

Bid Document

Bid Details	
Bid End Date/Time	29-10-2021 17:00:00
Bid Opening Date/Time	29-10-2021 17:30:00
Bid Life Cycle (From Publish Date)	90 (Days)
Bid Offer Validity (From End Date)	80 (Days)
Ministry/State Name	Ministry Of Heavy Industries And Public Enterprises
Department Name	Department Of Heavy Industry
Organisation Name	Bharat Heavy Electricals Limited (bhel)
Office Name	10250020-pem, Noida
Total Quantity	7
Item Category	BOQ
MSE Exemption for Years of Experience and Turnover	No
Startup Exemption for Years of Experience and Turnover	No
Document required from seller	Experience Criteria, Additional Doc 1 (Requested in ATC), Compliance of BoQ specification and supporting document *In case any bidder is seeking exemption from Experience / Turnover Criteria, the supporting documents to prove his eligibility for exemption must be uploaded for evaluation by the buyer
Bid to RA enabled	Yes
RA Qualification Rule	50% Lowest Priced Technically Qualified Bidders
Primary product category	BOQ
Time allowed for Technical Clarifications during technical evaluation	7 Days
Estimated Bid Value	11733611
Payment Timelines	Payments shall be made to the Seller within 60 days of issue of consignee receipt-cum-acceptance certificate (CRAC) and on-line submission of bills (This is in supersession of 10 days time as provided in clause 12 of GeM GTC)
Evaluation Method	Total value wise evaluation

EMD Detail

Required	No
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ePBG Detail

Advisory Bank	State Bank of India
ePBG Percentage(%)	5.00
Duration of ePBG required (Months).	27

(a). EMD & Performance security should be in favour of Beneficiary, wherever it is applicable.

Beneficiary:

MANAGER, BHEL PEM

10250020-PEM, Noida, Department of Heavy Industry, Bharat Heavy Electricals Limited (BHEL), Ministry of Heavy Industries and Public Enterprises

(Manish Kumar Sinha)

Splitting

Bid splitting not applied.

1. Estimated Bid Value indicated above is being declared solely for the purpose of guidance on EMD amount and for determining the Eligibility Criteria related to Turn Over, Past Performance and Project / Past Experience etc. This has no relevance or bearing on the price to be quoted by the bidders and is also not going to have any impact on bid participation. Also this is not going to be used as a criteria in determining reasonableness of quoted prices which would be determined by the buyer based on its own assessment of reasonableness and based on competitive prices received in Bid / RA process.

2. Reverse Auction would be conducted amongst first 50% of the technically qualified bidders arranged in the order of prices from lowest to highest. Number of sellers eligible for participating in RA would be rounded off to next higher integer value if number of technically qualified bidders is odd (e.g. if 7 bids are technically qualified, then RA will be conducted amongst L-1 to L-4). In case number of technically qualified bidders are 2 or 3, RA will be between all without any elimination. If Buyer has chosen to split the bid amongst N sellers, then minimum N sellers would be taken to RA round. In case Primary products of only one OEM are left in contention for participation in RA based on lowest 50% bidders qualifying for RA, the number of sellers qualifying for RA would be increased to get at least products of one more OEM (directly participated or through its reseller) if available. Further, if bid(s) of any seller(s) eligible for MSE preference is / are coming within price band of 15% of Non MSE L-1 or if bid of any seller(s) eligible for Make in India preference is / are coming within price band of 20% of non MII L-1, then such MSE / Make in India seller shall also be allowed to participate in the RA process.

BOQ (1 pieces)

Brand Type	Unbranded
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Technical Specifications

Specification Document	View File
BOQ Document	View File

Advisory-Please refer attached BOQ document for detailed consignee list and delivery period.

Consignees/Reporting Officer and Quantity

S.No.	Consignee/Reporting Officer	Address	Quantity	Delivery Days
1	Abhijeet Kumar	490021,BHEL Site Office, Construction Manager 2x250 MW, NSPCL Bhilai Expansion Power Project, Bhilai, Dist: Durg, Chhattisgarh Pin-490021	1	210

BOQ (1 pieces)

Brand Type	Unbranded
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Technical Specifications

Specification Document	View File
BOQ Document	View File

Advisory-Please refer attached BOQ document for detailed consignee list and delivery period.

Consignees/Reporting Officer and Quantity

S.No.	Consignee/Reporting Officer	Address	Quantity	Delivery Days
1	Narendra Dewangan	495450,BHEL Site Office, Construction Manager NTPC Korba STPP, Dist. Korba, Chhattisgarh, Pin- 495450,	1	210

BOQ (1 pieces)

Brand Type	Unbranded
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Technical Specifications

Specification Document	View File
BOQ Document	View File

Advisory-Please refer attached BOQ document for detailed consignee list and delivery period.

Consignees/Reporting Officer and Quantity

S.No.	Consignee/Reporting Officer	Address	Quantity	Delivery Days
1	Burhan Majhi	505215,BHEL Site office, 3X200MW+3X500MW, NTPC Ramagundam Stage-I & II FGD Package, (Telangana), PIN : 505215	1	210

BOQ (1 pieces)

Brand Type	Unbranded
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Technical Specifications

Specification Document	View File
BOQ Document	View File

Advisory-Please refer attached BOQ document for detailed consignee list and delivery period.

Consignees/Reporting Officer and Quantity

S.No.	Consignee/Reporting Officer	Address	Quantity	Delivery Days
1	Sudhir Kumar Rai	441104,BHEL SITE OFFICE 2x500 MW,NTPC Mouda FGD Project, Dist. Nagpur (M.S.) - 441104	1	210

BOQ (1 pieces)

Brand Type	Unbranded
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Technical Specifications

Specification Document	View File
BOQ Document	View File

Advisory-Please refer attached BOQ document for detailed consignee list and delivery period.

Consignees/Reporting Officer and Quantity

S.No.	Consignee/Reporting Officer	Address	Quantity	Delivery Days
1	Mridul Kumar Taisum	825321,BHEL SITE OFFICE, Construction Manager, BHEL 3X660 MW NORTH KARANPURA STPP (NTPC), BHEL site office, Tandwa, Dist. - Chatra, Jharkhand, Pin - 825321	1	210

BOQ (1 pieces)

Brand Type	Unbranded
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Technical Specifications

Specification Document	View File
BOQ Document	View File

Advisory-Please refer attached BOQ document for detailed consignee list and delivery period.

Consignees/Reporting Officer and Quantity

S.No.	Consignee/Reporting Officer	Address	Quantity	Delivery Days
1	Bethanabelli Eswararao	824303,BHEL SITE OFFICE, 4x250 MW Nabinagar Project BRBCL P.O. Nabinagar Dehri-onsone, Dist. - AURANGABAD(BH), BIHAR-824303, India	1	210

BOQ (1 pieces)

Brand Type	Unbranded
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Technical Specifications

Specification Document	View File
BOQ Document	View File

Advisory-Please refer attached BOQ document for detailed consignee list and delivery period.

Consignees/Reporting Officer and Quantity

S.No.	Consignee/Reporting Officer	Address	Quantity	Delivery Days
1	Ravi Ranjan Prabhat	824303, Construction Manager, 3x660 MW BHEL - NPGCL Nabinagar Project, PO.- Son Samriddhi Complex, NPGCL Township, District- Aurangabad, Bihar-824303	1	210

Buyer Added Bid Specific Additional Terms and Conditions

1. **OPTION CLAUSE:** The Purchaser reserves the right to increase or decrease the quantity to be ordered up to 25 percent of bid quantity at the time of placement of contract. The purchaser also reserves the right to increase the ordered quantity by up to 25% of the contracted quantity during the currency of the contract at the contracted rates. Bidders are bound to accept the orders accordingly.
2. **Nominated Inspection Agency:** On behalf of the Buyer organization, any one of the following Inspection Agency would be conducting inspection of stores before acceptance:
Pre-dispatch Inspection at Seller Premises (applicable only if pre-dispatch inspection clause has been selected in ATC): YES, BHEL NOMINATED TPIA/CUSTOMER
Post Receipt Inspection at consignee site before acceptance of stores: No
3. Buyer Added text based ATC clauses

PROJECT: - Combined Enquiry for Seven FGD Projects (i.e. 2x250 MW NSPCL Bhilai FGD, 2x500 MW NTPC MAUDA FGD STAGE-I, 3x200+3x500 MW NTPC RAMAGUNDAM FGD, 3x200+3x500+1x500 MW NTPC KORBA FGD, 3x660 MW North Karanpura FGD, 3x660 MW NPGCL NABINAGAR FGD and 4x250MW BRBCL Nabinagar FGD)

PACKAGE: - RIGID STEEL CONDUITS

GeM Bid No: - GEM/2021/B/1607637

Additional Terms and Conditions for subject Tender Enquiry to be complied by Bidders for Consideration in this tender:

- 1) **Payment Terms:** Payments shall be made to the Seller within 60 days (45 days for seller qualified and registered as Micro or small as per MSMED Act.) of issue of consignee receipt-cum-acceptance certificate (CRAC) and on-line submission of bills (This is in supersession of 10 days time as provided in clause 12 of

GeM GTC).

Supplier has to provide Tax invoice, Packing List, LR/RR, CRAC, Insurance intimation, Guarantee Certificate, E-way bill (as applicable) for payment. Provision of offline payment in GeM shall be utilized.

- 2) Terms of Delivery: As per cl. no. 13 of GTC on GeM. **However, Transit insurance shall be in the scope of Seller and unloading of items at delivery point shall be in the scope of BHEL. Bidder to quote prices accordingly.**

3) Delivery Period: 210 days from the date of PO.

However, following related to delivery shall be considered -

Delivery Schedule shall be Four (04) months from date of CAT-1 approval of Primary drawing/documents or BHEL manufacturing clearance whichever is later, subjected to drawing/document submission/re-submission schedule as stipulated, in case of any delay in submission/re-submission of Primary drawing/documents, then same shall be reduced from the given delivery period. Delay in BHEL's comments/approval beyond 18 days shall also be considered for delay analysis.

After award of contract - Successful bidders shall be asked to submit following Primary drg./doc.:

- i) PE-V0-XXX-558-E701 Data sheet of Rigid Steel Conduits
- ii) PE-V0-XXX-558-E906 Quality Plan of Rigid Steel Conduits

R-0 within 14 days from PO & subsequent revisions within 10 days of comments received from BHEL. BHEL shall furnish comments / approval on each submission within 18 days from receipt. Approval process of primary documents shall be completed within 90 days from Purchase Order. Seller shall be required to ensure supply as per approved Drawings with modifications as communicated by Buyer. If there is delay from buyer side in approval of drawing - the delivery period shall be refixed without LD for the period of delay in approval of Drawing. Only primary documents shall be considered for refixation of delivery. Above term 'After award of contract' is proposed from available clauses in ATC library on GEM portal. Material shall be dispatched by vendor after issuance of MDCC by BHEL only.

Followings may also be noted:

- a) Vendor to start manufacturing activities only after obtaining specific manufacturing clearance from BHEL Purchase Group (PG).
 - b) In case BHEL manufacturing clearance date is later than the date of Cat-1 approval of Primary drawing/documents, then the contractual delivery period will be calculated by setting off the time gap between Cat-1 approval date of Primary drawing/documents and the manufacturing clearance date, from any delay by vendor in submission/re-submission of Primary drawing/documents.
- 4) Performance Bank Guarantee: 27 Months from the date of PO as per cl. no. 7 of GEM GTC. However, please be noted that as per GEM, Single Purchase order (combined for all seven projects) shall be issued. Accordingly, BG for total PO (Ex-works) value shall be applicable and validity of BG shall be 18 months from the date of last supply of PO.

Please also be noted that PBG value given in ATC will override PBG given elsewhere and PBG calculation shall be as following:

(5% of Consignee wise total Ex-works price for Bhilai, Korba, BRBCL Nabinagar FGD projects)

+

(3% of Consignee wise total Ex-works price for Mauda, Ramagundam, North Karanpura & NPGCPL Nabinagar FGD projects).

Further if relaxation from end customer is received for Bhilai, Korba, BRBCL Nabinagar FGD projects, same benefit shall be passed on to bidders as well.

- 5) Liquidated Damage: Purchaser reserves the right to recover from the Seller/ Contractor, as agreed liquidated damages and not by way of penalty, a sum equivalent to half ($\frac{1}{2}$) percent and applicable GST thereon, of the total main supply contract price excluding GST per week or part thereof, subject to a maximum of ten (10) percent of the total main supply contract price excluding GST, if the Seller/ Contractor fails to deliver any part of the ordered goods/stores within the period stipulated in the Order/ Contract.

However, LD shall be calculated for Consignee wise Quantity.

- 6) Guarantee Terms: As per Cl. No. 10 of GTC on GeM for the bid. However, Guarantee & Warrantee time period shall be 18 months from the date of last supply in the contract.

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- 7) This is a conditional tender enquiry. Financial Bid (Part-II) opening of a bidder shall be subject to the followings:

- i) Techno-Commercial evaluation by BHEL.
- ii) Qualification of Technical PQR.
- iii) Offered item should mandatorily conform to PP-MII order provisions.

- 8) This item /package/system falls under the list of items defined in para 3 of ministry of finance guideline date 20.09.16 (procurement of items related to public safety, health, critical security operations and Equipment's etc.) & hence criteria of prior experience /turnover shall be same for all bidders including start up /MSME.

- 9) For this procurement, the local content to categorize a supplier as a Class I Local Supplier / Class II Local Supplier / Non Local supplier and Purchase preference to Class I local supplier, is as defined in Public Procurement (Preference to Make in India), (PPP-MII) Order 2017 dt. 16/09/2020 issued by DPIIT. In case of subsequent orders issued by the nodal ministry, changing the definition of local content for the items of the NIT, the same shall be applicable even if issued after issue of this NIT, but before opening of Part-II bids against this NIT.

Regarding verification of local content, the local supplier at the time of tender, bidding or solicitation shall be required to provide certification as per para 9 of PP-MII order revision dated 16.09.2020 (format enclosed with tender specification documents).

- 10) Bidders to ensure that Third party / customer issued certificates being submitted as proof of PQR qualification should have verifiable details of document / certificate issuing authority such as name & designation of Issuing Authority and its organization contact number and e-mail Id etc. In case the same found not available, Purchaser has right to reject such document from evaluation.

- 11) Bidders to,

- ensure compliance to Ministry of Power (MoP) Order No. 25-11/6/2018-PG dt. 02/07/2020 & Order No. 11/05/2018-Coord. dt. 23/07/2020, if applicable.
- ensure compliance of Ministry of Finance (MoF) Order (Public Procurement No. 1 & 2) F. No. 6/18/2019/PPD dt. 23/07/2020.
- to submit “Model Certificate for Tenders” as per Annexure-III of Ministry of Finance (MoF) Order (Public Procurement No. 1 & 2) F. No. 6/18/2019/PPD dt. 23/07/2020.

Note: Subsequent orders/circulars to be checked and to be complied.

- 12) Due to COVID-19 pandemic condition prevailing in the country, BHEL/PEM may go for Remote Inspection of Offered items, if required. Vendors are requested to be equipped with the facilities/gadgets to take up the inspection REMOTELY as indicated in the guidelines available at following link:

<https://pem.bhel.com/Documents/VendorSection/Vendor/Guidelines.pdf>

Inspection call to be raised by bidder on BHEL CQIR portal (details shall be shared at the of execution of order) and Inspection agency shall attend at the inspection within seven (07) days of the date on which the material is notified as being ready. In case of delay in witnessing of inspection beyond stipulated time (i.e. 7 days from the date on which the material is notified as being ready), by BHEL arising due to reasons not attributable to vendor, BHEL will extend the delivery period for such delay in carrying out inspection. If BHEL is not able to witness inspection up to 15 days then in addition to delay beyond stipulated period, extension in delivery time of 07 days for arranging fresh inspection will be given.

When the tests have been satisfactorily completed at Seller/ Contractor's works, the Inspection Agency shall issue an inspection report that effect within seven (07) days after completion of the tests, but if the tests were not witnessed by the Inspection Agency or his representative, the material acceptance report would be issued within seven (07) days after receipt of the test certificates by the Purchaser.

Purchaser will issue MDCC to the Seller/ Contractor within 7 days based on inspection report/ test certificates/Certificate of Conformance as applicable. In case of delay in issuance of MDCC beyond 7 days stipulated time (i.e. from the date of successful inspection report), by BHEL arising due to reasons not attributable to vendor, BHEL will extend the delivery period for such delay in issuing MDCC. If BHEL is not able to issue MDCC up to 15 days then in addition to delay beyond stipulated period, 7 days' additional time shall be given to vendor to facilitate the vendor for arranging logistics arrangements.

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

- 14) Evaluation shall be on the basis of total all inclusive, landed price at consignee's destination for all seven projects together (Refer cl. no. 6 of GTC on GEM).**

- 15) Consignee wise PQR criteria is uploaded with specification and shall prevail Value of Experience criteria and Past performance parameter mentioned in GeM bid.

- 16) Risk & Cost: Details as per 'Annexure for Risk & Cost' enclosed with this ATC.
- 17) Bidders to provide detailed break-up of quoted price in Ex-works, freight & Tax components.
- 18) Bidders to submit applicable Freight % & GST % included in their prices during tender clarification stage.
- 19) Bidders to comply with Packing Instructions and others parameters provided in tender specification document.
- 20) Please furnish NTPC's Main & Sub-supplier questionnaire (enclosed with this enquiry tender specification document) and submit all the supportive documents against details furnished therein (signed & stamped on each page).
- 21) Consignee Details (for PRC - Provisional Receipt Certificate & CRAC - Consignee's Receipt cum Acceptance Certificate, as applicable) shall be as per Project Site official details. Consignee details of projects considered are mentioned in NIT document for ready reference.
- 22) All other terms & conditions shall be as per GeM bid, selected Additional Terms & Conditions from GeM library and GTC on GeM version available on GeM Portal as on enquiry floating date.

ANNEXURE FOR RISK & COST

- 1.** In case of delays (beyond the maximum late delivery period as per LD clause) in supplies, or if there be defective supplies or non-fulfilment of any other terms and conditions of the Contract as enumerated subsequently in this clause, then, without prejudice to its right to recover any expenses, losses or damages to which the Buyer may be put to incur or sustain by reason of the Seller/Contractor's default or breach of Order/Contract or to suspend business dealings with the Seller/Contractor in terms of the Buyers' Guidelines for Suspension of Business Dealings as applicable from time to time, the Buyer shall also be entitled to cancel the Order/ Contract either in whole or portion thereof without compensation to Seller. On the occurrence of any of the acts/omissions mentioned below, the Buyer may if it so desires, procure upon such terms and in such manner as deemed appropriate, plant/equipment/ stores not so delivered or others of similar description where plant/ equipment/ stores exactly complying with particulars are not, in the opinion of the Buyer (which shall be final), readily procurable, at the risk and cost of the Seller.

The Seller shall be liable to the Buyer for any excess costs incurred thereof and the Seller shall continue the performance of the Order/Contract to the extent not cancelled under the provisions of this clause. The Seller shall on no account be entitled to any gain on such repurchases. If the Bidder does not agree to this Risk Purchase clause, BHEL reserves the right to reject the bid/offer of the Bidder. The order/contract may be cancelled in whole or part thereof and Risk & Cost Clause in line with terms and conditions of PO/Contract may be invoked by the Buyer in any of the following cases:

i. If the Seller/Contractor fails to deliver the goods or materials or any instalment thereof within the period(s) fixed for such delivery or the Seller's poor progress of the supply/services vis-à-vis delivery/execution timeline as stipulated in the contract, backlog attributable to the Seller including unexecuted portion of supply does not appear to be executable within balance period available;

ii. delivers goods or materials not of the contracted quality and failing to adhere to the contract specifications/execution methodology;

iii. withdrawal from or repudiation/abandonment of the supply/services by the Seller before completion as per contract or if the Seller refuses or is unable to supply goods or materials covered by the order/Contract either in whole or in part or otherwise fails to perform the Order/Contract.

iv. Non supply by the Seller within scheduled completion/delivery period as per contract or as extended from time to time for reasons attributable to the Seller;

v. Termination of Contract on account of any other reason(s) attributable to the Seller.

vi. Assignment, transfer, sub-letting of Contract without BHEL's written permission resulting in termination of Contract or part thereof by BHEL.

vii. If the Seller be an individual or a Sole Proprietorship, in the event of death or insanity of the Seller.

viii. If the Seller/Contractor being an individual or if a partnership firm thereof, shall at any time be adjudged insolvent or shall have a receiving order for administration of his estate made against him or shall take any proceeding for composition under any Insolvency Act for the time being in force or make any assignment of the order/Contract or enter into any arrangement or composition with his creditors or suspend payment or if the firm dissolved under the Partnership Act;

ix. If the Seller/Contractor being a Company is wound up voluntarily or by order of a Court or a Receiver, Liquidator or Manager on behalf of the debenture holders and creditors is appointed or circumstances have arisen which entitles the Court of debenture holder and creditors to appoint a receiver, liquidator or manager

x. Non- Compliance to any contractual condition or any other default attributable to the Seller.

Such defaulting vendor/Seller shall not be eligible to participate in re-tendering conducted on account of risk purchase made due to fault of such vendor/Seller.

2. BHEL's right to go for Risk and Cost, Calculation of Risk and Cost amount & LD, recovery options to BHEL are given as under: -

2.1 BHEL reserves the right to terminate the contract or withdraw portion of work and get it done through other agency, at the risk and cost of the contractor *after due notice of a period of 14 days' by BHEL* in any of the following cases:

- i) If the Seller/Contractor fails to deliver the goods or materials or any instalment thereof within the period(s) fixed for such delivery or the Seller's poor progress of the supply/ services vis-a-vis delivery/execution timeline as stipulated in the Contract, backlog attributable to seller including unexecuted portion of supply does not appear to be executable within balance available period;
- ii) Delivers goods or materials not of the contracted quality and failing to adhere to the contract specifications;
- iii) Withdrawal from or repudiation/ abandonment of the supply/ services by Seller before completion as per contract or if the Seller refuses or is unable to supply goods or materials covered by the Order/Contract either in whole or in part or otherwise fails to perform the Order/Contract;
- iv) Non-supply by the Seller within scheduled completion/delivery period as per Contract or as extended from time to time, for the reasons attributable to the Seller;
- v) Termination of Contract on account of any other reason (s) attributable to Seller.
- vi) Assignment, transfer, subletting of Contract without BHEL's written permission resulting in termination of Contract or part thereof by BHEL.
- vii) If the Seller be an individual or a sole proprietorship Firm, in the event of the death or insanity of the Seller;
- viii) If the Seller/Contractor being an individual or if a firm on a partnership thereof, shall at any time, be adjudged insolvent or shall have a receiving order for administration of his estate made against him or shall take any proceeding for composition under any Insolvency Act for the time being in force or make any assignment of the Order/Contract or enter into any arrangement or composition with his creditors or suspend payment or if the firm dissolved under the Partnership Act;
- ix) If the Seller/Contractor being a company is wound up voluntarily or by order of a Court or a Receiver, Liquidator or Manager on behalf of the debenture holders and creditors is appointed or circumstances shall have arisen which entitles the Court of debenture holder and creditors to appoint a receiver, liquidator or manager;
- x) Non-compliance to any contractual condition or any other default attributable to Seller.

2.1.1 Risk & Cost Amount against Balance Work

Risk & Cost amount against balance work shall be calculated as follows:

$$\text{Risk \& Cost Amount} = [(A-B) + (A \times H/100)]$$

Where,

A= Value of Balance scope of Work (*) as per rates of new contract

B= Value of Balance scope of Work (*) as per rates of old contract being paid to the contractor at the time

of termination of contract i.e. inclusive of PVC & ORC, if any.

H = Overhead Factor to be taken as 5

In case (A-B) is less than 0 (zero), value of (A-B) shall be taken as 0 (zero).

2.1.2 Balance scope of work (in case of termination of contract)

Difference of Contract Quantities and Executed Quantities as on the date of issue of Letter for 'Termination of Contract', shall be taken as balance scope of Work for calculating risk & cost amount.

Contract quantities are the quantities as per original contract. If, Contract has been amended, quantities as per amended Contract shall be considered as Contract Quantities.

Items for which total quantities to be executed have exceeded the Contract Quantities based on drawings issued to contractor from time to time till issue of Termination letter, then for these items total Quantities as per issued drawings would be deemed to be contract quantities.

Substitute/ extra items whose rates have already been approved would form part of contract quantities for this purpose.

Substitute/ extra items which have been executed but rates have not been approved, would also form part of contract quantities for this purpose and rates of such items shall be determined in line with contractual provisions.

However, increase in quantities on account of additional scope in new tender shall not be considered for this purpose.

NOTE: In case portion of work is being withdrawn at risk & cost of contractor instead of termination of contract, contract quantities pertaining to portion of work withdrawn shall be considered as 'Balance scope of work' for calculating Risk & Cost amount.

2.1.3 LD against delay in executed work in case of Termination of Contract

LD against delay in executed work shall be calculated in line NIT terms & conditions, for the delay attributable to contractor. For limiting the maximum value of LD, contract value shall be taken as Executed Value of work till termination of contract.

Method for calculation of LD against delay in executed work in case of termination of contract" is given below:

- i. Let the time period from scheduled date of start of work till termination of contract excluding the period of Hold (if any) not attributable to contractor = T1
- ii. Let the value of executed work till the time of termination of contract = X
- iii. Let the Total Executable Value of work for which inputs/fronts were made available to contractor and were planned for execution till termination of contract = Y
- iv. Delay in executed work attributable to contractor i.e. $T2 = [1-(X/Y)] \times T1$
- v. LD shall be calculated in line with LD clause (clause 16) of the Contract for the delay attributable to contractor taking "X" as Contract Value and "T2" as period of delay attributable to contractor.

2.2 Recoveries arising out of Risk & Cost and LD or any other recoveries due from Contractor

Without prejudice to the other means of recovery of such dues from the Seller recoveries from the Seller on whom risk

& cost has been invoked shall be made from the following:

- a) Dues available in the form of Bills payable to seller, SD, BGs against the same contract.
- b) Dues payable to seller against other contracts in the same Region/Unit/ Division of BHEL.
- c) Dues payable to seller against other contracts in the different Region/Unit/ division of BHEL.

In-case recoveries are not possible with any of the above available options, Legal action shall be initiated for recovery against contractor.

- 4. Buyer uploaded ATC document [Click here to view the file.](#)

Disclaimer

The additional terms and conditions have been incorporated by the Buyer after approval of the Competent Authority in Buyer Organization. Buyer organization is solely responsible for the impact of these clauses on the bidding process, its outcome and consequences thereof including any eccentricity / restriction arising in the bidding process due to these ATCs and due to modification of technical specification and / or terms and conditions governing the bid. Any clause incorporated by the Buyer such as demanding Tender Sample, incorporating any clause against the MSME policy and Preference to make in India Policy, mandating any Brand names or Foreign Certification, changing the default time period for Acceptance of material or payment timeline governed by OM of Department of Expenditure shall be null and void and would not be considered part of bid. Further any reference of conditions published on any external site or reference to external documents / clauses shall also be null and void. If any seller has any objection / grievance against these additional clauses or otherwise on any aspect of this bid, they can raise their representation against the same by using the Representation window provided in the bid details field in Seller dashboard after logging in as a seller within 4 days of bid publication on GeM. Buyer is duty bound to reply to all such representations and would not be allowed to open bids if he fails to reply to such representations.

[This Bid is also governed by the General Terms and Conditions](#)

In terms of GeM GTC clause 26 regarding Restrictions on procurement from a bidder of a country which shares a land border with India, any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority. While participating in bid, Bidder has to undertake compliance of this and any false declaration and non-compliance of this would be a ground for immediate termination of the contract and further legal action in accordance with the laws.

---Thank You---

BHILAI FGD - RIGID STEEL CONDUIT BOQ

Item Number	Item Title	Item Description	Item Quantity	Unit of Measure	Consignee ID	ZipCode	Delivery Period (In number of days)	Unit Price (Inclusive of TAX)	GST % Applicable	Brand	Model	HSN Code
1	558-15001-A	GI CONDUITS,1.6MM THK EPOXY 20MM DIA	500	MTR	BHILAI_PEM_CON	490021	210					
2	558-15002-A	GI CONDUITS,1.6MM THICK, 20MM DIA	10905	MTR	BHILAI_PEM_CON	490021	210					
3	558-15003-A	GI CONDUITS,1.6MM THICK, 25MM DIA	1750	MTR	BHILAI_PEM_CON	490021	210					
4	558-15005-A	GI CONDUITS,2.0MM THICK, 50MM DIA	500	MTR	BHILAI_PEM_CON	490021	210					

2X250 MW NSPCL BHILAI TPP (FGD PKG)

TECHNICAL SPECIFICATION

FOR

RIGID STEEL CONDUITS

SPECIFICATION NO.: *PE-TS- 468-558-E002*

REVISION: 0



**BHARAT HEAVY ELECTRICALS LIMITED
POWER SECTOR
PROJECT ENGINEERING MANAGEMENT
NOIDA, UP (INDIA) – 201301**

419056/2021/PS-PEM-EL



TECHNICAL SPECIFICATION FOR RIGID STEEL CONDUITS

SPEC NO. PE-TS- 468-558-E002

VOLUME NO.: II-B

SECTION: I

REV NO.: 00 DATE: 19.08.2021

SHEET : 1 OF 11

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COMPLIANCE CERTIFICATE

The bidder shall confirm compliance to the following by signing/ stamping this compliance certificate and furnishing same with the offer.

1. The scope of supply, technical details, construction features, design parameters etc. shall be as per technical specification & there are no exclusion/ deviation with regard to same
2. There are no deviation with respect to specification other than those furnished in the 'schedule of deviations'
3. Only those technical submittals which are specifically asked for in NIT to be submitted at tender stage shall be considered as part of offer. Any other submission, even if made, shall not be considered as part of offer.
4. Any comments/ clarifications on technical/ inspection requirements furnished as part of bidder's covering letter shall not be considered by BHEL, and bidder's offer shall be construed to be in conformance with the specification.
5. Any changes made by the bidder in the price schedule with respect to the description/ quantities from those given in BOQ-Cum-Price schedule of the specification shall not be considered (i.e., technical description & quantities as per specification shall prevail).

BIDDER'S STAMP & SIGNATURE

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SECTION – I



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SPECIFIC TECHNICAL REQUIREMENTS

1.0 SCOPE

- 1.1 Manufacture, Inspection and Testing at Manufacturer's works, proper packing and delivery to site of rigid steel conduits conforming to this specification.
- 1.2 Technical requirements of rigid steel conduits are indicated in Data Sheet-A & Section-II.
- 1.3 The stipulation of Data Sheet-A shall prevail in case of any conflict between the stipulations of Data Sheet-A & Section-II.

2.0 BILL OF QUANTITIES

The bidder to quote for items as per price schedule attached with NIT.

Supplier to also give the following undertaking in the BOM: "The BoM provided herewith completes the scope (in content and intent) of material supply under PO No. -----, dated ----- . Any additional material which may become necessary for the intended application of the supplied item(s)/package will be supplied free of cost in most reasonable time."

3.0 DRAWINGS & DOCUMENTS TO BE SUBMITTED

- 3.1 Bidders shall furnish following documents as the part of their technical offer: -
 - a) Complete signed & stamped copy of this specification.
 - b) "Deviation Schedule" with "NO Deviations" and bidder's signature and company stamp.
 - c) Unpriced Price Schedule as enclosed with NIT with 'Quoted' word against items with bidder's signature and company stamp.
- 3.2 Document submission / resubmission schedule after placement of order shall be as per NIT.

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4.0 PACKING

- 4.1 Packing shall be as per Clause 5 of Section -II.

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DATASHEET-A

I. APPLICABLE STANDARDS & CODES

- a) IS:9537 (Part I & II) Conduits for electrical installation.
- b) IS:2629 Recommended practice for hot dip galvanizing on iron and steel.
- c) IS:4759 Specification for hot dip zinc coatings on structural steel and allied products
- d) IS:6745 Methods for determination of mass of zinc coating on zinc coated iron and steel articles.
- e) IS:513 Cold reduced low carbon steel sheet and strip
- f) IS: 10748 Hot rolled Steel strip for welded tubes and pipes
- g) IS: 2633 Method for testing uniformity of coating on zinc coated articles
- h) IS:6005 Code of practice for phosphating iron & steel

II. RIGID STEEL CONDUITS

S.No.	Description	Unit	Parameters value/ type
a	Make	-	BIS approved [] As per enclosed sub-vendor list
b	Material	-	Hot/Cold rolled mild steel
c	Sizes	-	As per BOQ cum price schedule
d	Standard length	meter	3 – 5
e	Classification as per mechanical properties		Heavy
f	Conduit thickness (minimum)	mm	1.6 upto 25 mm dia, 2.0 above 25 mm & upto 50 mm dia
g	Surface treatment	-	Hot dip galvanizing on inside & outside surface
h	Epoxy thickness	micron	50 (applicable for epoxy coated conduits only)

III. SURFACE TREATMENT

a	Pre-treatment	-	As per IS 6005 prior to galvanising
b	Type	-	Hot dip galvanizing as per IS 2629
c	Min. Thickness of zinc coating	microns	48 (upto 25 mm dia), 65 (above 25 mm & upto 50 mm dia)
d	Min. Weight of zinc coating	(gm/m ²)	340 (upto 25 mm dia) 460 (above 25 mm & upto 50 mm dia)
e	Tests for galvanizing	-	a) Weight of zinc coating as per IS : 6745 b) Thickness of zinc coating as per IS : 4759 c) Uniformity of zinc coating as per IS : 2633 d) Adhesion as per IS: 2629

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RIGID STEEL CONDUITS**

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SECTION-II

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1.0 INTENT OF SPECIFICATION

The intent of specification is not to specify all details of design & construction of material. The material shall, however, conform in all aspects to high standard of design, engineering and workmanship and be capable of performing in continuous operation up to & after bidder's guarantee period in manner acceptable to purchaser who will interpret the drawings & specification and shall have power to reject any work or material which in his judgement is not in full accordance with this specification.

2.0 CODES AND STANDARDS

2.1 The material shall comply with all currently applicable safety codes and statutory regulations of India as well as of the locality where the material is to be installed.

2.2 The material, construction, manufacture, inspection and testing of Rigid steel conduits shall conform to the latest revision of relevant standards as per Data Sheet-A.

2.3 In case of conflict between the applicable reference standard and this specification, the stringent requirement of the two shall govern.

3.0 TECHNICAL REQUIREMENTS

3.1 Rigid conduits shall generally conform to the requirements of IS: 9537 (part I & II).

3.2 The diameter of conduits shall be uniform throughout the length. Each end of conduit length shall be threaded. The ends of conduits shall be sealed with protective caps to prevent damage to threaded portions and entrance of moisture and foreign material.

3.3 The inside surface of all conduits shall be smooth and suitable for pulling insulated cables and wires without damage.

3.4 Technical particulars of rigid conduits are specified in Data Sheet – A.

4.0 QUALITY ASSURANCE, TESTING & INSPECTION

4.1 Bidder shall confirm compliance with the BHEL's Standard Quality Plan (PE-QP-999-558-E001) as attached with the specification without any deviations. At contract stage, the successful bidder shall submit the Quality Plan for BHEL/ ultimate customer's approval. In case bidder has reference Quality Plan agreed with ultimate customer, same can be submitted for specific project after award of contract for BHEL/ ultimate customer's approval. There shall be no commercial implication to BHEL on account of Quality plan approval.

4.2 All materials shall be procured, manufactured, inspected and tested by vendor/ sub-vendor as per approved quality plan.

4.3 The supplier shall perform all tests necessary to ensure that the material and workmanship conform to the relevant standards and comply with the requirements of the specification. Charges for all these tests for all the equipments & components shall be deemed to be included



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in the bid price.

4.4 In case ordered quantities are manufactured and offered for inspection in more than one lot, BHEL reserves the right to witness testing on all lots without any commercial implication to BHEL.

5.0 PACKING

5.1 The material shall be packed to ensure protection against damage during transit, storage for prolonged periods and handling.

5.2 The ends of conduits shall be sealed with protective caps.

5.3 Each conduit shall be wrapped in plastic to prevent dust deposition.

5.4 The conduits should be aligned and stacked in bundles (a maximum of 25 pieces per bundle).

5.5 Each bundle shall be covered with jute fibre / thick plastic wrap for protection against extreme weather. Then, the bundle shall be tied with twin-strand mild steel wire, strong rope or steel strip.

6.0 MARKING


6.1 Rigid conduits shall be marked at least once on each manufacturing length, preferably 50 mm from one end, with the following:

- a) Manufacturer's name or trade mark, if any;
- b) Country of manufacture; and
- c) Nominal size of the conduits.
- d) ISI Certification Mark.

Marking may be applied by moulding, stamping, printing, adhesive label or water slide transfers.

6.2 Marking shall be durable and legible.

6.3 Marking shall be checked by inspection and by rubbing lightly the marking by hand for 15 seconds with a piece of cloth soaked with water and again for 15 seconds with a piece of cloth soaked with petroleum spirit.

	MANUFACTURER/ BIDDER/ SUPPLIER NAME & ADDRESS		STANDARD QUALITY PLAN				SPEC. NO :		DATE:	
			CUSTOMER :				QP NO.: PE-QP-999-558-E001, R04		DATE: 23.07.2020	
			PROJECT:				PO NO.:		DATE:	
			ITEM: RIGID STEEL CONDUITS		SYSTEM: STATION LIGHTING SYSTEM		SECTION: II		SHEET 1 OF 3	


SL NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD		AGENCY			REMARKS
1	2	3	4	5	6		7	8	9	*	**			
					M	C/ N				D	M	C	N	

1.0 RAW MATERIAL/BOUGHT OUT ITEMS

1.1		HOT ROLLED STEEL STRIP	MA	VISUAL, MECH. & CHEMICAL	MFR. STD.	-	IS10748	IS10748	TEST CERT.	√	P	V	-	AS APPLICABLE
1.2		COLD ROLLED STEEL SHEET	MA	VISUAL, MECH. & CHEMICAL	MFR. STD.	-	IS513	IS513	TEST CERT.	√	P	V	-	AS APPLICABLE


2.0 ACCEPTANCE TESTS

2.1	RIGID STEEL CONDUITS	DIMENSIONS	MA	MEASUREMENT	IS 9537-II	IS 9537-II	IS:9537/ APPROVED DATA SHEET	APPROVED DATA SHEET	INSP. REPORT	√	P	W	-	
2.2		MECH. PROPERTIES												
2.2A		BENDING TEST	CR	TEST	IS 9537-II	IS 9537-II	IS 9537-II	IS 9537-II	INSP. REPORT	√	P	W	-	
2.2B		COMPRESSION TEST	CR	TEST	IS 9537-II	IS 9537-II	IS 9537-II	IS 9537-II	INSP. REPORT	√	P	W	-	
2.3		GALVANISATION TEST												
2.3A		UNIFORMITY OF ZINC COATING	CR	TEST	IS 9537-II	IS 9537-II	IS-2633/ APPD DS	IS-2633/ APPD DS	INSP. REPORT	√	P	W	-	

BHEL					
ENGINEERING			QUALITY		
	Sign & Date	Name		Sign & Date	Name
Prepared by:	MEET SAGAR SINGH RAJPAL MUDIT CHOPRA	MEET SAGAR SINGH RAJPAL/ MUDIT CHOPRA	Checked by:	 RITESH KUMAR JAISWAL	KUNAL GANDHI
Reviewed by:	PRAVEEN DUTTA	PRAVEEN DUTTA	Reviewed by:	RITESH KUMAR JAISWAL	RITESH KUMAR JAISWAL

BIDDER/ SUPPLIER	
Sign & Date	
Seal	

FOR CUSTOMER REVIEW & APPROVAL			
Doc No:			
	Sign & Date	Name	Seal
Reviewed by:			
Approved by:			

	MANUFACTURER/ BIDDER/ SUPPLIER NAME & ADDRESS		STANDARD QUALITY PLAN				SPEC. NO :		DATE:	
			CUSTOMER :				QP NO.: PE-QP-999-558-E001, R04		DATE: 23.07.2020	
			PROJECT:				PO NO.:		DATE:	
			ITEM: RIGID STEEL CONDUITS		SYSTEM: STATION LIGHTING SYSTEM		SECTION: II		SHEET 2 OF 3	

SL NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD		AGENCY			REMARKS
1	2	3	4	5	6		7	8	9	* D	** M C N			


2.3B		MASS OF ZINC COAT.	CR	TEST	IS 9537-II	IS 9537-II	IS-6745/ APPD DS	IS-6745/ APPD DS	INSP. REPORT	√	P	W	-	
2.3C		COATING THICKNESS	CR	TEST	IS 9537-II	IS 9537-II	IS-4759/ APPD DS	IS-4759/ APPD DS	INSP. REPORT	√	P	W	-	BY ELCOMETER Refer Note 8
2.3D		EPOXY THICKNESS	MA	VISUAL/PHYSICAL	IS 9537-II	IS 9537-II	50 MICRONS	50 MICRONS	INSP. REPORT	√	P	W	-	AS APPLICABLE
2.4		MARKING	CR	VISUAL/PHYSICAL	IS 9537-II	IS 9537-II	APPROVED DATA SHEET	APPROVED DATA SHEET	INSP. REPORT		P	W	-	

3.0 PACKING

	PACKING	Soundness of Packing against transit damage	Major	Visual	100%	100%	BHEL * approved document	BHEL approved document	Inspection report	√	P	W	-	
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NOTES:

- The inspection shall be carried out once for the material offered for inspection in one lot. For subsequent lots against the same project, the material can be accepted based on certificate of compliance furnished by the vendor.
- Project specific QP shall be based on customer requirement. In case, any changes in QP commented by customer at contract stage shall be carried out by bidder without any implication to BHEL/ Customer.
- For export jobs, BHEL technical specification for seaworthy packing for export jobs is to be followed.
- Packing shall be suitable for storage at site in tropical climatic conditions. *Packing shall be done as per Clause 5 of Section -II of Technical specification.

BHEL					
ENGINEERING			QUALITY		
	Sign & Date	Name		Sign & Date	Name
Prepared by:	MEET SAGAR SINGH RAJPAL MUDIT CHOPRA	MEET SAGAR SINGH RAJPAL/ MUDIT CHOPRA	Checked by:		KUNAL GANDHI
Reviewed by:	PRAVEEN DUTTA	PRAVEEN DUTTA	Reviewed by:	RITESH KUMAR JAISWAL	RITESH KUMAR JAISWAL

BIDDER/ SUPPLIER	
Sign & Date	
Seal	

FOR CUSTOMER REVIEW & APPROVAL			
Doc No:			
	Sign & Date	Name	Seal
Reviewed by:			
Approved by:			

	MANUFACTURER/ BIDDER/ SUPPLIER NAME & ADDRESS		STANDARD QUALITY PLAN				SPEC. NO :		DATE:			
			CUSTOMER :				QP NO.: PE-QP-999-558-E001, R04		DATE: 23.07.2020			
			PROJECT:				PO NO.:		DATE:			
			ITEM: RIGID STEEL CONDUITS		SYSTEM: STATION LIGHTING SYSTEM		SECTION: II		SHEET 3 OF 3			
SL NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD		AGENCY	REMARKS
1	2	3	4	5	6		7	8	9	* D	** M C N	
					M	C/ N						

5. Latest revision/ year of issue of all the standards (IS/ ASME/ IEC etc.) Indicated in QP shall be referred.
6. BHEL reserves the right for conducting repeat test if required.
7. After packing and prior to issue MDCC, photographs of items to be dispatched shall be sent to BHEL purchase group for review.
8. Thickness of zinc coating shall be the average of the determination made at each end and the middle of the article.

