etc.		requirements	
Cleanliness	a) ISO 8501-1 b) ISO 8502-3	a) 100 % visual of all surfaces b) Spot checks	a) In accordance with specified Requirements b) Maximum quantity and size rating 2	a) Reblasting b) Recleaning and retesting until acceptable
Salt test	ISO 8502-6 and ISO 8502-9	Spot checks	Maximum conductivity corresponding to 20 mg/m ² NaCl	Repeated washing with potable water & retesting until acceptable
Chloride test	ISO 8502-2 ISO 8502-5	-	10 microgram/sq.cm for external & 5 microgram/sq.cm for internal vessel	-
Roughness	Comparator or stylus instrument (see ISO 8503)	Each component or once per 200 m ²	As specified	Reblasting
Curing test (for Zn silicate)	ASTM D4752	Each component or once per 100 m ²	Rating 4-5	Allow to cure
Visual examination of coating	Visual to determine curing, contamination, solvent retention, pinholes/popping, sagging & surface defects	100 % of surface after each coat	According to specified requirements	Repair of defects
Holiday detection	NACE RP0188 and as per *note -1 below	As per coating system specification	No holidays	Repair & retesting.
Film thickness	ISO 19840. Calibration on a smooth surface	ISO 19840	ISO 19840, and coating system data sheet	Repair, additional coats or recoating as appropriate
Adhesion	ISO 4624 using equipment with an automatic centered pulling force	Each component or once per 200 m ²	*See note-2 below	Coating to be rejected

	& carried out when coating system are fully cured			
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*Note:

1. Holiday Testing
Holiday testing shall be conducted in accordance with NACE SP0188. Minimum 10% of the coated areas, which include weld seams, corners, and edges, shall be holiday detected. Any holiday is unacceptable and shall be marked and repaired according to spot repair procedures.
2. Adhesion test
Adhesion test shall be carried out on separate test plates, minimum adhesion values in accordance with ISO 4624 shall be 5,0 MPa when using automatically centered test equipment.

6.3 Qualification of supervisors, foremen and QC personnel at The Fabrication Yard

The contractor's quality control inspector shall be qualified as a coating inspector in accordance with NS 476 Inspector level I or NACE level-I.

The contractor's quality control inspector shall qualify the tradesman level as blast-cleaner, painter, and applicator etc. for painting application.

The personnel shall have relevant knowledge of health and safety hazard, use of protection equipment, coating materials, mixing and thinning of coatings, coating pot-life, surface requirements etc.

Contractor shall carry out tests in accordance with the company approved Coating Procedure Specification for all coating systems that are planned to be used for this project before commencement of painting work.

The test shall be supervised by the coating manufacturer's Authorized technical representative and the contractor's quality control inspector and shall be witnessed & inspected and accepted by the FQA of Adani. Contractor shall issue an inspection report covering the qualification tests for the company approval.

The test shall be carried out on a test panel (minimum 1 m x 1 m) and at least on one end of, angle, channel, beam and flat bar and an alternative location providing similar complexity on the component to be used.

The acceptance criteria are the requirement to the visual and non – destructive inspection of the coating system described in this specification. Operators failing to meet the requirement shall not be allowed to carry out the work on this project.

6.4 Equipment and Material

Materials, tools or equipment used in the surface preparation and coating applications, shall be inspected regularly and rejected if they do not comply with the Specification.

6.5 Inspection Instruments

The following items shall be inspected using the inspection instruments listed below:

Instrument Item	Inspection Instrument
Surface Profile	Keane-tator Surface Profile Comparator or Testex Press-o-Film Elcometer 124 with 122 testex tape
Holidays	Tinker – Rasor Model M – 1
Surface Cleanliness	SSPC – Vis – 1
Viscosity	Zahn Viscometer or Ford Cup
Wet Film Thickness(WFT)	Nordson Wet Film Thickness Gauge Sheen WFT Gauge
Temperature & Humidity	Gardner Certified Hydrometer And Temperature Indicator
Surface Temperature	Pandux Surface Temperature Thermometer Elcometer Surface temperature gauge
Compressed Air Quality	Dry white cloth

6.5.1 Calibration

Each test instrument shall be maintained and calibrated as prescribed by the manufacturer.

6.5.2 Dry Film Thickness

The dry film thickness of the coating system shall be determined in accordance with SSPC-PA2 or by a Micro test thickness gauge or comparable instrument in accordance with the following procedure.

- (a) Ten readings shall be taken for every 10m² of painted areas.
- (b) 90% of all readings shall be within the specified dry film thickness.
- (c) Where thickness accordance with the above procedure falls below the specified minimum an additional coat of the intermediate or finish coat shall be applied.

7.0 PAINT MATERIALS:

The coating manufacturer shall provide a Coating System Data Sheet (CSDS) for each coating system to be used, containing at least the following information for each product:

- Surface pre-treatment requirements;
- Dry Film thickness (maximum, minimum and specified);
- Maximum and minimum re-coating intervals at relevant temperatures;
- Information on thinners to be used (quantities and type);
- coating repair system.
- Practical consumption
- Expected life of product with guarantee.
- MSDS

Paint manufacturer shall furnish all the characteristics of paint materials on printed literature, along with the test Certificate with actual test values of supplied batch for all the specified characteristics given in the specifications.

All the paint materials shall be of first quality, should pass all pre qualification testing for corrosive category – C5-M as per ISO 12944 and conform to the following general characteristics as per the tables below:

TABLE 7.1: REQUIRED CHARACTERISTIC OF PAINT MATERIALS

Technical Name	Type & Composition	Volume of solids (approx.)	DFT (Dry Film thickness) per coat (approx.)	Weight Per liter in kgs/ liters (approx)	Touch Dry at 25°C (approx)	Hard dry at 25°C (approx.)	Over coating Interval (approx.)	Pot life (approx.) 25°C
Inorganic zinc silicate Coating Containing	A two pack air drying self –	65 %±2	65-75 µ	2.2+/- 0.02	30 mts.	Over night	Min.; 16-24 Hrs Max. Indefinite.	4 Hrs

minimum 85% ±2 zinc in dry film by weight & 96% Purity of Zinc.	curingsolvent basedInorganic Zinc silicatecoating.							
Epoxy MIO High build containing minimum 50% MIO in dry film.	Two pack, super high build, polyamide cured epoxy, pigmented with natural lamellar micaceousironoxide	Min. 80%± 2	125-150 µ	1.82+/- 0.02	3 Hrs.	Overnig ht	Min. : 18 Hrs. Max. : Indefinite	2 hrs.
Glossy Aliphatic acrylic Polyurethane Topcoat	Two Components High Build Aliphatic Acrylic Polyurethane.	min 62% ±2	50-75 µ	1.46 +/- 0.02	1.5 hrs	12 hrs	Min. ;12 hrs Max. ;As per suppliers data	3 Hr
Inorganic zinc silicate Coating Containing minimum 75% ±2 zinc in dry film by weight & 96% Purity of Zinc.	A two pack air drying self – curing solvent based Inorganic Zinc silicate coating.	Min 60%± 2	65-75 µ	2.0+/- 0.02	30 mts	Overnig ht	Min.; 16-24 Hrs Max. Indefinite.	4 Hrs
Epoxy MIO High build containing minimum 50% MIO in dry film.	Two pack, high build, polyamide cured epoxy, pigmented with lamellar MIO.	Min 60%± 2	100-125 µ	1.58+/- 0.02	4 Hrs	18 hrs	Min. : 18 Hrs. Max. : Indefinite	5 hrs
Epoxy Direct to Metal Primer cum Finish Coating	Two pack, rapid cure, high build epoxy DTM primer cum finish	Min 70%±2	75-150 µ	1.63 +/- 0.02	30 mts	60 mts	60 mts	2 hrs
Rapid cure epoxy high build zinc phosphate primer(16% ZP content)	Two pack, rapid cure, high build polyamide cure, epoxy zinc phosphate primer.	Min 63%±2	50-100 µ	1.51+/- 0.02	45 mts	3 hrs	3 hrs	6 hrs
Self -priming Surfaceretolerant High build Epoxycoating	Two pack amid amine cured self priming epoxy mastic.	Min. 80%± 2	100- 125u	1.46 +/- 0.02	5 Hrs.	24 Hrs	Min. ;24 Hrs Max –As recommended by manufacturer	2 hrs

8.0 COATING SYSTEMS

8.1 Scope

The following section outlines the requirement of supply & application of anti corrosive coatings for corrosion protection of steel structural's

exposed to environments classified by ISO 12944-2 as C5-I, C5-M, C- 4 & C-3 and to get long term life (High Durability – above 15 years)

8.2 Surface Preparation

All the parts to be sprayed shall be degreased according to SSPC-SP 1. The absence of oil and grease after degreasing shall be tested by method given elsewhere in the specification.

