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| Domain :           | bhel.abcprocure.com |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                        |
| Parent department: | BHEL Trichy         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                        |
| Unit name          | :                   | BHEL Trichy                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                        |
| Purchase group     | :                   | FB Sub-Dely(Mech).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | RFQ/NIT/Enquiry Officer : SRIKESHNAYAR |
| Event ID           | :                   | 37088                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | RFQ/NIT/Enquiry no. : 1801901100       |
| Enquiry Date       | :                   | 18/11/2019 05:30:00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                        |
| Tender Description | :                   | GOGGLE VALVE (NON ENCASED TYPE) WITH ACCESSORIES AS PER ENCLOSED TECHNICAL SPECIFICATION TOS:GOGGLE:006B/REV.01 & TOS:BFG:003/REV.01 SUITABLE FOR FUEL GAS AS PER TSK:BFG:003A/REV.00 TOWARDS TATA STEEL LTD PROJECT (2X250 TPH CPP)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                        |
| Terms & Conditions | :                   | <p>01) The Tender will be operated on TWO PART BID basis and you are requested to submit Techno-commercial bid and Price bids in E-procurement site.(Vendors who are not having DSC, shall obtain the same &amp; quote accordingly). For details related to bidding through e-procurement site (abcprocure) please visit URL - <a href="https://bhel.abcprocure.com">https://bhel.abcprocure.com</a>. Refer the following documents in the site - minimum system requirement &amp; Bidder manual.</p> <p>02) Point wise confirmation to allour technical specifications (TOS:GOGGLE:006B/rev.01, TOS:BFG:003/Rev.01, Goggle valve-E , C &amp; I input details &amp; TSK:BFG:003A/REV 00) &amp; filled in vendor checklist of TOS:GOGGLE:006B/rev.01 (Part-II), shall be furnished along with the offer. Also, pls. furnish the weight &amp; dimensional drawing along with the offer.</p> <p>03) All the technical documents, as indicated in our technical specification TOS: BFG: 003/01 pg.4 sl no-12 has to be submitted along with the ofer for our technical evaluation Incomplete offer will lead to rejection, please be noted.</p> <p>04) Please confirm the PQR(Annxure-I)along with the required documents and submit the filled in AnnexureA (applicable commercial terms and conditions) along with the techno- commercial bid for evaluation.</p> <p>PLS. NOTE THAT,OFFERS NOT MEETING THEPQR WILL NOT BE CONSIDERED FOR FURTHER EVALUATION</p> <p>05) The tender will be considered on total quantity/package basis for evaluation and ordering.</p> <p>06) Delivery term:</p> <p>A. For Indigenous Suppliers: The quote shall be on FOR TATA Steel Kalinganagar project site basis (Odisha state). Packing &amp; forwarding, Freight to your account. Transit Insurance is on BHEL scope Ex-Works Contracts will not be entertained.</p> <p>B. For Import Suppliers: Bidders should submit their offer on CFR Chennai Seaport basis with freight break up details. Pls. indicate the freight breakup details. Transit insurance is on BHEL scope BHEL reserves the right to order on FOB or CFR basis.</p> <p>07) The materials are required for TATA Steel Ltd 2 X 250 TPH Project</p> |                                        |

- 08) Specific confirmation is required for the following commercial terms and conditions attached separately with this enquiry as Annexure -A. Offer will be evaluated on total cost to BHEL after all loadings as applicable.
- 09) Offers will be considered subjected to Customer approval and accordingly price bids of the customer approved vendor's offer only will be opened with due intimation.
- 10) In case of PO placement, PO acknowledgement has to be submitted within 5 days from the date of PO..
- 11) Third party non-disclosure agreement has to be signed & submitted. Deviation may lead to rejection of your offer.
- 12) The offers of the bidders who are under suspension as also the offers of the bidders, who engage the services of the banned firms, shall be rejected. The list of banned firms is available on BHEL web site [www.bhel.com](http://www.bhel.com).
- 13) 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.
- 14) 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.
- 15) The bidder has to keep track of any changes by viewing the addendum / Corrigendum's issued by the Purchaser on time-to-time basis in the E-Procurement platform. The Company calling for tenders shall not be responsible for any claims/problems arising out of this.
- 16) Before uploading scanned documents, the bidders shall sign on all the statements, documents, certificates uploaded by him, owning responsibility for their correctness / authenticity.
- 17) Disclaimer Clause : The Organization (Bharat Heavy Electricals Ltd.) nor the service provider (ABC procure.) is responsible for any failure of submission of bids due to failure of internet or other connectivity problems or reasons thereof.

Enclosures:

- 01) Special Conditions Annexure I (Technical Pre Qualification Requirement)
- 02) Annexure-A (Applicable Commercial terms & conditions and Loading)
- 03) BHEL Technical Specification TOS:GOGGLE:006B/rev.01
- 04) BHEL Technical Specification TOS:BFG:003/Rev.01
- 05) Goggle valve-E , C & I input details
- 06) TSK:BFG:003A/REV 00
- 07) Annexure C for MSE clause
- 08) Third party non-disclosure agreement

|                                      |   |                                                                                                                                                                      |                                                                                     |
|--------------------------------------|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| 09) PBG format                       |   |                                                                                                                                                                      |                                                                                     |
| 10) List of consortium banks         |   |                                                                                                                                                                      |                                                                                     |
| 11) Applicable painting schedule     |   |                                                                                                                                                                      |                                                                                     |
| Product / service / work keywords    | : | Valve,                                                                                                                                                               |                                                                                     |
| No. of Bid Parts                     | : | Multiple                                                                                                                                                             | Envelope : Techno-commercial bid , Price bid                                        |
| Type of contract                     | : | Goods                                                                                                                                                                | Project duration / delivery or completion period : 05 months from document approval |
| Download document                    | : | Before login                                                                                                                                                         | RFQ floated under the policy : PP-PURCHASE POLICY                                   |
| Estimated Category                   | : | M                                                                                                                                                                    | Delivery/Location At : FOR Site/CFR basis                                           |
| Delivery Date                        | : | 31/03/2020 05:30:00                                                                                                                                                  | Inspection by Agency : BHEL nominated TPI agency/BHEL/Customer                      |
| Inspection Location                  | : | At vendor works, before dispatch                                                                                                                                     | Min. bid required : 01                                                              |
| Bid submission configuration         |   |                                                                                                                                                                      |                                                                                     |
| Bid evaluation                       | : | Grand Total Package                                                                                                                                                  | Bidding access : Open Tender                                                        |
| Base currency                        | : | INR                                                                                                                                                                  | Bidding type : ICB/Global                                                           |
| Bidding currencies                   | : | YEN,EURO,USD,POUND,RUPIA,AED,MVR,MUR,OMR,SGD,IDR,SAR( Saudi Riyal),Sri Lankan Rupee (LKR),Swiss Franc,MXN (Mexican Peso),PHP (Philippine Peso),Taka (bangladesh),INR |                                                                                     |
| Key configuration                    |   |                                                                                                                                                                      |                                                                                     |
| Pre-bid meeting                      | : | Don't allow                                                                                                                                                          |                                                                                     |
| Dates configuration                  |   |                                                                                                                                                                      |                                                                                     |
| Document downloading start date      | : | 19/11/2019 12:00:00                                                                                                                                                  | Document downloading end date : 02/12/2019 14:00:00                                 |
| Bid submission start date            | : | 19/11/2019 12:00:00                                                                                                                                                  | Bid submission end date : 02/12/2019 14:00:00                                       |
| Bid opening date                     | : | 02/12/2019 14:05:00                                                                                                                                                  |                                                                                     |
| Document / EMD / Security fee detail |   |                                                                                                                                                                      |                                                                                     |
| Document fees                        | : | Not required                                                                                                                                                         | EMD : Not required                                                                  |
| Bidding forms                        |   |                                                                                                                                                                      |                                                                                     |
| Price bid                            |   |                                                                                                                                                                      |                                                                                     |
| Price bid                            |   |                                                                                                                                                                      |                                                                                     |

| Item description                                                                          | Quantity | Unit |
|-------------------------------------------------------------------------------------------|----------|------|
| GOGGLE VALVE (NON ENCASED TYPE) WITH ACCESSORIES AS PER ATTACHED TECHNICAL SPECIFICATIONS | 2.00     | NO   |

Disclaimer clause: The calculation shown here is for information purpose only. Suppliers should not treat the same as final. BHEL will release order on L1 supplier finalised as per tender terms and conditions and procedure.

## Information for Online Participation

Bidder who wish to participate in this tender needs to procure Digital Certificate as per Information Technology Act-2000 using that they can digitaly sign their electronic bids. Bidders can procure the same from any or the CCA approved certifying agencies, or they may contact e-Procurement Technologies Ltd. at below mentioned address and they will assist them in procuring the same. Bidders who already have a valid digital Certificate need not to procure the same. In case bidders need any clarification regarding online participation, they can contact,

e-Procurement Technologies Ltd.

Corporate Office:

Address : A-201/208, Wall Street - 2, Opp. Orient Club,  
Nr. Gujarat College, Ellis Bridge,  
Ahmedabad - 380006, Gujarat(INDIA)

## Digital Certificate Contacts

Contact Person : Mr. Himalay Vaishnav

Cell : +91-9099090830

Phone Nos. : +91-9099090830

Fax No :

e-Mail : info@abcProcure.com

## Support Team Contacts

Contact Person : BHEL Support Team Ahmedabad

Cell : +91-9265562819

Phone Nos. : +91-79-68136809/872/823/871

Fax No :

e-Mail : Bhel.Support@abcProcure.com

Bidder who wish to participate in e-Tender need to fill data in predefined forms of Price bid available in respective tender only. After filling data in predefined forms bidders need to click on final submission link to submit their encrypted bid. Bidder need to submit Document Fees, EMD & Reference Documents in hard copy if such instruction are given by tendering authority. As Per the new Inter-operability guidelines released by Controller of Certifying Authorities(CCA), the Secured Socket Layer(SSL) certificate for a e-procurement application is generated on a new algorithm, SHA2.

Also, the Digital Certificates that will be applicable for these platforms have to be SHA2 algorithm complaint. For the same, the users have to ensure that they have Windows XP(SP3)/Windows Vista/Windows7 installed in their respective PC/Laptop. In case of Windows XP Service pack - 3, if you get any issue you can install the SSL patch, which is available at our download section of our e-Tender/e-Auction Portal and also at our corporate website [www.abcprocure.com](http://www.abcprocure.com) just below the label of "Knowledge section".

## Fraud Prevention

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.

## Preference to Make in India

For this procurement, Public Procurement (Preference to Make in India), order 2017 dated 15.06.2017 & 28.05.2018 and subsequent orders issued by the respective Nodal ministry shall be applicable even if issued after issue of this NIT but before finalization of contract/PO/WO against this NIT. In the event of any Nodal Ministry prescribing higher or lower percentage of purchase preference and/ or local content in respect of this procurement, same shall be applicable. Default margin of purchase preference shall be 20% to local suppliers with default minimum local content of 50%.