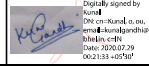
LEGENDS:

*RECORDS, IDENTIFIED WITH "TICK"(✓) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION,

** **M:** SUPPLIER/ MANUFACTURER/ SUB-SUPPLIER, **C:** MAIN SUPPLIER/ BHEL/ THIRD PARTY INSPECTION AGENCY, **N:** CUSTOMER,

P: PERFORM, **W:** WITNESS, **V:** VERIFICATION, AS APPROPRIATE

MA: MAJOR, **MI:** MINOR, **CR:** CRITICAL, **D:** DOCUMENTATION

BHEL					
ENGINEERING			QUALITY		
	Sign & Date	Name		Sign & Date	Name
Prepared by:	MEET SAGAR SINGH RAJPAL MUDIT CHOPRA	MEET SAGAR SINGH RAJPAL/ MUDIT CHOPRA	Checked by:	 Digitally signed by Kunal Gandhi DN: cn=Kunal Gandhi, o=BHEL, ou=Quality, email=k.gandhi@bhel.co.in, c=IN Date: 2020.07.29 09:23:53 +05'30'	KUNAL GANDHI
Reviewed by:	PRAVEEN DUTTA	Digitally signed by PRAVEEN DUTTA DN: cn=PRAVEEN DUTTA, o=BHEL, ou=Engineering, email=p.dutta@bhel.co.in, c=IN Date: 2020.07.25 12:27:51 +05'30'	Reviewed by:	RITESH KUMAR JAISWAL	Digitally signed by RITESH KUMAR JAISWAL DN: cn=RITESH KUMAR JAISWAL, o=BHEL, ou=Quality, email=r.jaiswal@bhel.co.in, c=IN Date: 2020.07.29 09:00:49 +05'30'

BIDDER/ SUPPLIER	
Sign & Date	
Seal	

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Doc No:			
	Sign & Date	Name	Seal
Reviewed by:			
Approved by:			

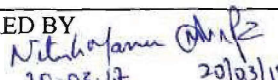
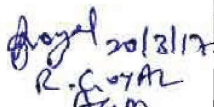
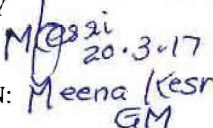
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	PRE-QUALIFICATION REQUIREMENTS FOR RIGID STEEL CONDUITS	PE-PQ-999-558-E002
		REVISION NO. 01 DATE 20/03/2017
		SHEET NO. 1 OF 1

ITEMS : RIGID STEEL CONDUITS	
SCOPE : Supply : YES; Erection & Commissioning : NO.	
1.0	Vendor should be a BIS approved manufacturer of rigid steel conduits as per IS 9537 Part II.
2.0	Availability of test reports of rigid steel conduits to establish in- house capability at manufacturer's works to carry out all routine, type & acceptance tests as per relevant IS.
3.0	Capacity of manufacturing 30 MT of rigid steel conduits per month.
4.0	Manufactured and supplied at least 80 km of rigid steel conduits in one or more orders.
5.0	Minimum two (2) nos. purchase orders for rigid steel conduits shall be submitted which should not be more than five (5) years old from the date of application for registration or date of techno-commercial bid opening (as applicable) for establishing continuity in business.

NOTE:

- The vendor can offer rigid steel conduits of any BIS approved make meeting criteria S.No.1 to 4 above.
The vendor to furnish the following documents:
 - Undertaking from BIS approved manufacturer of offered make to get the inspection & testing of conduits carried out at manufacturer's works.
 - Credentials of the manufacturer of offered make to meet the PQR requirements of S no 1.0 to 4.0 above.
 - Vendor's Credentials to meet S no 5.0.
- Consideration of offer shall be subject to customer's approval of bidders, if applicable.
- Bidder to submit all supporting documents in English. If documents submitted by bidder are in language other than English, a self-attested English translated document should also be submitted.
- Any other project specific requirement shall be as per Annexure-I and bidder shall submit relevant supporting documents.
- Notwithstanding anything stated above, BHEL reserves the right to assess the capabilities and capacity of the bidder/collaborators to perform the contract, should the circumstances warrant such assessment in the overall interest of BHEL.
- After satisfactory fulfillment of all the above criteria/ requirement, offer shall be considered for further evaluation as per NIT and all the other terms of the tender.

PREPARED BY  NAME: Nishu DESIGNATION: 20/03/17 (Mudat Chopra)	REVIEWED BY  NAME: R. G. Ar DESIGNATION: 20/3/17 Ar	APPROVED BY  NAME: Meena DESIGNATION: 20.3.17 Kesri GM
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ANNEXURE FOR RISK & COST

1. In case of delays (beyond the maximum late delivery period as per LD clause) in supplies, or if there be defective supplies or non-fulfilment of any other terms and conditions of the Contract as enumerated subsequently in this clause, then, without prejudice to its right to recover any expenses, losses or damages to which the Buyer may be put in or sustain by reason of the Seller/Contractor's default or breach of Order/Contract or to suspend business dealings with the Seller/Contractor in terms of the Buyers' Guidelines for Suspension of Business Dealings as applicable from time to time, the Buyer shall also be entitled to cancel the Order/Contract either in whole or portion thereof without compensation to Seller. On the occurrence of any of the acts/omissions mentioned below, the Buyer may if it so desires, procure upon such terms and in such manner as deemed appropriate, plant/equipment/ stores not so delivered or others of similar description where plant/ equipment/ stores exactly complying with particulars are not, in the opinion of the Buyer (which shall be final), readily procurable, at the risk and cost of the Seller.

The Seller shall be liable to the Buyer for any excess costs incurred thereof and the Seller shall continue the performance of the Order/Contract to the extent not cancelled under the provisions of this clause. The Seller shall on no account be entitled to any gain on such repurchases. If the Bidder does not agree to this Risk Purchase clause, BHEL reserves the right to reject the bid/offer of the Bidder. The order/contract may be cancelled in whole or part thereof and Risk & Cost Clause in line with terms and conditions of PO/Contract may be invoked by the Buyer in any of the following cases:

- i. If the Seller/Contractor fails to deliver the goods or materials or any instalment thereof within the period(s) fixed for such delivery or the Seller's poor progress of the supply/services vis-à-vis delivery/execution timeline as stipulated in the contract, backlog attributable to the Seller including unexecuted portion of supply does not appear to be executable within balance period available;
- ii. delivering goods or materials not of the contracted quality and failing to adhere to the contract specifications/execution methodology;
- iii. withdrawal from or repudiation/abandonment of the supply/services by the Seller before completion as per contract or if the Seller refuses or is unable to supply goods or materials covered by the order/Contract either in whole or in part or otherwise fails to perform the Order/Contract.
- iv. Non supply by the Seller within scheduled completion/delivery period as per contract or as extended from time to time for reasons attributable to the Seller;
- v. Termination of Contract on account of any other reason(s) attributable to the Seller.
- vi. Assignment, transfer, sub-letting of Contract without BHEL's written permission resulting in termination of Contract or part thereof by BHEL.
- vii. If the Seller be an individual or a Sole Proprietorship, in the event of death or insanity of the Seller.
- viii. If the Seller/Contractor being an individual or if a partnership firm thereof, shall at any time be adjudged insolvent or shall have a receiving order for administration of his estate made against him or shall take any proceeding for composition under any Insolvency Act for the time being in force or make any assignment of the order/Contract or enter into any arrangement or composition with his creditors or suspend payment or if the firm dissolved under the Partnership Act;
- ix. If the Seller/Contractor being a Company is wound up voluntarily or by order of a Court or a Receiver, Liquidator or Manager on behalf of the debenture holders and creditors is appointed or circumstances have arisen which entitles the Court of debenture holder and creditors to appoint a receiver, liquidator or manager
- x. Non- Compliance to any contractual condition or any other default attributable to the Seller.

Such defaulting vendor/Seller shall not be eligible to participate in re-tendering conducted on account of risk purchase made due to fault of such vendor/Seller.

2. BHEL's right to go for Risk and Cost, Calculation of Risk and Cost amount & L D, recovery options to BHEL are given as under: -

2.1 BHEL reserves the right to terminate the contract or withdraw portion of work and get it done through other agency, at the risk and cost of the contractor *after due notice of a period of 14 days' by BHEL* in any of the following cases:

- i) If the Seller/Contractor fails to deliver the goods or materials or any instalment thereof within the period(s) fixed for such delivery or the Seller's poor progress of the supply/ services vis-a-vis delivery/execution timeline as stipulated in the Contract, backlog attributable to seller including unexecuted portion of supply does not appear to be executable within balance available period;
- ii) Delivers goods or materials not of the contracted quality and failing to adhere to the contract specifications;
- iii) Withdrawal from or repudiation/ abandonment of the supply/ services by Seller before completion as per contract or if the Seller refuses or is unable to supply goods or materials covered by the Order/Contract either in whole or in part or otherwise fails to perform the Order/Contract;
- iv) Non-supply by the Seller within scheduled completion/delivery period as per Contract or as extended from time to time, for the reasons attributable to the Seller;
- v) Termination of Contract on account of any other reason (s) attributable to Seller.
- vi) Assignment, transfer, subletting of Contract without BHEL's written permission resulting in termination of Contract or part thereof by BHEL.
- vii) If the Seller be an individual or a sole proprietorship Firm, in the event of the death or insanity of the Seller;
- viii) If the Seller/Contractor being an individual or if a firm on a partnership thereof, shall at any time, be adjudged insolvent or shall have a receiving order for administration of his estate made against him or shall take any proceeding for composition under any Insolvency Act for the time being in force or make any assignment of the Order/Contract or enter into any arrangement or composition with his creditors or suspend payment or if the firm dissolved under the Partnership Act;
- ix) If the Seller/Contractor being a company is wound up voluntarily or by order of a Court or a Receiver, Liquidator or Manager on behalf of the debenture holders and creditors is appointed or circumstances shall have arisen which entitles the Court of debenture holder and creditors to appoint a receiver, liquidator or manager;
- x) Non-compliance to any contractual condition or any other default attributable to Seller.

2.1.1 Risk & Cost Amount against Balance Work:

Risk & Cost amount against balance work shall be calculated as follows:

$$\text{Risk \& Cost Amount} = [(A-B) + (A \times H/100)]$$

Where,

A= Value of Balance scope of Work (*) as per rates of new contract

B= Value of Balance scope of Work (*) as per rates of old contract being paid to the contractor at the time of termination of contract i.e. inclusive of PVC & ORC, if any.

H = Overhead Factor to be taken as 5

In case (A-B) is less than 0 (zero), value of (A-B) shall be taken as 0 (zero).

2.1.2 Balance scope of work (in case of termination of contract):

Difference of Contract Quantities and Executed Quantities as on the date of issue of Letter for 'Termination of Contract', shall be taken as balance scope of Work for calculating risk & cost amount.

Contract quantities are the quantities as per original contract. If, Contract has been amended, quantities as per amended Contract shall be considered as Contract Quantities.

Items for which total quantities to be executed have exceeded the Contract Quantities based on drawings issued to contractor from time to time till issue of Termination letter, then for these items total Quantities as per issued drawings would be deemed to be contract quantities.

Substitute/ extra items whose rates have already been approved would form part of contract quantities for this purpose.

Substitute/ extra items which have been executed but rates have not been approved, would also form part of contract quantities for this purpose and rates of such items shall be determined in line with contractual provisions.

However, increase in quantities on account of additional scope in new tender shall not be considered for this purpose.

NOTE: In case portion of work is being withdrawn at risk & cost of contractor instead of termination of contract, contract quantities pertaining to portion of work withdrawn shall be considered as 'Balance scope of work' for calculating Risk & Cost amount.

2.1.3 LD against delay in executed work in case of Termination of Contract:

LD against delay in executed work shall be calculated in line NIT terms & conditions, for the delay attributable to contractor. For limiting the maximum value of LD, contract value shall be taken as Executed Value of work till termination of contract.

Method for calculation of LD against delay in executed work in case of termination of contract" is given below:

- i. Let the time period from scheduled date of start of work till termination of contract excluding the period of Hold (if any) not attributable to contractor = T1
- ii. Let the value of executed work till the time of termination of contract = X
- iii. Let the Total Executable Value of work for which inputs/fronts were made available to contractor and were planned for execution till termination of contract = Y
- iv. Delay in executed work attributable to contractor i.e. $T2 = [1 - (X/Y)] \times T1$
- v. LD shall be calculated in line with LD clause (clause 16) of the Contract for the delay attributable to contractor taking "X" as Contract Value and "T2" as period of delay attributable to contractor.

2.2 Recoveries arising out of Risk & Cost and LD or any other recoveries due from Contractor:

Without prejudice to the other means of recovery of such dues from the Seller recoveries from the Seller on whom risk

& cost has been invoked shall be made from the following:

- a) Dues available in the form of Bills payable to seller, SD, BGs against the same contract.
- b) Dues payable to seller against other contracts in the same Region/Unit/ Division of BHEL.
- c) Dues payable to seller against other contracts in the different Region/Unit/ division of BHEL.

In-case recoveries are not possible with any of the above available options, Legal action shall be initiated for recovery against contractor.

Letter head of Company (<Rs. 10 Cr value)

Ref.....

Date.....

To,

Bharat Heavy Electricals Limited PEM,

PPEI Building, Plot No 25, Sector -16A,

Noida (U.P)-201301

Subject: -Certification regarding local content

Reference: Tender Enquiry No-.....

Name of Package:

Dear Sir,

We hereby certify that items offered by us of(package name).....for.....(Project Name/Rate contract)..... meets the requirement of minimum local content in line with Cl. No..... of NIT No..... dated..... and the Public Procurement (Preference to Make in India), Order 2017 dated-15.06.2017, 28.05.2018, 29.05.2019 , 04.06.2020 & 16.09.2020.

Local Content-%

We further confirms that details of location at which the local value addition is made will be our registered works at(address of the works)

Yours very truly

.....(authorized signatory of company)

.....(firm name)

ON COMPANY LETTER HEAD

To,

M/s Bharat Heavy Electricals Ltd.,
Project Engineering Management,
Power Project Engineering Institute,
HRD & ESI Complex, Plot No 25, Sector-16 A,
Noida-201301

Kind Attn. Mr.

Dear Sir,

This has reference to:

1. Our offer for RIGID STEEL CONDUITS for Combined Tender Enquiry (2 X 250 MW NSPCL BHILAI TPP FGD, 2X500 MW NTPC MAUDA FGD STAGE-I, 3X200 + 3X500 MW NTPC RAMAGUNDAM TPP FGD, 3X200+3X500+1x500 MW NTPC KORBA TPP-FGD, 3X660 MW North Karanpura FGD, 3X660 MW NPGCL NABINAGAR FGD and 4X250MW BRBCL Nabinagar FGD projects),
GeM Tender No. dated

2. Order no. F. No. 6/18/2019-PPD dt. 23.07.2020 issued by Ministry of Finance, Department of Expenditure Public Procurement Division.

I have read the clause regarding restriction on procurement from a bidder of a country which shares a land border with India; I certify that M/s (Company Name _____) is not from such a country **or**, if from such a country, has been registered with the competent authority. **(Remove the non-applicable)**


I hereby certify that M/s (Company Name _____) fulfil all requirements in this regard and is eligible to be considered.

[where applicable, evidence of valid registration by the competent authority shall be attached]


Thanking You,
Yours faithfully,

Owner, partner, CMD, Director, Authorized Signatory with proof that he/she is authorized to sign on owner's behalf

M/s _____


	CORPORATE QUALITY ASSURANCE/ कॉरपोरेट गुणवत्ता आश्वासन MAIN CONTRACTOR'S PROPOSAL CUM EVALUATION REPORT मुख्य संविदाकार प्रस्ताव सह मुल्यांकन रिपोर्ट	

Ref No:				Date:			
संदर्भ सं.:				तिथि:			
i.	Main Contractor मुख्य संविदाकार						
ii.	Project परियोजना						
iii.	Package Name पैकेज का नाम			Package No पैकेज सं.			
iv.	Proposed Item/Scope of Sub-contracting उप-संविदा(अनुबंध) का प्रस्तावित मद/ दायरा						
v.	Item covered under निम्नलिखित के अंतर्गत शामिल मद	Schedule-1 /अनुसूची- 1			As per contract clause No- अनुबंध के अनुसार खंड सं.- -		
		Schedule-2 अनुसूची- -2					
vi.	If item is Schedule-1 and proposed sub-vendor is indigenous, Main Contractor to explain how the contractual provisions will be fulfilled /यदि मद अनुसूची -1 है और प्रस्तावित उप-विक्रेता स्वदेशी है, तो मुख्य संविदाकार को स्पष्ट करना होगा कि संविदा/अनुबंध के प्रावधान कैसे पूरे किए जाएंगे						
vii.	Name and Address of the proposed Sub-vendor's works /प्रस्तावित सब-वेंडर का नाम तथा पता						
viii.	PO placement date/ Start of manufacturing (if self-manufactured) as per L2 network पीओ नियोजन की तिथि / एल- 2 नेटवर्क के अनुसार विनिर्माण (यदि स्व-निर्मित है) की शुरुआत						
ix.	Item Description (Type/Size/Rating/Scope of Sub-Contracting) मद का विवरण (प्रकार / आकार / रेटिंग / उप-अनुबंध का दायरा)	Total quantity of proposed item envisaged in this package (Nos/ Running Meters/ Kgs/ Tons etc) इस पैकेज में परिकल्पित प्रस्तावित मद की कुल मात्रा (संख्या / क्रियाशील मीटर / किलोग्राम / टन आदि)	Quantity proposed to be procured from proposed sub-vendor (Nos/ Running Meters /Kgs /Tons etc) प्रस्तावित उप-विक्रेता (संख्या / क्रियाशील मीटर / किलोग्राम / टन आदि) से खरीदी जाने वाली मात्रा	Timeline for quantity requirements as per project schedule & whether the proposed Sub-vendor equipped with adequate capacity to supply proposed order quantity in time / परियोजना समय सूची के अनुसार मात्रा आवश्यकताओं के लिए समय-सीमा और क्या प्रस्तावित उप-विक्रेता समय पर प्रस्तावित मांग की मात्रा की आपूर्ति करने में पूरी तरह से सक्षम है			
x.	Supply experience of the proposed sub-vendor (including supplies to Main Contractor, if any) for similar item/scope of sub-contracting, for last 3 years (Note:- Only relevant experience details w.r.t. proposed item/scope of subcontracting to be brought out here) पिछले 3 वर्षों के लिए उप-अनुबंध के समान मद / दायरे के लिए प्रस्तावित सब-वेंडर (मुख्य संविदाकार हेतु आपूर्ति, यदि कोई हो, सहित) का आपूर्ति अनुभव (नोट: - उप-अनुबंध के प्रस्तावित मद / दायरे के संबंध में केवल प्रासंगिक अनुभव के विवरण का उल्लेख हो						


	CORPORATE QUALITY ASSURANCE/ कॉरपोरेट गुणवत्ता आश्वासन MAIN CONTRACTOR'S PROPOSAL CUM EVALUATION REPORT मुख्य संविदाकार प्रस्ताव सह मुल्यांकन रिपोर्ट	

	Project/Package परियोजना/पैकेज	Customer Name ग्राहक का नाम	Supplied Item (Type/Rating/Model /Capacity/Size etc) आपूर्ति मद् (प्रकार/रेटिंग /मॉडल /क्षमता/आकार आदि)	PO ref no/date पीओ संदर्भ सं. /तिथि	Supplied Quantity आपूर्ति की मात्रा	Date of Supply आपूर्ति की तिथि	
<i>We confirm that as per our assessment, the proposed sub-vendor has requisite capabilities & supply experience and is suitable for supplying the proposed item/scope of sub-contracting/हम अपने आकलन के अनुसार इस बात की पुष्टि करते हैं कि, प्रस्तावित उप-विक्रेता के पास अपेक्षित क्षमता और आपूर्ति करने का अनुभव है और उप-अनुबंध के दायरे /प्रस्तावित मद् की आपूर्ति के लिए उपयुक्त है।</i>							
Name:		Desig:		Contact No:		Sign:	
नाम:		पद:		दूरभाष सं.:		हस्ताक्षर:	तिथि:


Company's Seal/Stamp:- कंपनी का मुहर:-

	CORPORATE QUALITY ASSURANCE/ कॉरपोरेट गुणवत्ता आश्वासन SUB-VENDOR QUESTIONNAIRE/ सब-वेंडर प्रश्नावली
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i.	Item/Scope of Sub-contracting उप-संविदा(अनुबंध) का मद/ दायरा			
ii.	Address of the registered office पंजीकृत कार्यालय का पता 	Details of Contact Person संपर्क व्यक्ति का विवरण (Name, Designation, Mobile, Email) (नाम, पदनाम, मोबाइल, ईमेल)		
iii.	Name and Address of the proposed Sub-vendor's works where item is being manufactured प्रस्तावित उप-विक्रेता के कार्यों का नाम और पता, जहां मद का निर्माण किया जा रहा है 	Details of Contact Person: संपर्क व्यक्ति का विवरण (Name, Designation, Mobile, Email) (नाम, पदनाम, मोबाइल, ईमेल)		
iv.	Annual Production Capacity for proposed item/scope of sub-contracting उप-संविदा(अनुबंध) के प्रस्तावित मद / दायरे के लिए वार्षिक उत्पादन क्षमता			
v.	Annual production for last 3 years for proposed item/scope of sub-contracting उप-संविदा(अनुबंध) के प्रस्तावित मद / दायरे के लिए पिछले 3 वर्षों का वार्षिक उत्पादन			
vi.	Details of proposed works प्रस्तावित कार्यों का विवरण			
1.	Year of establishment of present works वर्तमान फैक्टरी की स्थापना का वर्ष			
2.	Year of commencement of manufacturing at above works उपरोक्त फैक्टरी में निर्माण कार्य शुरू होने का वर्ष			
3.	Details of change in Works address in past (if any) पूर्व में फैक्टरी स्थल में परिवर्तन का विवरण (यदि कोई हो)			
4.	Total Area कुल क्षेत्र Covered Area शामिल क्षेत्र			
5.	Factory Registration Certificate फैक्टरी पंजीकरण प्रमाण पत्र	Details attached at Annexure – F2.1 विवरण अनुलग्नक-एफ 2.1 पर संलग्न है		
6.	Design/ Research & development set-up डिजाइन / अनुसंधान और विकास सेटअप (No. of manpower, their qualification, machines & tools employed etc.) (श्रमिकों की संख्या, उनकी योग्यता, मशीन और उपलब्ध उपकरण आदि)	Applicable / Not applicable if manufacturing is as per Main Contractor/purchaser design) Details attached at Annexure – F2.2 (if applicable) लागू / लागू नहीं, अगर विनिर्माण मुख्य संविदाकार / खरीददार के डिजाइन के अनुसार है) विवरण अनुलग्नक –एफ 2.2 पर संलग्न है। (यदि लागू हो)		
7.	Overall organization Chart with Manpower Details (Design/Manufacturing/Quality etc) मैनपावर विवरण के साथ समग्र संगठन का चार्ट(डिजाइन / विनिर्माण / गुणवत्ता आदि)	Details attached at Annexure – F2.3 विवरण अनुलग्नक – F2.3 में संलग्न है।		

	CORPORATE QUALITY ASSURANCE/ कॉरपोरेट गुणवत्ता आश्वासन SUB-VENDOR QUESTIONNAIRE/ सब-वेंडर प्रश्नावली
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8.	After sales service set up in India, in case of foreign sub-vendor(Location, Contact Person, Contact details etc.) भारत में बिक्री सेवा की स्थापना के बाद, विदेशी उप-विक्रेता के मामले में(स्थल , संपर्क व्यक्ति, संपर्क विवरण आदि)	Applicable / Not applicable लागू / लागू नहीं Details attached at Annexure – F2.4 विवरण अनुलग्नक -2.4 पर संलग्न है।			
9.	Manufacturing process execution plan with flow chart indicating various stages of manufacturing from raw material to finished product including outsourced process, if any फ्लोचार्ट सहित विनिर्माण प्रक्रिया निष्पादन योजना , जिसमें आउटसोर्स प्रक्रिया, यदि कोई हो, सहित कच्चे माल से तैयार उत्पाद तक विनिर्माण के विभिन्न चरणों को दर्शाया गया हो,	Details attached at Annexure – F2.5 विवरण अनुलग्नक - F2.5में संलग्न है।			
10.	Sources of Raw Material/Major Bought Out Item कच्चे माल के स्रोत / खरीदे हुए मुख्य मद	Details attached at Annexure – F2.6 विवरण अनुलग्नक - F2.6में संलग्न है।			
11.	Quality Control exercised during receipt of raw material/BOI, in-process , Final Testing, packing कच्चे माल / खरीदे हुए मद, प्रक्रियाबद्ध, अंतिम परीक्षण, पैकिंग करते समय गुणवत्ता नियंत्रण	Details attached at Annexure – F2.7 विवरण अनुलग्नक - F2.7 पर संलग्न है			
12.	Manufacturing facilities (List of machines, special process facilities, material handling etc.) विनिर्माण सुविधा(मशीनों की सूची, विशेष प्रक्रिया सुविधाएं, सामग्री रख-रखाव आदि)	Details attached at Annexure – F2.8 विवरण अनुलग्नक - F2.8में संलग्न है।			
13.	Testing facilities (List of testing equipment) परीक्षण सुविधाएं(परीक्षण उपकरण की सूची)	Details attached at Annexure – F2.9 विवरण अनुलग्नक – F2. 9 में संलग्न है।			
14.	If manufacturing process involves fabrication then- यदि निर्माण प्रक्रिया में फेब्रिकेशन की गई है तो- List of qualified Welders पात्र वेल्डर की सूची List of qualified NDT personnel with area of specialization विशेषज्ञता के क्षेत्र सहित पात्र एनडीटी कार्मिकों की सूची	Applicable / Not applicable लागू / लागू नहीं Details attached at Annexure – F2.10 विवरण अनुलग्नक - F2.10में संलग्न है। (if applicable) लागू / लागू नहीं			
15.	List of out-sourced manufacturing processes with Sub-Vendors' names & addresses सब-वेंडर द्वारा बाह्य स्रोतों (उनके नाम और पते सहित)से करवाएं गए निर्माण प्रक्रियाओं की सूची	Applicable / Not applicable लागू / लागू नहीं Details attached at Annexure. –F2.11 विवरण अनुलग्नक - F2.10में संलग्न है। (if applicable) (यदि लागू हो)			
16.	Supply reference list including recent supplies नवीनतम आपूर्ति सहित आपूर्ति संदर्भ सूची	Details attached at Annexure – F2.12 विवरण अनुलग्नक - F2.12 में संलग्न है। (as per format given below) (नीचे दिए गए प्रारूप के अनुसार)			
Project/ package परियोजना /पैकेज	Customer Name ग्राहक का नाम	Supplied Item (Type/Rating/Model /Capacity/Size etc) आपूर्ति की गई वस्तु (प्रकार / रेटिंग / मॉडल / क्षमता / आकार आदि)	PO ref no/date पीओ संदर्भ सं. / तिथि	Supplied Quantity आपूर्ति की मात्रा	Date of Supply आपूर्ति की तारीख
17.	Product satisfactory performance feedback letter/certificates/End User Feedback उत्पाद के संतोषजनक प्रदर्शन संबंधी फीडबैक पत्र / प्रमाण पत्र / अंतिम उपयोगकर्ता फीडबैक		Attached at annexure - F2.13 अनुलग्नक F2. 3पर संलग्न है		

	CORPORATE QUALITY ASSURANCE/ कॉरपोरेट गुणवत्ता आश्वासन SUB-VENDOR QUESTIONNAIRE/ सब-वेंडर प्रश्नावली
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18.	Summary of Type Test Report (Type Test Details, Report No, Agency, Date of testing) for the proposed product (similar or higher rating) प्रस्तावित उत्पाद (एक समान या उच्च रेटिंग वाले) के लिए टाइप टेस्ट रिपोर्ट (टाइप टेस्ट विवरण, रिपोर्ट संख्या, एजेंसी, जांच की तारीख) का सारांश नोट: - रिपोर्ट प्रस्तुत करने की आवश्यकता नहीं है Note:- Reports need not to be submitted	Applicable / Not applicable लागू / लागू नहीं Details attached at Annexure – F2.14 विवरण अनुलग्नक - F2.1 4 में संलग्न है (if applicable) (यदि लागू हो)
19.	Statutory / mandatory certification for the proposed product प्रस्तावित उत्पाद के लिए वैधानिक / अनिवार्य प्रमाणीकरण	Applicable / Not applicable लागू / लागू नहीं Details attached at Annexure – F2.15 (if applicable) (यदि लागू हो)
20.	Copy of ISO 9001 certificate आईएसओ 9001 प्रमाण पत्र की प्रति (if available) (यदि उपलब्ध हो)	Attached at Annexure – F2.16 अनुलग्नक में संलग्न - F2.1 6 है
21.	Product technical catalogues for proposed item (if available) प्रस्तावित मद के लिए उत्पाद तकनीकी कैटलॉग (यदि उपलब्ध हो)	Details attached at Annexure – F2.17 विवरण अनुलग्नक - F2.1 7 में संलग्न है

Name:		Desig:		Sign:		Date:	
नाम:		पद:		हस्ताक्षर:		तिथि:	

Company's Seal/Stamp:- कंपनी की मुहर / मोहर: -

KORBA FGD - RIGID STEEL CONDUITS BOQ

Item Number	Item Title	Item Description	Item Quantity	Unit of Measure	Consignee ID	ZipCode	Delivery Period (In number of days)	Unit Price (Inclusive of TAX)	GST % Applicable	Brand	Model	HSN Code
1	558-15001-A	GI CONDUITS,1.6MM THK EPOXY 20MM DIA	500	MTR	PEM_KORBA1	495450	210					
2	558-15002-A	GI CONDUITS,1.6MM THICK, 20MM DIA	17300	MTR	PEM_KORBA1	495450	210					
3	558-15003-A	GI CONDUITS,1.6MM THICK, 25MM DIA	2800	MTR	PEM_KORBA1	495450	210					
4	558-15005-A	GI CONDUITS,2.0MM THICK, 50MM DIA	2400	MTR	PEM_KORBA1	495450	210					

**3 X 200 + 3 X 500 + 1 X 500 MW NTPC KORBA TPP STAGE I,
II & III (FGD System Package)**

**TECHNICAL SPECIFICATION
FOR
RIGID STEEL CONDUITS**

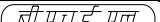
SPECIFICATION NO.: *PE-TS- 466-558-E002*

REVISION: 0




**BHARAT HEAVY ELECTRICALS LIMITED
POWER SECTOR
PROJECT ENGINEERING MANAGEMENT
NOIDA, UP (INDIA) – 201301**

423118/2021/PS-PEM-EL

<div><div>बी एच ई एल</div><div></div></div>	TECHNICAL SPECIFICATION FOR RIGID STEEL CONDUITS	SPEC NO. PE-TS- 466-558-E002
		VOLUME NO.: II-B
		SECTION: I
		REV NO.: 00 DATE: 20.08.2021
		SHEET : 1 OF 11

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	DATASHEET A	01
2	SECTION II	
	STANDARD TECHNICAL REQUIREMENTS	02
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	TECHNICAL SPECIFICATION FOR RIGID STEEL CONDUITS	SPEC NO. PE-TS- 466-558-E002
		VOLUME NO.: II-B
		SECTION: I
		REV NO.: 00 DATE: 20.08.2021
		SHEET : 2 OF 11

COMPLIANCE CERTIFICATE

The bidder shall confirm compliance to the following by signing/ stamping this compliance certificate and furnishing same with the offer.

1. The scope of supply, technical details, construction features, design parameters etc. shall be as per technical specification & there are no exclusion/ deviation with regard to same
2. There are no deviation with respect to specification other than those furnished in the 'schedule of deviations'
3. Only those technical submittals which are specifically asked for in NIT to be submitted at tender stage shall be considered as part of offer. Any other submission, even if made, shall not be considered as part of offer.
4. Any comments/ clarifications on technical/ inspection requirements furnished as part of bidder's covering letter shall not be considered by BHEL, and bidder's offer shall be construed to be in conformance with the specification.
5. Any changes made by the bidder in the price schedule with respect to the description/ quantities from those given in BOQ-Cum-Price schedule of the specification shall not be considered (i.e., technical description & quantities as per specification shall prevail).

BIDDER'S STAMP & SIGNATURE

423118/2021/PS-PEM-EL

**TECHNICAL SPECIFICATION FOR
RIGID STEEL CONDUITS**

SPEC NO. PE-TS- 466-558-E002


VOLUME NO.: II-B

SECTION: I

REV NO.: 00 DATE: 20.08.2021

SHEET : 3 OF 11

SECTION – I

	TECHNICAL SPECIFICATION FOR RIGID STEEL CONDUITS	SPEC NO. PE-TS- 466-558-E002
		VOLUME NO.: II-B
		SECTION: I
		REV NO.: 00 DATE: 20.08.2021
		SHEET : 4 OF 11

SPECIFIC TECHNICAL REQUIREMENTS

1.0 SCOPE

- 1.1 Manufacture, Inspection and Testing at Manufacturer's works, proper packing and delivery to site of rigid steel conduits conforming to this specification.
- 1.2 Technical requirements of rigid steel conduits are indicated in Data Sheet-A & Section-II.
- 1.3 The stipulation of Data Sheet-A shall prevail in case of any conflict between the stipulations of Data Sheet-A & Section-II.

2.0 BILL OF QUANTITIES

The bidder to quote for items as per price schedule attached with NIT.

Supplier to also give the following undertaking in the BOM: "The BoM provided herewith completes the scope (in content and intent) of material supply under PO No. -----, dated ----- . Any additional material which may become necessary for the intended application of the supplied item(s)/package will be supplied free of cost in most reasonable time."


3.0 DRAWINGS & DOCUMENTS TO BE SUBMITTED

- 3.1 Bidders shall furnish following documents as the part of their technical offer: -
 - a) Complete signed & stamped copy of this specification.
 - b) "Deviation Schedule" with "NO Deviations" and bidder's signature and company stamp.
 - c) Unpriced Price Schedule as enclosed with NIT with 'Quoted' word against items with bidder's signature and company stamp.
- 3.2 Document submission / resubmission schedule after placement of order shall be as per NIT.

#

4.0 PACKING

- 4.1 Packing shall be as per Clause 5 of Section -II.

	TECHNICAL SPECIFICATION FOR RIGID STEEL CONDUITS	SPEC NO. PE-TS- 466-558-E002
		VOLUME NO.: II-B
		SECTION: I
		REV NO.: 00 DATE: 20.08.2021
		SHEET : 5 OF 11

DATASHEET-A

I. APPLICABLE STANDARDS & CODES

- a) IS:9537 (Part I & II) Conduits for electrical installation.
- b) IS:2629 Recommended practice for hot dip galvanizing on iron and steel.
- c) IS:4759 Specification for hot dip zinc coatings on structural steel and allied products
- d) IS:6745 Methods for determination of mass of zinc coating on zinc coated iron and steel articles.
- e) IS:513 Cold reduced low carbon steel sheet and strip
- f) IS: 10748 Hot rolled Steel strip for welded tubes and pipes
- g) IS: 2633 Method for testing uniformity of coating on zinc coated articles
- h) IS:6005 Code of practice for phosphating iron & steel

II. RIGID STEEL CONDUITS


S.No.	Description	Unit	Parameters value/ type
a	Make	-	BIS approved [] As per enclosed sub-vendor list
b	Material	-	Hot/Cold rolled mild steel
c	Sizes	-	As per BOQ cum price schedule
d	Standard length	meter	3 – 5
e	Classification as per mechanical properties		Heavy
f	Conduit thickness (minimum)	mm	1.6 upto 25 mm dia, 2.0 above 25 mm & upto 50 mm dia
g	Surface treatment	-	Hot dip galvanizing on inside & outside surface
h	Epoxy thickness	micron	50 (applicable for epoxy coated conduits only)

III. SURFACE TREATMENT

a	Pre-treatment	–	As per IS 6005 prior to galvanising
b	Type	–	Hot dip galvanizing as per IS 2629
c	Min. Thickness of zinc coating	microns	48 (upto 25 mm dia), 65 (above 25 mm & upto 50 mm dia)
d	Min. Weight of zinc coating	(gm/m ²)	340 (upto 25 mm dia) 460 (above 25 mm & upto 50 mm dia)
e	Tests for galvanizing	–	a) Weight of zinc coating as per IS : 6745 b) Thickness of zinc coating as per IS : 4759 c) Uniformity of zinc coating as per IS : 2633 d) Adhesion as per IS: 2629

	TECHNICAL SPECIFICATION FOR RIGID STEEL CONDUITS	SPEC NO. PE-TS- 466-558-E002
		VOLUME NO.: II-B
		SECTION: II
		REV NO.: 00 DATE: 20.08.2021
		SHEET : 6 OF 11

SECTION-II

	TECHNICAL SPECIFICATION FOR RIGID STEEL CONDUITS	SPEC NO. PE-TS- 466-558-E002
		VOLUME NO.: II-B
		SECTION: II
		REV NO.: 00 DATE: 20.08.2021
		SHEET : 7 OF 11

1.0 INTENT OF SPECIFICATION

The intent of specification is not to specify all details of design & construction of material. The material shall, however, conform in all aspects to high standard of design, engineering and workmanship and be capable of performing in continuous operation up to & after bidder's guarantee period in manner acceptable to purchaser who will interpret the drawings & specification and shall have power to reject any work or material which in his judgement is not in full accordance with this specification.

2.0 CODES AND STANDARDS

2.1 The material shall comply with all currently applicable safety codes and statutory regulations of India as well as of the locality where the material is to be installed.

2.2 The material, construction, manufacture, inspection and testing of Rigid steel conduits shall conform to the latest revision of relevant standards as per Data Sheet-A.

2.3 In case of conflict between the applicable reference standard and this specification, the stringent requirement of the two shall govern.

3.0 TECHNICAL REQUIREMENTS

3.1 Rigid conduits shall generally conform to the requirements of IS: 9537 (part I & II).

3.2 The diameter of conduits shall be uniform throughout the length. Each end of conduit length shall be threaded. The ends of conduits shall be sealed with protective caps to prevent damage to threaded portions and entrance of moisture and foreign material.

3.3 The inside surface of all conduits shall be smooth and suitable for pulling insulated cables and wires without damage.


3.4 Technical particulars of rigid conduits are specified in Data Sheet – A.

4.0 QUALITY ASSURANCE, TESTING & INSPECTION

4.1 Bidder shall confirm compliance with the BHEL's Standard Quality Plan (PE-QP-999-558-E001) as attached with the specification without any deviations. At contract stage, the successful bidder shall submit the Quality Plan for BHEL/ ultimate customer's approval. In case bidder has reference Quality Plan agreed with ultimate customer, same can be submitted for specific project after award of contract for BHEL/ ultimate customer's approval. There shall be no commercial implication to BHEL on account of Quality plan approval.

4.2 All materials shall be procured, manufactured, inspected and tested by vendor/ sub-vendor as per approved quality plan.

4.3 The supplier shall perform all tests necessary to ensure that the material and workmanship conform to the relevant standards and comply with the requirements of the specification. Charges for all these tests for all the equipments & components shall be deemed to be included

	TECHNICAL SPECIFICATION FOR RIGID STEEL CONDUITS	SPEC NO. PE-TS- 466-558-E002
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		SHEET : 8 OF 11

in the bid price.

4.4 In case ordered quantities are manufactured and offered for inspection in more than one lot, BHEL reserves the right to witness testing on all lots without any commercial implication to BHEL.

5.0 PACKING

5.1 The material shall be packed to ensure protection against damage during transit, storage for prolonged periods and handling.

5.2 The ends of conduits shall be sealed with protective caps.

5.3 Each conduit shall be wrapped in plastic to prevent dust deposition.

5.4 The conduits should be aligned and stacked in bundles (a maximum of 25 pieces per bundle).

5.5 Each bundle shall be covered with jute fibre / thick plastic wrap for protection against extreme weather. Then, the bundle shall be tied with twin-strand mild steel wire, strong rope or steel strip.

6.0 MARKING


6.1 Rigid conduits shall be marked at least once on each manufacturing length, preferably 50 mm from one end, with the following:

- a) Manufacturer's name or trade mark, if any;
- b) Country of manufacture; and
- c) Nominal size of the conduits.
- d) ISI Certification Mark.

Marking may be applied by moulding, stamping, printing, adhesive label or water slide transfers.

6.2 Marking shall be durable and legible.

6.3 Marking shall be checked by inspection and by rubbing lightly the marking by hand for 15 seconds with a piece of cloth soaked with water and again for 15 seconds with a piece of cloth soaked with petroleum spirit.

	MANUFACTURER/ BIDDER/ SUPPLIER NAME & ADDRESS		STANDARD QUALITY PLAN				SPEC. NO :			DATE:	
			CUSTOMER :				QP NO.: PE-QP-999-558-E001, R04			DATE: 23.07.2020	
			PROJECT:				PO NO.:			DATE:	
			ITEM: RIGID STEEL CONDUITS		SYSTEM: STATION LIGHTING SYSTEM		SECTION: II			SHEET 1 OF 3	


SL NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD		AGENCY			REMARKS
1	2	3	4	5	6		7	8	9	*	**			
					M	C/ N				D	M	C	N	

1.0 RAW MATERIAL/BOUGHT OUT ITEMS

1.1		HOT ROLLED STEEL STRIP	MA	VISUAL, MECH. & CHEMICAL	MFR. STD.	-	IS10748	IS10748	TEST CERT.	√	P	V	-	AS APPLICABLE
1.2		COLD ROLLED STEEL SHEET	MA	VISUAL, MECH. & CHEMICAL	MFR. STD.	-	IS513	IS513	TEST CERT.	√	P	V	-	AS APPLICABLE


2.0 ACCEPTANCE TESTS

2.1	RIGID STEEL CONDUITS	DIMENSIONS	MA	MEASUREMENT	IS 9537-II	IS 9537-II	IS:9537/ APPROVED DATA SHEET	APPROVED DATA SHEET	INSP. REPORT	√	P	W	-	
2.2		MECH. PROPERTIES												
2.2A		BENDING TEST	CR	TEST	IS 9537-II	IS 9537-II	IS 9537-II	IS 9537-II	INSP. REPORT	√	P	W	-	
2.2B		COMPRESSION TEST	CR	TEST	IS 9537-II	IS 9537-II	IS 9537-II	IS 9537-II	INSP. REPORT	√	P	W	-	
2.3		GALVANISATION TEST												
2.3A		UNIFORMITY OF ZINC COATING	CR	TEST	IS 9537-II	IS 9537-II	IS-2633/ APPD DS	IS-2633/ APPD DS	INSP. REPORT	√	P	W	-	

BHEL					
ENGINEERING			QUALITY		
	Sign & Date	Name		Sign & Date	Name
Prepared by:	MEET SAGAR SINGH RAJPAL MUDIT CHOPRA	MEET SAGAR SINGH RAJPAL/ MUDIT CHOPRA	Checked by:	 RITESH KUMAR JAISWAL	KUNAL GANDHI
Reviewed by:	PRAVEEN DUTTA	PRAVEEN DUTTA	Reviewed by:	RITESH KUMAR JAISWAL	RITESH KUMAR JAISWAL

BIDDER/ SUPPLIER	
Sign & Date	
Seal	

FOR CUSTOMER REVIEW & APPROVAL			
Doc No:			
	Sign & Date	Name	Seal
Reviewed by:			
Approved by:			

	MANUFACTURER/ BIDDER/ SUPPLIER NAME & ADDRESS		STANDARD QUALITY PLAN				SPEC. NO :		DATE:	
			CUSTOMER :				QP NO.: PE-QP-999-558-E001, R04		DATE: 23.07.2020	
			PROJECT:				PO NO.:		DATE:	
			ITEM: RIGID STEEL CONDUITS		SYSTEM: STATION LIGHTING SYSTEM		SECTION: II		SHEET 2 OF 3	

SL NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD		AGENCY			REMARKS
1	2	3	4	5	6		7	8	9	*	**			
					M	C/ N				D	M	C	N	


2.3B		MASS OF ZINC COAT.	CR	TEST	IS 9537-II	IS 9537-II	IS-6745/ APPD DS	IS-6745/ APPD DS	INSP. REPORT	√	P	W	-	
2.3C		COATING THICKNESS	CR	TEST	IS 9537-II	IS 9537-II	IS-4759/ APPD DS	IS-4759/ APPD DS	INSP. REPORT	√	P	W	-	BY ELCOMETER Refer Note 8
2.3D		EPOXY THICKNESS	MA	VISUAL/PHYSICAL	IS 9537-II	IS 9537-II	50 MICRONS	50 MICRONS	INSP. REPORT	√	P	W	-	AS APPLICABLE
2.4		MARKING	CR	VISUAL/PHYSICAL	IS 9537-II	IS 9537-II	APPROVED DATA SHEET	APPROVED DATA SHEET	INSP. REPORT		P	W	-	

3.0 PACKING

	PACKING	Soundness of Packing against transit damage	Major	Visual	100%	100%	BHEL * approved document	BHEL approved document	Inspection report	√	P	W	-	
--	---------	---	-------	--------	------	------	--------------------------	------------------------	-------------------	---	---	---	---	--


NOTES:

- The inspection shall be carried out once for the material offered for inspection in one lot. For subsequent lots against the same project, the material can be accepted based on certificate of compliance furnished by the vendor.
- Project specific QP shall be based on customer requirement. In case, any changes in QP commented by customer at contract stage shall be carried out by bidder without any implication to BHEL/ Customer.
- For export jobs, BHEL technical specification for seaworthy packing for export jobs is to be followed.
- Packing shall be suitable for storage at site in tropical climatic conditions. *Packing shall be done as per Clause 5 of Section -II of Technical specification.

