

SECTION-I
NOTICE INVITING E-TENDER
(DOMESTIC COMPETITIVE BIDDING)
(SINGLE STAGE TWO ENVELOPE BIDDING)

A) DATE OF ISSUANCE OF NIT : 11-09-2017

B) FUNDING : Deposit Works of TSECL

Addl. General Manager, DP &C, TSECL, Agartala invites the tender on behalf of TSECL from the resourceful experienced manufacturer/local SSI manufacturer for Supply of P.C.C.poles of different sizes (7.5 Mtr, 8.00 mtr. & 9.00 mtr.long) for implementation of various work(s) under State Plan, NLCPR, Deposit , BEUP, RE Works for Gomati / South Tripura District during the year of 2017-2018.

C)

1.0

Item No.	Name of Work and NIT No.	Description of items	Quantity	Estimated Value	Tender Fee	Completion period
1	Procurement of 7.5 Mtr., 8 Mtr. & 9.0 Mtr. Long PCC Pole for Implementation of State Plan, NLCPR, Deposit , BEUP, RE Works for Gomati / South Tripura District TSECL/ Corp. Office/DNIT/ CIVIL/ 01/ 2017-18 dt. 11.09.2017	Procurement of 7.5 Mtr., 8 Mtr. & 9.0 Mtr. Long PCC Pole conforming to relevant IS with Up-to date amendment and as per TSECL's tender specification enclosed.	7.5 Mtr. long PCC Tubular Pole = 750 Nos	Rs.3,88,80,000.00	Rs.5,000/-	12 (Twelve) months
			8.0 Mtr. long PCC Tubular Pole = 5250 Nos			
			9.0 Mtr. long PCC Tubular Pole = 3000 Nos			
i. If the offer is submitted with inadequate tender fees will be liable for rejection of the bid.						

2.0 This NIT for the above work will appear in Local Newspapers. The complete Bidding Documents shall be available on Tripura State Electricity Corporation Limited website at www.tsecl.in and www.tenders.gov.in from 12-09-2017.

3.0 Eligible bidders shall participate in tender by dropping their hard copy of tender document as per stipulation of NIT in the following address. Tender shall be submitted in a two-bid system:

(a) Bid Envelop-I (Technical bid)

(b) Bid Envelop-II (Financial bid)

4.0 Critical Dates:

1.	Completion period Supply:	12(twelve) months.
2.	Date of Publishing of tender :	12-09-2017
4.	Period of Seeking clarifications :	From: 12-09-2017
		To: 26-09-2017
5	Time and date of Pre-Bid Meeting:	10-10-2017 11.00 A.M.
6.	Place of Pre-Bid Meeting:	O/O Additional General Manager (Distribution Planning & Coordination), Corporate Office, Bidyut Bhavan, Agartala, West Tripura, Pin: 799001. Ph. 0381-230 7433, Fax: 0381 232 5345.
7.	Deadline for submission of hard copy of Bidding document/ Bid Receipt date & time:	11-10-2017 Up to 5.00 P.M.
8.	Time and Date of Opening Technical Bid/Bids:	12-10-2017 3.30 P.M.
9.	Time and Date of Opening Price/Financial Bid:	To be notified after Technical Evaluation
10.	Place of Opening Bids:	O/O Additional General Manager (Distribution Planning & Coordination), Corporate Office, Bidyut Bhavan, Agartala, West Tripura, Pin: 799001. Ph. 0381-230 7433, Fax: 0381 232 5345.
11.	Bid Validity:	06 (Six) Months from the date of Opening Of Technical Bid.
12.	Officer inviting Bids (TSECL):	O/O Additional General Manager (Distribution Planning & Coordination), Corporate Office, Bidyut Bhavan, Agartala, West Tripura, Pin: 799001. Mob:--+919436121266 Ph. 0381-230 7433, Fax: 0381 232 5345.

1.0 INTRODUCTION

With the Administrative Approval and Expenditure Sanction of Competent Authority, **Two part tender for “Manufacturing, Testing and Supply of P.C.C.poles of different size (7.50 mtr. 8.00 mtr. & 9.00 mtr.long) for implementation of various work(s) in Gomati / South Tripura District during the year of 2017 - 2018”**, is being invited as per enclosed bid document.

2.0 SCOPE OF WORK.

Scopes of work covered under this package include Manufacturing, Inspection and testing at manufacturers works, dispatch, Supply, delivery loading, unloading and stacking of the PCC poles, bearing the technical specification specified in the bid document.

- 2.1 The PCC poles under the scope of work will be received by TSECL after manufacturing & successful Testing at works as per the delivery schedule. The PCC poles to be properly stored stack wise according to their categories, inside the factory complex and would be under watch & ward of the manufacturer. Quantities of pole as required for time to time will be lifted by TSECL throughout the contract period.

3.0 QUALIFYING REQUIREMENTS FOR BIDDERS

To be qualified to bid for the package, the bidder shall have to meet the following minimum criteria:

- 3.1 The bidder must be a PCC Pole Manufacturer, registered under Directorate of Industries & Commerce, Govt. of Tripura and must have well equipped manufacturing, testing facilities & sufficient arrangement for lifting, loading/ un loading of poles.. The manufacturing unit must have sufficient space inside the factory complex for storing of poles so that the poles can be lifted by TSECL throughout the contract period
- 3.2 **The minimum average annual turnover of the bidder for the last three years shall be not less than 30% of the estimated cost put to tender and the bidder must have his GST Registration.**(proof in respect to GST ID & GSTN address to be provided along with Part-I bid)
- 3.3 The bidder must have successfully executed one or more job(s) of Similar Nature of Works during last three consecutive years.
- 3.4 Bid offered by the firms/ enterprises, who has earlier record of Bad Performance in respect to non fulfillment of contractual obligations in similar works, is liable for rejection without assigning any reason thereof. The tendering authority of TSECL is the sole authority for arriving at such decision.
- 3.5 The bidder's offer must include the following documents to be submitted with technical bid,
 - (i) Copies of original documents defining the constitution or legal status, place of registration and principal place of business, Authorization / Power of attorney in favour of authorized signatory for signing of documents and submission of bid with the following information:-
 - 1 Name & address of authorized signatory.
 - 2 Telephone no / Fax no, Mobile No and E mail ID.
 - 3 Copy of Partnership deed in case of partnership firm, Memorandum and Article of Association in case of limited company, Ownership certificate in case of sole or proprietary firm and Power of Attorney in favour of authorized signatory in case the firm is not a proprietary firm.
 - (ii) **Photocopy of Current Income-tax challan / Return, GST registration No, PAN No, Labor License Declaration and EPF Registration no of bidder / all partners of joint venture.**
 - (iii) Successful completion certificate issued by an Engineer not below rank of Executive Engineer/Deputy General Manager in charge along with supporting photocopies of work order /LOA

for the work executed in any 1(one) year out of last 5 financial years. Bidders shall provide details of work of similar nature executed or under execution during last 3 years in the following format.