**Annexure I**  
**Technical Pre-Qualification Requirement for Goggle Valve Vendors**

1. The vendor shall be an established manufacturer of goggle valves of encasing type and Non-encasing type for Blast furnace gas application. Vendor shall have adequate Engineering, Manufacturing, testing and service facilities.
2. The supplier shall have experience of having supplied the goggle valves of sizes not less than NB1400 mm pipe diameter in either steel making industry or power plants for Blast furnace gas application. Vendor should have executed a similar job in the last 5 years. The supplier shall have experience of having supplied the goggle valves for applications of similar severity as specified in the enquiry.
3. The goggle valve offered shall be from the existing regular manufacturing range of the supplier. Vendor shall provide the Product catalogue of the offered model and general reference list supplied to various customer along with the offer.
4. Vendors to submit the following document in proof of the above point to the fullest satisfaction of BHEL.
  - a. Product catalogue
  - b. Minimum one Purchase order for goggle valve with respective GA drawings (within last five years from the date of enquiry) to meet the above said conditions.
  - c. Minimum one Customer inspection report/performance certificate as proof of successful execution of the order



An ISO 9001  
Company

**Bharat Heavy Electricals Limited**  
(High Pressure Boiler Plant)  
Tiruchirappalli-620 014, Tamil Nadu, India  
Dept: MATERIALS MANAGEMENT/BOI

**Annexure – A- Terms and Conditions**

**ACCEPTANCE OF TECHNO - COMMERCIAL TERMS & CONDITIONS BY THE BIDDERS**

|                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                            |
|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|
| <b>Description of the Equipment:</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>Goggle valve-Non Encased Type</b>       |
| <b>Enquiry No:</b>                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>Enq No 1801901100/14 dt. 18.11.2019</b> |
| <b>Sl. No.</b>                       | <b>Terms and conditions</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>Vendor's confirmation</b>               |
| 1 (a)                                | <p><b><u>Technical:</u></b><br/>Supply shall be as per BHEL's Technical Specifications (TOS:GOGGLE;006B/REV.01,TOS:BFG:003/REV.01, TSK:BFG:003A/REV.00 AND GOGGLE VALVE-E,C &amp; I INPUT DETAILS), Annexure-I &amp; Annexure-A attached with the enquiry, without deviation.</p> <p>Pl note that document approval (Drawings/Technical documents and QP) by BHEL and Customer is applicable.</p>                                                                                                                                         |                                            |
| 1 (b)                                | <p>Inspection by BHEL or BHEL Approved Third Party Inspection Agencies/Any IBR approved TPI agency &amp; Customer at vendor works before dispatch is applicable.</p> <p>Shipment shall be made only after obtaining despatch clearance from BHEL/MDCC from Customer.</p>                                                                                                                                                                                                                                                                  |                                            |
| 1 (C)                                | Confirmation & submission of all PQR documents as per annexure -I (Technical pre-qualification requirements)                                                                                                                                                                                                                                                                                                                                                                                                                              |                                            |
| 1 (d)                                | Offer will be considered as package basis for evaluation & ordering, as indicated in the tender. Evaluation will be on total cost to BHEL, after all loadings as applicable.                                                                                                                                                                                                                                                                                                                                                              |                                            |
| 1 (e)                                | Pl note that your offer consideration is subject to Techno- Commercial Suitability & Customer approval.                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                            |
| 2                                    | <p><b><u>Firm Price:</u></b><br/>The quoted / finalised rates shall be Firm till execution of the supplies. Offer with Price Variation Clause (PVC) will not be considered.</p>                                                                                                                                                                                                                                                                                                                                                           |                                            |
| 3                                    | The tender will be operated in two part bid system. One-part consisting of Technical bid with Commercial terms & conditions and other part is Price Bid. Based on the above and other conditions, as well as technical capability, vendors will be short-listed. The Techno-commercial bid will be opened on the due date and based on the suitability of techno-commercial bid, the price Bid of the techno-commercial suitable qualified vendors will be considered and opened on a suitable date with due intimation to vendors.       |                                            |
| 4                                    | <p><b><u>Delivery term For indigenous Suppliers:</u></b><br/>The quote shall be on FOR TATA Steel Ltd Kalinganagar project site Basis (Odisha state). Packing &amp; forwarding and Freight to yours account.</p> <p>Transit Insurance is on BHEL scope</p> <p><b><u>Ex-Works Contracts will not be entertained.</u></b></p> <p><b><u>Delivery term For Import Suppliers</u></b><br/>Bidders should submit their offer on CFR Chennai Seaport basis with freight break up details. Pls. indicate the freight breakup details. FOB rate</p> |                                            |

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|       | will be arrived by subtracting the corresponding freight break up from the CFR rate. BHEL reserves the right to order on FOB or CFR basis. Insurance on BHEL scope.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |
| 5 (a) | <p><b><u>Payment terms for Indigenous Suppliers:</u></b></p> <p>“100% direct EFT payment after 60 days from the date of dispatch against site acknowledgement and against 10% PBG valid for the Guarantee period.”</p> <p><b><u>Payment terms for Import Suppliers:</u></b></p> <p>“100% payment on CAD basis after 60 days from the date of receipt of documents, specified in PO, at BHEL bank &amp; against 10% PBG valid for the Guarantee period. Respective bank charges to respective account.</p> <p><b><u>For New suppliers</u></b></p> <p>For new suppliers not registered with BHEL, Trichy for the product, Payment shall be made 60 days after receipt and acceptance of materials &amp; against 10% PBG valid for the Guarantee period.</p> <p>In case of foreign supplier, first lot of mutually agreed quantity shall be supplied with payment as CAD basis after 60 days from the date of receipt &amp; acceptance of material &amp; against 10% PBG valid for the Guarantee period. If insisted for LC, after acceptance of first lot, only Usance LC with 60 days credit will be opened one month prior to material readiness &amp; against 10% PBG valid for the Guarantee period.</p> <p><b>Note:</b> PBG format is attached with the Enquiry. No deviation is permitted &amp; the deviated offers are liable for rejection. PBG shall be submitted for 10% of the PO value and the validity of the PBG shall have a validity period till the Guarantee period &amp; the claim period shall have three months extra.</p> |  |
| 5 (b) | <p><b><u>Loading Criteria:</u></b></p> <p><b><u>a) If any advance payment required (Indigenous/Import)</u></b></p> <p>“1. Advance payment shall be interest bearing and secured through Bank Guarantee/s and shall be limited to a maximum of 5% of the PO value.</p> <p>2. Interest rate shall be base rate of SBI (on the data of release of advance) plus 6%.</p> <p>The Bank Guarantee shall be for 110% of the value of advance, so as to enable recovery of not only principal but also the interest portion, if so required.</p> <p>3. Wherever advance against PO has been provided, no further activity linked advance will be allowed.</p> <p>4. Recovery of advance along with the interest will be made from the first bill to the maximum extent possible and subsequent bill”</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |

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|       | <p><b><u>b) for LC mode of payment (For Import Suppliers)</u></b></p> <p>In the case of LC payment, only usance LC with 60 days credit will be opened one month prior to material readiness, further loading will be considered @ 1.5% on the offered value. Hence supplier shall intimate the material readiness accordingly for opening LC. LC validity period will be 90 days and for any extension, applicable charges will be to supplier's account. Also, 10% PBG valid for the Guarantee period has to be submitted.</p>                                                                                                                                                                                                   |  |
| 6 (a) | <p><b><u>Liquidated damages:</u></b></p> <p>Delivery of the goods specified in the purchase order should be made within the time prescribed. Failure to dispatch the materials in the time as per the delivery quoted in our Purchase Order would make the supplier liable to an un-conditional LD at the rate of 0.5% of the total order value per week of the delay or part thereof subject to a maximum of 10% of the total order value.</p> <p>In case of PO placements, required documents have to be submitted for approval within 15 days from the date of PO &amp; reply for any further clarification has to be within 7 days. Any delay beyond the above specified period will be considered during LD calculation.</p> |  |
| 6 (b) | <p><b><u>Loading Criteria for arriving the L1 rate:</u></b></p> <p>Any deviation on BHEL LD clause, loading (Offered Value) will be applied to the extent to which it is not agreed by the bidder.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |
| 7 (a) | <p><b><u>Guarantee / Warranty Period:</u></b></p> <p>Guarantee clause applicable is "18 months from the date of supply or 12 months from the date of commissioning, whichever is earlier.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |
| 7 (b) | <p><b><u>Loading Criteria:</u></b></p> <p><b><u>Guarantee / Warranty Period:</u></b> No Deviation is permitted. If still vendor offered any deviation on the Guarantee / warranty period, it may lead to rejection of offer.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |
| 8     | <p><b><u>Risk purchase:</u></b></p> <p>If the supplier fails to deliver the goods within the delivery specified in the Purchase Order, BHEL will be entitled to terminate the contract and to Purchase elsewhere at the risk and cost of the seller either the whole of the goods or any part which the supplier has failed to deliver or despatch within the delivery period mentioned in the Purchase Order.</p>                                                                                                                                                                                                                                                                                                                |  |
| 9     | <p><b><u>Delivery Period</u></b></p> <p>Delivery period shall be 05 months from PO</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |
| 10    | <p><b><u>For Indigenous Vendor-</u></b><br/>LR date will be considered for LD calculation.</p> <p><b><u>For Import Suppliers-</u></b><br/>OBL date will be considered for LD calculation.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |
| 11    | <p><b><u>Validity:</u></b></p> <p>120 days minimum from techno commercial bid opening (Part-1). Any Deviation with respect to validity your offer will not be considered. Ensure your quoted rates will have 120 days minimum validity from techno</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |

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|    | commercial bid opening. The delay in responding to BHEL technical clarification beyond four days will be subsequently added to the validity period, Revised Price Bids will not be encouraged.                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
| 12 | <b>For Import Suppliers, PORT OF LOADING SHOULD BE INDICATED WITHOUT FAIL. Weight of the Total Consignment shall be indicated in the offer.<br/>PORT OF DISCHARGE – Chennai.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |
| 13 | <b><u>Inspection and testing requirements:</u></b><br>Inspection and testing requirements are to be carried out as per the specification and BHEL/Customer approved Drawing (All documents shall be submitted within 15 days from the date of PO for our approval), Technical spec &QP and all test certificates are to be submitted in complete set.<br>Inspection notice period: For TPI inspector visit to vendor works, a minimum of 3 working days' notice period for indigenous vendors and 30 working days' notice period for import vendors is required well in advance from the proposed date of inspection |  |
| 14 | <b><u>Repair &amp; replacements:</u></b><br>Within the guarantee period vendor has to replace / rectify the defective/ damaged items on free of cost within a reasonable time of reporting from our end.                                                                                                                                                                                                                                                                                                                                                                                                             |  |
| 15 | <b><u>For Import Suppliers</u></b><br>a) Foreign Exchange rate prevailing on Techno – Commercial bid opening rate will be taken for calculation. If the date of opening happens to be a bank holiday, then the forex rate as on previous bank (SBI) working day shall be taken.<br>b) Test certificate shall be submitted prior to despatch for our review and approval. Shipment shall be made only after obtaining despatch clearance from BHEL/MDCC from NTPC.                                                                                                                                                    |  |
| 16 | Documents are to be submitted along with technical bid (Part-1)<br>01. Covering letter<br>02. Unpriced offer.<br>03. Filed technical specification<br>04. Filed BHEL Terms and condition sheet (Annexure-A)<br>05. Catalogue's<br>06. PQR (Special Conditions annexure -1)<br>07. List of Spare paRTS<br>08. Third party non-disclosure agreement<br><br>Documents are to be submitted along with Price bid (Part-2)<br>01. Priced offer<br>Note: All the pages of documents are to be signed and stamped by authorized signatory of the company.                                                                    |  |
| 17 | <b><u>MSE Applicability as per Annexure C. The vendors shall furnish valid certificates (CA certificate &amp; UAM) as per annexure C, for availing the benefits of MSE with deemed validity in the offer itself.</u></b>                                                                                                                                                                                                                                                                                                                                                                                             |  |
| 18 | <b><u>Make in India:</u></b><br><br>For this procurement, Public Procurement (Preference to Make in India), order 2017 dated 15.06.2017 & 28.05.2018 and subsequent orders issued by the respective Nodal ministry shall be applicable even if issued after issue of this NIT but before finalization of                                                                                                                                                                                                                                                                                                             |  |

