



NIT No.: TPNODL/OT/2021-22/155 Dtd 27.01.2022

**Open Tender Notification**

**For**

**Rate Contract for supply of transmission line hardware (Cross Arm, Insulator, PG clamp etc.) in TPNODL Area.**

**Tender Enquiry No.: TPNODL/OT/2021-22/155 Dtd.27.01.2022**

**Due Date for Tender Fee: 09.02.2022 [16:00 Hrs.]**

**Due Date for Bid Submission: 11.02.2022 [16:00 Hrs.]**

**TP NORTHERN ODISHA DISTRIBUTION LIMITED  
(A TATA Power and Odisha Government Joint Venture)  
Contracts & Material Management Department,  
Corporate Office, Januganj, Balasore-756019**

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## Procedure to Participate in Tender

### Tender Enquiry No- TPNODL/OT/2021-22/099

Tender Enquiry No.	Work Description	EMD (Rs.)	Tender Fee (Inclusive of GST) (Rs.)	Last Date and Time for payment of Tender Fee
NIT Number: TPNODL/OT/21 -22/155	Supply of transmission line hardware components in TPNODL Area	2,00,000	5,000	09.02.2022, 16:00 Hrs

**RC Validity: 12 months**

**Please note that corresponding details mentioned in this document will supersede any other details mentioned anywhere else in the Tender Document.**

### **Procedure to Participate in Tender.**

Following steps to be done before "Last date and time for Payment of Tender Fee" as mentioned above:

1. Eligible and Interested Bidders to submit duly signed and stamped letter on Bidder's letter head indicating
  - a. Tender Enquiry number
  - b. Name of authorized person
  - c. Contact number
  - d. E-mail id
  - e. Details of submission of Tender Fee
  - f. GST Registration No
  - g. Payment UTR No- ..... Having Remark (Bidder Name\_NIT Number)
  - h. ANID & User ID of ARIBA System(If Any)
2. Non-Refundable Tender Fee, as indicated in table above, to be submitted in the form of Direct Deposit in the following bank account and submit the receipt along with a covering letter clearly indicating the Tender Reference/ Enquiry Number –



NIT No.: TPNODL/OT/2021-22/155 Dtd 27.01.2022

Beneficiary Name – TP Northern Odisha Distribution Limited  
Bank Name – Union Bank of India  
Branch Name – Balasore Branch  
Account No – 500601010280332  
IFSC Code – UBIN0550060

E-mail with necessary attachment to be sent to [supriya.panigrahi@tpnodl.com](mailto:supriya.panigrahi@tpnodl.com) with copy to [vipin.Chauhan@tpnodl.com](mailto:vipin.Chauhan@tpnodl.com) before last date and time for payment of Tender Fee.

Interested bidders to submit Tender Fee and Authorization Letter before Last date and time as indicated above, after which link from TPNODL E-Tender system (Ariba) will be shared for further communication and bid submission.

Please note all future correspondence regarding the tender, bid submission, bid submission date extension, Pre-bid query etc will happen only through TPNODL E-Tender system (Ariba). User manual to guide the bidders to submit the bid through E-Tender system (Ariba) is also enclosed.

No e-mail or verbal correspondence will be responded. All communication will be done strictly with the bidders who have done the above step to participate in the Tender.

Also it may be strictly noted that once date of “Last date and time for Payment of Tender Participation Fee” is lapsed no Bidder will be sent link from TPNODL E-Tender System (Ariba). Without this link vendor will not be able to participate in the tender. Any last moment request to participate in tender will not be entertained.

Any payment of Tender Fee / EMD by Bidder who have not done the prerequisite will not be refunded.

Also all future corrigendum to the said tender will be informed on Tender section on website <https://www.tpnodl.com>

**Corporate office: Januganj, Balasore, Odisha-756019**

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## 1.0 Event Information

### 1.1 Scope of work

**Open Tenders** are invited through e-tender bidding process from interested and eligible bidders for entering into a Rate Contract as defined below:

**RC Validity: 12 months**

Tender Enquiry No.	Work Description	EMD (Rs.)	Tender Fee (Inclusive of GST)(Rs.)	Last Date and Time for payment of Tender Fee
TPNODL/OT/2021-22/155	Supply of transmission line hardware components in TPNODL Area	2,00,000	5000	09.02.2022; 16:00Hrs

### 1.2 Availability of Tender Documents

Please refer "Procedure to participate in the e-tender".

### 1.3 Calendar of Events

(a)	Last Date of receipt of Tender Fee	09.02.2022 ; 16:00 Hrs
(b)	Date & Time of Pre-Bid Meeting (If any)	Not Applicable due to COVID-19, Queries to be answered through e-mail/TPNODL Tender website.
(c)	Last Date of receipt of pre-bid queries, if any	02.02.2022 up to 15:00 Hrs
(d)	Last Date of Posting Consolidated replies to all the pre-bid queries as received	06.02.2022 up to 18:00 Hrs
(e)	Last date and time of receipt of Bids	11.02.2022 up to 16:00 Hrs
(f)	Date & Time of opening technical bids & EMD	11.02.2022 up to 16:30 Hrs
(g)	Date & Time of opening of Price of qualified bids	Will be notified to the successful bidders through our website / e-mail.

**Note :-** In the event of last date specified for submission of bids and date of opening of bids is declared as a closed holiday for TPNODL, the last date of submission of bids and date of opening of bids will be the following working day at appointed times.

Pre bid meeting shall be scheduled at TPNODL Corporate Office or Online. Same shall be communicated to the interested bidders post receipt of their Tender Fee.

### 1.4 Mandatory documents required along with the Bid

1.4.1 EMD of requisite value and validity.

1.4.2 Tender Fee in case the tender is downloaded from website

- 1.4.3 Requisite Documents for compliance to Qualification Criteria mentioned in Clause 1.7.
- 1.4.4 Drawing, Type Test details along with a sample of each item as specified at Annexure I (as applicable)
- 1.4.5 Duly signed and stamped 'Schedule of Deviations' as per Annexure III on bidder's letter head.
- 1.4.6 Duly signed and stamped 'Schedule of Commercial Specifications' as per Annexure IV on bidder's letter head.
- 1.4.7 Proper authorization letter/ Power of Attorney to sign the tender on the behalf of bidder.
- 1.4.8 Copy of PAN, GST, PF, ESI Registration and valid Labour License (In case any of these documents is not available with the bidder, same to be explicitly mentioned in the 'Schedule of Deviations')

***Please note that in absence of any of the above documents, the bid submitted by a bidder shall be liable for rejection.***

## **1.5 Deviation from Tender**

Normally, the deviations to tender terms are not admissible and the bids with deviation are liable for rejection. Hence, the bidders are advised to refrain from taking any deviations on this Tender. Still in case of any deviations, all such deviations shall be set out by the Bidders, clause by clause in the 'Annexure III - Schedule of Deviations' and same shall be submitted as a part of the Technical Bid.

## **1.6 Right of Acceptance/ Rejection**

Bids are liable for rejection in absence of following documents: -

- 1.6.1 EMD of requisite value and validity
- 1.6.2 Tender fee of requisite value
- 1.6.3 Price Bid as per the Price Schedule mentioned in Annexure-I
- 1.6.4 Necessary documents against compliance to Qualification Requirements mentioned at Clause 1.7 of this Tender Document.
- 1.6.5 Filled in Schedule of Deviations as per Annexure III
- 1.6.6 Filled in Schedule of Commercial Specifications as per Annexure IV
- 1.6.7 Receipt of Bid within the due date and time

TPNODL reserves the right to accept/reject any or all the bids without assigning any reason thereof.

## **1.7 Qualification Criteria**

- 1.7.1 The bidder should either be an OEM for tendered equipment or an authorized channel partner of OEM. Self-Certification to be submitted in case of OEM. In case the OEM wishes to participate in the tender through a channel partner, necessary authorization to the partner (specific to the tender enquiry) to participate on behalf of OEM shall be submitted.
- 1.7.2 The bidder should have an average annual turnover of Rs. 1 Crores in any of last three financial years out of FY 17-18, FY 18-19, FY 19-20 and FY 20-21. Copy of audited P&L Account to be submitted in this regard.

- 1.7.3 The bidder/OEM should have supplied similar spares related to transmission line hardware either 100% of the average Order value in line with Clause No.1.7.2 (Rs. 1 Cr) above during last three years; or single Order of 50% of above value during last three years; or 2 Orders of 30% each of the above value during last 3 Years. Copy of Work Order / Completion Certificate to be submitted in this regard.
- 1.7.4 Bidder/ OEM should not have been blacklisted by any Govt. Organization/utility. Bidder to give the self-certification/undertaking for it.

## 1.8 Marketing Integrity

We have a fair and competitive marketplace. The rules for bidders are outlined in the General Condition of Contracts. Bidders must agree to these rules prior to participating. In addition to other remedies available, TPNODL reserves the right to exclude a bidder from participating in future markets due to the bidder's violation of any of the rules or obligations contained in the General Condition of Contracts. A bidder who violates the market place rules or engages in behavior that disrupts the fair execution of the marketplace, may result in restriction of a bidder from further participation in the marketplace for a length of time, depending upon the seriousness of the violation. Examples of violations include, but are not limited to:

- Failure to honor prices submitted to the marketplace
- Breach of terms as published in TENDER/NIT

## 1.9 BAs Confidentiality

All information contained in this tender is confidential and shall not be disclosed, published or advertised in any manner without written authorization from TPNODL. This includes all bidding information submitted to TPNODL. All tender documents remain the property of TPNODL and all BAs are required to return these documents to TPNODL upon request. BAs who do not honor these confidentiality provisions will be excluded from participating in future bidding events.

## 2.0 Evaluation Criteria

- The bids will be evaluated technically on the compliance to tender terms and conditions.
- If Qualified technically, the bids will be evaluated commercially on the overall item wise lowest cost as calculated in Schedule of Items [ANNEXURE I]. TPNODL however, reserves the right to split the order line item wise and / or quantity wise, among more than one Bidder. Hence all bidders are advised to quote their most competitive rates.
- Bidder has to mandatorily quote as per Schedule of Items [Annexure-I]. Failing to do so TPNODL may reject the bid.

**NOTE:** In case of a new bidder not registered, existing sites shall be visited by TPNODL officials for confirming overall performance of the BA. However TPNODL reserves the right to carry out sites inspection and evaluation for any bidder prior to technical qualification. In case a bidder is found as Disqualified in the sites visit evaluation, their bid shall not be evaluated any further and shall be summarily rejected. The decision of TPNODL shall be final and binding on the bidder in this regard.

**2.1 Price Variation Clause:** The prices as finalized shall remain firm during the entire contract period.

### 3.0 Submission of Bid Documents

#### 3.1 Bid Submission

Bidders are requested to submit their offer in line with this Tender document. TPNODL shall respond to the clarification raised by various bidders and the replies will be sent to all participating bidders through e-mail.

Bids shall be submitted in 3 (Three) parts:

**FIRST PART: “EMD”** of Rs. 2,00,000/- (Rupees Two Lakhs Thousands only). The EMD shall be valid for 210 days from the due date of bid submission in the form of BG/ Bankers Pay Order favoring ‘TP Northern Odisha Distribution Limited’, payable at Balasore only. The EMD has to be strictly in the format as mentioned in General Condition of Contract, failing which it shall not be accepted and the bid as submitted shall be liable for rejection. A separate non-refundable tender fee of stipulated amount also needs to be transferred online through NEFT/ RTGS in case the tender document is downloaded from our website.

#### TPNODL Bank Details for transferring Tender Fee and EMD is as below:

Beneficiary Name – TP Northern Odisha Distribution Limited  
Bank Name – Union Bank of India  
Branch Name – Balasore Branch  
Account No – 500601010280332  
IFSC Code – UBIN0550060

*In case the EMD is in the form of BG, EMD Original Hard Copy shall be delivered at the following address in Envelope clearly indicating Tender Reference Number, Name of Tender and Bidder Name before opening of the Bid.*

*The Envelop shall be addresses to:*

**H.O.D. (Contracts)  
TP NORTHERN ODISHA DISTRIBUTION LIMITED  
(A Tata Power and Odisha Government Joint Venture)  
Corporate office: Januganj, Balasore, Odisha-756019**

The envelop shall also bear the Name & Address of the bidder along with our Tender No. and subject.

#### SECOND PART: “TECHNICAL BID” shall contain the following documents:

- Documentary evidence in support of qualifying criteria
- Technical literature/GTP/Type test report etc. (if applicable)
- Qualified manpower available
- Testing facilities (if applicable)



- e) No Deviation Certificate as per the Annexure III – Schedule of Deviations
- f) Acceptance to Commercial Terms and Conditions viz Delivery schedule/ Contract period, payment terms etc. as per the Annexure IV – Schedule of Commercial Specifications.
- g) Quality Assurance Plan/Inspection Test Plan for supply items *(if applicable)*
- h) Acceptance of Annexure II-Scope of work and service level agreement.

**The technical bid shall be properly indexed and is to be submitted through TPNODL E-tender platform (Ariba) only. Hard copy of Technical Bids need not be submitted.**

**THIRD PART: “PRICE BID”** shall contain only the price details and strictly in format as mentioned in Annexure I along with explicit break up of basic prices, Taxes & duties, Freight etc. In case any discrepancy is observed between the item description stated in Schedule of Items mentioned in the tender and the price bid submitted by the bidder, the item description as mentioned in the tender document (to the extent modified through Corrigendum issued if any) shall prevail. Price Bid is to be submitted in soft copy through TPNODL E-Tendering system (Ariba) only. Hard copy of Price Bid not be submitted.

#### **SIGNING OF BID DOCUMENTS:**

The bid must contain the name, residence and place of business of the person or persons making the bid and must be signed and sealed by the Bidder with his usual signature. The names of all persons signing should also be typed or printed below the signature.

The Bid being submitted must be signed by a person holding a Power of Attorney authorizing him to do so, certified copies of which shall be enclosed.

The Bid submitted on behalf of companies registered with the Indian Companies Act, for the time being in force, shall be signed by persons duly authorized to submit the Bid on behalf of the Company and shall be accompanied by certified true copies of the resolutions, extracts of Articles of Association, special or general Power of Attorney etc. to show clearly the title, authority and designation of persons signing the Bid on behalf of the Company. Satisfactory evidence of authority of the person signing on behalf of the Bidder shall be furnished with the bid.

A bid by a person who affixes to his signature the word ‘President’, ‘Managing Director’, ‘Secretary’, ‘Agent’ or other designation without disclosing his principal will be rejected.

The Bidder’s name stated on the Proposal shall be the exact legal name of the firm.

#### **3.2 Contact Information**

All the bidders are requested to send their pre-bid queries (if any) against this tender through e-mail within the stipulated timelines. The consolidated reply to all the queries received shall be posted on TPNODL website by the stipulated timelines as detailed in calendar of events.

#### **Communication Details:**

##### Package Owner - Contracts

Name: Ms. Supriya Panigrahi

Contact No.: 8895590483

E-Mail ID: [supriya.panigrahi@tpnodl.com](mailto:supriya.panigrahi@tpnodl.com)

## HOD Contracts

Name: Mr. Vipin Chauhan

Contact No: 9717393121

E-Mail ID: [vipin.chauhan@tpnodl.com](mailto:vipin.chauhan@tpnodl.com)

Bidders are strictly advised to communicate with Package Owner through TPNODL E-tender System (Ariba) only. They need to pay Tender Participation Fee to receive the Ariba log-in.

### **3.3 Bid Prices**

Bidders shall quote for the entire Scope of Supply/ work with a break up of prices for individual items and Taxes & duties. The bidder shall complete the appropriate Price Schedules included herein, stating the Unit rate for each item & total price with taxes, duties & freight up to destination at various sites of TPNODL. The all-inclusive prices offered shall be inclusive of all costs as well as Duties, Taxes and Levies paid or payable during the execution of the supply / work, breakup of price constituents.

The quantity break up shown else-where other than Price Schedule is tentative. The bidder shall ascertain himself regarding material required for completeness of the entire work. Any items not indicated in the price schedule but which are required to complete the job as per the Technical Specifications/ Scope of Work/ SLA mentioned in the tender, shall be deemed to be included in prices quoted.

#### **Applicable GST to be specified clearly.**

The quantity break up shown else-where other than Price Schedule is tentative. The bidder shall ascertain himself regarding material required for completeness of the entire work. Any items not indicated in the price schedule but which are required to complete the job as per the Technical Specifications/ Scope of Work/ SLA mentioned in the tender, shall be deemed to be included in prices quoted.

### **3.4 Bid Currencies**

Prices shall be quoted in Indian Rupees Only.

### **3.5 Period of Validity of Bids**

Bids shall remain valid for 180 days from the due date of submission of the bid.

Notwithstanding clause above, the TPNODL may solicit the Bidder's consent to an extension of the Period of Bid Validity. The request and responses thereto shall be made in writing.

### **3.6 Alternative Bids**

Bidders shall submit Bids, which comply with the Bidding documents. Alternative bids will not be considered. The attention of Bidders is drawn to the provisions regarding the rejection of Bids in the terms and conditions, which are not substantially responsive to the requirements of the bidding documents.

### **3.7 Modifications and Withdrawal of Bids**

The bidder is not allowed to modify or withdraw its bid after the Bid's submission. The EMD as submitted along with the bid shall be liable for forfeiture in such event

### 3.8 Earnest Money Deposit (EMD)

The bidder shall furnish, as part of its bid, an EMD amounting as specified in the tender. The EMD is required to protect the TPNODL against the risk of bidder's conduct which would warrant forfeiture.

The EMD shall be denominate in any of the following form:

- Banker's Cheque/ Demand Draft/ Pay order drawn in favor of "TP Northern Odisha Distribution Limited", payable at Balasore only
- Online transfer of requisite amount through NEFT/ RTGS.
- Bank Guarantee valid for 210 days after due date of submission.

#### ***The EMD shall be forfeited in case of:***

a) The bidder withdraws its bid during the period of specified bid validity.

**Or**

- b) The case of a successful bidder, if the Bidder does not
- i) accept the purchase order, or
  - ii) furnish the required performance security BG

### 3.9 Type Tests (if applicable)

The type tests specified in TPNODL specifications should have been carried out within five years prior to the date of opening of technical bids and test reports are to be submitted along with the bids. If type tests carried out are not within the five years prior to the date of bidding, the bidder will arrange to carry out type tests specified, at his cost. The decision to accept/ reject such bids rests with TPNODL.

## 4.0 Bid Opening & Evaluation process

### 4.1 Process to be confidential

Information relating to the examination, clarification, evaluation and comparison of Bids and recommendations for the award of a contract shall not be disclosed to Bidders or any other persons not officially concerned with such process. Any effort by a Bidder to influence the TPNODL's processing of Bids or award decisions may result in the rejection of the Bidder's Bid.

### 4.2 Technical Bid Opening

Bids shall be opened as per the schedule mentioned in Calendar of Events. In case of limited tenders, the bids shall be opened internally by TPNODL. Owing to COVID Scenario, in case of Open Tenders also, the bids shall be opened internally by TPNODL. Technical bid must not contain any cost information whatsoever.

First the "EMD" will be checked. Bids without EMD/ cost of tender (if applicable) of required amount/ validity in prescribed format, shall be rejected.

Next, the technical bid of the bidders who have furnished the requisite EMD will be opened, one by one. The salient particulars of the techno commercial bid will be read out at the sole discretion of TPNODL.

### **4.3 Preliminary Examination of Bids/ Responsiveness**

TPNODL will examine the Bids to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed, and whether the Bids are generally in order. TPNODL may ask for submission of original documents in order to verify the documents submitted in support of qualification criteria.

Arithmetical errors will be rectified on the following basis: If there is a discrepancy between the unit price and the total price per item that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price per item will be corrected. If there is a discrepancy between the Total Amount and the sum of the total price per item, the sum of the total price per item shall prevail and the Total Amount will be corrected.

Prior to the detailed evaluation, TPNODL will determine the substantial responsiveness of each Bid to the Bidding Documents including production capability and acceptable quality of the Goods offered. A substantially responsive Bid is one, which conforms to all the terms and conditions of the Bidding Documents without material deviation.

Bid determined as not substantially responsive will be rejected by the TPNODL and/or the TPNODL and may not subsequently be made responsive by the Bidder by correction of the non-conformity.

### **4.4 Techno Commercial Clarifications**

Bidders need to ensure that the bids submitted by them are complete in all respects. To assist in the examination, evaluation and comparison of Bids, TPNODL may, at its discretion, ask the Bidder for a clarification on its Bid for any deviations with respect to the TPNODL specifications and attempt will be made to bring all bids on a common footing. All responses to requests for clarification shall be in writing and no change in the price or substance of the Bid shall be sought, offered or permitted owing to any clarifications sought by TPNODL. After all techno commercial issues are clarified, the date of price bid opening will be intimated to the technically accepted bidders and same shall also be notified at TPNODL website.

### **4.5 Price Bid Opening**

Price bids will be opened at the stipulated date and time. The EMD of the bidder withdrawing or substantially altering his offer at any stage after the technical bid opening will be forfeited at the sole discretion of TPNODL without any further correspondence in this regard.

### **4.6 Reverse Auctions**

TPNODL reserves the right to conduct the reverse auction (instead of public opening of price bids) for the products / services being asked for in the tender and reserves the rights to conduct the manual negotiation with the BA who is declared L1 after Reverse Auction. The terms and conditions for such reverse auction events shall be as per the Acceptance Form attached as Annexure VI of this document. The bidders along with the tender document shall mandatorily submit a duly signed copy of the Acceptance Form attached as Annexure VI as a token of acceptance for the same.

## **5.0 Award Decision**

TPNODL will award the contract to the successful bidder whose bid has been determined to be the lowest-evaluated responsive bid as per the Evaluation Criterion mentioned at Clause 2.0. The Cost for the said calculation shall be taken as the all-inclusive cost quoted by bidder in Annexure I (Schedule of Items) subject to any corrections required in line with Clause 4.3 above. The decision to place award of contract order/LOI solely depends on TPNODL on the cost competitiveness across multiple lots, quality, delivery and bidder's capacity, in addition to other factors that TPNODL may deem relevant.

TPNODL reserves all the rights to award the contract to one or more bidders so as to meet the requirement or nullify the award decision without assigning any reason thereof.

In case any BAs is found unsatisfactory during the Contract period, the award will be cancelled and TPNODL reserves the right to award other BAs who are found fit.

## **6.0 Order of Preference/Contradiction:**

In case of contradiction in any part of various documents in tender, following shall prevail in order of preference:

1. Schedule of Items (Annexure I)
2. Post Award Contract Administration (Clause 7.0)
3. Submission of Bid Documents (Clause 3.0)
4. Scope of Work and SLA (Annexure VII)-If any
5. Technical Specifications (Annexure II)
6. Inspection Test Plan (Annexure VIII)-If any
7. Acceptance Form for Participation in Reverse Auction (Annexure VI)
8. General Conditions of Contract (Annexure IX)

## **7.0 Post Award Contract Administration**

### **7.1 Special Conditions of Contract**

1. After finalization of tender, Rate Contract shall be issued on successful bidder with a validity period of 12 Months. Prices shall remain firm till validity of issued rate contract. Within the validity of rate contract and as per requirement of material, release order shall be issued time to time.
2. Within 21 days from the date of issue of RC to BA, BA shall submit PBG equivalent to 5% of the contract value which shall be valid till warranty period plus one month.
3. The Warranty shall be 24 months from the date of material received at TPNODL Store/Site in good condition.
4. The total time for completion of delivery at TPNODL Stores/Site shall be 2 months from the date of receipt of release order/GTP Approval.
5. Any relevant drawings and GTP approval need to be submitted within 7 Days of receipt of RC. In case, re-submission of drawings is required on request of TPNODL, same needs to be submitted back to TPNODL within 5 days of such request.

6. Bidder shall provide the fitment certificate at the time of dispatch the material.
7. Physical Inspection of the materials will be carried out at destination after delivery. The materials not found suitable as per technical specification during inspection, will be rejected.
8. TPNODL reserves the rights to short close the issued Release Order / Purchase Order, in case of any quality issues.
9. 100% payment shall be made to BA within 45 days on receipt of certified original bills / invoices in the name of TP Northern Odisha Distribution Limited subject to fulfilment of order obligations.
10. Any change in statutory taxes, duties and levies shall be borne by TPNODL.
11. TPNODL appreciates and welcomes the engagement/employment of persons from SC/ST community or any other deprived section of society by their BAs.
12. Quotation in all BOM items is mandatory, and bid shall be rejected if any line item of BOQ is found blank in un price bid.
13. TPNODL keeps the right to repeat the order within 12 months at same price.
14. All the terms and conditions of TPNODL GCC- Supply shall be applicable.

## **7.2 Drawing Submission & Approval**

Any relevant drawings and GTPs need to be submitted within 7 Days of receipt of firm Order by the successful bidder to TPNODL for approval.

In case, re-submission of drawings is required on request of TPNODL, same needs to be submitted back to TPNODL within 5 days of such request.

## **7.3 Delivery Terms**

The material shall be delivered within 2 month from issue of Release Order/GTP Approval.

## **7.4 Warranty Period**

As mentioned in 7.1 Special condition of contract.

## **7.5 Payment Terms**

On delivery of the materials in good condition and certification of acceptance by certified official, Associate shall submit the Bills/ Invoices in original in the name of TP Northern Odisha Distribution Ltd. to Invoice Desk. The payment shall be released within 45 days from the date of submission of certified bills/ invoices. However, bidders falling in MSME category the payment shall be released within 30 days.

## **7.6 Climate Change**

Significant quantities of waste are generated during the execution of project and an integrated approach for effective handling, storage, transportation and disposal of the same shall be adopted. This would ensure the minimization of environmental and social impact in order to combat the climate change.