Grind all sharp edges and corners to a minimum radius of 2 mm. Remove all welding slag, spatter & blend grind all sharp welds & high spots. Remove all salt deposits by jetting with clean (potable) water. Thereafter the surface to be abrasive blasted to near white metal finish as per SSPC-SP 10. Using SSPC VIS 1, it is to be visually assessed that the blast cleaned surface meets requirement of SSPC-SP 10.

Thereafter clear cellophane tape test as per ISO 8502-3 shall be used to confirm absence of dust on the blasted surface. Finally blasted surface shall be tested for presence of soluble salts as per method ISO 8502-9. Maximum allowable salt content shall be considered 50mg/M². (5 micrograms/cm²) In case salt content exceeds specified limit. The contaminated surface shall be cleaned by method as per Annex – C of ISO - 12944-4 (Water Cleaning.) or as per ISO 8501 – 4 (Wa-Wa 2 ½). After cleaning the surface shall be retested for salt content after drying.

The blasting media shall be either chilled iron or angular steel grit as per SSPC-AB-3 of mesh size G-16 to G-40. Copper or Nickel slag or Garret as abrasive will also be suitable having mesh size in the range of G16 to G24, conforming to SSPC-AB-1.

Mesh size shall be required as appropriate to the anchor tooth depth profile requirement and blasting equipment used. The blasted surface should be having angular profile depth of 50 to 75 microns with sharp angular shape. The profile depth shall be measured according to NACE standard RP 0287 (Replica Tape) or ASTM D 4417 method B (Profile depth gauge).

Suitable enclosure shall be provided to carry out the blast cleaning operation. The contractor shall put up minimum three temporary sheds each of size 15m x 30m with handling facilities at site to carry out abrasive blasting. If required prior approval from the factory inspector/pollution

control board etc. shall be obtained regarding the method of blast cleaning and abrasives used therein.

For manual blasting one profile depth measurement shall be taken every 10-20 M² of blasted surface. Surface preparation shall be completed in one abrasive blast cleaning operation wherever possible. If rust bloom (visual appearance of rust) appears on the blast cleaned surface before priming, the affected area shall be re-blasted to achieve specified degree of cleanliness after which only application of inorganic zinc silicate.

Air blasting pressure at nozzle shall be normally maintained at 100 psi. Air pressure and media size should be reduced and adjusted to preclude damage/distortion to thin gauge materials. Blasting time on work piece should be adjusted to only clean the surface and cut required anchor tooth with minimum loss of metal. Blast angle should be as close to perpendicular as possible but in no case greater than $\pm 30^\circ$ from perpendicular to work surface. Blasting media must be free of debris, excessive fines, contaminants such as NaCl and sulfur salts (Ref. SEC 13.2.1.6 of this Spec).

F-Tests for blasting media, blasting air & surface contamination.

F-1- Blasting Media

(For every fresh batch of media and one random test during blasting)

- a) Blasting Media shall be visually inspected for absence of contamination and debris using 10 X magnification.
- b) Inspection for the absence of oil contamination shall be conducted using following procedure:
 - Fill a small clean 200 ml bottle half full of abrasive.
 - Fill the bottle with potable water, cap and shake the bottle.
 - Inspect water for oil film/slick. If present, the blasting media is not to be used.
- c) Soluble salt contamination if suspected shall be verified by method ASTM D4940. If present, media to be replaced.
- d) Clean blasting equipment, especially pot and hoses, then replace blasting media and retest.

F-2 Test for Blasting Air

(Once Daily before start of blasting & once at random during blasting)

The air for blasting shall be free from moisture and oil. The compressor air shall be checked for oil and water contamination per ASTM D 4285.

F-3-Test for presence of oil/grease and contamination

The steel substrate after degreasing as per SSPC-SP 1 shall be tested as per following procedure to validate absence of oil and grease contamination.

- a) Visual inspection - Continue degreasing until all visible signs of contamination are removed.
- b) Conduct a solvent evaporation test by applying several drops or a small splash of residue-free trichloromethane on the suspect area especially pitting, crevice corrosion areas or depressed areas. An evaporation ring formation is indicative of oil and grease contamination. Continue degreasing and inspection till test is passed.

8.3 Paint Systems

8.3.1 For C5-M Environment Classification

Primer Coat: 1 coat of inorganic ethyl self-curing zinc silicate primer (coating) at 75 microns DFT/Coat to be applied by airless/pressure pot for high durability >15 yrs. The primer should meet the requirements of SSPC-SP 20 performance standard. Minimum Metallic Zinc in the dry film by weight must be 85%. Volume solids of the primer must be 65%.

Intermediate coat – 1 coat of Super High build epoxy MIO coating cured with polyamide hardener at 150 microns DFT/Coat to be applied by airless spray. Minimum Natural Lamellar Micaceous Iron Oxide content in the dry film must be 50% by weight. Volume solids of the product must be 80%.

Finish Coat- Two coats of High Build Gloss Aliphatic Acrylic Polyurethane at 50 micron/coat dry film thickness to be applied by brush/airless spray. Total thickness of the finish coat will be 100 microns. Volume Solids of the product must be 62%.

Total DFT minimum: 325 Microns and maximum: 350 Microns.

Notes:

1. This paint system is equivalent to the protective paint system no's (S7.14 & S 6.08) recommended for corrosion category C5-M & C5-I in ISO 12944-5.
2. This system is satisfactory for surface temperatures to 90° C continuous dry temperature.
3. Colour for final coat shall be as per colour code.
4. All material shall be supplied in the manufacturers original cans, durably & legibly marked with the description of the contents. This shall include the batch number, date of manufacturing & the manufacturer's name.
5. All coating materials used shall confirm to the composition clauses given against each product in the specification. In meeting the composition clauses, the manufacturer shall provide evidence of compliance from approved third party lab before start of the job & internal test report along with every supplied batch.
6. Material containing cadmium, lead or any other toxic material to environment/personnel shall not be used.

8.3.2 For C-4 Environment Classification

Primer Coat: 1 coat of inorganic ethyl self curing zinc silicate primer (coating) at 75 microns DFT/Coat to be applied by airless/pressure pot. The primer should meet the requirements of IS - 14946 performance standard. Minimum Metallic Zinc in the dry film by weight must be 75%. Volume solids of the primer must be 60% .

Intermediate coat – 1 coat of High build epoxy MIO coating cured with polyamide hardener at 100 microns DFT/ Coat to be applied by airless spray. Minimum Natural Lamellar Micaceous Iron Oxide content in the dry film must be 50% by weight. Volume solids of the product must be 60% .