|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |
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|      | <p>contract/PO/WO against this NIT.</p> <p>In the event of any Nodal Ministry prescribing higher or lower percentage of purchase preference and/ or local content in respect of this procurement, same shall be applicable.</p> <p>Default margin of purchase preference shall be 20% to local suppliers with default minimum local content of 50%.</p> <p>For more details, pls. refer the Public Procurement (Preference to Make in India), order 2017 dated 15.06.2017 &amp; 28.05.2018 and subsequent orders issued by the respective Nodal ministry.</p>                                                       |  |
| 19 a | <b>Important Information for Indigenous Suppliers:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |
|      | <b>Kindly indicate the GST No of your Firm</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |
|      | <b>Kindly Indicate the HSN Code for the Enquiry item.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |
|      | <b>Please indicate the applicable GST % ( IGST, SGST, CGST)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |
|      | <b>Kindly Note the BHEL Trichy Unit GST NO : 33AAACB4146P2ZL</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |
| 19 b | Response to Tenders for Indigenous supplier will be entertained only if the vendor has a valid GST registration number which should clearly have mentioned in the offer. If any specific exemption is available, a declaration with due supporting documents need to be furnished for considering the offer.                                                                                                                                                                                                                                                                                                        |  |
|      | <b>In Case of Order Placement:</b> Supplier shall mention their GSTN registration number in all their invoices and invoices shall be in the format as specified/prescribed under GST laws. Invoices shall necessarily contain Invoice number (in case of multiple numbering system is being followed for billing like SAP invoice no, commercial invoice no etc., then the Invoice No which is linked/uploaded in GSTN network shall be clearly indicated), item description as per PO, Quantity, Rate, Value, applicable taxes with nomenclature (like IGST, SGST, CGST & UTGST) separately, HSN/ SAC Code, etc.   |  |
|      | All invoices shall bear the HSN Code for each item separately (Harmonized System of Nomenclature)/ SAC code (Services Accounting Code).                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |
|      | A declaration to the effect that all invoice particulars are/were uploaded in the GSTN network/ portal & all tax liability as per GST rules and regulations have been and will be discharged, shall be mentioned in the invoice. If not mentioned in the invoice, a separate declaration shall be submitted as per the requirement of BHEL.                                                                                                                                                                                                                                                                         |  |
|      | All dispatch and quality documents like Mill Test Certificate, LR copy, Guarantee/Warranty certificate, work completion certificate, any other document mentioned in PO, shall be sent along with the vehicle/consignment. For all consignments received within the calendar month, input credit will be availed within that month in line with monthly returns filing cycle. In case of any discrepancy in the document or non-submission of documents mentioned in the PO, then BHEL will not be able to accept or account the material, in such case availing of tax credit will be deferred to next month or so |  |
|      | In case of discrepancy in the data uploaded by supplier in the GSTN portal or in case of any shortages or rejection in the supply, then BHEL will not be able to avail the tax credit and will notify the supplier of the same. Supplier                                                                                                                                                                                                                                                                                                                                                                            |  |

|    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|    | has to rectify the data discrepancy in the GSTN portal or issue credit note (details to be uploaded in GSTN portal) for the shortages or rejections in the suppliers, within the calendar month notified by BHEL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |
|    | For any such delay in availing of tax credit for reasons attributable to supplier (as mentioned above), interest (calculated @ SBI Base Rate + 6%) along with penalty if any will be deducted for the delayed period i.e. from the month of receipt till the month tax credit is availed, from the running bills.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |
|    | Under GST regime, BHEL has to discharge GST liability on LD recovered from suppliers/contractors. Hence applicable GST shall also be recoverable from suppliers/contractors on LD amount. For this Debit note will be issued by BHEL indicating the respective supply invoice number. For this, Debit note will be issued by BHEL indicating the respective supply invoice number. Debit note will be available on our B2B portal.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |
| 20 | <p><b><u>Important Information for Import Suppliers:</u></b></p> <p><b><u>FOR CFR INCO TERMS – CONTAINERIZED CARGO</u></b></p> <ul style="list-style-type: none"> <li>For CFR terms, moved through CONTAINERS (Suppliers should clearly specify this in their offer) it would be presumed by BHEL that the freight charges quoted is on LILO (LINER IN LINER OUT) basis including extra charges, if any, like Container Imbalance Charges, Trade Imbalance charges or any other charges payable to the Liner. No other charges other than the quoted Freight rate will be paid by BHEL excepting applicable Terminal Handling Charges, Container cleaning Charges, DO charges to Shipping Liner at Discharge Port. 14 FREE DAYS FOR Container detention shall be provided. If any deviation is taken by Tenderer, a loading of 22% on the freight rate per MT shall be considered by BHEL for arriving at the Total Landed Cost.</li> <li>In case of shipment through Containers on CFR basis, the BL should bear the endorsement that “14 free days for Container Detention is applicable”.</li> </ul> <p><b><u>BREAKBULK CARGO</u></b></p> <ul style="list-style-type: none"> <li>For CFR terms, moved through BREAK BULK BASIS (Suppliers should clearly specify this in their offer) it would be presumed by BHEL that the freight charges quoted is on LILO (LINER IN LINER OUT) basis. The materials will be Custom cleared from Port itself.</li> <li>The Indian Customs imposed, a penalty on late filing of Bill of Entries (Air/Sea Shipments) by the importer. The maximum free time allowed is 24 hrs from the time of arrival of cargo at final port of discharge. Rs.5000/- per day (for Initial 03 days) &amp; Rs.10000/- per day (thereafter)</li> <li>The vendor should furnish the Non-Negotiable Documents (Air Way Bill/Bill of Lading, Commercial Invoice, Packing List, and Certificate of Origin) either by email or post/courier to BHEL well before the landing of cargo at final port of discharge.</li> <li>Vendor will be held responsible for the penalty arises against the late filing of Bill Of entry due to: <ul style="list-style-type: none"> <li>Non availability of Non-Negotiable Documents (NNDs) before the cargo arrival</li> <li>Discrepancy in documents</li> </ul> </li> </ul> |  |

- Short landing of Consignments (For shipments on CFR/CPT/CIF/CIP – Chennai Port)
- All the shipments for the contracts (POs) finalized on CFR -Chennai Port basis
- (i) Delivery Orders involving multiple agencies like liners/freight forwarders are not allowed. There must be a single agency office at the final discharge Port (Chennai) for issuing the Delivery Order to BHEL.
- (ii) The detention/demurrage charges arise due to the delay in collection of Delivery Orders from multiple agencies of liner/freight forwarder also whose offices are not at available Chennai, the same amount will be deducted from Vendor's bills only.
- (iii) Apart from the normal charges like Terminal Handling Charges, Container cleaning Charges, Delivery Order Charges at final port of discharge no other charges will be borne by BHEL.
- (iv) The liner/freight forwarders should be properly communicated by the Vendor for not to claim such charges for issuing Delivery Order. If the liner/freight forwarder claims such charges in their invoices, the same amount will be deducted from the Vendor bills without any prior intimation in order to avoid the delay in Customs clearance. The likely additional/hidden costs or charges are:
  - a. CIC - Container Imbalance Charges/Surcharges
  - b. EIC - Equipment Imbalance Charge/Surcharges
  - c. CAF - Container/Currency Adjustment Factor
  - d. BAF - Bunker adjustment Factor
  - e. RDS - Rupee Depreciation Surcharge
  - f. CDS - Currency Depreciation Surcharge

**Transport Conditions for Import:**

The Original Documents (Bill of Lading, Invoice, Packing List, Certificate of Origin & Test Certificate) shall reach BHEL well in advance before the vessel arrival. The soft copies of the above shall be forwarded to BHEL immediately after shipment.

- In the event of delayed submission of documents by the supplier, an amount up to 5% of the invoice value will be retained towards demurrage & other charges and the difference if any between actual charges and recovery will be settled separately through supplementary invoice.
- In such cases, the Supplier shall authorize the Steamer / Shipping agent / transporter to freely release the consignment to BHEL by providing a "Surrender Bill of Lading".
- Otherwise, No-objection Certificate shall be issued to the Liner, authorizing BHEL to get the Delivery Order without producing the Original Bill of Lading.
- This is required to ensure avoidance of demurrage at Chennai Sea-port that may arise in case of delayed presentation of documents by the Seller.
- **Following details to be endorsed in OBL**

a. Import & Export Code (IEC) of importer : 0588138690

|              |                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|              | <p>b. GST Identification No (GSTIN) of importer : 33AAACB4146P2ZL</p> <p>c. Official email id of importer: <a href="mailto:santoshj@bhel.in">santoshj@bhel.in</a> ; <a href="mailto:asvasalu@bhel.in">asvasalu@bhel.in</a></p>                                                                                                                                                                                                                       |  |
| <b>Note:</b> | <p>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 the acceptable price to BHEL. Any deviation in specified commercial terms- Annexure B, will lead to rejection of offer.</p> <p><b>Any other Techno –Commercial Terms indicated by the vendor in their offer elsewhere will be ignored. BHEL will proceed with tender evaluation as per Annexure B only.</b></p> |  |

**Vendor's Seal and Signature**

## **Annexure C**

### **Clause: Special Provisions for Micro and small Enterprises (MSE):**

1. In case MSE vendor participating in the tender quotes within the price band of L1+15%, they will be allowed to supply the complete package requirement subject to acceptance of L1 price by MSE vendor.
2. In case of more than one such MSE, the counter offering will be to the lowest quoted MSE vendor subject to fulfilment of Point No.1
3. 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 CA certificate (Format enclosed) applicable for the year, certifying quantum of investment in plant and machinery within the permissible limit as per the act for relevant status (Micro or small) where the deemed validity of EM II is over. Date to be reckoned for determining the deemed validity will be the last date of technical bid submission. Non submission of such documents will lead to consideration of their bids at par with other bidders and MSE status of such suppliers shall be shifted to Non MSE supplier till the supplier submits these documents.
4. Declaration of UAM number by MSE bidders is mandatory. Failing which, such bidders will not be able to enjoy the benefits as per Public Procurement Policy for MSEs Order, 2012.
5. Payment for MSE Indigenous vendors will be as per MSMED Act 2006

**A. BLAST FURNACE GAS (BFG)#**

|                                         | Units                | BFG<br>FOR BOILER<br>DESIGN | BFG<br>FOR<br>PERFORMANCE<br>GUARANTEE |
|-----------------------------------------|----------------------|-----------------------------|----------------------------------------|
| Hydrogen                                | % vol                | 1-6                         | 5.1                                    |
| Carbon monoxide                         | % vol                | 20-24                       | 22.05                                  |
| Carbon dioxide                          | % vol                | 20-23                       | 21.86                                  |
| Oxygen                                  | % vol                | 1.0                         | 1.0                                    |
| Nitrogen                                | % vol                | BALANCE                     | 45.69                                  |
| Methane (CH <sub>4</sub> )              | % vol                | -                           | -                                      |
| Ethane (C <sub>m</sub> H <sub>n</sub> ) | % vol                | -                           | -                                      |
| Water Vapor                             | % vol                | 4.3                         | 4.3                                    |
| Density                                 | kg /Nm <sup>3</sup>  | 1.332                       | 1.332                                  |
| GCV                                     | kcal/Nm <sup>3</sup> | 820                         | 820                                    |
| NCV                                     | kcal/Nm <sup>3</sup> | 797                         | 797                                    |
| Dust content                            | mg/Nm <sup>3</sup>   | 10                          | 10                                     |
| Fuel temperature                        | °C                   | 30-60                       | 30- 35                                 |
| Available Pressure at<br>Battery Limit  | mmwc                 | 250-800                     | 300-350*                               |

**B. COKE OVEN GAS (COG) #**

|                                         | <b>Units</b>         | <b>COG<br/>FOR<br/>BOILER<br/>DESIGN</b> | <b>COG<br/>FOR<br/>PERFORMANCE<br/>GUARANTEE</b> |
|-----------------------------------------|----------------------|------------------------------------------|--------------------------------------------------|
| Hydrogen                                | % vol                | 52-56                                    | 52                                               |
| Carbon monoxide                         | % vol                | 6-9                                      | 6                                                |
| Carbon dioxide                          | % vol                | 3-4                                      | 3.22                                             |
| Oxygen                                  | % vol                | 0.4-0.6                                  | 0.6                                              |
| Nitrogen                                | % vol                | BALANCE                                  | 9.7                                              |
| Methane (CH <sub>4</sub> )              | % vol                | 22-26.5                                  | 22                                               |
| Ethane (C <sub>m</sub> H <sub>n</sub> ) | % vol                | 2-2.6                                    | 2.18                                             |
| Water Vapor                             | % vol                | 4.3                                      | 4.3                                              |
| Density                                 | kg /Nm <sup>3</sup>  | 0.537                                    | 0.537                                            |
| GCV                                     | kcal/Nm <sup>3</sup> | 4200                                     | 4200                                             |
| NCV                                     | kcal/Nm <sup>3</sup> | 3737                                     | 3737                                             |
| Dust content                            | mg/Nm <sup>3</sup>   | -                                        | -                                                |
| Fuel temperature                        | °C                   | 30-60                                    | 30- 35                                           |
| Available Pressure at<br>Battery Limit  | mmwc                 | 350-1200                                 | 350                                              |



**GENERAL SPECIFICATION FOR BLAST FURNACE GAS LINE  
VALVES**

**1. BINDING DOCUMENTS:**

- a. The partially filled data sheet shall be carefully gone through and Technical requirements met with.
- b. Vendor shall fill the complete data and submit with offer.
- c. The specification and the final approved data sheet shall form part of the purchase order, and be binding.