## 7.7 Ethics

- TPNODL is an ethical organization and as a policy TPNODL lays emphasis on ethical practices across its entire domain. Bidder should ensure that they should abide by all the ethical norms and in no form either directly or indirectly be involved in unethical practice.
- TPNODL work practices are governed by the Tata Code of Conduct which emphasizes on the following:
  - We shall select our suppliers and service providers fairly and transparently.
  - We seek to work with suppliers and service providers who can demonstrate that they share similar values. We expect them to adopt ethical standards comparable to our own.
  - Our suppliers and service providers shall represent our company only with duly authorized written permission from our company. They are expected to abide by the Code in their interactions with, and on behalf of us, including respecting the confidentiality of information shared with them.
  - We shall ensure that any gifts or hospitality received from, or given to, our suppliers or service providers comply with our company's gifts and hospitality policy.
  - We respect our obligations on the use of third party intellectual property and data.

Bidder is advised to refer GCC attached at Annexure IX for more information.

Any ethical concerns with respect to this tender can be reported to the following e-mail ID: [ceoffice@tpnodl.com](mailto:ceoffice@tpnodl.com)

## 8.0 Specification and standards

As per Annexure I & II

## 9.0 General Condition of Contract

Any condition not mentioned above shall be applicable as per GCC for Service attached along with this tender at Annexure IX.

## 10.0 Safety

Safety related requirements as mentioned in our safety Manual put in the Company's website which can be accessed by:

[http:// www.tpnodl.com](http://www.tpnodl.com)

All Associates shall strictly abide by the guidelines provided in the safety manual at all relevant stages during the contract period.

All jobs of this tender have to be executed strictly in compliance to the Safety terms and Conditions of TP Northern Odisha Distribution Limited. Please refer attached Safety terms and conditions, Annexure-X, for details. Violation of Safety norms will result in Penalty as mentioned in the above document.

**ANNEXURE-I**  
**Schedule for Items**

SINo	Material Description	Qty	UoM	HSN Code	Base Unit Price-Rs.	GST	All inclusive UNIT Price (FOR Price)-Rs	Amount Rs.
1	CROSS ARM HT V SHAPE FOR 33KV	3000	EA					
2	BOLT MS 16 X 175 MM	6000	KG					
3	PIN INSULATOR POLYMER 33KV 24MM FRP DIA	10000	EA					
4	DISC INSULATOR POLYMER 33KV T&C 70 KN	1500	EA					
5	CLAMP PG 3 BOLTED M-12 100MM SQR AAAC	7000	EA					
6	CLAMP PG 4 BOLTED FOR DOG CONDUCTOR	4000	EA					
7	CLAMP PG FOR GNAT - A-80	7000	EA					
<b>Total All Inclusive Amount</b>								

**NOTE:**

- The quantity mentioned above is for evaluation purpose only and may vary during the execution. Release Orders against this Rate Contract shall be issued by TPNODL as per actual requirement.
- The unit price with GST, is landed price FOR TPNODL Odisha Locations. Exact delivery location shall be specified in the Release Order.



- The bidders are advised to quote prices strictly in the above format. Failing to do so, bids are liable for rejection.
- The bidder must fill each and every column of the above format. **Mentioning “extra/inclusive” in any of the column may lead for rejection of the price bid.**
- No cutting/ overwriting in the prices is permissible.

**Annexure II**  
**Technical Specifications**  
**Attached along with the tender after annexure-IX**

**ANNEXURE III**  
**Schedule of Deviations**

*Bidders are advised to refrain from taking any deviations on this TENDER. Still in case of any deviations, all such deviations from this tender document shall be set out by the Bidders, Clause by Clause in this schedule and submit the same as a part of the **Technical Bid**.*

**Unless specifically mentioned in this schedule, the tender shall be deemed to confirm the TPNODL’s specifications:**

S. No.	Clause No.	Tender Clause Details	Details of deviation with justifications

***By signing this document we hereby withdraw all the deviations whatsoever taken anywhere in this bid document and comply to all the terms and conditions, technical specifications, scope of work etc. as mentioned in the standard document except those as mentioned above.***

**Seal of the Bidder:**

**Signature:**

**Name:**

CONFIDENTIAL

## ANNEXURE IV

### Schedule of Commercial Specifications

*(The bidders shall mandatorily fill in this schedule and enclose it with the offer Part I: Technical Bid. In the absence of all these details, the offer may not be acceptable.)*

S. No.	Particulars	Remarks
1.	Prices firm or subject to variation (If variable indicate the price variation clause with the ceiling if applicable)	Firm / Variable
1a.	If variable price variation on clause given	Yes / No
1b.	Ceiling	----- %
1c.	Inclusive of Excise Duty	Yes / No (If Yes, indicate % rate)
1d.	GST applicable at concessional rate	Yes / No (If Yes, indicate % rate)
1e.	Octroi payable extra	Yes / No (If Yes, indicate % rate)
1f.	Inclusive of transit insurance	Yes / No
2.	Delivery	Weeks / months
3.	Guarantee clause acceptable	Yes / No
4.	Terms of payment acceptable	Yes / No
5.	Performance Bank Guarantee acceptable (For <b>3or5%</b> of order value for guarantee period)	Yes / No
6.	Liquidated damages clause acceptable	Yes / No
7.	Validity (180 days) (From the date of opening of technical bid)	Yes / No
8.	Inspection during stage of manufacture	Yes / No
9.	Rebate for increased quantity	Yes / No (If Yes, indicate value)
10.	Change in price for reduced quantity	Yes / No (If Yes, indicate value)
11.	Covered under Small Scale and Ancillary Industrial Undertaking Act 1992	Yes / No (If Yes, indicate, SSI Reg'n No.)

## ANNEXURE V

### Checklist of all the documents to be submitted with the Bid

Bidder has to mandatorily fill in the checklist mentioned below:-

S. No.	Documents attached	Yes / No / Not Applicable
1	EMD of required value	
2	Tender Fee as mentioned in this RFQ	
3	Company profile/ organogram	
4	Signed copy of this RFQ as an unconditional acceptance	
5	Duly filled schedule of commercial specifications (Annexure IV)	
6	Sheet of commercial/ technical deviation if any (Annexure III)	
7	Balance sheet for the last completed three financial years; mandatorily enclosing Profit & loss account statement	
8	Acknowledgement for Testing facilities if available (duly mentioned on bidder letter head)	
9	List of Machine/ tools with updated calibration certificates if applicable	
10	Details of order copy (duly mentioned on bidder letter head)	
11	Order copies as a proof of quantity executed	
12	Details of Type Tests if applicable (duly mentioned on bidder letter head)	
13	All the relevant Type test certificates as per relevant IS/ IEC (CPRI/ ERDA/ other certified agency) if applicable	
14	Project/ Supply Completion certificates	
15	Performance certificates	
16	Client Testimonial/ Performance Certificates	
17	Credit rating/ Solvency certificate	
18	Undertaking regarding non blacklisting (On company letter head)	
19	List of trained/ Untrained Manpower	

## Annexure VI

### Acceptance Form for Participation In Reverse Auction Event

*(To be signed and stamped by the bidder)*

In a bid to make our entire procurement process more fair and transparent, TPNODL intends to use the reverse auctions as an integral part of the entire tendering process. All the bidders who are found as technically qualified based on the tender requirements shall be eligible to participate in the reverse auction event.

**The following terms and conditions are deemed as accepted by the bidder on participation in the bid event:**

1. TPNODL shall provide the user id and password to the authorized representative of the bidder. *(Authorization Letter in lieu of the same shall be submitted along with the signed and stamped Acceptance Form).*
2. TPNODL will make every effort to make the bid process transparent. However, the award decision by TPNODL would be final and binding on the supplier.
3. The bidder agrees to non-disclosure of trade information regarding the purchase, identity of TPNODL, bid process, bid technology, bid documentation and bid details.
4. The bidder is advised to understand the auto bid process to safeguard themselves against any possibility of non-participation in the auction event.
5. In case of bidding through Internet medium, bidders are further advised to ensure availability of the entire infrastructure as required at their end to participate in the auction event. Inability to bid due to telephone line glitch, internet response issues, software or hardware hangs, power failure or any other reason shall not be the responsibility of TPNODL.
6. In case of intranet medium, TPNODL shall provide the infrastructure to bidders. Further, TPNODL has sole discretion to extend or restart the auction event in case of any glitches in infrastructure observed which has restricted the bidders to submit the bids to ensure fair & transparent competitive bidding. In case of an auction event is restarted, the best bid as already available in the system shall become the start price for the new auction.
7. In case the bidder fails to participate in the auction event due any reason whatsoever, it shall be presumed that the bidder has no further discounts to offer and the initial bid as submitted by the bidder as a part of the tender shall be considered as the bidder's final no regret offer. Any offline price bids received from a bidder in lieu of non-participation in the auction event shall be out-rightly rejected by TPNODL.
8. The bidder shall be prepared with competitive price quotes on the day of the bidding event.
9. The prices as quoted by the bidder during the auction event shall be inclusive of all the applicable taxes, duties and levies and shall be FOR at TPNODL site.
10. The prices submitted by a bidder during the auction event shall be binding on the bidder.
11. No requests for time extension of the auction event shall be considered by TPNODL.
12. The original price bids of the bidders shall be reduced on pro-rata basis against each line item based on the final all inclusive prices offered during conclusion of the auction event for arriving at Contract amount.

**Signature & Seal of the Bidder**

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**Annexure VII**  
**Scope of Work & SLA**  
**As mentioned in annexure I & II**


**Annexure VIII**  
**Inspection Test Plan**  
**NA**

**Annexure IX**  
**GCC Supply**  
**Attached after technical specification**

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3)	CLIMATIC CONDITIONS OF THE INSTALLATION
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17)	GUARANTEED TECHNICAL PARTICULARS
18)	SCHEDULE OF DEVIATIONS

Initiator	<i>Suryakanta Mohanty</i>	HOD (Engineering)	<i>Sanku P.D.</i>
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## 1. SCOPE

This specification covers the technical requirements of design, manufacture, test at manufacturer's works, packing & forwarding, supply and unloading at store/ site of 33 KV Pin polymer insulator 10 KN used in 33 KV Overhead Transmission lines.



## 2. APPLICABLE STANDARDS:

Insulator shall comply with the requirements stated in the latest editions of the following standards

- IEC: 61109: Definition, test methods and acceptance criteria for composite insulators for A.C. overhead lines above 1000V.
- IEC: 61952: Insulators for overhead lines - Composite line post insulators for alternative current.
- IS: 2071/ IEC: 60060-1: Methods of High Voltage Testing.
- IS: 2486/ IEC: 60120: Specification for Insulator fittings for Overhead Power Lines with a nominal voltage greater than 1000V General Requirements and Tests, Dimensional Requirements Locking Devices.
- IEC: 60575: Thermal Mechanical Performance test and mechanical performance test on string insulator units.
- IS: 13134/ IEC: 60815: Guide for the selection of insulators in respect of polluted condition.
- STRI guide 1.92/1: Hydrophobicity Classification Guide.
- IEC: 60437: Methods of RI Test of HV insulators.
- IS: 4759: Hot dip zinc coatings on structural steel & other allied products.
- IS: 2629: Recommended Practice for Hot, Dip Galvanization for iron and steel.
- IS: 6745: Determination of Weight of Zinc Coating on Zinc coated iron and steel articles.
- IS: 2633: Testing of Uniformity of Coating of zinc coated articles.
- ASTM D 578-05: Standard specification for glass fiber strands.

## 3. CLIMATIC CONDITIONS:

a)	Maximum Ambient Temperature	50 °C
b)	Maximum Daily Average Ambient Temperature	40 °C
c)	Minimum Ambient Temperature	2 °C
d)	Maximum Humidity	99.7 %
e)	Minimum Humidity	15 %

Initiator		HOD (Engineering)	
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f)	Average rainy days per annum	160 days
g)	Average number of thunderstorm days per annum	70
h)	Wind velocity	200 km/hr
i)	Average Annual Rainfall	1800 mm

Note: The atmosphere across coastal divisions of TPNODL is very saline, laden with salt, acid and dust suspended during dry months and subjected to fog in cold months. The design of the equipment and accessories shall be suitable to withstand seismic forces corresponding to an acceleration of 0.3g.

<b>4. GENERAL TECHNICAL REQUIREMENTS</b>			
Sl. No.	Description	Unit	Requirements
1.	Type of Insulator		Polymeric Pin Insulator
2.	Standard according to which the Insulators are manufactured and tested.		IEC 61952 & IEC 61109
3.	Material of Housing and Weather Sheds		High voltage grade rubber
a.	Material of Core (FRP Rod)		ECR BORON FREE
b.	Material of end fittings		SGI Cast/Forged steel
c.	Sealing compound for end fittings		Silicone Sealant
4.	Colour of housing		Grey
5.	<b><u>ELECTRICAL CHARACTERISTICS</u></b>		
a)	Nominal system voltage	kV	33
b)	Highest system voltage	kV	36
c)	Dry Power frequency withstand voltage	kV	95
d)	Wet Power frequency withstand voltage	kV	75
e)	Dry Power Frequency Flashover Voltage	kV	130
f)	Wet Power Frequency Flashover voltage	kV	90
g)	Dry Lightning Impulse withstand Voltage	kV	Positive: 170 KV Negative: 180 KV
h)	Dry Lightning Impulse Flashover Voltage	kV	Positive: 210 KV Negative: 230 KV
i)	RIV at 1 MHz when energized at 10 KV/ 30 KV (rms. ) under dry condition	microvolt	< 70
j)	Dry arc distance	Mm	300
k)	Visible Discharge Test Voltage	kV (rms. )	27
6.	<b><u>OTHER PHYSICAL &amp; DIMENSIONAL REQUIREMENTS:</u></b>		
a)	Creepage distance (Min.)	Mm	900
b)	Minimum Failing Load	KN	10
c)	Dia. of FRP Rod	Mm	24
d)	Length of FRP Rod	Mm	300
e)	Diameter of weather sheds	Mm	110
f)	Thickness of Housing	Mm	3
g)	No. of weather sheds (min.)	Nos.	8
h)	Method of fixing sheds to housing		Injection Moulding
i)	Type of Sheds		Aerodynamic

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j)	Dia. of bottom end fitting	Mm	24
k)	Thread Length of bottom end fitting	Mm	130
l)	Type of Packing		Wooden / Corrugated Box
m)	No. of Insulators in each box	Nos.	20

## **5. GENERAL CONSTRUCTION**

Polymeric Insulators shall be designed to meet the high quality, safety and reliability and are capable of withstanding a wide range of environmental conditions.

Polymeric Insulators shall consist of THREE parts, at least two of which are insulating parts: -

- a. Core – the internal insulating part
- b. Housing – the external insulating part
- c. Weather Sheds
- d. Metal End Fittings.

### **5.1 CORE**

It shall be a glass-fiber reinforced epoxy resin rod of high strength (FRP rod). Glass fibers and resin shall be optimized in the FRP rod. Glass fibers shall be Boron free electrically corrosion resistant (ECR) glass fiber and shall exhibit both high electrical integrity and high resistance to acid corrosion. The matrix of the FRP rod shall be Hydrolysis resistant. The FRP rod shall be manufactured through Pultrusion process. The FRP rod shall be void free. All rods must pass electric leakage current test of 170V/mm. The leakage current shall not exceed 0.05mA.

### **5.2 POLYMER HOUSING**

The FRP rod shall be covered by a seamless sheath of high voltage grade Silicone rubber housing of thickness 3mm minimum. It shall be one-piece housing using only Injection Molding process to cover the core. Primer should be used to bond the housing with FRP rod. The housing shall be designed to provide the necessary creepage distance and protection against environmental influences. Housing shall conform to the requirements of IEC 60815 with latest amendments. The high voltage grade Silicone rubber polymer material should be as per requirement specified in clause 8.2.2

### **5.3 WEATHER SHEDS**

The composite polymer weather sheds made of high voltage grade Silicone rubber polymer shall be molded as part of the sheath and shall be free from imperfections. It should protect the FRP rod against environmental influences, external pollution and humidity. The strength of the weather shed to sheath interface shall be greater than the tearing strength of the polymer. The interface, if any, between sheds and sheath (housing) shall be free from voids. Housing and weather shed material shall have tensile strength of 3 MPa with 400% elongation minimum and tear strength of 16N/mm. The high voltage grade Silicone rubber polymer material should be as per requirement specified in clause 8.2.2

### **5.4 METAL END FITTINGS**

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End fitting transmit the mechanical load to the core. They shall be made of spheroidal graphite cast iron, malleable cast iron or forged steel or aluminum alloy. Metal end fittings shall be suitable for pin type hardware support of respective specified mechanical load and shall be hot dip galvanized in accordance with IS 2629. They shall be connected to the rod by means of a controlled compression technique. The OD of end fittings should be machined to make the surface uniform round to ensure effective sealing when housing is molded over it. The material used in fittings shall be corrosion resistant. As the main duty of the end fittings is the transfer of mechanical loads to the core the fittings should be properly attached to the core by a coaxial or hexagonal compression process & should not damage the individual fibers or crack the core. The dimensions of end fittings of insulators shall be in accordance with the standard dimensions stated in IEC: 60120/ IS: 2486 - Part-II /1989. Outer portion of Pin should be Zinc sleeved with minimum 99.95% purity of Electrolytic high grade zinc. Bottom end metal fitting (Shank) of Pin insulator should be forged steel as per IS 2002/92. Bottom end fitting should be single unit without any joints. Nuts as per IS 1363 (P-11I) and spring washer shall be as per IS 3063 with Latest amendments if any, Nuts and spring washer shall be hot dip galvanized.

The design of the insulator shall be such that stresses due to expansion and contraction in any part of the insulators shall not lead to deterioration. The Pin insulator shall not engage directly with hard metal.

## 6. MARKING

Each insulator shall be legibly and indelibly marked as-

- Name & Trade mark of the manufacturer
- Month and year of manufacture
- Minimum failing load in KN
- "TPNODL" Name should be mentioned on each insulator.

## 7. TESTS :

### TYPE TESTS :

- Dry lightning impulse withstand voltage test.
- Dry/Wet power frequency test.
- Mechanical load-time test.
- Radio interference test.
- Recovery of Hydrophobicity test.
- Brittle fracture resistance test.
- Cantilever Load withstand test for Pin Insulators.

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Tests on the high voltage grade Silicone rubber material used in manufacture of the insulator housing and weather sheds:

The bidder shall furnish following type test reports conducted on High voltage Silicone rubber material used for Polymer housing confirming following properties along with their bid:

Sl. No.	Property	Requirement	Standard
1.	Tensile Strength (MPa)	4 MPa min	ASTM D 412 – 06 a
2.	Elongation (%)	300 %	ASTM D 412 – 06 a
3.	Tear Strength	15 N / mm min	ASTMD 624
4.	Inclined plane tracking & erosion resistance test	4.5 kV 360 min	ASTM D 2303
5.	Volume Resistivity (Ohm - cm)	$1 \times 10^{13}$ ohm – cm min	ASTM D 257
6.	Dielectric constant	4	ASTM D 150
7.	Dielectric constant	26 kV / mm min	ASTM D 149
8.	Density	1.5 min	ASTM D 792
9.	Hardness (shore A)	62 nominal	ASTM D 2240
10.	Arc resistance	>220 seconds	ASTM D 495 – 99
11.	Silicone Content	>40%	BS: 2782 – Pt 10
12.	Flammability	V0	UL 94

**ACCEPTANCE TEST :**

- a) Physical & Dimensional Verification of materials.
- b) Mechanical Load Test
- c) Galvanizing test.
- d) Dry Power Frequency Withstand Voltage Test

**ROUTINE TEST :**

- a) Physical & Dimensional Verification of materials.
- b) Mechanical Load Test
- c) Identification of Marking

**8. TYPE TEST CERTIFICATES:**

The Bidder shall furnish the type test certificates of the 33 KV Pin Polymer Insulators for the tests as mentioned above as per the corresponding standards. All the tests shall be conducted at CPRI/ERDA as per

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the relevant standards. Type tests should have been conducted in certified Test laboratories during the period not exceeding 5 years from the date of opening the bid. In the event of any discrepancy in the test reports, i.e. any test report not acceptable, same shall be carried out without any cost implication to TPNODL.

### **9. PRE-DISPATCH INSPECTION:**

Equipment shall be subject to inspection by a duly authorized representative of the TPNODL Inspection may be made at any stage of manufacture at the option of the purchaser and the equipment if found unsatisfactory as to workmanship or material is liable to rejection. Supplier shall grant free access to the places of manufacture to TPNODL's representatives at all times when the work is in progress. Inspection by the TPNODL or its authorized representatives shall not relieve the supplier of his obligation of furnishing equipment in accordance with the specifications. Material shall be dispatched after specific MDCC (Material Dispatch Clearance Certificate) is issued by TPNODL.

Following documents shall be sent along with material

- i. Test Reports
- ii. MDCC issued by TPNODL
- iii. Invoice in duplicate
- iv. Packing list
- v. Drawings & catalogue
- vi. Guarantee/ Warrantee card
- vii. Delivery Challan
- viii. Other Documents(as applicable)

### **10. INSPECTION AFTER RECEIPT AT STORE:**

TPNODL Inspectors will inspect the material received at TPNODL Store and shall have right to reject if found different from the reports of the pre-dispatch inspection.

### **11. GUARANTEE:**

Supplier shall stand guarantee towards design, materials, workmanship & quality of process/manufacturing of items under the contract for due and intended performance of the same, as an integrated product delivered under this contract. In the event any defect is found by the Company up to a period of 12 months from the date of commissioning or 24 months from the date of last supplies made under the contract, whichever is earlier, supplier shall be liable to undertake to replace/rectify such defects at his own costs. within mutually agreed timeframe, and to the entire satisfaction of the Company, failing which the Company will be at liberty to get it replaced/rectified at supplier's risks and costs and recover all such expenses plus the Company's own charges (@ 20% of expenses incurred), from the supplier or from the "Security cum Performance Deposit" as the case may be. Supplier shall further be responsible for 'free replacement' for another period of THREE years from the end of the guarantee period for any 'Latent Defects' if noticed and reported by the Company.

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### **12. PACKING AND TRANSPORT:**

Supplier shall ensure that all equipment covered by this specification shall be prepared for rail/road transport (local equipment) and be packed in such a manner as to protect it from damage in transit.

### **13. TENDER SAMPLE:**

As and when required.

### **14. QUALITY CONTROL:**

The bidder shall submit with the offer Quality assurance plan indicating the various stages of inspection, the tests and checks which will be carried out on the material of construction, components during manufacture and bought out items and fully assembled component and equipment after finishing. As part of the plan, a schedule for stage and final inspection within the parameters of the delivery schedule shall be furnished. The Purchaser's engineer or its nominated representative shall have free access to the manufacturer's/sub-supplier's works to carry out inspections.

### **15. TESTING FACILITIES:**



Supplier/ Manufacturer shall have adequate in house testing facilities for carrying out all routine tests & acceptance tests as per relevant International/ Indian standards.

### **16. DRAWINGS AND DOCUMENTS:**

Following drawings and documents shall be prepared based on TPNOL specifications and statutory requirements and shall be submitted with the bid:

- a) Completely filled in Technical Particulars
- b) General description of the equipment and all components including brochures.
- c) Experience List
- d) Type test certificates.

**Drawings / documents to be submitted after the award of the contract are as under:**

Initiator		HOD (Engineering)	
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<b>TPNODL</b> TP NORTHERN ODISHA DISTRIBUTION LIMITED <small>(A Tata Power and Odisha Government Joint Venture)</small>		<b>TP NORTHERN ODISHA DISTRIBUTION LIMITED</b>	
<b>TECHNICAL SPECIFICATIONS</b>			
<b>SPECIFICATION FOR 33kV POLYMERIC PIN INSULATORS</b>			
Doc. Title			
Doc. No	ENG-EHV-010	Eff. Date: 06.12.2021	
Rev No.	00	Page 9 of 11	
Prepared by:	Reviewed by:	Approved by:	Issued by:

Sl. No.	Description	For Approval	For Review Information	Final Submission
1.	Technical Parameters	✓		✓
2.	General Arrangement Drawing	✓		✓
3.	Mounting and fixing arrangement		✓	✓
4.	Instruction for use		✓	✓
5.	QA & QC Plan & Type Test certificates	✓	✓	✓

### 17. GUARANTEED TECHNICAL PARTICULARS

Bidder shall submit guaranteed technical particulars in the attached format:

Sl.no	Description	Unit	Requirements
1.	Type of Insulator		Polymeric Pin Insulator
2.	Standard according to which the Insulators are manufactured and tested.		IEC 61952 & IEC 61109
3.	Material of Housing and Weather Sheds		High voltage grade rubber
a.	Material of Core (FRP Rod)		ECR BORON FREE
b.	Material of end fittings		SGI Cast/Forged steel
c.	Sealing compound for end fittings		Silicone Sealant
4.	Colour of housing		Grey
5.	<b><u>ELECTRICAL CHARACTERISTICS</u></b>		
a.	Nominal system voltage	kV	33
b.	Highest system voltage	kV	36
c.	Dry Power frequency withstandvoltage	kV	95
d.	Wet Power frequency withstandvoltage	kV	75
e.	Dry Power Frequency Flashover Voltage	kV	130
f.	Wet Power Frequency Flashover voltage	kV	90
g.	Dry Lightning Impulse withstand Voltage	kV	Positive: 170 KV Negative: 180 KV
h.	Dry Lightning Impulse FlashoverVoltage	kV	Positive: 210 KV Negative: 230 KV
i.	RIV at 1 MHz when energized at 10 KV/ 30 KV (rms. ) under dry condition	micro volt	< 70
j.	Dry arc distance	mm	300
k.	Visible Discharge Test Voltage	kV (rms. )	27
6.	<b><u>OTHER PHYSICAL &amp; DIMENSIONAL REQUIREMENTS:</u></b>		
a.	Creepage distance (Min.)	mm	900

To be furnished by Bidder

Initiator	<i>Suryakanta Mohanty</i>	HOD (Engineering)	<i>Sanku P.D.</i>
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<b>TECHNICAL SPECIFICATIONS</b>			
<b>SPECIFICATION FOR 33kV POLYMERIC PIN INSULATORS</b>			
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Prepared by:	Reviewed by:	Approved by:	Issued by:

b.	Minimum Failing Load	KN	10
c.	Dia. of FRP Rod	mm	24
d.	Length of FRP Rod	mm	300
e.	Diameter of weather sheds	mm	110
f.	Thickness of Housing	mm	3
g.	No. of weather sheds (min.)	Nos.	8
h.	Method of fixing sheds to housing		Injection Moulding
i.	Type of Sheds		Aerodynamic
j.	Dia. of bottom end fitting	mm	24
k.	Thread Length of bottom end fitting	mm	130
l.	Type of Packing		Wooden / Corrugated Box
m.	No. of Insulators in each box	Nos.	20

## 18. SCHEDULE OF DEVIATIONS

The Bidders shall set out all deviations from this specification, Clause by Clause in this schedule. Unless specifically mentioned in this schedule, the bidder shall be deemed to confirm the purchaser's specifications. (Format is attached)

### (TO BE ENCLOSED WITH TECHNICAL BID)

All deviations from this specification shall be set out by the Bidders, clause by Clause in this schedule. Unless specifically mentioned in this Schedule, the tender shall be deemed to confirm the Purchaser's specifications:

Sl. No.	Clause No.	Details of deviation with justifications
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Initiator	<i>Suryakanta Mohanty</i>	HOD (Engineering)	<i>Sanku P.D.</i>
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<b>TPNODL</b> TP NORTHERN ODISHA DISTRIBUTION LIMITED <small>(A Tata Power and Odisha Government Joint Venture)</small>	<b>TP NORTHERN ODISHA DISTRIBUTION LIMITED</b>		
	<b>TECHNICAL SPECIFICATIONS</b>		
<b>Doc. Title</b>	<b>SPECIFICATION FOR 33kV POLYMERIC PIN INSULATORS</b>		
<b>Doc. No</b>	ENG-EHV-010	<b>Eff. Date: 06.12.2021</b>	
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<b>Prepared by:</b>	<b>Reviewed by:</b>	<b>Approved by:</b>	<b>Issued by:</b>

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We confirm that there are no deviations apart from those mentioned above.