BHEL					
ENGINEERING			QUALITY		
	Sign & Date	Name		Sign & Date	Name
Prepared by:	MEET SAGAR SINGH RAJPAL MUDIT CHOPRA	MEET SAGAR SINGH RAJPAL/ MUDIT CHOPRA	Checked by:		KUNAL GANDHI
Reviewed by:	PRAVEEN DUTTA	PRAVEEN DUTTA	Reviewed by:	RITESH KUMAR JAISWAL	RITESH KUMAR JAISWAL

BIDDER/ SUPPLIER	
Sign & Date	
Seal	

FOR CUSTOMER REVIEW & APPROVAL			
Doc No:			
	Sign & Date	Name	Seal
Reviewed by:			
Approved by:			

	MANUFACTURER/ BIDDER/ SUPPLIER NAME & ADDRESS		STANDARD QUALITY PLAN				SPEC. NO :		DATE:			
			CUSTOMER :				QP NO.: PE-QP-999-558-E001, R04		DATE: 23.07.2020			
			PROJECT:				PO NO.:		DATE:			
			ITEM: RIGID STEEL CONDUITS		SYSTEM: STATION LIGHTING SYSTEM		SECTION: II		SHEET 3 OF 3			
SL NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD		AGENCY	REMARKS
1	2	3	4	5	6		7	8	9	* D	** M C N	
					M	C/ N						

5. Latest revision/ year of issue of all the standards (IS/ ASME/ IEC etc.) Indicated in QP shall be referred.
6. BHEL reserves the right for conducting repeat test if required.
7. After packing and prior to issue MDCC, photographs of items to be dispatched shall be sent to BHEL purchase group for review.
8. Thickness of zinc coating shall be the average of the determination made at each end and the middle of the article.

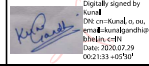
LEGENDS:

*RECORDS, IDENTIFIED WITH "TICK"(✓) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION,

** **M:** SUPPLIER/ MANUFACTURER/ SUB-SUPPLIER, **C:** MAIN SUPPLIER/ BHEL/ THIRD PARTY INSPECTION AGENCY, **N:** CUSTOMER,

P: PERFORM, **W:** WITNESS, **V:** VERIFICATION, AS APPROPRIATE

MA: MAJOR, **MI:** MINOR, **CR:** CRITICAL, **D:** DOCUMENTATION

BHEL					
ENGINEERING			QUALITY		
	Sign & Date	Name		Sign & Date	Name
Prepared by:	MEET SAGAR SINGH RAJPAL MUDIT CHOPRA	MEET SAGAR SINGH RAJPAL/ MUDIT CHOPRA	Checked by:	 Digitally signed by Kunal Gandhi DN: cn=Kunal Gandhi, o=BHEL, ou=Quality, email=k.gandhi@bhel.co.in, c=IN Date: 2020.07.29 09:23:13 +05'30'	KUNAL GANDHI
Reviewed by:	PRAVEEN DUTTA	Digitally signed by PRAVEEN DUTTA DN: cn=PRAVEEN DUTTA, o=BHEL, ou=Engineering, email=p.dutta@bhel.co.in, c=IN Date: 2020.07.25 12:27:51 +05'30'	Reviewed by:	RITESH KUMAR JAISWAL	Digitally signed by RITESH KUMAR JAISWAL DN: cn=RITESH KUMAR JAISWAL, o=BHEL, ou=Quality, email=r.jaiswal@bhel.co.in, c=IN Date: 2020.07.29 09:00:45 +05'30'

BIDDER/ SUPPLIER	
Sign & Date	
Seal	

FOR CUSTOMER REVIEW & APPROVAL			
Doc No:			
	Sign & Date	Name	Seal
Reviewed by:			
Approved by:			

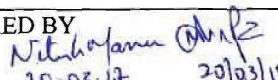
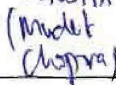
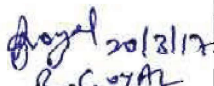
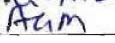
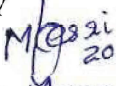
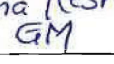
423118/2021/PS-PEM-EL

	PRE-QUALIFICATION REQUIREMENTS FOR RIGID STEEL CONDUITS	PE-PQ-999-558-E002
		REVISION NO. 01 DATE 20/03/2017
		SHEET NO. 1 OF 1

ITEMS : RIGID STEEL CONDUITS	
SCOPE : Supply : YES; Erection & Commissioning : NO.	
1.0	Vendor should be a BIS approved manufacturer of rigid steel conduits as per IS 9537 Part II.
2.0	Availability of test reports of rigid steel conduits to establish in- house capability at manufacturer's works to carry out all routine, type & acceptance tests as per relevant IS.
3.0	Capacity of manufacturing 30 MT of rigid steel conduits per month.
4.0	Manufactured and supplied at least 80 km of rigid steel conduits in one or more orders.
5.0	Minimum two (2) nos. purchase orders for rigid steel conduits shall be submitted which should not be more than five (5) years old from the date of application for registration or date of techno-commercial bid opening (as applicable) for establishing continuity in business.

NOTE:

- The vendor can offer rigid steel conduits of any BIS approved make meeting criteria S.No.1 to 4 above.
The vendor to furnish the following documents:
 - Undertaking from BIS approved manufacturer of offered make to get the inspection & testing of conduits carried out at manufacturer's works.
 - Credentials of the manufacturer of offered make to meet the PQR requirements of S no 1.0 to 4.0 above.
 - Vendor's Credentials to meet S no 5.0.
- Consideration of offer shall be subject to customer's approval of bidders, if applicable.
- Bidder to submit all supporting documents in English. If documents submitted by bidder are in language other than English, a self-attested English translated document should also be submitted.
- Any other project specific requirement shall be as per Annexure-I and bidder shall submit relevant supporting documents.
- Notwithstanding anything stated above, BHEL reserves the right to assess the capabilities and capacity of the bidder/collaborators to perform the contract, should the circumstances warrant such assessment in the overall interest of BHEL.
- After satisfactory fulfillment of all the above criteria/ requirement, offer shall be considered for further evaluation as per NIT and all the other terms of the tender.

PREPARED BY  NAME: Nishu DESIGNATION: 20/03/17 	REVIEWED BY  NAME: R. Goyal DESIGNATION: 20/3/17 	APPROVED BY  NAME: Meena DESIGNATION: 20.3.17 
--	---	---

Letter head of Company (<Rs. 10 Cr value)

Ref.....

Date.....

To,

Bharat Heavy Electricals Limited PEM,

PPEI Building, Plot No 25, Sector -16A,

Noida (U.P)-201301

Subject: -Certification regarding local content

Reference: Tender Enquiry No-.....

Name of Package:

Dear Sir,

We hereby certify that items offered by us of(package name).....for.....(Project Name/Rate contract)..... meets the requirement of minimum local content in line with Cl. No..... of NIT No..... dated..... and the Public Procurement (Preference to Make in India), Order 2017 dated-15.06.2017, 28.05.2018, 29.05.2019 , 04.06.2020 & 16.09.2020.

Local Content-%

We further confirms that details of location at which the local value addition is made will be our registered works at(address of the works)

Yours very truly

.....(authorized signatory of company)

.....(firm name)

ON COMPANY LETTER HEAD

To,

M/s Bharat Heavy Electricals Ltd.,
Project Engineering Management,
Power Project Engineering Institute,
HRD & ESI Complex, Plot No 25, Sector-16 A,
Noida-201301

Kind Attn. Mr.

Dear Sir,

This has reference to:

1. Our offer for RIGID STEEL CONDUITS for Combined Tender Enquiry (2 X 250 MW NSPCL BHILAI TPP FGD, 2X500 MW NTPC MAUDA FGD STAGE-I, 3X200 + 3X500 MW NTPC RAMAGUNDAM TPP FGD, 3X200+3X500+1x500 MW NTPC KORBA TPP-FGD, 3X660 MW North Karanpura FGD, 3X660 MW NPGCL NABINAGAR FGD and 4X250MW BRBCL Nabinagar FGD projects), GeM Tender No. dated

2. Order no. F. No. 6/18/2019-PPD dt. 23.07.2020 issued by Ministry of Finance, Department of Expenditure Public Procurement Division.

I have read the clause regarding restriction on procurement from a bidder of a country which shares a land border with India; I certify that M/s (Company Name _____) is not from such a country **or**, if from such a country, has been registered with the competent authority. **(Remove the non-applicable)**

I hereby certify that M/s (Company Name _____) fulfil all requirements in this regard and is eligible to be considered.

[where applicable, evidence of valid registration by the competent authority shall be attached]

Thanking You,
Yours faithfully,

Owner, partner, CMD, Director, Authorized Signatory with proof that he/she is authorized to sign on owner's behalf

M/s _____

ANNEXURE FOR RISK & COST

1. In case of delays (beyond the maximum late delivery period as per LD clause) in supplies, or if there be defective supplies or non-fulfilment of any other terms and conditions of the Contract as enumerated subsequently in this clause, then, without prejudice to its right to recover any expenses, losses or damages to which the Buyer may be put in or sustain by reason of the Seller/Contractor's default or breach of Order/Contract or to suspend business dealings with the Seller/Contractor in terms of the Buyers' Guidelines for Suspension of Business Dealings as applicable from time to time, the Buyer shall also be entitled to cancel the Order/Contract either in whole or portion thereof without compensation to Seller. On the occurrence of any of the acts/omissions mentioned below, the Buyer may if it so desires, procure upon such terms and in such manner as deemed appropriate, plant/equipment/ stores not so delivered or others of similar description where plant/ equipment/ stores exactly complying with particulars are not, in the opinion of the Buyer (which shall be final), readily procurable, at the risk and cost of the Seller.

The Seller shall be liable to the Buyer for any excess costs incurred thereof and the Seller shall continue the performance of the Order/Contract to the extent not cancelled under the provisions of this clause. The Seller shall on no account be entitled to any gain on such repurchases. If the Bidder does not agree to this Risk Purchase clause, BHEL reserves the right to reject the bid/offer of the Bidder. The order/contract may be cancelled in whole or part thereof and Risk & Cost Clause in line with terms and conditions of PO/Contract may be invoked by the Buyer in any of the following cases:

- i. If the Seller/Contractor fails to deliver the goods or materials or any instalment thereof within the period(s) fixed for such delivery or the Seller's poor progress of the supply/services vis-à-vis delivery/execution timeline as stipulated in the contract, backlog attributable to the Seller including unexecuted portion of supply does not appear to be executable within balance period available;
- ii. delivering goods or materials not of the contracted quality and failing to adhere to the contract specifications/execution methodology;
- iii. withdrawal from or repudiation/abandonment of the supply/services by the Seller before completion as per contract or if the Seller refuses or is unable to supply goods or materials covered by the order/Contract either in whole or in part or otherwise fails to perform the Order/Contract.
- iv. Non supply by the Seller within scheduled completion/delivery period as per contract or as extended from time to time for reasons attributable to the Seller;
- v. Termination of Contract on account of any other reason(s) attributable to the Seller.
- vi. Assignment, transfer, sub-letting of Contract without BHEL's written permission resulting in termination of Contract or part thereof by BHEL.
- vii. If the Seller be an individual or a Sole Proprietorship, in the event of death or insanity of the Seller.
- viii. If the Seller/Contractor being an individual or if a partnership firm thereof, shall at any time be adjudged insolvent or shall have a receiving order for administration of his estate made against him or shall take any proceeding for composition under any Insolvency Act for the time being in force or make any assignment of the order/Contract or enter into any arrangement or composition with his creditors or suspend payment or if the firm dissolved under the Partnership Act;
- ix. If the Seller/Contractor being a Company is wound up voluntarily or by order of a Court or a Receiver, Liquidator or Manager on behalf of the debenture holders and creditors is appointed or circumstances have arisen which entitles the Court of debenture holder and creditors to appoint a receiver, liquidator or manager
- x. Non- Compliance to any contractual condition or any other default attributable to the Seller.

Such defaulting vendor/Seller shall not be eligible to participate in re-tendering conducted on account of risk purchase made due to fault of such vendor/Seller.

2. BHEL's right to go for Risk and Cost, Calculation of Risk and Cost amount & L D, recovery options to BHEL are given as under: -

2.1 BHEL reserves the right to terminate the contract or withdraw portion of work and get it done through other agency, at the risk and cost of the contractor *after due notice of a period of 14 days' by BHEL* in any of the following cases:

- i) If the Seller/Contractor fails to deliver the goods or materials or any instalment thereof within the period(s) fixed for such delivery or the Seller's poor progress of the supply/ services vis-a-vis delivery/execution timeline as stipulated in the Contract, backlog attributable to seller including unexecuted portion of supply does not appear to be executable within balance available period;
- ii) Delivers goods or materials not of the contracted quality and failing to adhere to the contract specifications;
- iii) Withdrawal from or repudiation/ abandonment of the supply/ services by Seller before completion as per contract or if the Seller refuses or is unable to supply goods or materials covered by the Order/Contract either in whole or in part or otherwise fails to perform the Order/Contract;
- iv) Non-supply by the Seller within scheduled completion/delivery period as per Contract or as extended from time to time, for the reasons attributable to the Seller;
- v) Termination of Contract on account of any other reason (s) attributable to Seller.
- vi) Assignment, transfer, subletting of Contract without BHEL's written permission resulting in termination of Contract or part thereof by BHEL.
- vii) If the Seller be an individual or a sole proprietorship Firm, in the event of the death or insanity of the Seller;
- viii) If the Seller/Contractor being an individual or if a firm on a partnership thereof, shall at any time, be adjudged insolvent or shall have a receiving order for administration of his estate made against him or shall take any proceeding for composition under any Insolvency Act for the time being in force or make any assignment of the Order/Contract or enter into any arrangement or composition with his creditors or suspend payment or if the firm dissolved under the Partnership Act;
- ix) If the Seller/Contractor being a company is wound up voluntarily or by order of a Court or a Receiver, Liquidator or Manager on behalf of the debenture holders and creditors is appointed or circumstances shall have arisen which entitles the Court of debenture holder and creditors to appoint a receiver, liquidator or manager;
- x) Non-compliance to any contractual condition or any other default attributable to Seller.

2.1.1 Risk & Cost Amount against Balance Work:

Risk & Cost amount against balance work shall be calculated as follows:

$$\text{Risk \& Cost Amount} = [(A-B) + (A \times H/100)]$$

Where,

A= Value of Balance scope of Work (*) as per rates of new contract

B= Value of Balance scope of Work (*) as per rates of old contract being paid to the contractor at the time of termination of contract i.e. inclusive of PVC & ORC, if any.

H = Overhead Factor to be taken as 5

In case (A-B) is less than 0 (zero), value of (A-B) shall be taken as 0 (zero).

2.1.2 Balance scope of work (in case of termination of contract):

Difference of Contract Quantities and Executed Quantities as on the date of issue of Letter for 'Termination of Contract', shall be taken as balance scope of Work for calculating risk & cost amount.

Contract quantities are the quantities as per original contract. If, Contract has been amended, quantities as per amended Contract shall be considered as Contract Quantities.

Items for which total quantities to be executed have exceeded the Contract Quantities based on drawings issued to contractor from time to time till issue of Termination letter, then for these items total Quantities as per issued drawings would be deemed to be contract quantities.

Substitute/ extra items whose rates have already been approved would form part of contract quantities for this purpose.

Substitute/ extra items which have been executed but rates have not been approved, would also form part of contract quantities for this purpose and rates of such items shall be determined in line with contractual provisions.

However, increase in quantities on account of additional scope in new tender shall not be considered for this purpose.

NOTE: In case portion of work is being withdrawn at risk & cost of contractor instead of termination of contract, contract quantities pertaining to portion of work withdrawn shall be considered as 'Balance scope of work' for calculating Risk & Cost amount.

2.1.3 LD against delay in executed work in case of Termination of Contract:

LD against delay in executed work shall be calculated in line NIT terms & conditions, for the delay attributable to contractor. For limiting the maximum value of LD, contract value shall be taken as Executed Value of work till termination of contract.

Method for calculation of LD against delay in executed work in case of termination of contract" is given below:

- i. Let the time period from scheduled date of start of work till termination of contract excluding the period of Hold (if any) not attributable to contractor = T1
- ii. Let the value of executed work till the time of termination of contract = X
- iii. Let the Total Executable Value of work for which inputs/fronts were made available to contractor and were planned for execution till termination of contract = Y
- iv. Delay in executed work attributable to contractor i.e. $T2 = [1 - (X/Y)] \times T1$
- v. LD shall be calculated in line with LD clause (clause 16) of the Contract for the delay attributable to contractor taking "X" as Contract Value and "T2" as period of delay attributable to contractor.


2.2 Recoveries arising out of Risk & Cost and LD or any other recoveries due from Contractor:

Without prejudice to the other means of recovery of such dues from the Seller recoveries from the Seller on whom risk


& cost has been invoked shall be made from the following:

- a) Dues available in the form of Bills payable to seller, SD, BGs against the same contract.
- b) Dues payable to seller against other contracts in the same Region/Unit/ Division of BHEL.
- c) Dues payable to seller against other contracts in the different Region/Unit/ division of BHEL.

In-case recoveries are not possible with any of the above available options, Legal action shall be initiated for recovery against contractor.


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Ref No:				Date:			
संदर्भ सं.:				तिथि:			
i.	Main Contractor मुख्य संविदाकार						
ii.	Project परियोजना						
iii.	Package Name पैकेज का नाम			Package No पैकेज सं.			
iv.	Proposed Item/Scope of Sub-contracting उप- संविदा(अनुबंध) का प्रस्तावित मद/ दायरा						
v.	Item covered under निम्नलिखित के अंतर्गत शामिल मद	Schedule-1 /अनुसूची- 1				As per contract clause No- अनुबंध के अनुसार खंड सं.- -	
		Schedule-2 अनुसूची- -2					
vi.	If item is Schedule-1 and proposed sub-vendor is indigenous, Main Contractor to explain how the contractual provisions will be fulfilled /यदि मद अनुसूची -1 है और प्रस्तावित उप-विक्रेता स्वदेशी है, तो मुख्य संविदाकार को स्पष्ट करना होगा कि संविदा/अनुबंध के प्रावधान कैसे पूरे किए जाएंगे						
vii.	Name and Address of the proposed Sub-vendor's works /प्रस्तावित सब-वेंडर का नाम तथा पता						
viii.	PO placement date/ Start of manufacturing (if self-manufactured) as per L2 network पीओ नियोजन की तिथि / एल- 2 नेटवर्क के अनुसार विनिर्माण (यदि स्व-निर्मित है) की शुरुआत						
ix.	Item Description (Type/Size/Rating/Scope of Sub-Contracting) मद का विवरण (प्रकार / आकार / रेटिंग / उप-अनुबंध का दायरा)	Total quantity of proposed item envisaged in this package (Nos/ Running Meters/ Kgs/ Tons etc) इस पैकेज में परिकल्पित प्रस्तावित मद की कुल मात्रा (संख्या / क्रियाशील मीटर / किलोग्राम / टन आदि)	Quantity proposed to be procured from proposed sub-vendor (Nos/ Running Meters /Kgs /Tons etc) प्रस्तावित उप-विक्रेता (संख्या / क्रियाशील मीटर / किलोग्राम / टन आदि) से खरीदी जाने वाली मात्रा	Timeline for quantity requirements as per project schedule & whether the proposed Sub-vendor equipped with adequate capacity to supply proposed order quantity in time / परियोजना समय सूची के अनुसार मात्रा आवश्यकताओं के लिए समय-सीमा और क्या प्रस्तावित उप-विक्रेता समय पर प्रस्तावित मांग की मात्रा की आपूर्ति करने में पूरी तरह से सक्षम है			
x.	Supply experience of the proposed sub-vendor (including supplies to Main Contractor, if any) for similar item/scope of sub-contracting, for last 3 years (Note:- Only relevant experience details w.r.t. proposed item/scope of subcontracting to be brought out here) पिछले 3 वर्षों के लिए उप-अनुबंध के समान मद / दायरे के लिए प्रस्तावित सब-वेंडर (मुख्य संविदाकार हेतु आपूर्ति, यदि कोई हो, सहित) का आपूर्ति अनुभव (नोट: - उप-अनुबंध के प्रस्तावित मद / दायरे के संबंध में केवल प्रासंगिक अनुभव के विवरण का उल्लेख हो						


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	Project/Package परियोजना/पैकेज	Customer Name ग्राहक का नाम	Supplied Item (Type/Rating/Model /Capacity/Size etc) आपूर्ति मद (प्रकार/रेटिंग /मॉडल /क्षमता/आकार आदि)	PO ref no/date पीओ संदर्भ सं. /तिथि	Supplied Quantity आपूर्ति की मात्रा	Date of Supply आपूर्ति की तिथि			
<p><i>We confirm that as per our assessment, the proposed sub-vendor has requisite capabilities & supply experience and is suitable for supplying the proposed item/scope of sub-contracting/हम अपने आकलन के अनुसार इस बात की पुष्टि करते हैं कि, प्रस्तावित उप-विक्रेता के पास अपेक्षित क्षमता और आपूर्ति करने का अनुभव है और उप-अनुबंध के दायरे /प्रस्तावित मद की आपूर्ति के लिए उपयुक्त है।</i></p>									
Name: नाम:		Desig: पद:		Contact No: दूरभाष सं.:		Sign: हस्ताक्षर:		Date: तिथि:	


Company's Seal/Stamp:- कंपनी का मुहर:-

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i.	Item/Scope of Sub-contracting उप-संविदा(अनुबंध) का मद/ दायरा			
ii.	Address of the registered office पंजीकृत कार्यालय का पता 	Details of Contact Person संपर्क व्यक्ति का विवरण (Name, Designation, Mobile, Email) (नाम, पदनाम, मोबाइल, ईमेल)		
iii.	Name and Address of the proposed Sub-vendor's works where item is being manufactured प्रस्तावित उप-विक्रेता के कार्यों का नाम और पता, जहां मद का निर्माण किया जा रहा है 	Details of Contact Person: संपर्क व्यक्ति का विवरण (Name, Designation, Mobile, Email) (नाम, पदनाम, मोबाइल, ईमेल)		
iv.	Annual Production Capacity for proposed item/scope of sub-contracting उप-संविदा(अनुबंध) के प्रस्तावित मद / दायरे के लिए वार्षिक उत्पादन क्षमता			
v.	Annual production for last 3 years for proposed item/scope of sub-contracting उप-संविदा(अनुबंध) के प्रस्तावित मद / दायरे के लिए पिछले 3 वर्षों का वार्षिक उत्पादन			
vi.	Details of proposed works प्रस्तावित कार्यों का विवरण			
1.	Year of establishment of present works वर्तमान फैक्टरी की स्थापना का वर्ष			
2.	Year of commencement of manufacturing at above works उपरोक्त फैक्टरी में निर्माण कार्य शुरू होने का वर्ष			
3.	Details of change in Works address in past (if any) पूर्व में फैक्टरी स्थल में परिवर्तन का विवरण (यदि कोई हो)			
4.	Total Area कुल क्षेत्र Covered Area शामिल क्षेत्र			
5.	Factory Registration Certificate फैक्टरी पंजीकरण प्रमाण पत्र	Details attached at Annexure – F2.1 विवरण अनुलग्नक-एफ 2.1 पर संलग्न है		
6.	Design/ Research & development set-up डिजाइन / अनुसंधान और विकास सेटअप (No. of manpower, their qualification, machines & tools employed etc.) (श्रमिकों की संख्या, उनकी योग्यता, मशीन और उपलब्ध उपकरण आदि)	Applicable / Not applicable if manufacturing is as per Main Contractor/purchaser design) Details attached at Annexure – F2.2 (if applicable) लागू / लागू नहीं, अगर विनिर्माण मुख्य संविदाकार / खरीददार के डिजाइन के अनुसार है) विवरण अनुलग्नक –एफ 2.2 पर संलग्न है। (यदि लागू हो)		
7.	Overall organization Chart with Manpower Details (Design/Manufacturing/Quality etc) मैनपावर विवरण के साथ समग्र संगठन का चार्ट(डिजाइन / विनिर्माण / गुणवत्ता आदि)	Details attached at Annexure – F2.3 विवरण अनुलग्नक – F2.3 में संलग्न है।		

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8.	After sales service set up in India, in case of foreign sub-vendor(Location, Contact Person, Contact details etc.) भारत में बिक्री सेवा की स्थापना के बाद, विदेशी उप-विक्रेता के मामले में(स्थल , संपर्क व्यक्ति, संपर्क विवरण आदि)	Applicable / Not applicable लागू / लागू नहीं Details attached at Annexure – F2.4 विवरण अनुलग्नक -2.4 पर संलग्न है।			
9.	Manufacturing process execution plan with flow chart indicating various stages of manufacturing from raw material to finished product including outsourced process, if any फ्लोचार्ट सहित विनिर्माण प्रक्रिया निष्पादन योजना , जिसमें आउटसोर्स प्रक्रिया, यदि कोई हो, सहित कच्चे माल से तैयार उत्पाद तक विनिर्माण के विभिन्न चरणों को दर्शाया गया हो,	Details attached at Annexure – F2.5 विवरण अनुलग्नक - F2.5में संलग्न है।			
10.	Sources of Raw Material/Major Bought Out Item कच्चे माल के स्रोत / खरीदे हुए मुख्य मद	Details attached at Annexure – F2.6 विवरण अनुलग्नक - F2.6में संलग्न है।			
11.	Quality Control exercised during receipt of raw material/BOI, in-process , Final Testing, packing कच्चे माल / खरीदे हुए मद, प्रक्रियाबद्ध, अंतिम परीक्षण, पैकिंग करते समय गुणवत्ता नियंत्रण	Details attached at Annexure – F2.7 विवरण अनुलग्नक - F2.7 पर संलग्न है			
12.	Manufacturing facilities (List of machines, special process facilities, material handling etc.) विनिर्माण सुविधा(मशीनों की सूची, विशेष प्रक्रिया सुविधाएं, सामग्री रख-रखाव आदि)	Details attached at Annexure – F2.8 विवरण अनुलग्नक - F2.8में संलग्न है।			
13.	Testing facilities (List of testing equipment) परीक्षण सुविधाएं(परीक्षण उपकरण की सूची)	Details attached at Annexure – F2.9 विवरण अनुलग्नक – F2. 9 में संलग्न है।			
14.	If manufacturing process involves fabrication then- यदि निर्माण प्रक्रिया में फेब्रिकेशन की गई है तो- List of qualified Welders पात्र वेल्डर की सूची List of qualified NDT personnel with area of specialization विशेषज्ञता के क्षेत्र सहित पात्र एनडीटी कार्मिकों की सूची	Applicable / Not applicable लागू / लागू नहीं Details attached at Annexure – F2.10 विवरण अनुलग्नक - F2.10में संलग्न है। (if applicable) लागू / लागू नहीं			
15.	List of out-sourced manufacturing processes with Sub-Vendors' names & addresses सब-वेंडर द्वारा बाह्य स्रोतों (उनके नाम और पते सहित)से करवाएं गए निर्माण प्रक्रियाओं की सूची	Applicable / Not applicable लागू / लागू नहीं Details attached at Annexure. –F2.11 विवरण अनुलग्नक - F2.10में संलग्न है। (if applicable) (यदि लागू हो)			
16.	Supply reference list including recent supplies नवीनतम आपूर्ति सहित आपूर्ति संदर्भ सूची	Details attached at Annexure – F2.12 विवरण अनुलग्नक - F2.12 में संलग्न है। (as per format given below) (नीचे दिए गए प्रारूप के अनुसार)			
Project/ package परियोजना /पैकेज	Customer Name ग्राहक का नाम	Supplied Item (Type/Rating/Model /Capacity/Size etc) आपूर्ति की गई वस्तु (प्रकार / रेटिंग / मॉडल / क्षमता / आकार आदि)	PO ref no/date पीओ संदर्भ सं. / तिथि	Supplied Quantity आपूर्ति की मात्रा	Date of Supply आपूर्ति की तारीख
17.	Product satisfactory performance feedback letter/certificates/End User Feedback उत्पाद के संतोषजनक प्रदर्शन संबंधी फीडबैक पत्र / प्रमाण पत्र / अंतिम उपयोगकर्ता फीडबैक			Attached at annexure - F2.13 अनुलग्नक F2. 3पर संलग्न है	

	CORPORATE QUALITY ASSURANCE/ कॉरपोरेट गुणवत्ता आश्वासन SUB-VENDOR QUESTIONNAIRE/ सब-वेंडर प्रश्नावली
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18.	Summary of Type Test Report (Type Test Details, Report No, Agency, Date of testing) for the proposed product (similar or higher rating) प्रस्तावित उत्पाद (एक समान या उच्च रेटिंग वाले) के लिए टाइप टेस्ट रिपोर्ट (टाइप टेस्ट विवरण, रिपोर्ट संख्या, एजेंसी, जांच की तारीख) का सारांश नोट: - रिपोर्ट प्रस्तुत करने की आवश्यकता नहीं है Note:- Reports need not to be submitted	Applicable / Not applicable लागू / लागू नहीं Details attached at Annexure – F2.14 विवरण अनुलग्नक - F2.1 4 में संलग्न है (if applicable) (यदि लागू हो)					
19.	Statutory / mandatory certification for the proposed product प्रस्तावित उत्पाद के लिए वैधानिक / अनिवार्य प्रमाणीकरण	Applicable / Not applicable लागू / लागू नहीं Details attached at Annexure – F2.15 (if applicable) (यदि लागू हो)					
20.	Copy of ISO 9001 certificate आईएसओ 9001 प्रमाण पत्र की प्रति (if available) (यदि उपलब्ध हो)	Attached at Annexure – F2.16 अनुलग्नक में संलग्न - F2.1 6 है					
21.	Product technical catalogues for proposed item (if available) प्रस्तावित मद के लिए उत्पाद तकनीकी कैटलॉग (यदि उपलब्ध हो)	Details attached at Annexure – F2.17 विवरण अनुलग्नक - F2.1 7 में संलग्न है					
Name: नाम:		Desig: पद:		Sign: हस्ता क्षर:		Date: तिथि:	

Company's Seal/Stamp:- कंपनी की मुहर / मोहर: -

RAMAGUNDAM FGD - RIGID STEEL CONDUITS BOQ

Item Number	Item Title	Item Description	Item Quantity	Unit of Measure	Consignee ID	ZipCode	Delivery Period (In number of days)	Unit Price (Inclusive of TAX)	GST % Applicable	Brand	Model	HSN Code
1	558-15001-A	GI CONDUITS,1.6MM THK EPOXY 20MM DIA	400	MTR	PEM_RAM_A_CON	505215	210					
2	558-15002-A	GI CONDUITS,1.6MM THICK, 20MM DIA	18500	MTR	PEM_RAM_A_CON	505215	210					
3	558-15003-A	GI CONDUITS,1.6MM THICK, 25MM DIA	1100	MTR	PEM_RAM_A_CON	505215	210					
4	558-15005-A	GI CONDUITS,2.0MM THICK, 50MM DIA	100	MTR	PEM_RAM_A_CON	505215	210					

**3 X 200 + 3 X 500 MW NTPC RAMAGUNDAM TPP STAGE I
& II- FGD**

TECHNICAL SPECIFICATION

FOR

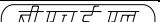
RIGID STEEL CONDUITS

SPECIFICATION NO.: *PE-TS- 467-558-E002*

REVISION: 0




**BHARAT HEAVY ELECTRICALS LIMITED
POWER SECTOR
PROJECT ENGINEERING MANAGEMENT
NOIDA, UP (INDIA) – 201301**

<div><div>बी एच ई एल</div><div></div></div>	<div>TECHNICAL SPECIFICATION FOR</div> <div>RIGID STEEL CONDUITS</div>	SPEC NO. PE-TS- 467-558-E002
		VOLUME NO.: II-B
		SECTION: I
		REV NO.: 00 DATE: 20.08.2021
		SHEET : 1 OF 11

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S. NO	DESCRIPTION	NO. OF SHEETS
1	SECTION I	
	COMPLIANCE CERTIFICATE	01
	SPECIFIC TECHNICAL REQUIREMENTS	01
	DATASHEET A	01
2	SECTION II	
	STANDARD TECHNICAL REQUIREMENTS	02
	STANDARD QUALITY PLAN	03

	TECHNICAL SPECIFICATION FOR RIGID STEEL CONDUITS	SPEC NO. PE-TS- 467-558-E002
		VOLUME NO.: II-B
		SECTION: I
		REV NO.: 00 DATE: 20.08.2021
		SHEET : 2 OF 11

COMPLIANCE CERTIFICATE


The bidder shall confirm compliance to the following by signing/ stamping this compliance certificate and furnishing same with the offer.

1. The scope of supply, technical details, construction features, design parameters etc. shall be as per technical specification & there are no exclusion/ deviation with regard to same
2. There are no deviation with respect to specification other than those furnished in the 'schedule of deviations'
3. Only those technical submittals which are specifically asked for in NIT to be submitted at tender stage shall be considered as part of offer. Any other submission, even if made, shall not be considered as part of offer.
4. Any comments/ clarifications on technical/ inspection requirements furnished as part of bidder's covering letter shall not be considered by BHEL, and bidder's offer shall be construed to be in conformance with the specification.
5. Any changes made by the bidder in the price schedule with respect to the description/ quantities from those given in BOQ-Cum-Price schedule of the specification shall not be considered (i.e., technical description & quantities as per specification shall prevail).

BIDDER'S STAMP & SIGNATURE

	TECHNICAL SPECIFICATION FOR RIGID STEEL CONDUITS	SPEC NO. PE-TS- 467-558-E002
		VOLUME NO.: II-B
		SECTION: I
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		SHEET : 3 OF 11

SECTION – I

	TECHNICAL SPECIFICATION FOR RIGID STEEL CONDUITS	SPEC NO. PE-TS- 467-558-E002
		VOLUME NO.: II-B
		SECTION: I
		REV NO.: 00 DATE: 20.08.2021
		SHEET : 4 OF 11

SPECIFIC TECHNICAL REQUIREMENTS

1.0 SCOPE

- 1.1 Manufacture, Inspection and Testing at Manufacturer's works, proper packing and delivery to site of rigid steel conduits conforming to this specification.
- 1.2 Technical requirements of rigid steel conduits are indicated in Data Sheet-A & Section-II.
- 1.3 The stipulation of Data Sheet-A shall prevail in case of any conflict between the stipulations of Data Sheet-A & Section-II.

2.0 BILL OF QUANTITIES

The bidder to quote for items as per price schedule attached with NIT.

Supplier to also give the following undertaking in the BOM: "The BoM provided herewith completes the scope (in content and intent) of material supply under PO No. -----, dated -----. Any additional material which may become necessary for the intended application of the supplied item(s)/package will be supplied free of cost in most reasonable time."


3.0 DRAWINGS & DOCUMENTS TO BE SUBMITTED

- 3.1 Bidders shall furnish following documents as the part of their technical offer: -
 - a) Complete signed & stamped copy of this specification.
 - b) "Deviation Schedule" with "NO Deviations" and bidder's signature and company stamp.
 - c) Unpriced Price Schedule as enclosed with NIT with 'Quoted' word against items with bidder's signature and company stamp.
- 3.2 Document submission / resubmission schedule after placement of order shall be as per NIT.

#

4.0 PACKING

- 4.1 Packing shall be as per Clause 5 of Section -II.

	TECHNICAL SPECIFICATION FOR RIGID STEEL CONDUITS	SPEC NO. PE-TS- 467-558-E002
		VOLUME NO.: II-B
		SECTION: I
		REV NO.: 00 DATE: 20.08.2021
		SHEET : 5 OF 11

DATASHEET-A

I. APPLICABLE STANDARDS & CODES


- a) IS:9537 (Part I & II) Conduits for electrical installation.
- b) IS:2629 Recommended practice for hot dip galvanizing on iron and steel.
- c) IS:4759 Specification for hot dip zinc coatings on structural steel and allied products
- d) IS:6745 Methods for determination of mass of zinc coating on zinc coated iron and steel articles.
- e) IS:513 Cold reduced low carbon steel sheet and strip
- f) IS: 10748 Hot rolled Steel strip for welded tubes and pipes
- g) IS: 2633 Method for testing uniformity of coating on zinc coated articles
- h) IS:6005 Code of practice for phosphating iron & steel

II. RIGID STEEL CONDUITS


S.No.	Description	Unit	Parameters value/ type
a	Make	-	BIS approved [] As per enclosed sub-vendor list
b	Material	-	Hot/Cold rolled mild steel
c	Sizes	-	As per BOQ cum price schedule
d	Standard length	meter	3 – 5
e	Classification as per mechanical properties		Heavy
f	Conduit thickness (minimum)	mm	1.6 up to 25 mm dia, 2.0 above 25 mm & up to 50 mm dia
g	Surface treatment	-	Hot dip galvanizing on inside & outside surface
h	Epoxy thickness	micron	50 (applicable for epoxy coated conduits only)

III. SURFACE TREATMENT

a	Pre-treatment	–	As per IS 6005 prior to galvanising
b	Type	–	Hot dip galvanizing as per IS 2629
c	Min. Thickness of zinc coating	microns	48 (up to 25 mm dia), 65 (above 25 mm & up to 50 mm dia)
d	Min. Weight of zinc coating	(gm/m ²)	340 (up to 25 mm dia) 460 (above 25 mm & up to 50 mm dia)
e	Tests for galvanizing	–	a) Weight of zinc coating as per IS: 6745 b) Thickness of zinc coating as per IS: 4759 c) Uniformity of zinc coating as per IS: 2633 d) Adhesion as per IS: 2629

	TECHNICAL SPECIFICATION FOR RIGID STEEL CONDUITS	SPEC NO. PE-TS- 467-558-E002
		VOLUME NO.: II-B
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		SHEET : 6 OF 11

SECTION-II

	TECHNICAL SPECIFICATION FOR RIGID STEEL CONDUITS	SPEC NO. PE-TS- 467-558-E002
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		REV NO.: 00 DATE: 20.08.2021
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1.0 INTENT OF SPECIFICATION

The intent of specification is not to specify all details of design & construction of material. The material shall, however, conform in all aspects to high standard of design, engineering and workmanship and be capable of performing in continuous operation up to & after bidder's guarantee period in manner acceptable to purchaser who will interpret the drawings & specification and shall have power to reject any work or material which in his judgement is not in full accordance with this specification.

2.0 CODES AND STANDARDS

2.1 The material shall comply with all currently applicable safety codes and statutory regulations of India as well as of the locality where the material is to be installed.

2.2 The material, construction, manufacture, inspection and testing of Rigid steel conduits shall conform to the latest revision of relevant standards as per Data Sheet-A.

2.3 In case of conflict between the applicable reference standard and this specification, the stringent requirement of the two shall govern.

3.0 TECHNICAL REQUIREMENTS

3.1 Rigid conduits shall generally conform to the requirements of IS: 9537 (part I & II).

3.2 The diameter of conduits shall be uniform throughout the length. Each end of conduit length shall be threaded. The ends of conduits shall be sealed with protective caps to prevent damage to threaded portions and entrance of moisture and foreign material.

3.3 The inside surface of all conduits shall be smooth and suitable for pulling insulated cables and wires without damage.


3.4 Technical particulars of rigid conduits are specified in Data Sheet – A.

4.0 QUALITY ASSURANCE, TESTING & INSPECTION

4.1 Bidder shall confirm compliance with the BHEL's Standard Quality Plan (PE-QP-999-558-E001) as attached with the specification without any deviations. At contract stage, the successful bidder shall submit the Quality Plan for BHEL/ ultimate customer's approval. In case bidder has reference Quality Plan agreed with ultimate customer, same can be submitted for specific project after award of contract for BHEL/ ultimate customer's approval. There shall be no commercial implication to BHEL on account of Quality plan approval.

4.2 All materials shall be procured, manufactured, inspected and tested by vendor/ sub-vendor as per approved quality plan.

4.3 The supplier shall perform all tests necessary to ensure that the material and workmanship conform to the relevant standards and comply with the requirements of the specification. Charges for all these tests for all the equipments & components shall be deemed to be included

	TECHNICAL SPECIFICATION FOR RIGID STEEL CONDUITS	SPEC NO. PE-TS- 467-558-E002
		VOLUME NO.: II-B
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		SHEET : 8 OF 11

in the bid price.

4.4 In case ordered quantities are manufactured and offered for inspection in more than one lot, BHEL reserves the right to witness testing on all lots without any commercial implication to BHEL.

5.0 PACKING

5.1 The material shall be packed to ensure protection against damage during transit, storage for prolonged periods and handling.

5.2 The ends of conduits shall be sealed with protective caps.

5.3 Each conduit shall be wrapped in plastic to prevent dust deposition.

5.4 The conduits should be aligned and stacked in bundles (a maximum of 25 pieces per bundle).

5.5 Each bundle shall be covered with jute fibre / thick plastic wrap for protection against extreme weather. Then, the bundle shall be tied with twin-strand mild steel wire, strong rope or steel strip.

6.0 MARKING


6.1 Rigid conduits shall be marked at least once on each manufacturing length, preferably 50 mm from one end, with the following:

- a) Manufacturer's name or trade mark, if any;
- b) Country of manufacture; and
- c) Nominal size of the conduits.
- d) ISI Certification Mark.

Marking may be applied by moulding, stamping, printing, adhesive label or water slide transfers.

6.2 Marking shall be durable and legible.

6.3 Marking shall be checked by inspection and by rubbing lightly the marking by hand for 15 seconds with a piece of cloth soaked with water and again for 15 seconds with a piece of cloth soaked with petroleum spirit.