Finish Coat- One coat of High Build Gloss Aliphatic Acrylic Polyurethane at 50 micron/coat dry film thickness to be applied by brush/airless spray. Volume Solids of the product must be 62%.

Total DFT minimum: 225 Microns.

Notes:

1. This paint system is equivalent to the protective paint system no S4.30 recommended for corrosion category C-4- in ISO 12944-5.
2. This system is satisfactory for surface temperatures to 90° C continuous dry temperature.
3. Colour for final coat shall be as per colour code.
4. All material shall be supplied in the manufacturers original cans, durably & legibly marked with the description of the contents. This shall include the batch number, date of manufacturing & the manufacturer's name.
5. All coating materials used shall confirm to the composition clauses given against each product in the specification. In meeting the composition clauses, the manufacturer shall provide evidence of compliance from approved third party lab before start of the job & internal test report along with every supplied batch.
6. Material containing cadmium, lead or any other toxic material to environment/personnel shall not be used.

8.3.3 For C-3 Environment Classification

Covered Areas like TG Shed etc:

Primer cum Top Coat: Two coat of DTM – Direct to Metal epoxy primer cum finish with optimum loading of Zinc Silicate anti corrosive pigments at 75 microns DFT/Coat to be applied by airless/pressure pot. The total thickness of the system will be 225 microns. Volume solids of the DTM coating must be 70%.

Total DFT minimum: 225 Microns.

Uncovered Areas – Exposed to UV Rays:

Primer Coat: 2coat of Rapid Cure, High Build, Epoxy Polyamide Cure Zinc Silicate Primer with optimum loading of Zinc Silicate anticorrosive pigment at 175 microns DFT/Coat to be applied by airless/pressure pot. Minimum Zinc phosphate pigment in the dry film by weight must be 16%. Volume solids of the primer must be 63%.

Finish Coat- One coat of High Build Gloss Aliphatic Acrylic Polyurethane at 50 micron/coat dry film thickness to be applied by brush/airless spray. Volume Solids of the product must be 62% .

Total DFT minimum: 225 Microns.

Notes:

1. This paint system is equivalent to the protective paint system no S3.18 recommended for corrosion category C-3- in ISO 12944-5.
2. This system is satisfactory for surface temperatures to 90° C continuous dry temperature.
3. Colour for final coat shall be as per colour code.
4. All material shall be supplied in the manufacturers original cans, durably & legibly marked with the description of the contents. This shall include the batch number, date of manufacturing & the manufacturer's name.
5. All coating materials used shall confirm to the composition clauses given against each product in the specification. In meeting the composition clauses, the manufacturer shall provide evidence of compliance from approved third party lab before start of the job & internal test report along with every supplied batch.
6. Material containing cadmium, lead or any other toxic material to environment/personnel shall not be used.

9 COLOUR SCHEDULE

9.1 EQUIPMENT AND PIPING STANDARD COLOUR CODE FOR MECHANICAL

EQUIPMENT

S. No.	Description	Ground Colour
A	CLOSED COOLING WATER SYSTEM	
1	Closed cooling water pumps	Sea Green
2	Plate heat exchanger	Sea Green
3	Closed cycle cooling water pump	Sea Green
4	CCCW Expansion tank	Sea Green
5	CCCW chemical dosing tank	Sea Green

B	WATER TREATMENT PLANT	
1	River water & Raw water	
a	Raw water pump	Sea Green
b	Clarifier	Sea Green
c	- Raw / Fire water storage tank	Sea Green
d	DM plant supply pump	Sea Green
e	Filter air blower	Sea Green
f	Filter back wash pump	Sea Green
g	Lime slaking tank & agitator	Sea Green
h	Lime slurry transfer pump	Sea Green
i	Lime solution tank	Sea Green
j	Lime solution dosing pump	Sea Green
k	Alum solution tank	Sea Green
l	Alum solution metering pump	Sea Green
m	Polyelectrolyte solution tank	Sea Green
n	Polyelectrolyte solution metering pump	Sea Green
o	Sludge feed pump	Sea Green
p	Filter press	Sea Green
q	Service water tank for DM building	Sea Green
r	Service water tank for control annex	Sea Green
2	Demineralisation system	
a	Activated carbon filter	Sea Green
b	Cation exchanger	Sea Green
c	Anion exchanger	Sea Green
d	Deaasser tower	Sea Green
e	Air blower for deaasser tower	Sea Green
f	Strong base anion exchanger	Sea Green
g	Deaassed water transfer pump	Sea Green
h	Strong base anion exchanger	Sea Green
i	Mixed bed polisher	Sea Green
j	Air blower for mixed bed polisher	Sea Green
k	DM Water Storage tank	Sea Green
l	DM water transfer pump	Sea Green
m	Acid unloading cum transfer pump	Dark Admiralty Grey
n	Bulk acid storage tank	Dark Admiralty Grey
o	Acid measuring tank for SAC	Dark Admiralty Grey
p	Acid measuring tank for MB	Dark Admiralty Grey
q	Regeneration water pump	Dark Admiralty Grey
r	Caustic Lye unloading cum transfer pump	Dark Violet
s	Bulk caustic storage tank	Dark Violet
t	Caustic regeneration tank & agitator	Dark Violet
u	Caustic solution filter	Dark Violet

S.No.	Description	Ground Colour
v	Caustic dilution tank for SBA/WBA	Dark Violet
w	Caustic dilution tank for MB	Dark Violet
x	Caustic pump for regeneration for WBA/SBA	Dark Violet
y	Waste water recirculation cum disposal pump	Sea Green
C	CRANE & HOIST	
1	Power house EOT crane	Canary Yellow
2	CW pump house EOT crane	Canary Yellow
D	COMPRESSED AIR PLANT	
1	Air compressor	Sky Blue

2	Compressed air dryer	Sky Blue
3	Air receiver	Sky Blue
E	Chemical Dosing	
1	Hydrazine preparation tank	Dark Admiralty Grey
2	Ammonia preparation tank	Dark Admiralty Grey
3	Hydrazine & ammonia dosing tank	Dark Admiralty Grey
4	Hydrazine & ammonia dosing pump	Dark Admiralty Grey
5	Phosphate preparation tank	Dark Admiralty Grey
6	Phosphate dosing tank	Dark Admiralty Grey
7	Phosphate dosing pump	Dark Admiralty Grey
8	- Sampling system	Dark Admiralty Grey
F	FIRE PROTECTION SYSTEM	
1	Diesel engine driven pump	Fire red
2	Fuel tank for diesel engine driven pump	Fire Red
3	Main hydrant pump (Electrical)	Fire Red
4	Jockey pump	Fire Red
5	Fire Water Storage tank	Fire Red
6	CO2 cylinder	Fire Red
G	FUEL OIL SYSTEM	
1	Fuel oil pumps skid	Light Brown
2	Fuel oil Storage tank	Light Brown
3	Fuel oil strainer	Light Brown
H	ASH DISPOSAL SYSTEM	
1	Ash transmitting vessel	Aluminium
I	AIR CONDITIONING AND VENTILATION SYSTEM	
1	Refrigerant compressor	Sky Blue
2	Chilled / condenser pumps	Sea Green
3	Condenser water pipe	Sea Green
4	Fans	Grey

9.2 STANDARD COLOUR CODE FOR ELECTRICAL EQUIPMENT

Sl. No.	Description	Colour	Colour No.
1	Transformers	Light grey	Shade 631 of IS : 5
2	Bus ducts	Light grey	Shade 631 of IS:5
3	Junction boxes.	Light grey	Shade 631 of IS:5
4	HT/LT Switchboards, Distribution boards, Control & Relay panels		
	a) Indoor	Siemens	RAL 7032
	b) Outdoor	Light grey	Shade 631 of IS:5
5	UPS Panel, charger panels	Siemens	RAL 7032
6	DG Alternator	Onan Green	-
7	NGR	Light grey	Shade 631 of IS : 5
8	Motor	Light grey	Shade 631 of IS : 5
9	Lighting fittings	As per manufacturer's	As per manufacturer's
10	Cable trays	Galvanized	

Note: 1. All panels that are to be erected at CCR floor shall be painted using RAL 7032 (exterior colour). All Electrical, C&I, Fire alarm or any other panel shall have this colour.