Sl.	Description of work of similar nature	Client Name with LOA Ref. No. & Date	LOA Value (in Lakhs)	Amount obtained till date (in Lakhs)	Schedule completion time	Actual Completion time	Brief Reason of delay

- (iv) Reports on the financial standing of the bidder , such as Profit and loss account & balance sheets and Auditor's reports etc. for the Financial years **2014- 15, 2015-16, 2016-17**
 - (v) Evidence of adequacy of working capital and access to line(s) of credit and availability of other financial resources from the scheduled commercial Bank.
 - (vi) Authority to seek reference from the Bidder's Bankers (as per format enclosed).
 - (vii) Financial Turnover should be as per the published audited annual report of the company/ bidder/partners of joint venture along with PAN card (individual / organization).
 - (viii) The bidder shall not have been debarred from business by any PSU /Govt Deptt during the last 3 years. Self declaration in this regard to be provided along with the bid.
 - (ix) Bidder shall be liable to follow the terms and condition of the NIT otherwise the bid shall be summarily rejected.
 - (x) Photocopies of all documents furnished shall be self-authenticated and duly stamped.
 - xi) **TSECL reserves the right to check the originals, if required.**
- 4.0** The Bid Document complete with **general condition of contract, technical specification, schedule of quantities** etc. may be seen at the **Corporate office, Bidyut Bhavan, North Banamalipur, Agartala** on all working days during office hours upto the date fixed for sale of bid documents..
- 5.0** The bidder shall bear all **cost and expenses** associated with purchase and submission of its bid including post bid discussions, technical; & other presentation etc., and **TSECL** will in no case be responsible or liable for those cost, regardless of the conduct or outcome of the bidding process.
- 6.0** The bidder shall furnish **documentary evidence** in support of the **qualifying requirements** stipulated above along with their bid. Bid received without such documents shall be summarily rejected.
- 7.0** The bidder shall be required to deposit the cost of tender in the shape of **demand draft / Banker' cheque** in favour of **TRIPURA STATE ELECTRICITY CORPORATION LIMITED** payable at **Agartala, West Tripura** along with the bid in a separate sealed envelope.
- 8.0** As per Provision of "Tripura Industrial Investment Promotion Incentives Scheme, 2017" 100% exemption from payment of earnest money and security deposits will be allowed to the local industrial enterprises eligible under the Scheme-2017,subject to submission of "**Incentives Eligibility Certificate**" from the competent authority and fulfillment of other eligibility conditions.
- 9.0** The successful bidder on award of work shall have to deposit a **Contract Performance Guaranty** equivalent to 10% of LOA value, **in the shape of Demand Draft or Bank Guarantee (BG)** from a **Public Sector / Scheduled Indian Bank guaranteed by Reserve Bank of India as per prescribed format** in favour of **Tripura State Electricity Corporation Limited, Banamalipur, Agartala, PIN 799001.**The earnest money deposited is also adjustable with the **contract performance guaranty**.

- 10.0 The bidding documents are not transferable and cost of bidding document is not refundable under any circumstances.
- 11.0 The original Bidding document shall be signed by the bidder(s) on all pages and will be enclosed with the **PRICE bidding schedule**. The Bidder(s) should initial all corrections to rates and items in the Bid(s). The Bidder(s) shall also sign every page of the **Schedule of Items of works** in full.
- 12.0 **The Bidder(s) shall have to give a DECLARATION that he / they have gone through the details of the Bidding Document(s) as per format appended with the Bidding Document.**
- 13.0 Address for **communication / Purchase of bid document**.

Addl. General Manager (Corporate Planning & Co-ordination)
Corporate Office, Tripura State Electricity Corporation Limited
Bidyut Bhavan, North Banamalipur
Agartala – 799001, West Tripura.

SECTION-II

INSTRUCTION TO BIDDERS

1. GENERAL INSTRUCTIONS

The bidders are to satisfy themselves by visiting to the site of work as regards the prevailing condition of approaches, transportation facilities, availability of labourers and availability of materials etc. before submission of bid. **The 'Officer in Charge' may be consulted in this regard.** No claim or excuse on this account will be entertained at any stage later on.

2. COST OF BIDDING

The Bidder shall bear all the costs and expenses associated with preparation and submission of its Bid including post-bid discussions, technical and other presentation etc. and the TSECL shall in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

3. THE BIDDING DOCUMENT

3.1 CONTENTS OF BIDDING DOCUMENTS

The goods and services required bidding procedures and contract terms are as prescribed in the Bidding Documents.

In addition to the Invitation for Bids, the Bidding Documents is a compilation of the following sections:

- a. Instructions to Bidders
- b. General Conditions of Contract
- c. Execution / Erection condition of Contract
- d. Declaration of Bidder
- e. Price schedule.

3.2 UNDERSTANDING OF BIDDING DOCUMENTS

A prospective Bidder is expected to examine all instructions, forms, terms and specifications in the Bidding Documents and fully inform himself as to all the conditions and matters which may in any way affect the scope of work or the cost thereof. Failure to furnish all information required by the Bidding Documents or submission of a Bid not substantially responsive to the Bidding Documents in every respect shall be at the Bidder's risk and may result in the rejection of its Bid.

4. CLARIFICATIONS ON BIDDING DOCUMENTS

- 4.1 **If prospective Bidder finds discrepancies or omissions in the specifications and documents or is in doubt as to the true meaning of any part or requires any clarification on Bidding Documents should notify the issue before the tender inviting authority of TSECL in the Pre bid Meeting. Necessary clarification will be conveyed in the Minutes of the pre bid meeting.**
- 4.2 Verbal clarification and information given from any offices of TSECL or his employee(s) or his representative (s) shall not in any way be binding on TSECL.

5. AMENDMENT TO BIDDING DOCUMENTS

- 5.1 **At any time prior to the deadline for submission of bids, TSECL may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the Bidding Documents by amendment (s).**
- 5.2 The amendment shall be circulated through the TSECL websites and State based Dailies / notified in writing by Post to all prospective Bidders, who have received the Bidding Documents at the address contained in the letter of request for issue of Bidding

Documents from the Bidders. TSECL shall bear no responsibility or liability arising out of non-receipt of the same in time or otherwise.

- 5.3. In order to afford prospective bidders reasonable time to take the amendment into account in preparing their bids, TSECL may, at its discretion, extend the deadline for submission of bids.
- 5.4. Such amendments, clarifications, etc shall be binding on the bidders and shall be given due consideration by the bidders while they submit their bids and invariably enclose such documents as a part of the Bid.

6. PREPARATION OF BIDS

6.1. LANGUAGE OF BID

The Bid prepared by the Bidders and all correspondence and documents relating thereto, exchanged by the Bidder and TSECL, shall be written in English language, provided that any printed literature furnished by the bidder may be written in another language so long as accompanied by an English translation of its pertinent passages. Failure to comply with this may disqualify a bid. For purposes of interpretation of the bid, the English translation shall govern.