	MANUFACTURER/ BIDDER/ SUPPLIER NAME & ADDRESS		STANDARD QUALITY PLAN			SPEC. NO :		DATE:	
			CUSTOMER :			QP NO.: PE-QP-999-558-E001, R04		DATE: 23.07.2020	
			PROJECT:			PO NO.:		DATE:	
			ITEM: RIGID STEEL CONDUITS		SYSTEM: STATION LIGHTING SYSTEM	SECTION: II		SHEET 1 OF 3	


SL NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD		AGENCY			REMARKS
1	2	3	4	5	6		7	8	9	*	**			
					M	C/ N				D	M	C	N	

1.0 RAW MATERIAL/BOUGHT OUT ITEMS

1.1		HOT ROLLED STEEL STRIP	MA	VISUAL, MECH. & CHEMICAL	MFR. STD.	-	IS10748	IS10748	TEST CERT.	√	P	V	-	AS APPLICABLE
1.2		COLD ROLLED STEEL SHEET	MA	VISUAL, MECH. & CHEMICAL	MFR. STD.	-	IS513	IS513	TEST CERT.	√	P	V	-	AS APPLICABLE


2.0 ACCEPTANCE TESTS

2.1	RIGID STEEL CONDUITS	DIMENSIONS	MA	MEASUREMENT	IS 9537-II	IS 9537-II	IS:9537/ APPROVED DATA SHEET	APPROVED DATA SHEET	INSP. REPORT	√	P	W	-	
2.2		MECH. PROPERTIES												
2.2A		BENDING TEST	CR	TEST	IS 9537-II	IS 9537-II	IS 9537-II	IS 9537-II	INSP. REPORT	√	P	W	-	
2.2B		COMPRESSION TEST	CR	TEST	IS 9537-II	IS 9537-II	IS 9537-II	IS 9537-II	INSP. REPORT	√	P	W	-	
2.3		GALVANISATION TEST												
2.3A		UNIFORMITY OF ZINC COATING	CR	TEST	IS 9537-II	IS 9537-II	IS-2633/ APPD DS	IS-2633/ APPD DS	INSP. REPORT	√	P	W	-	

BHEL					
ENGINEERING			QUALITY		
	Sign & Date	Name		Sign & Date	Name
Prepared by:	MEET SAGAR SINGH RAJPAL MUDIT CHOPRA	MEET SAGAR SINGH RAJPAL/ MUDIT CHOPRA	Checked by:	 RITESH KUMAR JAISWAL	KUNAL GANDHI
Reviewed by:	PRAVEEN DUTTA	PRAVEEN DUTTA	Reviewed by:	RITESH KUMAR JAISWAL	RITESH KUMAR JAISWAL

BIDDER/ SUPPLIER	
Sign & Date	
Seal	

FOR CUSTOMER REVIEW & APPROVAL			
Doc No:			
	Sign & Date	Name	Seal
Reviewed by:			
Approved by:			

	MANUFACTURER/ BIDDER/ SUPPLIER NAME & ADDRESS		STANDARD QUALITY PLAN				SPEC. NO :		DATE:	
			CUSTOMER :				QP NO.: PE-QP-999-558-E001, R04		DATE: 23.07.2020	
			PROJECT:				PO NO.:		DATE:	
			ITEM: RIGID STEEL CONDUITS		SYSTEM: STATION LIGHTING SYSTEM		SECTION: II		SHEET 2 OF 3	

SL NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD		AGENCY			REMARKS
1	2	3	4	5	6		7	8	9	*	**			
					M	C/ N				D	M	C	N	


2.3B		MASS OF ZINC COAT.	CR	TEST	IS 9537-II	IS 9537-II	IS-6745/ APPD DS	IS-6745/ APPD DS	INSP. REPORT	√	P	W	-	
2.3C		COATING THICKNESS	CR	TEST	IS 9537-II	IS 9537-II	IS-4759/ APPD DS	IS-4759/ APPD DS	INSP. REPORT	√	P	W	-	BY ELCOMETER Refer Note 8
2.3D		EPOXY THICKNESS	MA	VISUAL/PHYSICAL	IS 9537-II	IS 9537-II	50 MICRONS	50 MICRONS	INSP. REPORT	√	P	W	-	AS APPLICABLE
2.4		MARKING	CR	VISUAL/PHYSICAL	IS 9537-II	IS 9537-II	APPROVED DATA SHEET	APPROVED DATA SHEET	INSP. REPORT		P	W	-	

3.0 PACKING

	PACKING	Soundness of Packing against transit damage	Major	Visual	100%	100%	BHEL * approved document	BHEL approved document	Inspection report	√	P	W	-	
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NOTES:

- The inspection shall be carried out once for the material offered for inspection in one lot. For subsequent lots against the same project, the material can be accepted based on certificate of compliance furnished by the vendor.
- Project specific QP shall be based on customer requirement. In case, any changes in QP commented by customer at contract stage shall be carried out by bidder without any implication to BHEL/ Customer.
- For export jobs, BHEL technical specification for seaworthy packing for export jobs is to be followed.
- Packing shall be suitable for storage at site in tropical climatic conditions. *Packing shall be done as per Clause 5 of Section -II of Technical specification.

BHEL					
ENGINEERING			QUALITY		
	Sign & Date	Name		Sign & Date	Name
Prepared by:	MEET SAGAR SINGH RAJPAL MUDIT CHOPRA	MEET SAGAR SINGH RAJPAL/ MUDIT CHOPRA	Checked by:		KUNAL GANDHI
Reviewed by:	PRAVEEN DUTTA	PRAVEEN DUTTA	Reviewed by:	RITESH KUMAR JAISWAL	RITESH KUMAR JAISWAL

BIDDER/ SUPPLIER	
Sign & Date	
Seal	

FOR CUSTOMER REVIEW & APPROVAL			
Doc No:			
	Sign & Date	Name	Seal
Reviewed by:			
Approved by:			

	MANUFACTURER/ BIDDER/ SUPPLIER NAME & ADDRESS		STANDARD QUALITY PLAN				SPEC. NO :		DATE:			
			CUSTOMER :				QP NO.: PE-QP-999-558-E001, R04		DATE: 23.07.2020			
			PROJECT:				PO NO.:		DATE:			
			ITEM: RIGID STEEL CONDUITS		SYSTEM: STATION LIGHTING SYSTEM		SECTION: II		SHEET 3 OF 3			
SL NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD		AGENCY	REMARKS
1	2	3	4	5	6		7	8	9	* D	** M C N	
					M	C/ N						

5. Latest revision/ year of issue of all the standards (IS/ ASME/ IEC etc.) Indicated in QP shall be referred.
6. BHEL reserves the right for conducting repeat test if required.
7. After packing and prior to issue MDCC, photographs of items to be dispatched shall be sent to BHEL purchase group for review.
8. Thickness of zinc coating shall be the average of the determination made at each end and the middle of the article.

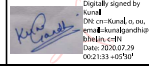
LEGENDS:

*RECORDS, IDENTIFIED WITH "TICK"(✓) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION,

** **M:** SUPPLIER/ MANUFACTURER/ SUB-SUPPLIER, **C:** MAIN SUPPLIER/ BHEL/ THIRD PARTY INSPECTION AGENCY, **N:** CUSTOMER,

P: PERFORM, **W:** WITNESS, **V:** VERIFICATION, AS APPROPRIATE

MA: MAJOR, **MI:** MINOR, **CR:** CRITICAL, **D:** DOCUMENTATION

BHEL					
ENGINEERING			QUALITY		
	Sign & Date	Name		Sign & Date	Name
Prepared by:	MEET SAGAR SINGH RAJPAL MUDIT CHOPRA	MEET SAGAR SINGH RAJPAL/ MUDIT CHOPRA	Checked by:	 Digitally signed by Kunal Gandhi DN: cn=Kunal Gandhi, o=BHEL, ou=Quality, email=k.gandhi@bhel.co.in, c=IN Date: 2020.07.29 09:21:53 +05'30'	KUNAL GANDHI
Reviewed by:	PRAVEEN DUTTA	Digitally signed by PRAVEEN DUTTA DN: cn=PRAVEEN DUTTA, o=BHEL, ou=Engineering, email=p.dutta@bhel.co.in, c=IN Date: 2020.07.25 12:27:51 +05'30'	Reviewed by:	RITESH KUMAR JAISWAL	Digitally signed by RITESH KUMAR JAISWAL DN: cn=Ritesh Kumar Jaishwal, o=BHEL, ou=Quality, email=r.jaishwal@bhel.co.in, c=IN Date: 2020.07.29 09:00:49 +05'30'

BIDDER/ SUPPLIER	
Sign & Date	
Seal	

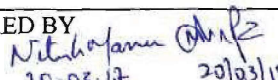
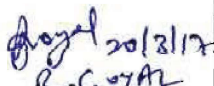
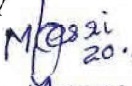
FOR CUSTOMER REVIEW & APPROVAL			
Doc No:			
	Sign & Date	Name	Seal
Reviewed by:			
Approved by:			

	PRE-QUALIFICATION REQUIREMENTS FOR RIGID STEEL CONDUITS	PE-PQ-999-558-E002
		REVISION NO. 01 DATE 20/03/2017
		SHEET NO. 1 OF 1

ITEMS : RIGID STEEL CONDUITS	
SCOPE : Supply : YES; Erection & Commissioning : NO.	
1.0	Vendor should be a BIS approved manufacturer of rigid steel conduits as per IS 9537 Part II.
2.0	Availability of test reports of rigid steel conduits to establish in- house capability at manufacturer's works to carry out all routine, type & acceptance tests as per relevant IS.
3.0	Capacity of manufacturing 30 MT of rigid steel conduits per month.
4.0	Manufactured and supplied at least 80 km of rigid steel conduits in one or more orders.
5.0	Minimum two (2) nos. purchase orders for rigid steel conduits shall be submitted which should not be more than five (5) years old from the date of application for registration or date of techno-commercial bid opening (as applicable) for establishing continuity in business.

NOTE:

- The vendor can offer rigid steel conduits of any BIS approved make meeting criteria S.No.1 to 4 above.
The vendor to furnish the following documents:
 - Undertaking from BIS approved manufacturer of offered make to get the inspection & testing of conduits carried out at manufacturer's works.
 - Credentials of the manufacturer of offered make to meet the PQR requirements of S no 1.0 to 4.0 above.
 - Vendor's Credentials to meet S no 5.0.
- Consideration of offer shall be subject to customer's approval of bidders, if applicable.
- Bidder to submit all supporting documents in English. If documents submitted by bidder are in language other than English, a self-attested English translated document should also be submitted.
- Any other project specific requirement shall be as per Annexure-I and bidder shall submit relevant supporting documents.
- Notwithstanding anything stated above, BHEL reserves the right to assess the capabilities and capacity of the bidder/collaborators to perform the contract, should the circumstances warrant such assessment in the overall interest of BHEL.
- After satisfactory fulfillment of all the above criteria/ requirement, offer shall be considered for further evaluation as per NIT and all the other terms of the tender.

PREPARED BY  NAME: Nishu DESIGNATION: 20/03/17 (Mudat Chopra)	REVIEWED BY  NAME: R. Goyal DESIGNATION: 20/3/17 (R. Goyal)	APPROVED BY  NAME: Meena DESIGNATION: 20.3.17 (Meena Kesri GM)
--	---	---

Letter head of Company (<Rs. 10 Cr value)

Ref.....

Date.....

To,

Bharat Heavy Electricals Limited PEM,

PPEI Building, Plot No 25, Sector -16A,

Noida (U.P)-201301

Subject: -Certification regarding local content

Reference: Tender Enquiry No-.....

Name of Package:

Dear Sir,

We hereby certify that items offered by us of(package name).....for.....(Project Name/Rate contract)..... meets the requirement of minimum local content in line with Cl. No..... of NIT No..... dated..... and the Public Procurement (Preference to Make in India), Order 2017 dated-15.06.2017, 28.05.2018, 29.05.2019 , 04.06.2020 & 16.09.2020.

Local Content-%

We further confirms that details of location at which the local value addition is made will be our registered works at(address of the works)

Yours very truly

.....(authorized signatory of company)

.....(firm name)

ON COMPANY LETTER HEAD

To,

M/s Bharat Heavy Electricals Ltd.,
Project Engineering Management,
Power Project Engineering Institute,
HRD & ESI Complex, Plot No 25, Sector-16 A,
Noida-201301

Kind Attn. Mr.

Dear Sir,

This has reference to:

1. Our offer for RIGID STEEL CONDUITS for Combined Tender Enquiry (2 X 250 MW NSPCL BHILAI TPP FGD, 2X500 MW NTPC MAUDA FGD STAGE-I, 3X200 + 3X500 MW NTPC RAMAGUNDAM TPP FGD, 3X200+3X500+1x500 MW NTPC KORBA TPP-FGD, 3X660 MW North Karanpura FGD, 3X660 MW NPGCL NABINAGAR FGD and 4X250MW BRBCL Nabinagar FGD projects), GeM Tender No. dated

2. Order no. F. No. 6/18/2019-PPD dt. 23.07.2020 issued by Ministry of Finance, Department of Expenditure Public Procurement Division.

I have read the clause regarding restriction on procurement from a bidder of a country which shares a land border with India; I certify that M/s (Company Name _____) is not from such a country **or**, if from such a country, has been registered with the competent authority. **(Remove the non-applicable)**

I hereby certify that M/s (Company Name _____) fulfil all requirements in this regard and is eligible to be considered.

[where applicable, evidence of valid registration by the competent authority shall be attached]

Thanking You,
Yours faithfully,

Owner, partner, CMD, Director, Authorized Signatory with proof that he/she is authorized to sign on owner's behalf

M/s _____

ANNEXURE FOR RISK & COST

1. In case of delays (beyond the maximum late delivery period as per LD clause) in supplies, or if there be defective supplies or non-fulfilment of any other terms and conditions of the Contract as enumerated subsequently in this clause, then, without prejudice to its right to recover any expenses, losses or damages to which the Buyer may be put in or sustain by reason of the Seller/Contractor's default or breach of Order/Contract or to suspend business dealings with the Seller/Contractor in terms of the Buyers' Guidelines for Suspension of Business Dealings as applicable from time to time, the Buyer shall also be entitled to cancel the Order/Contract either in whole or portion thereof without compensation to Seller. On the occurrence of any of the acts/omissions mentioned below, the Buyer may if it so desires, procure upon such terms and in such manner as deemed appropriate, plant/equipment/ stores not so delivered or others of similar description where plant/ equipment/ stores exactly complying with particulars are not, in the opinion of the Buyer (which shall be final), readily procurable, at the risk and cost of the Seller.

The Seller shall be liable to the Buyer for any excess costs incurred thereof and the Seller shall continue the performance of the Order/Contract to the extent not cancelled under the provisions of this clause. The Seller shall on no account be entitled to any gain on such repurchases. If the Bidder does not agree to this Risk Purchase clause, BHEL reserves the right to reject the bid/offer of the Bidder. The order/contract may be cancelled in whole or part thereof and Risk & Cost Clause in line with terms and conditions of PO/Contract may be invoked by the Buyer in any of the following cases:

- i. If the Seller/Contractor fails to deliver the goods or materials or any instalment thereof within the period(s) fixed for such delivery or the Seller's poor progress of the supply/services vis-à-vis delivery/execution timeline as stipulated in the contract, backlog attributable to the Seller including unexecuted portion of supply does not appear to be executable within balance period available;
- ii. delivers goods or materials not of the contracted quality and failing to adhere to the contract specifications/execution methodology;
- iii. withdrawal from or repudiation/abandonment of the supply/services by the Seller before completion as per contract or if the Seller refuses or is unable to supply goods or materials covered by the order/Contract either in whole or in part or otherwise fails to perform the Order/Contract.
- iv. Non supply by the Seller within scheduled completion/delivery period as per contract or as extended from time to time for reasons attributable to the Seller;
- v. Termination of Contract on account of any other reason(s) attributable to the Seller.
- vi. Assignment, transfer, sub-letting of Contract without BHEL's written permission resulting in termination of Contract or part thereof by BHEL.
- vii. If the Seller be an individual or a Sole Proprietorship, in the event of death or insanity of the Seller.
- viii. If the Seller/Contractor being an individual or if a partnership firm thereof, shall at any time be adjudged insolvent or shall have a receiving order for administration of his estate made against him or shall take any proceeding for composition under any Insolvency Act for the time being in force or make any assignment of the order/Contract or enter into any arrangement or composition with his creditors or suspend payment or if the firm dissolved under the Partnership Act;
- ix. If the Seller/Contractor being a Company is wound up voluntarily or by order of a Court or a Receiver, Liquidator or Manager on behalf of the debenture holders and creditors is appointed or circumstances have arisen which entitles the Court of debenture holder and creditors to appoint a receiver, liquidator or manager
- x. Non- Compliance to any contractual condition or any other default attributable to the Seller.

Such defaulting vendor/Seller shall not be eligible to participate in re-tendering conducted on account of risk purchase made due to fault of such vendor/Seller.

2. BHEL's right to go for Risk and Cost, Calculation of Risk and Cost amount & L D, recovery options to BHEL are given as under: -

2.1 BHEL reserves the right to terminate the contract or withdraw portion of work and get it done through other agency, at the risk and cost of the contractor *after due notice of a period of 14 days' by BHEL* in any of the following cases:

- i) If the Seller/Contractor fails to deliver the goods or materials or any instalment thereof within the period(s) fixed for such delivery or the Seller's poor progress of the supply/ services vis-a-vis delivery/execution timeline as stipulated in the Contract, backlog attributable to seller including unexecuted portion of supply does not appear to be executable within balance available period;
- ii) Delivers goods or materials not of the contracted quality and failing to adhere to the contract specifications;
- iii) Withdrawal from or repudiation/ abandonment of the supply/ services by Seller before completion as per contract or if the Seller refuses or is unable to supply goods or materials covered by the Order/Contract either in whole or in part or otherwise fails to perform the Order/Contract;
- iv) Non-supply by the Seller within scheduled completion/delivery period as per Contract or as extended from time to time, for the reasons attributable to the Seller;
- v) Termination of Contract on account of any other reason (s) attributable to Seller.
- vi) Assignment, transfer, subletting of Contract without BHEL's written permission resulting in termination of Contract or part thereof by BHEL.
- vii) If the Seller be an individual or a sole proprietorship Firm, in the event of the death or insanity of the Seller;
- viii) If the Seller/Contractor being an individual or if a firm on a partnership thereof, shall at any time, be adjudged insolvent or shall have a receiving order for administration of his estate made against him or shall take any proceeding for composition under any Insolvency Act for the time being in force or make any assignment of the Order/Contract or enter into any arrangement or composition with his creditors or suspend payment or if the firm dissolved under the Partnership Act;
- ix) If the Seller/Contractor being a company is wound up voluntarily or by order of a Court or a Receiver, Liquidator or Manager on behalf of the debenture holders and creditors is appointed or circumstances shall have arisen which entitles the Court of debenture holder and creditors to appoint a receiver, liquidator or manager;
- x) Non-compliance to any contractual condition or any other default attributable to Seller.

2.1.1 Risk & Cost Amount against Balance Work:

Risk & Cost amount against balance work shall be calculated as follows:

$$\text{Risk \& Cost Amount} = [(A-B) + (A \times H/100)]$$

Where,

A= Value of Balance scope of Work (*) as per rates of new contract

B= Value of Balance scope of Work (*) as per rates of old contract being paid to the contractor at the time of termination of contract i.e. inclusive of PVC & ORC, if any.

H = Overhead Factor to be taken as 5

In case (A-B) is less than 0 (zero), value of (A-B) shall be taken as 0 (zero).

2.1.2 Balance scope of work (in case of termination of contract):

Difference of Contract Quantities and Executed Quantities as on the date of issue of Letter for 'Termination of Contract', shall be taken as balance scope of Work for calculating risk & cost amount.

Contract quantities are the quantities as per original contract. If, Contract has been amended, quantities as per amended Contract shall be considered as Contract Quantities.

Items for which total quantities to be executed have exceeded the Contract Quantities based on drawings issued to contractor from time to time till issue of Termination letter, then for these items total Quantities as per issued drawings would be deemed to be contract quantities.

Substitute/ extra items whose rates have already been approved would form part of contract quantities for this purpose.

Substitute/ extra items which have been executed but rates have not been approved, would also form part of contract quantities for this purpose and rates of such items shall be determined in line with contractual provisions.

However, increase in quantities on account of additional scope in new tender shall not be considered for this purpose.

NOTE: In case portion of work is being withdrawn at risk & cost of contractor instead of termination of contract, contract quantities pertaining to portion of work withdrawn shall be considered as 'Balance scope of work' for calculating Risk & Cost amount.

2.1.3 LD against delay in executed work in case of Termination of Contract:

LD against delay in executed work shall be calculated in line NIT terms & conditions, for the delay attributable to contractor. For limiting the maximum value of LD, contract value shall be taken as Executed Value of work till termination of contract.

Method for calculation of LD against delay in executed work in case of termination of contract" is given below:

- i. Let the time period from scheduled date of start of work till termination of contract excluding the period of Hold (if any) not attributable to contractor = T1
- ii. Let the value of executed work till the time of termination of contract = X
- iii. Let the Total Executable Value of work for which inputs/fronts were made available to contractor and were planned for execution till termination of contract = Y
- iv. Delay in executed work attributable to contractor i.e. $T2 = [1 - (X/Y)] \times T1$
- v. LD shall be calculated in line with LD clause (clause 16) of the Contract for the delay attributable to contractor taking "X" as Contract Value and "T2" as period of delay attributable to contractor.


2.2 Recoveries arising out of Risk & Cost and LD or any other recoveries due from Contractor:

Without prejudice to the other means of recovery of such dues from the Seller recoveries from the Seller on whom risk


& cost has been invoked shall be made from the following:

- a) Dues available in the form of Bills payable to seller, SD, BGs against the same contract.
- b) Dues payable to seller against other contracts in the same Region/Unit/ Division of BHEL.
- c) Dues payable to seller against other contracts in the different Region/Unit/ division of BHEL.

In-case recoveries are not possible with any of the above available options, Legal action shall be initiated for recovery against contractor.


	CORPORATE QUALITY ASSURANCE/ कॉरपोरेट गुणवत्ता आश्वासन MAIN CONTRACTOR'S PROPOSAL CUM EVALUATION REPORT मुख्य संविदाकार प्रस्ताव सह मुल्यांकन रिपोर्ट	

Ref No:				Date:			
संदर्भ सं.:				तिथि:			
i.	Main Contractor मुख्य संविदाकार						
ii.	Project परियोजना						
iii.	Package Name पैकेज का नाम			Package No पैकेज सं.			
iv.	Proposed Item/Scope of Sub-contracting उप- संविदा(अनुबंध) का प्रस्तावित मद/ दायरा						
v.	Item covered under निम्नलिखित के अंतर्गत शामिल मद	Schedule-1 /अनुसूची- 1				As per contract clause No- अनुबंध के अनुसार खंड सं.- -	
		Schedule-2 अनुसूची- -2					
vi.	If item is Schedule-1 and proposed sub-vendor is indigenous, Main Contractor to explain how the contractual provisions will be fulfilled /यदि मद अनुसूची -1 है और प्रस्तावित उप-विक्रेता स्वदेशी है, तो मुख्य संविदाकार को स्पष्ट करना होगा कि संविदा/अनुबंध के प्रावधान कैसे पूरे किए जाएंगे						
vii.	Name and Address of the proposed Sub-vendor's works /प्रस्तावित सब-वेंडर का नाम तथा पता						
viii.	PO placement date/ Start of manufacturing (if self-manufactured) as per L2 network पीओ नियोजन की तिथि / एल- 2 नेटवर्क के अनुसार विनिर्माण (यदि स्व-निर्मित है) की शुरुआत						
ix.	Item Description (Type/Size/Rating/Scope of Sub-Contracting) मद का विवरण (प्रकार / आकार / रेटिंग / उप-अनुबंध का दायरा)	Total quantity of proposed item envisaged in this package (Nos/ Running Meters/ Kgs/ Tons etc) इस पैकेज में परिकल्पित प्रस्तावित मद की कुल मात्रा (संख्या / क्रियाशील मीटर / किलोग्राम / टन आदि)	Quantity proposed to be procured from proposed sub-vendor (Nos/ Running Meters /Kgs /Tons etc) प्रस्तावित उप-विक्रेता (संख्या / क्रियाशील मीटर / किलोग्राम / टन आदि) से खरीदी जाने वाली मात्रा	Timeline for quantity requirements as per project schedule & whether the proposed Sub-vendor equipped with adequate capacity to supply proposed order quantity in time / परियोजना समय सूची के अनुसार मात्रा आवश्यकताओं के लिए समय-सीमा और क्या प्रस्तावित उप-विक्रेता समय पर प्रस्तावित मांग की मात्रा की आपूर्ति करने में पूरी तरह से सक्षम है			
x.	Supply experience of the proposed sub-vendor (including supplies to Main Contractor, if any) for similar item/scope of sub-contracting, for last 3 years (Note:- Only relevant experience details w.r.t. proposed item/scope of subcontracting to be brought out here) पिछले 3 वर्षों के लिए उप-अनुबंध के समान मद / दायरे के लिए प्रस्तावित सब-वेंडर (मुख्य संविदाकार हेतु आपूर्ति, यदि कोई हो, सहित) का आपूर्ति अनुभव (नोट: - उप-अनुबंध के प्रस्तावित मद / दायरे के संबंध में केवल प्रासंगिक अनुभव के विवरण का उल्लेख हो						


	CORPORATE QUALITY ASSURANCE/ कॉरपोरेट गुणवत्ता आश्वासन MAIN CONTRACTOR'S PROPOSAL CUM EVALUATION REPORT मुख्य संविदाकार प्रस्ताव सह मुल्यांकन रिपोर्ट	

	Project/Package परियोजना/पैकेज	Customer Name ग्राहक का नाम	Supplied Item (Type/Rating/Model /Capacity/Size etc) आपूर्ति मद्द (प्रकार/रेटिंग /मॉडल /क्षमता/आकार आदि)	PO ref no/date पीओ संदर्भ सं. /तिथि	Supplied Quantity आपूर्ति की मात्रा	Date of Supply आपूर्ति की तिथि	
<i>We confirm that as per our assessment, the proposed sub-vendor has requisite capabilities & supply experience and is suitable for supplying the proposed item/scope of sub-contracting/हम अपने आकलन के अनुसार इस बात की पुष्टि करते हैं कि, प्रस्तावित उप-विक्रेता के पास अपेक्षित क्षमता और आपूर्ति करने का अनुभव है और उप-अनुबंध के दायरे /प्रस्तावित मद्द की आपूर्ति के लिए उपयुक्त है।</i>							
Name:		Desig:		Contact No:		Sign:	
नाम:		पद:		दूरभाष सं.:		हस्ताक्षर:	तिथि:


Company's Seal/Stamp:- कंपनी का मुहर:-

	CORPORATE QUALITY ASSURANCE/ कॉरपोरेट गुणवत्ता आश्वासन SUB-VENDOR QUESTIONNAIRE/ सब-वेंडर प्रश्नावली
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i.	Item/Scope of Sub-contracting उप-संविदा(अनुबंध) का मद/ दायरा			
ii.	Address of the registered office पंजीकृत कार्यालय का पता 	Details of Contact Person संपर्क व्यक्ति का विवरण (Name, Designation, Mobile, Email) (नाम, पदनाम, मोबाइल, ईमेल)		
iii.	Name and Address of the proposed Sub-vendor's works where item is being manufactured प्रस्तावित उप-विक्रेता के कार्यों का नाम और पता, जहां मद का निर्माण किया जा रहा है 	Details of Contact Person: संपर्क व्यक्ति का विवरण (Name, Designation, Mobile, Email) (नाम, पदनाम, मोबाइल, ईमेल)		
iv.	Annual Production Capacity for proposed item/scope of sub-contracting उप-संविदा(अनुबंध) के प्रस्तावित मद / दायरे के लिए वार्षिक उत्पादन क्षमता			
v.	Annual production for last 3 years for proposed item/scope of sub-contracting उप-संविदा(अनुबंध) के प्रस्तावित मद / दायरे के लिए पिछले 3 वर्षों का वार्षिक उत्पादन			
vi.	Details of proposed works प्रस्तावित कार्यों का विवरण			
1.	Year of establishment of present works वर्तमान फैक्टरी की स्थापना का वर्ष			
2.	Year of commencement of manufacturing at above works उपरोक्त फैक्टरी में निर्माण कार्य शुरू होने का वर्ष			
3.	Details of change in Works address in past (if any) पूर्व में फैक्टरी स्थल में परिवर्तन का विवरण (यदि कोई हो)			
4.	Total Area कुल क्षेत्र Covered Area शामिल क्षेत्र			
5.	Factory Registration Certificate फैक्टरी पंजीकरण प्रमाण पत्र	Details attached at Annexure – F2.1 विवरण अनुलग्नक-एफ 2.1 पर संलग्न है		
6.	Design/ Research & development set-up डिजाइन / अनुसंधान और विकास सेटअप (No. of manpower, their qualification, machines & tools employed etc.) (श्रमिकों की संख्या, उनकी योग्यता, मशीन और उपलब्ध उपकरण आदि)	Applicable / Not applicable if manufacturing is as per Main Contractor/purchaser design) Details attached at Annexure – F2.2 (if applicable) लागू / लागू नहीं, अगर विनिर्माण मुख्य संविदाकार / खरीददार के डिजाइन के अनुसार है) विवरण अनुलग्नक –एफ 2.2 पर संलग्न है। (यदि लागू हो)		
7.	Overall organization Chart with Manpower Details (Design/Manufacturing/Quality etc) मैनपावर विवरण के साथ समग्र संगठन का चार्ट(डिजाइन / विनिर्माण / गुणवत्ता आदि)	Details attached at Annexure – F2.3 विवरण अनुलग्नक – F2.3 में संलग्न है।		

	CORPORATE QUALITY ASSURANCE/ कॉरपोरेट गुणवत्ता आश्वासन SUB-VENDOR QUESTIONNAIRE/ सब-वेंडर प्रश्नावली
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8.	After sales service set up in India, in case of foreign sub-vendor(Location, Contact Person, Contact details etc.) भारत में बिक्री सेवा की स्थापना के बाद, विदेशी उप-विक्रेता के मामले में(स्थल , संपर्क व्यक्ति, संपर्क विवरण आदि)	Applicable / Not applicable लागू / लागू नहीं Details attached at Annexure – F2.4 विवरण अनुलग्नक -2.4 पर संलग्न है।			
9.	Manufacturing process execution plan with flow chart indicating various stages of manufacturing from raw material to finished product including outsourced process, if any फ्लोचार्ट सहित विनिर्माण प्रक्रिया निष्पादन योजना , जिसमें आउटसोर्स प्रक्रिया, यदि कोई हो, सहित कच्चे माल से तैयार उत्पाद तक विनिर्माण के विभिन्न चरणों को दर्शाया गया हो,	Details attached at Annexure – F2.5 विवरण अनुलग्नक - F2.5में संलग्न है।			
10.	Sources of Raw Material/Major Bought Out Item कच्चे माल के स्रोत / खरीदे हुए मुख्य मद	Details attached at Annexure – F2.6 विवरण अनुलग्नक - F2.6में संलग्न है।			
11.	Quality Control exercised during receipt of raw material/BOI, in-process , Final Testing, packing कच्चे माल / खरीदे हुए मद, प्रक्रियाबद्ध, अंतिम परीक्षण, पैकिंग करते समय गुणवत्ता नियंत्रण	Details attached at Annexure – F2.7 विवरण अनुलग्नक - F2.7 पर संलग्न है			
12.	Manufacturing facilities (List of machines, special process facilities, material handling etc.) विनिर्माण सुविधा(मशीनों की सूची, विशेष प्रक्रिया सुविधाएं, सामग्री रख-रखाव आदि)	Details attached at Annexure – F2.8 विवरण अनुलग्नक - F2.8में संलग्न है।			
13.	Testing facilities (List of testing equipment) परीक्षण सुविधाएं(परीक्षण उपकरण की सूची)	Details attached at Annexure – F2.9 विवरण अनुलग्नक – F2. 9 में संलग्न है।			
14.	If manufacturing process involves fabrication then- यदि निर्माण प्रक्रिया में फेब्रिकेशन की गई है तो- List of qualified Welders पात्र वेल्डर की सूची List of qualified NDT personnel with area of specialization विशेषज्ञता के क्षेत्र सहित पात्र एनडीटी कार्मिकों की सूची	Applicable / Not applicable लागू / लागू नहीं Details attached at Annexure – F2.10 विवरण अनुलग्नक - F2.10में संलग्न है। (if applicable) लागू / लागू नहीं			
15.	List of out-sourced manufacturing processes with Sub-Vendors' names & addresses सब-वेंडर द्वारा बाह्य स्रोतों (उनके नाम और पते सहित)से करवाएं गए निर्माण प्रक्रियाओं की सूची	Applicable / Not applicable लागू / लागू नहीं Details attached at Annexure. –F2.11 विवरण अनुलग्नक - F2.10में संलग्न है। (if applicable) (यदि लागू हो)			
16.	Supply reference list including recent supplies नवीनतम आपूर्ति सहित आपूर्ति संदर्भ सूची	Details attached at Annexure – F2.12 विवरण अनुलग्नक - F2.12 में संलग्न है। (as per format given below) (नीचे दिए गए प्रारूप के अनुसार)			
Project/ package परियोजना /पैकेज	Customer Name ग्राहक का नाम	Supplied Item (Type/Rating/Model /Capacity/Size etc) आपूर्ति की गई वस्तु (प्रकार / रेटिंग / मॉडल / क्षमता / आकार आदि)	PO ref no/date पीओ संदर्भ सं. / तिथि	Supplied Quantity आपूर्ति की मात्रा	Date of Supply आपूर्ति की तारीख
17.	Product satisfactory performance feedback letter/certificates/End User Feedback उत्पाद के संतोषजनक प्रदर्शन संबंधी फीडबैक पत्र / प्रमाण पत्र / अंतिम उपयोगकर्ता फीडबैक			Attached at annexure - F2.13 अनुलग्नक F2. 3पर संलग्न है	

	CORPORATE QUALITY ASSURANCE/ कॉरपोरेट गुणवत्ता आश्वासन SUB-VENDOR QUESTIONNAIRE/ सब-वेंडर प्रश्नावली
---	---

18.	Summary of Type Test Report (Type Test Details, Report No, Agency, Date of testing) for the proposed product (similar or higher rating) प्रस्तावित उत्पाद (एक समान या उच्च रेटिंग वाले) के लिए टाइप टेस्ट रिपोर्ट (टाइप टेस्ट विवरण, रिपोर्ट संख्या, एजेंसी, जांच की तारीख) का सारांश नोट: - रिपोर्ट प्रस्तुत करने की आवश्यकता नहीं है Note:- Reports need not to be submitted	Applicable / Not applicable लागू / लागू नहीं Details attached at Annexure – F2.14 विवरण अनुलग्नक - F2.1 4 में संलग्न है (if applicable) (यदि लागू हो)
19.	Statutory / mandatory certification for the proposed product प्रस्तावित उत्पाद के लिए वैधानिक / अनिवार्य प्रमाणीकरण	Applicable / Not applicable लागू / लागू नहीं Details attached at Annexure – F2.15 (if applicable) (यदि लागू हो)
20.	Copy of ISO 9001 certificate आईएसओ 9001 प्रमाण पत्र की प्रति (if available) (यदि उपलब्ध हो)	Attached at Annexure – F2.16 अनुलग्नक में संलग्न - F2.1 6 है
21.	Product technical catalogues for proposed item (if available) प्रस्तावित मद के लिए उत्पाद तकनीकी कैटलॉग (यदि उपलब्ध हो)	Details attached at Annexure – F2.17 विवरण अनुलग्नक - F2.1 7 में संलग्न है

Name:		Desig:		Sign:		Date:	
नाम:		पद:		हस्ताक्षर:		तिथि:	

Company's Seal/Stamp:- कंपनी की मुहर / मोहर: -

MAUDA FGD - RIGID STEEL CONDUITS BOQ

Item Number	Item Title	Item Description	Item Quantity	Unit of Measure	Consignee ID	ZipCode	Delivery Period (In number of days)	Unit Price (Inclusive of TAX)	GST % Applicable	Brand	Model	HSN Code
1	558-15001-A	GI CONDUITS 1.6MM THK EPOXY 20MM DIA	250	MTR	SUDHIR_MOUDA_PEM	441104	210					
2	558-15002-A	GI CONDUITS,1.6MM THICK, 20MM DIA	12300	MTR	SUDHIR_MOUDA_PEM	441104	210					
3	558-15003-A	GI CONDUITS,1.6MM THICK, 25MM DIA	500	MTR	SUDHIR_MOUDA_PEM	441104	210					
4	558-15005-A	GI CONDUITS,2.0MM THICK, 50MM DIA	500	MTR	SUDHIR_MOUDA_PEM	441104	210					



**PRE-QUALIFICATION REQUIREMENTS FOR
RIGID STEEL CONDUITS**

PE-PQ-999-558-E002

REVISION NO. 01 DATE 20/03/2017

SHEET NO. 1 OF 1

ITEMS : RIGID STEEL CONDUITS

SCOPE : Supply : YES; Erection & Commissioning : NO.

1.0	Vendor should be a BIS approved manufacturer of rigid steel conduits as per IS 9537 Part II.
2.0	Availability of test reports of rigid steel conduits to establish in- house capability at manufacturer's works to carry out all routine, type & acceptance tests as per relevant IS.
3.0	Capacity of manufacturing 30 MT of rigid steel conduits per month.
4.0	Manufactured and supplied at least 80 km of rigid steel conduits in one or more orders.
5.0	Minimum two (2) nos. purchase orders for rigid steel conduits shall be submitted which should not be more than five (5) years old from the date of application for registration or date of techno-commercial bid opening (as applicable) for establishing continuity in business.

NOTE:

- The vendor can offer rigid steel conduits of any BIS approved make meeting criteria S.No.1 to 4 above.
The vendor to furnish the following documents:
 - Undertaking from BIS approved manufacturer of offered make to get the inspection & testing of conduits carried out at manufacturer's works.
 - Credentials of the manufacturer of offered make to meet the PQR requirements of S no 1.0 to 4.0 above.
 - Vendor's Credentials to meet S no 5.0.
- Consideration of offer shall be subject to customer's approval of bidders, if applicable.
- Bidder to submit all supporting documents in English. If documents submitted by bidder are in language other than English, a self-attested English translated document should also be submitted.
- Any other project specific requirement shall be as per Annexure-I and bidder shall submit relevant supporting documents.
- Notwithstanding anything stated above, BHEL reserves the right to assess the capabilities and capacity of the bidder/collaborators to perform the contract, should the circumstances warrant such assessment in the overall interest of BHEL.
- After satisfactory fulfillment of all the above criteria/ requirement, offer shall be considered for further evaluation as per NIT and all the other terms of the tender.

PREPARED BY NAME: Nitish Kumar DESIGNATION: 20/03/17 (Mudat Chopra)	REVIEWED BY NAME: R. Goyal DESIGNATION: 20/3/17 (R. Goyal)	APPROVED BY NAME: Meena Kesri DESIGNATION: 20.3.17 GM
---	--	---

PRE-QUALIFICATION REQUIREMENTS FOR
RIGID STEEL CONDUITS
ANNEXURE-I
PROJECT SPECIFIC REQUIREMENT
2X500 MW NTPC MAUDA FGD STAGE-I

NIL

NIDHI
RAWAT

Digitally signed by NIDHI
RAWAT
DN: cn=NIDHI RAWAT, o=BHEL,
ou=ELECTRICAL,
email=nidhir@bhel.in, c=IN
Date: 2021.06.14 10:17:32
+05'30'

NIDHI RAWAT

[DY MANAGER-ELECT]

AYAN
SAHA

Digitally signed by
AYAN SAHA
DN: cn=AYAN
SAHA, o=BHEL,
ou=PEM,
email=ayansaha@b
hel.in, c=IN
Date: 2021.06.14
13:55:28 +05'30'

AYAN SAHA

[SR. MAHAGER-ELECT]

Sandeep
p Lodh

Digitally signed by Sandeep
Lodh
DN: cn=Sandeep Lodh,
o=BHEL, ou=PEM,
email=sandeeplohdh@bhel.in,
c=IN
Date: 2021.06.14 15:39:47
+05'30'

SANDEEP LODH

[SR DGM-ELECT]

DEBASISA
RATH
DEBASISA RATH

Digitally signed by DEBASISA RATH
DN: cn=DEBASISA RATH, o=BHEL, ou=ELECTRICAL, ou=BHEL, ou=PEM, email=debasisa.rath@bhel.in, c=IN
Date: 2021.06.14 16:30:49 +05'30'

[AGM&DH-ELECT]

2X500 MW NTPC MAUDA FGD STAGE-I

TECHNICAL SPECIFICATION FOR RIGID STEEL CONDUITS

SPECIFICATION NO.: *PE-TS- 444-558-E002*

REVISION: 0



**BHARAT HEAVY ELECTRICALS LIMITED
POWER SECTOR
PROJECT ENGINEERING MANAGEMENT
NOIDA, UP (INDIA) – 201301**



**TECHNICAL SPECIFICATION FOR
RIGID STEEL CONDUITS**

SPEC NO. PE-TS- 444-558-E002
VOLUME NO.: II-B
SECTION: I
REV NO.: 00 DATE: 14.06.2021
SHEET : 1 OF 13

CONTENTS

S. NO	DESCRIPTION	NO. OF SHEETS
1	SECTION I	
	COMPLIANCE CERTIFICATE	01
	SPECIFIC TECHNICAL REQUIREMENTS	01
	DATASHEET A	01
2	SECTION II	
	STANDARD TECHNICAL REQUIREMENTS	02
	STANDARD QUALITY PLAN	03



**TECHNICAL SPECIFICATION FOR
RIGID STEEL CONDUITS**

SPEC NO. PE-TS- 444-558-E002
VOLUME NO.: II-B
SECTION: I
REV NO.: 00 DATE: 14.06.2021
SHEET : 2 OF 13

COMPLIANCE CERTIFICATE

The bidder shall confirm compliance to the following by signing/ stamping this compliance certificate and furnishing same with the offer.

1. The scope of supply, technical details, construction features, design parameters etc. shall be as per technical specification & there are no exclusion/ deviation with regard to same
2. There are no deviation with respect to specification other than those furnished in the 'schedule of deviations'
3. Only those technical submittals which are specifically asked for in NIT to be submitted at tender stage shall be considered as part of offer. Any other submission, even if made, shall not be considered as part of offer.
4. Any comments/ clarifications on technical/ inspection requirements furnished as part of bidder's covering letter shall not be considered by BHEL, and bidder's offer shall be construed to be in conformance with the specification.
5. Any changes made by the bidder in the price schedule with respect to the description/ quantities from those given in BOQ-Cum-Price schedule of the specification shall not be considered (i.e., technical description & quantities as per specification shall prevail).

BIDDER'S STAMP & SIGNATURE



**TECHNICAL SPECIFICATION FOR
RIGID STEEL CONDUITS**

SPEC NO. PE-TS- 444-558-E002

VOLUME NO.: II-B

SECTION: I

REV NO.: 00 DATE: 14.06.2021

SHEET : 3 OF 13

SECTION – I



TECHNICAL SPECIFICATION FOR RIGID STEEL CONDUITS

SPEC NO. PE-TS- 444-558-E002
VOLUME NO.: II-B
SECTION: I
REV NO.: 00 DATE: 14.06.2021
SHEET : 4 OF 13

STANDARD TECHNICAL REQUIREMENTS

1.0 SCOPE

- 1.1 Manufacture, Inspection and Testing at Manufacturer's works, proper packing and delivery to site of rigid steel conduits conforming to this specification.
- 1.2 Technical requirements of rigid steel conduits are indicated in Data Sheet-A & Section-II.
- 1.3 The stipulation of Data Sheet-A shall prevail in case of any conflict between the stipulations of Data Sheet-A & Section-II.

2.0 BILL OF QUANTITIES

The bidder to quote for items as per price schedule attached with NIT.

3.0 DRAWINGS & DOCUMENTS TO BE SUBMITTED

- 3.1 Bidders shall furnish following documents as the part of their technical offer: -
 - a) Complete signed & stamped copy of this specification.
 - b) "Deviation Schedule" with "NO Deviations" and bidder's signature and company stamp.
 - c) Unpriced Price Schedule as enclosed with NIT with 'Quoted' word against items with bidder's signature and company stamp.
- 3.2 Following documents shall be submitted after placement of order for BHEL & customer's approval:-

Sl. No.	Drawings / Document Description	Document Number	Document Type
1.	Technical Data Sheet for Rigid steel conduits	PE-V0-444-558-E701	Primary
2.	MQP for Galvanised & epoxy coated rigid conduit	PE-V0-444-558-E906	Primary

Note:

1. Drawing Schedule for Vendors:

- a. For Primary documents: R-0 within 14 days from PO & subsequent revisions within 10 days of comments received from BHEL. BHEL shall furnish comments /approval on each submission within 18 days from receipt.

4.0 PACKING

- 4.1 Packing shall be as per Clause 5 of Section -II.