**2. TECHNICAL REQUIREMENTS: (NOT APPLICABLE FOR GOGGLE VALVE)**

- a. For flow parameters and requirement of accessories refer to item Description and / or the data sheet.
- b. Carbon steel body flanged as per ANSI / BS 4504 to meet the technical requirement .
- c. Butterfly valves shall be of carbon steel discs, SS stem and SS seat; seal and packing materials as per service requirements.
- d. Ball valves shall be of SS ball, SS stem and SS seat; seal and packing materials as per service requirements.
- e. Steam polished & finished to 2-4 microns RMS in case of TFE packing.
- f. Valve internals shall not vibrate or chatter & not unduly noisy; the noise level shall be limited to 85 Db at one meter distance.
- g. Valve hysteresis shall be limited to 5% of input span for valves without positioners & to 0.5% for valves with positioners.

**3. THE FLUID:**

- a. Blast furnace gas is dust laden and saturated. The valves shall be operable and shall offer specified leak tightness under operating conditions.
- b. There is a possibility that the BF gas lines will be occasionally purged with steam to remove the gas from the ducts before doing any maintenance. The seals offered shall be suitable for the purging temperature.
- c. BF gas leakage through the glands to the atmosphere is very hazardous and can kill people around and hence the glands shall be of special design to avoid any leakage. It is preferable to provide glands, which do not require any external sealant gas/air. Tender shall state the leakage rate through the glands.
- d. Special gaskets for the flanges if any for BF gas valves to avoid leakage shall be quoted separately.
- e. Leak tightness as per data sheet.



4. SPECIAL REQUIREMENTS: **(NOT APPLICABLE FOR GOGGLE VALVE)**

- a. The closing time for the trip valves shall be preferably less than the specified time, when connected through solenoid pilot. Tender can indicate the minimum possible value. The quick exhaust valves can be quoted if required to meet with this closing time. Preference will be given for faster closing valves.
- b. Soft seals shall be replaceable independent of seat ring. Seal replacement shall be swift and easy without major handling.
- c. Blow out proof stem and fire safe design shall be offered for all applications.
- d. All valves shall be provided with outboard type of bearings suitable for easy replacement from outside. The bearing shall not require frequent lubrication. Non-lubricated / self lubricated bearings preferable.
- e. There should be a minimum reserve of 20% torque developed by the actuator, over the valve torque at all operating conditions.

5.ACCESSORIES: **(NOT APPLICABLE FOR GOGGLE VALVE)**

- a. Include accessories as under item description & / or data sheet.
- b. If the input signal has to be other than 0.2 to 1.0 the maker actuator shall offer the matching controller (called for separately) with higher output; or, alternatively include a positioner with air lock valve & air set in mounted & piped up condition.
- c. Positioner to be for 4 to 20 mA input, direct / reverse action, field adjustable & gauges.
- d. Electronic Position Transmitter 24 Vdc input & 4-20 mA output ,two wire, non-contact type.
- e. Offer shall include hand-lever and two numbers limit switches of Honeywell model EXDAR or equivalent Or cam operated enclosed rotary switches with DPDT contracts (110AC 10A) & 1 / 2 inch-14 NPSM female cable entry.
- f. All accessories shall be with explosion proof enclosure to NEMA 7 & 9, suitable for outdoor installation & 70°C ambient.
- g. All accessories shall be supplied in fully mounted & piped-up condition with 3/8" OD PVC jacketed copper tube, except for controllers.
- h. Pneumatic ports on all equipments shall be 3 / 8 " NPT female.
- i. Include quick exhaust valves, if required, to limit the valve closing time.
- j. Solenoid pilot valve as per data sheet, and shall be provided with moulding coil class H insulation. Explosion proof housing, wired to the terminal block / junction box.
- k. Limit switches and / or solenoid pilot wiring shall be terminated in an explosion proof junction box.

6.MARKING:

- a. Stainless steel nameplates with following boldly engraved shall be firmly fixed to the body; suitable local indicators for open / close



position of the valve. Maker's name & production serial number; service; BHEL material code; type, size & rating of body; size & form disc; type, size & spring range of actuator; valve action; air failure position.

- b. Each spare shall be individually tagged with part name, maker's name & spare code and BHEL material code.

#### 7. PAINTING:

- a. All interior surfaces applied with rust preventive oil, following hydraulic test and drying.
- b. All exposed surfaces degreased, de-rusted and epoxy coated over red oxide primer.

#### 8. PACKING:

- a. All openings (fluid, pneumatic and electric) shall be firmly capped.
- b. Valves shall be land worthy packed in wooden boxed with waterproof under cover.
- c. Liberal packing material & struts shall be provided to arrest rolling & to protect from transmit damages.
- d. The limit switches, positioner, position transmitter solenoid valve and such components shall be capsulated / covered properly with thermocole material.

#### 9. TEST CERTIFICATES: **(NOT APPLICABLE FOR GOGGLE VALVE)**

Following work TCs shall be submitted along with the supplies;

- a. Body hydraulic test done at 1.5 times the cold working pressure;
- b. Seat leak test as specified in valve data sheet.
- c. Material certificates for body, discs, seat, seal and shaft.
- d. Standard performance tests for actuator, positioner solenoid pilot and position transmitter.
- e. For proper actuation and response of transmitter & switches.
- f. Dimensional certificate for overall dimensions and all terminal connections.
- g. Chemical composition
- h. Shore hardness for resilient materials.
- i. Open / close timings.

Following test certificate shall be provided: **(NOT APPLICABLE FOR GOGGLE VALVE)**

II.)

- a. Fire safe flame test.
- b. Open / close test for 10000 cycles and leak test.
- c. Torque measurement for actuator and valves.



**10. INWARD INSPECTION:**

- a. Verify the works test certificates, marking particulars, nameplates of each accessory and the scope of supply
- b. Watch For Damages.
- c. Perform random check on all terminal connections and the internal particulars.

**11. After placement of purchase order 6 sets of following documents / drawings.**

Required within one month from the date of purchase order:

- a. Quality plan.
- b. Supporting arrangement detail for valve
- c. Complete dimensional drawings.
- d. O & M instructions for all items concerned.
- e. Spares identification drawings.
- f. Test supports.

**12. Along with the quotation, submit following documents in full for technical evaluation:**

- a. Completely filled-in data sheet.
- b. Dimensional drg with all accessories mounted, catalogues, Specifications, spares, identifier drgs, O & M manuals.
- c. Copies of std test methods and copies of certificates formats for main valve and all accs.
- d. Confirmation /deviation list to each point of this specification

**13. All the materials / assemblies are subjected to purchaser's customer's inspection at any stage. The stages of inspection will be decided based on the quality plan submitted by the vendor.**

**14. Vendor shall furnish valves as per codes/standards specified in this specification & associated data sheets. International standards equivalent to purchaser's specified standards are also acceptable subject to purchaser's approval.**

**15. Supplier shall indicate the total weight of the assemblies for all the items.**

**16. GUARANTEE & WARANTEE**

All the materials shall be defect free and shall be replaceable free of cost during guarantee period. The performance of valves shall be guaranteed for a period of 12 months from the date of commissioning or 18 months from the date of supply whichever is earlier.

# Controls & Instrumentation/Fossil Boilers

## GOGGLE VALVE – E, C&I input details

Project :- TATA Kalinganagar project, 2 x 250 TPH

Cust. Nos.: - 1430 & 1431

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1. HYDRAULIC POWER UNIT – CONTROL PANEL :

Hydraulic power unit has to be equipped with a control panel with necessary controls for the operation of the valve using Hydro motor, operation of the vent valve & clamping/de-clamping operation etc. as applicable. The control panel should meet the following requirements,

- Power supply isolation switch/fuses/Overload relays of suitable rating.
- Lockable Local/Remote selector switch.
- Facility for local operation through Push buttons, Indicating lamps
- Provision for status indication and fault annunciation.
- Facility for remote operation and provision for remote signal interface.
- Termination of all the electrical accessories on the valve in the control panel.
- The panel shall be suitable for placing in outdoor, dusty environment and shall have canopy to protect from rain & other falling objects. Colour of the panel will be indicated later.

2. 1 no. of 415 V, 3 Ø, 3 wire, AC power will be provided up to the control panel. It is vendor's responsibility to derive the required control supplies and distribute up to the valves. The power supply has to be rated suitably taking care of the power rating of all the drives, cable run length distances from the power pack unit to the goggle valve.

3. Following signal exchanges shall be provided as minimum in the control panel.

Interposing relays shall be provided in the control panel to receive the open/close command signals from the DCS.

- a. Goggle Valve Open
- b. Goggle Valve Close

Potential free output contacts shall be provided to DCS for the following feedback signals from valve:

- a. Hydraulic power Unit On
- b. Hydraulic Power Unit Off
- c. Hydraulic Oil Pressure too low
- d. Hydraulic Power Unit in Auto
- e. Hydraulic Power Unit in Remote
- f. Hydraulic Power Unit in Local
- g. Hydraulic Power Unit Group Fault
- h. Goggle valve open
- i. Goggle valve close
- j. Vent Valve Open
- k. Vent Valve Close
- l. Valve Clamped
- m. Valve De Clamped

If additional signals are envisaged as per vendor's design to meet the system requirement, then the same have to be terminated at the control panel for remote interface.

4. Proximity non-contact type, Limit switches shall be provided for position limit sensing.
5. All the electrical accessories/panels shall be of flame proof construction taking care of the Gas group, Zone and Temperature class requirements and shall meet IP 55 protection class.
6. All Cables that run between various vendor supplied equipment, shall be in vendor's scope. All cables shall be of voltage grade 1.1 kV, PVC, Type C insulated, Armoured, FRLS sheathed. For Control cables, Minimum conductor size shall be 1.5 sq.mm. Vendor to supply necessary cable trays for routing of the cables.
7. Vendor to supply Double compression type, Brass with Nickel plated, Flame proof cable glands for the termination of cables.
8. Nothing in this specification shall be construed to relieve the vendor from his responsibility. This specification covers the minimum requirements of the system. It is the responsibility of the vendor to include all the requirements for completeness of the system.