9.3 COLOUR CODING FOR IDENTIFICATION OF PIPELINES USED IN THERMAL POWER PLANTS

Sl.No	Medium	Ground Shade		Band Shade		Remarks
		Color	Color No. as per IS:5	Color	Color No. as per IS:5	
1	Water system					
a)	Untreated or raw / service	Sea green	217	White	-	White is not included in IS - 5-2007
b)	Treated/dematerialized	Sea green	217	Light orange	557	
c)	Condensate	Sea green	217	Light brown	410	
d)	Potable water	Sea green	217	French blue	166	
e)	RO water	Sea green	217	Light orange	557	
f)	Service & clarified water	Sea green	217	French blue	166	
2	Steam system					
a)	Auxiliary steam	Aluminium	-	Signal red	537	with aluminium
3	Air system					
a)	Instrument	Sky Blue	101	White	-	White not included in IS-5 - 2007
b)	Service/Plant	Sky Blue	101	White	-	
c)	Vacuum pipes	Sky Blue	101	Black	-	Black not included in
5	Gas system					
a)	Hydrogen	Canary yellow	309	Signal red	537	White is not included in
b)	Chlorine	Canary yellow	309	Dark violet	796	
c)	Carbon dioxide	Canary yellow	309	Light grey	631	
e)	Oxygen	Canary yellow	309	White	218	

Sl.No	Medium	Ground Shade		Band Shade		Remarks
		Color	Color No. as per IS:5	Color	Color No. as per IS:5	
6	Oils					
a)	LDO/HFO	Light brown	410	Brilliant green	221	
b)	Transformer oil	Light brown	410	Light orange	557	
7	Chemical feed					
a)	Acid piping (in water treatment plant)	Dark admiralty grey	632	Signal red	537	Hazard mark is given
b)	Alkali Piping (in water treatment plant)	Dark violet	796	Golden yellow	356	Hazard mark is given
8	Fire services	Fire red	536	-	-	
9	Effluent pipes	Black	-	-	-	

9.4 COLOUR CODE FOR STRUCTURAL STEEL

SL. NO	ITEAM/SERVICE	COLOR	COLOR No. as per IS:5
1	Gantry girder & monorail	Brilliant green	221
2	Gantry girder & monorail stopper	Signal red	537
3	Building structural steel columns brackets, beams bracings, roof truss, purloin, side grit, louvers, stringers	Dark admiralty grey	632
4	Pipe rack structure & trestle	Dark admiralty grey	632
5	Chequered plate (Plain Face)	Black	-
6	Grating	Black	-
7	Ladder	Dark admiralty grey	632
8	Hand railing Hand rail	Signal red	537
9	Middle rail	Signal red	537
10	Toe Plate	Signal red	537
11	Vertical post	Black	-
12	Structural steel for Silo	Smoke grey	692

10 RECOMMENDED LIST OF PAINT MANUFACTURER

- 1.Asian Paints India Ltd
2. Shalimar Paints
- 3.Jotun
4. Akzonobel
5. Berger Paints
6. Good lass Nerolac Paints
7. Bombay Paints
8. Jenson & Nicholson

11 PROCEDURE OF APPROVAL OF NEW COATING MATERIAL

Following procedure recommended is to be followed for approval materials Manufactured by new manufactures (indigenous and foreign):

1. Sample shall be selected by adani and the manufacturer should arrange testing of the coating materials as per the List of tests given in Para 5 below from one of the reputed Government Laboratories. Testing charge shall be borne by manufacturer.
2. Samples of coating materials should be submitted to the Govt.Laboratory in sealed containers with batch number and test certificate on regular format of manufacturer's testing laboratory.
3. All test panels should be prepared by the Govt. testing agency colored photographs of test panels should be taken before and after the test and should be enclosed along with test report.

Sample batch number and manufacturers test certificate should be enclosed along with the report. Test report must contain detail of observations and rating if any as per the testing code. Suggested Govt. laboratories are:

RRL, Hyderabad
HBTI, Kanpur
DMSRDE, Kanur
IIT, Bombay
BIS, Laboratories
UDCT, Mumbai

4. Manufacturers should intimate the company, details of samples submitted for testing, name of Govt. testing agency, date. Contact personnel of the Govt. testing agency. At the end of the test the manufacturer should submit the test reports to the Company for approval. The manufacturer(s) shall be qualified based on the results of these tests and the Company's decision in this regard - shall be Final and binding on the manufacturer.
5. All tests required for evaluation of acceptance coating materials for structural steel in thermal power plant shall be as per C5-M classification in ISO 12944 – 2 relevant ISO/ASTM standards.

Types of Environment

ISO 12944 classification	Typical Environments
C1 & C2	Rural areas, low pollution. Heated building/neutral atmosphere.
C3	Urban and industrial atmospheres. Moderate sulphur dioxide levels. Production areas with high humidity.
C4	Industrial and coastal. Chemical processing plants.
C5I	Industrial areas with high humidity and aggressive atmospheres.
C5M	Marine, offshore, estuaries, coastal areas with high salinity.

**DECLARATION REGARDING MINIMUM LOCAL CONTENT IN LINE WITH
REVISED 'PUBLIC PROCUREMENT (PREFERENCE TO MAKE IN INDIA),
ORDER, 2017 ISSUED BY DPIIT VIDE OM NO. P-45021/2/2017-PP(BE-II) PART
(4) VOL. II DATED 19.07.2024 AND SUBSEQUENT ORDER(s)**

(To be typed and submitted in the Letter Head of the Entity/Firm providing certificate as applicable)

To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir,

Sub: Declaration reg. minimum local content in line with Revised 'Public Procurement (Preference to Make in India), Order, 2017 issued by DPIIT vide OM No. P-45021/2/2017-PP(BE-II) Part (4) Vol. II dated 19.07.2024 and subsequent order(s).

Ref: 1) Enquiry No:

2) All other pertinent issues till date

We hereby certify that the items/works/services offered by..... (specify the name of the organization here) has a local content of _____ % and this meets the local content requirement for '**Class-I local supplier**' / '**Class II local supplier**' ** as defined in Revised 'Public Procurement (Preference to Make in India), Order, 2017 issued by DPIIT vide OM No. P-45021/2/2017-PP(BE-II) Part (4) Vol. II dated 19.07.2024 and subsequent order(s).

The details of the location(s) at which the local value addition is made are as follows:

- | | |
|----------|----------|
| 1. _____ | 2. _____ |
| 3. _____ | 4. _____ |

Thanking you,
Yours faithfully,

(Signature, Date & Seal of Authorized Signatory of the Bidder)

** - Strike out whichever is not applicable.

Note:

1. Bidders to note that above format, duly filled & signed by authorized signatory, shall be submitted along with the techno-commercial offer.
2. In case the bidder's quoted value is in excess of Rs. 10 crores, the authorized signatory for this declaration shall necessarily be the statutory auditor or cost auditor of the company (in the case of companies) or a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies).
3. In the event of false declaration, actions as per the above order and as per BHEL Guidelines shall be initiated against the bidder.