Seal of the Company

Designation

Signature

Initiator	<i>Suryakanta Mohanty</i>	HOD (Engineering)	<i>Sanku P.D.</i>
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<b>Doc. Title</b>	<b>SPECIFICATION OF 33KV "V" CROSS ARMS FOR RSJ (150X150)/WPB (160X160) POLES</b>		
<b>Doc. No:</b>	ENG-EHV-011	Eff. Date: 07.10.2021	
<b>Rev No:</b>	00	Page 1 of 10	
<b>Prepared by:</b>	<b>Reviewed by:</b>	<b>Approved by:</b>	<b>Issued by:</b>

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2. APPLICABLE STANDARDS
3. CLIMATIC CONDITIONS OF THE INSTALLATION
4. GENERAL CONSTRUCTIONS
5. GENERAL TECHNICAL REQUIREMENTS
6. MARKING
7. TESTS
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17. SPARES, ACCESSORIES AND TOOLS
18. DRAWINGS
19. GENERAL TECHNICAL PARTICULARS
20. SCHEDULE OF DEVIATIONS

<b>Initiator</b>	<i>Anup Kumar Samal.</i>	HOG (Engineering)	<i>Sanku P.D.</i>
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<b>Doc. Title</b>	<b>SPECIFICATION OF 33KV "V" CROSS ARMS FOR RSJ (150X150)/WPB (160X160) POLES</b>		
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<b>Prepared by:</b>	<b>Reviewed by:</b>	<b>Approved by:</b>	<b>Issued by:</b>

**1.0 SCOPE**

The scope of this document is to give design & constructional features, inspection, supply, and transportation guidelines for V Cross arm used in 33 KV lines.

**2.0 APPLICABLE STANDARDS**

The equipment covered by this specification shall unless otherwise stated, be designed, manufactured, and tested in accordance with latest editions of the following standards/IEC and shall confirm to the regulations of local statutory authorities.

- a) IS 2062:2011 - For Hot rolled medium and high tensile structural steel- specification
- b) IS 1852-1985 - For Rolling and cutting tolerances for hot rolled steel products
- c) IS 2629-1985 - For Recommended practice for hot dip galvanized of iron and steel
- d) IS 4759-1996 - For Hot dip zinc coatings on structural steel and other allied products- specification
- e) IS 808-1989 - Dimensions for Hot Rolled Steel Beam, Column, Channel and Angle Sections

**3.0 CLIMATIC CONDITIONS OF THE INSTALLATION:**

The material shall be suitable for following climatic conditions,

Sl. No.	Descriptions	Conditions
1.	Maximum altitude above sea level	1200 m
2.	Maximum ambient air temperature	50°C
3.	Maximum daily average ambient air temperature	40°C
4.	Minimum ambient air temperature	2°C
5.	Maximum relative humidity	99%
6.	Average number of thunderstorm days per annum	70
7.	Average number of rainy days per annum	120
8.	Average number of dust storm per annum	20
9.	Average annual rainfall	1800 mm
10.	Average number of rainy days per annum	160
11.	Earthquakes of an intensity in horizontal direction	Equivalent to seismic acceleration of 0.3g
12.	Earthquakes of an intensity in vertical direction	equivalent to seismic acceleration of 0.15g (g being acceleration due to gravity)
13.	Wind velocity	200 km/hr.

<b>Initiator</b>		HOG (Engineering)	
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<b>TECHNICAL SPECIFICATIONS</b>			
<b>Doc. Title</b>		<b>SPECIFICATION OF 33KV "V" CROSS ARMS FOR RSJ (150X150)/WPB (160X160) POLES</b>	
<b>Doc. No:</b>	ENG-EHV-011	<b>Eff. Date:</b> 07.10.2021	
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<b>Prepared by:</b>	<b>Reviewed by:</b>	<b>Approved by:</b>	
		<b>Issued by:</b>	

Environmentally, some of the regions, where the work will take place includes coastal areas, subject to high relative humidity, which can give rise to condensation. Onshore winds will frequently be salt laden. On occasions, the combination of salt and condensation may create pollution conditions for outdoor insulators. Some places are in heavily industrial polluted areas.

Therefore, Outdoor material and equipment shall be designed and protected for use in exposed, heavily polluted, salty, corrosive and humid coastal atmosphere


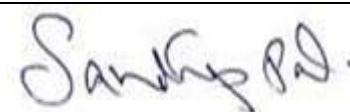
#### 4.0 GENERAL CONSTRUCTIONS

The material shall be-

- a) V Cross-arms shall be made out M S Channel 100 x 50 x 6 mm, along with dimensions 100 x50X 6 mm at Pole top bracket and 65 x 65 x 6 mm plate welded at both ends, for 33KV, suitable for WPB 13mt, to be used in 33KV. (for details refer attached drawing)
- b) The cross arm shall be hot dipped galvanized generally conforming to IS –2633/72.
- c) The V Cross-arm should not be welded/ jointed at any place except as specified.
- d) The clamps for the V Cross-arm shall be of G.I. & shall be hot dipped galvanized generally conforming to IS – 2633/72
- e) The clamps shall be designed to fit for the specified rail.
- f) Hot dip galvanizing to be done after fabrication only.
- g) The design shall be suitable for the climatic condition stated above.
- h) The constructional details shall be as per the attached drawing
- i) Dimensional tolerance shall be limited to 2% except tolerance on thickness until and unless otherwise specified.
- j) Zinc electroplated/painted material will not be accepted.
- k) Approximate weight eight shall be 22.0 kg

#### 5.0 GENERAL TECHNICAL REQUIREMENTS

SL. NO.	TECHNICAL PARTICULARS	DESIRED VALUE
1	Type Of Cross Arm	V
2	Grade of Steel	E 250 A
3	Relevant Standard	IS: 2062, IS: 2633, IS: 2629
4	Dimensions	100X50X6 mm, 65X65X6 mm
5	Galvanisation process	Hot-Dip Galvanized
6	Weight of Cross Arm	20.0 Kg
7	Minimum Tensile Strength	410 N/mm <sup>2</sup>
8	Yield Stress	250 N/mm <sup>2</sup>

Initiator		HOG (Engineering)	
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<b>Doc. Title</b>	<b>SPECIFICATION OF 33KV "V" CROSS ARMS FOR RSJ (150X150)/WPB (160X160) POLES</b>		
<b>Doc. No:</b>	ENG-EHV-011	Eff. Date: 07.10.2021	
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9	Percentage Elongation (Min.) at Gauge Length	23%
10	Bend Test (Internal Dia.)	Min-2t
11	Mass of Zinc Coating	6 Dip, 705 gm/m <sup>2</sup>
12	Zinc Coating Thickness	100 micron (5 Dip)
13	Chemical composition	Grade: E 250 (As per IS: 2062)
14	Engraved Marking (Punching before galvanisation)	TPNODL, Manufacture's name or trademark, Month & Year of Manufacturing.

### 6.0 MARKING:

The unit shall be appropriately marked as "**PROPERTY OF TPNODL**" and with the name of the vendor and year of manufacturing at suitable location.

### 7.0 TESTS

All routine, acceptance & type tests shall be carried out in accordance with the relevant IS/IEC. All routine/acceptance tests shall be witnessed by the purchaser/his authorized representative. All components shall also be type tested as per the relevant standards.

Tests	IS to be referred
Visual test	As a routine test
Dimensional tests	As per the drawing
Tensile strength	IS 2062
Bend test	IS 2062
Impact test	IS 2062
Hot dip galvanizing	IS 4759 : 1996

### 8.0 TYPE TEST CERTIFICATE

The bidder shall furnish the type test certificates of the V cross Arm for the tests as mentioned above as per the corresponding standards. All the tests shall be conducted at NABL accredited labs as per the relevant standards. Type tests should have been conducted during the period not exceeding 5 years from the date of opening the bid. In the event of any discrepancy in the test reports i.e. any test report not acceptable or any/all type tests (including additional type tests, if any) not carried out, same shall be carried out without any cost implication to TPNODL.

### 9.0 PRE DISPATCH INSPECTION

Initiator	Anup Kumar Samal.	HOG (Engineering)	Sanku P.D.
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<b>TPNODL</b> <small>TP NORTHERN ODISHA DISTRIBUTION LIMITED</small> <small>(A Tata Power and Odisha Government Joint Venture)</small>		<b>TATA POWER NORTHERN ODISHA DISTRIBUTION LIMITED</b>	
<b>TECHNICAL SPECIFICATIONS</b>			
<b>Doc. Title</b>		<b>SPECIFICATION OF 33KV "V" CROSS ARMS FOR RSJ (150X150)/WPB (160X160) POLES</b>	
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<b>Prepared by:</b>	<b>Reviewed by:</b>	<b>Approved by:</b>	<b>Issued by:</b>

Equipment shall be subjected to inspection by a duly authorized representative of TPNODL. Inspection may be made at any stage of manufacture at the discretion of the purchaser and the equipment, if found unsatisfactory as to workmanship or material, the same is liable to rejection. Bidder shall always grant free access to the places of manufacture to TPNODL's representatives when the work is in progress. Inspection by TPNODL or its authorized representatives shall not relieve the bidder of his obligation of furnishing equipment in accordance with the specifications. Material shall be dispatched after specific MDCC (Material Dispatch Clearance Certificate) is issued by TPNODL.

Following documents shall be sent along with material.

- a) Test reports
- b) MDCC issued by TPNODL.
- c) Invoice in duplicate
- d) Packing list
- e) Drawings & catalogue
- f) Guarantee / Warranty card
- g) Delivery Challan
- h) Other Documents (as applicable)

#### 10.0 INSPECTION AFTER RECEIPT AT STORES

The material received at TPNODL, Balasore, Odisha store will be inspected for acceptance and shall be liable for rejection, if found different from the reports of the pre-dispatch inspection and one copy of the report shall be sent to Engineering and contracts department.

#### 11.0 GUARANTEE

Bidder shall stand guarantee towards design, materials, workmanship & quality of process / manufacturing of items under this contract for due and intended performance of the same, as an integrated product delivered under this contract. In the event any defect is found by the Company up to a period of at least 48 months from the date of commissioning or 60 months from the date of last supplies made under the contract whichever is later. In the event any defect is found by the Company up to a period of 48 months from the date of commissioning or 60 months from the date of last supplies made under the contract, whichever is earlier, supplier shall be liable to undertake to replace/rectify such defects at his own costs.

#### 12.0 PACKING


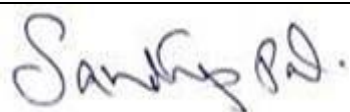
Bidder shall ensure that all the equipment covered under this specification shall be prepared for rail/road transport in a manner to protect the equipment from damage in transit.

#### 13.0 TENDER SAMPLE

Not required.

#### 14.0 QUALITY CONTROL

The bidder shall submit with the offer Quality assurance plan indicating the various stages of inspection, the tests and checks which will be carried out on the material of construction, components during manufacture and bought out items and fully assembled component and equipment after finishing. As part of the plan, a

Initiator		HOG (Engineering)	
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<b>TECHNICAL SPECIFICATIONS</b>			
<b>Doc. Title</b>		<b>SPECIFICATION OF 33KV "V" CROSS ARMS FOR RSJ (150X150)/WPB (160X160) POLES</b>	
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schedule for stage and final inspection within the parameters of the delivery schedule shall be furnished. TPNODL's engineer or its nominated representative shall have free access to the manufacturer's/sub-supplier's works to carry out inspections.

#### 15.0 MINIMUM TESTING FACILITIES

Bidder shall have adequate in-house testing facilities for carrying out all routine tests & acceptance tests as per relevant International / Indian standards

#### 16.0 MANUFACTURING ACTIVITIES

The successful bidder will have to submit the bar chart for various manufacturing activities clearly elaborating each stage, with quantity. This bar chart should be in line with the Quality assurance plan submitted with the offer. This bar chart will have to be submitted within 15 days from the release of the order.

#### 17.0 SPARES, ACCESSORIES AND TOOLS

Bidder shall provide a list of recommended spares with quantity and unit prices for 3 years of operation after commissioning. The bidder shall provide a list of complete set of accessories and tools required for erection & maintenance along with the installation procedure.

#### 18.0 DRAWINGS

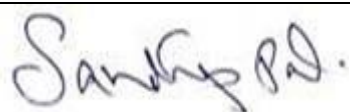
Following drawings & documents shall be prepared based on Purchaser's specifications and statutory requirements with complete BOM and shall be submitted with the bid:

- General description of the equipment and all components including brochures
- General arrangement drawings
- Type Test Certificates.
- Experience List
- Manufacturing schedule and test schedule.

After the contract, four (4) copies of the drawings, drawn to scale, describing the equipment in detail shall be forwarded for approval and shall subsequently provide four (4) complete sets of final drawings, one of which shall be auto positive suitable for reproduction, before the dispatch of the equipment. Soft copy (Compact Disk CD) of all the drawing, test certificates shall be submitted after the final approval of the same to the purchaser.

Following Drawings/Documents shall be submitted after the award of the contract:  
 Drawings/documents to be submitted after the award of the contract:

S.No	Description	For Approval	For Review Information	Final Submission
1	Technical Parameters	√		√

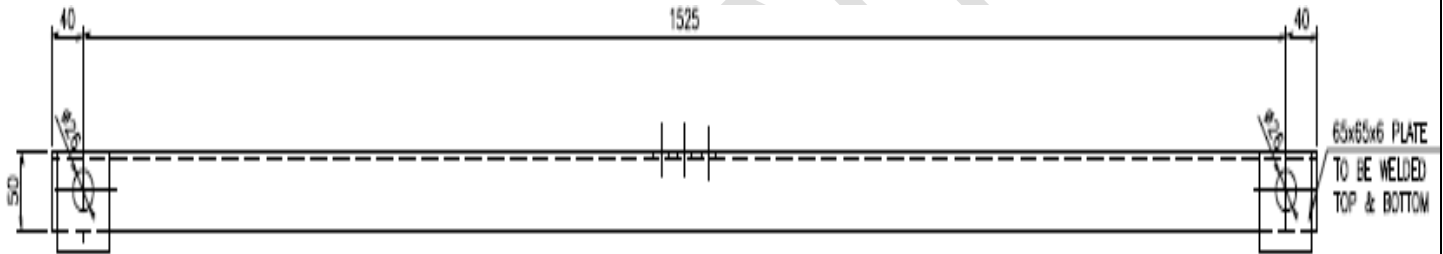
Initiator		HOG (Engineering)	
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**TECHNICAL SPECIFICATIONS**

<b>Doc. Title</b>	<b>SPECIFICATION OF 33KV "V" CROSS ARMS FOR RSJ (150X150)/WPB (160X160) POLES</b>		
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2	General Arrangement drawings	√		√
3	Manual/Catalogues/drawings		√	
4	Installation Instructions ( if any)		√	√
5	QA &QC Plan	√	√	√
6	Routine, Acceptance & Type Test Certificates	√	√	√

All the documents & drawings shall be in English language.



V-Cross Arm (100X50X6)

<b>Initiator</b>	<i>Anup Kumar Samal.</i>	HOG (Engineering)	<i>Sanku P.D.</i>
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**TECHNICAL SPECIFICATIONS**

**Doc. Title** SPECIFICATION OF 33KV "V" CROSS ARMS FOR RSJ (150X150)/WPB (160X160) POLES

**Doc. No:** ENG-EHV-011

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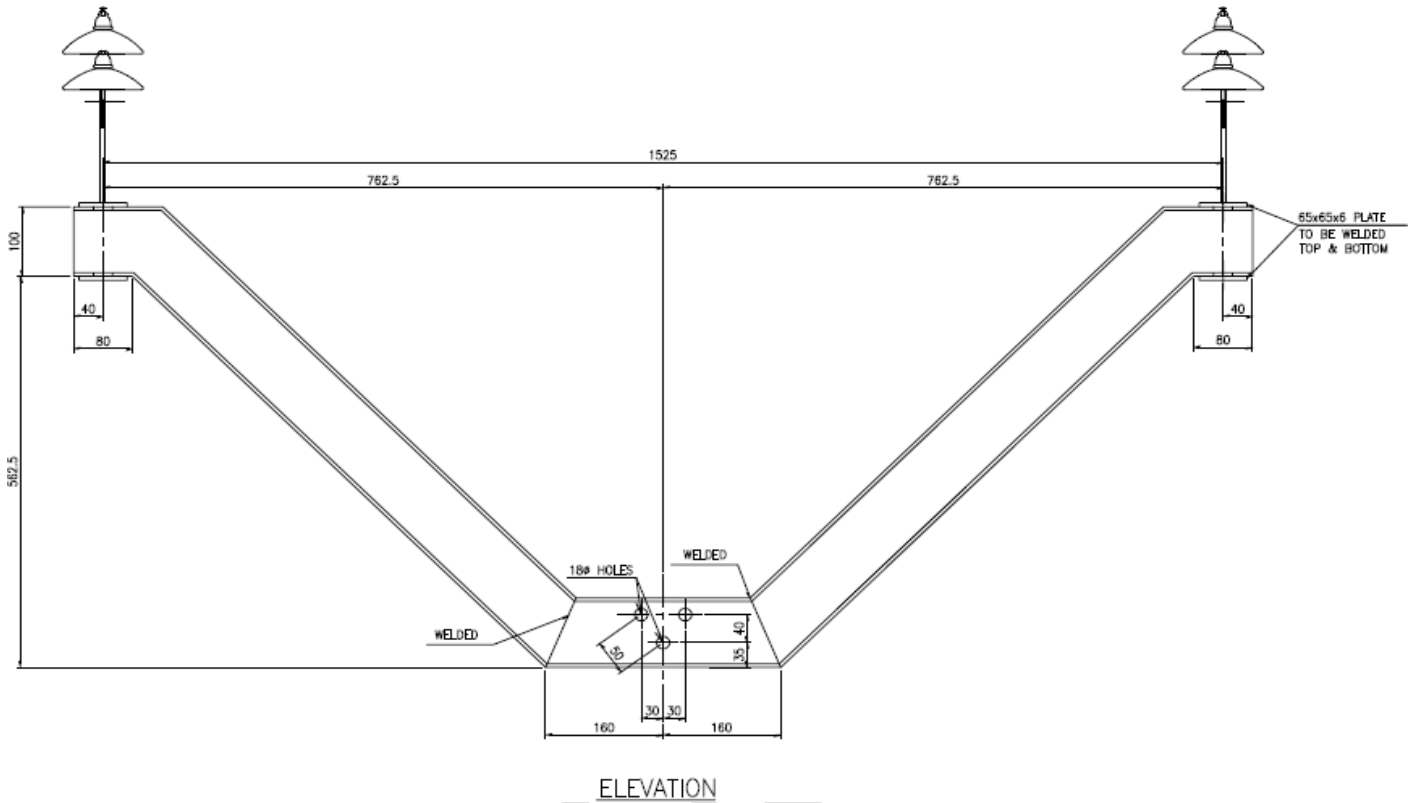
**Page 8 of 10**

**Prepared by:**

**Reviewed by:**

**Approved by:**

**Issued by:**



**Fig: Drawing of 33kV V-cross arm**

CONFIDENTIAL

Initiator		HOG (Engineering)	
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**Doc. Title SPECIFICATION OF 33KV "V" CROSS ARMS FOR RSJ (150X150)/WPB (160X160) POLES**

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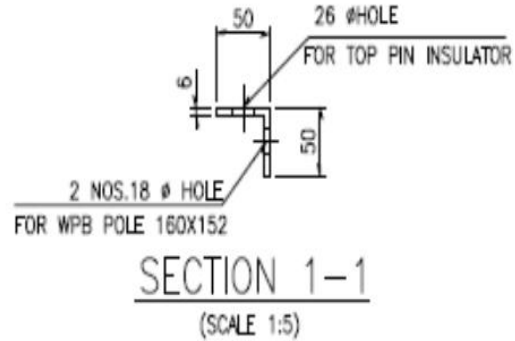
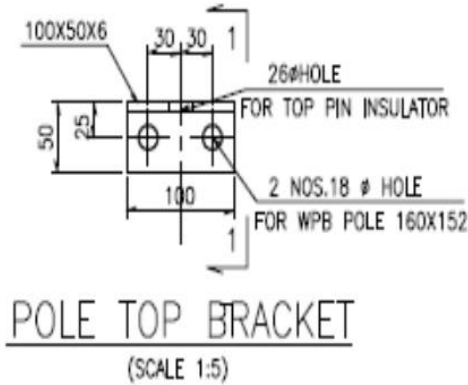
**Page 9 of 10**

**Prepared by:**

**Reviewed by:**

**Approved by:**

**Issued by:**



**19.0 GUARANTEED TECHNICAL PARTICULARS**

SL. NO.	TECHNICAL PARTICULARS	To be furnished by bidder
1	Type Of Cross Arm	
2	Grade of Steel	
3	Relevant Standard	
4	Dimensions	
5	Galvanisation process	
6	Weight of Cross Arm	
7	Working Load	
8	Minimum Tensile Strength	
9	Yield Stress	
10	Percentage Elongation (Min.) at Gauge Length	
11	Bend Test (Internal Dia.)	
12	Mass of Zinc Coating	
13	Zinc Coating Thickness	
14	Chemical composition	
15	Engraved Marking (Punching before galvanisation)	

**20.0 SCHEDULE OF DEVIATIONS**

Initiator	<i>Anup Kumar Samal.</i>	HOG (Engineering)	<i>Sanku P.D.</i>
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All deviations from this specification shall be set out by the Bidders, clause by Clause in this schedule. Unless specifically mentioned in this Schedule, the tender shall be deemed to confirm the purchaser's specifications

S.No	Clause No.	Details of deviation with justifications

We confirm that there are no deviations apart from those detailed above.

Seal of the Company:

Signature

Designation



Initiator		HOG (Engineering)	
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**TECHNICAL SPECIFICATION**

Document Title	Specification of 33KV 70KN Disc insulator T&C type		
Document No.	ENG-EHV-022	Eff. Date: 17-01-2022	
Revision No.		Page 1 of 10	
Prepared By: Udit Sankar Das	Reviewed By: Sandip Pal	Approved By: Sandip Pal	Issued By :

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2. APPLICABLE STANDARDS
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18. DRAWINGS AND DOCUMENTS
19. SCHEDULE OF DEVIATIONS

Initiator		HOD (Operation)	
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TECHNICAL SPECIFICATION

Document Title	Specification of 33KV 70KN Disc insulator T&C type		
Document No.	ENG-EHV-022	Eff. Date: 17-01-2022	
Revision No.		Page 2 of 10	
Prepared By: Udit Sankar Das	Reviewed By: Sandip Pal	Approved By: Sandip Pal	Issued By :

**1. SCOPE**

This specification covers the technical requirements of design, manufacture, test at manufacturer's works, packing, supply of 33 KV polymer disc insulators T&C type.

**2. APPLICABLE STANDARDS:**



Insulator shall comply with the requirements stated in the latest editions of the following standards

- IEC: 61109: Definite ion, test methods and acceptance criteria for composite insulators for A.C. overhead lines above 1000V.
- IEC: 61952: Insulators for overhead lines – Composite line post insulators for alternative current.
- IS: 2071/ IEC: 60060-1: Methods of High Voltage Testing.
- IS: 2486/ IEC: 60120: Specification for Insulator fittings for Overhead power Lines with a nominal voltage greater than 1000V General Requirements and Tests Dimensional Requirements Locking Devices.
- IEC: 60575: Thermal Mechanical Performance test and mechanical performance test on string insulator units.
- IS: 13134/ IEC: 60815: Guide for the selection of insulators in respect of polluted condition.
- STRI guide 1.92/1: Hydrophobicity Classification Guide.
- IEC: 60437: Methods of RI Test of HV insulators.
- IS: 4759: Hot dip zinc coatings on structural steel & other allied products.
- IS: 2629: Recommended Practice for Hot, Dip Galvanization for iron and steel.
- IS: 6745: Determinate ion of Weight of Zinc Coating on Zinc coated iron and steel articles.
- IS: 2633: Testing of Uniformity of Coating of zinc coated articles.
- ASTM D 578-05: Standard specification for glass fiber strands

**3. CLIMATIC CONDITIONS:**

The material shall be suitable for following climatic conditions,

1. CLIMATIC CONDITIONS:		
a)	Maximum Ambient Temperature	50 °C
b)	Maximum Daily Average Ambient Temperature	40 °C
c)	Minimum Ambient Temperature	2 °C
d)	Maximum Humidity	99.7 %
e)	Minimum Humidity	15 %
f)	Average Annual Rainfall	1800 mm
g)	Average Wind Speed prevailing in the area	200 km/hr.