TECHNICAL SPECIFICATION FOR RIGID STEEL CONDUITS

SPEC NO. PE-TS- 444-558-E002
VOLUME NO.: II-B
SECTION: I
REV NO.: 00 DATE: 14.06.2021
SHEET : 5 OF 13

DATASHEET-A

I. APPLICABLE STANDARDS & CODES

- a) IS:9537 (Part I & II) Conduits for electrical installation.
- b) IS:2629 Recommended practice for hot dip galvanizing on iron and steel.
- c) IS:4759 Specification for hot dip zinc coatings on structural steel and allied products
- d) IS:6745 Methods for determination of mass of zinc coating on zinc coated iron and steel articles.
- e) IS:513 Cold reduced low carbon steel sheet and strip
- f) IS: 10748 Hot rolled Steel strip for welded tubes and pipes
- g) IS: 2633 Method for testing uniformity of coating on zinc coated articles
- h) IS:6005 Code of practice for phosphating iron & steel

II. RIGID STEEL CONDUITS

S.No.	Description	Unit	Parameters value/ type
a	Make	-	BIS approved [] As per enclosed sub-vendor list
b	Material	-	Hot/Cold rolled mild steel
c	Sizes	-	As per BOQ cum price schedule
d	Standard length	meter	3 – 5
e	Classification as per mechanical properties		Heavy
f	Conduit thickness (minimum)	mm	1.6 upto 25 mm dia, 2.0 above 25 mm & upto 50 mm dia
g	Surface treatment	-	Hot dip galvanizing on inside & outside surface
h	Epoxy thickness	micron	50 (applicable for epoxy coated conduits only)

III. SURFACE TREATMENT

a	Pre-treatment	-	As per IS 6005 prior to galvanising
b	Type	-	Hot dip galvanizing as per IS 2629
c	Min. Thickness of zinc coating	microns	48 (upto 25 mm dia), 65 (above 25 mm & upto 50 mm dia)
d	Min. Weight of zinc coating	(gm/m ²)	340 (upto 25 mm dia) 460 (above 25 mm & upto 50 mm dia)
e	Tests for galvanizing	-	a) Weight of zinc coating as per IS : 6745 b) Thickness of zinc coating as per IS : 4759 c) Uniformity of zinc coating as per IS : 2633 d) Adhesion as per IS: 2629



**TECHNICAL SPECIFICATION FOR
RIGID STEEL CONDUITS**

SPEC NO. PE-TS- 444-558-E002

VOLUME NO.: II-B

SECTION: II

REV NO.: 00 DATE: 14.06.2021

SHEET : 6 OF 13

SECTION-II



TECHNICAL SPECIFICATION FOR RIGID STEEL CONDUITS

SPEC NO. PE-TS- 444-558-E002
VOLUME NO.: II-B
SECTION: II
REV NO.: 00 DATE: 14.06.2021
SHEET : 7 OF 13

1.0 INTENT OF SPECIFICATION

The intent of specification is not to specify all details of design & construction of material. The material shall, however, conform in all aspects to high standard of design, engineering and workmanship and be capable of performing in continuous operation up to & after bidder's guarantee period in manner acceptable to purchaser who will interpret the drawings & specification and shall have power to reject any work or material which in his judgement is not in full accordance with this specification.

2.0 CODES AND STANDARDS

2.1 The material shall comply with all currently applicable safety codes and statutory regulations of India as well as of the locality where the material is to be installed.

2.2 The material, construction, manufacture, inspection and testing of Rigid steel conduits shall conform to the latest revision of relevant standards as per Data Sheet-A.

2.3 In case of conflict between the applicable reference standard and this specification, the stringent requirement of the two shall govern.

3.0 TECHNICAL REQUIREMENTS

3.1 Rigid conduits shall generally conform to the requirements of IS: 9537 (part I & II).

3.2 The diameter of conduits shall be uniform throughout the length. Each end of conduit length shall be threaded. The ends of conduits shall be sealed with protective caps to prevent damage to threaded portions and entrance of moisture and foreign material.

3.3 The inside surface of all conduits shall be smooth and suitable for pulling insulated cables and wires without damage.

3.4 Technical particulars of rigid conduits are specified in Data Sheet – A.

4.0 QUALITY ASSURANCE, TESTING & INSPECTION

4.1 Bidder shall confirm compliance with the BHEL's Standard Quality Plan (PE-QP-999-558-E001) as attached with the specification without any deviations. At contract stage, the successful bidder shall submit the Quality Plan for BHEL/ ultimate customer's approval. In case bidder has reference Quality Plan agreed with ultimate customer, same can be submitted for specific project after award of contract for BHEL/ ultimate customer's approval. There shall be no commercial implication to BHEL on account of Quality plan approval.

4.2 All materials shall be procured, manufactured, inspected and tested by vendor/ sub-vendor as per approved quality plan.

4.3 The supplier shall perform all tests necessary to ensure that the material and workmanship conform to the relevant standards and comply with the requirements of the specification. Charges for all these tests for all the equipments & components shall be deemed to be included



TECHNICAL SPECIFICATION FOR RIGID STEEL CONDUITS

SPEC NO. PE-TS- 444-558-E002
VOLUME NO.: II-B
SECTION: II
REV NO.: 00 DATE: 14.06.2021
SHEET : 8 OF 13

in the bid price.

4.4 In case ordered quantities are manufactured and offered for inspection in more than one lot, BHEL reserves the right to witness testing on all lots without any commercial implication to BHEL.

5.0 PACKING

5.1 The material shall be packed to ensure protection against damage during transit, storage for prolonged periods and handling.

5.2 The ends of conduits shall be sealed with protective caps.

5.3 Each conduit shall be wrapped in plastic to prevent dust deposition.

5.4 The conduits should be aligned and stacked in bundles (a maximum of 25 pieces per bundle).

5.5 Each bundle shall be covered with jute fibre / thick plastic wrap for protection against extreme weather. Then, the bundle shall be tied with twin-strand mild steel wire, strong rope or steel strip.

6.0 MARKING

6.1 Rigid conduits shall be marked at least once on each manufacturing length, preferably 50 mm from one end, with the following:

- a) Manufacturer's name or trade mark, if any;
- b) Country of manufacture; and
- c) Nominal size of the conduits.
- d) ISI Certification Mark.

Marking may be applied by moulding, stamping, printing, adhesive label or water slide transfers.

6.2 Marking shall be durable and legible.

6.3 Marking shall be checked by inspection and by rubbing lightly the marking by hand for 15 seconds with a piece of cloth soaked with water and again for 15 seconds with a piece of cloth soaked with petroleum spirit.



SPEC. NO :

DATE:

CUSTOMER :

QP NO.: PE-QP-999-558-E001, R04

DATE: 23.07.2020

PROJECT:

PO NO.:

DATE:

ITEM: RIGID STEEL CONDUITS

SYSTEM: STATION LIGHTING SYSTEM


SECTION: II

SHEET 1 OF 3

1.0 RAW MATERIAL/BOUGHT OUT ITEMS

2.0 ACCEPTANCE TESTS

FOR CUSTOMER REVIEW & APPROVAL			
Doc No:			
	Sign & Date	Name	Seal
Reviewed by:			
Approved by:			

	MANUFACTURER/ BIDDER/ SUPPLIER NAME & ADDRESS		STANDARD QUALITY PLAN				SPEC. NO :		DATE:	
			CUSTOMER :				QP NO.: PE-QP-999-558-E001, R04		DATE: 23.07.2020	
			PROJECT:				PO NO.:		DATE:	
			ITEM: RIGID STEEL CONDUITS		SYSTEM: STATION LIGHTING SYSTEM		SECTION: II		SHEET 2 OF 3	

SL NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD		AGENCY			REMARKS
1	2	3	4	5	6		7	8	9	*	**			
					M	C/ N				D	M	C	N	


2.3B		MASS OF ZINC COAT.	CR	TEST	IS 9537-II	IS 9537-II	IS-6745/ APPD DS	IS-6745/ APPD DS	INSP. REPORT	√	P	W	-	
2.3C		COATING THICKNESS	CR	TEST	IS 9537-II	IS 9537-II	IS-4759/ APPD DS	IS-4759/ APPD DS	INSP. REPORT	√	P	W	-	BY ELCOMETER Refer Note 8
2.3D		EPOXY THICKNESS	MA	VISUAL/PHYSICAL	IS 9537-II	IS 9537-II	50 MICRONS	50 MICRONS	INSP. REPORT	√	P	W	-	AS APPLICABLE
2.4		MARKING	CR	VISUAL/PHYSICAL	IS 9537-II	IS 9537-II	APPROVED DATA SHEET	APPROVED DATA SHEET	INSP. REPORT		P	W	-	

3.0 PACKING

	PACKING	Soundness of Packing against transit damage	Major	Visual	100%	100%	BHEL * approved document	BHEL approved document	Inspection report	√	P	W	-	
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NOTES:

- The inspection shall be carried out once for the material offered for inspection in one lot. For subsequent lots against the same project, the material can be accepted based on certificate of compliance furnished by the vendor.
- Project specific QP shall be based on customer requirement. In case, any changes in QP commented by customer at contract stage shall be carried out by bidder without any implication to BHEL/ Customer.
- For export jobs, BHEL technical specification for seaworthy packing for export jobs is to be followed.
- Packing shall be suitable for storage at site in tropical climatic conditions. *Packing shall be done as per Clause 5 of Section -II of Technical specification.

BHEL					
ENGINEERING			QUALITY		
	Sign & Date	Name		Sign & Date	Name
Prepared by:	MEET SAGAR SINGH RAJPAL MUDIT CHOPRA	MEET SAGAR SINGH RAJPAL/ MUDIT CHOPRA	Checked by:		KUNAL GANDHI
Reviewed by:	PRAVEEN DUTTA	PRAVEEN DUTTA	Reviewed by:	RITESH KUMAR JAISWAL	RITESH KUMAR JAISWAL

BIDDER/ SUPPLIER	
Sign & Date	
Seal	


FOR CUSTOMER REVIEW & APPROVAL			
Doc No:			
	Sign & Date	Name	Seal
Reviewed by:			
Approved by:			

	MANUFACTURER/ BIDDER/ SUPPLIER NAME & ADDRESS		STANDARD QUALITY PLAN				SPEC. NO :		DATE:		
			CUSTOMER :				QP NO.: PE-QP-999-558-E001, R04		DATE: 23.07.2020		
			PROJECT:				PO NO.:		DATE:		
			ITEM: RIGID STEEL CONDUITS		SYSTEM: STATION LIGHTING SYSTEM		SECTION: II		SHEET 3 OF 3		
SL NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	AGENCY	REMARKS
1	2	3	4	5	6		7	8	9	* D	** M C N
					M	C/ N					

- Latest revision/ year of issue of all the standards (IS/ ASME/ IEC etc.) Indicated in QP shall be referred.
- BHEL reserves the right for conducting repeat test if required.
- After packing and prior to issue MDCC, photographs of items to be dispatched shall be sent to BHEL purchase group for review.
- Thickness of zinc coating shall be the average of the determination made at each end and the middle of the article.

LEGENDS:

*RECORDS, IDENTIFIED WITH "TICK"(✓) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION,
 ** **M:** SUPPLIER/ MANUFACTURER/ SUB-SUPPLIER, **C:** MAIN SUPPLIER/ BHEL/ THIRD PARTY INSPECTION AGENCY, **N:** CUSTOMER,
P: PERFORM, **W:** WITNESS, **V:** VERIFICATION, AS APPROPRIATE
MA: MAJOR, **MI:** MINOR, **CR:** CRITICAL, **D:** DOCUMENTATION

BHEL						BIDDER/ SUPPLIER		FOR CUSTOMER REVIEW & APPROVAL				
ENGINEERING			QUALITY			Sign & Date		Doc No:				
	Sign & Date	Name		Sign & Date	Name	Seal			Sign & Date	Name	Seal	
Prepared by:	MEET SAGAR SINGH RAJPAL MUDIT CHOPRA	MEET SAGAR SINGH RAJPAL/ MUDIT CHOPRA	Checked by:	 Digitally signed by Kunal Gandhi DN: cn=Kunal Gandhi, o=BHEL, ou=Engineering, email=Kunal.Gandhi@bhel.co.in, c=IN Date: 2020.07.25 09:21:53 +05'30'	KUNAL GANDHI				Reviewed by:			
Reviewed by:	PRAVEEN DUTTA	Digitally signed by PRAVEEN DUTTA DN: cn=PRAVEEN DUTTA, o=BHEL, ou=Engineering, email=PRAVEEN.DUTTA@bhel.co.in, c=IN Date: 2020.07.25 12:27:51 +05'30'	Reviewed by:	RITESH KUMAR JAISWAL	Digitally signed by RITESH KUMAR JAISWAL DN: cn=RITESH KUMAR JAISWAL, o=BHEL, ou=Engineering, email=RITESH.KUMAR.JAISWAL@bhel.co.in, c=IN Date: 2020.07.25 09:00:45 +05'30'			Approved by:				

Letter head of Company (<Rs. 10 Cr value)

Ref.....

Date.....

To,

Bharat Heavy Electricals Limited PEM,

PPEI Building, Plot No 25, Sector -16A,

Noida (U.P)-201301

Subject: -Certification regarding local content

Reference: Tender Enquiry No-.....

Name of Package:

Dear Sir,

We hereby certify that items offered by us of(package name).....for.....(Project Name/Rate contract)..... meets the requirement of minimum local content in line with Cl. No..... of NIT No..... dated..... and the Public Procurement (Preference to Make in India), Order 2017 dated-15.06.2017, 28.05.2018, 29.05.2019 , 04.06.2020 & 16.09.2020.

Local Content-%

We further confirms that details of location at which the local value addition is made will be our registered works at(address of the works)

Yours very truly

.....(authorized signatory of company)

.....(firm name)

ON COMPANY LETTER HEAD

To,

M/s Bharat Heavy Electricals Ltd.,
Project Engineering Management,
Power Project Engineering Institute,
HRD & ESI Complex, Plot No 25, Sector-16 A,
Noida-201301

Kind Attn. Mr.

Dear Sir,

This has reference to:

1. Our offer for RIGID STEEL CONDUITS for Combined Tender Enquiry (2 X 250 MW NSPCL BHILAI TPP FGD, 2X500 MW NTPC MAUDA FGD STAGE-I, 3X200 + 3X500 MW NTPC RAMAGUNDAM TPP FGD, 3X200+3X500+1x500 MW NTPC KORBA TPP-FGD, 3X660 MW North Karanpura FGD, 3X660 MW NPGCL NABINAGAR FGD and 4X250MW BRBCL Nabinagar FGD projects), GeM Tender No. dated

2. Order no. F. No. 6/18/2019-PPD dt. 23.07.2020 issued by Ministry of Finance, Department of Expenditure Public Procurement Division.

I have read the clause regarding restriction on procurement from a bidder of a country which shares a land border with India; I certify that M/s (Company Name _____) is not from such a country **or**, if from such a country, has been registered with the competent authority. **(Remove the non-applicable)**

I hereby certify that M/s (Company Name _____) fulfil all requirements in this regard and is eligible to be considered.

[where applicable, evidence of valid registration by the competent authority shall be attached]

Thanking You,
Yours faithfully,

Owner, partner, CMD, Director, Authorized Signatory with proof that he/she is authorized to sign on owner's behalf

M/s _____

ANNEXURE FOR RISK & COST

1. In case of delays (beyond the maximum late delivery period as per LD clause) in supplies, or if there be defective supplies or non-fulfilment of any other terms and conditions of the Contract as enumerated subsequently in this clause, then, without prejudice to its right to recover any expenses, losses or damages to which the Buyer may be put in or sustain by reason of the Seller/Contractor's default or breach of Order/Contract or to suspend business dealings with the Seller/Contractor in terms of the Buyers' Guidelines for Suspension of Business Dealings as applicable from time to time, the Buyer shall also be entitled to cancel the Order/Contract either in whole or portion thereof without compensation to Seller. On the occurrence of any of the acts/omissions mentioned below, the Buyer may if it so desires, procure upon such terms and in such manner as deemed appropriate, plant/equipment/ stores not so delivered or others of similar description where plant/ equipment/ stores exactly complying with particulars are not, in the opinion of the Buyer (which shall be final), readily procurable, at the risk and cost of the Seller.

The Seller shall be liable to the Buyer for any excess costs incurred thereof and the Seller shall continue the performance of the Order/Contract to the extent not cancelled under the provisions of this clause. The Seller shall on no account be entitled to any gain on such repurchases. If the Bidder does not agree to this Risk Purchase clause, BHEL reserves the right to reject the bid/offer of the Bidder. The order/contract may be cancelled in whole or part thereof and Risk & Cost Clause in line with terms and conditions of PO/Contract may be invoked by the Buyer in any of the following cases:

- i. If the Seller/Contractor fails to deliver the goods or materials or any instalment thereof within the period(s) fixed for such delivery or the Seller's poor progress of the supply/services vis-à-vis delivery/execution timeline as stipulated in the contract, backlog attributable to the Seller including unexecuted portion of supply does not appear to be executable within balance period available;
- ii. delivers goods or materials not of the contracted quality and failing to adhere to the contract specifications/execution methodology;
- iii. withdrawal from or repudiation/abandonment of the supply/services by the Seller before completion as per contract or if the Seller refuses or is unable to supply goods or materials covered by the order/Contract either in whole or in part or otherwise fails to perform the Order/Contract.
- iv. Non supply by the Seller within scheduled completion/delivery period as per contract or as extended from time to time for reasons attributable to the Seller;
- v. Termination of Contract on account of any other reason(s) attributable to the Seller.
- vi. Assignment, transfer, sub-letting of Contract without BHEL's written permission resulting in termination of Contract or part thereof by BHEL.
- vii. If the Seller be an individual or a Sole Proprietorship, in the event of death or insanity of the Seller.
- viii. If the Seller/Contractor being an individual or if a partnership firm thereof, shall at any time be adjudged insolvent or shall have a receiving order for administration of his estate made against him or shall take any proceeding for composition under any Insolvency Act for the time being in force or make any assignment of the order/Contract or enter into any arrangement or composition with his creditors or suspend payment or if the firm dissolved under the Partnership Act;
- ix. If the Seller/Contractor being a Company is wound up voluntarily or by order of a Court or a Receiver, Liquidator or Manager on behalf of the debenture holders and creditors is appointed or circumstances have arisen which entitles the Court of debenture holder and creditors to appoint a receiver, liquidator or manager
- x. Non- Compliance to any contractual condition or any other default attributable to the Seller.

Such defaulting vendor/Seller shall not be eligible to participate in re-tendering conducted on account of risk purchase made due to fault of such vendor/Seller.

2. BHEL's right to go for Risk and Cost, Calculation of Risk and Cost amount & L D, recovery options to BHEL are given as under: -

2.1 BHEL reserves the right to terminate the contract or withdraw portion of work and get it done through other agency, at the risk and cost of the contractor *after due notice of a period of 14 days' by BHEL* in any of the following cases:

- i) If the Seller/Contractor fails to deliver the goods or materials or any instalment thereof within the period(s) fixed for such delivery or the Seller's poor progress of the supply/ services vis-a-vis delivery/execution timeline as stipulated in the Contract, backlog attributable to seller including unexecuted portion of supply does not appear to be executable within balance available period;
- ii) Delivers goods or materials not of the contracted quality and failing to adhere to the contract specifications;
- iii) Withdrawal from or repudiation/ abandonment of the supply/ services by Seller before completion as per contract or if the Seller refuses or is unable to supply goods or materials covered by the Order/Contract either in whole or in part or otherwise fails to perform the Order/Contract;
- iv) Non-supply by the Seller within scheduled completion/delivery period as per Contract or as extended from time to time, for the reasons attributable to the Seller;
- v) Termination of Contract on account of any other reason (s) attributable to Seller.
- vi) Assignment, transfer, subletting of Contract without BHEL's written permission resulting in termination of Contract or part thereof by BHEL.
- vii) If the Seller be an individual or a sole proprietorship Firm, in the event of the death or insanity of the Seller;
- viii) If the Seller/Contractor being an individual or if a firm on a partnership thereof, shall at any time, be adjudged insolvent or shall have a receiving order for administration of his estate made against him or shall take any proceeding for composition under any Insolvency Act for the time being in force or make any assignment of the Order/Contract or enter into any arrangement or composition with his creditors or suspend payment or if the firm dissolved under the Partnership Act;
- ix) If the Seller/Contractor being a company is wound up voluntarily or by order of a Court or a Receiver, Liquidator or Manager on behalf of the debenture holders and creditors is appointed or circumstances shall have arisen which entitles the Court of debenture holder and creditors to appoint a receiver, liquidator or manager;
- x) Non-compliance to any contractual condition or any other default attributable to Seller.

2.1.1 Risk & Cost Amount against Balance Work:

Risk & Cost amount against balance work shall be calculated as follows:

$$\text{Risk \& Cost Amount} = [(A-B) + (A \times H/100)]$$

Where,

A= Value of Balance scope of Work (*) as per rates of new contract

B= Value of Balance scope of Work (*) as per rates of old contract being paid to the contractor at the time of termination of contract i.e. inclusive of PVC & ORC, if any.

H = Overhead Factor to be taken as 5

In case (A-B) is less than 0 (zero), value of (A-B) shall be taken as 0 (zero).

2.1.2 Balance scope of work (in case of termination of contract):

Difference of Contract Quantities and Executed Quantities as on the date of issue of Letter for 'Termination of Contract', shall be taken as balance scope of Work for calculating risk & cost amount.

Contract quantities are the quantities as per original contract. If, Contract has been amended, quantities as per amended Contract shall be considered as Contract Quantities.

Items for which total quantities to be executed have exceeded the Contract Quantities based on drawings issued to contractor from time to time till issue of Termination letter, then for these items total Quantities as per issued drawings would be deemed to be contract quantities.

Substitute/ extra items whose rates have already been approved would form part of contract quantities for this purpose.

Substitute/ extra items which have been executed but rates have not been approved, would also form part of contract quantities for this purpose and rates of such items shall be determined in line with contractual provisions.

However, increase in quantities on account of additional scope in new tender shall not be considered for this purpose.

NOTE: In case portion of work is being withdrawn at risk & cost of contractor instead of termination of contract, contract quantities pertaining to portion of work withdrawn shall be considered as 'Balance scope of work' for calculating Risk & Cost amount.

2.1.3 LD against delay in executed work in case of Termination of Contract:

LD against delay in executed work shall be calculated in line NIT terms & conditions, for the delay attributable to contractor. For limiting the maximum value of LD, contract value shall be taken as Executed Value of work till termination of contract.

Method for calculation of LD against delay in executed work in case of termination of contract" is given below:

- i. Let the time period from scheduled date of start of work till termination of contract excluding the period of Hold (if any) not attributable to contractor = T1
- ii. Let the value of executed work till the time of termination of contract = X
- iii. Let the Total Executable Value of work for which inputs/fronts were made available to contractor and were planned for execution till termination of contract = Y
- iv. Delay in executed work attributable to contractor i.e. $T2 = [1 - (X/Y)] \times T1$
- v. LD shall be calculated in line with LD clause (clause 16) of the Contract for the delay attributable to contractor taking "X" as Contract Value and "T2" as period of delay attributable to contractor.


2.2 Recoveries arising out of Risk & Cost and LD or any other recoveries due from Contractor:

Without prejudice to the other means of recovery of such dues from the Seller recoveries from the Seller on whom risk


& cost has been invoked shall be made from the following:

- a) Dues available in the form of Bills payable to seller, SD, BGs against the same contract.
- b) Dues payable to seller against other contracts in the same Region/Unit/ Division of BHEL.
- c) Dues payable to seller against other contracts in the different Region/Unit/ division of BHEL.

In-case recoveries are not possible with any of the above available options, Legal action shall be initiated for recovery against contractor.


	CORPORATE QUALITY ASSURANCE/ कॉरपोरेट गुणवत्ता आश्वासन MAIN CONTRACTOR'S PROPOSAL CUM EVALUATION REPORT मुख्य संविदाकार प्रस्ताव सह मुल्यांकन रिपोर्ट	

Ref No:				Date:			
संदर्भ सं.:				तिथि:			
i.	Main Contractor मुख्य संविदाकार						
ii.	Project परियोजना						
iii.	Package Name पैकेज का नाम			Package No पैकेज सं.			
iv.	Proposed Item/Scope of Sub-contracting उप- संविदा(अनुबंध) का प्रस्तावित मद/ दायरा						
v.	Item covered under निम्नलिखित के अंतर्गत शामिल मद	Schedule-1 /अनुसूची- 1		As per contract clause No- अनुबंध के अनुसार खंड सं.- -			
		Schedule-2 अनुसूची- -2					
vi.	If item is Schedule-1 and proposed sub-vendor is indigenous, Main Contractor to explain how the contractual provisions will be fulfilled /यदि मद अनुसूची -1 है और प्रस्तावित उप-विक्रेता स्वदेशी है, तो मुख्य संविदाकार को स्पष्ट करना होगा कि संविदा/अनुबंध के प्रावधान कैसे पूरे किए जाएंगे						
vii.	Name and Address of the proposed Sub-vendor's works /प्रस्तावित सब-वेंडर का नाम तथा पता						
viii.	PO placement date/ Start of manufacturing (if self-manufactured) as per L2 network पीओ नियोजन की तिथि / एल- 2 नेटवर्क के अनुसार विनिर्माण (यदि स्व-निर्मित है) की शुरुआत						
ix.	Item Description (Type/Size/Rating/Scope of Sub-Contracting) मद का विवरण (प्रकार / आकार / रेटिंग / उप-अनुबंध का दायरा)	Total quantity of proposed item envisaged in this package (Nos/ Running Meters/ Kgs/ Tons etc) इस पैकेज में परिकल्पित प्रस्तावित मद की कुल मात्रा (संख्या / क्रियाशील मीटर / किलोग्राम / टन आदि)	Quantity proposed to be procured from proposed sub-vendor (Nos/ Running Meters /Kgs /Tons etc) प्रस्तावित उप-विक्रेता (संख्या / क्रियाशील मीटर / किलोग्राम / टन आदि) से खरीदी जाने वाली मात्रा	Timeline for quantity requirements as per project schedule & whether the proposed Sub-vendor equipped with adequate capacity to supply proposed order quantity in time / परियोजना समय सूची के अनुसार मात्रा आवश्यकताओं के लिए समय-सीमा और क्या प्रस्तावित उप-विक्रेता समय पर प्रस्तावित मांग की मात्रा की आपूर्ति करने में पूरी तरह से सक्षम है			
x.	Supply experience of the proposed sub-vendor (including supplies to Main Contractor, if any) for similar item/scope of sub-contracting, for last 3 years (Note:- Only relevant experience details w.r.t. proposed item/scope of subcontracting to be brought out here) पिछले 3 वर्षों के लिए उप-अनुबंध के समान मद / दायरे के लिए प्रस्तावित सब-वेंडर (मुख्य संविदाकार हेतु आपूर्ति, यदि कोई हो, सहित) का आपूर्ति अनुभव (नोट: - उप-अनुबंध के प्रस्तावित मद / दायरे के संबंध में केवल प्रासंगिक अनुभव के विवरण का उल्लेख हो						


	CORPORATE QUALITY ASSURANCE/ कॉरपोरेट गुणवत्ता आश्वासन MAIN CONTRACTOR'S PROPOSAL CUM EVALUATION REPORT मुख्य संविदाकार प्रस्ताव सह मुल्यांकन रिपोर्ट	

	Project/Package परियोजना/पैकेज	Customer Name ग्राहक का नाम	Supplied Item (Type/Rating/Model /Capacity/Size etc) आपूर्ति मद्द (प्रकार/रेटिंग /मॉडल /क्षमता/आकार आदि)	PO ref no/date पीओ संदर्भ सं. /तिथि	Supplied Quantity आपूर्ति की मात्रा	Date of Supply आपूर्ति की तिथि	
<i>We confirm that as per our assessment, the proposed sub-vendor has requisite capabilities & supply experience and is suitable for supplying the proposed item/scope of sub-contracting/हम अपने आकलन के अनुसार इस बात की पुष्टि करते हैं कि, प्रस्तावित उप-विक्रेता के पास अपेक्षित क्षमता और आपूर्ति करने का अनुभव है और उप-अनुबंध के दायरे /प्रस्तावित मद्द की आपूर्ति के लिए उपयुक्त है।</i>							
Name:		Desig:		Contact No:		Sign:	
नाम:		पद:		दूरभाष सं.:		हस्ताक्षर:	तिथि:


Company's Seal/Stamp:- कंपनी का मुहर:-

	CORPORATE QUALITY ASSURANCE/ कॉरपोरेट गुणवत्ता आश्वासन SUB-VENDOR QUESTIONNAIRE/ सब-वेंडर प्रश्नावली
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i.	Item/Scope of Sub-contracting उप-संविदा(अनुबंध) का मद/ दायरा			
ii.	Address of the registered office पंजीकृत कार्यालय का पता 	Details of Contact Person संपर्क व्यक्ति का विवरण (Name, Designation, Mobile, Email) (नाम, पदनाम, मोबाइल, ईमेल)		
iii.	Name and Address of the proposed Sub-vendor's works where item is being manufactured प्रस्तावित उप-विक्रेता के कार्यों का नाम और पता, जहां मद का निर्माण किया जा रहा है 	Details of Contact Person: संपर्क व्यक्ति का विवरण (Name, Designation, Mobile, Email) (नाम, पदनाम, मोबाइल, ईमेल)		
iv.	Annual Production Capacity for proposed item/scope of sub-contracting उप-संविदा(अनुबंध) के प्रस्तावित मद / दायरे के लिए वार्षिक उत्पादन क्षमता			
v.	Annual production for last 3 years for proposed item/scope of sub-contracting उप-संविदा(अनुबंध) के प्रस्तावित मद / दायरे के लिए पिछले 3 वर्षों का वार्षिक उत्पादन			
vi.	Details of proposed works प्रस्तावित कार्यों का विवरण			
1.	Year of establishment of present works वर्तमान फैक्टरी की स्थापना का वर्ष			
2.	Year of commencement of manufacturing at above works उपरोक्त फैक्टरी में निर्माण कार्य शुरू होने का वर्ष			
3.	Details of change in Works address in past (if any) पूर्व में फैक्टरी स्थल में परिवर्तन का विवरण (यदि कोई हो)			
4.	Total Area कुल क्षेत्र Covered Area शामिल क्षेत्र			
5.	Factory Registration Certificate फैक्टरी पंजीकरण प्रमाण पत्र	Details attached at Annexure – F2.1 विवरण अनुलग्नक-एफ 2.1 पर संलग्न है		
6.	Design/ Research & development set-up डिजाइन / अनुसंधान और विकास सेटअप (No. of manpower, their qualification, machines & tools employed etc.) (श्रमिकों की संख्या, उनकी योग्यता, मशीन और उपलब्ध उपकरण आदि)	Applicable / Not applicable if manufacturing is as per Main Contractor/purchaser design) Details attached at Annexure – F2.2 (if applicable) लागू / लागू नहीं, अगर विनिर्माण मुख्य संविदाकार / खरीददार के डिजाइन के अनुसार है) विवरण अनुलग्नक –एफ 2.2 पर संलग्न है। (यदि लागू हो)		
7.	Overall organization Chart with Manpower Details (Design/Manufacturing/Quality etc) मैनपावर विवरण के साथ समग्र संगठन का चार्ट(डिजाइन / विनिर्माण / गुणवत्ता आदि)	Details attached at Annexure – F2.3 विवरण अनुलग्नक – F2.3 में संलग्न है।		

	CORPORATE QUALITY ASSURANCE/ कॉरपोरेट गुणवत्ता आश्वासन SUB-VENDOR QUESTIONNAIRE/ सब-वेंडर प्रश्नावली
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8.	After sales service set up in India, in case of foreign sub-vendor(Location, Contact Person, Contact details etc.) भारत में बिक्री सेवा की स्थापना के बाद, विदेशी उप-विक्रेता के मामले में(स्थल , संपर्क व्यक्ति, संपर्क विवरण आदि)	Applicable / Not applicable लागू / लागू नहीं Details attached at Annexure – F2.4 विवरण अनुलग्नक -2.4 पर संलग्न है।			
9.	Manufacturing process execution plan with flow chart indicating various stages of manufacturing from raw material to finished product including outsourced process, if any फ्लोचार्ट सहित विनिर्माण प्रक्रिया निष्पादन योजना , जिसमें आउटसोर्स प्रक्रिया, यदि कोई हो, सहित कच्चे माल से तैयार उत्पाद तक विनिर्माण के विभिन्न चरणों को दर्शाया गया हो,	Details attached at Annexure – F2.5 विवरण अनुलग्नक - F2.5में संलग्न है।			
10.	Sources of Raw Material/Major Bought Out Item कच्चे माल के स्रोत / खरीदे हुए मुख्य मद	Details attached at Annexure – F2.6 विवरण अनुलग्नक - F2.6में संलग्न है।			
11.	Quality Control exercised during receipt of raw material/BOI, in-process , Final Testing, packing कच्चे माल / खरीदे हुए मद, प्रक्रियाबद्ध, अंतिम परीक्षण, पैकिंग करते समय गुणवत्ता नियंत्रण	Details attached at Annexure – F2.7 विवरण अनुलग्नक - F2.7 पर संलग्न है			
12.	Manufacturing facilities (List of machines, special process facilities, material handling etc.) विनिर्माण सुविधा(मशीनों की सूची, विशेष प्रक्रिया सुविधाएं, सामग्री रख-रखाव आदि)	Details attached at Annexure – F2.8 विवरण अनुलग्नक - F2.8में संलग्न है।			
13.	Testing facilities (List of testing equipment) परीक्षण सुविधाएं(परीक्षण उपकरण की सूची)	Details attached at Annexure – F2.9 विवरण अनुलग्नक – F2. 9 में संलग्न है।			
14.	If manufacturing process involves fabrication then- यदि निर्माण प्रक्रिया में फेब्रिकेशन की गई है तो- List of qualified Welders पात्र वेल्डर की सूची List of qualified NDT personnel with area of specialization विशेषज्ञता के क्षेत्र सहित पात्र एनडीटी कार्मिकों की सूची	Applicable / Not applicable लागू / लागू नहीं Details attached at Annexure – F2.10 विवरण अनुलग्नक - F2.10में संलग्न है। (if applicable) लागू / लागू नहीं			
15.	List of out-sourced manufacturing processes with Sub-Vendors' names & addresses सब-वेंडर द्वारा बाह्य स्रोतों (उनके नाम और पते सहित)से करवाएं गए निर्माण प्रक्रियाओं की सूची	Applicable / Not applicable लागू / लागू नहीं Details attached at Annexure. –F2.11 विवरण अनुलग्नक - F2.10में संलग्न है। (if applicable) (यदि लागू हो)			
16.	Supply reference list including recent supplies नवीनतम आपूर्ति सहित आपूर्ति संदर्भ सूची	Details attached at Annexure – F2.12 विवरण अनुलग्नक - F2.12 में संलग्न है। (as per format given below) (नीचे दिए गए प्रारूप के अनुसार)			
Project/ package परियोजना /पैकेज	Customer Name ग्राहक का नाम	Supplied Item (Type/Rating/Model /Capacity/Size etc) आपूर्ति की गई वस्तु (प्रकार / रेटिंग / मॉडल / क्षमता / आकार आदि)	PO ref no/date पीओ संदर्भ सं. / तिथि	Supplied Quantity आपूर्ति की मात्रा	Date of Supply आपूर्ति की तारीख
17.	Product satisfactory performance feedback letter/certificates/End User Feedback उत्पाद के संतोषजनक प्रदर्शन संबंधी फीडबैक पत्र / प्रमाण पत्र / अंतिम उपयोगकर्ता फीडबैक			Attached at annexure - F2.13 अनुलग्नक F2. 3पर संलग्न है	

	CORPORATE QUALITY ASSURANCE/ कॉरपोरेट गुणवत्ता आश्वासन SUB-VENDOR QUESTIONNAIRE/ सब-वेंडर प्रश्नावली
---	---

18.	Summary of Type Test Report (Type Test Details, Report No, Agency, Date of testing) for the proposed product (similar or higher rating) प्रस्तावित उत्पाद (एक समान या उच्च रेटिंग वाले) के लिए टाइप टेस्ट रिपोर्ट (टाइप टेस्ट विवरण, रिपोर्ट संख्या, एजेंसी, जांच की तारीख) का सारांश नोट: - रिपोर्ट प्रस्तुत करने की आवश्यकता नहीं है Note:- Reports need not to be submitted	Applicable / Not applicable लागू / लागू नहीं Details attached at Annexure – F2.14 विवरण अनुलग्नक - F2.1 4 में संलग्न है (if applicable) (यदि लागू हो)
19.	Statutory / mandatory certification for the proposed product प्रस्तावित उत्पाद के लिए वैधानिक / अनिवार्य प्रमाणीकरण	Applicable / Not applicable लागू / लागू नहीं Details attached at Annexure – F2.15 (if applicable) (यदि लागू हो)
20.	Copy of ISO 9001 certificate आईएसओ 9001 प्रमाण पत्र की प्रति (if available) (यदि उपलब्ध हो)	Attached at Annexure – F2.16 अनुलग्नक में संलग्न - F2.1 6 है
21.	Product technical catalogues for proposed item (if available) प्रस्तावित मद के लिए उत्पाद तकनीकी कैटलॉग (यदि उपलब्ध हो)	Details attached at Annexure – F2.17 विवरण अनुलग्नक - F2.1 7 में संलग्न है

Name:	Desig:	Sign:	Date:
नाम:	पद:	हस्ताक्षर:	तिथि:

Company's Seal/Stamp:- कंपनी की मुहर / मोहर: -

NORTH KARANPURA FGD - RIGID STEEL CONDUITS BOQ

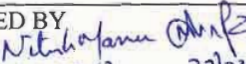
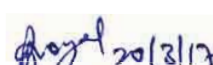
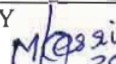
Item Number	Item Title	Item Description	Item Quantity	Unit of Measure	Consignee ID	ZipCode	Delivery Period (In number of days)	Unit Price (Inclusive of TAX)	GST % Applicable	Brand	Model	HSN Code
1	558-15001-A	GI CONDUITS 1.6MM THK EPOXY 20MM DIA	150	MTR	nkp_1666_pem	825321	210					
2	558-15002-A	GI CONDUITS,1.6MM THICK, 20MM DIA	6100	MTR	nkp_1666_pem	825321	210					
3	558-15003-A	GI CONDUITS,1.6MM THICK, 25MM DIA	450	MTR	nkp_1666_pem	825321	210					
4	558-15005-A	GI CONDUITS,2.0MM THICK, 50MM DIA	50	MTR	nkp_1666_pem	825321	210					

	PRE-QUALIFICATION REQUIREMENTS FOR RIGID STEEL CONDUITS	PE-PQ-999-558-E002
		REVISION NO. 01 DATE 20/03/2017
		SHEET NO. 1 OF 1

ITEMS : RIGID STEEL CONDUITS	
SCOPE : Supply : YES; Erection & Commissioning : NO.	
1.0	Vendor should be a BIS approved manufacturer of rigid steel conduits as per IS 9537 Part II.
2.0	Availability of test reports of rigid steel conduits to establish in- house capability at manufacturer's works to carry out all routine, type & acceptance tests as per relevant IS.
3.0	Capacity of manufacturing 30 MT of rigid steel conduits per month.
4.0	Manufactured and supplied at least 80 km of rigid steel conduits in one or more orders.
5.0	Minimum two (2) nos. purchase orders for rigid steel conduits shall be submitted which should not be more than five (5) years old from the date of application for registration or date of techno-commercial bid opening (as applicable) for establishing continuity in business.

NOTE:

- The vendor can offer rigid steel conduits of any BIS approved make meeting criteria S.No.1 to 4 above.
The vendor to furnish the following documents:
 - Undertaking from BIS approved manufacturer of offered make to get the inspection & testing of conduits carried out at manufacturer's works.
 - Credentials of the manufacturer of offered make to meet the PQR requirements of S no 1.0 to 4.0 above.
 - Vendor's Credentials to meet S no 5.0.
- Consideration of offer shall be subject to customer's approval of bidders, if applicable.
- Bidder to submit all supporting documents in English. If documents submitted by bidder are in language other than English, a self-attested English translated document should also be submitted.
- Any other project specific requirement shall be as per Annexure-I and bidder shall submit relevant supporting documents.
- Notwithstanding anything stated above, BHEL reserves the right to assess the capabilities and capacity of the bidder/collaborators to perform the contract, should the circumstances warrant such assessment in the overall interest of BHEL.
- After satisfactory fulfillment of all the above criteria/ requirement, offer shall be considered for further evaluation as per NIT and all the other terms of the tender.

PREPARED BY  NAME: Nishu DESIGNATION: 20-03-17 (Model Choppa)	REVIEWED BY  NAME: R. G. Ar DESIGNATION: 20/3/17 Ar	APPROVED BY  NAME: Meena DESIGNATION: 20-3-17 Kesri GM
---	--	--

BHEL PEM-ELECTRICAL

PRE-QUALIFYING REQUIREMENTS FOR RIGID STEEL CONDUIT

ANNEXURE –I

PROJECT SPECIFIC CRITERIA AGAINST ENQUIRY

PROJECT: 3X660 MW NORTH KARANPURA FGD

NIL

**Anil
Rana**

Digitally signed by Anil Rana
DN: cn=Anil Rana, o=BHEL,
ou=PS-PEM,
email=anilrana@bhel.in, c=IN
Date: 2021.08.02 10:29:20
+05'30'

[Dealing Engineer]

**ABHIS
HEK**

Digitally signed by ABHISHEK
DN: cn=ABHISHEK, o=BHEL,
ou=PSM,
email=abhishhek1@bhel.in, c=IN
Date: 2021.08.02 13:43:38 +05'30'

[Manager - Electrical]

**PRAVEEN
DUTTA**

Digitally signed by PRAVEEN DUTTA
DN: c=IN, o=BHARAT HEAVY ELECTRICALS LIMITED,
ou=PS-PEM, postalCode=201301, st=UTTAR PRADESH,
2.5.4.20=da8948a9c3e2703a98a0aaca2aedd61dd68d
b6f6c570427c5c374e3b47c930, cn=PRAVEEN DUTTA
Date: 2021.08.06 15:48:26 +05'30'

[Section Head]

**DEBASISA
RATH**
[DH-Electrical]

Digitally signed by DEBASISA RATH
DN: c=IN, o=BHARAT HEAVY ELECTRICALS
LIMITED, ou=BHEL PS PEM NoIDA,
postalCode=201301, st=UTTAR PRADESH,
2.5.4.20=da8948a9c3e2703a98a0aaca2aedd61dd68d
b6f6c570427c5c374e3b47c930, cn=DEBASISA RATH
Date: 2021.08.07 11:09:44 +05'30'

VOLUME-II

3X660 MW NORTH KARANAPURA FGD

TECHNICAL SPECIFICATION

FOR


RIGID STEEL CONDUITS

SPECIFICATION NO: *PE-TS-441-558-E002*

REVISION: 00



BHARAT HEAVY ELECTRICALS LIMITED
POWER SECTOR
PROJECT ENGINEERING MANAGEMENT
NOIDA, UP (INDIA) – 201301

<div><div>बी एच ई एल</div><div></div></div>	TECHNICAL SPECIFICATION FOR RIGID STEEL CONDUITS	SPECIFICATION NO. PE-441-558-E002	
		VOLUME II	
		SECTION	
		REVISION 00	DATE: 02.08.2021
		SHEET 1 OF 1	

CONTENTS

Sl. No.	DESCRIPTION	NO. OF SHEETS
1.0	SECTION- I	
	COMPLIANCE CERTIFICATE	01
	SPECIFIC TECHNICAL REQUIREMENTS	01
	DATA SHEET – A	01
2.0	SECTION- II	
	STANDARD TECHNICAL REQUIREMENTS	02
	STANDARD QUALITY PLAN	03

Total nos. of sheets including cover & separator sheets = 12 sheets



**TECHNICAL SPECIFICATION
FOR
RIGID STEEL CONDUITS**

SPECIFICATION NO. PE-TS-441-558-E002

VOLUME II

SECTION I

REVISION 00

DATE: 02.08.2021

SHEET 1 of 1

COMPLIANCE CERTIFICATE

The bidder shall confirm compliance to the following by signing/ stamping this compliance certificate and furnishing same with the offer.