MANUFACTURER'S NAME AND ADDRESS			QUALITY PLAN					TO BE FILLED BY BHEL		TO BE FILLED BY BHEL				
BHEL	VENDOR'S NAME	ITEM			QP NO.									
				REV										
		DRG. NO.	AS PER PO											
		SPEC.	AS PER PO											
		REV				Page 1 of 1								
SL. NO.	COMPONENT & OPERATIONS	CHARACTERISTICS		CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS		AGENCY			REMARKS
											M	B	N	
1	2	3		4	5	6	7	8	9	D	10			11

MANUFACTURER/SUBCONTRACTOR		LEGEND:	FOR CUSTOMER USE	APPROVED BY
		! RECORDS IDENTIFIED WITH ‘TICK’ SHALL BE ESSENTIALLY INCLUDED BY CONTRACTOR IN QA DOCUMENTATION.		
		M: MANUFACTURER / SUBCONTRACTOR B: BHEL / NOM. INSPECTION AGENCY N: CUSTOMER INDICATE ‘P’ PERFORM ‘W’ WITNESS AND ‘V’ VERIFICATION ALL ‘W’ INDICATED IN COLUMN ‘N’ SHALL BE ‘CHP’ OF CUSTOMER		

CHECK LIST

NOTE: - Suppliers are required to fill in the following details in their Letterhead and no column should be left blank

A	Name and Address of the Supplier		
B	GSTN No. the Supplier (Place of Execution of Contract / Purchase Order)		
C	Details of Contact person for this Tender	Name: Mr./ Ms. Designation: Telephone No: Mobile No: Email ID:	
D	EMD DETAILS		
E	DESCRIPTION	APPLICABILITY (BY BHEL)	ENCLOSED BY BIDDER
i.	Whether Pre - Qualification Criteria is understood and provided proper supporting documents.	Applicable/ Not Applicable	YES / NO
ii.	Whether all pages of the Tender documents including annexures, appendices etc are read and understood	Applicable/ Not Applicable	YES / NO
iii.	Audited Balance Sheet and profit & Loss Account for the last three years	Applicable/ Not Applicable	YES / NO
iv.	Copy of PAN Card & GST registration	Applicable/ Not Applicable	YES / NO
v.	Submission of MSE certificate as specified in Tender	Applicable/ Not Applicable	YES / NO
vi.	Offer forwarding letter / tender submission letter as per Annexure – 2	Applicable/ Not Applicable	YES / NO
vii.	Submission of Certificate of No Deviation as per Annexure – 3	Applicable/ Not Applicable	YES / NO
viii.	Declaration regarding Insolvency/ Liquidation/ Bankruptcy Proceedings as per Annexure – 4	Applicable/ Not Applicable	YES / NO
ix.	Declaration by Authorized Signatory as per Annexure – 5	Applicable/ Not Applicable	YES / NO
x.	Declaration by Authorized Signatory regarding Authenticity of submitted Documents Annexure – 6	Applicable/ Not Applicable	YES / NO
xi.	Submission of Non-Disclosure Certificate as per Annexure – 7	Applicable/ Not Applicable	YES / NO
xii.	Submission of Integrity Pact as specified in Tender as per Annexure – 8	Applicable/ Not Applicable	YES / NO

xiii.	Declaration confirming knowledge about Site Conditions as per Annexure – 9	Applicable/ Not Applicable	YES / NO
xiv.	Declaration reg. Related Firms & their areas of Activities as per Annexure – 10	Applicable/ Not Applicable	YES / NO
xv.	Declaration for relation in BHEL as per Annexure – 11	Applicable/ Not Applicable	YES / NO
xvi.	Declaration reg. minimum local content in line with revised public procurement as per Annexure – 12	Applicable/ Not Applicable	YES / NO
xvii.	Declaration regarding compliance to Restrictions under Rule 144 (xi) of GFR 2017 as per Annexure – 13	Applicable/ Not Applicable	YES / NO
xviii.	Bank Account Details for E-Payment as per Annexure – 14	Applicable/ Not Applicable	YES / NO
xix.	Power of Attorney for submission of tender as per Annexure – 15	Applicable/ Not Applicable	YES / NO
xx.	Proforma of Bank Guarantee for Earnest Money as per Annexure – 16	Applicable/ Not Applicable	YES / NO

NOTE: Strike off 'YES' or 'NO', as applicable. Tender not accompanied by the prescribed **above applicable documents** are liable to be summarily rejected.

DATE :

Sign. of the AUTHORISED SIGNATORY
(With Name, Designation and Company seal)

OFFER FORWARDING LETTER / TENDER SUBMISSION LETTER

(To be typed and submitted in the Letter Head of the Company/Firm of Bidder)

Offer Reference No:

Date:

To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir,

Sub: Submission of Offer against Ge M Bid No:

Having examined the tender documents against your GeM Bid No. _____ dated _____ and having understood the provisions of the said tender documents and having thoroughly studied the requirements of BHEL related to the work tendered for, in connection with _____ (name of work & project site), we hereby submit our offer for the proposed work in accordance with terms and conditions mentioned in the tender documents, at the prices quoted by us and as per the indicated delivery schedule.

Should our Offer be accepted by BHEL for Award, I/we further agree to furnish 'Performance Security' for the work as provided for in the Tender Conditions within the stipulated time as may be indicated by BHEL.

I/We further agree to execute all the works referred to in the said Tender documents upon the terms and conditions contained or referred to therein and as detailed in the appendices annexed thereto.

I/We have deposited herewith the requisite Earnest Money Deposit (EMD) as per details furnished in the Check List.

Authorised Representative of Bidder

Signature:

Name:

Address:

Place:

Date:

CERTIFICATE OF NO DEVIATION

(To be Typed & submitted in the Letter Head of the Company/Firm of Bidder)

To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir,

Subject: **No Deviation Certificate**

Ref: 1| GeM Bid No:,

2| All other pertinent issues till date

We hereby confirm that we have not changed/ modified/materially altered any of the tender documents as downloaded from the website/ issued by BHEL and in case of such observance at any stage, it shall be treated as null and void.

We also hereby confirm that we have neither set any Terms and Conditions and nor have we taken any deviation from the Tender conditions together with other references applicable for the above referred GeM Bid.

We further confirm our unqualified acceptance to all Terms and Conditions, unqualified compliance to Tender Conditions.

We confirm to have submitted offer in accordance with tender instructions and as per aforesaid references.

Thanking you,

Yours faithfully,

(Signature, date & seal of authorized
representative of the bidder)

Date:

Place:

UNDERTAKING

(To be typed and submitted in the Letter Head of the Company/Firm of Bidder)

To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir/Madam,

Sub: DECLARATION REGARDING INSOLVENCY/ LIQUIDATION / BANKRUPTCY PROCEEDINGS

Ref. GeM Bid Specification No:

I/We, _____ declare that,

I/We am/are not admitted under insolvency resolution process or liquidation under Insolvency and Bankruptcy Code, 2016, as amended from time to time or under any other law as on date, by NCLT or any adjudicating authority/authorities.

**Sign. of the AUTHORISED SIGNATORY
(With Name, Designation and Company seal)**

Place:

Date:

DECLARATION BY AUTHORISED SIGNATORY OF BIDDER

(To be typed and submitted in the Letter Head of the Company/Firm of Bidder)

To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir,

Sub: **Declaration by Authorised Signatory**

Ref: 1) GeM Bid Specification No:

2) All other pertinent issues till date

I/We, hereby certify that all the information and data furnished by me with regard to the above Tender Specification are true and complete to the best of my knowledge. I have gone through the specifications, conditions, stipulations and all other pertinent issues till date, and agree to comply with the requirements and Intent of the specification.

I further certify that I am authorised to represent on behalf of my Company/Firm for the above mentioned tender and a valid Power of Attorney to this effect is also enclosed.