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h)	Average Thunderstorms prevailing in the area	70 days per annum
i)	Average dust storms prevailing in the area	20 days per annum
j)	Average number of rainy days per annum	160
k)	Maximum Altitude above sea level	1200 m
l)	Seismic Level	0.24g to 0.48g

The atmosphere is generally laden with mild acid and dust in suspension during the dry months and is subjected to fog in cold months. The design of equipment and accessories shall be suitable to withstand seismic forces corresponding to an acceleration of 0.3 g.

4. General Technical Requirements:

GUARANTEED TECHNICAL PARTICULARS 33KV 70KN COMPOSITE POLYMER DISC INSULATOR (T&C)			
Sr	Description	TPNODL Requirement	Bidder Offer
1	Type of insulator	33kv 70KN Polymer DiscInsulator (T&C) Type	
2	Reference Standard	IEC 61109	
3	Material of FRP Rod	Boron free ECR	
4	Material of sheds	Silicon Rubber , Silicone content > 30%	
5	Type of metal end fittings	Tongue & Clevis (T&C)	
6	Material of end fittings (B&S)	SGCI / MCI, Hot Dip Galvanized	
7	Cotter Pin	SGCI / MCI, Hot Dip Galvanized	
8	Lock Pin	SGCI/ MCI	
9	Material of sealing compound	RTV Silicon	
10	Colour of sheds	Grey	
11	Rated voltage	33KV	
12	Highest voltage	36KV	
13	Frequency	50 Hz	
14	Dry Power Frequency Withstand voltage	95KV	
15	Wet Power Frequency Withstand voltage	70KV	
16	Dry PF Flashover Voltage	110KV	
17	Wet PF Flashover Voltage	80KV	
18	Dry Lightning Impulse withstand voltage		
	Positive	Positive:170 KV	

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	Negative	Negative:180 KV	
19	Dry Lightning Impulse Flashover voltage		
	Positive	Positive:210 KV	
	Negative	Negative:230 KV	
20	Visible Discharge Voltage (PF)	27 kV	
21	RIV at 1MHz when energized at 30KV (rms) under dry condition	< 70 microvolt	
22	Creepage distance(min)	900 mm	
23	Minimum Failing load (Tension Load)	70 KN	
24	Dia of FRP Rod (min)	16 mm	
25	Length of FRP Rod (min)	425 mm	
26	Dia of weather sheds (min)	100 mm	
27	Sectional Length	525±20 mm	
28	Thickness of housing (min)	3 mm	
29	Dry arc distance (min)	400 mm	
30	Method of fixing sheds to housing	Injection Moulding	
31	No of weather sheds (min)	8	
32	Type of sheds	Aerodynamic	
33	Shed Profile	Parallel	
34	Weight of composite insulator (min)	1.300 kg	
35	Type of packing	Corrugated Box /HDPE Bag	
36	No of insulator in each pack (Max)	15 Nos.	
37	Gross weight of package (max)	20 kgs.	
38	Marking on insulator	Trade Mark or Mfg name : ..... , Tension Load: 70 KN Voltage Rating: 33kV , Mfg Date: MM/YY, Customer Name: TPNODL	
39	Drawing	Enclosed	


5. GENERAL CONSTRUCTION

Polymeric Insulators shall be designed to meet the high quality, safety and reliability and are capable of withstanding a wide range of environmental conditions.

Polymeric Insulators shall consist of THREE parts, at least two of which are insulating parts:-

- Core- the internal insulating part
- Housing the external insulating part

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- Weather Sheds
- Metal end fittings.

**CORE:**

It shall be a glass-fiber reinforced epoxy resin rod of high strength (FRP nrod). Glass fibers andresin shall be optimized in the FRP rod. Glass fibers shall be Boron free electrically corrosionresistant (ECR) glass fiber and shall exhibit both high electrical integrity and high resistance to acid corrosion. The matrix of the FRP rod shall be Hydrolysis resistant. The FRP rod shall bemanufactured through Pultrusion process. The FRP rod shall be void free

**POLYMER HOUSING**

The FRP rod shall be covered by a seamless sheath of a high voltage grade silicone rubber compound of a thickness of 3 mm minimum. It shall be one-piece housing using injection Molding Principle to cover the core. The elastomer housing shall be designed to provide the necessary creepage distance and protection against environmental influences, external pollution and humidity. Housing shall conform to the requirement of IEC 61109:2008 with latest amendments. It shall be directly molded on core and shall have chemical bonding with the FRP rod. The strength of the bond shall be greater than the tearing strength of the polymer. Sheath material in the bulk as well as in the sealing/bonding area shall be free from voids.



**WEATHERSHEDS**

The composite polymer Weather sheds made of silicone elastomer compound shall be molded as part of the sheath and shall be free from imperfections. The weather sheds should have silicon rubber content of minimum **30%** by weight. The strength of the weather shed to sheath interface shall be greater than the tearing strength of the polymer. The interface, if any, between sheds and sheath (housing) shall be free from voids.

**METAL END FITTINGS**

End fitting transmit the mechanical load to the core. They shall be made of spheroidal graphite cast iron, malleable cast iron or forged steel or aluminum alloy. Metal end fitting shall be suitable for pin type hardware support of respective specified mechanical load and shall be hot dip galvanized in accordance with IS 2629. They shall be connected to the rod by means of a controlled compression technique. The OD of end fittings should be machined to make the surface uniform round to ensure effective sealing when housing is molded over it. The material used in fittings shall be corrosionresistant. As the main duty of the end fittings is the transfer of mechanical loads to the core the fittings should be properly attached to the core by a coaxial or hexagonal compression process &should not damage the individual fibers or crack the core. The dimensions of end fittings ofinsulators shall be in accordance with the standard dimensions stated in IEC: 60120/ IS: 2486 - Part-II /1989. Outer portion of Pin should be Zinc sleeved with minimum 99.95% purity of Electrolytic high grade zinc. Bottom end metal fitting (Shank) of Pin insulator should be forged steelas per IS 2002/92. Bottom end fitting should be single unit without any joints.

Nuts as per IS 1363 (P-III) and spring washer shall be as per IS 3063 with Latest amendments if any, Nuts and spring washer shall be hot dip galvanized. The design of the insulator shall be such that stresses due to expansion

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and contraction in any part of the insulators shall not lead to deterioration. The Pin insulator shall not engage directly with hard metal.

6. Marking

Each insulator shall be legibly and indelibly marked as



- Name & Trade mark of the manufacturer
- Month and year of manufacture
- Minimum failing load in KN
- "TPNODL" Name should be mentioned on each insulator.

7. TESTS

**TYPE TESTS:** Insulators offered shall be manufactured with the same configuration & raw materials as used in the Insulators for which design & type test reports are submitted. The manufacturer shall submit a certificate for the same. **The type test reports submitted shall not be more than 07 years old.**

Sr.	Test Description	Test Standard
1	Dry lightning impulse withstand voltage test	IEC 61109 : 2008 & as per customer requirements
2	Dry lightning impulse Flashover voltage test	
3	Wet power frequency withstand voltage test	
4	Wet power frequency flashover voltage test	
5	Dry Power frequency withstand voltage test	
6	Dry Power Frequency Falshover Voltage Test	
7	Radio interference test	IEC 60437
8	VISIBLE DISCHARGE TEST	IS 731/71
9	Recovery of Hydrophobicity test	Annexure-B (As per STRI guide)
10	Polymer (Silicone Resin) content by Thermo Gravimetric Analysis (TGA)	ASTM E1131-08M ERDA Test Procedu INS - 360
11	Water Diffusion test on FRP rod	IEC 62217 : 2012, CI 9.4.2
12	Brittle fracture resistance test on FRP	REC Spec 76/2006
13	Dye Penetration Test on FRP	IEC 61109 (CI.10) / IEC 62217
14	Minimum Failing Load Test - Damage limit Proof test and test of the Tighness of interface between end fittings and insulator housing <b>(Applicable for Disc Insulators only)</b>	IEC 61109: 2008 Cl. No 11.2
15	Bend Test / Cantiliver failing Load Test <b>(Applicable for Pin &amp; Post Insulators only)</b>	As per IS:731 (Clause- 10.8.2)

The bidder shall submit type test reports as per IEC 61109 (with latest amendments, if any) from NABL approved laboratory along with the bid. Additional type tests required if any shall be carried out by the

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manufacturer, after award of contract for which no additional charges shall be payable. In case, the tests have already been carried out, the manufacturer shall submit reports for the same.

#### ACCEPTANCE TEST

- Physical & Dimensional Verification of materials
- Mechanical Load Test
- Galvanizing test.
- Dry Power Frequency Withstand Voltage Test

#### ROUTINE TEST:

- Physical & Dimensional Verification of materials.
- Mechanical Load Test
- Identification of Marking

#### 8. TYPE TEST CERTIFICATE



The bidder shall furnish the type test certificates for the tests as mentioned above as per the corresponding standards. All the tests shall be conducted at CPRI/ERDA as per the relevant standards not exceeding 7 years from the date of opening of the bid. In the event of any discrepancy in the test reports, i.e. any test report not acceptable, the same shall be carried out without any cost implication to TPNODL. TPNODL has rights for Surveillance tests of randomly selected samples from the third-party lab for quality checks of items. TPNODL shall be intimated in case revision is done by the manufacturer in product design/ dimension/ material during the execution of the contract. Subsequently, Type test certificate shall be produced.

#### 9. PRE DISPATCH INSPECTION

Equipment shall be subjected to inspection by a duly authorized representative of TPNODL. Inspection may be made at any stage of manufacture at the discretion of the purchaser and the equipment, if found unsatisfactory as to workmanship or material, the same is liable to rejection. Bidder shall always grant free access to the places of manufacture to TPNODL's representatives when the work is in progress. Inspection by TPNODL or its authorized representatives shall not relieve the bidder of his obligation of furnishing equipment in accordance with the specifications. Material shall be dispatched after specific MDCC (Material Dispatch Clearance Certificate) is issued by TPNODL.

Following documents shall be sent along with material.

- Test reports
- MDCC issued by TPNODL.
- Invoice in duplicate
- Packing list
- Drawings & catalogue
- Guarantee / Warrantee card
- Delivery Challan

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- Other Documents (as applicable)

**10. INSPECTION AFTER RECEIPT AT STORES**

The material received at TPNODL, Balasore, Odisha store will be inspected for acceptance and shall be liable for rejection if found different from the reports of the pre-dispatch inspection and one copy of the report shall be sent to Engineering and contracts department.

**11. GUARANTEE**

Bidder shall stand guarantee towards design, materials, workmanship & quality of process/manufacturing of items under this contract for the due and intended performance of the same, as an integrated product delivered under this contract. In the event, any defect is found by the Company up to a period of at least 48 months from the date of commissioning or 60 months from the date of last supplies made under the contract whichever is later. In the event any defect is found by the Company up to a period of 48 months from the date of commissioning or 60 months from the date of last supplies made under the contract, whichever is earlier, the supplier shall be liable to undertake to replace/rectify such defects at his own costs.

**12. PACKING**

Bidder shall ensure that all the equipment covered under this specification shall be prepared for rail/road transport in a manner to protect the equipment from damage in transit.

**13. TENDER SAMPLE**

Bidder shall submit the sample of material during the tender evaluation process with the offer (in case of first supply to TPNODL).

**14. TRAINING**

Detailed Installation instruction with drawings for all joints and termination shall be provided by Bidder with tender documents in English and Hindi & Odia Language. Updated installation manual shall be provided in the kit. Hands-on training shall be conducted annually at our site location for BA and TPNODL jointers.

Bidder shall provide installation/operational services at the site.

**15. QUALITY CONTROL**

The bidder shall submit with the offer Quality assurance plan indicating the various stages of inspection, the tests and checks which will be carried out on the material of construction, components during manufacture and bought out items and fully assembled component and equipment after finishing. As part of the plan, a schedule for stage and final inspection within the parameters of the delivery schedule shall be furnished. TPNODL's engineer or its nominated representative shall have free access to the manufacturer's/sub-supplier's works to carry out inspections.

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**16. MINIMUM TESTING FACILITIES**

Bidder shall have adequate in-house testing facilities for carrying out all routine tests & acceptance tests as per relevant International / Indian standards

**17. MANUFACTURING ACTIVITIES**

The successful bidder will have to submit the bar chart for various manufacturing activities clearly elaborating each stage, with quantity. This bar chart should be in line with the Quality assurance plan submitted with the offer. This bar chart will have to be submitted within 15 days from the release of the order.

**18. DRAWINGS & DOCUMENT**

After the award of the contract four (4) copies of following drawings, drawn to scale, describing the equipment in detail shall be forwarded for approval.

S. No.	Description	For Approval	For Review Information	Final Submission
1	Technical Parameters	√		√
2	BOM ( at the time of pre-bid)	√		
3	Drawing showing Joints Details	√		√
5	Termination drawings	√		
6	Manual/Catalogues		√	√
7	Transport/ Shipping dimension drawing		√	√
8	QA &QC Plan	√	√	√
9	Routine, Acceptance and Type Test Certificates	√	√	√



All the documents & drawings shall be in the English language.

**19. SCHEDULE OF DEVIATIONS**

The bidders shall set out all deviations from this specification, Clause by Clause in this schedule. Unless specifically mentioned in this schedule, the tender shall be deemed to confirm the purchaser’s specifications.

**SCHEDULE OF DEVIATIONS: (TO BE ENCLOSED WITH TECHNICAL BID)**

All deviations from this specification shall be set out by the Bidders, clause by Clause in this schedule. Unless specifically mentioned in this Schedule, the tender shall be deemed to confirm the purchaser’s specifications:

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S.No	Clause No.	Details of deviation with justifications

We confirm that there are no deviations apart from those detailed above.

Seal of the Company:

Signature:

Date:

Initiator	<i>Udit Sankar Das</i>	HOD (Operation)	<i>Sandip Pal</i>
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<b>Doc. Title</b>	<b>SPECIFICATION FOR G.I. BOLT, NUT, WASHER AND SPRING WASHER</b>	
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19. GUARANTEED TECHNICAL PARTICULARS
20. SCHEDULE OF DEVIATIONS

Initiator	<i>Beejankanta Mohanty</i>	HOD (Engineering)	<i>Sanku P.D.</i>
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**1. SCOPE:**

This specification covers technical requirements of design, manufacture, testing at manufacturer's works, packing, forwarding and unloading at TPNODL stores/site of G.I. Bolt, Nuts, Washers and spring washers for 33 kV & 11 kV distribution network operation & maintenance work.

**2. APPLICABLE STANDARDS:**

The equipment covered by this specification shall unless otherwise stated, be designed, manufactured, and tested in accordance with the latest editions of the following Indian, International Standards and shall conform to the regulations of the local Statutory authorities:

- IS 1367: Technical supply condition for threaded steel fasteners.
- IS 12427: Fasteners – Threaded steel fasteners – Hexagonal head transmission tower bolts.
- IS 14394: Industrial fasteners –Nuts of product grade C - Hot dip Galvanized.
- IS 3063: Fasteners-Single Coil Rectangular section lock washers.
- IS 2629-1996: recommended practice for hot-dip galvanizing of iron and steel.
- IS 2016-1997: Specification for plain washers.

**3. CLIMATIC CONDITIONS OF THE INSTALLATION:**

a) Max. Ambient Temperature	: 50 deg.C
b) Max. Daily average ambient temp	: 40 deg.C
c) Min. Ambient Temperature	: 2 deg.C
d) Maximum Humidity	: 99.7%
e) Minimum Humidity	: 15%
f) Average No. of thunderstorm per annum	: 70
g) Average Annual Rainfall	: 1800 mm
h) Average No. of rainy days per annum	: 160
i) Rainy months	: June to October
j) Altitude not exceeding	: 1200 m.
k) Wind Pressure	: 200 kg/sq. m up an elevation of 30m.

Note: The atmosphere across coastal divisions of TPNODL is very saline, laden with salt, acid and dust suspended during dry months and subjected to fog in cold months. The design of the equipment and accessories shall be suitable to withstand seismic forces corresponding to an acceleration of 0.3g.

Initiator	<i>Suryakanta Mohanty</i>	HOD (Engineering)	<i>Sanku P.D.</i>
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#### 4. GENERAL TECHNICAL REQUIREMENTS

S.N.	Description	Units	Requirement
<b>Mechanical Properties of Hexagonal Bolts as per (IS:1367 Part-III/1979)</b>			
1	Tensile Strength (To be arranged on size 150 mm & above) Min.	N/sq. mm.	400
2	Stress under proof load Min.	N/sq. mm.	225
3	Brinell Hardness		HB 114(min.) to 238 max.
4	Rockwell hardness		HRB-Max. 67(min) to 99.5 max.
5	Vickers hardness		HV 120 (min) to 250 max.
6	Elongation after fracture	%	3 Min. 22%
7	Yield Stress ,min.	N/sq. mm	340
8	Strength under wedge loading min.	N/sq. mm.	400
9	Impact Strength, min.		25
10	Head soundness		No fracture
<b>Hexagonal Nuts(IS:1367 Part-IV/1980 Table 4)</b>			
11	Proof stress min.	N/sq. mm.	610
12	Vickers Hardness		HV-Min. 130 HV-Max. 302

#### 5. GENERAL CONSTRUCTIONS FOR NUTS & BOLTS

The Nut & bolt are made of low or medium carbon steel, the quality of zinc, bath temperature and the process of galvanizing in general shall conform to IS 2629-1996. Galvanizing shall be carried out by hot dip process only. The galvanizing process shall provide for substantial diffusion of hydrogen. Bolts & Nuts shall be taken at a temperature of 200 degree. C for a period of 30 minutes. The fasteners after galvanizing shall meet the physical properties of the relevant standards. The minimum average thickness of coating shall be 54µm and mass shall be 375 gm/sq. meter. However minimum individual thickness of coating shall be 43 µm and mass shall be 300 gm/sq. meter.

Fasteners with Internal Threads- Prior to galvanizing and subsequent tapping the dimensions of fasteners with internal threads shall conform to the relevant standards. Internal threads shall be tapped over-size after galvanizing and they shall be oiled for corrosion protection.

Fasteners with External Threads- Prior to galvanizing, the dimensions of fasteners with external threads shall conform to the relevant standards including thread sizes. The thickness of galvanized coating on external threads shall be so controlled in the galvanizing process that galvanized fasteners with external threads can be assembled by hand with internally threaded fasteners. Galvanized external threads shall not be recut.

Allowances for Internal threads to Accommodate Galvanized External threads:

Nominal size of Internal Threads	Diameter Allowance (mm)
Below M16	+ 0.40
M16 to M22	+ 0.50
Over M22 and up to and including M36	+ 0.65

All fasteners, spring washers and pack washers shall be suitable as per IS: 1363.

Initiator	<i>Suryakanta Mohanty</i>	HOD (Engineering)	<i>Sanku P.D.</i>
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The length of thread of Hexagonal bolts of length more than 100 mm shall be as per IS 1363 (Part-2) 2002 with amendments up to date.

Hexagonal bolts of length less than 100 mm shall be full threaded as per IS 1363 (Part-3)/2002 with amendments up to date.

The length of Hexagonal bolt & Nuts shall be as per IS 1363(Part-3)/2002 with amendments up to date.

The design of material shall be suitable for the climatic condition as stated above and should be galvanized properly so that no rust can be found in any part of fasteners.

Chemical compositions for Bolts & Nuts are in below:

For Bolts:

Carbon: 0.55% (max.)

Phosphorous: 0.05%.

Sulphur: 0.06%

For Nuts:

Carbon: 0.50% (max.)

Phosphorous: 0.12%.

Sulphur: 0.34%.

#### GENERAL CONSTRUCTIONS FOR WASHER

A washer is a thin plate (typically disk-shaped) with a hole (typically in the middle) that is normally used to distribute the load of a threaded fastener. Washers have an outer diameter (OD) about twice the width of the inner diameter (ID).

Washers will be of hardened steel to prevent the loss of pre-load due to Brinelling after the torque is applied.

Washers shall be made of steel or aluminium as per requirement. The washers shall be free from cracks, burrs, pits and other defects. The holes shall be reasonably concentric with the outer periphery; all sharp edges shall be removed.

Two type of washers used in TPNODL Electricity network:

- 1) Plain Washers.
- 2) Spring washers.



#### Plain Washer:

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A plain washer (or 'flat washer') is a flat annulus or ring, often of metal, used to spread the load of a screwed fastening. Additionally, a plain washer may be used when the hole is a larger diameter than the fixing nut.

Plain washers of the following types:

- a) Machined washers, for precision and semi-precision grade of general purpose bolts and screws, in the diameter range 1.7 to 155 mm.
- b) Punched washers, type A, for black grade general purpose bolts and screws, in the diameter range 1.8 to 52 mm and
- c) Punched washers type B, for slotted head screws in the diameter range 1.8 to 22 mm.

The diameter for machined washers, punched washers, types A & B, shall be as per IS: 2016.

### Spring Washer:

Spring washers, sometimes called disc springs, are a subtype of washers. They lend their mechanical capabilities to the unique profile of the material: when subject to a load, the irregularities of the washer compress with a proportionate resistance to return to their predeflected shape. Spring washers are employed in applications where assemblies need a part to take up play, eliminate rattle, maintain assembly tension, compensate for expansion or contraction in materials after assembly, or to absorb intermittent shock loads and provide a controlled reaction under dynamic loads.

### Types of Spring Washer:

There are two types of spring washers which we use in TPNODL Electricity Distribution Network:

**Belleville washers** can support high loads with small deflections. The load and deflection capability is dependent on height/thickness ratio. These are common in thermal expansion applications.

**Crescent washer** is meant for lighter loads and produces a small deflection. There is a uniform spring rate throughout the washer's deflection. This is used in flexible, load-cycling applications..

**Wave washers** offer moderate load capacity and deflection, and are typically used as cushions or spacers. These have multiple waves within the washer.

### A diagram of Spring washer:



## 6. MARKING

The body of the device shall be appropriately embossed/marked with “**PROPERTY OF TPNODL, BALASORE**” such that it is permanent and does not harm the body of the device.

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## 7. TESTS

All routine, acceptance & type tests shall be carried out in accordance with the relevant IS. All Routine /acceptance tests shall be witnessed by the purchaser/his authorized representative. All the components shall also be type tested as per the relevant standards. The device shall be calibrated against standards which are traceable to National / International standards.

### TYPE TEST:

The following tests shall constitute the type tests and shall be carried out as per relevant IS: 1367 Part-III (Latest amended).

- 1) Chemical Composition Test.
- 2) Test for Mechanical Properties for Hexagonal Bolts
  - Tensile strength.
  - Yield stress.
  - Stress under proof load
  - Brinell Hardness
  - Rockwell Hardness
  - Vickers Hardness
  - Elongation after fracture
  - Strength under Wedge loading
  - Head soundness
- 3) Test for Mechanical Properties for hexagonal Nuts.
  - Proof Stress.
  - Vickers Hardness.

### ROUTINE/ACCEPTANCE TEST:

The following tests shall be got conducted in presence of purchaser representative as per relevant IS: 1367 Part-III/1991 with latest amendment for bolts and IS: 1367 Part-VI/1980 with latest amendment for nuts on the samples taken from the offered lot material for the purpose of acceptance of that lot of material.

- 1) Chemical Composition Test.
- 2) Test for Mechanical Properties for Hexagonal Bolts
  - Tensile strength.
  - Yield stress.
  - Stress under proof load
  - Brinell Hardness
  - Rockwell Hardness
  - Vickers Hardness
  - Elongation after fracture
  - Strength under Wedge loading
  - Head soundness
- 3) Test for Mechanical Properties for hexagonal Nuts.
  - Proof Stress.
  - Vickers Hardness.

## 8. TYPE TEST CERTIFICATES

The bidder shall furnish the type test certificates of the individual component for the tests as mentioned as above as per the corresponding standards, if asked for by TPNODL. All the tests shall

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be conducted by NABL accredited Lab as per the relevant standards. Type test should have been conducted in certified Test Laboratories during the period not exceeding 5 years from the date of opening the bid. In the event of any discrepancy in the test reports i.e. any test report not acceptable or any/all type tests (including additional type tests, if any) not carried out, same shall be carried out without any cost implication to TPNODL.

#### 9. PRE DISPATCH INSPECTION

The Material shall be subject to inspection by a duly authorized representative of the TPNODL. Inspection may be made at any stage of manufacture at the discretion of the purchaser and the equipment, if found unsatisfactory as to workmanship or material, the same is liable to rejection. Bidder shall always grant free access to the places of manufacture to TPNODL's representatives when the work is in progress. Inspection by the TPNODL or its authorized representatives shall not relieve the bidder of his obligation of furnishing equipment in accordance with the specifications. Material shall be dispatched after specific MDCC (Material Dispatch Clearance Certificate) is issued by TPNODL.

Following documents shall be sent along with material

- a) Test reports
- b) MDCC issued by TPNODL
- c) TPNODL Invoice in duplicate
- d) Packing list
- e) Drawings & catalogue
- f) Guarantee / Warrantee card
- g) Delivery Challan
- h) Other Documents (as applicable)

#### 10. INSPECTION AFTER RECEIPT AT STORES

The material received at TPNODL store will be inspected for acceptance and shall be liable for rejection, if found different from the reports of the pre-dispatch inspection and one copy of the report shall be sent to each Contracts and Engineering department.