1. The scope of supply, technical details, construction features, design parameters etc. shall be as per technical specification & there are no exclusion/ deviation with regard to same
2. There are no deviation with respect to specification other than those furnished in the 'schedule of deviations'
3. Only those technical submittals which are specifically asked for in NIT to be submitted at tender stage shall be considered as part of offer. Any other submission, even if made, shall not be considered as part of offer.
4. Any comments/ clarifications on technical/ inspection requirements furnished as part of bidder's covering letter shall not be considered by BHEL, and bidder's offer shall be construed to be in conformance with the specification.
5. Any changes made by the bidder in the price schedule with respect to the description/ quantities from those given in BOQ-Cum-Price schedule of the specification shall not be considered (i.e., technical description & quantities as per specification shall prevail).

BIDDER'S STAMP & SIGNATURE

402319/2021/PS-PEM-EL



**TECHNICAL SPECIFICATION
FOR
RIGID STEEL CONDUITS**

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SECTION – I



TECHNICAL SPECIFICATION FOR RIGID STEEL CONDUITS

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DATE: 02.08.2021

SHEET 1 OF 1

1.0 SCOPE

- 1.1 Manufacture, Inspection and Testing at Manufacturer's works, proper packing and delivery to site of rigid steel conduits conforming to this specification.
- 1.2 Technical requirements of rigid steel conduits are indicated in Data Sheet-A & Section-II.
- 1.3 The stipulation of Data Sheet-A shall prevail in case of any conflict between the stipulations of Data Sheet-A & Section-II.

2.0 BILL OF QUANTITIES


The bidder to quote for items as per price schedule attached with NIT.

3.0 DRAWINGS & DOCUMENTS TO BE SUBMITTED

- 3.1 Documents shall be submitted after placement of order for BHEL & customer's approval as specified in NIT.
- 3.2 Documents shall be furnished through BHEL's document management system (wrench) portal.

Notes:

1. Vendor shall submit the drawing/document submission/resubmission schedule after approval of documents.
2. In BOM each of the item to be uniquely identified with item code no. or item Sl. No. Supplier to ensure that all the items which will find separate mention in the packing list are covered in detailed BOM.

	TECHNICAL SPECIFICATION FOR RIGID STEEL CONDUITS	SPECIFICATION NO. PE-TS-441-558-E002	
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DATA SHEET-A

1.0 APPLICABLE STANDARDS & CODES

- a) IS:9537 (Part I & II) Conduits for electrical installation.
- b) IS:2629 Recommended practice for hot dip galvanizing on iron and steel.
- c) IS:4759 Specification for hot dip zinc coatings on structural steel and allied products
- d) IS:6745 Methods for determination of mass of zinc coating on zinc coated iron and steel articles.
- e) IS:513 Cold reduced low carbon steel sheet and strip
- f) IS: 10748 Hot rolled Steel strip for welded tubes and pipes
- g) IS: 2633 Method for testing uniformity of coating on zinc coated articles
- h) IS:6005 Code of practice for phosphating iron & steel

2.0 RIGID STEEL CONDUITS

S.No.	Description	Unit	Parameters value/ type
a	Make	-	[√] BIS approved [] As per enclosed sub-vendor list
b	Material	-	Hot or Cold rolled mild steel
c	Sizes	-	As per BOQ cum price schedule
d	Standard length	meter	3 – 5
e	Classification as per mechanical properties		Heavy
f	Conduit thickness (minimum)	mm	1.6 upto 32 mm dia, 2.0 above 32 mm & upto 50 mm dia
g	Surface treatment	-	Hot dip galvanizing on inside & outside surface
h	Epoxy thickness	micron	50 (applicable for epoxy coated conduits only)

3.0 SURFACE TREATMENT

a	Pre-treatment	-	As per IS 6005 prior to galvanising
b	Type	-	Hot dip galvanizing as per IS 2629
c	Min. Thickness of zinc coating	microns	48 (upto 32 mm dia), 65 (above 32 mm & upto 50 mm dia)
d	Min. Weight of zinc coating	(gm/m ²)	340 (upto 32 mm dia) 460 (above 32 mm & upto 50 mm dia)
e	Tests for galvanizing		a) Weight of zinc coating as per IS : 6745 b) Thickness of zinc coating as per IS : 4759 c) Uniformity of zinc coating as per IS : 2633 d) Adhesion as per IS: 2629

402319/2021/PS-PEM-EL



**TECHNICAL SPECIFICATION
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SECTION-II

	TECHNICAL SPECIFICATION FOR RIGID STEEL CONDUITS		SPECIFICATION NO. PE-TS-441-558-E002
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			SECTION II
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1.0 INTENT OF SPECIFICATION

The intent of specification is not to specify all details of design & construction of material. The material shall, however, conform in all aspects to high standard of design, engineering and workmanship and be capable of performing in continuous operation up to & after bidder's guarantee period in manner acceptable to purchaser who will interpret the drawings & specification and shall have power to reject any work or material which in his judgement is not in full accordance with this specification.

2.0 CODES AND STANDARDS

- 2.1 The material shall comply with all currently applicable safety codes and statutory regulations of India as well as of the locality where the material is to be installed.
- 2.2 The material, construction, manufacture, inspection and testing of Rigid steel conduits shall conform to the latest revision of relevant standards as per Data Sheet-A.
- 2.3 In case of conflict between the applicable reference standard and this specification, the stringent requirement of the two shall govern.

3.0 TECHNICAL REQUIREMENTS

- 3.1 Rigid conduits shall generally conform to the requirements of IS: 9537 (part I & II).
- 3.2 The diameter of conduits shall be uniform throughout the length. Each end of conduit length shall be threaded. The ends of conduits shall be sealed with protective caps to prevent damage to threaded portions and entrance of moisture and foreign material.
- 3.3 The inside surface of all conduits shall be smooth and suitable for pulling insulated cables and wires without damage.
- 3.4 Technical particulars of rigid conduits are specified in Data Sheet – A.

4.0 QUALITY ASSURANCE, TESTING & INSPECTION

- 4.1 Bidder shall confirm compliance with the BHEL's Standard Quality Plan (PE-QP-999-558-E002) as attached with the specification without any deviations. At contract stage, the successful bidder shall submit the Quality Plan for BHEL/ ultimate customer's approval. In case bidder has reference Quality Plan agreed with ultimate customer, same can be submitted for specific project after award of contract for BHEL/ ultimate customer's approval. There shall be no commercial implication to BHEL on account of Quality plan approval.
- 4.2 All materials shall be procured, manufactured, inspected and tested by vendor/ sub-vendor as per approved quality plan.
- 4.3 The supplier shall perform all tests necessary to ensure that the material and workmanship conform to the relevant standards and comply with the requirements of the specification. Charges for all these tests for all the equipments & components shall be deemed to be included in the bid price.



TECHNICAL SPECIFICATION FOR RIGID STEEL CONDUITS

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Sheet 2 of 2

- 4.4 In case ordered quantities are manufactured and offered for inspection in more than one lot, BHEL reserves the right to witness testing on all lots without any commercial implication to BHEL.

5.0 PACKING

- 5.1 The material shall be packed to ensure protection against damage during transit, storage for prolonged periods and handling.
- 5.2 The ends of conduits shall be sealed with protective caps.
- 5.3 Each conduit shall be wrapped in plastic to prevent dust deposition.
- 5.4 The conduits should be aligned and stacked in bundles (a maximum of 25 pieces per bundle).
- 5.5 Each bundle shall be covered with jute fibre or thick plastic wrap for protection against extreme weather. Then, the bundle shall be tied with twin-strand mild steel wire, strong rope or steel strip.

6.0 MARKING


- 6.1 Rigid conduits shall be marked at least once on each manufacturing length, preferably 50 mm from one end, with the following:

- a) Manufacturer's name or trade mark, if any;
- b) Country of manufacture; and
- c) Nominal size of the conduits.
- d) ISI Certification Mark.

Marking may be applied by moulding, stamping, printing, adhesive label or water slide transfers.

- 6.2 Marking shall be durable and legible.
- 6.3 Marking shall be checked by inspection and by rubbing lightly the marking by hand for 15 seconds with a piece of cloth soaked with water and again for 15 seconds with a piece of cloth soaked with petroleum spirit.

BHEL					
ENGINEERING			QUALITY		
	Sign & Date	Name		Sign & Date	Name
Prepared by:	<div>MEET SAGAR SINGH RAJPAAL MUDIT CHOPRA</div>	<div>MEET SAGAR SINGH RAJPAAL/ MUDIT CHOPRA</div>	Checked by:	<div></div>	KUNAL GANDHI
Reviewed by:	<div>PRAVEEN DUTTA</div>	<div>PRAVEEN DUTTA</div>	Reviewed by:	<div>RITESH KUMAR</div>	<div>R.K. JAISWAL</div>
<div>018960848497462625437448347039 Date: 2020-02-25 12:26:39 +05'30'</div>					

		MANUFACTURER/ SUPPLIER NAME & ADDRESS		STANDARD QUALITY PLAN					SPEC. NO. :		DATE:				
CUSTOMER :				PROJECT:								QP NO.: PE-QP-999-558-E001, R04		DATE: 23.07.2020	
												PO NO.:		DATE:	
												ITEM: RIGID STEEL CONDUITS		SYSTEM: STATION LIGHTING SYSTEM	
SL NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	AGENCY			REMARKS			
1	2	3	4	5	6	7	8	9	**						
					M	C/ N		*	D	M	C	N			
2.3B		MASS OF ZINC COAT.	CR	TEST	IS 9537-II	IS 6745/ APPD DS	IS-6745/ APPD DS	INSP. REPORT	✓	P	W	-			
2.3C		COATING THICKNESS	CR	TEST	IS 9537-II	IS 4759/ APPD DS	IS-4759/ APPD DS	INSP. REPORT	✓	P	W	-			
2.3D		EPOXY THICKNESS	MA	VISUAL/PHYSICAL	IS 9537-II	50 MICRONS	50 MICRONS	INSP. REPORT	✓	P	W	-			
2.4		MARKING	CR	VISUAL/PHYSICAL	IS 9537-II	APPROVED DATA SHEET	APPROVED DATA SHEET	INSP. REPORT		P	W	-			
3.0 PACKING															
	PACKING	Soundness of Packing against transit damage	Major	Visual	100%	100%	BHEL approved document	BHEL approved document	Inspection report	✓	P	W -			

NOTES:

1. The inspection shall be carried out once for the material offered for inspection in one lot. For subsequent lots against the same project, the material can be accepted based on certificate of compliance furnished by the vendor.

2. Project specific QP shall be based on customer requirement. In case, any changes in QP commented by customer at contract stage shall be carried out by bidder without any implication to BHEL/ Customer.

3. For export jobs, BHEL technical specification for seaworthy packing for export jobs is to be followed.

4. Packing shall be suitable for storage at site in tropical climatic conditions.

ENGINEERING

Sign & Date

MEET SAGAR SINGH RAJPAL/ MUDIT CHOPRA

Checked by:

MEET SAGAR SINGH RAJPAL/ MUDIT CHOPRA

BHEL

Sign & Date

PRABHAKAR DUTTA

Reviewed by:

PRABHAKAR DUTTA

QUALITY

Sign & Date

KUNAL GANDHI

Reviewed by:

RITESH KUMAR JAISWAL

FOR CUSTOMER REVIEW & APPROVAL

Doc No:


Reviewed by:

Approved by:

Sign & Date

Name

Seal

		MANUFACTURER/ SUPPLIER NAME & ADDRESS		STANDARD QUALITY PLAN					SPEC. NO :		DATE:		
				CUSTOMER :		QP NO.: PE-QP-999-558-E001, R04						DATE: 23.07.2020	
				PROJECT:		PO NO.:						DATE:	
				ITEM: RIGID STEEL CONDUITS		SYSTEM: STATION LIGHTING SYSTEM		SECTION: II		SHEET 3 OF 3			
SL NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	AGENCY		REMARKS	
1	2	3	4	5	M	6	7	8	9	*	M C N		

5. Latest revision/ year of issue of all the standards (IS/ ASME/ IEC etc.) Indicated in QP shall be referred.
6. BHEL reserves the right for conducting repeat test if required.
7. After packing and prior to issue MDCC, photographs of items to be dispatched shall be sent to BHEL purchase group for review.
8. Thickness of zinc coating shall be the average of the determination made at each end and the middle of the article.

LEGENDS:
*RECORDS, IDENTIFIED WITH "TICK"(✓) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION,
** M: SUPPLIER/ MANUFACTURER/ SUB-SUPPLIER, C: MAIN SUPPLIER/ BHEL/ THIRD PARTY INSPECTION AGENCY, N: CUSTOMER,
P: PERFORM, W: WITNESS, V: VERIFICATION, AS APPROPRIATE
MA: MAJOR, MI: MINOR, CR: CRITICAL, D: DOCUMENTATION

BHEL						BIDDER/ SUPPLIER				FOR CUSTOMER REVIEW & APPROVAL			
ENGINEERING		QUALITY				Sign & Date		Sign & Date		Name		Seal	
Prepared by:	MEET SAGAR SINGH RAJPAL/ MUDDIT CHOPRA	Name	MEET SAGAR SINGH RAJPAL/ MUDDIT CHOPRA	Checked by:	KUNAL GANDHI	Reviewed by:		Approved by:					
Reviewed by:	PRAVEEN DUTTA	Name	PRAVEEN DUTTA	Reviewed by:	RITESH KUMAR	Reviewed by:		Approved by:					

MEET SAGAR SINGH RAJPAL/ MUDDIT CHOPRA

PRAVEEN DUTTA

RITESH KUMAR

JAI SWAL

MEET SAGAR SINGH RAJPAL/ MUDDIT CHOPRA

PRAVEEN DUTTA

RITESH KUMAR

JAI SWAL

MEET SAGAR SINGH RAJPAL/ MUDDIT CHOPRA

PRAVEEN DUTTA

RITESH KUMAR

JAI SWAL

MEET SAGAR SINGH RAJPAL/ MUDDIT CHOPRA

PRAVEEN DUTTA

RITESH KUMAR

JAI SWAL

Letter head of Company (<Rs. 10 Cr value)

Ref.....

Date.....

To,

Bharat Heavy Electricals Limited PEM,

PPEI Building, Plot No 25, Sector -16A,

Noida (U.P)-201301

Subject: -Certification regarding local content

Reference: Tender Enquiry No-.....

Name of Package:

Dear Sir,

We hereby certify that items offered by us of(package name).....for.....(Project Name/Rate contract)..... meets the requirement of minimum local content in line with Cl. No..... of NIT No..... dated..... and the Public Procurement (Preference to Make in India), Order 2017 dated-15.06.2017, 28.05.2018, 29.05.2019 , 04.06.2020 & 16.09.2020.

Local Content-%

We further confirms that details of location at which the local value addition is made will be our registered works at(address of the works)

Yours very truly

.....(authorized signatory of company)

.....(firm name)

ON COMPANY LETTER HEAD

To,

M/s Bharat Heavy Electricals Ltd.,
Project Engineering Management,
Power Project Engineering Institute,
HRD & ESI Complex, Plot No 25, Sector-16 A,
Noida-201301

Kind Attn. Mr.

Dear Sir,

This has reference to:

1. Our offer for RIGID STEEL CONDUITS for Combined Tender Enquiry (2 X 250 MW NSPCL BHILAI TPP FGD, 2X500 MW NTPC MAUDA FGD STAGE-I, 3X200 + 3X500 MW NTPC RAMAGUNDAM TPP FGD, 3X200+3X500+1x500 MW NTPC KORBA TPP-FGD, 3X660 MW North Karanpura FGD, 3X660 MW NPGCL NABINAGAR FGD and 4X250MW BRBCL Nabinagar FGD projects), GeM Tender No. dated

2. Order no. F. No. 6/18/2019-PPD dt. 23.07.2020 issued by Ministry of Finance, Department of Expenditure Public Procurement Division.

I have read the clause regarding restriction on procurement from a bidder of a country which shares a land border with India; I certify that M/s (Company Name _____) is not from such a country **or**, if from such a country, has been registered with the competent authority. **(Remove the non-applicable)**

I hereby certify that M/s (Company Name _____) fulfil all requirements in this regard and is eligible to be considered.

[where applicable, evidence of valid registration by the competent authority shall be attached]

Thanking You,
Yours faithfully,

Owner, partner, CMD, Director, Authorized Signatory with proof that he/she is authorized to sign on owner's behalf

M/s _____

ANNEXURE FOR RISK & COST

1. In case of delays (beyond the maximum late delivery period as per LD clause) in supplies, or if there be defective supplies or non-fulfilment of any other terms and conditions of the Contract as enumerated subsequently in this clause, then, without prejudice to its right to recover any expenses, losses or damages to which the Buyer may be put in or sustain by reason of the Seller/Contractor's default or breach of Order/Contract or to suspend business dealings with the Seller/Contractor in terms of the Buyers' Guidelines for Suspension of Business Dealings as applicable from time to time, the Buyer shall also be entitled to cancel the Order/Contract either in whole or portion thereof without compensation to Seller. On the occurrence of any of the acts/omissions mentioned below, the Buyer may if it so desires, procure upon such terms and in such manner as deemed appropriate, plant/equipment/ stores not so delivered or others of similar description where plant/ equipment/ stores exactly complying with particulars are not, in the opinion of the Buyer (which shall be final), readily procurable, at the risk and cost of the Seller.

The Seller shall be liable to the Buyer for any excess costs incurred thereof and the Seller shall continue the performance of the Order/Contract to the extent not cancelled under the provisions of this clause. The Seller shall on no account be entitled to any gain on such repurchases. If the Bidder does not agree to this Risk Purchase clause, BHEL reserves the right to reject the bid/offer of the Bidder. The order/contract may be cancelled in whole or part thereof and Risk & Cost Clause in line with terms and conditions of PO/Contract may be invoked by the Buyer in any of the following cases:

- i. If the Seller/Contractor fails to deliver the goods or materials or any instalment thereof within the period(s) fixed for such delivery or the Seller's poor progress of the supply/services vis-à-vis delivery/execution timeline as stipulated in the contract, backlog attributable to the Seller including unexecuted portion of supply does not appear to be executable within balance period available;
- ii. delivers goods or materials not of the contracted quality and failing to adhere to the contract specifications/execution methodology;
- iii. withdrawal from or repudiation/abandonment of the supply/services by the Seller before completion as per contract or if the Seller refuses or is unable to supply goods or materials covered by the order/Contract either in whole or in part or otherwise fails to perform the Order/Contract.
- iv. Non supply by the Seller within scheduled completion/delivery period as per contract or as extended from time to time for reasons attributable to the Seller;
- v. Termination of Contract on account of any other reason(s) attributable to the Seller.
- vi. Assignment, transfer, sub-letting of Contract without BHEL's written permission resulting in termination of Contract or part thereof by BHEL.
- vii. If the Seller be an individual or a Sole Proprietorship, in the event of death or insanity of the Seller.
- viii. If the Seller/Contractor being an individual or if a partnership firm thereof, shall at any time be adjudged insolvent or shall have a receiving order for administration of his estate made against him or shall take any proceeding for composition under any Insolvency Act for the time being in force or make any assignment of the order/Contract or enter into any arrangement or composition with his creditors or suspend payment or if the firm dissolved under the Partnership Act;
- ix. If the Seller/Contractor being a Company is wound up voluntarily or by order of a Court or a Receiver, Liquidator or Manager on behalf of the debenture holders and creditors is appointed or circumstances have arisen which entitles the Court of debenture holder and creditors to appoint a receiver, liquidator or manager
- x. Non- Compliance to any contractual condition or any other default attributable to the Seller.

Such defaulting vendor/Seller shall not be eligible to participate in re-tendering conducted on account of risk purchase made due to fault of such vendor/Seller.

2. BHEL's right to go for Risk and Cost, Calculation of Risk and Cost amount & L D, recovery options to BHEL are given as under: -

2.1 BHEL reserves the right to terminate the contract or withdraw portion of work and get it done through other agency, at the risk and cost of the contractor *after due notice of a period of 14 days' by BHEL* in any of the following cases:

- i) If the Seller/Contractor fails to deliver the goods or materials or any instalment thereof within the period(s) fixed for such delivery or the Seller's poor progress of the supply/ services vis-a-vis delivery/execution timeline as stipulated in the Contract, backlog attributable to seller including unexecuted portion of supply does not appear to be executable within balance available period;
- ii) Delivers goods or materials not of the contracted quality and failing to adhere to the contract specifications;
- iii) Withdrawal from or repudiation/ abandonment of the supply/ services by Seller before completion as per contract or if the Seller refuses or is unable to supply goods or materials covered by the Order/Contract either in whole or in part or otherwise fails to perform the Order/Contract;
- iv) Non-supply by the Seller within scheduled completion/delivery period as per Contract or as extended from time to time, for the reasons attributable to the Seller;
- v) Termination of Contract on account of any other reason (s) attributable to Seller.
- vi) Assignment, transfer, subletting of Contract without BHEL's written permission resulting in termination of Contract or part thereof by BHEL.
- vii) If the Seller be an individual or a sole proprietorship Firm, in the event of the death or insanity of the Seller;
- viii) If the Seller/Contractor being an individual or if a firm on a partnership thereof, shall at any time, be adjudged insolvent or shall have a receiving order for administration of his estate made against him or shall take any proceeding for composition under any Insolvency Act for the time being in force or make any assignment of the Order/Contract or enter into any arrangement or composition with his creditors or suspend payment or if the firm dissolved under the Partnership Act;
- ix) If the Seller/Contractor being a company is wound up voluntarily or by order of a Court or a Receiver, Liquidator or Manager on behalf of the debenture holders and creditors is appointed or circumstances shall have arisen which entitles the Court of debenture holder and creditors to appoint a receiver, liquidator or manager;
- x) Non-compliance to any contractual condition or any other default attributable to Seller.

2.1.1 Risk & Cost Amount against Balance Work:

Risk & Cost amount against balance work shall be calculated as follows:

$$\text{Risk \& Cost Amount} = [(A-B) + (A \times H/100)]$$

Where,

A= Value of Balance scope of Work (*) as per rates of new contract

B= Value of Balance scope of Work (*) as per rates of old contract being paid to the contractor at the time of termination of contract i.e. inclusive of PVC & ORC, if any.

H = Overhead Factor to be taken as 5

In case (A-B) is less than 0 (zero), value of (A-B) shall be taken as 0 (zero).

2.1.2 Balance scope of work (in case of termination of contract):

Difference of Contract Quantities and Executed Quantities as on the date of issue of Letter for 'Termination of Contract', shall be taken as balance scope of Work for calculating risk & cost amount.

Contract quantities are the quantities as per original contract. If, Contract has been amended, quantities as per amended Contract shall be considered as Contract Quantities.

Items for which total quantities to be executed have exceeded the Contract Quantities based on drawings issued to contractor from time to time till issue of Termination letter, then for these items total Quantities as per issued drawings would be deemed to be contract quantities.

Substitute/ extra items whose rates have already been approved would form part of contract quantities for this purpose.

Substitute/ extra items which have been executed but rates have not been approved, would also form part of contract quantities for this purpose and rates of such items shall be determined in line with contractual provisions.

However, increase in quantities on account of additional scope in new tender shall not be considered for this purpose.

NOTE: In case portion of work is being withdrawn at risk & cost of contractor instead of termination of contract, contract quantities pertaining to portion of work withdrawn shall be considered as 'Balance scope of work' for calculating Risk & Cost amount.

2.1.3 LD against delay in executed work in case of Termination of Contract:

LD against delay in executed work shall be calculated in line NIT terms & conditions, for the delay attributable to contractor. For limiting the maximum value of LD, contract value shall be taken as Executed Value of work till termination of contract.

Method for calculation of LD against delay in executed work in case of termination of contract" is given below:

- i. Let the time period from scheduled date of start of work till termination of contract excluding the period of Hold (if any) not attributable to contractor = T1
- ii. Let the value of executed work till the time of termination of contract = X
- iii. Let the Total Executable Value of work for which inputs/fronts were made available to contractor and were planned for execution till termination of contract = Y
- iv. Delay in executed work attributable to contractor i.e. $T2 = [1 - (X/Y)] \times T1$
- v. LD shall be calculated in line with LD clause (clause 16) of the Contract for the delay attributable to contractor taking "X" as Contract Value and "T2" as period of delay attributable to contractor.


2.2 Recoveries arising out of Risk & Cost and LD or any other recoveries due from Contractor:

Without prejudice to the other means of recovery of such dues from the Seller recoveries from the Seller on whom risk


& cost has been invoked shall be made from the following:

- a) Dues available in the form of Bills payable to seller, SD, BGs against the same contract.
- b) Dues payable to seller against other contracts in the same Region/Unit/ Division of BHEL.
- c) Dues payable to seller against other contracts in the different Region/Unit/ division of BHEL.

In-case recoveries are not possible with any of the above available options, Legal action shall be initiated for recovery against contractor.


	CORPORATE QUALITY ASSURANCE/ कॉरपोरेट गुणवत्ता आश्वासन MAIN CONTRACTOR'S PROPOSAL CUM EVALUATION REPORT मुख्य संविदाकार प्रस्ताव सह मुल्यांकन रिपोर्ट	

Ref No:				Date:			
संदर्भ सं.:				तिथि:			
i.	Main Contractor मुख्य संविदाकार						
ii.	Project परियोजना						
iii.	Package Name पैकेज का नाम			Package No पैकेज सं.			
iv.	Proposed Item/Scope of Sub-contracting उप- संविदा(अनुबंध) का प्रस्तावित मद/ दायरा						
v.	Item covered under निम्नलिखित के अंतर्गत शामिल मद	Schedule-1 /अनुसूची- 1				As per contract clause No- अनुबंध के अनुसार खंड सं.- -	
		Schedule-2 अनुसूची- -2					
vi.	If item is Schedule-1 and proposed sub-vendor is indigenous, Main Contractor to explain how the contractual provisions will be fulfilled /यदि मद अनुसूची -1 है और प्रस्तावित उप-विक्रेता स्वदेशी है, तो मुख्य संविदाकार को स्पष्ट करना होगा कि संविदा/अनुबंध के प्रावधान कैसे पूरे किए जाएंगे						
vii.	Name and Address of the proposed Sub-vendor's works /प्रस्तावित सब-वेंडर का नाम तथा पता						
viii.	PO placement date/ Start of manufacturing (if self-manufactured) as per L2 network पीओ नियोजन की तिथि / एल- 2 नेटवर्क के अनुसार विनिर्माण (यदि स्व-निर्मित है) की शुरुआत						
ix.	Item Description (Type/Size/Rating/Scope of Sub-Contracting) मद का विवरण (प्रकार / आकार / रेटिंग / उप-अनुबंध का दायरा)	Total quantity of proposed item envisaged in this package (Nos/ Running Meters/ Kgs/ Tons etc) इस पैकेज में परिकल्पित प्रस्तावित मद की कुल मात्रा (संख्या / क्रियाशील मीटर / किलोग्राम / टन आदि)	Quantity proposed to be procured from proposed sub-vendor (Nos/ Running Meters /Kgs /Tons etc) प्रस्तावित उप-विक्रेता (संख्या / क्रियाशील मीटर / किलोग्राम / टन आदि) से खरीदी जाने वाली मात्रा	Timeline for quantity requirements as per project schedule & whether the proposed Sub-vendor equipped with adequate capacity to supply proposed order quantity in time / परियोजना समय सूची के अनुसार मात्रा आवश्यकताओं के लिए समय-सीमा और क्या प्रस्तावित उप-विक्रेता समय पर प्रस्तावित मांग की मात्रा की आपूर्ति करने में पूरी तरह से सक्षम है			
x.	Supply experience of the proposed sub-vendor (including supplies to Main Contractor, if any) for similar item/scope of sub-contracting, for last 3 years (Note:- Only relevant experience details w.r.t. proposed item/scope of subcontracting to be brought out here) पिछले 3 वर्षों के लिए उप-अनुबंध के समान मद / दायरे के लिए प्रस्तावित सब-वेंडर (मुख्य संविदाकार हेतु आपूर्ति, यदि कोई हो, सहित) का आपूर्ति अनुभव (नोट: - उप-अनुबंध के प्रस्तावित मद / दायरे के संबंध में केवल प्रासंगिक अनुभव के विवरण का उल्लेख हो						


	CORPORATE QUALITY ASSURANCE/ कॉरपोरेट गुणवत्ता आश्वासन MAIN CONTRACTOR'S PROPOSAL CUM EVALUATION REPORT मुख्य संविदाकार प्रस्ताव सह मुल्यांकन रिपोर्ट	

	Project/Package परियोजना/पैकेज	Customer Name ग्राहक का नाम	Supplied Item (Type/Rating/Model /Capacity/Size etc) आपूर्ति मद् (प्रकार/रेटिंग /मॉडल /क्षमता/आकार आदि)	PO ref no/date पीओ संदर्भ सं. /तिथि	Supplied Quantity आपूर्ति की मात्रा	Date of Supply आपूर्ति की तिथि			
<i>We confirm that as per our assessment, the proposed sub-vendor has requisite capabilities & supply experience and is suitable for supplying the proposed item/scope of sub-contracting/हम अपने आकलन के अनुसार इस बात की पुष्टि करते हैं कि, प्रस्तावित उप-विक्रेता के पास अपेक्षित क्षमता और आपूर्ति करने का अनुभव है और उप-अनुबंध के दायरे /प्रस्तावित मद् की आपूर्ति के लिए उपयुक्त है।</i>									
Name:		Desig:		Contact No:		Sign:		Date:	
नाम:		पद:		दूरभाष सं.:		हस्ताक्षर:		तिथि:	


Company's Seal/Stamp:- कंपनी का मुहर:-

	CORPORATE QUALITY ASSURANCE/ कॉरपोरेट गुणवत्ता आश्वासन SUB-VENDOR QUESTIONNAIRE/ सब-वेंडर प्रश्नावली
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i.	Item/Scope of Sub-contracting उप-संविदा(अनुबंध) का मद/ दायरा			
ii.	Address of the registered office पंजीकृत कार्यालय का पता 	Details of Contact Person संपर्क व्यक्ति का विवरण (Name, Designation, Mobile, Email) (नाम, पदनाम, मोबाइल, ईमेल)		
iii.	Name and Address of the proposed Sub-vendor's works where item is being manufactured प्रस्तावित उप-विक्रेता के कार्यों का नाम और पता, जहां मद का निर्माण किया जा रहा है 	Details of Contact Person: संपर्क व्यक्ति का विवरण (Name, Designation, Mobile, Email) (नाम, पदनाम, मोबाइल, ईमेल)		
iv.	Annual Production Capacity for proposed item/scope of sub-contracting उप-संविदा(अनुबंध) के प्रस्तावित मद / दायरे के लिए वार्षिक उत्पादन क्षमता			
v.	Annual production for last 3 years for proposed item/scope of sub-contracting उप-संविदा(अनुबंध) के प्रस्तावित मद / दायरे के लिए पिछले 3 वर्षों का वार्षिक उत्पादन			
vi.	Details of proposed works प्रस्तावित कार्यों का विवरण			
1.	Year of establishment of present works वर्तमान फैक्टरी की स्थापना का वर्ष			
2.	Year of commencement of manufacturing at above works उपरोक्त फैक्टरी में निर्माण कार्य शुरू होने का वर्ष			
3.	Details of change in Works address in past (if any) पूर्व में फैक्टरी स्थल में परिवर्तन का विवरण (यदि कोई हो)			
4.	Total Area कुल क्षेत्र Covered Area शामिल क्षेत्र			
5.	Factory Registration Certificate फैक्टरी पंजीकरण प्रमाण पत्र	Details attached at Annexure – F2.1 विवरण अनुलग्नक-एफ 2.1 पर संलग्न है		
6.	Design/ Research & development set-up डिजाइन / अनुसंधान और विकास सेटअप (No. of manpower, their qualification, machines & tools employed etc.) (श्रमिकों की संख्या, उनकी योग्यता, मशीन और उपलब्ध उपकरण आदि)	Applicable / Not applicable if manufacturing is as per Main Contractor/purchaser design) Details attached at Annexure – F2.2 (if applicable) लागू / लागू नहीं, अगर विनिर्माण मुख्य संविदाकार / खरीददार के डिजाइन के अनुसार है) विवरण अनुलग्नक –एफ 2.2 पर संलग्न है। (यदि लागू हो)		
7.	Overall organization Chart with Manpower Details (Design/Manufacturing/Quality etc) मैनपावर विवरण के साथ समग्र संगठन का चार्ट(डिजाइन / विनिर्माण / गुणवत्ता आदि)	Details attached at Annexure – F2.3 विवरण अनुलग्नक – F2.3 में संलग्न है।		

	CORPORATE QUALITY ASSURANCE/ कॉरपोरेट गुणवत्ता आश्वासन SUB-VENDOR QUESTIONNAIRE/ सब-वेंडर प्रश्नावली
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8.	After sales service set up in India, in case of foreign sub-vendor(Location, Contact Person, Contact details etc.) भारत में बिक्री सेवा की स्थापना के बाद, विदेशी उप-विक्रेता के मामले में(स्थल , संपर्क व्यक्ति, संपर्क विवरण आदि)	Applicable / Not applicable लागू / लागू नहीं Details attached at Annexure – F2.4 विवरण अनुलग्नक -2.4 पर संलग्न है।			
9.	Manufacturing process execution plan with flow chart indicating various stages of manufacturing from raw material to finished product including outsourced process, if any फ्लोचार्ट सहित विनिर्माण प्रक्रिया निष्पादन योजना , जिसमें आउटसोर्स प्रक्रिया, यदि कोई हो, सहित कच्चे माल से तैयार उत्पाद तक विनिर्माण के विभिन्न चरणों को दर्शाया गया हो,	Details attached at Annexure – F2.5 विवरण अनुलग्नक - F2.5में संलग्न है।			
10.	Sources of Raw Material/Major Bought Out Item कच्चे माल के स्रोत / खरीदे हुए मुख्य मद	Details attached at Annexure – F2.6 विवरण अनुलग्नक - F2.6में संलग्न है।			
11.	Quality Control exercised during receipt of raw material/BOI, in-process , Final Testing, packing कच्चे माल / खरीदे हुए मद, प्रक्रियाबद्ध, अंतिम परीक्षण, पैकिंग करते समय गुणवत्ता नियंत्रण	Details attached at Annexure – F2.7 विवरण अनुलग्नक - F2.7 पर संलग्न है			
12.	Manufacturing facilities (List of machines, special process facilities, material handling etc.) विनिर्माण सुविधा(मशीनों की सूची, विशेष प्रक्रिया सुविधाएं, सामग्री रख-रखाव आदि)	Details attached at Annexure – F2.8 विवरण अनुलग्नक - F2.8में संलग्न है।			
13.	Testing facilities (List of testing equipment) परीक्षण सुविधाएं(परीक्षण उपकरण की सूची)	Details attached at Annexure – F2.9 विवरण अनुलग्नक – F2. 9 में संलग्न है।			
14.	If manufacturing process involves fabrication then- यदि निर्माण प्रक्रिया में फेब्रिकेशन की गई है तो- List of qualified Welders पात्र वेल्डर की सूची List of qualified NDT personnel with area of specialization विशेषज्ञता के क्षेत्र सहित पात्र एनडीटी कार्मिकों की सूची	Applicable / Not applicable लागू / लागू नहीं Details attached at Annexure – F2.10 विवरण अनुलग्नक - F2.10में संलग्न है। (if applicable) लागू / लागू नहीं			
15.	List of out-sourced manufacturing processes with Sub-Vendors' names & addresses सब-वेंडर द्वारा बाह्य स्रोतों (उनके नाम और पते सहित)से करवाएं गए निर्माण प्रक्रियाओं की सूची	Applicable / Not applicable लागू / लागू नहीं Details attached at Annexure. –F2.11 विवरण अनुलग्नक - F2.10में संलग्न है। (if applicable) (यदि लागू हो)			
16.	Supply reference list including recent supplies नवीनतम आपूर्ति सहित आपूर्ति संदर्भ सूची	Details attached at Annexure – F2.12 विवरण अनुलग्नक - F2.12 में संलग्न है। (as per format given below) (नीचे दिए गए प्रारूप के अनुसार)			
Project/ package परियोजना /पैकेज	Customer Name ग्राहक का नाम	Supplied Item (Type/Rating/Model /Capacity/Size etc) आपूर्ति की गई वस्तु (प्रकार / रेटिंग / मॉडल / क्षमता / आकार आदि)	PO ref no/date पीओ संदर्भ सं. / तिथि	Supplied Quantity आपूर्ति की मात्रा	Date of Supply आपूर्ति की तारीख
17.	Product satisfactory performance feedback letter/certificates/End User Feedback उत्पाद के संतोषजनक प्रदर्शन संबंधी फीडबैक पत्र / प्रमाण पत्र / अंतिम उपयोगकर्ता फीडबैक			Attached at annexure - F2.13 अनुलग्नक F2. 3पर संलग्न है	

	CORPORATE QUALITY ASSURANCE/ कॉरपोरेट गुणवत्ता आश्वासन SUB-VENDOR QUESTIONNAIRE/ सब-वेंडर प्रश्नावली
---	---

18.	Summary of Type Test Report (Type Test Details, Report No, Agency, Date of testing) for the proposed product (similar or higher rating) प्रस्तावित उत्पाद (एक समान या उच्च रेटिंग वाले) के लिए टाइप टेस्ट रिपोर्ट (टाइप टेस्ट विवरण, रिपोर्ट संख्या, एजेंसी, जांच की तारीख) का सारांश नोट: - रिपोर्ट प्रस्तुत करने की आवश्यकता नहीं है Note:- Reports need not to be submitted	Applicable / Not applicable लागू / लागू नहीं Details attached at Annexure – F2.14 विवरण अनुलग्नक - F2.1 4 में संलग्न है (if applicable) (यदि लागू हो)				
19.	Statutory / mandatory certification for the proposed product प्रस्तावित उत्पाद के लिए वैधानिक / अनिवार्य प्रमाणीकरण	Applicable / Not applicable लागू / लागू नहीं Details attached at Annexure – F2.15 (if applicable) (यदि लागू हो)				
20.	Copy of ISO 9001 certificate आईएसओ 9001 प्रमाण पत्र की प्रति (if available) (यदि उपलब्ध हो)	Attached at Annexure – F2.16 अनुलग्नक में संलग्न - F2.1 6 है				
21.	Product technical catalogues for proposed item (if available) प्रस्तावित मद के लिए उत्पाद तकनीकी कैटलॉग (यदि उपलब्ध हो)	Details attached at Annexure – F2.17 विवरण अनुलग्नक - F2.1 7 में संलग्न है				
<table border="1" style="width: 100%;"> <tr> <td style="width: 25%;"> Name: नाम: </td> <td style="width: 25%;"> Desig: पद: </td> <td style="width: 25%;"> Sign: हस्ता क्षर: </td> <td style="width: 25%;"> Date: तिथि: </td> </tr> </table>			Name: नाम:	Desig: पद:	Sign: हस्ता क्षर:	Date: तिथि:
Name: नाम:	Desig: पद:	Sign: हस्ता क्षर:	Date: तिथि:			

Company's Seal/Stamp:- कंपनी की मुहर / मोहर: -

BRBCL NABINAGAR FGD - RIGID STEEL CONDUITS BOQ

Item Number	Item Title	Item Description	Item Quantity	Unit of Measure	Consignee ID	ZipCode	Delivery Period (In number of days)	Unit Price (Inclusive of TAX)	GST % Applicable	Brand	Model	HSN Code
1	558-15001-A	GI CONDUITS 1.6MM THK EPOXY 20MM DIA	400	MTR	NABI_250_PEM_CON	824303	210					
2	558-15002-A	GI CONDUITS,1.6MM THICK, 20MM DIA	10500	MTR	NABI_250_PEM_CON	824303	210					
3	558-15003-A	GI CONDUITS,1.6MM THICK, 25MM DIA	500	MTR	NABI_250_PEM_CON	824303	210					
4	558-15004-A	GI CONDUITS,2.0MM THICK, 40MM DIA	200	MTR	NABI_250_PEM_CON	824303	210					
5	558-15005-A	GI CONDUITS,2.0MM THICK, 50MM DIA	150	MTR	NABI_250_PEM_CON	824303	210					

4X250 MW BRBCL NABINAGAR FGD

VOLUME-II

**TECHNICAL SPECIFICATION FOR
*RIGID STEEL CONDUITS***

SPECIFICATION NO: PE-TS-463-558-E002

REVISION: 00



**BHARAT HEAVY ELECTRICALS LIMITED
POWER SECTOR
PROJECT ENGINEERING MANAGEMENT
NOIDA, UP (INDIA) – 201301**

401139/2021/PS-PEM-EL



TECHNICAL SPECIFICATION FOR RIGID STEEL CONDUITS

SPECIFICATION NO. PE-TS-463-558-E002

VOLUME II

SECTION

REVISION 00

DATE: 04.08.2021

SHEET 1 OF 1

CONTENTS

Sl. No.	DESCRIPTION	NO. OF SHEETS
1.0	SECTION- I	
	COMPLIANCE CERTIFICATE	01
	SPECIFIC TECHNICAL REQUIREMENTS	01
	DATA SHEET – A	01
2.0	SECTION- II	
	STANDARD TECHNICAL REQUIREMENTS	02
	STANDARD QUALITY PLAN	03
	PACKING SPECIFICATION (ANNEXURE-A)	01

Total nos. of sheets including cover & separator sheets = 13 sheets



**TECHNICAL SPECIFICATION
FOR
RIGID STEEL CONDUITS**

SPECIFICATION NO. PE-TS-463-558-E002

VOLUME II

SECTION I

REVISION 00

DATE:

SHEET 1 of 1

COMPLIANCE CERTIFICATE

The bidder shall confirm compliance to the following by signing/ stamping this compliance certificate and furnishing same with the offer.

1. The scope of supply, technical details, construction features, design parameters etc. shall be as per technical specification & there are no exclusion/ deviation with regard to same
2. There are no deviation with respect to specification other than those furnished in the 'schedule of deviations'
3. Only those technical submittals which are specifically asked for in NIT to be submitted at tender stage shall be considered as part of offer. Any other submission, even if made, shall not be considered as part of offer.
4. Any comments/ clarifications on technical/ inspection requirements furnished as part of bidder's covering letter shall not be considered by BHEL, and bidder's offer shall be construed to be in conformance with the specification.
5. Any changes made by the bidder in the price schedule with respect to the description/ quantities from those given in BOQ-Cum-Price schedule of the specification shall not be considered (i.e., technical description & quantities as per specification shall prevail).

BIDDER'S STAMP & SIGNATURE

401139/2021/PS-PEM-EL



TECHNICAL SPECIFICATION
FOR
RIGID STEEL CONDUITS

SPECIFICATION NO. PE-TS-463-558-E002

VOLUME II

SECTION I

REVISION 00

DATE:

SECTION – I



TECHNICAL SPECIFICATION FOR RIGID STEEL CONDUITS

SPECIFICATION NO. PE-TS-475-558-E002

VOLUME II

SECTION I

REVISION 00

DATE: 28.05.2021

SHEET 1 OF 1

1.0 SCOPE

- 1.1 Manufacture, Inspection and Testing at Manufacturer's works, proper packing and delivery to site of rigid steel conduits conforming to this specification.
- 1.2 Technical requirements of rigid steel conduits are indicated in Data Sheet-A & Section-II.
- 1.3 The stipulation of Data Sheet-A shall prevail in case of any conflict between the stipulations of Data Sheet-A & Section-II.

2.0 BILL OF QUANTITIES

The bidder to quote for items as per price schedule attached with NIT.

3.0 DRAWINGS & DOCUMENTS TO BE SUBMITTED

- 3.1 Documents shall be submitted after placement of order for BHEL & customer's approval as specified in NIT.
- 3.2 Documents shall be furnished through BHEL's document management system (WRENCH) portal.