7. LOCAL CONDITIONS

- 7.1. It shall be imperative on each bidder to fully inform himself of all local conditions and factors, which may have any effects on the execution of the contract covered under these documents and specifications. The Owner shall not entertain any request for clarification from bidders, regarding such local conditions.
- 7.2. It must be **understood and agreed that such factors as above have properly been investigated and considered while submitting the proposals**. No claim for financial adjustment to the Contract awarded under these specifications and documents shall be entertained by TSECL. Neither any change in the time schedule of the Contract nor any financial adjustments arising thereof shall be permitted by TSECL.

8. DOCUMENTS COMPRISING THE BID

The Bid shall be submitted in **2 (two) parts** in **separate sealed envelopes** properly **superscribing tender no, name of work and bid opening date** as follows:

Part-I: Bid Guarantee & Pre Qualification & Techno-Commercial Data

1. Containing Bid earnest money as per the stipulations of the Bid Documents in a separate sealed envelop.
2. Containing Documentary Evidence of the Bidder fulfilling the Qualifying Requirements stipulated in the NIT / Bid Document. The document to be submitted shall include copies of the relevant work order / purchase order / Award letters / Agreements etc. and corresponding completion certificates issued by the concerned clients. The Bidder shall also furnish copies of the audited balance sheet and Profit and Loss Accounts for the last three financial years (w.r.t. the Bid Opening Date) in support of their meeting the financial / qualifying requirement. The Bidder shall also submit professional tax clearance certificate & sales tax clearance certificate and all such other documents deemed necessary in support of their meeting the stipulated qualifying requirement and its credentials.

3. Containing Bidders Technical Proposal, drawings etc. along with Commercial Terms, Payment Terms in conformity with the Bid Documents.

Part-II: Price Bid

The price schedule as per the format indicated in the Bid Price Schedule. **The price should be quoted both in figures and word. The bidder is also required to mention the vehicular road distance between his works and the office of the Tendering authority of TSECL.**

9. PRICES AND TAXES & DUTIES.

- 9.1 Prices shall be quoted in figures & words in Rupees only, in the “**Schedule of Quantity & Prices**” (Schedule-A) attached to the Bid document. for **Manufacturing and supply of PCC Poles ex works basic, as per specification and drawing, with applicable GST. Quoted Prices shall be FIRM and inclusive of all cost of labour, insurance, EPF charges, spares, T&Ps, all consumables & materials and all applicable tax and duties.**
- 9.2 **Goods and Services Tax (GST)** as applicable on twenty eight (28) days prior to deadline for submission of bids, shall be mentioned in the **Schedule-A.**
- 9.3 **Applicable GST shall be reimbursed by TSECL on submission of actual documentary proof based on tax invoices raised by the contractor.**
- 9.4 **Statutory variation in Taxes & duties after twenty eight (28) days prior to deadline for submission of bids and during the scheduled completion period will be adjusted / reimbursed against production of documentary evidence.**
- 9.5 **Income Tax as admissible will be deducted at source for which necessary TDS certificate will be issued”**

10. TIME SCHEDULE

- 10.1. The basic consideration and the essence of the Contract shall be strict adherence to the time schedule for performing the work. within the **Scheduled completion of 12 (twelve) months)**
- 10.2. The requirement of completion schedule for the works is mentioned in this document.
- 10.3. The completion schedule as stated in the document shall be one of the major factors in consideration of the Bids.
- 10.4. **TSECL reserves the right to request for a change in the work schedule during post-bid discussion with successful bidder.**
- 10.5. **The successful Bidder** shall be required to submit detailed **BAR CHART** and finalize the same with TSECL, as per the requirement of completion schedule.

11. CONTRACT QUALITY ASSURANCE

- 11.1. The Bidder shall include in his proposal, the quality assurance programmed containing the overall quality management and procedures, which he proposed to follow in the performance of the works during various phases, as, detailed in relevant clause of the **General Technical Conditions.**
- 11.2. At the time of award of Contract, the detailed quality assurance programme to be followed for the execution of the contract shall be mutually discussed and agreed to and such agreed programme shall form part of the contract.

12. INSURANCE

The bidder's insurance liabilities pertaining to the Scope of Work is detailed out in clauses titled insurance in General Terms & Conditions of Contract and in Erection Conditions of Contract. Bidder's attention is specifically invited to these clauses. The bid price shall include all the cost in pursuance of fulfilling all the insurance liabilities under the Contract.

13. BID GUARANTEE

- 13.1. The Bidder shall furnish, as part of its Bid, earnest money for an amount as specified in the Notice Inviting Tender (NIT) in the shape of Deposit at Call in favour of Tripura State Electricity Corporation Limited payable at Agartala, West Tripura.
- 13.2. The earnest money is required to protect TSECL against the risk of Bidder's conduct, which would warrant the earnest money forfeiture
- 13.3. The earnest money shall be deposited in Indian rupees only.
- 13.4. Any bid not secured in accordance with para above shall be rejected by TSECL as non-responsive.
- 13.5. **The earnest money of the unsuccessful Bidders shall be discharged / returned as promptly as possible as but not later than 60 days after the expiration of the period of bid validity prescribed by the Owner.**
- 13.6. The **earnest money** of the **successful Bidder** will be **adjusted** with the **performance guarantee** require to be furnished on award of contract.
- 13.7. The earnest money shall be forfeited:
 - a. If a Bidder withdraws its bid during the period of bid validity specified by the Bidder on the bid form; or
 - b. In case of a successful Bidder fails to sign the contract; or furnish the performance guarantee.
- 13.8. No interest shall be payable by TSECL on the above earnest money.

14. PERIOD OF VALIDITY OF BIDS

- 14.1. Bids shall remain valid for **6 (six) calendar** months after the date of bid opening prescribed by TSECL, unless otherwise specified in the accompanying Special Conditions of Contract. A Bid valid for a **shorter period** shall **be rejected** by TSECL as non-responsive.
- 14.2. In exceptional circumstances, TSECL may solicit the Bidder's consent to an extension of the period of Bid validity. The request and the response thereto shall be made in writing (including cable or fax). The Earnest money provided under the relevant clause shall also be retained up to the extended period. No interest shall be payable by TSECL for retaining the earnest money up to the extended period. A Bidder may refuse the request without forfeiting the earnest money deposited by him. A Bidder granting the request shall not be required or permitted to modify his Bid.

SUBMISSION OF BIDS

FORMAT OF BID

- 14.3. The Bidder shall prepare the Price Bid, exactly as per prescribed format attached to the bid document any deviation of the format may lead to rejection of the bid. The Price Bid shall be typed or written in indelible ink and shall be signed by the Bidder or a person or

persons duly authorized by the bidder to sign the bidding document. Written power-of-attorney accompanying the Bid shall indicate the letter of authorization. The person or persons signing the Bid shall initial all pages of the Bid, except for un-amended printed literature.

- 14.4. The Bid shall be submitted in three parts as described in clause no. 8 of Section – II.
- 14.5. The Bid shall contain no interlineations, erasures or overwriting except as necessary to correct errors made by the Bidder, in which case the person or persons signing the Bid shall initial such corrections.