#### 11. GUARANTEE

Bidder shall stand guarantee towards design, materials, workmanship & quality of process / manufacturing of items under this contract for due and intended performance of the same, as an integrated product delivered under this contract. In the event any defect is found by the Purchaser up to a period of 12 months from the date of commissioning or 18 months from the date of last supplies made under the contract whichever is earlier, Bidder shall be liable to undertake to replace/rectify such defects at its own costs, within mutually agreed time frame, and to the entire satisfaction of the Purchaser, failing which the Purchaser will be at liberty to get it replaced/rectified at Bidder's risks and costs and recover all such expenses plus the Purchaser's own charges (@ 20% of expenses incurred), from the Bidder or from the "Security cum Performance Deposit" as the case may be.



Bidder shall further be responsible for 'free replacement' for another period of THREE years from the end of the guarantee period for any 'Latent Defects' if noticed and reported by the Purchaser.

#### 12. PACKING

Bidder shall ensure that all the equipment covered under this specification shall be prepared for rail/road transport in a manner so as to protect the equipment from damage in transit.

#### 13. TENDER SAMPLE

Bidder should submit 3 Nos. (Three) sample along with offer.

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#### 14. QUALITY CONTROL

The bidder shall have a prove track of not less than 10 years in Ultrasonic device manufacturing and servicing in international market. The bidder shall submit with the offer Quality assurance plan indicating the various stages of inspection, the tests and checks which will be carried out on the material of construction, components during manufacture and bought out items and fully assembled component and equipment after finishing. As part of the plan, a schedule for stage and final inspection within the parameters of the delivery schedule shall be furnished. The Purchaser's engineer or its nominated representative shall have free access to the manufacturer's/sub-supplier's works to carry out inspections.

#### 15. MINIMUM TESTING FACILITIES

Bidder shall have adequate in house testing facilities for carrying out all routine tests & acceptance tests as per relevant International / Indian standards.

#### 16. MANUFACTURING ACTIVITIES

The successful bidder will have to submit the bar chart for various manufacturing activities clearly elaborating each stage, with quantity. This bar chart should be in line with the Quality assurance plan submitted with the offer. This bar chart will have to be submitted within 15 days from the release of the order.

#### 17. SPARES, ACCESSORIES AND TOOLS

Not applicable.

#### 18. DRAWINGS AND DOCUMENTS

Following documents shall be prepared based on TPNODL specifications and statutory requirements with complete BOM and shall be submitted with the bid:

- Completely filled in Technical Particulars.
- General description of the equipment and all components including brochures.
- Bill of Material
- Type test Certificates
- Experience List.

After the after of the contract, four (4) copies of the drawings, drawn to scale, describing the equipment in detail shall be forwarded for approval and shall subsequently provide four (4) complete sets of final drawings, one of which shall be auto positive suitable for reproduction, before the dispatch of the equipment. Soft copy (Compact Disk CD) of all the drawing, GTP, test certificates shall be submitted after the final approval of the same to the purchaser.

Following Drawings/Documents shall be submitted after the award of the contract:

S. No	Description	For Approval	For Review Information	Final Submission
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Initiator	<i>Geeyasanta Mohanty</i>	HOD (Engineering)	<i>Sanku B.D.</i>
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1	Technical Parameters	√		√
2	Manual/Catalogues/drawings for all components.		√	
3	Technical details and test certificates of the component.		√	√
4	Instructions for use		√	√
5	Transport/shipping dimension drawing		√	√
6	QA & QC Plan	√	√	√
7	Routine, Acceptance and Type test Certificates	√	√	√

All the Documents and Drawings shall be in English Language.

**Instruction Manuals:** Bidder shall furnish two (2) soft copies (CD) and four (4) hard copies of nicely bound manual (in English Language) covering erection and maintenance instructions and all relevant Information pertaining to the main equipment as well as auxiliary devices.

#### 19. GUARANTEED TECHNICAL PARTICULARS

S.N.	Description	Units	Requirement
<b>Mechanical Properties of Hexagonal Bolts as per (IS:1367 Part-III/1979)</b>			
1	Tensile Strength (To be arranged on size 150 mm & above) Min.	N/sq. mm.	Bidder should provide
2	Stress under proof load Min.	N/sq. mm.	
3	Brinell Hardness		
4	Rockwell hardness		
5	Vickers hardness		
6	Elongation after fracture	%	
7	Yield Stress ,min.	N/sq. mm	
8	Strength under wedge loading min.	N/sq. mm.	
9	Impact Strength, min.		
10	Head soundness		
<b>Hexagonal Nuts(IS:1367 Part-IV/1980 Table 4)</b>			
11	Proof stress min.	N/sq. mm.	Bidder should provide
12	Vickers Hardness		

20.

#### SCHEDULE OF DEVIATIONS (TO BE ENCLOSED WITH TECHNICAL BID)

Initiator	<i>Suryakanta Mohanty</i>	HOD (Engineering)	<i>Sanku P.D.</i>
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All deviations from this specification shall be set out by the Bidders, clause by Clause in this schedule. Unless specifically mentioned in this Schedule, the tender shall be deemed to confirm the purchaser's specifications:

S. No	Clause No.	Details of deviation with justifications


We confirm that there are no deviations apart from those detailed above.

Seal of the Company:

Signature

Designation

Initiator	<i>Beejankanta Mohanty</i>	HOD (Engineering)	<i>Sanku P.D.</i>
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### 1.0 SCOPE:

This specification covers the technical requirements of design, manufacture, construction, testing at manufacturer's works, packing, forwarding, supply and unloading at site/store and performance of PG Connector with Shear off Head for trouble free and efficient operation. PG Connectors for Various Sizes of AAAC & ACSR Conductor Viz.35 sq.mm, 50- sq.mm, 80 Sq.mm, 100 sq.mm , 148 Sq.mm and 232 sq.mm. The specific requirements are covered in the specification.

### 2.0 APPLICABLE STANDARDS:

PG Connector with Shear Off Head shall comply with the requirements stated in the latest edition of the following standards.


IS 5561-1970	Specification for electric power connector
IS 731-1971	Method of high voltage testing
IS 2629	Method of galvanizing
IS 617-1959	Specification for Al and Al alloys
IS 2633-1964	Hot dip galvanizing (testing for uniformity of coating)

### 3.0 CLIMATIC CONDITION OF THE INSTALLATION:

- |       |  |                   |
|-------|--|-------------------|
| i.    | Maximum Ambient Temperature                  | 50°c              |
| ii.   | Maximum daily average ambient temperature    | 40°c              |
| iii.  | Minimum Ambient Temperature                  | 2°c               |
| iv.   | Maximum humidity                             | 99.7%             |
| v.    | Minimum humidity                             | 15%               |
| vi.   | Average Annual Rainfall                      | 1800mm            |
| vii.  | Average wind speed prevailing in the area    | 200kmph           |
| viii. | Average Thunderstorms prevailing in the area | 70 days per annum |

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			FOR 80 SQ MM- 3X M12	
9.	Overall Diameter	mm	5.1 - 15.7	7.5 - 20.3

### 5.0 GENERAL CONSTRUCTION:

Aluminum Parallel Groove connectors i.e. designed to connect two parallel conductors. These connectors are composed of Mo parts, an upper body and lower body. They have two parallel grooves to receive the conductors. In aluminium clamps, the two bodies are made out of high strength aluminum alloy.

The bolts are made out of hard steel and hot-dip galvanized with aluminum shear off head arrangement operating with normal/ordinary tools.

### 6.0 NAME PLATE & MAKING:

Name of Manufacturer, Size to be engraved on all the PG connectors.



The packing of connectors shall have following details:


- a) Name of Manufacturer
- b) PO no. with date
- c) Month & year of manufacture
- d) PROPERTY OF TPNODL
- e) Item Description
- f) Material code

### 7.0 TESTS:

#### 7.1 Type test:

- i) Tensile test
- ii) Resistance test
- iii) Temperature rise test
- iv) Short-time current test
- v) Dimensional check

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- vi) Galvanizing test
- vii) Climatic ageing test

**7.2 Acceptance Test:**

- i) Tensile test
- ii) Resistance test
- iii) Dimensional check
- iv) Galvanizing test
- v) Shear head torque test.

**7.3 Routine Test:**

- i) Visual Inspection.
- ii) Dimensional check.
- iii) Conductivity test



**8.0 TYPE TEST CERTIFICATES:**


The bidder shall furnish the type test certificates and result for the tests as mentioned above as per corresponding standards. All the tests shall be conducted at CPRI / ERDA / UL Accredited Labs as per the relevant standards.

Type test should have been conducted in certified Test Laboratories during the period not exceeding 5 years from the date of opening the bid. In the event of any discrepancy in the test reports, i.e., any test report not acceptable or any/all type tests (including additional type tests, if any) not carried out, same shall be carried out without any cost implication to the TPNODL.

**9.0 PRE-DESPATCH INSPECTION:**

**9.1** The Material shall be subject to inspection by a duly authorized representative of the TPNODL. Inspection may be made at any stage of manufacture at the discretion of TPNODL and the equipment, if found unsatisfactory as to workmanship or material, the same is liable to rejection. Bidder shall grant free access to the places of manufacture to TPNODL's representatives at all times when the work is in progress. Inspection by TPNODL or its authorized representatives shall not relieve the bidder of his obligation of furnishing equipment in accordance with the specifications. Material shall be dispatched after specific MDCC (Material Dispatch Clearance Certificate) is issued by TPNODL.

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Following documents shall be sent along with material

- a. Test reports
- b. MDCC issued by TPNODL
- c. Invoice in duplicate
- d. Packing list
- e. Drawings & catalogue
- f. Guarantee / Warrantee card
- g. Delivery Challan
- h. Other Documents (as applicable).

9.2) In respect of raw material used for PG Connector Shear off, bidder shall use materials manufactured/supplied by standard manufacturers and furnish the manufacturers' test certificate as well as the proof of purchase from these manufacturers (excise gate pass) for information of the TPNODL. The bidder shall furnish following documents along with their offer in respect of the raw materials:



- a. Invoice of bidder
- b. Mill's certificate
- c. Packing List
- d. Bill of landing
- e. Bill of entry certificate by custom


#### 10.0 INSPECTION AFTER RECEIPT AT STORES:

The material received at TPNODL store shall be inspected for acceptance and shall be liable for rejection, if found different from the reports of the pre-dispatch inspection and one copy of the report shall be sent to Plant Engineering department.

#### 11.0 GUARANTEE

Bidder shall stand guarantee towards design, materials, workmanship & quality of process / manufacturing of items under this contract for due and intended performance of the same, as an integrated product delivered under this contract. In the event any defect is found by TPNODL, up to a period of at least 12 months from the date of commissioning or 24 months from the date

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of last supplies made under the contract whichever is later, (the time scale of 12/24 months could be enhanced subject to mutual agreements). Bidder shall be liable to undertake to replace/rectify such defects at its own costs, within mutually agreed time frame, and to the entire satisfaction of TPNODL, failing which TPNODL will be at liberty to get it replaced/rectified at Bidder's risks and costs and recover all such expenses plus the TPNODL's own charges (@ 20% of expenses incurred), from the Bidder or from the "Security cum Performance Deposit" as the case may be. Bidder shall further be responsible for 'free replacement' for another period of THREE years from the end of the guarantee period for any 'Latest Defects' if noticed and reported by TPNODL.

#### **12.0 PACKING:**

Bidder shall ensure that cable covered under this specification shall be prepared for rail/road transport (local equipment) and be packed in such a manner as to protect the equipment from damage in transit.

#### **13.0 TENDER SAMPLE:**



Bidder shall have to submit the 3 no's sample of each type material with the offer (in case of first supply to TPNODL).

#### **14.0 QUALITY CONTROL:**

The bidder shall submit with the offer Quality assurance plan indicating the various stages of inspection, the tests and checks which will be carried out on the material of construction, components during manufacture and bought out items and fully assembled component and equipment after finishing. As part of the plan, a schedule for stage and final inspection within the parameters of the delivery schedule shall be furnished.

TPNODL reserves the sole rights for the type test of random sample from the lot and in case of any discrepancy or deviation from the Type test certificates submitted along with the bid, the complete Lot shall be rejected.

TPNODL's engineer or its nominated representative shall have free access to the bidder's works to carry out inspections.

Initiator		HOD (Engineering)	
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<b>TPNODL</b> TP NORTHERN ODISHA DISTRIBUTION LIMITED <small>(A Tata Power and Odisha Government Joint Venture)</small>	<b>TP NORTHERN ODISHA DISTRIBUTION LIMITED</b>		
	<b>TECHNICAL SPECIFICATIONS</b>		
<b>Doc. Title</b>	<b>STANDARD TECHNICAL SPECIFICATION OF PG CONNECTOR WITH SHEAR OFF HEAD FOR VARIOUS CONDUCTOR SIZES 35 SQ.MM, 50 SQ.MM, 80 SQ.MM, 100 SQ.MM, 148 SQ.MM &amp; 232 SQ.MM</b>		
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### 15.0 MINIMUM TESTING FACILITIES:

Bidder shall Bidder save adequate in-house testing facilities for carrying out all routine test & acceptance tests as per relevant International / Indian standards.

### 16.0 MANUFACTURING ACTIVITIES:

The successful bidder will have to submit the bar chart for various manufacturing activities clearly elaborating each stage, with quantity. This bar chart should be in line with the Quality assurance plan submitted with the offer. This bar chart will have to be submitted within 15 days from the release of the order.

### 17.0 SPARES, ACCESSORIES AND TOOLS:

Not Required.

### 18.0 DRAWINGS AND DOCUMENTS:

Following drawings & Documents shall be prepared based on TPNODL specifications and statutory requirements and shall be submitted with the bid:

- a) Completely filled-in GTP.
- b) General arrangement drawing for Connector PG Shear Off unit.
- c) General description of equipment and all components including brochures.
- d) Bill of material.
- e) Experience List
- f) Type test certificates

Drawings/documents to be submitted after the award of the contract:

Sr. No.	Description	For Approval	For Review Information	Final Submission
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Initiator	<i>Suryakanta Mohanty</i>	HOD (Engineering)	<i>Sanku P.D.</i>
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<b>TPNODL</b> TP NORTHERN ODISHA DISTRIBUTION LIMITED <small>(A Tata Power and Odisha Government Joint Venture)</small>		<b>TP NORTHERN ODISHA DISTRIBUTION LIMITED</b> <b>TECHNICAL SPECIFICATIONS</b>	
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1	Technical parameters	✓		✓
2	General Arrangement Drawings	✓		✓
3	Installation Instruction		✓	✓
4	Mounting and fixing drawing	✓	✓	✓
5	QA & QC Plan	✓	✓	✓
6	Test Certificates	✓	✓	✓

All the documents & drawings shall be in English language.

After receipt of the order, the successful bidder shall be required to furnish soft copies of all relevant drawings and GTP for TPNODL approval.

#### 19.0 GUARANTEED TECHNICAL PARTICULARS:

S. No	Description	To be furnished by bidder
1.	Suitable size of main conductor	
2.	Suitable size of branch conductor	
3.	Rated Voltage	
4.	System Frequency	
5.	Tightening Torque	
6.	Material Composition	
7.	Pressure surfaces	

Initiator	<i>Suryakanta Mohanty</i>	HOD (Engineering)	<i>Sanku P.D.</i>
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<b>TPNODL</b> TP NORTHERN ODISHA DISTRIBUTION LIMITED <small>(A Tata Power and Odisha Government Joint Venture)</small>	<b>TP NORTHERN ODISHA DISTRIBUTION LIMITED</b>		
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S. No	Description	To be furnished by bidder
8.	Hot dip galvanizing of Bolt	Yes/No
9.	Is Bolt 8.8 grade	Yes/No
10.	Is pressure surfaces grooved or grip-jawed	Yes/No
11.	Is connector is provided with aluminum shear head, operating with normal tools.	Yes/No
12.	Is nut required to tightening the bolt	Yes/No
13.	No. of Bolts	
14	Size of Bolts	
15	Weight of PG Connector	
16	Size of PG Connector (LXW)mm	
17	Thickness of PG Connector	


## 20.0 SCHEDULE OF DEVIATIONS:

### (TO BE ENCLOSED WITH TECHNICAL BID)

All deviations from this specification shall be set out by the Bidders, clause by Clause in this schedule. Unless specifically mentioned in this Schedule, the tender shall be deemed to confirm the purchaser's specifications.

Initiator	<i>Suryakanta Mohanty</i>	HOD (Engineering)	<i>Sanku P.D.</i>
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 <b>TPNODL</b> <small>TP NORTHERN ODISHA DISTRIBUTION LIMITED</small> <small>(A Tata Power and Odisha Government Joint Venture)</small>	<b>TP NORTHERN ODISHA DISTRIBUTION LIMITED</b>		
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	<b>DOCUMENT NO.</b>	TPNODL/ENGG/SPEC/023/2021	REVISION NO: R0

Sr. No.	Clause No.	Details of deviation with justifications

We confirm that there are no deviations apart from those detailed above.

Signature of Bidder:

Name of the Company:

Date:

Office Seal:

Initiator	<i>Suryakanta Mohanty</i>	HOD (Engineering)	<i>Sanku P.D.</i>
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<b>TPNODL</b> <b>TP NORTHERN ODISHA DISTRIBUTION LIMITED</b> <small>(A Tata Power and Odisha Government Joint Venture)</small>	<b>TP NORTHERN ODISHA DISTRIBUTION LIMITED</b>		
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<b>Initiator</b>		<b>HOD (Engineering)</b>	
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Doc. Title

GENERAL CONDITIONS OF CONTRACT –SUPPLY ORDERS

Rev. No

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Prepared By

Imran Ahmad/ Swetaraj Parida

Reviewed By

Vipin Chauhan

Approved By

Sunil Bhattar

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## 1.0 ORGANIZATIONAL VALUES

The Tata Group has always been a value driven organization. These values continue to direct the Group's growth and businesses. The six core Tata Values underpinning the way we do business are:

**Integrity** - We must conduct our business fairly, with honesty and transparency. Everything we do must stand the test of public scrutiny.

**Understanding** - We must be caring, respectful, compassionate and humanitarian towards our colleagues and customers around the world and always work for the benefit of India.

**Excellence** - We must constantly strive to achieve the highest possible standards in our day to day work and in the quality of goods and services we provide.

**Unity** - We must work cohesively with our colleagues across the group and with our customers and partners around the world to build strong relationships based on tolerance, understanding and mutual co-operation.

**Responsibility** - We must continue to be responsible and sensitive to the countries, communities and environments in which we work, always ensuring that what comes from the people goes back to the people many times over.

**Agility** - We must work in a speedy and responsive manner and be proactive and innovative in our approach.

## 2.0 Tata Code of Conduct

The Business Associate and TPNODL shall be bound by the provisions/ clauses mentioned in Tata Code of Conduct (TCoC) in all their dealings with stakeholders. The Associate is advised to go through the TCoC document available as Annexure-J.

## 3.0 CONTRACT PARAMETERS

### 3.1 Issue/Award of Contract

TPNODL awards the contract to the Associate in writing in the form of Purchase Order (PO) or Rate Contract (RC), hereafter referred as Contract, through in any or all of following modes physical handover / post / e-mail / web document / fax with all the attachments/enclosures which shall be part of the contract document.

On receipt of the contract, the associate shall return to TPNODL copy of the contract document duly signed by legally authorized representative of associate, within two days of Effective Date of Contract for contracts having contract execution time less than 30 days and within five days for all other contracts.

Note- In case of RC though, further Release Orders (RO) shall be issued by TPNODL on RC rates and terms & Conditions as per the requirement of TPNODL.

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### **3.2 Contract Commencement Date**

The date of issue/award of contract shall be the Effective Date of Contract or Contract Commencement date.

### **3.3 Contract Completion Date**

The date of expiry of Guarantee Period shall be deemed as the Contract Completion Date.

### **3.4 Contract Period/Time**

The period from Contract Commencement Date to Contract Completion Date shall be deemed as the Contract Period/Time.

### **3.5 Contract Execution Completion Date**

The stipulated date for completing the supply as per schedule of quantities shall be deemed as the Contract Execution Completion Date.

### **3.6 Contract Price /Value**

The total all inclusive price/value mentioned in the PO/RC is the Contract Price/Value and is based on the quantity, unit rates and prices quoted and awarded and shall be subject to adjustment based on actual quantities supplied and accepted and certified by the authorized representative of the company unless otherwise specified in schedule of quantities or in contract documents.

### **3.7 Contract Document**

The Contract Document shall mean and include but not limited to the following:

- NIT/Tender Enquiry, QR, Instruction to Bidders, Special Condition of Contract (SCC) of tender, GCC, Technical & Commercial Specifications including relevant annexure and attachments).
- Bids & Proposals Received from Associate including relevant annexure/attachments.
- RC/PO with agreed deviations from the tender/bid documents.
- All the Inspection and Test reports, Detailed Engineering Drawings.
- Material Dispatch Clearance Certificate (MDCC).
- Minutes of Meeting (MoM)

### **3.8 Contract Language**

All documents, instructions, catalogues, brochures, pamphlets, design data, norms and calculations, drawings, operation, maintenance and safety manuals, reports, labels, on deliveries and any other data shall be in English Language.

The Contract documents and all correspondence between the TPNODL, Third Parties associated with the contract, and the Associate shall be in English language.

However, all signboards required indicating "Danger" and/or security at site and otherwise statutory required shall be in English, Hindi, and local languages.

### **3.9 Reverse Auction**

TPNODL reserves the right to conduct the reverse auction (instead of public opening of price bids) for the products / services being asked for in the tender. The terms and conditions for such reverse auction events shall be as per the Acceptance Form attached in Annexure F. The



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bidders along with the tender document shall mandatorily submit a duly signed copy of the Acceptance Form as mentioned in the Annexure J as a token of acceptance for the same.

#### 4.0 SCOPE OF WORK

All the activities that are to be undertaken by the Associate to realize the contractual deliverables in completeness form Scope of Work. Following clauses list, but not limited to, major requirements of the scope of work.

The associate shall satisfy himself and undertake fully the technical/commercial requirements of items to be supplied as listed in the Schedule of Quantities together with the tests to be performed /test reports to be furnished before dispatch, arrangement of stage and final inspections during manufacturing as per terms and conditions of contract, technical parameters & delivery terms and conditions including transit insurance to be met in order to fully meet TPNODL's requirements.

Completeness: Any supplies and services which might have not been specifically mentioned in the Contract but are necessary for the scope mentioned in Special Terms & Conditions and/or completeness of the works at the highest possible level, including any royalties, license fees & compensation to be paid, whether incurred by the associates or by a third party for the work covered in the scope, regardless of when incurred, shall be supplied/provided by the associate without any extra cost and within the time schedule for efficient, smooth and satisfactory operation and maintenance of the works at the highest possible level under Indian conditions (but according to international standards for facility of this type), unless expressly excluded from the scope of supplies and services in this Contract.

TPNODL have the right, during the performance of the Contract, to change the scope and/or technical character of the Project and/or of the supplies and services stipulated in the Contract by submitting a request in writing to the Associate. The Associate shall, within fifteen days of receipt of such request from the TPNODL, provide Purchaser with a reasonably detailed estimate of the cost of the change outlined in the request.

In the event, TPNODL requests a change, the Contract price and time shall be adjusted upwards or downwards, as the case may be and shall be mutually agreed to. The associate shall not be entitled to any extension of time unless such changes adversely affect the time schedule.

The Associate shall not proceed with the changes as requested till adjustment of contract price and time schedule where so applicable in terms of or otherwise directed by the TPNODL.

#### 4.1 Bid Evaluation- Commercial & Technical

TPNODL reserves the right to evaluate the bid on below parameters as per the requirement:

**Commercial Evaluation:** The bid shall be evaluated on the basis of Qualifying Requirement parameters and other commercial parameters as mentioned in tender.

**Technical Evaluation:** The bid shall be evaluated on the parameters and not limited to Bidder Experience, Bidder Performance with other utility/company, internal performance feedback, Technical Specification, General Technical Parameters (GTP), Layout, Drawings etc.

TPNODL reserves the right to carry out Factory Evaluation of Manufacturer along with the Visit to executed Sites for further evaluation to ascertain bidder's manufacturing capability, quality procedures & Performance of executed works.

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## 5.0 PRICES/RATES/TAXES

Unless specified elsewhere in the contract document, the prices/rates are inclusive of cost of finished product for which MDCC will be issued by TPNODL, packaging and forwarding charges, freight and transit insurance charges covering loading at Associate's works, transportation to TPNODL store/site & unloading & delivery at TPNODL stores/TPNODL site, cost of documentation including all the relevant test certificates and other supportive documents to be furnished.

The Prices/Rates are inclusive of all taxes, levies, cess and duties, particularly Goods and Services Tax as applicable. All government levy / taxes shall be paid only when the invoice is submitted according to the relevant act.

The prices/rates shall remain firm till actual completion of entire supply of goods/material/equipment as per contract is achieved and shall remain valid till the completion of the contract.

The prices shall remain unchanged irrespective of TPNODL making changes in quantum in all or any of the schedules of items of contract.

### 5.1 Changes in Statutory Tax Structure

If rate of any or all of the statutory taxes and duties applicable to the contract changes, such changes shall be incorporated by default if the changes occur within the contract execution time and shall be applicable if the contract is executed by the Associate within the Contract Execution Time.

For execution of contracts beyond contract execution time, where the delay is not attributable to TPNODL no upward revision in tax /duties shall be considered irrespective of changes in the statutory tax structure either within the contract execution time or beyond. However, in such cases, benefits due to any downward revisions in statutory tax rates shall be passed on to TPNODL.

## 6.0 TERMS OF PAYMENT

On delivery of the materials in good condition and certification of acceptance by TPNODL official, Associate shall submit the Bills/Invoices in original in the name of "TPNODL Limited" to invoice desk, complete with all required documents as under:

- Test Reports (4 sets).
- MDCC issued by TPNODL.
- Packing List.
- Drawing and Catalogue.
- Guarantee/Warranty Card.
- Delivery Challan.
- O&M Manual.
- Copy of Order.
- Minutes of Meeting.