**SPECIFICATION FOR BF GAS ISOLATION VALVE  
(GOGGLE VALVE NON-ENCASED TYPE)**

(Read along with general specification No. TOS:BFG:003 / REV:01 &  
Goggle valve – E,C & I input details)

**PART-I**

- 1.0 Service : Blast Furnace Gas isolation tight shut off, mounted in horizontal pipe, in Boiler floor
- 1.1 Flow max : 250000 NM<sup>3</sup> / Hr.
- 1.2 Inlet Pr. Nor. : 700 mm WC (Operating range: 250-1200 mmWC)
- 1.3 Allowable DP : 5 mm WC
- 1.4 Temp Nor / max : 27/50 ° C
- 1.5 CV Required : Equivalent to a bore of Inside Dia. 2600mm
- 1.6 Valve CV rating : Vendor to quote
- 2.0 Body type : Goggle type – Non-encased type.
- 2.1 Size : NB 2600 mm
- 2.2 Ends : Companion flanges (Suitable for welding to OD 2620 X 10 t pipe) with gaskets and fasteners will be in vendor's scope.
- 2.3 Body Rating : 0.35 Kg / cm<sup>2</sup> g
- 2.4 Body Material : Cast / Fabricated steel
- 2.5 Goggle plate Material : Carbon steel
- 2.6 Seat Material : Stainless steel
- 2.7 Seal Material : Resilient seals
- 2.8 Seat leak class : Bubble tight
- 2.9 Stem material : Stainless steel
- 2.10 Stem size : Vendor to quote
- 2.11 Bearings : Outboard type
- 2.12 Glands / Packings : Vendor to indicate material
- 2.13 Leakage through Glands packings : Vendor to quote- zero leakage.
- 3.0 Expansion bellows : Accommodate clamping / de-clamping movements
- 4.0 Clamping / Declamping : Shall be hydraulic cylinders minimum four number  
Located equally around the periphery.  
Dual hydraulic circuit shall be provided,  
Hand pump for manual operation shall be included.
- 4.1 Slide movements : Shall be quick enough to complete the movement with minimum leakage. Specify the time.  
The movement shall be by hydraulic motor.  
The slide shall be operated manually in case of failure of motor.
- 4.2 Total Operational time : Vendor to specify
- 4.3 Limit switches : Minimum 2 nos. for indicating clamping and declamping and 2 nos. for indicating positions of slide.  
The limit switches shall be proximity non-contact type and shall be provided for position limit sensing, shall be of DPDT type, 110V AC, 10Amp rated, Explosion proof, Honeywell or equivalent.



#### 4.4 Hydraulic power pack :

Shall be weather proof suitable for outdoor location. The power pack should be provided with simple controls with minimum automatic operation. Power pack shall be mounted on a skid.

- a) The distance between the Goggle valve-NB2600 mm and Hydraulic power pack shall be approx. 50 meters. Inter connecting pipes and respective support materials shall be accordingly accounted.
- b) The Hydraulic power pack is to be placed at ground floor and frame of Hydraulic power pack shall be suitable for fixing in concrete foundation. Foundation bolt pitches shall be furnished along with GA drawing. Foundation bolts for Hydraulic power pack shall be in vendor's scope of supply.
- c) The Goggle valve is located at a floor elevation of 10.825 m and Hydraulic power pack is to be located on the ground floor. All inter connecting pipes and respective support materials shall be in vendor's scope.
- d) Suitable arrangement shall be provided over Louvers of Hydraulic power pack so that fire-fighting jet will not affect the power pack operation.

4.5 Vent valve : Fire safe ball type- Hydraulic Piston operated.  
Vendor to specify size.

4.6 Solenoid valve : All solenoid valves used shall be of reputed make with class H continuous duty coil, explosion proof, suitable for the application.

4.7 Load panel : The starters for the electric motor & indication shall be provided. The voltage available at the site is 415V, 3ph, 50Hz S / F / U only. All other required power for the goggle valve system shall be derived from this source only. Explosion proof panel, Interconnection between panels & motors shall be done by vendor.

#### 4.8 General Requirements

- a) Local control panel shall only be in vendor scope. Remote control panel is in BHEL scope. Hence vendor shall terminate the required connections for further continuation to remote panel in a junction box. The local control panels shall be placed at a safe distance of approx.. 15 m away from the Goggle valve. Interconnecting cables between Local control panel and goggle valve is in vendor scope.
- b) Interconnecting cables (viz., Panel to power pack motor, Panel to power pack JB & Panel to JB each 50meters approx.) shall be in vendor scope.
- c) Limiting forces and moments at each load point of the valve shall be provided by vendor. This is required to size the structural members of the boiler. Hence vendor shall arrange to furnish details on forces on each load point of the goggle valve and hydraulic power pack. Vendor shall also furnish typical support details.
- d) The first fill of complete hydraulic system shall be in the scope of supply of vendor. The oil required for first fill may be sent separately so that it can be filled at site.
- e) All rollers and shaft supporting bearings shall be provided with "Life lubricated" sealed Ball bearings



## 5.0 INFORMATION REQUIRED

### 5.1 Along with offer:

- a. Following is the indicative list of drawings to be submitted. (1) GA of goggle valve with Total weight (2) GA & scheme of hydraulic power pack unit with total weight & foundation details (3) Hydraulic control circuit (4) Mechanical De-Clamping arrangement for slide plate valves (5) Cabinet drawing of Hydraulic power pack (6) GA of control panel (7) Electrical Circuit diagrams for control panel (8) Junction box wiring diagram.
- b. Details of power cylinders, limit switches, power pack components etc., make and model numbers.
- c. Filled in specification sheet highlighting deviations from the specification.
- d. Customer list.
- e. The forces and moments the valve can take.

### 5.2 After the purchase order:

Total of two (2) hard copies and two (2) copies on magnetic media (USB memory stick or CD-ROM) of the below listed details shall be provided:

- a. Quality plan.
- b. Supporting arrangement detail for the valve.
- c. Complete dimensional drgs.
- d. O & M instructions for all items concerned.
- e. Spares identification drgs.
- f. Test reports

## 6.0 GUARANTEE & WARRANTEE:

All materials shall be defect free and shall be replaceable free of cost during guarantee period. The performance of the valve shall be guaranteed for a period of 12 months from the date of commissioning.

- 7.0 Nothing in this specification shall be construed to relieve the vendor from his responsibility. This specification covers the minimum requirements of the system. It is the responsibility of the vendor to include all the requirements for completeness of the system.
- 8.0 E, C & I – Input details specification shall supersede technical requirements in case the scope requirement of E, C & I – input details is different from this specification.



**PART-II**  
**(VENDOR CHECKLIST FOR GOGGLE VALVE)**

BHEL Material Code:L143014220015001

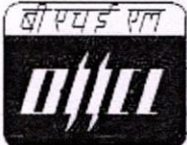
| O.    |                                 | BHEL SPECIFICATION                                                                                                                                                                                             | VENDOR CONFIRMATION |
|-------|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
|       | FLOW DATA                       |                                                                                                                                                                                                                |                     |
| 1.1   | Service                         | BF gas isolation tight shut off, mounted in Horizontal pipe, in Boiler floor.                                                                                                                                  |                     |
| 1.2   | Flow max.                       | 250000 NM <sup>3</sup> / Hr                                                                                                                                                                                    |                     |
| 1.3   | Inlet Pr. nor                   | 850 mm WC<br>(Operating range 250-1200 mm WC)                                                                                                                                                                  |                     |
| 1.4   | Allowable DP                    | 5 mm WC                                                                                                                                                                                                        |                     |
| 1.5   | Temp Nor / max                  | 27 / 50 ° C                                                                                                                                                                                                    |                     |
| A.    | VALVE DATA                      |                                                                                                                                                                                                                |                     |
| 2.1   | Valve type                      | Slide plate type – Non Encased type                                                                                                                                                                            |                     |
| 2.2   | CV Required                     | Equivalent to a bore of ø2600mm                                                                                                                                                                                |                     |
| 2.3   | Valve CV rating                 | Vendor to quote                                                                                                                                                                                                |                     |
| 2.4   | Body type                       | Goggle type – Non encased type                                                                                                                                                                                 |                     |
| 2.5   | Size                            | NB 2600 mm                                                                                                                                                                                                     |                     |
| 2.6   | Ends                            | Companion flanges (Suitable for welding to OD 2620X 10t pipe) with gaskets and fasteners in vendor's scope                                                                                                     |                     |
| 2.7   | Body Rating                     | 0.35 Kg / cm <sup>2</sup> g                                                                                                                                                                                    |                     |
| 2.8   | Body Material                   | Cast / Fabricated steel                                                                                                                                                                                        |                     |
| 2.9   | Goggle plate Material           | Carbon steel                                                                                                                                                                                                   |                     |
| 2.10  | Seat Material                   | Stainless steel                                                                                                                                                                                                |                     |
| 2.11  | Seal Material                   | Resilient seals                                                                                                                                                                                                |                     |
| 2.12  | Seat leak class                 | Bubble tight                                                                                                                                                                                                   |                     |
| 2.13  | Stem material                   | Stainless steel                                                                                                                                                                                                |                     |
| 2.14  | Stem size                       | Vendor to quote                                                                                                                                                                                                |                     |
| 2.15  | Bearings                        | Outboard type                                                                                                                                                                                                  |                     |
| 2.16  | Glands / Packings               | Vendor to indicate material                                                                                                                                                                                    |                     |
| 2.17  | Leakage through Glands packings | Vendor to quote- zero leakage                                                                                                                                                                                  |                     |
| 3.0   | Expansion bellows               | Accommodate clamping / declamping movements                                                                                                                                                                    |                     |
| 4.0   | Clamping / De-clamping          | Shall be by Hydraulic cylinders minimum four number located equally around the periphery.<br>Dual Hydraulic circuit shall be provided.<br>Hand pump for manual operation shall be included at a safe distance. |                     |
| 4.1   | Slide movements                 | Shall be quick enough to complete the movement with minimum of leak.<br>Specify the time.<br>The movement shall be by hydraulic motor.<br>The slide shall be operated manually in case of failure of motor.    |                     |
| 4.2   | Total Operational time          | Vendor to specify                                                                                                                                                                                              |                     |
| 4.2.1 | Valve opening time              | Vendor to specify (shall be < 60secs)                                                                                                                                                                          |                     |
| 4.2.2 | Valve closing time              | Vendor to specify (shall be < 60secs)                                                                                                                                                                          |                     |



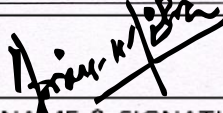
|       |                                            | <b>BHEL SPECIFICATION</b>                                                                                                                                                                                                                                                               | <b>VENDOR CONFIRMATION</b> |
|-------|--------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| 4.3   | Limit switches                             | Minimum 2nos.for indicating clamping and De-clamping and 2 nos. for indicating positions of the slide.<br>The limit switches shall be proximity non-contact type and shall be provided for position limit sensing DPDT, 110V AC, 10Amp rated, explosion proof, Honeywell or equivalent. |                            |
| 4.3.1 | Limit switches make & model                | Vendor to specify                                                                                                                                                                                                                                                                       |                            |
| 4.4   | Hydraulic power pack                       | Vendor to conform to the complete specifications requirements as per clause 4.4 of this specification.                                                                                                                                                                                  |                            |
| 4.4.1 | No. of Hydraulic cylinders                 | Vendor to specify (Minimum four)                                                                                                                                                                                                                                                        |                            |
| 4.4.2 | Type of Hydraulic cylinders                | Vendor to specify                                                                                                                                                                                                                                                                       |                            |
| 4.4.3 | Hydraulic cylinder bore                    | Vendor to specify                                                                                                                                                                                                                                                                       |                            |
| 4.4.4 | Hydraulic cylinder stroke                  | Vendor to specify                                                                                                                                                                                                                                                                       |                            |
| 4.4.5 | Type of Hydraulic motor                    | Vendor to specify                                                                                                                                                                                                                                                                       |                            |
| 4.4.6 | Relief valve setting pumping unit          | Vendor to specify                                                                                                                                                                                                                                                                       |                            |
| 4.4.7 | Operating pressure of hydraulic power pack | Vendor to specify                                                                                                                                                                                                                                                                       |                            |
| 4.5   | Vent valve                                 | Fire safe ball type-Hydraulic piston operated.<br>Vendor to specify size.                                                                                                                                                                                                               |                            |
| 4.6   | Solenoid valve                             | All solenoid valves used shall be of reputed make with class H continuous duty coil, explosion proof, Suitable for the application.                                                                                                                                                     |                            |
| 4.7   | Load panel                                 | The starters for electric motor & indication shall be provided. The voltage available at the site is 415V, 3ph, 50Hz S / F / U only. Explosion proof panel, Interconnection between panels & motor shall be done by vendor.                                                             |                            |
| 4.8   | General Requirements                       | Vendor to confirm to clause 4.8 of this specification                                                                                                                                                                                                                                   |                            |
| 5.0   | Information required                       | Along with offer:<br>As per Clause 5.1 of this specification<br><br>After the purchase order:<br>As per Clause 5.2 of this specification                                                                                                                                                |                            |
| 6.0   | Guarantee & Warrantee                      | All materials shall be defect free and shall be replaceable free of cost during guarantee period. The performance of the valve shall be guaranteed for a period of 12 months from the date of commissioning or 18 months from the date of supply whichever is earlier.                  |                            |