15. SIGNATURE OF BIDS

- 15.1. The Bid must contain the name, residence and place of business of the person or persons making the Bid and shall be signed and sealed by the Bidder with his usual signature. The names of all persons signing shall also be typed or printed below the signature.
- 15.2. Bid by a partnership must be furnished with full names of all partners and be signed with the partnership name, followed by the signature(s) and designation(s) of the authorized partner(s) or other authorized representative(s).
- 15.3. Bids by Corporation / Company must be signed with the legal name of the Corporation/Company by the President, Managing Director or by the Secretary or other person or persons authorized to Bid on behalf of such Corporation / Company in the matter.
- 15.4. A Bid by a person who affixes to his signature the word 'President', 'Managing Director', 'Secretary', 'Agent', or other designation without disclosing his principal shall be rejected.
- 15.5. Satisfactory evidence of authority of the person signing on behalf of the Bidder shall be furnished with the Bid.
- 15.6. The Bidder's name stated on the proposal shall be exact legal name of the firm.
- 15.7. Bids not conforming to all the above requirements may be disqualified.
- 15.8. The **Bidding document** shall be signed by the bidder(s) on all pages and will be enclosed with the **PRICE BIDDING SCHEDULE**. The Bidder(s) should initial all corrections to rates and items in the Bid(s). The Bidder shall sign every page of the Price Schedule.

16. SEALING AND MARKING OF BIDS

- 16.1. The Bidders shall seal the Pre-Qualification Bid & Techno-Commercial Bid in **Envelope-I** & Price Bid in **Envelope-II** and all the 3(three) sealed covers should be packed, sealed and submitted as one package.
- 16.2. All the inner and outer envelopes shall be submitted with superscription of name of work, NIT number and due date of opening:
 - a) Addressed to TSECL at the following address:

Additional General Manager
DP&C, Corporate Office, TSECL
Agartala, Tripura (west).
 - b) The inner envelope shall indicate the name and address of the Bidder to enable the Bid to be returned unopened, in case it is declared "late" or "rejected".
- 16.3. If the outer envelope is not sealed and marked as required as above, TSECL shall assume no responsibility for the Bid's misplacement or premature opening.

17. DEADLINE FOR SUBMISSION OF BIDS

- 17.1. The Bidders have the option of sending the Bid by registered post or submitting the Bid in person. **Bids submitted by telex / telegram / fax shall not be accepted.** No request from any Bidder to TSECL to collect the Bid from airlines, cargo agents etc. shall be entertained.
- 17.2. Bids shall be received by TSECL at the address specified under relevant para of section - II, not later than the time & date mentioned in the Invitation to Bid.
- 17.3. TSECL may, at its discretion, extend this deadline for the submission of Bids, in which case all rights and obligations of TSECL and Bidders previously subject to the deadline shall thereafter be subject to the deadline as extended.

18. LATE BIDS

- 24.1 Any Bid received by TSECL after the time & date fixed or extended for submission of Bids prescribed by TSECL, shall be rejected and/or returned unopened to the Bidder.

19. MODIFICATION AND WITHDRAWAL OF BIDS

- 19.1. **The Bidder may modify or withdraw its Bid after the Bid's submission provided that written notice of the modification or withdrawal is received by TSECL prior to the deadline prescribed for submission of Bids.**
- 19.2. The Bidder's modification or withdrawal notice shall be prepared, sealed, marked and dispatched in accordance with the provisions of the relevant clause of section – II.
- 19.3. No Bid shall be modified / withdrawn in the interval between the deadline for submission of Bids and the expiration of the period of Bid validity specified by the Bidder on the Bid Form. Withdrawal/modification of a Bid during this interval shall result forfeiture of the earnest money deposited by the bidder.

BID OPENING AND EVALUATION

20. OPENING OF BIDS BY TSECL

- 20.1. **The Part-I bids will be opened on the scheduled day as per NIT . Part-II bid(Price bid) of the bidders those have been found qualified in Part-I bid, will only be opened by TSECL. The date of opening of the price Bid shall be notified in writing.**

In case the above schedule date of opening of Bid is declared holiday by the State / Central Government the Bid will be opened on the following working day keeping time unaltered.

- 20.2. The Bid and its all parts shall be opened in the presence of Bidders' representatives (**up to 2 persons**) who choose to attend at the date and time for opening of bids indicated in the NIT or in case any extension has been given thereto, on the extended bid opening date and time notified to all the Bidders, who have purchased the Bidding Documents. The Bidders' representatives who are present shall sign a register evidencing their attendance.

No person / agent shall be allowed to be present during opening of Bid without valid authorization from the concerned bidder.

- 20.3. The Bidders names, bid prices, modifications, bid withdrawals and the presence or absence of the requisite earnest money and such other details as TSECL, at its discretion, may consider appropriate shall be announced at the opening.

20.4. No electronic recording devices shall be permitted during bid opening.

21. CLARIFICATION OF BIDS

21.1. To assist in the examination, evaluation and comparison of Bids, TSECL may, at its discretion, ask the Bidder for a clarification of its Bid. The request for clarification and the response shall be in writing and no change in the price or substance of the Bid shall be sought, offered or permitted.

22. PRELIMINARY EXAMINATION

22.1. TSECL shall 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.

22.2. Arithmetical errors shall be rectified on the following basis:

If there is a discrepancy between **the unit price** and **the total price** that is obtained by multiplying the unit price and quantity, **the unit price shall prevail** and total price shall be corrected. If there is a discrepancy between words and figures, the **amount in words** shall prevail. If the Bidder does not accept the correction of the errors as above, his bid shall be rejected and the amount of earnest money shall be forfeited.

The Bidder shall ensure that the prices furnished by him are complete. In the case of not quoting of rates of any item (supply / erection) in the specified price schedules of the Bid Form, TSECL shall be entitled to consider the **highest price** of the tender for the purpose of evaluation and for the purpose of award of the Contract, use the **lowest price** of the tender.

22.3. Prior to the detailed evaluation, TSECL shall determine the substantial responsiveness of each Bid w.r.t. Bidding Documents. For purpose of these Clauses, a substantially responsive Bid is one, which conforms to all the terms and conditions of the Bidding Documents without material deviations. A material deviation is one which affects in any way the prices, quality, quantity or delivery period of the equipment or which limits in any way the responsibilities or liabilities of the Bidder or any right of TSECL as required in these specifications and documents. TSECL determination of a Bid's responsiveness shall be based on the contents of the Bid itself without recourse to extrinsic evidence.

22.4. A Bid determined as not substantially responsive shall be rejected by TSECL and may not subsequently be made responsive by the Bidder by correction of the non-conformity.

22.5. TSECL may waive any minor non-conformity or irregularity in a Bid, which does not constitute a material deviation, provided such waiver, does not prejudice or affect the relative ranking of any Bidder.