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- E-Way challan (if applicable)

Bills/ invoices shall mention Supplier's GST Number. TPNODL will make 100% payment within 30 days of submission of the Bill/Invoice complete in all respects and along with all the requisite documents mentioned above, subject to condition that Associate has furnished the requisite Security-cum-Performance Guarantee as stipulated in the contract.

### 6.1 Quantity Variation

Payment will be made on the basis of actual quantity of supplies/actual measurement of works accepted by TPNODL and not on the basis of contract quantity.

### 6.2 Full and Final Payment

Full & Final Payment in all contracts shall be made subject to the associate submitting "No Demand Certificate" in the format as per Annexure-C.

### 7.0 MODE OF PAYMENT

Payment shall be made through crossed RTGS/ NEFT/ Online Net banking mode whichever of the two modes chosen by the Associate, in favour of Associate's Bank Account on TPNODL records, on whose name Contract has been issued. Those Associates opting for the RTGS mode shall submit the details of Bank Account and other details as per annexure G. Further, for any payments made, TPNODL is not responsible for any consequences/disputes Associate have among the owners channel partners, sub-Associates and all such dispute/concerns shall be settled solely by the Associate.

### 8.0 SECURITY CUM PERFORMANCE DEPOSIT

Associates shall submit within 15 days from the effective date of issue of PO/RC, Security Performance Bank Guarantee (SPBG) in the format as per Annexure B of this document from banks acceptable to TPNODL for:

- (a) 5% of the PO value if purchase order value is more than Rs 5 Crores.
- (b) 10% of the PO value if purchase order value is less than Rs 5 Crores.

This shall remain valid till the end of the Guarantee Period of contract, plus one month.

- (c) 5% of the RC value in case of Rate Contract. This shall remain valid till the Guarantee period plus one month.

- For PO/RC values less than Rs. 5 lacs, Associate may request for deduction of amount equivalent to SPBG value from their first invoice. Such amount shall be withheld by TPNODL while processing the invoice and shall be released after completion of Guarantee Period plus one month.
- For PO/RC values less than Rs. 3 lacs, the clause (8.0) for Security cum Performance Bank Guarantee (SPBG) shall not be applicable.
- In case of RC (Rate Contract) after the expiry of RC validity, Associate shall have to submit SPBG. However, the Associate has the option to re-submit the SPBG as per actual RO

(Release Order) value issued against the RC, valid for Guarantee Period plus one month. The Guarantee Period shall be considered as per the last RO issued against the said RC. The original SPBG as submitted against the RC shall be released on submission of

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the new SPBG to TPNODL. Alternatively, Associate may extend the validity of original SPBG only till the requisite period, i.e. Guarantee Period plus one month.

## 9.0 STATUTORY COMPLIANCE

### 9.1 Compliance to Various Acts

Associate should ensure adherence to all applicable laws, rules and regulation applicable under this contract from time to time. In case of violation any risk, costs etc shall be in associates account and keep TDPPL indemnified always till completion of contracts.

### 9.2 SA 8000

As TPNODL is SA 8000 compliant, it expects its Associates to follow guidelines of SA 8000:2014 on the following aspects

1. Child Labour
2. Forced or Compulsory Labour
3. Health & Safety
4. Freedom of Association & Right to Collective Bargaining
5. Discrimination
6. Disciplinary Practices
7. Working Hours
8. Remuneration
9. Management System

### 9.3 Affirmative Action

TPNODL appreciate and welcome the engagement/employment of persons from SC/ST community or any other deprived section of society by their business associates.

#### Relaxation in Contract Clauses under Affirmative Action for SC/ ST Business Associates\*\*

TPNODL believes that inclusive growth is the key to sustainable development, and to promote the same Policy on Affirmative Action for Scheduled Caste & Scheduled Tribe Communities has been adopted across the company.

Under the same pre-text, and to promote entrepreneurship among SC/ST community TPNODL has taken initiative by proposing relaxations in contract clauses as per below:

S. No	Initiative	for SC/ ST BA's	Guideline Document
1	Tender Fees	100% waiver for SC/ST community	All Open Tenders
2	Earnest Money Deposit	50 % relaxation of estimated EMD value	All limited and Open Tenders
3	Performance Bank Guarantee	50% relaxation in PBG for order value above 50 lacs else 25% relaxation	All limited and Open tenders
4	Turnover	25% relaxation in company turnover under qualifying requirement criteria	All Open Tenders

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**\*\*Classification of BAs under SC/ST shall be governed under following guidelines:**

- Proprietorship/ Single Ownership Firm: Proprietor of the firm should be from SC/ST community. Governing document shall be duly audited balance Sheet for the last FY bearing the name of proprietor.
- Partnership Firm: Only such firms shall qualify which have SC/ST partners holding equal to or more than 50% of the total ownership pattern of the firm. Governing document shall be Partnership Deed and audited balance sheet/ ITR for last FY.
- Private limited company: Only such firms shall qualify which have SC/ST directors holding equal to or more than 50% of the total ownership pattern of the firm. Governing document shall be Memorandum of Understanding (MoU) and/or Article of Association (AoA).

Governing document shall be Memorandum of Understanding (MoU) and/or Article of Association (AoA).

*Note: Certification from SC/ST commission shall be required for deciding upon SC/ST status of a person.*

**9.4 MSME Development ACT 2006**

Provisions for Firms falling in The Micro, Small and Medium Enterprise Development Act 2006:-

- Business Associate is requested to inform the TPNODL if they fall under provisions of The Micro, Small and Medium Enterprises Development Act, 2006 legislation, and provide necessary documents to TPNODL. The Associate also needs to mention the relevant details on their invoice/ bill.
- Business Associate shall submit the self-undertaking of registration in MSME category at the time of bidding as well as on an annual basis to TPNODL, enabling them to avail the consequent benefits, failing which TPNODL may take appropriate action against such defaults.
- Business Associates falling in MSME category shall submit the Tender Fee when participating in TPNODL tenders. However, they are eligible to submit concessional EMD at 50% of the EMD otherwise applicable.

**9.5 ISO 14001**

The vendor to confirm whether their organization is ISO 14001 certified. If not, the Vendor must certify that the handling, use and disposal of their product/ by-products conform to practices consistent with sound environment management and local statues. The Vendor shall ensure that all the wastes are disposal in environmental friendly way with strict compliance to applicable laws including adherence to MoEF guidelines with respect to the disposal of batteries, lead waste, copper cables, ash, waste oil, e-waste etc. which shall be disposed through MoEF approved parties only. The vendor shall also dispose off the e-waste generated at the end of the product life cycle at its own costs and risk as per the MoEF guidelines/ Orders

**10.0 QUALITY**

**10.1 Knowledge of Requirements**

The Associate shall be deemed to have carefully examined and to have knowledge of the equipment, the general and other conditions, specifications, schedules, drawings, etc. forming

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part of the Contract and also to have satisfied himself as to the nature and character of the work to be executed and the type of the equipment and duties required including wherever necessary of the site conditions and relevant matters and details. Any information thus procured or otherwise obtained from TPNODL/Consultants shall not in any way relieve the Associate from his responsibility and executing the works in accordance with the terms of contract.

### **10.2 Material/Equipment/Works Quality**

The items / works under the scope of the Associate shall be of the best quality and workmanship according to the latest engineering practice and shall be manufactured from materials of best quality considering strength and durability for their best performance and, in any case, in accordance with the specifications set forth in this Contract. All material shall be new. Substitution of specified material or variation from the process of fabrication/ construction/ manufacture may be permitted but only with the prior written approval of the TPNODL.

### **10.3 Adherence to Rules & Regulations**

The Associate shall procure and/or fabricate/erect all materials and equipment in accordance with all requirements of Central and State enactment, rules and regulations governing such work in India and at site. This shall not be construed as relieving the Associate from complying with any requirement of TPNODL as enumerated in the Contract which may be more rigid than and not contrary to the above mentioned rules, nor providing such construction as may be required by the above mentioned rules and regulations. In case of variance of the Technical Specification from the laws, ordinance, rules and regulations governing the work, the Associate shall immediately notify the same to the TPNODL. It is the sole responsibility of the Associate, however, to determine that such variance exists. Wherever required by rules and regulations, the Associate shall also obtain the statutory authorities' approval for the plant, machinery and equipment to be supplied by the Associate.

### **10.4 Specifications and Standards**

The Associate shall follow all codes and standards referred in the Contract Document. Codes and standards of other may be followed by the Associate with the prior written approval of TPNODL, provided materials, supplies and equipment according to the standard are equal to or better than the corresponding standards specified in the Contract.

Brand names mentioned in the Contract documents are for the purpose of establishing the type and quality of products to be used. The Associate shall not change the brand name and qualities of the bought out items without the prior written approval of the TPNODL. All such products and equipment shall be used or installed in strict accordance with original manufacturer's recommendations, unless otherwise directed by the TPNODL. In any circumstances the codes, specimen and standards prescribed by any government agency should not be violated.

## **11.0 INSPECTION/PARTICIPATION**

### **11.1 Right to Carry Out Inspection**

TPNODL reserves the right to send its representatives for inspection or participation at various stages of contract execution listed below, applicable as per contract construction.

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- During basic design and detail engineering of material/ Equipment carried out by Associate /Outsourced Agencies.
- During manufacturing stages of the product at Associate's/Associate's Outsourced Agency's Plant/Facility.
- During Pre-dispatch Inspection and Testing of finished/manufactured product at Associate's/Associate's outsourced Agency's Plant/Facility.
- During Installation & Commissioning Activities/Stages.
- Prior to Clearing of the completed installation for commissioning.
- Any other stage as find appropriate by TPNODL during contract execution time.

All inspections and participations shall be carried out by TPNODL giving written intimation to the Associate or receiving appropriate advance written inspection call from the Associate, unless otherwise specified elsewhere in the contract document.

MDCC request shall be submitted by BA to TPNODL at least 7 days before inspection date.

### 11.2 Facilitating Inspection

The Associate shall provide all opportunities and information to TPNODL's engineers to get acquainted with the technical know-how and the methods and practices adopted by the Associate in basic and detail engineering. The Associate shall provide documents, drawings, calculations etc. as may be required by TPNODL's Engineers.

The Associate shall provide free of charge office accommodation, office facilities, secretarial services, communication facilities, general and drawing office stationary, etc. as may be reasonably required by the TPNODL's engineers. Similarly, facilities shall also be provided by Associate's outsource agencies/partners/authorized dealers (collectively termed as sub associates) if such basic and detail engineering activities are carried out in the design offices of sub-Associates.

The Associate shall be responsible for the safety of employees of TPNODL/Third Party Agency when they are at the Associate's /Associate's outsource agency's plant or facility for carrying out/witnessing inspection/testing. All statutory safety precautions as applicable shall be followed by the Associate during Inspection Testing. If TPNODL inspectors are not satisfied with the safety arrangements at the plant, TPNODL have the right to call off inspection till such time corrective action is taken by the Associate.

Before raising the call for pre-dispatch final inspection and testing, the Associate shall conduct all the tests—type tests, routine tests etc-as specified in the contract document and submit copies of the test certificates to TPNODL along with the inspection call, for scrutiny of TPNODL.

The Associate and TPNODL shall jointly document all the observations, comments and action points after completion of inspection and it shall be binding on the Associate to provide compliance on all the points requiring compliance and furnish the compliance report to the designated authority of TPNODL for receiving clearance for dispatch of materials

### 11.3 Third Party Nomination

TPNODL also may nominate a third party for the purpose of carrying out the inspection and such an agency shall be entitled to all the rights and privileges of TPNODL as far as conducting the inspection.

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#### **11.4 Waiver of Inspections**

TPNODL on its own discretion shall chose to waive off any inspection and ask the Associate to submit all the test reports as applicable as per contract specifications, related to inspection and testing of the goods ordered for scrutiny and clearance for dispatch.

#### **11.5 Incorrect Inspection Call**

In case it is observed that the material offered for inspection is not ready at the time of TPNODL inspection visit rendering it as futile, all costs towards such inspection shall be recovered from the BA. Taxes as applicable on such recoveries shall be borne by the BA.

### **12.0 MDCC & DELIVERY OF MATERIALS**

#### **12.1 Material Dispatch Clearance Certificate**

Associate shall deliver material/goods/equipment against Supply Contracts or Supply Part of Composite/Service Contracts only after receiving Material Dispatch Clearance Certificate (hereafter termed as MDCC) issued by designated authority of TPNODL. Material delivered at TPNODL stores or at project site without a valid MDCC issued by the designated official of TPNODL shall be rejected. MDCC shall be issued to associate furnishing compliance report on the action points documented during pre-dispatch inspection and testing at Associate's/ Sub Associate's plant/ facility. In case Pre-dispatch inspection is waived at the discretion of TPNODL, then, MDCC shall be issued on receiving all the test reports-routine& type-from the Associate and finding them in order.

The associate shall include and provide for securely protecting and packing the materials so as to avoid loss or damage during handling and transport by air, sea, rail and road or any other means.

All such packing shall allow to the extent possible for easy removal and checking at Site. The associate shall take special precautions to prevent rusting of steel and iron parts during transit by sea. Gas seals or other materials shall be utilized by the associate for protection against moisture during transit of all Plant and Equipment.

Each Equipment or parts of Equipment shall be tagged with reference to the assembly drawings and corresponding part numbers. Each bale or package shall contain a packing note quoting specifically the name of the associate, item description, quantity, item / package identification.

All packing cases, containers, packing and other similar materials shall be new and supplied free by the associate and it shall not be required to be returned to the associate.

Notwithstanding anything stated in this clause, the associate shall be entirely responsible for loss, damage or depreciation or deterioration to the materials and supplies due to faulty and/or insecure packing or otherwise during transportation to the Site until otherwise provided herein.

In case of the consignments dispatched by road, the associate shall ensure that it or its subcontractors:

- i) Identify and obtain the correct type of trucks/trailers, keeping in view the nature of consignments to be dispatched.
- ii) Take such actions as may be necessary to avoid all possible chances of damages during transit and to ensure that all packages are firmly secured.



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Timelines for inspection and MDCC is as below:

S. No.	Inspection	MDCC issuance time including Inspection time (max.)
1	Outside Odisha	12 days
2	Within Odisha	5 days
3	Waiver*	3 working days

\* Associate is expected to raise the inspection call assuming that Inspection shall be carried out by TPNODL. The decision for waiver of inspection shall be on sole discretion of TPNODL.

### 12.2 Right to Rejection on Receipt

Goods/Material/Equipment delivered in condition physically damaged & incomplete as a product ordered, or not packed and transported as per the terms and conditions of the contract is liable to be rejected. Such item shall be lifted back by Associates within 15 days from receipt of rejection note from TPNODL and have to supply back the material within next 30 days or within the timeframe mutually decided by Associate and TPNODL.

If delivery of the material is beyond the agreed time, Liquidated damage clause, mentioned in this GCC separately shall be applicable; but the period for levy of LD shall be considered as per the original delivery schedule and not from the agreed timelines for material rectification.

### 12.3 Consignee

Unless otherwise specified in the Contract Document, Materials/Goods/Equipment shall be consigned to "Stores-In-Charge", TPNODL, Bhubaneswar.

### 12.4 Submission of mandatory documents on Delivery

Following documents shall be mandatorily submitted by BA along with supply of material to TPNODL stores/site:

S. No.	Documents	Requisite
1	Invoice copy in original	With all consignments
2	LR copy	Wherever required
3	Packing list	With all consignments
4	MDCC	With all consignments
5	Purchase order / Release order	Signed copy
6	Test certificates	With all consignments
7	Inspection/JVR report	In case pre-dispatch inspection is conducted
8	Device data in CD as per template for metering items	Wherever applicable

### 12.5 Dispatch and Delivery Instructions

S. No.	Instructions
1	Purchase order/ Release order no. shall be mentioned on invoice and on material
2	TPNODL material code and material description shall be mentioned in invoice and on material.

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3	“Property of TPNODL” shall be embossed on material.
4	The material shall be properly sealed and packed in standard packing as per purchase order terms & conditions.
5	The weight and quantity of material shall be mentioned wherever applicable
6	The material supplied shall be co-related with the packing list.
7	The name plate detail on equipment shall include Material code, Material description, specification detail of material [as applicable], Serial No. Year of manufacturing, PO/RO no. and date, “PROPERTY OF TPNODL, Bhubaneswar”, Guarantee period and Associate’s name.
8	In case of manual unloading, supplier / transporter shall deploy sufficient Labour for unloading the material at TPNODL central store. For heavy item(s), crane will be provided by TPNODL [unloading cost will be recovered from the associate].
9	The driver should have valid License and one helper in truck. All the documents of truck like registration papers, PUC etc. should be available in Truck.
10	BA representative should accompany the material and get it unloaded / stacked in his presence wherever possible.

### 13.0 GUARANTEE

#### 13.1 Guarantee of Performance

Associates shall stand guarantee that the equipment and material supplied under the contract is free from design, manufacturing, material, construction, erection & installation and workmanship & quality defects and is capable of its due, rated and intended quality performance, as an integrated product delivered under the contract, for a specific period termed as Guarantee Period(as elaborated elsewhere in this clause). The Associate should also guarantee that the equipment/material is new and unused except for the usage required for the tests and checks required as part of quality assurance.

#### 13.2 Guarantee Period

The Guarantee Period will be equipment/service/work specific and shall be as specified in the Standard Specifications of TPNODL for the equipment/material/service/work and where standard specifications are not part of contract documents or guarantee period is not specified in the standard specifications,, the guarantee period shall be as per the Special Terms and Conditions of the Contract. In case of no mention of the guarantee period in standard specifications or SCC Guarantee Period will be 12 Months from the Date of Commissioning or 24 months from the date of delivery of final lot of supplies made, whichever is earlier.

#### 13.3 Failure in Guarantee Period (GP)

If the equipment and material supplied under the contract fails to perform its due, rated & intended quality performance, during the Guarantee period, the associate is liable to undertake repair/rectify/replace the equipment and material supplied within time frame specified in the SCC or elsewhere in the contract documents at associate’s cost to make the equipment and material supplied/service or work rendered under the contract of performing its due, rated and intended quality performance. If Associate fails to repair/rectify/replace the equipment or material supplied rendered under the contract, failed in Guarantee Period, TPNODL will be at liberty to get the same done at Associate’s risks and costs and recover all such expenses plus the TPNODL’s own charges (@ 20% of expenses incurred), from the Associate or from the “Security cum Performance Deposit” as the case may be.

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If during the Warranty/ Guarantee period some parts of the supplies are replaced owing to the defects/ damages under the Warranty, the Warranty period for such replaced parts shall be until the expiry of twelve months from the date of such replacement or renewal or until the end of original Guarantee period, whichever is later.

Any repairs during the Guarantee Period shall be carried out by the Associate within 30 days of reporting the issue to Associate by TPNODL. However, if replacement of the Equipment is required, Associate shall notify the same to TPNODL within 7 days of reporting the issue by TPNODL. Thereafter, the total time for supply of new equipment/ material shall be equal to the original delivery period of that equipment/ material as specified in the Contract. In case the Associate is not able to rectify/ replace the faulty equipment/ material within the stipulated timelines as mentioned above, penalty shall be levied as per the Liquidated Damages clause mentioned in this document. The penalty amount shall be recovered from the payment due to the vendor or by encashment of the SPBG as the case may be.

#### **13.4 Cost of repairs on failure in GP**

The cost of repairs/rectification/replacement, required transportation, site inspection /mobilization/dismantling and re-installation costs as applicable, to be borne by Associate. The Associate has to ensure that the interruption in the usage of intended purpose of the equipment is minimized to the maximum extent In lieu of the time taken for repairs/rectification/replacement.

#### **13.5 Guarantee period for Goods Outsourced**

If the Associate outsources partly equipment/materials/services from third party as mutually agreed upon at the pre award stage of contract, TPNODL shall have the benefit of any additional guarantee period if provided by the third party for the part supplied/executed by them.

#### **13.6 Latent Defect**

Hidden defects in manufacturing or design of the product supplied and which could not be identified by the tests conducted but later manifested during operation of the equipment are termed as latent defects. Associates shall further be responsible for 'free replacement' for another period of THREE years from the end of the guarantee period for any 'Latent Defects' if noticed and reported by the Company.

#### **13.7 Support beyond the Guarantee Period**

The Associate shall ensure availability of spares and necessary support for a period of atleast 10 years post completion of guarantee period of equipment supplied against the contract.

### **14.0 LIQUIDATED DAMAGES**

- a) For supplies which are of standalone use, multiple in quantities and having a single final delivery schedule, Liquidated damages shall be levied without prejudice to any of the other contractual rights of TPNODL, as described below:

For delay of each week and part thereof from the delivery schedule specified in the contract, 1% of contract value corresponding to undelivered quantity, provided full quantity is supplied within 130% of the original contract time. If full contractual quantity is not delivered within 130% of contract time for delivery, TPNODL has the right to levy LD on the entire contract value, subject to a maximum of 10% of the total contract value.

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- b) For Supplies having phased delivery schedule as per contract terms, standalone use and multiple in quantities, Liquidated damages shall be levied without prejudice to any of the other contractual rights of TPNODL, as described below:

For the purpose of calculating and applying LD, each delivery lot shall be considered separately. For delay of each week and part thereof, from the delivery schedule specified for the lot, 1% of the contract value corresponding to the undelivered quantity of the lot subject to a maximum of 10% of the total contract value of the subject lot. However, if full contractual quantity is not delivered within 130% of contract time for delivery, TPNODL has the right to levy LD on the entire contract value, subject to a maximum of 10% of the total contract value. Deduction of LD shall be on landed cost i.e contract value inclusive of taxes and in pursuant statutory compliance GST would be applicable at the stipulated rate and the same shall be borne by Business Associate. In case of LD deduction, a GST invoice shall be issued by TPNODL as a proof of deduction/ recovery.

#### **14.1 LD Waiver Request**

Any request of LD waiver shall be submitted within thirty (30) days of deducting LD. Request submitted beyond the timeline shall not be entertained.

#### **15.0 UNLAWFUL ACTIVITIES**

The Associate shall have to ensure that none of its employees are engaged in any unlawful activities (whether covered under the scope of the present GCC or not) subversive of the TPNODL's interest failing which appropriate action (legal or otherwise) may be taken against the Associate by the TPNODL, in accordance with the terms of the present GCC.

#### **16.0 CONFIDENTIALITY**

Associate and its employees or representatives thereof shall strictly maintain the confidentiality of various information they come across while executing the contract as detailed below.

##### **16.1 Documents**

All maps, plans, drawings, specifications, schemes and other documents or information related to the Contract/Project and the subject matter contained therein and all other information given to the Associate by the TPNODL in connection with the performance of the contract shall be held confidential by the Associate and shall remain the property of the TPNODL and shall not be used or disclosed to third parties by the Associate for any purpose other than for which they have been supplied or prepared. The Associate may disclose to third parties, upon execution of confidentiality agreements, such part of the drawings, specifications or information if such disclosure is necessary for the performance of the Work provided such third parties agree in writing to keep such information confidential to the same extent and degree as provided herein, for the benefit of the TPNODL.

##### **16.2 Geographical Data**

Maps, layouts and photographs of the unit/plant including its surrounding regions showing vital installation for national security of country or those of TPNODL shall not be published or disclosed to the third parties or taken out of the country without prior written approval of the TPNODL and upon execution of confidentiality agreements satisfactory to the TPNODL with such third parties prior to disclosure.

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### **16.3 Associate's Processes**

Title to secret processes if any developed by the Associate on an exclusive basis and employed in the design of the equipment shall remain with the Associate. TPNODL shall hold in confidence such processes and shall not disclose such processes to the third parties without prior approval of the Associate and execution by such third parties of secrecy agreements satisfactory to the Associate prior to disclosure. Upon completion of contract, such processes shall become the property of the TPNODL. Title to technical specifications, drawings, flow sheets, norms, calculations, diagrams, interpretations of test results, schematics, layouts and such other information, which the Associate has supplied to the TPNODL under the Contract shall be passed on to the TPNODL. The TPNODL shall have the right to use these for construction, erection, start-up, Trial Run, operation, maintenance, modifications and/or expansion of the works including for the manufacture of spare parts.

### **16.4 Exclusions**

The provision of Clauses 16.1 to 16.3 shall not apply to information:

- Which at the time of disclosure are in the public domain which later on become part of public domain through no fault of the party concerned, or
- Which were in the possession of the party concerned prior to disclosure to him by the other party, or
- Which were received by the party concerned after the time of disclosure without restriction on disclosure or use, from a third party who did not acquire such information directly or indirectly from the other party or has no obligation of confidentiality for such information.

### **16.5 Violation**

In case of violation of this clause, the Associate is liable to pay compensation and damages as may be determined by the competent authority of TPNODL.

## **17.0 INTELLECTUAL PROPERTY RIGHTS**

If, in the course of performance of its functions and duties as envisaged by the scope of the present GCC, the Associate acquires or develops, any unique knowledge or information which would be covered, or, is likely to be covered within the definition of a trademark, copyright, patent, business secret, geographical indication or any other form of intellectual property right, it shall be obliged, under the terms of this present GCC, to share such knowledge or information with the TPNODL. All rights, with respect to, or arising from such intellectual property, as afore mentioned, shall solely vest in TPNODL.

Moreover, the Associate undertakes not to breach any intellectual property right vesting in a third party/parties, whether by breach of statutory provision, passing off, or otherwise. In the event of any such breach, the Associate shall be wholly liable to compensate, indemnify or make good any loss suffered by such third party/parties, or any compensation/damages arising from any legal proceeding/s, or otherwise. No liability of TPNODL shall arise in this respect, and any costs, damages, expenses, compensation payable by TPNODL in this regard to a third party/parties, arising from a legal proceeding/s or otherwise, shall be recoverable from the Associate.

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## 18.0 INDEMNITY

The Associate shall at all times indemnify, keep indemnified and hold harmless the TPNODL and its officers, directors, employees, affiliates, agents, successors and assigns against all actions, claims, demands, costs, charges and expenses arising from or incurred by reason of any infringement of patent, trade mark, registered design, copy rights and/or industrial property rights by manufacture, sale or use of the equipment supplied by the Associate whether or not the TPNODL is held liable for by any court judgement. In this connection, the TPNODL shall pass on all claims made against him to the Associate for settlement.