Yours faithfully,

(Signature, Date & Seal of Authorized
Signatory of the Bidder)

Date:

DECLARATION BY AUTHORISED SIGNATORY OF BIDDER

(To be typed and submitted in the Letter Head of the Company/Firm of Bidder)

To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir,

Sub : **Declaration by Authorised Signatory regarding Authenticity of submitted documents.**

Ref : 1) GeM Bid No. & Date:

2) All other pertinent issues till date

I/We, hereby certify that all the documents submitted by us in support of possession of "Qualifying Requirements" are true copies of the original and are fully compliant required for qualifying / applying in the bid and shall produce the original of same as and when required by Bharat Heavy Electricals Limited.

I / We hereby further confirm that no tampering is done with documents submitted in support of our qualification as bidder. I / We understand that at any stage (during bidding process or while executing the awarded contract) if it is found that fake / false / forged bid qualifying / supporting documents / certificates were submitted, it would lead to summarily rejection of our bid / termination of contract. BHEL shall be at liberty to initiate other appropriate actions as per the terms of the Bid / Contract and other extant policies of Bharat Heavy Electricals Limited.

Yours faithfully,

**(Signature, Date & Seal of Authorized
Signatory of the Bidder)**

Date:

DECLARATION

Date _____

To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir/ Madam,

Sub: **Details of related firms and their area of activities**

Please find below details of firms owned by our family members that are doing business/ registered for same item with BHEL, _____ (NA, if not applicable)

1	Material Category/ Work Description	
	Name of Firm	
	Address of Firm	
	Nature of Business	
	Name of Family Member	
	Relationship	
2	Material Category/ Work Description	
	Name of Firm	
	Address of Firm	
	Nature of Business	
	Name of Family Member	
	Relationship	
...		

Note: I certify that the above information is true and I agree for penal action from BHEL in case any of the above information furnished is found to be false.

Regards,

(_____)

From: M/s _____

Supplier Code: _____

DECLARATION FOR RELATION IN BHEL

(To be typed and submitted in the Letter Head of the Company/Firm of Bidder failing which the offer of Bidder is liable to be summarily rejected)

To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir,

Sub: Declaration for relation in BHEL

Ref: 1) GeM Bid Specification No:

I/We hereby submit the following information pertaining to relation/relatives of Proprieter/Partner(s)/ Director(s) employed in BHEL

Tick (✓) any one as applicable

- 1.** The Proprieter, Partner(s), Director(s) of our Company/Firm DO NOT have any relation or relatives employed in BHEL

OR

- 2.** The Proprieter, Partner(s), or Director(s) of our Company/Firm HAVE relation/relatives employed in BHEL and their particulars are as below:

i.

ii.

**(Signature, Date & Seal of Authorized
Signatory of the Bidder)**

Note:

1. Attach separate sheet, if necessary.
2. If BHEL Management comes to know at a later date that the information furnished by the Bidder is false, BHEL reserves the right to take suitable action against the Bidder/Contractor.

**DECLARATION REGARDING MINIMUM LOCAL CONTENT IN LINE WITH
REVISED PUBLIC PROCUREMENT (PREFERENCE TO MAKE IN INDIA), ORDER 2017 DATED 04TH
JUNE, 2020 AND SUBSEQUENT ORDER(S)**

(To be typed and submitted in the Letter Head of the Entity/Firm providing certificate as applicable)

To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir,

Sub: Declaration reg. minimum local content in line with Public Procurement (Preference to Make in India), Order 2017-Revision, dated 04th June, 2020 and subsequent order(s).

Ref: 1) GeM Bid Specification No:

2) All other pertinent issues till date

We hereby certify that the items/works/services offered by..... (specify the name of the organization here) has a local content of _____ % and this meets the local content requirement for 'Class-I local supplier' / 'Class II local supplier' ** as defined in Public Procurement (Preference to Make in India), Order 2017-Revision dated 04.06.2020 issued by DPIIT and subsequent order(s).

The details of the location(s) at which the local value addition is made are as follows:

1. _____ 2. _____

3. _____ 4. _____

...

Thanking you,

Yours faithfully,

**(Signature, Date & Seal of
Authorized Signatory of the Bidder)**

**** - Strike out whichever is not applicable.**

Note:

1. Bidders to note that above format, duly filled & signed by authorized signatory, shall be submitted along with the techno-commercial offer.
2. In case the bidder's quoted value is in excess of Rs. 10 crores, the authorized signatory for this declaration shall necessarily be the statutory auditor or cost auditor of the company (in the case of companies) or a practising cost accountant or practicing chartered accountant (in respect of suppliers other than companies).
3. In the event of false declaration, actions as per the above order and as per BHEL Guidelines shall be initiated against the bidder.

DECLARATION REGARDING COMPLIANCE TO RESTRICTIONS UNDER RULE 144 (xi) OF GFR 2017

(To be typed and submitted in the Letter Head of the Entity/ Firm providing certificate as applicable)

To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir,

Sub: Declaration regarding compliance to Restrictions under Rule 144 (xi) of GFR 2017

Ref: 1) GeM Bid Specification No:

2) All other pertinent issues till date

I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India. I certify that _____ (**SPECIFY THE NAME OF THE ORGANIZATION HERE**), is not from such a country/ has been registered with the Competent Authority (*attach valid registration by the Competent Authority, i.e., the Registration Committee constituted by the Dept for Promotion of Industry and Internal Trade (DPIIT).*

I hereby certify that we fulfil all requirements in this regard and is eligible to be considered.

Thanking you,
Yours faithfully,

**(Signature, Date & Seal of
Authorized Signatory of the Bidder)**

Note: Bidders to note that in case above certification given by a bidder, whose bid is accepted, is found to be false, then this would be a ground for immediate termination and for taking further action in accordance with law and as per BHEL guidelines

BANK ACCOUNT DETAILS FOR E-PAYMENT

(To be given on Letter head of the Company /Firm of Bidder, and **ENDORSED (SIGNED & STAMPED)**
BY THE BANK to enable BHEL release payments through Electronic Fund Transfer (EFT/RTGS)

1. Beneficiary Name :

2. Beneficiary Account No. :

3. Bank Name & Branch :

4. City/Place :

5. 9 digit MICR Code of Bank Branch :

6. IFSC Code of Bank Branch :

7. Beneficiary E-mail ID :
(for payment confirmation)

NOTE: In case Bank endorsed certificate regarding above has already been submitted earlier, kindly submit photocopy of the same

POWER OF ATTORNEY for SUBMISSION OF TENDER

(To be typed on non-judicial stamp paper of minimum Rs. 100/- and Notarized)

KNOW ALL MEN BY THESE PRESENTS, that I/We do hereby make, nominate, constitute and appoint Mr. _____, whose signature given below herewith to be true and lawful Attorney of M/s. _____ hereinafter called 'Company', for submitting Tender/entering into Contract and inter alia, sign, execute all papers and to do necessary lawful acts on behalf of Company with M/s Bharat Heavy Electricals Ltd, Central Procurement Cell (CPC), in connection with _____vide GeM Bid No: _____, dated _____.

And the Company do hereby agree to ratify and confirm all acts, deeds, things or proceedings as may be lawfully done by the said attorney and by or on behalf of the company and in the name of the company, by virtue of the powers conferred herein and the same shall be binding on the company and shall have full force and effect.

IN WITNESS WHEREOF, the common seal of the company has been hereunto affixed in the manner hereinafter appearing on the document.