23. DEFINITIONS AND MEANINGS

23.1. For the purpose of the evaluation and comparison of bids, the following meanings and definition shall apply: -

- a. **'Bid Price'** shall mean the base price quoted by each Bidder in his proposal for the complete scope of works.
- b. **Transportation Factor:-** The bidders must mention actual vehicular road distance **between his works and the office of the Deputy General Manager , Udaipur, TSECL. Capitalization of Transportation cost @ Rs.4 /- per pole / Km will be considered for evaluation of the Lowest bid in the tender.**

- 23.2. **“Evaluated Bid Price:-** shall be the summation of ‘Bid Price’, and Capitalization of Transportation cost @ Rs.4 /- per pole / Km
- 23.3. **Evaluated bid prices (Tender value) of all the bidders shall be compared among themselves to determine the lowest evaluated Bid (Tender) and, as a result of this comparison; the lowest Bid (Tender) shall be selected for consideration of award of the Contract.**

24. CONTACTING THE OWNER

Bids shall be deemed to be under consideration immediately after they are opened and until such time official intimation of award/rejection is made by TSECL to the Bidders. While the bids are under consideration, Bidders and/or their representatives or other interested parties are advised to refrain from contacting by any means, the Owner and/or his employees/representatives on matters relating to the bids under consideration. TSECL, if necessary, shall obtain clarifications on the bids by requesting for such information from any or all the Bidders, either in writing or through personal contacts as may be necessary. Bidders shall not be permitted to change the substance of the bids after the bids have been opened.

AWARD OF CONTRACT

25. AWARD CRITERIA

- 25.1. TSECL shall award the Contract to the successful Bidder whose bid has been determined to be substantially responsive and has been determined as technically acceptable and lowest evaluated Bid, provided further that the Bidder is determined to be qualified to perform the Contract satisfactorily. TSECL shall be the sole judge in this regard.
- 25.2. Further, TSECL reserves the right to award separate Contracts to two or more parties in line with the terms and conditions specified in the accompanying Technical Specifications.

26. OWNER’S RIGHT TO ACCEPT ANY BID AND TO REJECT ANY OR ALL BIDS

- 26.1. TSECL reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to award of contract, without thereby incurring any liability to the affected Bidder or Bidders or any obligation to inform the affected Bidder or Bidders of the grounds for such action.

27. NOTIFICATION OF AWARD

- 27.1. Prior to the expiration of the period of bid validity and extended validity period, if any, TSECL shall notify the successful Bidder in writing by registered letter or by telex or FAX, to be confirmed in writing by registered letter, that his Bid has been accepted.
- 27.2. The Notification of Award/Letter of Award shall constitute the formation of the Contract.
- 27.3. **Upon the successful Bidder’s furnishing of Contract Performance Guarantee TSECL shall promptly notify each unsuccessful Bidder and will discharge its bid guarantee.**

28. SIGNING OF CONTRACT

- 28.1. At the same time as TSECL notifies the successful Bidder that its bid has been accepted, TSECL shall send the Bidder the detailed Letter of Award.
- 28.2. **Within 15(fifteen) days of receipt of the detailed Letter of Award, the successful Bidder shall convey in writing unconditional acceptance of the Letter of Award and**

shall attend the respective office of TSECL along with the “**Contract Performance Guarantee**” for signing the contract agreement. **Otherwise the bidder will be debarred for next 3(three) years from participation of similar nature of tender.**

29. CONTRACT PERFORMANCE GUARANTEE

- 29.1. As a Contract Performance Security, the successful Bidder, to whom the work is awarded, shall be required to furnish a contract Performance Guarantee in the shape of demand draft in favour of **Tripura State Electricity Corporation Limited, Banamalipur, Agartala, PIN 799001**. The guarantee amount shall be equal to ten percent (10%) of the Contract Price and it shall guarantee the faithful performance of the Contract in accordance with the terms and conditions specified in these documents and specifications. The earnest money deposited at the time of tender shall be adjusted with the contract performance guarantee.
- 29.2. The Performance Guarantee shall cover additionally the following guarantees to TSECL:
- a.** The successful Bidder guarantees the successful and satisfactory performance of the executed works under the Contract, as per the specifications and conditions.
 - b.** The successful Bidder further guarantees that the materials/equipments provided by him shall be free from all defects in design, material and workmanship and shall upon written notice from TSECL fully remedy free of expenses to TSECL such defects as developed under the normal use within the period of guarantee specified in the relevant clause of the General Terms and conditions.
- 29.3. The Contract Performance Guarantee is intended to secure the performance of the entire contract. However, it is not to be construed as limiting the damages under clause entitled “Equipment Performance Guarantee” in Technical Specifications and damages stipulated in other clauses in the Bidding Documents.
- 29.4. The Contract performance Guarantee submitted in the shape of demand draft shall be returned to the Contractor without any interest at the end of successful completion of the work against a Bank Guarantee of equivalent amount from any Public Sector / Scheduled Indian Bank valid up to the Guarantee period. The Bank Guarantee such deposited shall be discharged after expiry of Guarantee period.
- 29.5. **The contract performance Guarantee shall be forfeited: -**
- a) If the contractor fails to start the work as per approved BAR CHART for reasons solely rests on him.**
 - b) If the contractor left / suspends the work without prior written intimation to the owner’s Engineer in charge of the work stating the reasons for such suspension of work.**
 - c) If the contractor left / suspends the work for reasons which are not acceptable to TSECL.**

30. CORRUPT OR FRAUDULENT PRACTICES

- 30.1. TSECL expects the bidders / suppliers / contractors to observe the highest standards of ethics during the procurement and execution of such contracts. In pursuance of this policy, TSECL
- a. defines, for the purpose of this provision, the terms set forth below as follows;

- (i) "Corrupt practice" means offering, giving, receiving or soliciting of anything of value to influence the action of a official in the procurement process or in contract execution, and
 - (j) "Fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the owner, and includes collusive practice among bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the owner from the benefits of free and open competition.
- b. Will reject a proposal for award if it determines the bidder recommended for award has engaged a corrupt or fraudulent practice in competing for the contract in question.
 - c. Will declare a firm ineligible, either indefinitely or for a stated period of time, if TSECL at any time determines that the firm has engaged in corrupt / fraudulent practices in competing for, or in executing the contract.