TECHNICAL SPECIFICATION FOR RIGID STEEL CONDUITS

SPECIFICATION NO. PE-TS-463-558-E002

VOLUME II

SECTION I

REVISION 00

DATE:

SHEET 1 OF 1

DATA SHEET-A

1.0 APPLICABLE STANDARDS & CODES

- a) IS:9537 (Part I & II) Conduits for electrical installation.
- b) IS:2629 Recommended practice for hot dip galvanizing on iron and steel.
- c) IS:4759 Specification for hot dip zinc coatings on structural steel and allied products
- d) IS:6745 Methods for determination of mass of zinc coating on zinc coated iron and steel articles.
- e) IS:513 Cold reduced low carbon steel sheet and strip
- f) IS: 10748 Hot rolled Steel strip for welded tubes and pipes
- g) IS: 2633 Method for testing uniformity of coating on zinc coated articles
- h) IS:6005 Code of practice for phosphating iron & steel

2.0 RIGID STEEL CONDUITS

S.No.	Description	Unit	Parameters value/ type
a	Make	-	[√] BIS approved [] As per enclosed sub-vendor list
b	Material	-	Hot or Cold rolled mild steel
c	Sizes	-	As per BOQ cum price schedule
d	Standard length	meter	3 – 5
e	Classification as per mechanical properties		Heavy
f	Conduit thickness (minimum)	mm	1.6 upto 32 mm dia, 2.0 above 32 mm & upto 50 mm dia
g	Surface treatment	-	Hot dip galvanizing on inside & outside surface
h	Epoxy thickness	micron	50 (applicable for epoxy coated conduits only)

3.0 SURFACE TREATMENT

a	Pre-treatment	-	As per IS 6005 prior to galvanising
b	Type	-	Hot dip galvanizing as per IS 2629
c	Min. Thickness of zinc coating	microns	48 (upto 32 mm dia), 65 (above 32 mm & upto 50 mm dia)
d	Min. Weight of zinc coating	(gm/m ²)	340 (upto 32 mm dia) 460 (above 32 mm & upto 50 mm dia)
e	Tests for galvanizing		a) Weight of zinc coating as per IS : 6745 b) Thickness of zinc coating as per IS : 4759 c) Uniformity of zinc coating as per IS : 2633 d) Adhesion as per IS: 2629

401139/2021/PS-PEM-EL



TECHNICAL SPECIFICATION
FOR
RIGID STEEL CONDUITS

SPECIFICATION NO. PE-TS-475-558-E002

VOLUME II

SECTION II

REVISION 00

DATE:

SECTION-II



TECHNICAL SPECIFICATION FOR RIGID STEEL CONDUITS

SPECIFICATION NO. PE-TS-463-558-E002

VOLUME II

SECTION II

REVISION 00

DATE: 16.12.2020

Sheet 1 of 2

1.0 INTENT OF SPECIFICATION

The intent of specification is not to specify all details of design & construction of material. The material shall, however, conform in all aspects to high standard of design, engineering and workmanship and be capable of performing in continuous operation up to & after bidder's guarantee period in manner acceptable to purchaser who will interpret the drawings & specification and shall have power to reject any work or material which in his judgement is not in full accordance with this specification.

2.0 CODES AND STANDARDS

- 2.1 The material shall comply with all currently applicable safety codes and statutory regulations of India as well as of the locality where the material is to be installed.
- 2.2 The material, construction, manufacture, inspection and testing of Rigid steel conduits shall conform to the latest revision of relevant standards as per Data Sheet-A.
- 2.3 In case of conflict between the applicable reference standard and this specification, the stringent requirement of the two shall govern.

3.0 TECHNICAL REQUIREMENTS

- 3.1 Rigid conduits shall generally conform to the requirements of IS: 9537 (part I & II).
- 3.2 The diameter of conduits shall be uniform throughout the length. Each end of conduit length shall be threaded. The ends of conduits shall be sealed with protective caps to prevent damage to threaded portions and entrance of moisture and foreign material.
- 3.3 The inside surface of all conduits shall be smooth and suitable for pulling insulated cables and wires without damage.
- 3.4 Technical particulars of rigid conduits are specified in Data Sheet – A.

4.0 QUALITY ASSURANCE, TESTING & INSPECTION

- 4.1 Bidder shall confirm compliance with the BHEL's Standard Quality Plan (PE-QP-999-558-E001) as attached with the specification without any deviations. At contract stage, the successful bidder shall submit the Quality Plan for BHEL/ ultimate customer's approval. In case bidder has reference Quality Plan agreed with ultimate customer, same can be submitted for specific project after award of contract for BHEL/ ultimate customer's approval. There shall be no commercial implication to BHEL on account of Quality plan approval.
- 4.2 All materials shall be procured, manufactured, inspected and tested by vendor/ sub-vendor as per approved quality plan.
- 4.3 The supplier shall perform all tests necessary to ensure that the material and workmanship conform to the relevant standards and comply with the requirements of the specification. Charges for all these tests for all the equipments & components shall be deemed to be included in the bid price.



TECHNICAL SPECIFICATION FOR RIGID STEEL CONDUITS

SPECIFICATION NO. PE-TS-463-558-E002

VOLUME II

SECTION II

REVISION 00

DATE: 16.12.2020

Sheet 2 of 2

- 4.4 In case ordered quantities are manufactured and offered for inspection in more than one lot, BHEL reserves the right to witness testing on all lots without any commercial implication to BHEL.

5.0 PACKING


- 5.1 The material shall be packed to ensure protection against damage during transit, storage for prolonged periods and handling.
- 5.2 The ends of conduits shall be sealed with protective caps.
- 5.3 Each conduit shall be wrapped in plastic to prevent dust deposition.
- 5.4 The conduits should be aligned and stacked in bundles (a maximum of 25 pieces per bundle).
- 5.5 Each bundle shall be covered with jute fibre or thick plastic wrap for protection against extreme weather. Then, the bundle shall be tied with twin-strand mild steel wire, strong rope or steel strip.


6.0 MARKING

- 6.1 Rigid conduits shall be marked at least once on each manufacturing length, preferably 50 mm from one end, with the following:
- a) Manufacturer's name or trade mark, if any;
 - b) Country of manufacture; and
 - c) Nominal size of the conduits.
 - d) ISI Certification Mark.

Marking may be applied by moulding, stamping, printing, adhesive label or water slide transfers.



- 6.2 Marking shall be durable and legible.
- 6.3 Marking shall be checked by inspection and by rubbing lightly the marking by hand for 15 seconds with a piece of cloth soaked with water and again for 15 seconds with a piece of cloth soaked with petroleum spirit.

BHEL				FOR CUSTOMER REVIEW & APPROVAL			
ENGINEERING				BIDDER/SUPPLIER			
Sign & Date		Sign & Date		Doc No:			
Seal		Seal		Reviewed by:		Seal	
Prepared by: MEET SAGAR SINGH RAJPAL		Name: MEET SAGAR SINGH RAJPAL		Checked by: 		Name: KUNAL GANDHI	
Reviewed by: PRAVEEN DUTTA		Name: PRAVEEN DUTTA		Reviewed by: RITESH KUMAR		Name: RITESH KUMAR	

		MANUFACTURER/ SUPPLIER NAME & ADDRESS		STANDARD QUALITY PLAN					SPEC. NO. :		DATE:	
				CUSTOMER :					QP NO.: PE-QP-999-558-E001, R04		DATE: 23.07.2020	
				PROJECT:					PO NO.:		DATE:	
				ITEM: RIGID STEEL CONDUITS		SYSTEM: STATION LIGHTING SYSTEM			SECTION: II		SHEET 2 OF 3	
SL NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	AGENCY		REMARKS	
1	2	3	4	5	6	7	8	9	**			
					M	C/ N		*	M C N			
2.3B		MASS OF ZINC COAT.	CR	TEST	IS 9537-II	IS 6745/ APPD DS	IS-6745/ APPD DS	INSP. REPORT	✓	P	W	-
2.3C		COATING THICKNESS	CR	TEST	IS 9537-II	IS 4759/ APPD DS	IS-4759/ APPD DS	INSP. REPORT	✓	P	W	-
2.3D		EPOXY THICKNESS	MA	VISUAL/PHYSICAL	IS 9537-II	50 MICRONS	50 MICRONS	INSP. REPORT	✓	P	W	-
2.4		MARKING	CR	VISUAL/PHYSICAL	IS 9537-II	APPROVED DATA SHEET	APPROVED DATA SHEET	INSP. REPORT		P	W	-
3.0 PACKING												
	PACKING	Soundness of Packing against transit damage	Major	Visual	100%	100%	BHEL approved document	BHEL approved document	Inspection report	✓	P	W -

NOTES:

- The inspection shall be carried out once for the material offered for inspection in one lot. For subsequent lots against the same project, the material can be accepted based on certificate of compliance furnished by the vendor.
- Project specific QP shall be based on customer requirement. In case, any changes in QP commented by customer at contract stage shall be carried out by bidder without any implication to BHEL/ Customer.
- For export jobs, BHEL technical specification for seaworthy packing for export jobs is to be followed.
- Packing shall be suitable for storage at site in tropical climatic conditions.

BHEL				BIDDER/ SUPPLIER				FOR CUSTOMER REVIEW & APPROVAL			
ENGINEERING		QUALITY		Sign & Date		Sign & Date		Doc No:		Name	
Prepared by:	MEET SAGAR SINGH RAJPAL/ MUDDIT CHOPRA	Checked by:	KUNAL GANDHI	Seal		Reviewed by:		Seal			
Reviewed by:	PRAVEEN DUTTA	Reviewed by:	RITESH KUMAR			Approved by:					
											
DUTTA				JAISWAL							

MEET SAGAR SINGH RAJPAL/ MUDDIT CHOPRA

401139/2021/PS-PEM-EL

23.07.2020

PRAVEEN DUTTA


401139/2021/PS-PEM-EL

23.07.2020

RITESH KUMAR

401139/2021/PS-PEM-EL

23.07.2020

		MANUFACTURER/ SUPPLIER NAME & ADDRESS		STANDARD QUALITY PLAN					SPEC. NO. :		DATE:	
		CUSTOMER :							QP NO.: PE-QP-999-558-E001, R04		DATE: 23.07.2020	
		PROJECT:							PO NO.:		DATE:	
		ITEM: RIGID STEEL CONDUITS		SYSTEM: STATION LIGHTING SYSTEM				SECTION: II		SHEET 3 OF 3		
SL NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	AGENCY	REMARKS		
1	2	3	4	5	6	7	8	9	**			
					M	C/ N		*	M	C	N	

5. Latest revision/ year of issue of all the standards (IS/ ASME/ IEC etc.) Indicated in QP shall be referred.
6. BHEL reserves the right for conducting repeat test if required.
7. After packing and prior to issue MDCC, photographs of items to be dispatched shall be sent to BHEL purchase group for review.
8. Thickness of zinc coating shall be the average of the determination made at each end and the middle of the article.

LEGENDS:
*RECORDS, IDENTIFIED WITH "TICK"(✓) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION,
** M: SUPPLIER/MANUFACTURER/ SUB-SUPPLIER, C: MAIN SUPPLIER/ BHEL/ THIRD PARTY INSPECTION AGENCY, N: CUSTOMER,
P: PERFORM, W: WITNESS, V: VERIFICATION, AS APPROPRIATE
MA: MAJOR, MI: MINOR, CR: CRITICAL, D: DOCUMENTATION

BHEL				BIDDER/ SUPPLIER				FOR CUSTOMER REVIEW & APPROVAL			
ENGINEERING		QUALITY		Sign & Date		Sign & Date		Doc No:		Name	
Prepared by:	MEET SAGAR SINGH RAJPAL/ MUDDIT CHOPRA	Checked by:	KUNAL GANDHI	Seal		Reviewed by:		Seal			
Reviewed by:	PRAVEEN DUTTA	Reviewed by:	RITESH KUMAR			Approved by:					

MEET SAGAR SINGH RAJPAL

DATE: 2020.07.21 12:27:51

on-PRAVEEN DUTTA

PRAVEEN DUTTA

DATE: 2020.07.21 12:27:51

on-PRAVEEN DUTTA

RITESH KUMAR

DATE: 2020.07.21 12:27:51

on-PRAVEEN DUTTA

KUNAL GANDHI

DATE: 2020.07.21 12:27:51


on-PRAVEEN DUTTA

ANNEXURE-A
PACKING SPECIFICATIONS- RIGID STEEL CONDUITS

PACKING

1. The material shall be packed to ensure protection against damage during transit, storage for prolonged periods and handling.
2. The ends of conduits shall be sealed with protective caps.
3. Each conduit shall be wrapped in plastic to prevent dust deposition.
4. The conduits should be aligned and stacked in bundles (a maximum of 25 pieces per bundle).
5. Each bundle shall be covered with jute fibre / thick plastic wrap for protection against extreme weather. Then, the bundle shall be tied with twin-strand mild steel wire, strong rope or steel strip.

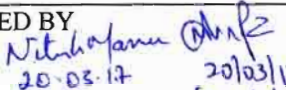
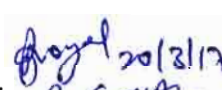
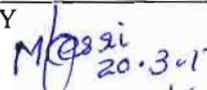
401147/2021/PS-PEM-EL

	PRE-QUALIFICATION REQUIREMENTS FOR RIGID STEEL CONDUITS	PE-PQ-999-558-E002
		REVISION NO. 01 DATE 20/03/2017
		SHEET NO. 1 OF 1

ITEMS : RIGID STEEL CONDUITS	
SCOPE : Supply : YES; Erection & Commissioning : NO.	
1.0	Vendor should be a BIS approved manufacturer of rigid steel conduits as per IS 9537 Part II.
2.0	Availability of test reports of rigid steel conduits to establish in- house capability at manufacturer's works to carry out all routine, type & acceptance tests as per relevant IS.
3.0	Capacity of manufacturing 30 MT of rigid steel conduits per month.
4.0	Manufactured and supplied at least 80 km of rigid steel conduits in one or more orders.
5.0	Minimum two (2) nos. purchase orders for rigid steel conduits shall be submitted which should not be more than five (5) years old from the date of application for registration or date of techno-commercial bid opening (as applicable) for establishing continuity in business.

NOTE:

- The vendor can offer rigid steel conduits of any BIS approved make meeting criteria S.No.1 to 4 above. The vendor to furnish the following documents:
 - Undertaking from BIS approved manufacturer of offered make to get the inspection & testing of conduits carried out at manufacturer's works.
 - Credentials of the manufacturer of offered make to meet the PQR requirements of S no 1.0 to 4.0 above.
 - Vendor's Credentials to meet S no 5.0.
- Consideration of offer shall be subject to customer's approval of bidders, if applicable.
- Bidder to submit all supporting documents in English. If documents submitted by bidder are in language other than English, a self-attested English translated document should also be submitted.
- Any other project specific requirement shall be as per Annexure-I and bidder shall submit relevant supporting documents.
- Notwithstanding anything stated above, BHEL reserves the right to assess the capabilities and capacity of the bidder/collaborators to perform the contract, should the circumstances warrant such assessment in the overall interest of BHEL.
- After satisfactory fulfillment of all the above criteria/ requirement, offer shall be considered for further evaluation as per NIT and all the other terms of the tender.

PREPARED BY  NAME: Nitish Kumar DESIGNATION: 20.03.17 (Manager Chapra)	REVIEWED BY  NAME: R. Goyal DESIGNATION: 20/3/17 Asst.	APPROVED BY  NAME: Meena Kesri DESIGNATION: 20.3.17 GM
---	---	--

**BHEL PEM ELECTRICAL
PRE-QUALIFYING REQUIREMENTS FOR RIGID STEEL CONDUITS
ANNEXURE – I
PROJECT SPECIFIC CRITERIA AGAINST ENQUIRY
PROJECT: 4X250 MW BRBCL NABINAGAR FGD**

-NIL-

Devendra Singh
[Dy. Manager]

Kavita Gupta
[Manager]

Omkar Kumar
[Section Head]

Debasisa Rath
[DH-Electrical]

Letter head of Company (<Rs. 10 Cr value)

Ref.....

Date.....

To,

Bharat Heavy Electricals Limited PEM,

PPEI Building, Plot No 25, Sector -16A,

Noida (U.P)-201301

Subject: -Certification regarding local content

Reference: Tender Enquiry No-.....

Name of Package:

Dear Sir,

We hereby certify that items offered by us of(package name).....for.....(Project Name/Rate contract)..... meets the requirement of minimum local content in line with Cl. No..... of NIT No..... dated..... and the Public Procurement (Preference to Make in India), Order 2017 dated-15.06.2017, 28.05.2018, 29.05.2019 , 04.06.2020 & 16.09.2020.

Local Content-%

We further confirms that details of location at which the local value addition is made will be our registered works at(address of the works)

Yours very truly

.....(authorized signatory of company)

.....(firm name)

ON COMPANY LETTER HEAD

To,

M/s Bharat Heavy Electricals Ltd.,
Project Engineering Management,
Power Project Engineering Institute,
HRD & ESI Complex, Plot No 25, Sector-16 A,
Noida-201301

Kind Attn. Mr.

Dear Sir,

This has reference to:

1. Our offer for RIGID STEEL CONDUITS for Combined Tender Enquiry (2 X 250 MW NSPCL BHILAI TPP FGD, 2X500 MW NTPC MAUDA FGD STAGE-I, 3X200 + 3X500 MW NTPC RAMAGUNDAM TPP FGD, 3X200+3X500+1x500 MW NTPC KORBA TPP-FGD, 3X660 MW North Karanpura FGD, 3X660 MW NPGCL NABINAGAR FGD and 4X250MW BRBCL Nabinagar FGD projects), GeM Tender No. dated

2. Order no. F. No. 6/18/2019-PPD dt. 23.07.2020 issued by Ministry of Finance, Department of Expenditure Public Procurement Division.

I have read the clause regarding restriction on procurement from a bidder of a country which shares a land border with India; I certify that M/s (Company Name _____) is not from such a country **or**, if from such a country, has been registered with the competent authority. **(Remove the non-applicable)**

I hereby certify that M/s (Company Name _____) fulfil all requirements in this regard and is eligible to be considered.

[where applicable, evidence of valid registration by the competent authority shall be attached]

Thanking You,
Yours faithfully,

Owner, partner, CMD, Director, Authorized Signatory with proof that he/she is authorized to sign on owner's behalf

M/s _____

ANNEXURE FOR RISK & COST

1. In case of delays (beyond the maximum late delivery period as per LD clause) in supplies, or if there be defective supplies or non-fulfilment of any other terms and conditions of the Contract as enumerated subsequently in this clause, then, without prejudice to its right to recover any expenses, losses or damages to which the Buyer may be put in or sustain by reason of the Seller/Contractor's default or breach of Order/Contract or to suspend business dealings with the Seller/Contractor in terms of the Buyers' Guidelines for Suspension of Business Dealings as applicable from time to time, the Buyer shall also be entitled to cancel the Order/Contract either in whole or portion thereof without compensation to Seller. On the occurrence of any of the acts/omissions mentioned below, the Buyer may if it so desires, procure upon such terms and in such manner as deemed appropriate, plant/equipment/ stores not so delivered or others of similar description where plant/ equipment/ stores exactly complying with particulars are not, in the opinion of the Buyer (which shall be final), readily procurable, at the risk and cost of the Seller.

The Seller shall be liable to the Buyer for any excess costs incurred thereof and the Seller shall continue the performance of the Order/Contract to the extent not cancelled under the provisions of this clause. The Seller shall on no account be entitled to any gain on such repurchases. If the Bidder does not agree to this Risk Purchase clause, BHEL reserves the right to reject the bid/offer of the Bidder. The order/contract may be cancelled in whole or part thereof and Risk & Cost Clause in line with terms and conditions of PO/Contract may be invoked by the Buyer in any of the following cases:

- i. If the Seller/Contractor fails to deliver the goods or materials or any instalment thereof within the period(s) fixed for such delivery or the Seller's poor progress of the supply/services vis-à-vis delivery/execution timeline as stipulated in the contract, backlog attributable to the Seller including unexecuted portion of supply does not appear to be executable within balance period available;
- ii. delivers goods or materials not of the contracted quality and failing to adhere to the contract specifications/execution methodology;
- iii. withdrawal from or repudiation/abandonment of the supply/services by the Seller before completion as per contract or if the Seller refuses or is unable to supply goods or materials covered by the order/Contract either in whole or in part or otherwise fails to perform the Order/Contract.
- iv. Non supply by the Seller within scheduled completion/delivery period as per contract or as extended from time to time for reasons attributable to the Seller;
- v. Termination of Contract on account of any other reason(s) attributable to the Seller.
- vi. Assignment, transfer, sub-letting of Contract without BHEL's written permission resulting in termination of Contract or part thereof by BHEL.
- vii. If the Seller be an individual or a Sole Proprietorship, in the event of death or insanity of the Seller.
- viii. If the Seller/Contractor being an individual or if a partnership firm thereof, shall at any time be adjudged insolvent or shall have a receiving order for administration of his estate made against him or shall take any proceeding for composition under any Insolvency Act for the time being in force or make any assignment of the order/Contract or enter into any arrangement or composition with his creditors or suspend payment or if the firm dissolved under the Partnership Act;
- ix. If the Seller/Contractor being a Company is wound up voluntarily or by order of a Court or a Receiver, Liquidator or Manager on behalf of the debenture holders and creditors is appointed or circumstances have arisen which entitles the Court of debenture holder and creditors to appoint a receiver, liquidator or manager
- x. Non- Compliance to any contractual condition or any other default attributable to the Seller.

Such defaulting vendor/Seller shall not be eligible to participate in re-tendering conducted on account of risk purchase made due to fault of such vendor/Seller.

2. BHEL's right to go for Risk and Cost, Calculation of Risk and Cost amount & L D, recovery options to BHEL are given as under: -

2.1 BHEL reserves the right to terminate the contract or withdraw portion of work and get it done through other agency, at the risk and cost of the contractor *after due notice of a period of 14 days' by BHEL* in any of the following cases:

- i) If the Seller/Contractor fails to deliver the goods or materials or any instalment thereof within the period(s) fixed for such delivery or the Seller's poor progress of the supply/ services vis-a-vis delivery/execution timeline as stipulated in the Contract, backlog attributable to seller including unexecuted portion of supply does not appear to be executable within balance available period;
- ii) Delivers goods or materials not of the contracted quality and failing to adhere to the contract specifications;
- iii) Withdrawal from or repudiation/ abandonment of the supply/ services by Seller before completion as per contract or if the Seller refuses or is unable to supply goods or materials covered by the Order/Contract either in whole or in part or otherwise fails to perform the Order/Contract;
- iv) Non-supply by the Seller within scheduled completion/delivery period as per Contract or as extended from time to time, for the reasons attributable to the Seller;
- v) Termination of Contract on account of any other reason (s) attributable to Seller.
- vi) Assignment, transfer, subletting of Contract without BHEL's written permission resulting in termination of Contract or part thereof by BHEL.
- vii) If the Seller be an individual or a sole proprietorship Firm, in the event of the death or insanity of the Seller;
- viii) If the Seller/Contractor being an individual or if a firm on a partnership thereof, shall at any time, be adjudged insolvent or shall have a receiving order for administration of his estate made against him or shall take any proceeding for composition under any Insolvency Act for the time being in force or make any assignment of the Order/Contract or enter into any arrangement or composition with his creditors or suspend payment or if the firm dissolved under the Partnership Act;
- ix) If the Seller/Contractor being a company is wound up voluntarily or by order of a Court or a Receiver, Liquidator or Manager on behalf of the debenture holders and creditors is appointed or circumstances shall have arisen which entitles the Court of debenture holder and creditors to appoint a receiver, liquidator or manager;
- x) Non-compliance to any contractual condition or any other default attributable to Seller.

2.1.1 Risk & Cost Amount against Balance Work:

Risk & Cost amount against balance work shall be calculated as follows:

$$\text{Risk \& Cost Amount} = [(A-B) + (A \times H/100)]$$

Where,

A= Value of Balance scope of Work (*) as per rates of new contract

B= Value of Balance scope of Work (*) as per rates of old contract being paid to the contractor at the time of termination of contract i.e. inclusive of PVC & ORC, if any.

H = Overhead Factor to be taken as 5

In case (A-B) is less than 0 (zero), value of (A-B) shall be taken as 0 (zero).

2.1.2 Balance scope of work (in case of termination of contract):

Difference of Contract Quantities and Executed Quantities as on the date of issue of Letter for 'Termination of Contract', shall be taken as balance scope of Work for calculating risk & cost amount.

Contract quantities are the quantities as per original contract. If, Contract has been amended, quantities as per amended Contract shall be considered as Contract Quantities.

Items for which total quantities to be executed have exceeded the Contract Quantities based on drawings issued to contractor from time to time till issue of Termination letter, then for these items total Quantities as per issued drawings would be deemed to be contract quantities.

Substitute/ extra items whose rates have already been approved would form part of contract quantities for this purpose.

Substitute/ extra items which have been executed but rates have not been approved, would also form part of contract quantities for this purpose and rates of such items shall be determined in line with contractual provisions.

However, increase in quantities on account of additional scope in new tender shall not be considered for this purpose.

NOTE: In case portion of work is being withdrawn at risk & cost of contractor instead of termination of contract, contract quantities pertaining to portion of work withdrawn shall be considered as 'Balance scope of work' for calculating Risk & Cost amount.

2.1.3 LD against delay in executed work in case of Termination of Contract:

LD against delay in executed work shall be calculated in line NIT terms & conditions, for the delay attributable to contractor. For limiting the maximum value of LD, contract value shall be taken as Executed Value of work till termination of contract.

Method for calculation of LD against delay in executed work in case of termination of contract" is given below:

- i. Let the time period from scheduled date of start of work till termination of contract excluding the period of Hold (if any) not attributable to contractor = T1
- ii. Let the value of executed work till the time of termination of contract = X
- iii. Let the Total Executable Value of work for which inputs/fronts were made available to contractor and were planned for execution till termination of contract = Y
- iv. Delay in executed work attributable to contractor i.e. $T2 = [1 - (X/Y)] \times T1$
- v. LD shall be calculated in line with LD clause (clause 16) of the Contract for the delay attributable to contractor taking "X" as Contract Value and "T2" as period of delay attributable to contractor.


2.2 Recoveries arising out of Risk & Cost and LD or any other recoveries due from Contractor:

Without prejudice to the other means of recovery of such dues from the Seller recoveries from the Seller on whom risk


& cost has been invoked shall be made from the following:

- a) Dues available in the form of Bills payable to seller, SD, BGs against the same contract.
- b) Dues payable to seller against other contracts in the same Region/Unit/ Division of BHEL.
- c) Dues payable to seller against other contracts in the different Region/Unit/ division of BHEL.

In-case recoveries are not possible with any of the above available options, Legal action shall be initiated for recovery against contractor.


	CORPORATE QUALITY ASSURANCE/ कॉरपोरेट गुणवत्ता आश्वासन MAIN CONTRACTOR'S PROPOSAL CUM EVALUATION REPORT मुख्य संविदाकार प्रस्ताव सह मुल्यांकन रिपोर्ट	

Ref No:				Date:			
संदर्भ सं.:				तिथि:			
i.	Main Contractor मुख्य संविदाकार						
ii.	Project परियोजना						
iii.	Package Name पैकेज का नाम			Package No पैकेज सं.			
iv.	Proposed Item/Scope of Sub-contracting उप- संविदा(अनुबंध) का प्रस्तावित मद/ दायरा						
v.	Item covered under निम्नलिखित के अंतर्गत शामिल मद	Schedule-1 /अनुसूची- 1				As per contract clause No- अनुबंध के अनुसार खंड सं.- -	
		Schedule-2 अनुसूची- -2					
vi.	If item is Schedule-1 and proposed sub-vendor is indigenous, Main Contractor to explain how the contractual provisions will be fulfilled /यदि मद अनुसूची -1 है और प्रस्तावित उप-विक्रेता स्वदेशी है, तो मुख्य संविदाकार को स्पष्ट करना होगा कि संविदा/अनुबंध के प्रावधान कैसे पूरे किए जाएंगे						
vii.	Name and Address of the proposed Sub-vendor's works /प्रस्तावित सब-वेंडर का नाम तथा पता						
viii.	PO placement date/ Start of manufacturing (if self-manufactured) as per L2 network पीओ नियोजन की तिथि / एल- 2 नेटवर्क के अनुसार विनिर्माण (यदि स्व-निर्मित है) की शुरुआत						
ix.	Item Description (Type/Size/Rating/Scope of Sub-Contracting) मद का विवरण (प्रकार / आकार / रेटिंग / उप-अनुबंध का दायरा)	Total quantity of proposed item envisaged in this package (Nos/ Running Meters/ Kgs/ Tons etc) इस पैकेज में परिकल्पित प्रस्तावित मद की कुल मात्रा (संख्या / क्रियाशील मीटर / किलोग्राम / टन आदि)	Quantity proposed to be procured from proposed sub-vendor (Nos/ Running Meters /Kgs /Tons etc) प्रस्तावित उप-विक्रेता (संख्या / क्रियाशील मीटर / किलोग्राम / टन आदि) से खरीदी जाने वाली मात्रा	Timeline for quantity requirements as per project schedule & whether the proposed Sub-vendor equipped with adequate capacity to supply proposed order quantity in time / परियोजना समय सूची के अनुसार मात्रा आवश्यकताओं के लिए समय-सीमा और क्या प्रस्तावित उप-विक्रेता समय पर प्रस्तावित मांग की मात्रा की आपूर्ति करने में पूरी तरह से सक्षम है			
x.	Supply experience of the proposed sub-vendor (including supplies to Main Contractor, if any) for similar item/scope of sub-contracting, for last 3 years (Note:- Only relevant experience details w.r.t. proposed item/scope of subcontracting to be brought out here) पिछले 3 वर्षों के लिए उप-अनुबंध के समान मद / दायरे के लिए प्रस्तावित सब-वेंडर (मुख्य संविदाकार हेतु आपूर्ति, यदि कोई हो, सहित) का आपूर्ति अनुभव (नोट: - उप-अनुबंध के प्रस्तावित मद / दायरे के संबंध में केवल प्रासंगिक अनुभव के विवरण का उल्लेख हो						


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	Project/Package परियोजना/पैकेज	Customer Name ग्राहक का नाम	Supplied Item (Type/Rating/Model /Capacity/Size etc) आपूर्ति मद्द (प्रकार/रेटिंग /मॉडल /क्षमता/आकार आदि)	PO ref no/date पीओ संदर्भ सं. /तिथि	Supplied Quantity आपूर्ति की मात्रा	Date of Supply आपूर्ति की तिथि			
<i>We confirm that as per our assessment, the proposed sub-vendor has requisite capabilities & supply experience and is suitable for supplying the proposed item/scope of sub-contracting/हम अपने आकलन के अनुसार इस बात की पुष्टि करते हैं कि, प्रस्तावित उप-विक्रेता के पास अपेक्षित क्षमता और आपूर्ति करने का अनुभव है और उप-अनुबंध के दायरे /प्रस्तावित मद्द की आपूर्ति के लिए उपयुक्त है।</i>									
Name:		Desig:		Contact No:		Sign:		Date:	
नाम:		पद:		दूरभाष सं.:		हस्ताक्षर:		तिथि:	


Company's Seal/Stamp:- कंपनी का मुहर:-

	CORPORATE QUALITY ASSURANCE/ कॉरपोरेट गुणवत्ता आश्वासन SUB-VENDOR QUESTIONNAIRE/ सब-वेंडर प्रश्नावली
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i.	Item/Scope of Sub-contracting उप-संविदा(अनुबंध) का मद/ दायरा			
ii.	Address of the registered office पंजीकृत कार्यालय का पता 	Details of Contact Person संपर्क व्यक्ति का विवरण (Name, Designation, Mobile, Email) (नाम, पदनाम, मोबाइल, ईमेल)		
iii.	Name and Address of the proposed Sub-vendor's works where item is being manufactured प्रस्तावित उप-विक्रेता के कार्यों का नाम और पता, जहां मद का निर्माण किया जा रहा है 	Details of Contact Person: संपर्क व्यक्ति का विवरण (Name, Designation, Mobile, Email) (नाम, पदनाम, मोबाइल, ईमेल)		
iv.	Annual Production Capacity for proposed item/scope of sub-contracting उप-संविदा(अनुबंध) के प्रस्तावित मद / दायरे के लिए वार्षिक उत्पादन क्षमता			
v.	Annual production for last 3 years for proposed item/scope of sub-contracting उप-संविदा(अनुबंध) के प्रस्तावित मद / दायरे के लिए पिछले 3 वर्षों का वार्षिक उत्पादन			
vi.	Details of proposed works प्रस्तावित कार्यों का विवरण			
1.	Year of establishment of present works वर्तमान फैक्टरी की स्थापना का वर्ष			
2.	Year of commencement of manufacturing at above works उपरोक्त फैक्टरी में निर्माण कार्य शुरू होने का वर्ष			
3.	Details of change in Works address in past (if any) पूर्व में फैक्टरी स्थल में परिवर्तन का विवरण (यदि कोई हो)			
4.	Total Area कुल क्षेत्र Covered Area शामिल क्षेत्र			
5.	Factory Registration Certificate फैक्टरी पंजीकरण प्रमाण पत्र	Details attached at Annexure – F2.1 विवरण अनुलग्नक-एफ 2.1 पर संलग्न है		
6.	Design/ Research & development set-up डिजाइन / अनुसंधान और विकास सेटअप (No. of manpower, their qualification, machines & tools employed etc.) (श्रमिकों की संख्या, उनकी योग्यता, मशीन और उपलब्ध उपकरण आदि)	Applicable / Not applicable if manufacturing is as per Main Contractor/purchaser design) Details attached at Annexure – F2.2 (if applicable) लागू / लागू नहीं, अगर विनिर्माण मुख्य संविदाकार / खरीददार के डिजाइन के अनुसार है) विवरण अनुलग्नक –एफ 2.2 पर संलग्न है। (यदि लागू हो)		
7.	Overall organization Chart with Manpower Details (Design/Manufacturing/Quality etc) मैनपावर विवरण के साथ समग्र संगठन का चार्ट(डिजाइन / विनिर्माण / गुणवत्ता आदि)	Details attached at Annexure – F2.3 विवरण अनुलग्नक – F2.3 में संलग्न है।		

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8.	After sales service set up in India, in case of foreign sub-vendor(Location, Contact Person, Contact details etc.) भारत में बिक्री सेवा की स्थापना के बाद, विदेशी उप-विक्रेता के मामले में(स्थल , संपर्क व्यक्ति, संपर्क विवरण आदि)	Applicable / Not applicable लागू / लागू नहीं Details attached at Annexure – F2.4 विवरण अनुलग्नक -2.4 पर संलग्न है।			
9.	Manufacturing process execution plan with flow chart indicating various stages of manufacturing from raw material to finished product including outsourced process, if any फ्लोचार्ट सहित विनिर्माण प्रक्रिया निष्पादन योजना , जिसमें आउटसोर्स प्रक्रिया, यदि कोई हो, सहित कच्चे माल से तैयार उत्पाद तक विनिर्माण के विभिन्न चरणों को दर्शाया गया हो,	Details attached at Annexure – F2.5 विवरण अनुलग्नक - F2.5में संलग्न है।			
10.	Sources of Raw Material/Major Bought Out Item कच्चे माल के स्रोत / खरीदे हुए मुख्य मद	Details attached at Annexure – F2.6 विवरण अनुलग्नक - F2.6में संलग्न है।			
11.	Quality Control exercised during receipt of raw material/BOI, in-process , Final Testing, packing कच्चे माल / खरीदे हुए मद, प्रक्रियाबद्ध, अंतिम परीक्षण, पैकिंग करते समय गुणवत्ता नियंत्रण	Details attached at Annexure – F2.7 विवरण अनुलग्नक - F2.7 पर संलग्न है			
12.	Manufacturing facilities (List of machines, special process facilities, material handling etc.) विनिर्माण सुविधा(मशीनों की सूची, विशेष प्रक्रिया सुविधाएं, सामग्री रख-रखाव आदि)	Details attached at Annexure – F2.8 विवरण अनुलग्नक - F2.8में संलग्न है।			
13.	Testing facilities (List of testing equipment) परीक्षण सुविधाएं(परीक्षण उपकरण की सूची)	Details attached at Annexure – F2.9 विवरण अनुलग्नक – F2. 9 में संलग्न है।			
14.	If manufacturing process involves fabrication then- यदि निर्माण प्रक्रिया में फेब्रिकेशन की गई है तो- List of qualified Welders पात्र वेल्डर की सूची List of qualified NDT personnel with area of specialization विशेषज्ञता के क्षेत्र सहित पात्र एनडीटी कार्मिकों की सूची	Applicable / Not applicable लागू / लागू नहीं Details attached at Annexure – F2.10 विवरण अनुलग्नक - F2.10में संलग्न है। (if applicable) लागू / लागू नहीं			
15.	List of out-sourced manufacturing processes with Sub-Vendors' names & addresses सब-वेंडर द्वारा बाह्य स्रोतों (उनके नाम और पते सहित)से करवाएं गए निर्माण प्रक्रियाओं की सूची	Applicable / Not applicable लागू / लागू नहीं Details attached at Annexure. –F2.11 विवरण अनुलग्नक - F2.10में संलग्न है। (if applicable) (यदि लागू हो)			
16.	Supply reference list including recent supplies नवीनतम आपूर्ति सहित आपूर्ति संदर्भ सूची	Details attached at Annexure – F2.12 विवरण अनुलग्नक - F2.12 में संलग्न है। (as per format given below) (नीचे दिए गए प्रारूप के अनुसार)			
Project/ package परियोजना /पैकेज	Customer Name ग्राहक का नाम	Supplied Item (Type/Rating/Model /Capacity/Size etc) आपूर्ति की गई वस्तु (प्रकार / रेटिंग / मॉडल / क्षमता / आकार आदि)	PO ref no/date पीओ संदर्भ सं. / तिथि	Supplied Quantity आपूर्ति की मात्रा	Date of Supply आपूर्ति की तारीख
17.	Product satisfactory performance feedback letter/certificates/End User Feedback उत्पाद के संतोषजनक प्रदर्शन संबंधी फीडबैक पत्र / प्रमाण पत्र / अंतिम उपयोगकर्ता फीडबैक			Attached at annexure - F2.13 अनुलग्नक F2. 3पर संलग्न है	

	CORPORATE QUALITY ASSURANCE/ कॉरपोरेट गुणवत्ता आश्वासन SUB-VENDOR QUESTIONNAIRE/ सब-वेंडर प्रश्नावली
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18.	Summary of Type Test Report (Type Test Details, Report No, Agency, Date of testing) for the proposed product (similar or higher rating) प्रस्तावित उत्पाद (एक समान या उच्च रेटिंग वाले) के लिए टाइप टेस्ट रिपोर्ट (टाइप टेस्ट विवरण, रिपोर्ट संख्या, एजेंसी, जांच की तारीख) का सारांश नोट: - रिपोर्ट प्रस्तुत करने की आवश्यकता नहीं है Note:- Reports need not to be submitted	Applicable / Not applicable लागू / लागू नहीं Details attached at Annexure – F2.14 विवरण अनुलग्नक - F2.1 4 में संलग्न है (if applicable) (यदि लागू हो)
19.	Statutory / mandatory certification for the proposed product प्रस्तावित उत्पाद के लिए वैधानिक / अनिवार्य प्रमाणीकरण	Applicable / Not applicable लागू / लागू नहीं Details attached at Annexure – F2.15 (if applicable) (यदि लागू हो)
20.	Copy of ISO 9001 certificate आईएसओ 9001 प्रमाण पत्र की प्रति (if available) (यदि उपलब्ध हो)	Attached at Annexure – F2.16 अनुलग्नक में संलग्न - F2.1 6 है
21.	Product technical catalogues for proposed item (if available) प्रस्तावित मद के लिए उत्पाद तकनीकी कैटलॉग (यदि उपलब्ध हो)	Details attached at Annexure – F2.17 विवरण अनुलग्नक - F2.1 7 में संलग्न है

Name:	Desig:	Sign:	Date:
नाम:	पद:	हस्ताक्षर:	तिथि:

Company's Seal/Stamp:- कंपनी की मुहर / मोहर: -

NPGC NABINAGAR FGD - RIGID STEEL CONDUITS BOQ

Item Number	Item Title	Item Description	Item Quantity	Unit of Measure	Consignee ID	ZipCode	Delivery Period (In number of days)	Unit Price (Inclusive of TAX)	GST % Applicable	Brand	Model	HSN Code
1	558-15001-A	GI CONDUITS,1.6MM THK EPOXY 20MM DIA	500	MTR	RAVI_NABINAGAR	824303	210					
2	558-15002-A	GI CONDUITS,1.6MM THICK, 20MM DIA	15000	MTR	RAVI_NABINAGAR	824303	210					
3	558-15003-A	GI CONDUITS,1.6MM THICK, 25MM DIA	500	MTR	RAVI_NABINAGAR	824303	210					
4	558-15005-A	GI CONDUITS,2.0MM THICK, 50MM DIA	120	MTR	RAVI_NABINAGAR	824303	210					

3x660 MW NPGCPL NABINAGAR STPP (FGD PKG)

TECHNICAL SPECIFICATION

FOR

RIGID STEEL CONDUITS

SPECIFICATION NO.: *PE-TS- 457-558-E002*

REVISION: 0



**BHARAT HEAVY ELECTRICALS LIMITED
POWER SECTOR
PROJECT ENGINEERING MANAGEMENT
NOIDA, UP (INDIA) – 201301**

371488/2021/PS-PEM-EL



TECHNICAL SPECIFICATION FOR RIGID STEEL CONDUITS

SPEC NO. PE-TS- 457-558-E002

VOLUME NO.: II-B


SECTION: I

REV NO.: 00 DATE: 14.07.2021

SHEET : 1 OF 11

CONTENTS

S. NO	DESCRIPTION	NO. OF SHEETS
1	SECTION I	
	COMPLIANCE CERTIFICATE	01
	SPECIFIC TECHNICAL REQUIREMENTS	01
	DATASHEET A	01
2	SECTION II	
	STANDARD TECHNICAL REQUIREMENTS	02
	STANDARD QUALITY PLAN	03

	TECHNICAL SPECIFICATION FOR RIGID STEEL CONDUITS	SPEC NO. PE-TS- 457-558-E002
		VOLUME NO.: II-B
		SECTION: I
		REV NO.: 00 DATE: 14.07.2021
		SHEET : 2 OF 11

COMPLIANCE CERTIFICATE

The bidder shall confirm compliance to the following by signing/ stamping this compliance certificate and furnishing same with the offer.

1. The scope of supply, technical details, construction features, design parameters etc. shall be as per technical specification & there are no exclusion/ deviation with regard to same
2. There are no deviation with respect to specification other than those furnished in the 'schedule of deviations'
3. Only those technical submittals which are specifically asked for in NIT to be submitted at tender stage shall be considered as part of offer. Any other submission, even if made, shall not be considered as part of offer.
4. Any comments/ clarifications on technical/ inspection requirements furnished as part of bidder's covering letter shall not be considered by BHEL, and bidder's offer shall be construed to be in conformance with the specification.
5. Any changes made by the bidder in the price schedule with respect to the description/ quantities from those given in BOQ-Cum-Price schedule of the specification shall not be considered (i.e., technical description & quantities as per specification shall prevail).

BIDDER'S STAMP & SIGNATURE

371488/2021/PS-PEM-EL

**TECHNICAL SPECIFICATION FOR
RIGID STEEL CONDUITS**

SPEC NO. PE-TS- 457-558-E002

VOLUME NO.: II-B

SECTION: I

REV NO.: 00 DATE: 14.07.2021

SHEET : 3 OF 11

SECTION – I



TECHNICAL SPECIFICATION FOR RIGID STEEL CONDUITS

SPEC NO. PE-TS- 457-558-E002

VOLUME NO.: II-B

SECTION: I

REV NO.: 00 DATE: 14.07.2021

SHEET : 4 OF 11

SPECIFIC TECHNICAL REQUIREMENTS

1.0 SCOPE

- 1.1 Manufacture, Inspection and Testing at Manufacturer's works, proper packing and delivery to site of rigid steel conduits conforming to this specification.
- 1.2 Technical requirements of rigid steel conduits are indicated in Data Sheet-A & Section-II.
- 1.3 The stipulation of Data Sheet-A shall prevail in case of any conflict between the stipulations of Data Sheet-A & Section-II.