Dated at _____ this _____ day of _____

Director/CMD/Partner/Proprietor

Signature of Mr. _____ (Attorney)

Attested by: Director/CMD/Partner/Proprietor

Witness

Notary Public

NON DISCLOSURE AGREEMENT

THIS NON DISCLOSURE AGREEMENT (this "**Agreement**") entered into on this day of June, 20.. (the "**Effective Date**")

By and Between

Bharat Heavy Electricals Limited (a Public Sector Undertaking of Government of India), a company incorporated under the Companies Act, 1956 and having its registered office at having its registered office at "BHEL House", Siri Fort, New Delhi - 110 049, India (hereinafter referred to as "**BHEL**" of which the expression shall unless repugnant to the context or the meaning thereof be deemed to include its successors and permitted assigns) (hereinafter referred to as "BHEL"),

And

ABC, a Company incorporated under the laws of and having its registered office at (hereinafter referred to as "ABC").

The party who is receiving information would be referred as Receiving Party and the party who is disclosing information would be referred as Disclosing Party, as the context requires.

WHEREAS

- (A) The Disclosing Party and The Receiving Party wish to explore and discuss the potential of certain mutually advantageous business relationships for _____, for the purpose ofproducts in India ('the Purpose');
- (B) The Disclosing Party, in furtherance of such business relationship, will disclose certain information, including but not limited to, scientific, development, financial, marketing, sales or other proprietary information;
- (C) The Receiving Party and the Disclosing Party wish to protect and preserve the confidentiality of such information provided by the Disclosing Party to the Receiving Party by preventing its unauthorized disclosure and use, in accordance with the terms of this Agreement; and
- (D) The Receiving Party agrees to hold such information in strict confidence and not to disclose or to use, directly or indirectly, for any purpose other than the performance of this Agreement

NOW, THEREFORE and in consideration of the promises made herein, their mutual and individual interests, and other good and valuable consideration, the receipt and sufficiency of all of which is hereby acknowledged, the Parties agree as follows:

-
-
1. **PURPOSE:** Purpose to ne mentioned here.
 2. **DISCLOSING PARTY.** means a Party that discloses the confidential information to the other party under this agreement.
 3. **RECEIVING PARTY** means a Party that receives the confidential information from the other party under this agreement.
 4. **Confidential Information**
 - (a) Subject to the provisions of this Agreement, all information disclosed by the Disclosing Party to the Receiving Party, shall be deemed to be "Confidential Information" for the purposes of this Agreement.
 - (b)
 - (i) It is clarified that Confidential Information shall include, but is not limited to, any trade secret, technique, strategy, component, concept, program, report, study, memorandum, correspondence, documentation, information, manual, record, data, technology, product, plan, design, procedure, method, invention, sample, notes, summaries, analyses, compilations and other writings, producing any such sample, medium, test data relating to any research project, work in progress, future development, engineering, manufacturing, marketing, pricing, billing, servicing, financing, personnel matter, its present or future products, sales, suppliers, clients, customers, employees, investors, or any other information which the Disclosing Party provides to the Receiving Party whether in oral, written, graphic or electronic form and whether or not such information is identified as such by an appropriate stamp or marking. The Confidential Information shall also include all reports, notes or other material prepared by the Receiving Party based on the Confidential Information and/ or any discussion thereon.
 - (ii) Confidential Information includes information disclosed by the Disclosing Party or by any individual, firm or corporation controlled by, controlling, or under the common control of the Disclosing Party.
 - (c) Confidential Information shall not include any information which the Receiving Party can demonstrate to the Disclosing Party:
 - (1) is now, or has become, through no act or failure to act on the part of the Receiving Party, generally known or available to the public;
 - (2) is known by the Receiving Party at the time of receiving such information as evidenced by its records;
 - (3) is discovered/independently developed by the Receiving Party independent of any disclosures by the Disclosing Party; or

-
- (4) is hereafter furnished to the Receiving Party by a third party, as a matter of right and without restriction on disclosure.

- (d) Notwithstanding any other provision of this Agreement, the Receiving Party shall be permitted to disclose Confidential Information if such disclosure is in response to a valid order of a court or other governmental body, provided, however, that the Receiving Party shall be required to give prior notice in writing to the Disclosing Party so that the Disclosing Party may seek an appropriate protective order including that the Confidential Information so disclosed be used only for the purposes for which the order was issued;

5. **Disclosure**

In consideration of the disclosure of Confidential Information by, the Recipient hereby agrees to:

- (a) Shall treat as confidential and safeguard all information disclosed and/or its Affiliates in connection
- (b) to hold the Confidential Information in strict confidence and to take all necessary precautions to protect such Confidential Information (including, without limitation, all precautions the Recipient employs with respect to its own confidential materials);
- (c) limit disclosure of any Confidential Information to its concerned directors, officers and employees, (collectively "Representatives") strictly only to who have a need to know such Confidential Information in connection with the Transaction between the parties to which this Agreement relates, and only for that purpose;
- (d) advise its Representatives of the proprietary nature of the Confidential Information and of the obligations set forth 2 in this Agreement and require in writing such Representatives to keep the Confidential Information confidential;
- (e) shall keep all Confidential Information strictly confidential by using a reasonable degree of care, but not less than the degree of care used by it in safeguarding its own confidential information;
- (f) not disclose any Confidential Information received by it to any third party; and
- (g) not to copy or reverse engineer any such Confidential Information.
- (h) not to use the Confidential Information for any purpose other than the Transaction.
- (i) not use the information for any scientific research or any other research.
- (j) Confidential information does not include information:
 - a. Which is generally available to the public other than as a result of a breach of this Agreement; or
 - b. Which is already in the possession of Recipient without restriction prior to any disclosure hereunder; or

-
-
- c. Which is or has been lawfully disclosed to Recipient by someone who is free lawfully to disclose the same without confidentiality restrictions; or
 - d. Which is independently developed by Recipient or its Affiliates and no Confidential information disclosed hereunder has been used directly or indirectly in such development; or
 - e. Whose applicable period of confidentiality pursuant hereto, or such other period specifically agreed to in writing by the parties, has ended
- (k) This agreement is not intended to, and does not, oblige either party to enter into any further agreements or to proceed with the transaction, any possible relationship or other transaction. Recipient acknowledges that Discloser makes no representation or warranty whether express or implied, as to the accuracy or completeness of Confidential information, and Discloser disclaims any and all liability unless contained in any definitive agreement.

Each Party will comply with all applicable data protection laws and regulations. Where applicable in particular if one Party receives access to and processes personal data on behalf of the other party in connection with this Agreement and such processing agreement, the Parties will enter into any required data processing of other data protection agreement

6. Restriction on Use

- (a)** The Receiving Party and its Representatives shall hold the Confidential Information received from the Disclosing Party in confidence, and shall not, directly or indirectly:
 - (i) disclose the Confidential Information to any third party; or
 - (ii) use the Confidential Information for any purpose other than the permitted Purpose.
- (b)** The Receiving Party shall not use the Confidential Information for any purpose or in any manner, which would constitute a violation of any applicable laws or regulations, directly or indirectly.
- (c)** The Confidential Information shall be the property of the Disclosing Party. No rights, licenses or interests including, but not limited to, trademarks, inventions, copyrights or patents are implied, transferred or granted in relation to the Confidential Information provided by the Disclosing Party to the Receiving Party under this Agreement.
- (d)** The Receiving Party shall not reproduce the Confidential Information in any form except as needed for the Purpose of the Agreement as set out above or with the prior written consent of the Disclosing Party.

(e) All the title and rights in the Confidential Information shall be reserved with the respective Discloser and/or its licensors and no rights or obligations other than those expressly set out in this Agreement are granted or to be implied from this Agreement. In particular no license is granted to the Recipient, directly or indirectly, by this Agreement relating to any invention, discovery, patent, copyright or other industrial or intellectual property right now or in the future.

7. Protection of Confidential Information

- (a) The Receiving Party represents and warrants that it shall protect the Confidential Information received with utmost care and diligence.
- (b) All Confidential Information shall be promptly returned to the Disclosing Party after the Receiving Party's need for it has expired, or upon request of the Disclosing Party, and in any event, upon completion or termination of this Agreement.