SECTION-III

GENERAL TERMS & CONDITIONS OF CONTRACT

A. INTRODUCTION

1.0 DEFINITION OF TERMS

- 1.1 'The Contract' means the agreement entered into between Tripura State Electricity Corporation Limited and Contractor as per the Contract Agreement signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.
- 1.2 'Owner' shall mean **TRIPURA STATE ELECTRICITY CORPORATION LIMITED (TSECL)** and shall include their legal representatives, successors and assigns.
- 1.3 '**Contractor**' or '**Manufacturer**' shall mean the Bidder whose bid shall be accepted by TSECL for award of the Works and shall include such successful Bidder's legal representatives, successors and permitted assigns.
- 1.4 '**Sub-contractor**' shall mean the person named in the Contract for any part of the Works or any person to whom any part of the Contract has been sublet by the Contractor with the consent in writing of the owner's Engineer in charge of the work and shall include the legal representatives, successors and permitted assigns of such person.
- 1.5 '**Consulting Engineer**'/'**Consultant**' shall mean Power Grid Corporation of India Ltd. or any firm or person duly appointed as such from time to time by TSECL.
- 1.6 The terms '**Equipment**', '**Stores**' and '**Materials**' shall mean and include equipment, stores and materials to be provided by the Contractor under the Contract.
- 1.7 '**Works**' shall mean and include provision of **Materials**, labour and services, as per the Specifications and complete testing and putting into satisfactory operation including all transportation, handling, unloading and storage at the Site as defined in the Contract.
- 1.8 '**Specifications**' shall mean the Specifications and Bidding Documents forming a part of the Contract and such other schedules and drawings as may be mutually agreed upon.
- 1.9 '**Site**' shall mean and include the land and other places on, into or through which the works and the related facilities are to be erected or installed and any adjacent land, paths, street or reservoir which may be allocated or used by TSECL or Contractor in the performance of the Contract.
- 1.10 The term '**Contract Price**' shall mean the item wise price / lump-sum price quoted by the Contractor in his bid with additions and/or deletions as may be agreed and incorporated in the Letter of Award, for the entire scope of the works.
- 1.11 The term '**Equipment Portion**' of the Contract price shall mean the ex-works value of the equipment/materials.
- 1.12 The term '**Erection Portion**' of the Contract price shall mean the value of field activities of the works including erection, testing and putting into satisfactory operation including successful completion of performance and guarantee tests to be performed at Site by the Contractor including cost of insurances.
- 1.13 '**Manufacturer's Works**' or '**Contractor's Works**', shall mean the place of work used by the manufacturer, the Contractor, their collaborators/associate or sub-contractors for the performance of the Contract.

- 1.14 **'Inspector'** shall mean TSECL or any person nominated by TSECL from time to time, to inspect the equipment; stores or Works under the Contract and/or the duly authorized representative of TSECL.
- 1.15 **'Notification of Award of Contract'/Letter of Award'/Telex of Award'** shall mean the official notice issued by TSECL notifying the Contractor that his bid has been accepted.
- 1.16 **'Date of Contract'** shall mean the date on which Notification of Award of Contract/Letter of Award/Telex of Award has been issued.
- 1.17 **'Month'** shall mean the calendar month. 'Day or 'Days', unless herein otherwise expressly defined, shall mean calendar day or days of 24 hours each.
A **'Week'** shall mean continuous period of seven (7) days.
- 1.18 "Writing" shall include any manuscript, type written or printed statement, under or over signature and/or seal as the case may be.
- 1.19 When the words 'Approved', 'Subject to Approval', 'Satisfactory', 'Equal to', 'Proper', 'Requested', 'As Directed', 'Where Directed', 'When Determined by', 'Accepted', 'Permitted', or words and phrases of like importance are used, the approval, judgment, direction etc. is understood to be a function of TSECL.
- 1.20 **"Test on Completion"** shall mean such tests as prescribed in the Contract to be performed by the Contractor before the work is Taken Over by TSECL.
- 1.21 **'Start Up'** shall mean the time period required to bring the equipment covered under the Contract from an inactive condition, when construction is essentially complete, to the state ready for trial operation. The start up period shall include preliminary inspection and checkout of equipment and supporting sub-system, initial operation of the complete equipment covered under the Contract to obtain necessary pre-trial operation data, perform calibration and corrective action, shut down, inspection and adjustment prior to the trial operation period.
- 1.22 **"Initial Operation"** shall mean the first integral operation of the complete equipment covered under the Contract with the sub-system and supporting equipment in service or available for service.
- 1.23 **'Trial Operation', 'Reliability Test', 'Trial Run', 'Completion Test'** shall mean the extended period of time after the start up period. During this trial operation period, the unit shall be operated over the full load range. The length of Trial Operation shall be as determined by the Engineer of TSECL unless otherwise specified elsewhere in the Contract.
- 1.24 **'Performance and Guarantee Test'** shall mean all operational checks and tests required to determine and demonstrate capacity, efficiency and operating characteristics as specified in the Contract Documents.
- 1.25 The term **'Final Acceptance/Taking Over'** shall mean written acceptance of the Works performed under the Contract by TSECL, after successful commissioning/completion of Performance and Guarantee Tests, as specified in the accompanying Technical Specification or otherwise agreed in the Contract.
- 1.26 **"Commercial Operation"** shall mean the Conditions of Operation in which the complete equipment covered under the Contract is officially declared by TSECL to be available for continuous operation at different loads up to and including rated capacity. Such declaration by TSECL, however, shall not relieve or prejudice the Contractor of any of his obligations under the Contract.

- 1.27 **'Guarantee period'/'Maintenance Period'** shall mean the period during which the Contractor shall remain liable for repair or replacement of any defective part of the works performed under the contract.
- 1.28 **'Latent Defects'** shall mean such defects caused by faulty designs, material or workmanship which cannot be detected during inspection, testing etc, based on the technology available for carrying out such tests.
- 1.29 **'Drawings', 'Plans'** shall mean all:
- a. Drawing furnished by TSECL as a basis for Bid Proposals.
 - b. Supplementary drawings furnished by TSECL to clarify and define in greater detail the intent of the Contract.
 - c. Drawings submitted by the Contractor with his Bid provided such drawings are acceptable to TSECL.
 - d. Drawings furnished by TSECL to the Contractor during the progress of the Work; and
 - e. Engineering **data and drawings submitted by the Contractor during the progress of the Work** provided such drawings are acceptable to the Executive Engineer in charge of the work.
- 1.30 **"Codes"** shall mean the following including the latest amendments and / or replacement, if any:
- a. A.S.M.E. Test Codes.
 - b. A.I.E.E. Test Codes.
 - c. American Society of Testing Materials Codes. Standards of the Indian Standards Institutions.
 - d. I.E.E. standards.
 - e. I.E.C. standards.
 - f. Other Internationally approved standards and / or Rules and **Regulations touching the subject matter of the Contract.**
- 1.31 Words imparting 'Person' shall include firms, companies, corporation and association or bodies of individuals.
- 1.32 Terms and expressions not herein defined shall have the same meaning as are assigned to them in the **Indian Sale of Goods Act (1930)**, failing that in the **Indian Contract Act (1872)** and failing that in the **General Clauses Act (1897)** including amendments thereof if any.
- 1.33 In addition to the above the following definitions shall also apply.
- a. 'All equipment and materials' to be supplied shall also mean 'Goods'.
 - b. 'Constructed' shall also mean 'erected and installed'
 - c. 'Contract Performance Guarantee shall also mean 'Contract Performance Security'

2.0 APPLICATION

These General Conditions shall apply to the extent that they are not **superseded by provisions in other parts of the Contract.**

3.0 STANDARDS

The Goods supplied under this Contract shall conform to the standards mentioned in the Various Technical Specifications and when no applicable standard is mentioned to the authoritative standard appropriate to the Goods and such standards shall be the latest issued by the concerned institution.