The Associate assumes responsibility for and shall indemnify and save harmless the TPNODL from all liability, claims, costs, expenses, taxes and assessments including penalties, punitive damages, attorney's fees and court costs which are or may be required to be paid by the TPNODL and its officers, directors, employees, affiliates, agents, successors and assigns arising from any breach of the Associate's obligations under the Contract or for which the Associate has assumed responsibilities under the Contract including those imposed under any local or national law or laws, or in respect to all salaries, wages or other compensation for all persons employed by the Associate or his Sub-Associates or suppliers in connection with the performance of any work covered by the Contract. The Associate shall execute, deliver and shall cause his Sub-Associate and suppliers to execute and deliver, such other further instruments and to comply with all the requirements of such laws and regulation as may be necessary there under to conform and effectuate the Contract and to protect the TPNODL.

The TPNODL shall not be held responsible for any accident or damages incurred or claims arising, due to the Associate's error there from prior to completion of work. The Associate shall be liable for such accidents and after completion of work for such accidents as the case may be due to negligence on his part to carry out Work in accordance with Indian laws and regulations and the specifications set forth herein.

## 19.0 LIABILITY & LIMITATIONS

### 19.1 Liability

Except for any specific liability which may be identified in the Contract and which may be payable hereunder, Associate shall not be liable for any special, incidental, indirect, or consequential Damages or any loss of business Contracts, revenues or other financial loss (or equivalents thereof no matter how claimed, computed or characterized) arising out of or in connection with the Performance of the Work or supply of Goods ***unless caused by Associate's negligence, willful misconduct or breach of contract.***

If the Associate is a joint venture or consortium, all concerned parties shall be jointly and severally bound to the TPNODL for the fulfillment of the provisions of the Contract. The consortium or the joint venture shall designate one party as their leader, who will be the coordinator between the parties and TPNODL. The constituents & leader of the consortium or joint venture shall not be changed without the prior consent of TPNODL.

TPNODL shall have no liability or any special, incidental, indirect or consequential Damages for any loss of Business Contracts, revenues or other financial loss arising out of this Contract.

### 19.2 Limitation of Liability

The total liability of Associate against any contract shall be limited to the Total All Inclusive Contract Value.

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## 20.0 FORCE MAJEURE

Force Majeure applies if the performance by either Party ("the Affected Party") of its obligations under Contract is materially and adversely affected.

"Force Majeure" shall mean any event or circumstance or combination of events or circumstances referred below and their consequences that wholly or partly prevents or unavoidably delays any Party in the performance of its obligations under this Agreement, but only and to the extent that such events and circumstances are not within the reasonable control, directly or indirectly, of the Affected Party and could not have been avoided even if the Affected Party had taken reasonable care:

- Act of war (whether declared or undeclared), invasion, armed conflict or act of foreign enemy, embargo, blockade, revolution, riot, bombs, religious strife or civil commotion, etc. ▪ Politically motivated sabotage, or terrorism, etc.
- Action or Act of Government or Governmental agency for which remedy is beyond the control of the affected parties. ▪ Any act of God.

Note: Causes like power breakdown/ shortages/fire/strikes, accidents etc do not fall under Force Majeure.

Time being the essence of the Contract, if either party is prevented from the performance of its obligations in whole or in part due to an event of Force Majeure, then provided Notice of happening of any event by the Affected Party is given to the other party within seven (7) days from the date of occurrence of such event, which DIRECTLY has impact on works and submitted details and quantum of resulting effect, but at the same time had made all possible efforts to mitigate and overcome effects thereof, the Affected Party's performance under this Contract shall be suspended until such event ceases and the Scheduled Completion shall be delayed accordingly.

If Force Majeure event(s) continue for a period of more than three months, the parties shall hold consultation to discuss the further course of action.

Neither party shall be considered to be in default or in breach of its obligation under the Contract to the extent that performance of such obligation by either party is prevented by any circumstances of Force Majeure which arise after effective date of Contract.

Neither party can claim any compensation from the other party on account of Force Majeure.

## 21.0 SUSPENSION OF CONTRACT

### 21.1 Suspension for Convenience

TPNODL may, at any time and at its sole option, suspend execution of all or any portions of the schedule of items of contract to be supplied/work to be executed by Associate under the contract by providing to the Associate at least two business days written notice for contracts having contract completion period less than sixty days and at least seven business days' notice for all other contracts.

Upon receipt of any such notice, the Associate shall respond as follows as applicable as per contract construction.

- Immediately discontinue further supply of material/goods specified in the suspension notice for supply contracts

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- Immediately discontinue further service/work and supply of materials of those services/materials/work specified in the suspension notice for service /composite contract
- Promptly make every reasonable effort to obtain suspension, upon terms satisfactory to TPNODL, of all orders, outsourcing arrangements, and rental Contracts to the extent that they relate to performance of the portion of Work suspended by the notice.
- Protect and maintain the portion of the service/Work already completed, including the portion of the Work suspended hereunder, unless otherwise specifically stated in the notice.
- Continue delivering/carrying out the supply/service/work items as per contract conditions, which do not fall under purview of the suspension notice.

On receipt of resumption notice from TPNODL, the Associate shall resume execution of contract as specified in the resumption notice, within the time frame specified in the resumption notice.

### **21.2 Suspension for Breach of Contract conditions.**

TPNODL shall suspend execution of whole/or part thereof the contract till such time Associate complies with the conditions stipulated under section clause 22.1 for breach/default of contract conditions.

### **21.3 Compensation in lieu of Suspension**

If the suspension of the contract in whole or in part is for convenience of TPNODL and not due to any breach of contract conditions by the associate, TPNODL at its discretion shall consider compensating all reasonable additional costs incurred by Associate in lieu of suspension of whole or part of contract, on representation of the Associate providing justified estimates of such additional costs and such estimates are found acceptable and approved by competent authority of TPNODL.

If the suspension of contract in whole or part thereof is due to breach of contract conditions (refer clause 22.1) by the Associate, Associate shall not be entitled for any compensation for any cost incurred in lieu of suspension of whole or part of contract and also shall be liable for compensating all the losses arising to TPNODL in lieu of suspension of contract. Resumption notice shall be subject to the Associate taking corrective action for the breach of contract conditions within the time frame and as per the terms specified in the suspension notice.

## **22 TERMINATION OF CONTRACT**

### **22.1 Termination for Default/Breach of Contract**

The contract / PO /RC shall be subject to termination by TPNODL in case of breach of the contract by the Associate which shall include but not be limited to the following:

- a. Withdrawal or intimation by the Associate of its intent to withdraw or surrender the execution / completion of the contracted work /PO or failure in ensuring adherence to any delivery schedules, in deviation of the contract/PO.
- b. Refusal or neglect on the part of the Associate to supply material/equipment of quantity or quality as specified by TPNODL and within the timeframe as specified in the contract document or refusal or neglect to execute the services/work in terms of the agreed standards of quantity or quality and/or within the timeframe specified in the contract/PO.



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- c. Failure in any respect to perform any portion of the Work contracted with promptness, diligence, or in accordance with the terms of the contract.
- d. Failure to furnish guarantees as specified and /or failure to comply with the terms thereof.
- e. Failure to furnish such relevant documents or information within the time specified which may be necessary for due execution / completion of the works and documentation.
- f. Liquidation, bankruptcy either voluntary or involuntary OR entering into any composition or compromise with its creditors, or Insolvency.
- g. In case any reasonable information has been received by TPNODL that Associate has adopted/ or attempted to adopt any unethical conduct, action in award of the contract /PO or at any time thereafter.
- h. Failure to comply with applicable statutory provisions as contained in the contract or failure to comply with the applicable laws.
- i. Failure to comply with safety regulations/clauses stipulated in the contract or as may be generally instructed by TPNODL.

If the default or breach as specified under clause 22 (except sub clause g thereof) be committed by the associate for the first time, TPNODL shall issue, along the with notice of default or breach, a warning notice instructing the associate to take remedial/corrective action within the time frame stipulated in the warning notice and not to repeat the same in future. The timeframe for corrective action by the associate shall be specific to the nature of breach of contract and the same shall not be objected to by the Associate. If the Associate fails to comply with the instructions in the warning notice or in taking corrective action to the satisfaction of TPNODL then TPNODL may terminate the entire or part of contract at its discretion by issuing termination notice without incurring any liability on this ground.

In case the contract is terminated for any breach of the nature specified in clause 22 g stated above, TPNODL shall have the right to terminate all the contracts TPNODL is having with the Associate by issuing termination notice which shall be without prejudice to the other rights of TPNODL available to it under law.

Without prejudice to its right to terminate for breach of contract, TPNODL may, without assigning any reason, terminate the Contract in whole or in part at any time at its discretion while the contract is in force by serving a written notice of two weeks to the Associate.

In the event of TPNODL having proceeded with termination of the contract the associate shall comply and proceed further in the following manner:

- a) Associate shall discontinue the supply, on the expiry of the said period of two weeks.
- b) Associate shall ensure that no further steps are being taken towards discharge of the obligations, terms and conditions as contained in the contract/PO. This shall include initiation of actions not limited to discontinuation of other allied and associated arrangements which the associate might have entered into with third parties for due discharge of its obligations under the contract with TPNODL.
- c) The Associate shall perform thereafter such tasks as may be necessary to preserve and protect the terminated portion of the material/service/work in progress and the materials and equipment at TPNODL sites or in transit thereto. However the associate shall

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continue to fulfill its contractual obligations with regard to the part of contract not terminated.

- d) It shall be open for TPNODL to conduct a joint assessment with the associate of the material, supplies, equipment ,works or in general as to the subject matter of the contract in regard to which the associate claims having completed its obligations before or during such termination.
- e) It shall be open to TPNODL to seek invocation of the performance bank guarantee or any other guarantee or other security deposit by whatever name called submitted by the associate, which shall not be objected to or protested against by the associate.

In case of termination of the contract the parties agree to be governed inter alia by the following:

- a) In case TPNODL exercises its right of termination as stated above the associate shall not dispute or object to the same.
- b) The Associate shall be entitled to receive and claim only such payments OR sums of money from TPNODL as may be found payable to it in regard to works executed by it under the terms of the contract and no other claim of any nature whatsoever shall be made by the Associate.
- c) All such provisions which the parties have agreed to survive and prevail even after termination of the contract shall remain effective despite the termination.

In the event of such termination, TPNODL may finish the Work by whatever method it may deem expedient, including the hiring of services and /or purchase of material equipment from such third parties as TPNODL may deem fit or may itself provide any labor or materials and perform any part of the Work. The associate undertakes to bear the incremental costs if any paid by TPNODL in such a case attributable to failure on the part of the associate. The Associate in such a case shall not be entitled to receive any further payments and any sums found payable to it may be adjusted by TPNODL against the amount recoverable from him on this ground. The same shall be without prejudice to other rights available to TPNODL under law against the associate.

Upon the termination of any of the contract due to occurrence of any circumstances provided in clauses stated above and constituting repeated breach or misconduct , TPNODL shall be entitled to bar the associates its agents , affiliates from undertaking any negotiation / tendering, bidding , participation activities concerning TPNODL for a period of two years from date of such termination. The same shall be without prejudice to other rights available to TPNODL.

### **22.2 Termination for Convenience of Associate**

Associate at its convenience may request for termination of contract, clearly assigning the reason for such request. TPNODL has full right to accept, reject or partially accept such request. However, associate shall continue its supply as per contract till final approval is given to associates for such termination.

### **22.3 Termination for Convenience of TPNODL**

TPNODL at its sole discretion may terminate the contract by giving 30 days prior notice in writing or through email to the Associate. TPNODL shall pay the Associate for all the supplies/

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services rendered till the actual date of contract termination against submission of invoice by the Associate to that effect.

### **23.0 DISPUTE RESOLUTION & ARBITRATION**

In case of any dispute or difference the parties shall endeavour to resolve the same through conciliatory and amicable measures within 15 Days failing which the matter may be referred by either party for resolution by the sole arbitrator to be appointed mutually by both the parties. The arbitral proceedings shall be conducted in accordance with Arbitration and Conciliation Act 1996 and the place of arbitration shall be Bhubaneswar. The language to be used at proceedings shall be English and the award of the arbitrator shall be final and binding on the parties. The parties shall bear their respective costs of arbitration. The associate shall continue to discharge its obligations towards due performance of the works as per the terms of the contract during the arbitration proceedings unless otherwise directed in writing by TPNODL or suspended by the arbitrator. Further, TPNODL shall continue making such payments as may be found due and payable to the associate for such works.

#### **23.1 Governing Laws and Jurisdiction**

The parties shall be subject to the jurisdiction of the courts of law in Bhubaneswar and any matter arising here from shall be subject to applicable law in force in India.

### **24.0 ATTRIBUTES OF GCC**

#### **24.1 Cancellation**

The Company reserves the right to cancel, add, delete at its sole discretion, all or any terms of this GCC or any contract, order or terms agreed between the parties in pursuance without assigning any reasons and without any compensation to the Associates.

#### **24.2 Severability**

If any portion of this GCC is held to be void, invalid, or otherwise unenforceable, in whole or part, the remaining portions of this GCC shall remain in effect.

#### **24.3 Order of Priority**

In case of any discrepancies between the stipulations in General Conditions of the Contract (GCC) and Special Conditions of Contract (SCC), the GCC shall stand superseded by the SCC to the extent stipulated hereinabove while balance portion of respective clauses of GCC shall continue to be applicable.

### **25.0 ERRORS AND OMISSIONS**

The Associate shall be responsible for all discrepancies, errors and omissions in the drawings, documents or other information submitted by him, irrespective of whether these have been approved, reviewed or otherwise accepted by the TPNODL or not. However any error in design/drawing arising out of any incorrect data/written information from TPNODL will not be considered as error and omissions on part of the Associate.

### **26.0 TRANSFER OF TITLES**

The title of ownership and property to all equipment, materials, drawings & documents shall pass to the TPNODL on acceptance of material by store/site after Inspection.

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However, such passing of title of ownership and property to the TPNODL shall not in any way absolve, dilute or diminish the responsibility and obligations of the Associate under this Contract including loss or damages and all risks, which shall vest with the Associate.

## 27.0 INSURANCE

The Contractor shall take out the Insurance Policies which shall cover all risks including the following, as applicable:-

- a) The value of the policy shall cover the total value of all the items till they are handed over to TPNODL.
- b) TPNODL shall be the principal holder of the policy. The Associate shall be the loss payee under the policy. Associate / Sub-contractor of the Associate shall not be holders or beneficiaries in the policy nor shall they be named in the policy. TPNODL reserves the exclusive right to assign the policy.
- c) While the payment of premium may be phased in agreement with the insurance company, at no time shall goods and services required to be provided by the associate shall remain uninsured in accordance with (a) above.
- d) A copy of the Insurance policy shall be made available to TPNODL prior to first dispatch lot of any Equipment and policy shall be kept alive and valid at all times up to the stage of final acceptance.
- e) TPNODL reserves the right to take out whatever policy that is deemed necessary by him if the associate fails to keep the said policy alive and valid at all times and/or causes lapses in payment of premium thereby jeopardizing the said policy. The cost of such policy(s) shall be recovered / deducted from the amount payable to the associate.
- f) The policy shall ensure that the TPNODL's decision regarding replacement of goods damaged, lost or rendered unusable shall be final.

In all cases, the associate shall lodge the claims with the underwriters and also settle the claims and shall also notify TPNODL of any filed claims. However, the associate shall proceed with the repairs and/or replacement of the equipment/components without waiting for the settlement of the claims. In case of seizure of materials by concerned authorities, the associate shall arrange prompt release against bond, security or cash as required. TPNODL, upon request by the associate, will extend all reasonable assistance to the associate in such a case.

All the insurance claims shall be processed and settled by the associate and the missing/damaged items shall be replaced/repared by them without any extra cost to TPNODL and without affecting the completion time.

## 28.0 SUGGESTIONS & FEEDBACK

We welcome all our Business Associates to write to us about their experience with TPNODL; be it our Company, our services or our people. Each and every concern, issue, query and suggestion from you will help us to become a better company to work with and shall help us develop a strong bonding of trust and a long term relationship with you.

You may send your feedback by filling up our Business Associate Feedback Form enclosed herewith as *Annexure-I*. You can also log on to our website [www.tpnodl.com](http://www.tpnodl.com) to provide your feedback.

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- Suggestions for us
- Feedback form
- Knowledge Sharing/ Experience with TPNODL
- Any issues with TPNODL.

Submission of feedback form is mandatory before the release of final payment to the BA.

## 29.0 CONTACT POINTS

In case Business Associate needs information with respect to payments or has any grievances, same may be lodged by log on to our website [www.tpnodl.com](http://www.tpnodl.com)

## 30.0 LIST OF ANNEXURES

S. No.	Subject	Annexure
1.	Performa for Bid Security Bank Guarantee	A
2.	Performa for Performance Bank Guarantee (CP cum EP)	B
3.	Performa for No Demand Certificate by Associate	C
4.	Performa For Application For Issuance of Consolidated TDS Certificate	D
5.	Business Associate Feedback Form	E
6.	Acceptance Form For Participation In Reverse Auction Event	F
7.	Form for RTGS Payment	G
8.	Vendor Appraisal Form	H
9.	Manufacturer Authorization Form	I
10.	Tata Code of Conduct	I

### ANNEXURE-A

#### PROFORMA FOR BID SECURITY BANK GUARANTEE

**TP Northern Odisha Distribution Limited  
Balasore**

WHEREAS, (Name of the Bidder) \_\_\_\_\_  
(hereinafter called "the BIDDER") has submitted his bid dated \_\_\_\_\_ for the  
(Tender No. & Name of Contract) \_\_\_\_\_ (hereinafter  
called "the BID").

KNOW ALL men by these presents we (Name of the  
Bank) \_\_\_\_\_ of (Name of the  
Country) \_\_\_\_\_ having our registered  
office at \_\_\_\_\_ (hereinafter called "the BANK) are bound unto

Approved Copy of GCC (TPNODL)

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TPNODL Limited (TPNODL) in the sum of \_\_\_\_\_ for which payment well and truly to be made to the TPNODL the Bank binds himself, his successors and assigns by these presents.

SEALED with the Common Seal of the said Bank this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_\_.

The CONDITIONS of this obligation are:

- i) If the Bidder withdraws his Bid during the period of bid validity specified in the Proforma of Bid or
- ii) If the Bidder having been notified of the acceptance of his Bid by the TPNODL during the period of bid validity fails or refuses to furnish the Contract Performance Bank Guarantee, in accordance with the Instructions to Bidders.

We undertake to pay the TPNODL upto the above amount upon receipt of its first written demand, provided that in its demand the TPNODL will note that amount claimed by it is due to it owing to the occurrence of one or both conditions, specifying the occurred condition or conditions.

This Guarantee will remain in force upto and including the date (No of days as mentioned in tender enquiry) days after the closing date of submission of bids as stated in the Invitation to Bid or as extended by you at any time prior to this date, notice of which extension to the Bank being hereby waived, and any demand in respect thereof should reach the Bank not later than the above date.

**DATE** ..... **SIGNATURE OF THE BANK** .....

**WITNESS** ..... **SEAL** .....

(Signature, Name & Address) ( At least 2 witnesses)

**ANNEXURE- B**

**PROFORMA FOR PERFORMANCE BANK GUARANTEE (CP cum EP)**

**(On Rs.100/- Stamp Paper) Note:**

- a) Format shall be followed in toto
- b) Claim period of one month must be kept up
- c) The guarantee to be accompanied by the covering letter from the bank confirming the signature to the guarantee

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**TP Northern Odisha Distribution Ltd.**

**Mumbai**

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CP cum EP BG No.....

Order/Contract No.....dated.....

1. You have entered into a Contract No \_\_\_\_\_ with M/s. \_\_\_\_\_ (hereinafter referred to as "the Vendor") for the supply cum erection / civil work of \_\_\_\_\_ (hereinafter referred to as "the said Equipment") for the price and on the terms and conditions contained in the said contract.
2. In accordance with the terms of the said contract, "the Vendor" agreed to furnish you with an irrevocable, unconditional and acceptable bank guarantee for 10% of the value of contract and to be valid till the end of Guarantee period plus one month towards "Contract cum Equipment performance". For this purpose you have agreed to accept the guarantee.
3. In consideration thereof, we, \_\_\_\_\_ hereby irrevocably and unconditionally guarantee to pay to you on demand but in any case before the end of five working days from the date of the claim and without demur and without reference to "the Vendor" such amount or amounts not exceeding the sum of Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_ only) being \_\_\_\_\_% (\_\_\_\_\_ percent) of the total value of the contract on receipt of your intimating that "the Vendor" has not fulfilled his contractual obligations. You shall be the sole judge for such non-fulfillment and "the Vendor" shall have no right to question such judgment.
4. You shall have the right to file / make your claim on us under the guarantee for a **further period of one month** from the date of expiry.
5. This guarantee shall not be revoked without express consent and shall not be affected by your granting time or any other indulgence to "the Vendor", which shall include but not be limited to, postponement from time to time of the exercise the same in you or any right which you may have against "the Vendor" and to exercise the same in any covenant contained or implied in the said contract or any other course or remedy or security available to you, and our Bank shall not be released from its obligations under this guarantee by

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your exercising any of your rights with reference to matters aforesaid or any of them or by reasons of any other act or forbearance or other acts of omission or commission on your part or any other indulgence shown by you or by any other matter or thing whatsoever which under the law would, but for this provision have the effect of relieving our bank from its obligation under this guarantee.

6. We also agree that you shall be entitled at your option to enforce this guarantee against our bank as a principal debtor, in the first instance, notwithstanding any other security or guarantee that you may have in relation to "the Vendor's" liabilities in respect of the premises
7. This guarantee shall not be affected by any change in the constitution of our Bank or "the Vendor" or for any other reason whatsoever.
8. Any claim / extension under the guarantee can be lodge-able at outstation banks or at Mumbai branch and claim will also be payable at Mumbai Branch (to be confirmed by Mumbai Branch by a letter to that effect in case BG is from the branch outside Mumbai).
9. Notwithstanding anything herein contained, our liability under this guarantee is limited to Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_) only and the guarantee will remain in force upto and including \_\_\_\_\_ (Date) and shall be extended from time to time for such period or period as may be desired by "the Vendor".
10. Unless a demand or claim under this guarantee is received by us in writing within one months from \_\_\_\_\_ (expiry date) i.e. on or before \_\_\_\_\_ (claim period end date), we shall be discharged from all liabilities under this guarantee thereafter.

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

Bank's rubber stamp

1. Banks full address

Designation of Signatory

2. Bank official number



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**ANNEXURE-C**

**PROFORMA FOR “NO DEMAND CERTIFICATE” BY ASSOCIATE**

(On Company's Letter head or with Company Seal)

(To be submitted by the Associate to TPNODL Accounts Department at the time of receipt of full and final payment)

**(Certificate No. CCP/002)**

Name of the Project Order/

Contract No.

Dated

Name of the Associate Scheme

No. / Job No.

We, M/s. \_\_\_\_\_ (Associate) do hereby acknowledge and confirm that we have received the full and final payment due and payable to us from TPNODL, in respect of our aforesaid Order No \_\_\_\_\_ dated \_\_\_\_\_ including amendments, if any, issued by TPNODL to our entire satisfaction and we further confirm that we have no claim whatsoever pending with TPNODL under the said contract / W.O.

Notwithstanding any protest recorded by us in any correspondence, documents, measurement books and / or final bills etc., we waive all our rights to lodge any claim or protest in future under this contract.

We are issuing this “NO DEMAND CERTIFICATE” in favour of TPNODL, with full knowledge and with our free consent without any undue influence, misrepresentation, coercion etc.

**Place**

**Name**

(Company Seal)

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**ANNEXURE-D**

**PROFORMA FOR APPLICATION FOR ISSUANCE OF CONSOLIDATED TDS  
CERTIFICATE**

To be printed on the letterhead

To,  
TPNODL Limited,  
Bhubaneswar

**Sub: Application for issuance of Consolidated TDS Certificate for the FY \_\_\_\_\_**

Dear Sir,

I / we hereby request / authorize you to issue me / us a consolidate TDS Certificate for the financial year \_\_\_\_\_ against tax deducted at source by you from my / our payments / bills during the said year from time to time under Chapter XVII – B of the Income Tax Act, 1961. For and on behalf of

Signature

Name

Address

Contact No. (Land Line)  
(Mobile)

PAN #

Assessing authority

**ATTACH THE COPY OF PAN CARD**

**ANNEXURE-E**

**BUSINESS ASSOCIATE FEEDBACK FORM**

With an objective to improve our internal processes and systems, and serve you better, we solicit your valuable feedback & suggestions. It is estimated that it will take about 10 minutes to complete this survey. We assure you that your feedback shall be kept confidential. Please send the duly filled feedback form in the "TPNODL addressed - attached envelop"

**You are associated with us as**

- OEMs    Service Contractor    Material Suppliers    Material & Manpower Supplier

**You are associated with us for**

- Less than 1 year    More than 1 year but less than 3 years    More than 3 years

**Your office is located at**

- Bhubaneswar    Within 200 kms from Bhubaneswar    More than 200 kms from Bhubaneswar

**Your nearly turnover with TPNODL**

- Less than 25 Lacs    25 Lacs to 1 Crore    More than 1 Cr.

**Additional Information**

<b>Your Name</b>	
<b>Your Designation</b>	
<b>Your Organization</b>	
<b>Contact Nos.</b>	
<b>Email</b>	

*We once again thank you for your participation in this survey. Please spare 10 minutes to give your feedback on following pages (Section A to E)*

**SECTION – A**

(Please ✓ mark in the relevant box and give your remarks / suggestions / information for our improvement).