8. No Further Warranties

The Confidential Information shall be disclosed on an "**as is**" basis only and without any warranties of any kind, including but not limited to, warranties of merchantability or fitness for a particular purpose.

9. No Further Business Arrangement

Nothing contained herein shall be construed to obligate either Party to enter into any further agreements with each other. This Agreement does not create any other business arrangement, including but not limited to any partnership, agency or joint venture, between the Parties.

10. Term

The term of this Agreement shall commence on the Effective Date and valid for the period of two (2) years. The Disclosing party shall have a right to terminate this Agreement by giving a written notice of 30 days to the Receiving Party. However, the Receiving Party obligation to protect and restrict the use of Confidential Information under this Agreement shall continue until such time as the Disclosing Party discloses it to the public or when it otherwise becomes part of the public domain through no action of the Receiving Party.

11. Injunctive remedy

The Recipient acknowledges that the Confidential Information to be disclosed hereunder is commercially sensitive of a unique and valuable character, and that the unauthorized dissemination of the Confidential Information would destroy or diminish the value of such information. The damages that would result from the unauthorized dissemination of the

Confidential Information would be impossible to calculate. Therefore, Recipient hereby agrees that the affected Discloser shall be entitled to injunctive relief preventing the dissemination of any Confidential Information in violation of the terms hereof. Such injunctive relief shall be in addition to any other remedies available hereunder, whether at law or in equity. The affected Discloser shall be entitled to recover all its damages, costs and fees, including reasonable attorneys' fees, incurred in obtaining any such relief. Further, in the event of litigation relating to this Agreement, the prevailing party shall be entitled to recover its reasonable attorney's fees and expenses.

12. Return of Confidential Information

Recipient shall immediately return and redeliver to the respective Discloser all tangible material embodying the Confidential Information provided hereunder and all notes, summaries, memoranda, drawings, manuals, records, excerpts or derivative information deriving there from and all other documents or materials ("Notes") (and all copies of any of the foregoing, including "copies" that have been converted to computerized media in the form of image, data or word processing files either manually or by image capture) based on or including any Confidential Information, in whatever form of storage or retrieval, upon the earlier of (i) the completion or termination of the dealings between the parties contemplated hereunder; (ii) the termination of this Agreement; or (iii) any breach of this agreement, in which case the party in breach shall also be liable towards the Disclosers under the law and this Agreement or (iv) at such time as the respective Discloser may so request; provided however that the Recipient may retain such of its documents as is necessary to enable it to comply with its document retention policies. Alternatively, the Recipient, with the written consent of the respective Discloser may immediately destroy any of the foregoing embodying Confidential Information (or the reasonably non-recoverable data erasure of computerized data) and, upon request, certify in writing such destruction by an authorized officer of the Recipient supervising the destruction).

13. Notice of Breach

Recipient shall notify the Disclosers immediately upon discovery of any unauthorized use or disclosure of Confidential Information by Recipient or its Representatives, or any other breach of this Agreement by Recipient or its Representatives, and will cooperate with efforts by the Discloser regain possession of Confidential Information and prevent its further unauthorized use.

14. Survival

The provisions of Clauses 8, 9 & 10 of this Agreement, and the rights and obligations contained there under shall not terminate upon termination of this Agreement.

15. Governing Law & Dispute Resolution

The contract shall be governed by the Law for the time being in force in the Republic of India. Civil Court having original Civil Jurisdiction at (name of Place) shall alone have exclusive jurisdiction in regard to all matters in respect of this agreement.

Except as provided elsewhere in this Contract, in case amicable settlement is not reached between the Parties, in respect of any dispute or difference; arising out of the formation, breach, termination, validity or execution of the Contract; or, the respective rights and liabilities of the Parties; or, in relation to interpretation of any provision of the Contract; or, in any manner touching upon the Contract, then, either Party may, by a notice in writing to the other Party refer such dispute or difference to arbitration. The arbitration shall be conducted by three arbitrators, one to be appointed by each of the Parties and a third arbitrator to be appointed by the mutual consent of the two arbitrators so appointed by the Parties.

The Arbitrator shall pass a reasoned award and the award of the Arbitrator shall be final and binding upon the Parties. Subject as aforesaid, the provisions of Arbitration and Conciliation Act 1996 (India) or statutory modifications or re-enactments thereof and the rules made thereunder and for the time being in force shall apply to the arbitration proceedings under this clause. The seat of arbitration shall be _____(the place from where the contract is issued)

16. No Publication

Neither Party shall disclose, publicise or advertise in any manner the discussions or negotiations contemplated by the Agreement without the prior written consent of the other Party, except as may be required by law.

17. Miscellaneous

- (a) This Agreement constitutes the entire understanding between the parties and supersedes any and all prior or contemporaneous understandings and agreements, whether oral or written, between the parties, with respect to the subject matter hereof. This Agreement can only be modified by a written amendment signed by the party against whom enforcement of such modification is sought.
- (b) Any failure by a Discloser to enforce the Recipient's strict performance of any provision of this Agreement will not constitute a waiver of its right to subsequently enforce such provision or any other provision of this Agreement.

- (c) Although the restrictions contained in this Agreement are considered by the parties to be reasonable for the purpose of protecting the Confidential Information, if any such restriction is found by a court of competent jurisdiction to be unenforceable, such provision will be modified, rewritten or interpreted to include as much of its nature and scope as will render it enforceable. If it cannot be so modified, rewritten or interpreted to be enforceable in any respect, it will not be given effect, and the remainder of the Agreement will be enforced as if such provision was not included.
- (d) Any notices or communications required or permitted to be given hereunder may be delivered by hand, deposited with a nationally recognized overnight carrier, electronic-mail, or mailed by certified mail, return receipt requested, postage prepaid, in each case, to the address of the other party first indicated above (or such other addressee as may be furnished by a party in accordance with this paragraph). All such notices or communications shall be deemed to have been given and received (a) in the case of personal delivery or electronic-mail, on the date of such delivery, and (b) in the case of delivery by a nationally recognized overnight carrier, on the third business day following dispatch.
- (e) Parties shall not directly or indirectly assign or transfer it by operation of law or otherwise without the prior written consent of the Disclosers, which consent will not be unreasonably withheld. All obligations contained in this Agreement shall extend to and be binding upon the parties to this Agreement and their respective successors, assigns and designees.
- (f) Paragraph headings used in this Agreement are for reference only and shall not be used or relied upon in the interpretation of this Agreement.

18. Notices

All notices, documents, consents, approvals or other communications (a 'Notice') to be given hereunder shall be in writing and shall be transmitted by first class registered or recorded delivery mail to the person at the address specified herein below, or by telex, facsimile or other electronic means in a form generating a record copy to the party being served at the relevant address for that party shown herein below. Any Notice sent by mail shall be deemed to have been duly served on receipt of delivery confirmation. Any Notice sent by telex facsimile or other electronic means shall be deemed to have been duly served at the time of transmission.

Notice if to:

BHEL, then to,

Phone :

Fax :

E-mail :

ABC, then to,

(Name)_____

(Designation)_____

Phone :

Fax :

E-mail :

19. Counterparts, Telefax Signatures

This Agreement may be signed in two counterparts, each of which is to be considered an original, and taken together as one and the same document.

IN WITNESS WHEREOF, of their Agreement to the terms and conditions contained herein, the undersigned have caused this Agreement to be executed by their duly authorized representatives:

For Bharat Heavy Electricals Limited	For ABC
Signature: Name: Designation:	Signature: Name: Designation:
Signature: Name: Designation:	Signature: Name: Designation:

BOTH SIDED