4.0 LANGUAGE AND MEASURES

All documents pertaining to the Contract including specification, Schedules, notices, correspondence, operating and maintenance instructions, drawings or any other writing shall be written in English language. The Metric System of measurement shall be used exclusively in the Contract.

5.0 CONTRACT DOCUMENT

- 5.1 The term "Contract Documents" shall mean and include the following which shall be deemed to form an integral part of the Contract:
- a. Invitation of Bid including letter forwarding the Bidding Documents, Instructions to Bidders, General Terms and Conditions of Contract, Erection Conditions of Contract and all other documents included under the Special Conditions of Contract and various other sections.
 - b. Specifications of the equipment/material to be provided and furnished under the Contract as brought out in the accompanying Technical Specification.
 - c. Contractor's Bid proposal and the documents attached there-to including the letter of clarifications thereto between the Contractor and TSECL prior to the Award of Contract.
 - d. All the materials, literature, data and information of any sort given by the Contractor along with his bid, subject to the approval of TSECL.
 - e. Letter of Award and any agreed variations of the conditions of the documents and special terms and conditions of contract if any.

6.0 USE OF THE CONTRACT DOCUMENTS AND INFORMATION

The Contractor shall not communicate or use in advertising, publicity, sales releases or in any other medium, photographs or other reproduction of the Works under this contract, or descriptions of the site, dimensions, quantity, quality, or other information, concerning the Works unless prior written permission has been obtained from TSECL.

7.0 JURISDICTION OF CONTRACT

The laws applicable to the Contract shall be the laws in force in India. The Courts of Udaipur shall have exclusive jurisdiction in all matters arising **under this Contract**.

8.0 MANNER OF EXECUTION OF CONTRACT

- 8.1 The contractor should attend the concerned office of TSECL within 15(fifteen) days from the date of issue of the Letter of Award to the Contractor for signing the contract agreement.
- The Contractor shall provide for signing of the Contract, Performance Guarantee, appropriate power of attorney and other requisite materials.
- 8.2 The Agreement shall be signed in two originals and the Contractor shall be provided with one signed original and the rest shall be retained by TSECL.

- 8.3 The Contractor shall provide free of cost to TSECL all the engineering data, drawings, and descriptive materials submitted with the Bid, in at least six (6) copies to form a part of the contract immediately after issue of Letter of Award.
- 8.4 Subsequent to signing of the Contract, the Contractor, at his own cost, shall provide TSECL with at least five (5) true copies of Agreement and one soft copy including 3(three) hard copies of the approved drawings within fifteen (15) days after the signing of the Contract.

9.0 ENFORCEMENT OF TERMS

- 9.1 The failure of either party to enforce at any time any of the provisions of this Contract or any rights in respect thereto or to exercise any option therein provided, shall in no way be construed to be a waiver of such provisions, rights or options or in anyway to affect the validity of the Contract. The exercise by either party of any of its rights herein shall not prejudice either party from exercising the same or any other right it may have under the **Contract**.

10.0 COMPLETION OF CONTRACT

- 10.1 Unless otherwise terminated under the provisions of any other relevant clause, this Contract shall be deemed to have been completed on the date stipulated in the NIT.

11.0 TIME – THE ESSENCE OF CONTRACT

- 11.1 The time and the date of completion of the Contract as stipulated in the Contract by TSECL without or with modifications, if any, and so incorporated in the Letter of Award, shall be deemed to be the essence of the Contract. The Contractor shall so organize his resources and perform his Work as to complete it not later than the date agreed to.
- 11.2 The Contractor shall submit a detailed **BAR CHART / PERT NETWORK** consisting of adequate number of activities covering various key phases of the Work such as design, procurement, manufacturing, shipment and field erection activities **within fifteen (15) days of the date of Notice of Award of Contract**. This Bar Chart shall also indicate the interface facilities to be provided by TSECL and the dates by which such facilities are needed. The Contractor shall discuss with TSECL for finalization and approval of the Bar Chart by TSECL. The agreed Bar Chart shall form part of the contract documents. During the performance of the Contract, if in the opinion of the owner's Engineer in charge of the work, proper progress is not maintained, suitable changes shall be made in the Contractor's operations to ensure proper progress without any cost implication to TSECL. The interface facilities to be provided by TSECL in accordance with the agreed Bar Chart shall also be reviewed while reviewing the progress of the Contractor.
- 11.3 Based on the agreed Bar Chart fortnightly reports shall be submitted by the Contractor as directed by the owner's Engineer in charge of the work.
- 11.4 Subsequent to the finalization of the Bar Chart, the Contractor shall make available to the owner's Engineer in charge of the work a detailed manufacturing programme in line with the agreed Contract Bar Chart. Such manufacturing programme shall be reviewed, updated and submitted to the owner's Engineer in charge of the work once in every month thereafter.
- 11.5 The above Bar Charts/manufacturing programme shall be compatible with TSECL computer environment and furnished to TSECL on such media as may be desired by TSECL.

12.0 EFFECTIVENESS OF CONTRACT

The Contract shall be considered as having come into force from the date of the Notification of Award, unless otherwise provided in the Notification of Award.

13.0 LIQUIDATED DAMAGES

13.1 For Equipment / finished item Portion (Excluding Spares)

13.1.1 If the Contractor fails to successfully complete the work within the time fixed under the Contract, the Contractor shall pay to TSECL as liquidated damages and not as penalty a sum specified for each specified period of delays. The details of such liquidated damages are brought out in the accompanying Special Conditions of Contract.

13.1.2 Materials will be deemed to have been delivered only when the items i.e. PCC Poles of different sizes are tested and found in order and as per specifications by TSECL Engineers on call from bidders. Delay means any delay / failure to deliver PCC poles as per approved BAR chart within specified time schedule without any acceptable hindrance.

13.1.3 The total amount of liquidated damages for delay under the Contract will be subject to a maximum of 5% of the Contract price.

13.2 Amount of liquidated damages (for poles).

13.2.1 The liquidated damages for delay in supply of poles, beyond the dates stipulated under relevant clause shall be **½% (Half per cent)** of the price of undelivered finished items, per week or part thereof.

13.2.2 The total amount of liquidated damages for delay under the Contract shall be subject to a maximum of **ten per cent (10%)** of the value of poles ordered unless otherwise specifically mentioned in Special Conditions of Contract.

14.0 GUARANTEE

14.1 The Contractor shall warrant that the equipment / material shall be new, unused and in accordance with the contract documents and free from defects in material and workmanship for a period of twelve (12) calendar months commencing immediately upon the satisfactory completion of the work. The Contractor's liability shall be limited to the replacement/repair of any defective parts in the equipment/work done of his own manufacture/construction or those of his sub-contractors under normal use and arising solely from faulty design, materials and/or workmanship provided always that such defective parts are repairable at the site and are not in the meantime essential in the commercial use of the equipment. Such replaced/defective parts shall be returned to the Contractor unless otherwise arranged. No repairs or replacement shall normally be carried out by owner's Engineer in charge of the work when the equipment/work is under the supervision of the Contractor's supervisory engineer.