S. No.	Parameters	1	2	3	4	5	Remarks/ Suggestion
		Do Not Agree	Slightly in Agreement	In Fair Agreement	Mostly in Agreement	Fully Agree	
1	You receive all relevant queries / tenders from us in timely manner.						
2	We provide you enough lead time to respond to our queries / tenders.						
3	We provide you adequate support (drawings, documents, clarifications, briefing etc.) to enable you meet our requirements.						
4	All following elements of our contract / purchase order are rational :						
4.1	Scope of Work						
4.2	Delivery / Execution Schedule						
4.3	Payment Terms						
4.4	Liquidated Damages						
4.5	Performance Guarantee						
5	Our purchase orders / contracts are simple, specific & easy to understand						
6	TPNODL demonstrate willingness to be flexible in administration of Contract / Purchase Order						
7	We provide timely responses / clarifications to your queries						
8	TPNODL representative you interact / coordinate with is adequately empowered to support you in meeting contractual obligations						
9	TPNODL provide you all necessary infrastructure support for timely and quality completion of work (including AMC)						
10	TPNODL Engineer-in-Charge timely certifies the jobs executed/ material supplied						
11	TPNODL Engineer-in-Charge efficiently supervises the job execution for timely completion of job						
12	BIRD (Bill Inward Receipt Desk) initiative has improved payment disbursement process						

S. No.	Parameters	1	2	3	4	5	Remarks/ Suggestion
		Do Not Agree	Slightly in Agreement	In Fair Agreement	Mostly in Agreement	Fully Agree	
13	Our approach for Inspection and Quality Assurance effective to expedite project completion?						
14	TPNODL never defaults on contractual terms						
15	In TPNODL Contracts closure is done within set time limit						
16	Our material receiving procedures are well defined and efficiently deployed to reduce mutual inconvenience						
17	Bank Guarantees are released in time bound manner						
18	Our processes related to payment / account settlement are effective.						
19	You get payments on time						
20	TPNODL Employees follow Ethical behaviour						

GENERAL CONDITIONS OF CONTRACT

**SECTION – B**

SECTION – B (Please rate the following parameters on a scale of 1 to 5, where 1 - Minimum; 5 - Maximum)

S. No.	Parameters	1	2	3	4	5	Remarks/ Suggestion
1	How do you rate courtesy/ empathy/ attitude level and warmth of TPNODL employees you interact with from following team?						
1.1	Project Engineering						
1.2	District / Zones						
1.3	Projects/HOG (TS &P)						
1.4	Inspection & Quality Assurance						
1.5	Stores						
1.6	Metering & Billing						
1.7	Accounts / Finance						
1.8	Administration						
1.9	IT & Automation						
2	How would you rate TPNODL in comparison to your other clients in terms of <b>fairness of treatment and transparency</b> with its Business Associates?						
3	How would you rate TPNODL in comparison to your other clients in terms of <b>processes and systems to manage partnership</b> with its Business Associates						
4	How would you rate TPNODL in comparison to your other clients in terms of <b>building long term &amp; mutually relationship</b> with its Business Associates						

**SECTION – C**

Please √ mark in the relevant box and give your remarks / suggestions / information for our improvement.

S. No.	Parameters	Certainly No	Probably No	Certainly Yes	Probably Yes	Remarks/ Suggestion
1	Based on your experience with TPNODL, would you like to continue your relationship with TPNODL?					
2	If someone asks you about TPNODL, would you talk "positively" about					

	TPNODL?					
3	Would you refer TPNODL name to others in your community, fraternity and society as a professional & dynamic organization?					

**SECTION - D**

**If we ask you to rate us on a scale of 1 to 10, how will you rate TPNODL, that truly represents your overall satisfaction with us (please tick appropriate box) -**

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

**SECTION - E**

Please ✓ mark in the relevant box and give your remarks / suggestions / information for our improvement.

Please spare your thoughts for TPNODL's improvement in particular areas of weaknesses, particularly relating to some great practices, attitudes that you have seen elsewhere in Indian and International Organizations, which you recommend TPNODL to adopt. Please give your valuable salient recommendations.

Please spare your thoughts for TPNODL's improvement in particular areas of major concerns for you. We also welcome your suggestions to adopt any best practices, attitudes that you

Recommendation	<i>Please tick (✓) your top 5 expectations out of the following 10 points listed below -</i>	
(Please list down improvement you expect from TPNODL)	<i>Timely payment</i>	
1	<i>Flexibility in Contracts/PO</i>	
	<i>Clarity in PO,s &amp; Contracts</i>	
2	<i>Timely response to quarries</i>	
	<i>Timely certification of works executed</i>	
3	<i>Clarity in Specs, drawings, other docs etc.</i>	
	<i>Adequate information provided on website for tender notification, parties qualified etc.</i>	
4	<i>Timely receipt of material at site for execution</i>	
	<i>Performance Guarantee/EMD released in time</i>	

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5	<i>Inspection &amp; quality assurance support for timely job completion</i>
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We thank you for your time and courtesy!!

**ANNEXURE-F**

**ACCEPTANCE FORM FOR PARTICIPATION IN REVERSE AUCTION EVENT**

***(To be signed and stamped by the bidder prior to participation in the auction event)***

In a bid to make our entire procurement process more fair and transparent, TPNODL intends to use the reverse auctions through SAP-SRM tool as an integral part of the entire tendering process. All the bidders who are found as technically qualified based on the tender requirements shall be eligible to participate in the reverse auction event.

**The following terms and conditions are deemed as accepted by the bidder on participation in the bid event:**

1. TPNODL shall provide the user id and password to the authorized representative of the bidder. (Authorization Letter in lieu of the same shall be submitted along with the signed and stamped Acceptance Form).
2. TPNODL will make every effort to make the bid process transparent. However, the award decision by TPNODL would be final and binding on the supplier.
3. The bidder agrees to non-disclosure of trade information regarding the purchase, identity of TPNODL, bid process, bid technology, bid documentation and bid details.
4. The bidder is advised to understand the auto bid process to safeguard themselves against any possibility of non-participation in the auction event.
5. In case of bidding through Internet medium, bidders are further advised to ensure availability of the entire infrastructure as required at their end to participate in the auction event. Inability to bid due to telephone line glitch, internet response issues, software or hardware hangs, power failure or any other reason shall not be the responsibility of TPNODL.
6. In case of intranet medium, TPNODL shall provide the infrastructure to bidders. Further, TPNODL has sole discretion to extend or restart the auction event in case of any glitches in infrastructure observed which has restricted the bidders to submit the bids to ensure fair & transparent competitive bidding. In case an auction event is restarted, the best bid as already available in the system shall become the start price for the new auction.
7. In case the bidder fails to participate in the auction event due any reason whatsoever, it shall be presumed that the bidder has no further discounts to offer and the initial bid as submitted by the bidder as a part of the tender shall be considered as the bidder's final no regret offer. Any offline price bids received from a bidder in lieu of non-participation in the auction event shall be out rightly rejected by TPNODL.
8. The bidder shall be prepared with competitive price quotes on the day of the bidding event.
9. The prices as quoted by the bidder during the auction event shall be inclusive of all the applicable taxes, duties and levies and shall be FOR at TPNODL site.
10. The prices submitted by a bidder during the auction event shall be binding on the bidder.
11. No requests for time extension of the auction event shall be considered by TPNODL.
12. The original price bids of the bidders shall be reduced on pro-rata basis against each line item based on the final all inclusive prices offered during conclusion of the auction event for arriving at Contract amount.

**Signature & Seal of the Bidder**





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Name of the Authorized Signatory: \_\_\_\_\_ :

Contact Person's Name:

Official Correspondence Address:

We confirm that we will bear the charges, if any, levied by our bank for the credit of NEFT/RTGS amounts in our account. Any change in above furnished information shall be informed to TPNODL well in time at our own. Further, we kept TPNODL indemnified for any loss incurred due to wrong furnishing of above information.

Thanking you,

For \_\_\_\_\_

**(Authorised Signatory)**

**(Signature with Rubber Stamp)**

**Certification from Bank:**

We confirm that we are enabled for receiving NEFT/RTGS credits and we further confirm that the account number (specify Bank a/c no.) of (Please mention here name of the account holder), the signature of the authorised signatory and the MICR and IFSC Code of our branch mentioned above are correct.

This also is certified that the above information is correct as per Bank record

**(Manager's/ Officers Signature under Bank Stamp)**

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**ANNEXURE-H**  
**VENDOR APPRAISAL FORM**

TO BE SUBMITTED BY VENDOR (To be filled as applicable)			
Part A			
<b>1.0</b>	<b>DETAILS OF THE FIRM</b>		
	1.1	NAME (IN CAPITAL LETTERS)	
	1.2	TYPE OF CONCERN (PROPRIETARY) PARTNERSHIP PVT.LTD., PUBLIC LTD. ETC.	
	1.3	YEAR OF ESTABLISHMENT	
	1.4	LOCATION OF OFFICE POSTAL ADDRESS	
	1.5	CONTACT DETAIL OF BA's REPRESENTATIVE NAME E-MAIL ID CELL NO.	
	1.6	LOCATION OF MANUFACTURING UNITS	:
		i) UNITS 1	:
		ii) OTHER UNITS	:
<b>2.0</b>	<b>PRODUCTS / SERVICES BEING OFFERED</b>		
<b>3.0</b>	<b>TURNOVER DURING THE LAST 3 YEARS (TO BE VERIFIED WITH THE LATEST PROFIT &amp; LOSS STATEMENT).</b>		
<b>4.0</b>	<b>AVALABILITY OF STATUTORY DOCUMENTS I.E. COPY OF PAN CARD</b>		
<b>5.0</b>	<b>AVALABILITY OF STATUTORY DOCUMENTS I.E. COPY OF GST REGISTRATION</b>		
<b>6.0</b>	<b>APPLICABILITY UNDER MSME CERTIFICATION</b>		
<b>7.0</b>	<b>BA BELONGS TO AA COMMUNITY (SC/ST)</b>		
<b>8.0</b>	<b>DOCUMENTS VERIFYING ADDRESS PROOF (SUPPORTED BY ANY GOVT. ISSUED DOCUMENT)</b>		

<b>9.0</b>	<b>TECHNICAL</b>		
	9.1	NO.OF DESIGN ENGINEERS (INDICATE NO.OF YEARS EXPERIENCE IN RELATED FIELDS)	:
	9.2	NO.OF DRAUGHTSMEN	:
	9.3	COLLABORATION DETAILS (IF ANY)	:
		9.3.1 DATE OF COLLABORATION	:
		9.3.2 NAME OF COLLABORATOR	:
		9.3.3 RBI APPROVAL DETAILS	:
		9.3.4 EXPERIENCE LIST OF COLLABORATOR	:
		9.3.5 DURATION OF AGREEMENT	:
	9.4	AVAILABILITY OF STANDARDS / DESIGN PROCEDURES / COLLABORATOR'S / DOCUMENTS (CHECK WHETHER THESE ARE LATEST/CURRENT)	:
	9.5	TECHNICAL SUPPORT, BACK-UP GUARANTEE, SUPERVISION, QUALITY CONTROL BY COLLABORATOR (WHEREVER ESSENTIAL). (THIS CLAUSE IS RELEVANT WHEN VENDOR'S EXPERIENCE IS INADEQUATE)	:
	9.6	QUALITY OF DRAWINGS	:
<b>10.0</b>	<b>MANUFACTURE</b>		
	10.1	SHOP SPACE, LAYOUT LIGHTING, VENTILATION, ETC.	:
	10.2	POWER (KVA)	:
		MAINS INSTALLED	:
		UTILISED	:
		STANDBY POWER SOURCE	:
	10.3	MANUFACTURING FACILITIES (ATTACH LIST OF EQUIPMENTS AS APPLICABLE)	:
		10.3.1 MATERIAL HANDLING	:
		10.3.2 MACHINING	:
		10.3.3 FABRICATION	:

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		10.3.4 HEAT TREATMENT	:
		10.3.5 BALANCING FACILITY	:
		10.3.6 SURFACE TREATMENT PRIOR TO PAINTING/ COATING, POLISHING, PICKLING, PASSIVATION, PAINTING, ETC.	:
	10.4	SUPERVISORY STAFF	:
	10.5	ADEQUACY OF SKILLED LABOURS (MACHINISTS, WELDERS, ETC.)	:
	10.6	NO. OF SHIFTS	:
	10.7	TYPE OF MATERIAL HANDLED (SUCH AS CS, SS, ETC.)	:
	10.8	WORKMANSHIP	:
	10.9	MATERIAL IN STOCK AND VALUE	:
	10.10	TRANSPORT FACILITIES	:
	10.11	CARE IN HANDLING	:
<b>11.0</b>	<b>INSPECTION / QC / QA / TESTING</b>		
	11.1	NUMBER OF PERSONNEL (INDICATE NO.OF YEARS OF EXPERIENCE)	:
	11.2	INDEPENDENCE FROM PRODUCTION	:
	11.3	AVAILABILITY OF PROCEDURAL WRITE UP/QUALITY PLAN	:
	11.4	INCOMING MATERIAL CONTROL AND DOCUMENTATION	:
	11.5	RELIABILITY/REPUTATION OF SUPPLY SOURCES	:
	11.6	STAGE INSPECTION AND DOCUMENTATION	:
	11.7	SUB-ASSEMBLY & DOCUMENTATION	:
	11.8	FINAL INSPECTION AND DOCUMENTATION	:
	11.9	PREPARATION OF FINAL DOCUMENTATION PACKAGE	:
	11.10	TYPE TEST FACILITIES	:
	11.11	ACCEPTANCE TEST FACILITIES	:

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	11.12	CALIBRATION OF INSTRUMENTS AND GAUGES (WITH TRACEABILITY TO NATIONAL STANDARDS) (ATTACH LIST)	:
	11.13	STATUTORY APPROVALS LIKE BIS, IBR, ETC.(AS APPLICABLE)	:
	11.14	SUB-VENDOR APPROVAL SYSTEM AND QUALITY CONTROL	:
	11.15	DETAILS OF TESTS CARRIED OUT AT INDEPENDENT RECOGNISED LABORATORIES	:
		i) FURNISH LIST OF TESTS CARRIED OUT AND THE NAME OF THE LABORATORY WHERE THE TESTS WERE CONDUCTED	:
		ii) CHECK AVAILABILITY OF CERTIFICATES AND REVIEW THESE WHEREVER POSSIBLE	:
12.0		<b>EXPERIENCE (INCLUDING CONSTRUCTION / ERECTION / COMMISSIONING) TO BE FURNISHED IN THE FORMAT INDICATED IN APPENDIX)</b>	:
13.0		<b>SALES, SERVICE AND SITE ORGANISATIONAL DETAILS</b>	:
14.0		<b>CERTIFICATE FROM CUSTOMERS (ATTACH COPIES OF DOCUMENTS)</b>	:
15.0		<b>POWER SITUATION</b>	:
16.0		<b>LABOUR SITUATION</b>	:
17.0		<b>APPLICABILITY OF SC/ST RELAXATION (Y/N) IF YES, SUPPORTING DOCUMENTS TO BE ATTACHED</b>	:
<b>Part C Supporting Documents</b>			

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<b>18.0</b>	<p><b>DOCUMENTS TO BE ENCLOSED:</b></p> <ol style="list-style-type: none"> <li>1. Factory License</li> <li>2. ISO Certificate</li> <li>3. Registration of Central Excise</li> <li>4. Income Tax Clearance.</li> <li>5. PF Registration</li> <li>6. ESI Registration</li> <li>7. Insurance for Workman Compensation Act No.</li> <li>8. Electrical Contract LIC No.</li> <li>9. PAN No.</li> <li>10. GST Registration</li> <li>11. MSME Certification</li> <li>12. WC Tax Registration</li> <li>13. Organogram of Co. having organogram of Design, safety, quality, production and other teams.</li> <li>14. Details of subscription of BIS, IEC, IEE, ASTM or other.</li> <li>15. Details of the team in Design, Quality, Safety, Production.</li> <li>16. List of manufacturing equipment as per Part C.</li> <li>17. List of calibrated equipment as per Part C.</li> <li>18. List of clients and order executed in past two years.</li> <li>19. Complaint escalation matrix.</li> <li>20. Performance Certificates of same product from Minimum two utilities.</li> <li><b>21. e-Payment Form as per enclosed Annexure-G</b></li> </ol>	
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**\* Classification of BAs under SC/ST shall be governed under following guidelines:**

- **Proprietorship/ Single Ownership Firm:** Proprietor of the firm should be from SC/ST community. Governing document shall be Proprietorship Deed.
- **Partnership Firm:** Only such firms shall qualify which have SC/ST partners holding equal to or more than 50% of the total ownership pattern of the firm. Governing document shall be Partnership Deed.
- **Private Limited Company:** Only such firms shall qualify which have SC/ST directors holding equal to or more than 50% of the total ownership pattern of the firm. Governing document shall be Memorandum of Understanding (MoU) and/or Article of Association (AoA).
- The relaxation available for BAs under SC / STs shall be as per GCC for Tender Fees, EMD, PBG and Turnover criteria.

*NOTE: Certification from SC/ST Commission shall be required for deciding upon SC/ST status of a person.*

*Annexure-G (e-Payment detail form) must be filled by Associate along with this form.*

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**ANNEXURE-I**  
**MANUFACTURER AUTHORIZATION FORM**

*(To be submitted on OEM's Letter Head)*

Date: .....

Tender Enquiry No.: .....

To,  
Chief (Procurement & Stores)  
TPNODL Limited,  
Mumbai

Sir,

WHEREAS M/s. *[name of OEM]*, who are official manufacturers of ..... having factories at *[address of OEM]* do hereby authorize M/s *[name of bidder]* to submit a Bid in relation to the Invitation for Bids indicated above, the purpose of which is to provide the following Goods, manufactured by us

.....and to subsequently negotiate and sign the Contract.

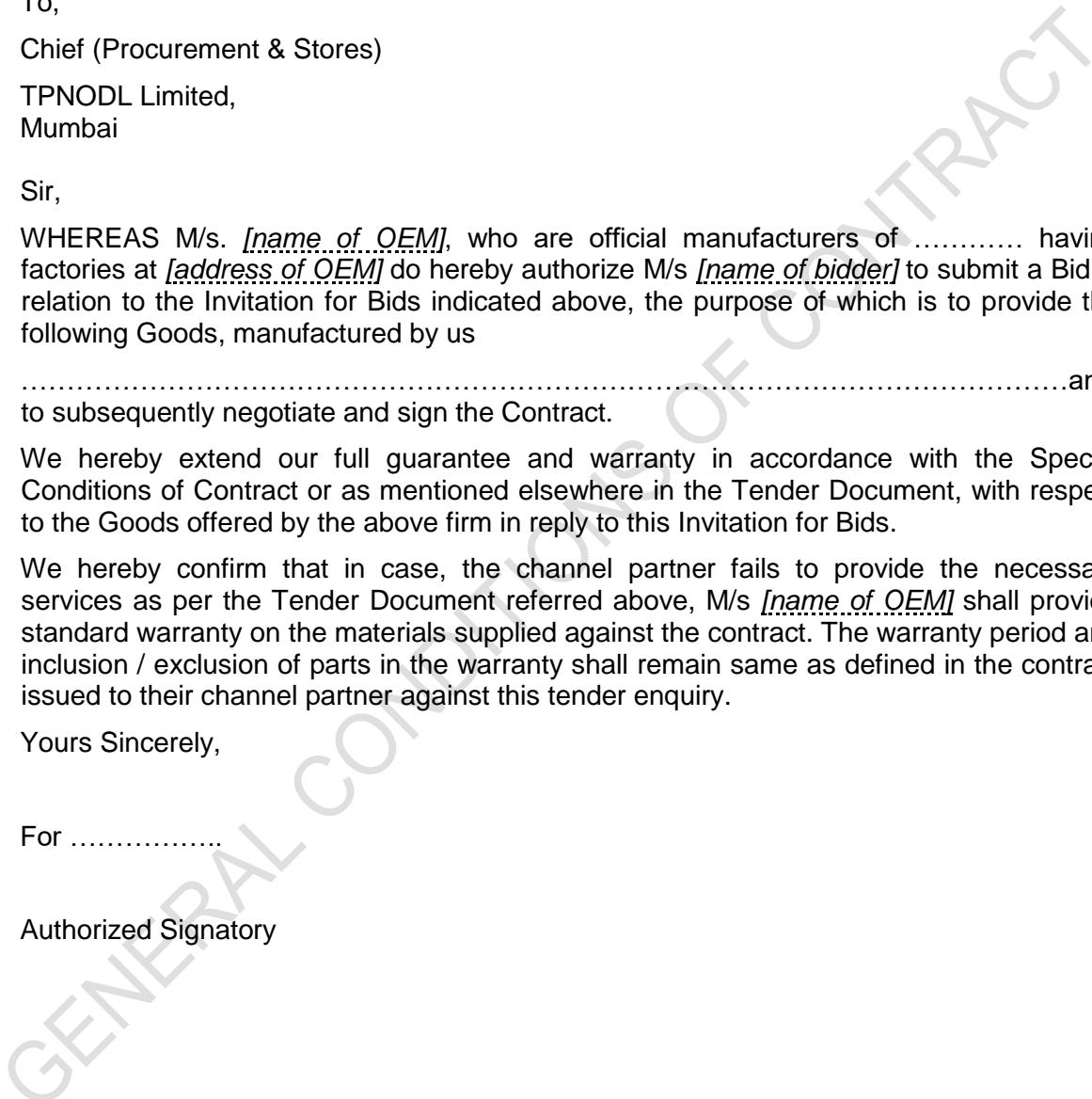
We hereby extend our full guarantee and warranty in accordance with the Special Conditions of Contract or as mentioned elsewhere in the Tender Document, with respect to the Goods offered by the above firm in reply to this Invitation for Bids.

We hereby confirm that in case, the channel partner fails to provide the necessary services as per the Tender Document referred above, M/s *[name of OEM]* shall provide standard warranty on the materials supplied against the contract. The warranty period and inclusion / exclusion of parts in the warranty shall remain same as defined in the contract issued to their channel partner against this tender enquiry.

Yours Sincerely,

For .....

Authorized Signatory





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## Annexure-J

### TATA CODE OF CONDUCT (TCoC)

Introducing Tata Code of Conduct (TCoC) in GCC, the following clause is proposed for inclusion as per suggestions from Chief Ethics Counsellor -

“TCoC is the overarching policy framework that applies to all TATA Group companies including TPNODL. TCoC provides for stakeholder-wise approach in each of the seven chapters.

The chapter “Our Value Chain Partners” states the policy as follows:

1. We shall select our suppliers and service providers fairly and transparently.
2. We seek to work with suppliers and service providers who can demonstrate that they share similar values. We expect them to adopt ethical standards comparable to our own.
3. Our suppliers and service providers shall represent our company only with duly authorized written permission from our company. They are expected to abide by the Code in their interactions with, and on behalf of us, including respecting the confidentiality of information shared with them.
4. We shall ensure that any gifts or hospitality received from, or given to, our suppliers or service providers comply with our company’s gifts and hospitality policy.
5. We respect our obligations on the use of third party intellectual property and data.

To effectively implement TCoC, there is a 3-tier framework comprising of Ethics Management Apex Team headed by the CEO, who is also the Principal Ethics Officer (PEO), TPNODL; Locational Ethics Counsellors (LECs) who cover various locations/offices of TPNODL; and LECs are assisted by 4-5 Ethics Champions (ECs).

In case any Ethical Concern is faced during the course of your business dealings with TPNODL, one may utilize any one or more of the following avenues:

1. Ethics Portal on website – [www.tpnodl.com](http://www.tpnodl.com)
2. Ethics Box
3. IVRS No. 19124
4. Locational Ethics Counsellor (LEC)
5. **Third Party Ethics Helpline – 1800-22-7697 (Toll Free) \***
6. Chief Ethics Counsellor

TPNODL is committed to follow Core Values and Core Principles mentioned in TCoC, cited below, in carrying out various activities as well as in discharge of bi-lateral and multi-lateral obligations involving other entities/organizations:

#### **Core Values:**

All six core values are already mentioned in GCC.

#### **Core Principles:**

1. **Zero tolerance to bribery or corruption** in any form.

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2. Committed to **good corporate citizenship**
3. Contribute to the **economic development of the communities** of the countries & regions we operate in.
4. No compromise on **Safety**
5. Our conduct shall be **fair & transparent**
6. Respect the **human rights & dignity** of our stakeholders
7. **No unfair discrimination** of any kind
8. Statements made to stakeholders shall be **truthful** & made in **good faith**
9. Not engage in any restrictive or **unfair trade practice**
10. Provide avenues for our stakeholders to **raise concerns in good faith**
11. Environment **free from fear** of retribution to deal with concerns that are raised
12. Expect the leaders to be **role model**
13. **Comply with the laws** of the countries in which we operate

#### **Gift Policy:**

##### **Principles for acceptance of gifts/benefits –**

A gift or benefit may be accepted only if it complies with all of the following principles:

- ✓ it does not influence,
- ✓ does not have the potential to influence, an employee in such a way as to compromise or appear to compromise integrity and impartiality
- ✓ does not create a conflict of interest or perception of conflict of interest;

##### **Principles for non-acceptance of gifts/benefits -**

The gift or benefit may not be accepted or given if any of the following principles apply:

- ✓ causes the recipient or donor **to act in partial manner** in the course of duty
- ✓ apprehension of the recipient becoming **obligated to the donor**
- ✓ it is **not offered openly**
- ✓ if is an **offer of money** or something readily convertible to money (e.g. Shares)

##### **Violation –**

1. Not abiding with this policy would constitute violation of “Our Employees” Stakeholder group Clause “Gifts and Hospitality” of the Tata Code of Conduct (TCoC) 2015. Prompt action will be taken against violations.
  2. Any deviation from this policy must be supported by appropriate rationale and must be duly approved by CEO who is also the Principal Ethics Officer. In any case, in dealing with such deviations, the spirit of the TCoC should in no case be compromised.
2. If it is determined that an employee / associate has violated this policy, appropriate action including termination of the employee’s / associate’s employment or association with TPNODL may be decided upon.