| List of Consortium Banks * |                           |    |                                                       |
|----------------------------|---------------------------|----|-------------------------------------------------------|
|                            | Nationalised Banks        |    | Nationalised Banks                                    |
| 1                          | Allahabad bank            | 19 | Vijaya Bank                                           |
| 2                          | Andhra bank               |    | <b>Public Sector Banks</b>                            |
| 3                          | Bank of Baroda            | 20 | IDBI                                                  |
| 4                          | Canara Bank               |    | <b>Foreign banks</b>                                  |
| 5                          | Corporation bank          | 21 | CITI Bank N.A                                         |
| 6                          | Central bank              | 22 | Deutsche Bank AG                                      |
| 7                          | Indian Bank               | 23 | The Hongkong and Shanghai Banking Corporation Limited |
| 8                          | Indian Oversea Bank       | 24 | Standard Chartered Bank                               |
| 9                          | Oriental bank of Commerce | 25 | J P Morgan                                            |
| 10                         | Punjab National Bank      |    |                                                       |
| 11                         | Punjab & Sindh Bank       |    | <b>Private banks</b>                                  |
| 12                         | State Bank of India       | 26 | Axis Bank                                             |
| 13                         | State Bank of Hyderabad   | 27 | The Federal Bank Limited                              |
| 14                         | Syndicate Bank            | 28 | HDFC                                                  |
| 15                         | State Bank of Travancore  | 29 | Kotak Mahindra Bank                                   |
| 16                         | UCO Bank                  | 30 | ICICI                                                 |
| 17                         | Union Bank of India       | 31 | Indusind Bank                                         |
| 18                         | United Bank of India      | 32 | Yes Bank                                              |

\*      wef 22.03.2016

|                                                                                                        |                                                                                                                          |
|--------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| PROJECT                                                                                                | BTG PACKAGE FOR 1 x 120 MW GAS BASED<br>CAPTIVE POWER PLANT                                                              |
| CUSTOMER                                                                                               |  TATA STEEL LIMITED (TSL), KALINGANAGAR |
| CONSULTANT<br>FICHTNER                                                                                 | FICHTNER Consulting Engineers (India) Private Limited<br>Chennai, Bengaluru                                              |
| <br>Maharatna Company | BHARAT HEAVY ELECTRICALS LTD.<br>TRICHY                                                                                  |
| TITLE                                                                                                  | Painting schedule for Boiler components                                                                                  |
| BHEL<br>DOCUMENT<br>NO:                                                                                | PL: C3 - PS/ 1430, Rev.01 Dated 12.10.18                                                                                 |
| TATA<br>DOCUMENT.<br>NO:                                                                               | QST-23-02-01-20-291-026                                                                                                  |

*dry appany*  
*TSL (SURVARAO)*

| APPROVED                                                                                                                                                                                                                                                            |       |          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|----------|
|                                                                                                                                                                                  | PDS   | 16.10.18 |
| NAME & SIGNATURE                                                                                                                                                                                                                                                    | DEPT. | DATE     |
|  ENGINEERING & PROJECTS<br>TATA STEEL LIMITED                                                                                                                                    |       |          |
| Approval of this document or permission to proceed with construction work does not relieve the consulting Engineer / supplier / vendor from any responsibility for correctness or Design / detail / compliances with contractual obligation and Terms & Conditions. |       |          |

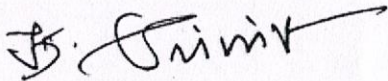
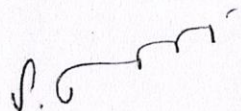
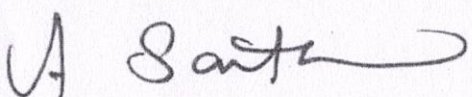
BHARAT HEAVY ELECTRICALS LIMITED

Tiruchirappalli - 620 014



**TATA STEEL LIMITED, KALINGANAGAR 2X250TPH CPP,  
JAJPUR DIST, ORISSA  
CUSTOMER NO: I3-1430/1431, UNIT I&II  
PAINTING SCHEDULE**

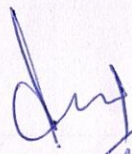
TATA Document Number: QST-23-02-01-20-291-026

|             |                                             |                                                                                     |                                   |
|-------------|---------------------------------------------|-------------------------------------------------------------------------------------|-----------------------------------|
| Prepared by | K. Srinivasan<br>Senior Engineer/ Plant Lab |  | Document No: PL: C3 - PS / 1430   |
| Reviewed by | S Thiagarajan<br>AGM/ PE/ FB                |  | Revision No: 01 Dated: 12-10-2018 |
| Approved by | A. Santha Kumari<br>AGM/ Plant Lab          |  | Sheet No. 02 of 12                |

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**RECORD OF REVISIONS**

| <b>Rev. No</b> | <b>Date</b> | <b>Details of revision</b>                                                                    | <b>Remarks</b>                                                          |
|----------------|-------------|-----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| 00             | 20-09-2018  | New                                                                                           | Prepared in line with BHEL standard painting system.                    |
| 01             | 12-10-2018  | Sheet 4 – Note included for Sl. No. 3<br>Sheet 7 – Finish paint shade modified for Sl. No. 9. | Modification incorporated as per discussion via MOM dt. 11 & 12.10.2018 |

  
TSL (URVA RAD)

| Sl.No.      | PGMA / Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Surface Preparation & Surface Profile                                            | Primer coat                                                                                |              | Intermediate coat                                                   |              | Finish coat                                                                                                                                 |              |                                              | Total DFT $\mu\text{m}$ (min) |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|--------------|---------------------------------------------------------------------|--------------|---------------------------------------------------------------------------------------------------------------------------------------------|--------------|----------------------------------------------|-------------------------------|
|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                  | Paint                                                                                      | No. of coats | Paint                                                               | No. of coats | Paint                                                                                                                                       | No. of coats | Shade                                        |                               |
| 1<br>PS 1AC | Drum (Except Internals), Drum suspension<br><br>04-114, 144;                                                                                                                                                                                                                                                                                                                                                                                                                                                             | SSPC-SP3/ Power Tool Cleaning                                                    | Red Oxide Zinc Phosphate Primer (Alkyd Base) to IS 12744<br>DFT= 30 $\mu\text{m}$ per coat | 1            | --                                                                  | --           | Synthetic Enamel paint (Long Oil Alkyd) to IS 2932<br>DFT= 20 $\mu\text{m}$ per coat                                                        | 2            | International orange<br>Shade No:592 of IS 5 | 70                            |
| 2<br>PS5B   | Drum Internals, foundation materials & Dd items<br>04-114; 21-602,604,700;<br>24-352,700;<br>32-700; 35-010,190,700;<br>39-010,700; 42-700; 48-019,700;                                                                                                                                                                                                                                                                                                                                                                  | SSPC-SP1/ or<br>SSPC – SP3 Solvent/ Power Tool Cleaning                          | Rust Preventive Fluid to PR: CHEM: 09 – 04<br>DFT=25 $\mu\text{m}$ per coat                | 2            | --                                                                  | --           | --                                                                                                                                          | --           | --                                           | 40                            |
| 3<br>PS31D  | <u>Buck stays</u><br>08-101,104,107,400,700,900;<br><u>Boiler supporting structures, Columns, Girders, Bracings</u><br>35-110,120,130,140,150,160,210,220,<br>35-230,310, 390, 440 to 444, 511,513,<br>35-521,523, 35-531,533,610;<br><u>Galleries, Stair-ways &amp; inter connecting walkways (except gratings) #</u><br>36-210,220,230,240,250,260,270,280,290<br>36-300,310,380,390,610,620;<br>38-210,310,390,610,712;<br>39-100,140,141,150,300,301,303<br><u>Duct supports:</u><br>48-015,205,265,385,495,775,785; | Blast cleaning to SA2 ½ (Near white metal) with surface profile 30 $\mu\text{m}$ | Epoxy based Zinc Phosphate Primer to IS13238<br>DFT 30 $\mu\text{m}$                       | 1            | Epoxy based MIO pigmented intermediate coat<br>DFT 75 $\mu\text{m}$ | 1            | Epoxy based Finish paint to IS14209<br>DFT 30 $\mu\text{m}$<br><br>Aliphatic acrylic Polyurethane paint to IS 13213<br>DFT 30 $\mu\text{m}$ | 1<br><br>1   | Light Grey<br>Shade No: 631 of IS 5          | 165                           |

# Note: All the floor grills/ gratings shall be hot dip galvanized

| Sl. No.   | PGMA / Description                                                                                                                                                                                                                                                                                                                                                                                                                                   | Surface Preparation &- Surface Profile | Primer coat                                                                                                  |              | Intermediate Coat |              | Finish coat |              |           | Total DFT $\mu\text{m}$ (min) |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|--------------------------------------------------------------------------------------------------------------|--------------|-------------------|--------------|-------------|--------------|-----------|-------------------------------|
|           |                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                        | Paint                                                                                                        | No. of coats | Paint             | No. of coats | Paint       | No. of coats | Shade     |                               |
| 4<br>PS 3 | <u>Components Insulated other than components in Sl.No.6 &amp;8</u><br><u>Ring Headers, Down Comers, Hot air Headers outside the gas path etc.</u><br><u>Temperature &gt;95°C &amp; &lt;400°C</u><br><br>05-137,147,155,229,231,251;<br>07-101,201,223,231,232;<br>10-135,136,176,191,235,236,270;<br>18-001,010,020;<br>19-701,702,753,903;<br>21-600; 24-424,475<br>48-202,204,207,208,212,214,262,264,267,<br>48-382,384,492,494,772,774,782,784; | SSPC-SP3/<br>Power Tool<br>Cleaning    | Red Oxide<br>Zinc<br>Phosphate<br>Primer<br>(Alkyd Base)<br>to IS 12744<br>DFT= 30 $\mu\text{m}$<br>per coat | 2            | --                | --           | No paint    | No<br>paint  | Red Oxide | 60                            |
| 5<br>PS 9 | <u>Components &gt;95° C uninsulated other than components coming in gas path.</u><br><u>Temp up to 400 deg.C</u><br><br>24-420; 42-300; 48-200, 915;                                                                                                                                                                                                                                                                                                 | SSPC-SP3/<br>Power Tool<br>Cleaning    | HR<br>Aluminium<br>Paint to<br>IS 13183<br>Gr.II                                                             | 2            | --                | --           | --          | --           | Aluminium | 40                            |
| PS 10     | <u>Temp &gt; 400 &amp; &lt;600 deg.C</u><br>09- 001,002,003; 28-220;                                                                                                                                                                                                                                                                                                                                                                                 | SSPC-SP3/<br>Power Tool<br>Cleaning    | HR<br>Aluminium<br>Paint to<br>IS 13183<br>Gr.I                                                              | 2            | --                | --           | --          | --           | Aluminium | 40                            |