2.0 BILL OF QUANTITIES

The bidder to quote for items as per price schedule attached with NIT.


Supplier to also give the following undertaking in the BOM: "The BoM provided herewith completes the scope (in content and intent) of material supply under PO No. -----, dated ----- . Any additional material which may become necessary for the intended application of the supplied item(s)/package will be supplied free of cost in most reasonable time."

3.0 DRAWINGS & DOCUMENTS TO BE SUBMITTED

- 3.1 Bidders shall furnish following documents as the part of their technical offer: -
 - a) Complete signed & stamped copy of this specification.
 - b) "Deviation Schedule" with "NO Deviations" and bidder's signature and company stamp.
 - c) Unpriced Price Schedule as enclosed with NIT with 'Quoted' word against items with bidder's signature and company stamp.
- 3.2 Document submission / resubmission schedule after placement of order shall be as per NIT.

4.0 PACKING

- 4.1 Packing shall be as per Clause 5 of Section -II.

	TECHNICAL SPECIFICATION FOR RIGID STEEL CONDUITS	SPEC NO. PE-TS- 457-558-E002
		VOLUME NO.: II-B
		SECTION: I
		REV NO.: 00 DATE: 14.07.2021
		SHEET : 5 OF 11

DATASHEET-A

I. APPLICABLE STANDARDS & CODES

- a) IS:9537 (Part I & II) Conduits for electrical installation.
- b) IS:2629 Recommended practice for hot dip galvanizing on iron and steel.
- c) IS:4759 Specification for hot dip zinc coatings on structural steel and allied products
- d) IS:6745 Methods for determination of mass of zinc coating on zinc coated iron and steel articles.
- e) IS:513 Cold reduced low carbon steel sheet and strip
- f) IS: 10748 Hot rolled Steel strip for welded tubes and pipes
- g) IS: 2633 Method for testing uniformity of coating on zinc coated articles
- h) IS:6005 Code of practice for phosphating iron & steel


II. RIGID STEEL CONDUITS

S.No.	Description	Unit	Parameters value/ type
a	Make	-	BIS approved [] As per enclosed sub-vendor list
b	Material	-	Hot/Cold rolled mild steel
c	Sizes	-	As per BOQ cum price schedule
d	Standard length	meter	3 – 5
e	Classification as per mechanical properties		Heavy
f	Conduit thickness (minimum)	mm	1.6 upto 25 mm dia, 2.0 above 25 mm & upto 50 mm dia
g	Surface treatment	-	Hot dip galvanizing on inside & outside surface
h	Epoxy thickness	micron	50 (applicable for epoxy coated conduits only)


III. SURFACE TREATMENT

a	Pre-treatment	–	As per IS 6005 prior to galvanising
b	Type	–	Hot dip galvanizing as per IS 2629
c	Min. Thickness of zinc coating	microns	48 (upto 25 mm dia), 65 (above 25 mm & upto 50 mm dia)
d	Min. Weight of zinc coating	(gm/m ²)	340 (upto 25 mm dia) 460 (above 25 mm & upto 50 mm dia)
e	Tests for galvanizing	–	a) Weight of zinc coating as per IS : 6745 b) Thickness of zinc coating as per IS : 4759 c) Uniformity of zinc coating as per IS : 2633 d) Adhesion as per IS: 2629

371488/2021/PS-PEM-EL

	TECHNICAL SPECIFICATION FOR RIGID STEEL CONDUITS	SPEC NO. PE-TS- 457-558-E002
		VOLUME NO.: II-B
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		REV NO.: 00 DATE: 14.07.2021
		SHEET : 6 OF 11

SECTION-II

	TECHNICAL SPECIFICATION FOR RIGID STEEL CONDUITS	SPEC NO. PE-TS- 457-558-E002
		VOLUME NO.: II-B
		SECTION: II
		REV NO.: 00 DATE: 14.07.2021
		SHEET : 7 OF 11

1.0 INTENT OF SPECIFICATION

The intent of specification is not to specify all details of design & construction of material. The material shall, however, conform in all aspects to high standard of design, engineering and workmanship and be capable of performing in continuous operation up to & after bidder's guarantee period in manner acceptable to purchaser who will interpret the drawings & specification and shall have power to reject any work or material which in his judgement is not in full accordance with this specification.

2.0 CODES AND STANDARDS

2.1 The material shall comply with all currently applicable safety codes and statutory regulations of India as well as of the locality where the material is to be installed.

2.2 The material, construction, manufacture, inspection and testing of Rigid steel conduits shall conform to the latest revision of relevant standards as per Data Sheet-A.

2.3 In case of conflict between the applicable reference standard and this specification, the stringent requirement of the two shall govern.

3.0 TECHNICAL REQUIREMENTS

3.1 Rigid conduits shall generally conform to the requirements of IS: 9537 (part I & II).

3.2 The diameter of conduits shall be uniform throughout the length. Each end of conduit length shall be threaded. The ends of conduits shall be sealed with protective caps to prevent damage to threaded portions and entrance of moisture and foreign material.

3.3 The inside surface of all conduits shall be smooth and suitable for pulling insulated cables and wires without damage.


3.4 Technical particulars of rigid conduits are specified in Data Sheet – A.

4.0 QUALITY ASSURANCE, TESTING & INSPECTION

4.1 Bidder shall confirm compliance with the BHEL's Standard Quality Plan (PE-QP-999-558-E001) as attached with the specification without any deviations. At contract stage, the successful bidder shall submit the Quality Plan for BHEL/ ultimate customer's approval. In case bidder has reference Quality Plan agreed with ultimate customer, same can be submitted for specific project after award of contract for BHEL/ ultimate customer's approval. There shall be no commercial implication to BHEL on account of Quality plan approval.

4.2 All materials shall be procured, manufactured, inspected and tested by vendor/ sub-vendor as per approved quality plan.

4.3 The supplier shall perform all tests necessary to ensure that the material and workmanship conform to the relevant standards and comply with the requirements of the specification. Charges for all these tests for all the equipments & components shall be deemed to be included

	TECHNICAL SPECIFICATION FOR RIGID STEEL CONDUITS	SPEC NO. PE-TS- 457-558-E002
		VOLUME NO.: II-B
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		SHEET : 8 OF 11

in the bid price.

4.4 In case ordered quantities are manufactured and offered for inspection in more than one lot, BHEL reserves the right to witness testing on all lots without any commercial implication to BHEL.

5.0 PACKING

5.1 The material shall be packed to ensure protection against damage during transit, storage for prolonged periods and handling.

5.2 The ends of conduits shall be sealed with protective caps.

5.3 Each conduit shall be wrapped in plastic to prevent dust deposition.

5.4 The conduits should be aligned and stacked in bundles (a maximum of 25 pieces per bundle).

5.5 Each bundle shall be covered with jute fibre / thick plastic wrap for protection against extreme weather. Then, the bundle shall be tied with twin-strand mild steel wire, strong rope or steel strip.

6.0 MARKING


6.1 Rigid conduits shall be marked at least once on each manufacturing length, preferably 50 mm from one end, with the following:

- Manufacturer's name or trade mark, if any;
- Country of manufacture; and
- Nominal size of the conduits.
- ISI Certification Mark.

Marking may be applied by moulding, stamping, printing, adhesive label or water slide transfers.

6.2 Marking shall be durable and legible.

6.3 Marking shall be checked by inspection and by rubbing lightly the marking by hand for 15 seconds with a piece of cloth soaked with water and again for 15 seconds with a piece of cloth soaked with petroleum spirit.

	MANUFACTURER/ BIDDER/ SUPPLIER NAME & ADDRESS		STANDARD QUALITY PLAN				SPEC. NO :		DATE:	
			CUSTOMER :				QP NO.: PE-QP-999-558-E001, R04		DATE: 23.07.2020	
			PROJECT:				PO NO.:		DATE:	
			ITEM: RIGID STEEL CONDUITS		SYSTEM: STATION LIGHTING SYSTEM		SECTION: II		SHEET 1 OF 3	


SL NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD		AGENCY			REMARKS
1	2	3	4	5	6		7	8	9	*	**			
					M	C/ N				D	M	C	N	

1.0 RAW MATERIAL/BOUGHT OUT ITEMS

1.1		HOT ROLLED STEEL STRIP	MA	VISUAL, MECH. & CHEMICAL	MFR. STD.	-	IS10748	IS10748	TEST CERT.	√	P	V	-	AS APPLICABLE
1.2		COLD ROLLED STEEL SHEET	MA	VISUAL, MECH. & CHEMICAL	MFR. STD.	-	IS513	IS513	TEST CERT.	√	P	V	-	AS APPLICABLE


2.0 ACCEPTANCE TESTS

2.1	RIGID STEEL CONDUITS	DIMENSIONS	MA	MEASUREMENT	IS 9537-II	IS 9537-II	IS:9537/ APPROVED DATA SHEET	APPROVED DATA SHEET	INSP. REPORT	√	P	W	-	
2.2		MECH. PROPERTIES												
2.2A		BENDING TEST	CR	TEST	IS 9537-II	IS 9537-II	IS 9537-II	IS 9537-II	INSP. REPORT	√	P	W	-	
2.2B		COMPRESSION TEST	CR	TEST	IS 9537-II	IS 9537-II	IS 9537-II	IS 9537-II	INSP. REPORT	√	P	W	-	
2.3		GALVANISATION TEST												
2.3A		UNIFORMITY OF ZINC COATING	CR	TEST	IS 9537-II	IS 9537-II	IS-2633/ APPD DS	IS-2633/ APPD DS	INSP. REPORT	√	P	W	-	

BHEL					
ENGINEERING			QUALITY		
	Sign & Date	Name		Sign & Date	Name
Prepared by:	MEET SAGAR SINGH RAJPAL MUDIT CHOPRA	MEET SAGAR SINGH RAJPAL/ MUDIT CHOPRA	Checked by:	 RITESH KUMAR JAISWAL	KUNAL GANDHI
Reviewed by:	PRAVEEN DUTTA	PRAVEEN DUTTA	Reviewed by:	RITESH KUMAR JAISWAL	RITESH KUMAR JAISWAL

BIDDER/ SUPPLIER	
Sign & Date	
Seal	

FOR CUSTOMER REVIEW & APPROVAL			
Doc No:			
	Sign & Date	Name	Seal
Reviewed by:			
Approved by:			

	MANUFACTURER/ BIDDER/ SUPPLIER NAME & ADDRESS		STANDARD QUALITY PLAN				SPEC. NO :		DATE:	
			CUSTOMER :				QP NO.: PE-QP-999-558-E001, R04		DATE: 23.07.2020	
			PROJECT:				PO NO.:		DATE:	
			ITEM: RIGID STEEL CONDUITS		SYSTEM: STATION LIGHTING SYSTEM		SECTION: II		SHEET 2 OF 3	

SL NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD		AGENCY			REMARKS
1	2	3	4	5	6		7	8	9	*	**			
					M	C/ N				D	M	C	N	


2.3B		MASS OF ZINC COAT.	CR	TEST	IS 9537-II	IS 9537-II	IS-6745/ APPD DS	IS-6745/ APPD DS	INSP. REPORT	√	P	W	-	
2.3C		COATING THICKNESS	CR	TEST	IS 9537-II	IS 9537-II	IS-4759/ APPD DS	IS-4759/ APPD DS	INSP. REPORT	√	P	W	-	BY ELCOMETER Refer Note 8
2.3D		EPOXY THICKNESS	MA	VISUAL/PHYSICAL	IS 9537-II	IS 9537-II	50 MICRONS	50 MICRONS	INSP. REPORT	√	P	W	-	AS APPLICABLE
2.4		MARKING	CR	VISUAL/PHYSICAL	IS 9537-II	IS 9537-II	APPROVED DATA SHEET	APPROVED DATA SHEET	INSP. REPORT		P	W	-	

3.0 PACKING

	PACKING	Soundness of Packing against transit damage	Major	Visual	100%	100%	BHEL * approved document	BHEL approved document	Inspection report	√	P	W	-	
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NOTES:

- The inspection shall be carried out once for the material offered for inspection in one lot. For subsequent lots against the same project, the material can be accepted based on certificate of compliance furnished by the vendor.
- Project specific QP shall be based on customer requirement. In case, any changes in QP commented by customer at contract stage shall be carried out by bidder without any implication to BHEL/ Customer.
- For export jobs, BHEL technical specification for seaworthy packing for export jobs is to be followed.
- Packing shall be suitable for storage at site in tropical climatic conditions. *Packing shall be done as per Clause 5 of Section -II of Technical specification.

BHEL					
ENGINEERING			QUALITY		
	Sign & Date	Name		Sign & Date	Name
Prepared by:	MEET SAGAR SINGH RAJPAL MUDIT CHOPRA	MEET SAGAR SINGH RAJPAL/ MUDIT CHOPRA	Checked by:		KUNAL GANDHI
Reviewed by:	PRAVEEN DUTTA	PRAVEEN DUTTA	Reviewed by:	RITESH KUMAR JAISWAL	RITESH KUMAR JAISWAL

BIDDER/ SUPPLIER	
Sign & Date	
Seal	

FOR CUSTOMER REVIEW & APPROVAL			
Doc No:			
	Sign & Date	Name	Seal
Reviewed by:			
Approved by:			

	MANUFACTURER/ BIDDER/ SUPPLIER NAME & ADDRESS		STANDARD QUALITY PLAN				SPEC. NO :		DATE:			
			CUSTOMER :				QP NO.: PE-QP-999-558-E001, R04		DATE: 23.07.2020			
			PROJECT:				PO NO.:		DATE:			
			ITEM: RIGID STEEL CONDUITS		SYSTEM: STATION LIGHTING SYSTEM		SECTION: II		SHEET 3 OF 3			
SL NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD		AGENCY	REMARKS
1	2	3	4	5	6		7	8	9	* D	** M C N	
					M	C/ N						

5. Latest revision/ year of issue of all the standards (IS/ ASME/ IEC etc.) Indicated in QP shall be referred.
6. BHEL reserves the right for conducting repeat test if required.
7. After packing and prior to issue MDCC, photographs of items to be dispatched shall be sent to BHEL purchase group for review.
8. Thickness of zinc coating shall be the average of the determination made at each end and the middle of the article.

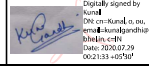
LEGENDS:

*RECORDS, IDENTIFIED WITH "TICK"(✓) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION,

** **M:** SUPPLIER/ MANUFACTURER/ SUB-SUPPLIER, **C:** MAIN SUPPLIER/ BHEL/ THIRD PARTY INSPECTION AGENCY, **N:** CUSTOMER,

P: PERFORM, **W:** WITNESS, **V:** VERIFICATION, AS APPROPRIATE

MA: MAJOR, **MI:** MINOR, **CR:** CRITICAL, **D:** DOCUMENTATION

BHEL					
ENGINEERING			QUALITY		
	Sign & Date	Name		Sign & Date	Name
Prepared by:	MEET SAGAR SINGH RAJPAL MUDIT CHOPRA	MEET SAGAR SINGH RAJPAL/ MUDIT CHOPRA	Checked by:	 Digitally signed by Kunal Gandhi DN: cn=Kunal Gandhi, o=BHEL, ou=Quality, email=k.gandhi@bhel.co.in, c=IN Date: 2020.07.29 09:23:13 +05'30'	KUNAL GANDHI
Reviewed by:	PRAVEEN DUTTA	Digitally signed by PRAVEEN DUTTA DN: cn=PRAVEEN DUTTA, o=BHEL, ou=Engineering, email=p.dutta@bhel.co.in, c=IN Date: 2020.07.25 12:27:51 +05'30'	Reviewed by:	RITESH KUMAR JAISWAL	Digitally signed by RITESH KUMAR JAISWAL DN: cn=RITESH KUMAR JAISWAL, o=BHEL, ou=Quality, email=r.jaiswal@bhel.co.in, c=IN Date: 2020.07.29 09:00:45 +05'30'

BIDDER/ SUPPLIER	
Sign & Date	
Seal	

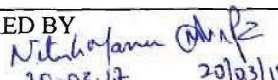
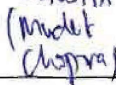
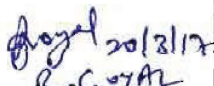
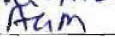
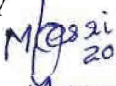
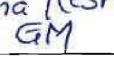
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	Sign & Date	Name	Seal
Reviewed by:			
Approved by:			

	PRE-QUALIFICATION REQUIREMENTS FOR RIGID STEEL CONDUITS	PE-PQ-999-558-E002
		REVISION NO. 01 DATE 20/03/2017
		SHEET NO. 1 OF 1

ITEMS : RIGID STEEL CONDUITS	
SCOPE : Supply : YES; Erection & Commissioning : NO.	
1.0	Vendor should be a BIS approved manufacturer of rigid steel conduits as per IS 9537 Part II.
2.0	Availability of test reports of rigid steel conduits to establish in- house capability at manufacturer's works to carry out all routine, type & acceptance tests as per relevant IS.
3.0	Capacity of manufacturing 30 MT of rigid steel conduits per month.
4.0	Manufactured and supplied at least 80 km of rigid steel conduits in one or more orders.
5.0	Minimum two (2) nos. purchase orders for rigid steel conduits shall be submitted which should not be more than five (5) years old from the date of application for registration or date of techno-commercial bid opening (as applicable) for establishing continuity in business.

NOTE:

- The vendor can offer rigid steel conduits of any BIS approved make meeting criteria S.No.1 to 4 above.
The vendor to furnish the following documents:
 - Undertaking from BIS approved manufacturer of offered make to get the inspection & testing of conduits carried out at manufacturer's works.
 - Credentials of the manufacturer of offered make to meet the PQR requirements of S no 1.0 to 4.0 above.
 - Vendor's Credentials to meet S no 5.0.
- Consideration of offer shall be subject to customer's approval of bidders, if applicable.
- Bidder to submit all supporting documents in English. If documents submitted by bidder are in language other than English, a self-attested English translated document should also be submitted.
- Any other project specific requirement shall be as per Annexure-I and bidder shall submit relevant supporting documents.
- Notwithstanding anything stated above, BHEL reserves the right to assess the capabilities and capacity of the bidder/collaborators to perform the contract, should the circumstances warrant such assessment in the overall interest of BHEL.
- After satisfactory fulfillment of all the above criteria/ requirement, offer shall be considered for further evaluation as per NIT and all the other terms of the tender.

PREPARED BY  NAME: Nishu DESIGNATION: 20/03/17 	REVIEWED BY  NAME: R. G. Ar DESIGNATION: 20/3/17 	APPROVED BY  NAME: Meena DESIGNATION: 20.3.17 
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371488/2021/PS-PEM-EL

**PRE-QUALIFICATION REQUIREMENTS FOR
RIGID STEEL CONDUITS
ANNEXURE-I
PROJECT SPECIFIC REQUIREMENT
3x660 MW NPGCPL NABINAGAR STPP (FGD PKG)**

NIL

SUJIT KUMAR SETHY

[DY MANAGER-ELECT]

AYAN SAHA

[SR. MAHAGER-ELECT]

SANDEEP LODH

[SR DGM-ELECT]

DEBASISA RATH

[AGM&DH-ELECT]

Letter head of Company (<Rs. 10 Cr value)

Ref.....

Date.....

To,

Bharat Heavy Electricals Limited PEM,

PPEI Building, Plot No 25, Sector -16A,

Noida (U.P)-201301

Subject: -Certification regarding local content

Reference: Tender Enquiry No-.....

Name of Package:

Dear Sir,

We hereby certify that items offered by us of(package name).....for.....(Project Name/Rate contract)..... meets the requirement of minimum local content in line with Cl. No..... of NIT No..... dated..... and the Public Procurement (Preference to Make in India), Order 2017 dated-15.06.2017, 28.05.2018, 29.05.2019 , 04.06.2020 & 16.09.2020.

Local Content-%

We further confirms that details of location at which the local value addition is made will be our registered works at(address of the works)

Yours very truly

.....(authorized signatory of company)

.....(firm name)

ON COMPANY LETTER HEAD

To,

M/s Bharat Heavy Electricals Ltd.,
Project Engineering Management,
Power Project Engineering Institute,
HRD & ESI Complex, Plot No 25, Sector-16 A,
Noida-201301

Kind Attn. Mr.

Dear Sir,

This has reference to:

1. Our offer for RIGID STEEL CONDUITS for Combined Tender Enquiry (2 X 250 MW NSPCL BHILAI TPP FGD, 2X500 MW NTPC MAUDA FGD STAGE-I, 3X200 + 3X500 MW NTPC RAMAGUNDAM TPP FGD, 3X200+3X500+1x500 MW NTPC KORBA TPP-FGD, 3X660 MW North Karanpura FGD, 3X660 MW NPGCL NABINAGAR FGD and 4X250MW BRBCL Nabinagar FGD projects), GeM Tender No. dated

2. Order no. F. No. 6/18/2019-PPD dt. 23.07.2020 issued by Ministry of Finance, Department of Expenditure Public Procurement Division.

I have read the clause regarding restriction on procurement from a bidder of a country which shares a land border with India; I certify that M/s (Company Name _____) is not from such a country **or**, if from such a country, has been registered with the competent authority. **(Remove the non-applicable)**

I hereby certify that M/s (Company Name _____) fulfil all requirements in this regard and is eligible to be considered.

[where applicable, evidence of valid registration by the competent authority shall be attached]

Thanking You,
Yours faithfully,

Owner, partner, CMD, Director, Authorized Signatory with proof that he/she is authorized to sign on owner's behalf

M/s _____

ANNEXURE FOR RISK & COST

1. In case of delays (beyond the maximum late delivery period as per LD clause) in supplies, or if there be defective supplies or non-fulfilment of any other terms and conditions of the Contract as enumerated subsequently in this clause, then, without prejudice to its right to recover any expenses, losses or damages to which the Buyer may be put in or sustain by reason of the Seller/Contractor's default or breach of Order/Contract or to suspend business dealings with the Seller/Contractor in terms of the Buyers' Guidelines for Suspension of Business Dealings as applicable from time to time, the Buyer shall also be entitled to cancel the Order/Contract either in whole or portion thereof without compensation to Seller. On the occurrence of any of the acts/omissions mentioned below, the Buyer may if it so desires, procure upon such terms and in such manner as deemed appropriate, plant/equipment/ stores not so delivered or others of similar description where plant/ equipment/ stores exactly complying with particulars are not, in the opinion of the Buyer (which shall be final), readily procurable, at the risk and cost of the Seller.

The Seller shall be liable to the Buyer for any excess costs incurred thereof and the Seller shall continue the performance of the Order/Contract to the extent not cancelled under the provisions of this clause. The Seller shall on no account be entitled to any gain on such repurchases. If the Bidder does not agree to this Risk Purchase clause, BHEL reserves the right to reject the bid/offer of the Bidder. The order/contract may be cancelled in whole or part thereof and Risk & Cost Clause in line with terms and conditions of PO/Contract may be invoked by the Buyer in any of the following cases:

- i. If the Seller/Contractor fails to deliver the goods or materials or any instalment thereof within the period(s) fixed for such delivery or the Seller's poor progress of the supply/services vis-à-vis delivery/execution timeline as stipulated in the contract, backlog attributable to the Seller including unexecuted portion of supply does not appear to be executable within balance period available;
- ii. delivers goods or materials not of the contracted quality and failing to adhere to the contract specifications/execution methodology;
- iii. withdrawal from or repudiation/abandonment of the supply/services by the Seller before completion as per contract or if the Seller refuses or is unable to supply goods or materials covered by the order/Contract either in whole or in part or otherwise fails to perform the Order/Contract.
- iv. Non supply by the Seller within scheduled completion/delivery period as per contract or as extended from time to time for reasons attributable to the Seller;
- v. Termination of Contract on account of any other reason(s) attributable to the Seller.
- vi. Assignment, transfer, sub-letting of Contract without BHEL's written permission resulting in termination of Contract or part thereof by BHEL.
- vii. If the Seller be an individual or a Sole Proprietorship, in the event of death or insanity of the Seller.
- viii. If the Seller/Contractor being an individual or if a partnership firm thereof, shall at any time be adjudged insolvent or shall have a receiving order for administration of his estate made against him or shall take any proceeding for composition under any Insolvency Act for the time being in force or make any assignment of the order/Contract or enter into any arrangement or composition with his creditors or suspend payment or if the firm dissolved under the Partnership Act;
- ix. If the Seller/Contractor being a Company is wound up voluntarily or by order of a Court or a Receiver, Liquidator or Manager on behalf of the debenture holders and creditors is appointed or circumstances have arisen which entitles the Court of debenture holder and creditors to appoint a receiver, liquidator or manager
- x. Non- Compliance to any contractual condition or any other default attributable to the Seller.

Such defaulting vendor/Seller shall not be eligible to participate in re-tendering conducted on account of risk purchase made due to fault of such vendor/Seller.

2. BHEL's right to go for Risk and Cost, Calculation of Risk and Cost amount & L D, recovery options to BHEL are given as under: -

2.1 BHEL reserves the right to terminate the contract or withdraw portion of work and get it done through other agency, at the risk and cost of the contractor *after due notice of a period of 14 days' by BHEL* in any of the following cases:

- i) If the Seller/Contractor fails to deliver the goods or materials or any instalment thereof within the period(s) fixed for such delivery or the Seller's poor progress of the supply/ services vis-a-vis delivery/execution timeline as stipulated in the Contract, backlog attributable to seller including unexecuted portion of supply does not appear to be executable within balance available period;
- ii) Delivers goods or materials not of the contracted quality and failing to adhere to the contract specifications;
- iii) Withdrawal from or repudiation/ abandonment of the supply/ services by Seller before completion as per contract or if the Seller refuses or is unable to supply goods or materials covered by the Order/Contract either in whole or in part or otherwise fails to perform the Order/Contract;
- iv) Non-supply by the Seller within scheduled completion/delivery period as per Contract or as extended from time to time, for the reasons attributable to the Seller;
- v) Termination of Contract on account of any other reason (s) attributable to Seller.
- vi) Assignment, transfer, subletting of Contract without BHEL's written permission resulting in termination of Contract or part thereof by BHEL.
- vii) If the Seller be an individual or a sole proprietorship Firm, in the event of the death or insanity of the Seller;
- viii) If the Seller/Contractor being an individual or if a firm on a partnership thereof, shall at any time, be adjudged insolvent or shall have a receiving order for administration of his estate made against him or shall take any proceeding for composition under any Insolvency Act for the time being in force or make any assignment of the Order/Contract or enter into any arrangement or composition with his creditors or suspend payment or if the firm dissolved under the Partnership Act;
- ix) If the Seller/Contractor being a company is wound up voluntarily or by order of a Court or a Receiver, Liquidator or Manager on behalf of the debenture holders and creditors is appointed or circumstances shall have arisen which entitles the Court of debenture holder and creditors to appoint a receiver, liquidator or manager;
- x) Non-compliance to any contractual condition or any other default attributable to Seller.

2.1.1 Risk & Cost Amount against Balance Work:

Risk & Cost amount against balance work shall be calculated as follows:

$$\text{Risk \& Cost Amount} = [(A-B) + (A \times H/100)]$$

Where,

A= Value of Balance scope of Work (*) as per rates of new contract

B= Value of Balance scope of Work (*) as per rates of old contract being paid to the contractor at the time of termination of contract i.e. inclusive of PVC & ORC, if any.

H = Overhead Factor to be taken as 5

In case (A-B) is less than 0 (zero), value of (A-B) shall be taken as 0 (zero).

2.1.2 Balance scope of work (in case of termination of contract):

Difference of Contract Quantities and Executed Quantities as on the date of issue of Letter for 'Termination of Contract', shall be taken as balance scope of Work for calculating risk & cost amount.

Contract quantities are the quantities as per original contract. If, Contract has been amended, quantities as per amended Contract shall be considered as Contract Quantities.

Items for which total quantities to be executed have exceeded the Contract Quantities based on drawings issued to contractor from time to time till issue of Termination letter, then for these items total Quantities as per issued drawings would be deemed to be contract quantities.

Substitute/ extra items whose rates have already been approved would form part of contract quantities for this purpose.

Substitute/ extra items which have been executed but rates have not been approved, would also form part of contract quantities for this purpose and rates of such items shall be determined in line with contractual provisions.

However, increase in quantities on account of additional scope in new tender shall not be considered for this purpose.

NOTE: In case portion of work is being withdrawn at risk & cost of contractor instead of termination of contract, contract quantities pertaining to portion of work withdrawn shall be considered as 'Balance scope of work' for calculating Risk & Cost amount.

2.1.3 LD against delay in executed work in case of Termination of Contract:

LD against delay in executed work shall be calculated in line NIT terms & conditions, for the delay attributable to contractor. For limiting the maximum value of LD, contract value shall be taken as Executed Value of work till termination of contract.

Method for calculation of LD against delay in executed work in case of termination of contract" is given below:

- i. Let the time period from scheduled date of start of work till termination of contract excluding the period of Hold (if any) not attributable to contractor = T1
- ii. Let the value of executed work till the time of termination of contract = X
- iii. Let the Total Executable Value of work for which inputs/fronts were made available to contractor and were planned for execution till termination of contract = Y
- iv. Delay in executed work attributable to contractor i.e. $T2 = [1 - (X/Y)] \times T1$
- v. LD shall be calculated in line with LD clause (clause 16) of the Contract for the delay attributable to contractor taking "X" as Contract Value and "T2" as period of delay attributable to contractor.


2.2 Recoveries arising out of Risk & Cost and LD or any other recoveries due from Contractor:

Without prejudice to the other means of recovery of such dues from the Seller recoveries from the Seller on whom risk


& cost has been invoked shall be made from the following:

- a) Dues available in the form of Bills payable to seller, SD, BGs against the same contract.
- b) Dues payable to seller against other contracts in the same Region/Unit/ Division of BHEL.
- c) Dues payable to seller against other contracts in the different Region/Unit/ division of BHEL.

In-case recoveries are not possible with any of the above available options, Legal action shall be initiated for recovery against contractor.


	CORPORATE QUALITY ASSURANCE/ कॉरपोरेट गुणवत्ता आश्वासन MAIN CONTRACTOR'S PROPOSAL CUM EVALUATION REPORT मुख्य संविदाकार प्रस्ताव सह मुल्यांकन रिपोर्ट	

Ref No:				Date:			
संदर्भ सं.:				तिथि:			
i.	Main Contractor मुख्य संविदाकार						
ii.	Project परियोजना						
iii.	Package Name पैकेज का नाम			Package No पैकेज सं.			
iv.	Proposed Item/Scope of Sub-contracting उप- संविदा(अनुबंध) का प्रस्तावित मद/ दायरा						
v.	Item covered under निम्नलिखित के अंतर्गत शामिल मद	Schedule-1 /अनुसूची- 1		As per contract clause No- अनुबंध के अनुसार खंड सं.- -			
		Schedule-2 अनुसूची- -2					
vi.	If item is Schedule-1 and proposed sub-vendor is indigenous, Main Contractor to explain how the contractual provisions will be fulfilled /यदि मद अनुसूची -1 है और प्रस्तावित उप-विक्रेता स्वदेशी है, तो मुख्य संविदाकार को स्पष्ट करना होगा कि संविदा/अनुबंध के प्रावधान कैसे पूरे किए जाएंगे						
vii.	Name and Address of the proposed Sub-vendor's works /प्रस्तावित सब-वेंडर का नाम तथा पता						
viii.	PO placement date/ Start of manufacturing (if self-manufactured) as per L2 network पीओ नियोजन की तिथि / एल- 2 नेटवर्क के अनुसार विनिर्माण (यदि स्व-निर्मित है) की शुरुआत						
ix.	Item Description (Type/Size/Rating/Scope of Sub-Contracting) मद का विवरण (प्रकार / आकार / रेटिंग / उप-अनुबंध का दायरा)	Total quantity of proposed item envisaged in this package (Nos/ Running Meters/ Kgs/ Tons etc) इस पैकेज में परिकल्पित प्रस्तावित मद की कुल मात्रा (संख्या / क्रियाशील मीटर / किलोग्राम / टन आदि)	Quantity proposed to be procured from proposed sub-vendor (Nos/ Running Meters /Kgs /Tons etc) प्रस्तावित उप-विक्रेता (संख्या / क्रियाशील मीटर / किलोग्राम / टन आदि) से खरीदी जाने वाली मात्रा	Timeline for quantity requirements as per project schedule & whether the proposed Sub-vendor equipped with adequate capacity to supply proposed order quantity in time / परियोजना समय सूची के अनुसार मात्रा आवश्यकताओं के लिए समय-सीमा और क्या प्रस्तावित उप-विक्रेता समय पर प्रस्तावित मांग की मात्रा की आपूर्ति करने में पूरी तरह से सक्षम है			
x.	Supply experience of the proposed sub-vendor (including supplies to Main Contractor, if any) for similar item/scope of sub-contracting, for last 3 years (Note:- Only relevant experience details w.r.t. proposed item/scope of subcontracting to be brought out here) पिछले 3 वर्षों के लिए उप-अनुबंध के समान मद / दायरे के लिए प्रस्तावित सब-वेंडर (मुख्य संविदाकार हेतु आपूर्ति, यदि कोई हो, सहित) का आपूर्ति अनुभव (नोट: - उप-अनुबंध के प्रस्तावित मद / दायरे के संबंध में केवल प्रासंगिक अनुभव के विवरण का उल्लेख हो						


	CORPORATE QUALITY ASSURANCE/ कॉरपोरेट गुणवत्ता आश्वासन MAIN CONTRACTOR'S PROPOSAL CUM EVALUATION REPORT मुख्य संविदाकार प्रस्ताव सह मुल्यांकन रिपोर्ट	

	Project/Package परियोजना/पैकेज	Customer Name ग्राहक का नाम	Supplied Item (Type/Rating/Model /Capacity/Size etc) आपूर्ति मद (प्रकार/रेटिंग /मॉडल /क्षमता/आकार आदि)	PO ref no/date पीओ संदर्भ सं. /तिथि	Supplied Quantity आपूर्ति की मात्रा	Date of Supply आपूर्ति की तिथि
<p><i>We confirm that as per our assessment, the proposed sub-vendor has requisite capabilities & supply experience and is suitable for supplying the proposed item/scope of sub-contracting/हम अपने आकलन के अनुसार इस बात की पुष्टि करते हैं कि, प्रस्तावित उप-विक्रेता के पास अपेक्षित क्षमता और आपूर्ति करने का अनुभव है और उप-अनुबंध के दायरे /प्रस्तावित मद की आपूर्ति के लिए उपयुक्त है।</i></p>						
Name: नाम:		Desig: पद:	Contact No: दूरभाष सं.:	Sign: हस्ताक्षर:		Date: तिथि:


Company's Seal/Stamp:- कंपनी का मुहर:-

	CORPORATE QUALITY ASSURANCE/ कॉरपोरेट गुणवत्ता आश्वासन SUB-VENDOR QUESTIONNAIRE/ सब-वेंडर प्रश्नावली
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i.	Item/Scope of Sub-contracting उप-संविदा(अनुबंध) का मद/ दायरा			
ii.	Address of the registered office पंजीकृत कार्यालय का पता 	Details of Contact Person संपर्क व्यक्ति का विवरण (Name, Designation, Mobile, Email) (नाम, पदनाम, मोबाइल, ईमेल)		
iii.	Name and Address of the proposed Sub-vendor's works where item is being manufactured प्रस्तावित उप-विक्रेता के कार्यों का नाम और पता, जहां मद का निर्माण किया जा रहा है 	Details of Contact Person: संपर्क व्यक्ति का विवरण (Name, Designation, Mobile, Email) (नाम, पदनाम, मोबाइल, ईमेल)		
iv.	Annual Production Capacity for proposed item/scope of sub-contracting उप-संविदा(अनुबंध) के प्रस्तावित मद / दायरे के लिए वार्षिक उत्पादन क्षमता			
v.	Annual production for last 3 years for proposed item/scope of sub-contracting उप-संविदा(अनुबंध) के प्रस्तावित मद / दायरे के लिए पिछले 3 वर्षों का वार्षिक उत्पादन			
vi.	Details of proposed works प्रस्तावित कार्यों का विवरण			
1.	Year of establishment of present works वर्तमान फैक्टरी की स्थापना का वर्ष			
2.	Year of commencement of manufacturing at above works उपरोक्त फैक्टरी में निर्माण कार्य शुरू होने का वर्ष			
3.	Details of change in Works address in past (if any) पूर्व में फैक्टरी स्थल में परिवर्तन का विवरण (यदि कोई हो)			
4.	Total Area कुल क्षेत्र Covered Area शामिल क्षेत्र			
5.	Factory Registration Certificate फैक्टरी पंजीकरण प्रमाण पत्र	Details attached at Annexure – F2.1 विवरण अनुलग्नक-एफ 2.1 पर संलग्न है		
6.	Design/ Research & development set-up डिजाइन / अनुसंधान और विकास सेटअप (No. of manpower, their qualification, machines & tools employed etc.) (श्रमिकों की संख्या, उनकी योग्यता, मशीन और उपलब्ध उपकरण आदि)	Applicable / Not applicable if manufacturing is as per Main Contractor/purchaser design) Details attached at Annexure – F2.2 (if applicable) लागू / लागू नहीं, अगर विनिर्माण मुख्य संविदाकार / खरीददार के डिजाइन के अनुसार है) विवरण अनुलग्नक –एफ 2.2 पर संलग्न है। (यदि लागू हो)		
7.	Overall organization Chart with Manpower Details (Design/Manufacturing/Quality etc) मैनपावर विवरण के साथ समग्र संगठन का चार्ट(डिजाइन / विनिर्माण / गुणवत्ता आदि)	Details attached at Annexure – F2.3 विवरण अनुलग्नक – F2.3 में संलग्न है।		

	CORPORATE QUALITY ASSURANCE/ कॉरपोरेट गुणवत्ता आश्वासन SUB-VENDOR QUESTIONNAIRE/ सब-वेंडर प्रश्नावली
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8.	After sales service set up in India, in case of foreign sub-vendor(Location, Contact Person, Contact details etc.) भारत में बिक्री सेवा की स्थापना के बाद, विदेशी उप-विक्रेता के मामले में(स्थल , संपर्क व्यक्ति, संपर्क विवरण आदि)	Applicable / Not applicable लागू / लागू नहीं Details attached at Annexure – F2.4 विवरण अनुलग्नक -2.4 पर संलग्न है।			
9.	Manufacturing process execution plan with flow chart indicating various stages of manufacturing from raw material to finished product including outsourced process, if any फ्लोचार्ट सहित विनिर्माण प्रक्रिया निष्पादन योजना , जिसमें आउटसोर्स प्रक्रिया, यदि कोई हो, सहित कच्चे माल से तैयार उत्पाद तक विनिर्माण के विभिन्न चरणों को दर्शाया गया हो,	Details attached at Annexure – F2.5 विवरण अनुलग्नक - F2.5में संलग्न है।			
10.	Sources of Raw Material/Major Bought Out Item कच्चे माल के स्रोत / खरीदे हुए मुख्य मद	Details attached at Annexure – F2.6 विवरण अनुलग्नक - F2.6में संलग्न है।			
11.	Quality Control exercised during receipt of raw material/BOI, in-process , Final Testing, packing कच्चे माल / खरीदे हुए मद, प्रक्रियाबद्ध, अंतिम परीक्षण, पैकिंग करते समय गुणवत्ता नियंत्रण	Details attached at Annexure – F2.7 विवरण अनुलग्नक - F2.7 पर संलग्न है			
12.	Manufacturing facilities (List of machines, special process facilities, material handling etc.) विनिर्माण सुविधा(मशीनों की सूची, विशेष प्रक्रिया सुविधाएं, सामग्री रख-रखाव आदि)	Details attached at Annexure – F2.8 विवरण अनुलग्नक - F2.8में संलग्न है।			
13.	Testing facilities (List of testing equipment) परीक्षण सुविधाएं(परीक्षण उपकरण की सूची)	Details attached at Annexure – F2.9 विवरण अनुलग्नक – F2. 9 में संलग्न है।			
14.	If manufacturing process involves fabrication then- यदि निर्माण प्रक्रिया में फेब्रिकेशन की गई है तो- List of qualified Welders पात्र वेल्डर की सूची List of qualified NDT personnel with area of specialization विशेषज्ञता के क्षेत्र सहित पात्र एनडीटी कार्मिकों की सूची	Applicable / Not applicable लागू / लागू नहीं Details attached at Annexure – F2.10 विवरण अनुलग्नक - F2.10में संलग्न है। (if applicable) लागू / लागू नहीं			
15.	List of out-sourced manufacturing processes with Sub-Vendors' names & addresses सब-वेंडर द्वारा बाह्य स्रोतों (उनके नाम और पते सहित)से करवाएं गए निर्माण प्रक्रियाओं की सूची	Applicable / Not applicable लागू / लागू नहीं Details attached at Annexure. –F2.11 विवरण अनुलग्नक - F2.10में संलग्न है। (if applicable) (यदि लागू हो)			
16.	Supply reference list including recent supplies नवीनतम आपूर्ति सहित आपूर्ति संदर्भ सूची	Details attached at Annexure – F2.12 विवरण अनुलग्नक - F2.12 में संलग्न है। (as per format given below) (नीचे दिए गए प्रारूप के अनुसार)			
Project/ package परियोजना /पैकेज	Customer Name ग्राहक का नाम	Supplied Item (Type/Rating/Model /Capacity/Size etc) आपूर्ति की गई वस्तु (प्रकार / रेटिंग / मॉडल / क्षमता / आकार आदि)	PO ref no/date पीओ संदर्भ सं. / तिथि	Supplied Quantity आपूर्ति की मात्रा	Date of Supply आपूर्ति की तारीख
17.	Product satisfactory performance feedback letter/certificates/End User Feedback उत्पाद के संतोषजनक प्रदर्शन संबंधी फीडबैक पत्र / प्रमाण पत्र / अंतिम उपयोगकर्ता फीडबैक			Attached at annexure - F2.13 अनुलग्नक F2. 3पर संलग्न है	

	CORPORATE QUALITY ASSURANCE/ कॉरपोरेट गुणवत्ता आश्वासन SUB-VENDOR QUESTIONNAIRE/ सब-वेंडर प्रश्नावली
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18.	Summary of Type Test Report (Type Test Details, Report No, Agency, Date of testing) for the proposed product (similar or higher rating) प्रस्तावित उत्पाद (एक समान या उच्च रेटिंग वाले) के लिए टाइप टेस्ट रिपोर्ट (टाइप टेस्ट विवरण, रिपोर्ट संख्या, एजेंसी, जांच की तारीख) का सारांश नोट: - रिपोर्ट प्रस्तुत करने की आवश्यकता नहीं है Note:- Reports need not to be submitted	Applicable / Not applicable लागू / लागू नहीं Details attached at Annexure – F2.14 विवरण अनुलग्नक - F2.1 4 में संलग्न है (if applicable) (यदि लागू हो)
19.	Statutory / mandatory certification for the proposed product प्रस्तावित उत्पाद के लिए वैधानिक / अनिवार्य प्रमाणीकरण	Applicable / Not applicable लागू / लागू नहीं Details attached at Annexure – F2.15 (if applicable) (यदि लागू हो)
20.	Copy of ISO 9001 certificate आईएसओ 9001 प्रमाण पत्र की प्रति (if available) (यदि उपलब्ध हो)	Attached at Annexure – F2.16 अनुलग्नक में संलग्न - F2.1 6 है
21.	Product technical catalogues for proposed item (if available) प्रस्तावित मद के लिए उत्पाद तकनीकी कैटलॉग (यदि उपलब्ध हो)	Details attached at Annexure – F2.17 विवरण अनुलग्नक - F2.1 7 में संलग्न है

Name:	Desig:	Sign:	Date:
नाम:	पद:	हस्ताक्षर:	तिथि:

Company's Seal/Stamp:- कंपनी की मुहर / मोहर: -