| Sl.No.        | PGMA / Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Surface<br>Prepn &-<br>Surface<br>Profile                               | Primer coat                                                                                       |                 | Intermediate<br>Coat |                 | Finish coat                                                                        |                 |                                       | Total<br>DFT<br>μm<br>(min) |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|-----------------|----------------------|-----------------|------------------------------------------------------------------------------------|-----------------|---------------------------------------|-----------------------------|
|               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                         | Paint                                                                                             | No. of<br>coats | Paint                | No. of<br>coats | Paint                                                                              | No. of<br>coats | Shade                                 |                             |
| 6<br><br>PS2  | Loose tubes, SH, RH & Eco.coils,<br><br>11-248,250,251,356,616,691;<br>12-135,551,803,850,852,900<br>12-901;19-105;19-802                                                                                                                                                                                                                                                                                                                                                                                                                                                           | SSPC – SP2<br>or<br>SSPC – SP3<br>Hand tool /<br>Power tool<br>cleaning | Red Oxide Zinc<br>Phosphate Dip<br>coat primer to<br>PR: CHEM:<br>09 – 03<br>DFT=35μm per<br>coat | 1*              | --                   | --              | --                                                                                 | --              | Red Oxide                             | 35                          |
| 7<br><br>PS1A | Components < 95° C<br>(insulated/uninsulated) –Other than<br>components in Sl.No.3.<br>Miscellaneous and casing sheets,<br>Fuel firing, Steam blowing piping, Duct<br>plates, expansion joints, Coal Feeding,<br>Handling equipment.<br><br>07-601; 21-601,605;<br>24-350,400,401,403,425,426,427,435,436,<br>24-437,440,441,442,473; 39-302;<br>41-350,390,450;<br>42-002,005,070,146,152,156,<br>42-157,195,200; 43-004,104,200;<br>45-220,221;<br>48-012,014,032,034,042,044,911,912<br>95-088,089; 96-188,189,193; 97-591;<br><br>\$ Handling Equipments:<br>99-099,100,400,500 | SSPC-SP3/<br>Power Tool<br>Cleaning                                     | Red Oxide Zinc<br>Phosphate<br>Primer<br>(Alkyd Base)<br>to IS 12744<br>DFT= 30μm per<br>coat     | 1               | --                   | --              | Syn. Enamel<br>paint<br>(Long Oil<br>Alkyd)<br>to IS 2932<br>DFT= 20μm<br>per coat | 2               | Smoke Grey<br>Shade No:<br>692 of IS5 | 70                          |

\*-In lieu of dip painting, 2 coats of brush painting of Red Oxide Zinc Phosphate primer to a coating thickness of 60μ is also permitted in line with Sr.No.8.

\$ - Final Shade is Golden yellow for Under hung crane, Chain Pulley Block, Ratchet Lever and Trolley with hoist. Black shade for Hook.

| Sl. No.        | PGMA / Description                                                                                                                                                                                                                                                                                                                                                                        | Surface<br>Prepn &<br>Surface<br>Profile | Primer coat                                                                                             |                 | Intermediate<br>coat |                 | Finish coat                                                              |                 |                                    | Total<br>DFT<br>μm<br>(min) |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|---------------------------------------------------------------------------------------------------------|-----------------|----------------------|-----------------|--------------------------------------------------------------------------|-----------------|------------------------------------|-----------------------------|
|                |                                                                                                                                                                                                                                                                                                                                                                                           |                                          | Paint                                                                                                   | No. of<br>coats | Paint                | No. of<br>coats | Paint                                                                    | No. of<br>coats | Shade                              |                             |
| 8<br><br>PS3   | Components >95° C coming in the gas path, WW panels, Commissioning Spares & erection Materials etc.,<br>04-988<br>06-400,500,631,634,637,641,644, 647,651, 06-653,655; 07-993; 12-993;<br>19-763,850,851,999; 20-988;21-987;<br>24-955,960,987,988,989,993;<br>30-103,105,215,219,220,224;<br>31-010,301; 32-010,210,810;<br>35-993;36-993;37-010;39-993;<br>41-988;42-988;48-993;97-590; | SSPC-SP3/<br>Power<br>Tool<br>Cleaning   | Red Oxide Zinc Phosphate Primer (Alkyd Base) to IS 12744<br>DFT= 30μm per coat                          | 2               | --                   | --              | No paint                                                                 | No paint        | Red Oxide                          | 60                          |
| 9<br><br>PS1AY | Hand rails and posts, ladders / rungs, stairs<br>35-850; 36 – 820, 850; 39-820,850;                                                                                                                                                                                                                                                                                                       | SSPC-SP3/<br>Power<br>Tool<br>Cleaning   | Red Oxide Zinc Phosphate Primer (Alkyd Base) to IS 12744<br>DFT= 30μm per coat                          | 1               | --                   | --              | Synthetic Enamel paint (Long Oil Alkyd) to IS 2932<br>DFT= 20μm per coat | 2               | Lemon yellow Shade No. 355 of IS 5 | 70                          |
| 10<br><br>PS6  | Floor Grills, guard plate<br>35-811; 36-811,813,814; 39-810;                                                                                                                                                                                                                                                                                                                              | SSPC-SP8/<br>Pickling                    | Hot dip Galvanizing to a coating weight of 610 g/m <sup>2</sup> (minimum)<br>Refer Notes given below ** |                 |                      |                 |                                                                          |                 |                                    |                             |

Notes \*\*: Guard plates shall be painted as per painting scheme prescribed in Sl.No: 03.

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TSZ (GURMA Pkg)

**PAINTING SCHEME FOR VALVES**

| Sl.No.          | PGMA / Description                                                                                                                                                                                 | Surface<br>Prepa-<br>ration &<br>Surface<br>Profile | Primer coat                                                                                                  |                 | Intermediate<br>coat |                 | Finish coat                                                                                    |                 |                                                  | Total<br>DFT<br>$\mu\text{m}$<br>(min) |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|--------------------------------------------------------------------------------------------------------------|-----------------|----------------------|-----------------|------------------------------------------------------------------------------------------------|-----------------|--------------------------------------------------|----------------------------------------|
|                 |                                                                                                                                                                                                    |                                                     | Paint                                                                                                        | No. of<br>coats | Paint                | No. of<br>coats | Paint                                                                                          | No. of<br>coats | Shade                                            |                                        |
| 11<br><br>PS 10 | Cast carbon steel valves<br>(Conventional)<br>Cast alloy steel valves<br>(Conventional)<br>All API valves, QCNRV, SV & SRV<br>Silencers<br><br>21-800, 850; 24-460,480,485;<br>80-278,279,280,905; | SSPC-SP3/<br>Power Tool<br>Cleaning                 | Heat<br>Resistant<br>Aluminium<br>Paint to<br>IS 13183<br>Gr.II/ Gr. I                                       | 2               | --                   | --              | --                                                                                             | --              | Aluminium                                        | 40                                     |
|                 | Forged valves                                                                                                                                                                                      | Chemical<br>cleaning                                | Phosphating<br>To a coating<br>weight of<br>1500 mg per<br>sq.ft.                                            | --              | --                   | --              | --                                                                                             | --              | --                                               | --                                     |
| 12<br><br>1AS   | Soot Blower components<br><br>20-301,304, 621, 801,804;                                                                                                                                            | SSPC-SP3/<br>Power Tool<br>Cleaning                 | Red Oxide<br>Zinc<br>Phosphate<br>Primer<br>(Alkyd Base)<br>to IS 12744<br>DFT= 30 $\mu\text{m}$<br>per coat | 2               | --                   | --              | Syn. Enamel<br>paint<br>(Long Oil<br>Alkyd)<br>to IS 2932<br>DFT= 20 $\mu\text{m}$<br>per coat | 2               | Verdigris<br>Green<br>Shade No.<br>280 of<br>IS5 | 100                                    |
|                 | HP / LP system                                                                                                                                                                                     | SSPC-SP3/<br>Power Tool<br>Cleaning                 | Heat<br>Resistant<br>Aluminium<br>Paint to<br>IS 13183 Gr.I                                                  | 2               | --                   | --              | --                                                                                             | --              | Aluminium                                        | 40                                     |

| Sl. No.     | PGMA / Description                                                                                                              | Surface Preparation & Surface Profile                 | Primer coat                                                                                    |              | Intermediate coat |              | Finish coat                                                                          |              |                                      | Total DFT $\mu\text{m}$ (min) |
|-------------|---------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|------------------------------------------------------------------------------------------------|--------------|-------------------|--------------|--------------------------------------------------------------------------------------|--------------|--------------------------------------|-------------------------------|
|             |                                                                                                                                 |                                                       | Paint                                                                                          | No. of coats | Paint             | No. of coats | Paint                                                                                | No. of coats | Shade                                |                               |
| 13<br>PS15  | For CLH & VLH***<br>PGs 07,08,12,17,19,21,24,45,47,48 & 80<br><br>07-401,410,420,431; 19-901<br>24-351,353, 404;<br>48-206,395; | Abrasive blast cleaning to Sa 2 1/2<br>35- 50 microns | Epoxy zinc rich primer<br>To IS 14589<br>Gr. II<br>%VS=35,<br>(min)<br>DFT=40 microns per coat | 1            | --                | --           | Aliphatic acrylic Poly-urethane paint<br>%VS=40.0 (min)<br>DFT=30.0 microns per coat | 1            | Phirozi Blue<br>Shade No. 176 of IS5 | 70                            |
| 14<br>PS 5B | All Columns below '0' level (embedded in concrete)<br>PGs 34,35,36,38 39                                                        | SSPC-SP3/ Power Tool Cleaning                         | Rust Preventive Fluid to<br>PR: CHEM: 09 - 04<br>DFT=20 $\mu\text{m}$ per coat                 | 2            | --                | --           | --                                                                                   | --           | --                                   | 40                            |

\*\*\*For components other than CLH & VLH, Painting Scheme given in Sl. No. 7 shall be followed.

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ISL (SQA RAJ)

**NOTES:**

01. Rust Preventive Coating should be given on HSFG Bolt and nut threads.
02. Machined surfaces and Retainers A & C types are to be applied with a coating of Temporary Rust Preventive oil.
03. All threaded and other surfaces of foundation bolts and its materials, insulation pins, Anchor channels, Sleeves shall be coated with Temporary Rust Preventive Fluid and during execution of civil works; the dried film of coating shall be removed using organic solvents.
04. Ground shade/colour of Finish paints & identification tag/Band for equipments, pipings pipe service, boiler supporting structures and other boiler components shall be followed as per tender.
05. PGMA's under Sub-Vendor items are not indicated. For all bought-out and sub-vendors items including PGMA's mentioned above falling under the scope of BHEL the same scheme as for main equipment as covered in this document shall be followed.
06. The Painting Scheme is valid for only Customer No: 1430, 1431 of M/s TATASTEEL KALINGANAGAR CPP -2x250TPH boiler.
07. No painting is required for Stainless Steel, Non-ferrous & galvanized components.
08. Wherever inside surfaces of components under PGMA 48 – XXX & other PGs, need protection till erection, two coats of Red-oxide zinc phosphate primer paint to IS12744 to a DFT of 60 microns shall be applied, after power tool cleaning.
09. The Temporary Rust Preventive coating that already been applied on any components, tubes, pipes etc., shall be removed by suitable solvents / heating to 350 –400 °C for an hour before primer paint application –but, in this case, it should be ensured that the minimum surface cleanliness required for primer paint application shall be SSPC – SP2 (equivalent – Hand Tool cleaning).
10. In components, wherever plates / sheets of thickness less than or equal to 5 mm and rods of <25mm/tubes/drain pipes are used, power tool / hand tool cleaning to SSPC- SP3 / SP2 shall be followed and the painting shall be done as described in Sl. No: 07.
11. For all commissioning components-erection materials (xx-993) two coats of Red oxide Zinc Phosphate Primer shall be applied to meet the temporary protection till erection, after power tool cleaning.
12. Touch-up painting of damaged areas shall be carried out as per clause applicable painting scheme.
13. All components covered under different PGMA's are to be painted. In case any component is left out, the same shall be deemed to be included under the relevant section based on paint logic approved.
14. For very small components like clamps etc. which don't have feasible dimensions for blast cleaning, Sl.No.7 shall be followed.
15. For very small components with weldable primer at edges, the entire component shall be applied with weldable primer.
16. All temporary/ transport structures, e.g. PGMA 04-194 are to be painted with one coat of Red-oxide zinc phosphate primer paint to IS12744 to a DFT of 30 µ/coat and 2 coats of Synthetic Enamel finish paint to IS 2932 –Shade Yellow-to a DFT of 20 µ/coat. The total DFT shall be 70 µ and these are to be cut & removed at site after erection. (It excludes components covered under Sr.No. 3 & 9 of description table)
17. For internal protection of Pipes, tubes, headers and other pressure parts, Volatile Corrosion Inhibitor (VCI) pellets shall be put ( after sponge testing/draining/ or drying ) and subsequently end capped. The dosage of VCI pellets shall be approximately 100 g/cu.m. For tubes typically 4 – 5 tablets per end are to be put. For C & I items the dosage of self-indicating Silica Gel (colourless) shall be 250 g/ cu.m. (About 2 to 3 bags weighing approximately 100 grams each). VCI pellets shall not be used for stainless steel components and its composite associates.
18. All threaded components of spring assemblies and turnbuckles shall be galvanized and achromatized to 15 microns minimum thickness.
19. Soot blower components i.e Valve head assembly having high surface temperature (> 200 and <600 deg. C) shall be applied with protective coating as per PS9 (up to 400 deg.C) and PS10 (up to 600 deg.C)
20. Corner plate, sheet channel and fixing pins of PGMA 32-210 shall be painted as per scheme PS3 to total DFT of 60 microns.
21. It is mandatory that for finish coat each layer shall have a permanent DFT and free from any paint defects like sags, wrinkles etc. Total DFT of a component correspond to respective painting scheme has to be ensured and recorded by inspection agency as per QP.
22. Handrails of PGMA under Sl. No. 3 need to be painted in line with scheme for handrails (i.e. Sl .No. 9).

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23. For chequered plates having thickness  $\leq 5\text{mm}$ , surface preparation can be power tool cleaning to St3 and painting shall be in line with Sl. No. 7.

24. Painting of bunker structures to be in line with painting scheme of supporting structures (Sl. No. 3).

### Painting Scheme – Details for procurement & application purposes

| Sl. No. | Generic nature of paint                                           | Theoretical Covering Capacity Sq.m per Litre. | No. of pack | Volume solids, % (min)** | DFT in microns (min) per coat | Shade                      | Shade No. to IS5   | Mode of appln. | Over coating interval, Hrs. |
|---------|-------------------------------------------------------------------|-----------------------------------------------|-------------|--------------------------|-------------------------------|----------------------------|--------------------|----------------|-----------------------------|
| 1       | Aliphatic acrylic polyurethane paint to IS 13213 (latest)         | 10                                            | 2           | 40                       | 30                            | Phirozi – Blue/ Light grey | 176/ 631           | Spray          | 24                          |
| 2       | Heat resistant Aluminium paint to IS 13183 Grade I/II (latest)    | 10                                            | 1           | -                        | 20                            | --                         | --                 | Brush / Spray  | 24                          |
| 3       | Red oxide zinc phosphate primer paint to IS 12744 (latest)        | 10                                            | 1           | As per IS 12744          | 30                            | Red Oxide                  | --                 | Brush / Spray  | 12                          |
| 4       | Red oxide Zinc Phosphate Dip coat primer paint to PR: CHEM: 09-03 | 10                                            | 1           | --                       | 35                            | Red Oxide                  | ---                | Dip            | 12                          |
| 5       | Long oil alkyd synthetic enamel finish paint to IS2932            | 10                                            | 1           | As per IS 2932           | 15-20                         | Reqd. shade                | Corrpdg. Shade no. | Brush / Spray  | 12                          |
| 6       | Temporary Rust preventive fluid to PR: CHE: 09 – 04               | 10                                            | 1           | --                       | 20                            | Amber                      | --                 | --             | 12                          |
| 7       | Epoxy Zinc rich primer to IS14589 Gr.II                           | 8                                             | 2           | 40                       | 40                            | Grey                       | --                 | Spray          | 24                          |
| 8       | De Oxaluminat weldable primer – colour Aluminum                   | 10                                            | 1           | --                       | --                            | Aluminum                   | --                 | Brush/ Spray   | 24                          |
| 9       | Epoxy based polyamide cured MIO pigmented intermediate coat.      | 8                                             | 2           | 60                       | 75                            | Brown/ grey                | --                 | Spray          | 24                          |
| 10      | Epoxy based polyamide cured finish paint to IS14209 (latest).     | 13                                            | 2           | 60                       | 30                            | Smoke grey                 | 692                | Spray          | 24                          |
| 11      | Epoxy based zinc phosphate primer to IS13238 (latest)             | 13                                            | 2           | 40                       | 30                            | Grey                       | --                 | Spray          | 24                          |

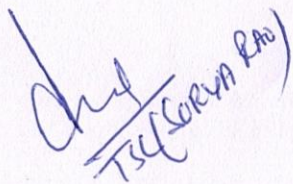
The covering capacity of paints specified is only approximate.

Paints and Rust Preventive fluid shall be procured from BHEL's approved suppliers. \*\*Values are indicative.

### Painting of Damaged Areas

(Areas where the paint has deteriorated badly by erosion and areas where the paint film has lost its adhesion and where the steel has rusted appreciably, should be repainted as follows)

| Sl.No. | Components                                                                     | Surface<br>Prepa-<br>ration             | Primer coat        |                 | Intermediate<br>coat |                 | Finish coat |                 |       | Total<br>DFT<br>μm<br>(min) |
|--------|--------------------------------------------------------------------------------|-----------------------------------------|--------------------|-----------------|----------------------|-----------------|-------------|-----------------|-------|-----------------------------|
|        |                                                                                |                                         | Paint              | No. of<br>coats | Paint                | No. of<br>coats | Paint       | No. of<br>coats | Shade |                             |
| 1      | Paint damaged components fall under<br>Sl.no: 1, 2,3, 4,5,6,7,8,9,11,12,13,14. | Power tool<br>cleaning to<br>bare metal | As given in scheme |                 |                      |                 |             |                 |       |                             |

  
TSC (Srinivas Rao)

## BANK GUARANTEE FOR PERFORMANCE SECURITY

(Non-Judicial Stamp paper/e-stamp paper of appropriate value as per Stamp Act prevailing in the State(s))

Bank Guarantee No:

Date:

To

NAME

& ADDRESSES OF THE BENEFICIARY

**IFSC AND MICR CODE**

Dear Sirs,

1. In consideration of Bharat Heavy Electricals Limited (hereinafter referred to as the 'Employer' which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns) incorporated under the Companies Act, 1956 and having its registered office at \_\_\_\_\_<sup>1</sup> through its Unit at.....(name of the Unit) having awarded to ( Name of the Vendor / Contractor / Supplier ) (VENDOR CODE ) with its registered office at \_\_\_\_\_<sup>2</sup> hereinafter referred to as the ' Vendor / Contractor / Supplier ', which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns), a contract Ref No.....dated .....<sup>3</sup> valued at Rs.....<sup>4</sup> ( Rupees -----)/FC.....(in words.....) for .....<sup>5</sup> (hereinafter called the 'Contract') and the Vendor / Contractor / Supplier having agreed to provide a Contract Performance Bank Guarantee, equivalent to .....% (... Percent) of the said value of the Contract to the Employer for the faithful performance of the Contract,

2. we, ....., (hereinafter referred to as the Bank), having registered/Head office at ..... and inter alia a branch at ..... being the Guarantor under this Guarantee, hereby, irrevocably and unconditionally undertake to forthwith and immediately pay to the Employer any sum or sums upto a maximum amount of Rs -----<sup>6</sup> ( Rupees -----) without any demur, immediately on first demand from the Employer and without any reservation, protest, and recourse and without the Employer needing to prove or demonstrate reasons for its such demand.

3. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. \_\_\_\_\_.

4. We undertake to pay to the Employer any money so demanded notwithstanding any dispute or disputes raised by the Vendor / Contractor / Supplier in any suit or proceeding pending before any Court or Tribunal, Arbitrator or any other authority, our liability under this present being absolute and unequivocal.

5. The payment so made by us under this Guarantee shall be a valid discharge of our liability for payment thereunder and the Vendor / Contractor / Supplier shall have no claim against us for making such payment.

6. We the .....bank further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Contract/satisfactory completion of the performance guarantee period as per the terms of the Contract and that it shall continue to be enforceable till all the dues of the Employer under or by virtue of the said Contract have been fully paid and its claims satisfied or discharged.

7. We.....BANK further agree with the Employer that the Employer shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Contract or to extend time of performance by the said Vendor / Contractor / Supplier from time to time or to postpone for any time or from time to time any of the powers exercisable by the Employer against the said Vendor / Contractor / Supplier and to forbear or enforce any of the terms and conditions relating to the said Contract and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Vendor / Contractor / Supplier or for any forbearance, act or omission on the part of the Employer or any indulgence by the Employer to the said Vendor / Contractor / Supplier or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.

8. The Bank also agrees that the Employer at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Vendor / Contractor / Supplier and notwithstanding any security or other guarantee that the Employer may have in relation to the Vendor / Contractor / Supplier's liabilities.

9. This Guarantee shall remain in force upto and including.....<sup>7</sup> and shall be extended from time to time for such period as may be desired by Employer.

10. This Guarantee shall not be determined or affected by liquidation or winding up, dissolution or change of constitution or insolvency of the Vendor / Contractor / Supplier but shall in all respects and for all purposes be binding and operative until payment of all money payable to the Employer in terms thereof.

11. Unless a demand or claim under this guarantee is made on us in writing on or before the .....<sup>8</sup>we shall be discharged from all liabilities under this guarantee thereafter.

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

13. We..... BANK lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Employer in writing.

Notwithstanding anything to the contrary contained hereinabove:

a) The liability of the Bank under this Guarantee shall not exceed.....<sup>6</sup>

- b) This Guarantee shall be valid up to .....<sup>7</sup>
- c) Unless the Bank is served a written claim or demand on or before (minimum 3 to 6 months from the expiry date)<sup>8</sup> all rights under this guarantee shall be forfeited and the Bank shall be relieved and discharged from all liabilities under this guarantee irrespective of whether or not the original bank guarantee is returned to the Bank.

14. We, \_\_\_\_\_ Bank, have power to issue this Guarantee under law and the undersigned as a duly authorized person has full powers to sign this Guarantee on behalf of the Bank.

For and on behalf of  
(Name of the Bank)

Dated.....

Place of Issue.....

BANK EMAIL ID:

BANK PHONE NO:

AUTHORISED SIGNATORIES CELL PHONE NO:

BANK FAX NO:

<sup>1</sup> NAME AND ADDRESS OF EMPLOYER I.e Bharat Heavy Electricals Limited

<sup>2</sup> NAME AND ADDRESS OF THE VENDOR /CONTRACTOR / SUPPLIER.

<sup>3</sup> DETAILS ABOUT THE NOTICE OF AWARD/CONTRACT REFERENCE

<sup>4</sup> CONTRACT VALUE

<sup>5</sup> PROJECT/SUPPLY DETAILS

<sup>6</sup> BG AMOUNT IN FIGURES AND WORDS

<sup>7</sup> VALIDITY DATE

<sup>8</sup> DATE OF EXPIRY OF CLAIM PERIOD

|                                                                                                           |                                                 |  |                          |             |
|-----------------------------------------------------------------------------------------------------------|-------------------------------------------------|--|--------------------------|-------------|
| <br><b>BHEL - TRICHY</b> | <b>THIRD PARTY NON-DISCLOSURE<br/>AGREEMENT</b> |  | Doc.No. : ISMS-04/TP/011 |             |
|                                                                                                           |                                                 |  | Ver. No: 3.0             | Rev. No: 00 |
|                                                                                                           |                                                 |  | Date : 27 - 10 - 14      |             |

## THIRD PARTY NON-DISCLOSURE AGREEMENT

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

I warrant and agree as follows:

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

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

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

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

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

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

Dated at \_\_\_\_\_, this \_\_\_\_ day of \_\_\_\_\_, 20\_\_.

Name

Company

Signature