14.2 In the event of any emergency, where in the judgment of the owner's Engineer in Charge of work, delay would cause serious loss or damages, repairs or adjustment may be made by him or a third party chosen by him without advance notice to the Contractor and the cost of such work shall be paid by the Contractor. In the event such action is taken by the Executive Engineer in Charge of work, the Contractor shall be notified promptly and he shall assist wherever possible in making necessary corrections. This shall not relieve the Contractor of his liabilities under the terms and conditions of the Contract.

14.3 If it becomes necessary for the Contractor to replace or renew any defective portions of the Works, the provision of this clause shall apply to portion of the Works so replaced or renewed until the expiry of twelve (12) months from the date of such replacement or renewal. If any defects are not remedied within a reasonable time, the Deputy General Manager in Charge of work may proceed to do the work at the Contractor's risk and cost,

but without prejudice to any other rights which TSECL may have against the Contractor in respect of such defects.

- 14.4 The cost of any special or general overhaul rendered necessary during the maintenance period due to defects in the PCC poles or defective work carried out by the Contractor shall be borne by the Contractor.
- 14.5 The acceptance of the PCC poles by the **Deputy General Manager (DGM) in Charge** of work shall in no way relieve the Contractor of his obligation under this clause.
- 14.6 In the case of those defective parts, which are not repairable at site but are essential for the commercial operation of the PCC poles, the Contractor and the Owner's Engineer in Charge of work shall mutually agree to a programme of replacement or renewal, which shall minimize interruption to the maximum extent in the operation of the power system.
- 14.7 At the end of the guarantee period, the Contractor's liability ceases except for latent defects. For latent defects, the Contractor's liability as mentioned in clause nos. 14.1 through 14.7 above shall continue to remain till the end of 5 years from the date of completion of the work.

The provisions contained in this clause shall not be applicable:

- a) If TSECL has not used the PCC poles according to the generally approved REC practice and in accordance with the conditions of operations specified and in accordance with operating manuals, if any.
- b) In cases of normal **wear and tear of the parts to be specifically mentioned by the Contractor in the offer.**

15.0 TAXES, PERMITS & LICENCES

The Contractor shall be responsible for payment of all Indian duties, levies and taxes lawfully assessed against this contract.

16.0 REPLACEMENT OF DEFECTIVE PARTS AND MATERIALS

- 16.1 If during the performance of the Contract, owner's Engineer in charge of the work shall decide and inform in writing to the Contractor that the Contractor has provided/manufactured any equipment, material or part of equipment unsound and imperfect or the executed works are inferior to the quality specified, the Contractor on receiving details of such defects or deficiencies shall at his own expense within seven (7) days of his receiving the notice, or otherwise, within such time as may be reasonably necessary for making it good, proceed to alter, reconstruct or remove such works and furnish fresh equipment/materials up to the standards of the specifications. In case, the Contractor fails to do so, the Owner's Engineer in charge of the work may on giving the Contractor seven (7) days notice in writing of his intentions to do so, proceed to remove the portion of the works so complained of and at the cost of the Contractor perform all such work or furnish all such equipment/materials.
- 16.2 The Contractor's full and extreme liability under this clause shall be satisfied by the payment to TSECL of the extra cost, of such replacement procured including erection as provided for in the Contract, such extra cost being the ascertained difference between the price paid by TSECL for such replacements and the Contract Price by portion for such defective equipment/materials/works and repayments of any sum paid by TSECL to the Contractor in respect of such defective equipment/material. Should TSECL not so replace the defective equipment/materials, the Contractor's extreme liability under this clause shall be limited to repayment of all sums paid by TSECL under the Contract for such defective equipment/materials.

17.0 PATENT RIGHTS AND ROYALTIES

Royalties and fees for patents covering materials, articles, apparatus, devices, equipment or processes used in the Works shall be deemed to have been included in the Contract Price. The Contractor shall satisfy all demands that may be made at any time for such royalties or fees and he alone shall be liable for any damages or claims for patent infringements and shall keep TSECL indemnified in that regard. The Contractor shall, at his own cost and expense, defend all suits or proceedings that may be instituted for alleged infringement of any patents involved in the Works, and, in case of an award of damages, the Contractor shall pay for such award. In the event of any suit or other proceedings instituted against TSECL, the same shall be defended at the cost and expense of the Contractor who shall also satisfy/comply with any decree, order or award made against TSECL. But it shall be understood that no such machine, plant, work, material or thing has been used by TSECL for any purpose or any manner other than that for which they have been furnished and installed by the Contractor and specified under these specifications. Final payment to the Contractor by TSECL shall not be made while any such suit or claim remains unsettled. In the event any apparatus or equipment, or any part thereof furnished by the Contractor, is in such suit or proceedings held to constitute infringement, and its use is enjoined, the Contractor shall at his option and at his own expense, either procure for TSECL, the right to continue the use of said apparatus, equipment or part thereof, replace it with non-infringing apparatus or equipment or modify it, so it becomes non-infringing.

18.0 DEFENCE OF SUITS

If any action in court is brought against TSECL for the failure, omission or neglect on the part of the Contractor to perform any acts, matters, or things under the Contract, or for damage or injury caused by the alleged omission or negligence on the part of the Contractor, his agents, representatives or his Sub-Contractors, or in connection with any claim based on lawful demands of Sub-Contractors, workmen, suppliers or employees, the Contractor shall in all such cases indemnify and keep TSECL, from all losses, damages, expenses or **decrees arising of such action**.

19.0 LIMITATION OF LIABILITIES

The final payment by TSECL in pursuance of the Contract shall mean the release of the Contractor from all his liabilities under the Contract. Such final payment shall be made only at the end of the Guarantee/Warranty Period, and till such time as the contractual liabilities and responsibilities of the Contractor, shall prevail. All other payments made under the Contract shall be treated as on-account payments.

20.0 POWER TO VARY OR OMIT WORK

- 20.1 No alterations, amendments, omissions, suspensions or variations of the Works (hereinafter referred to as 'variation') under the Contract as detailed in the Contract Documents, shall be made by the Contractor except as directed in writing by owner's Engineer in charge of the work, but he shall have full powers subject to the provisions hereinafter contained, from time to time during the execution of the Contract, by notice in writing to instruct the Contractor to make such variation without prejudice to the Contract. The Contractor shall carry out such variation and be bound by the same conditions as far as applicable as though the said variations occurred in the Contract Documents. If any suggested variations would, in the opinion of the Contractor, if carried out, prevent him from fulfilling any of his obligations or guarantees under the Contract, he shall notify the Engineer thereof in writing and the Engineer shall decide forthwith whether or not, the same shall be carried out and if the Engineer confirm his instructions, the Contractor's obligations and guarantees shall be modified to such an extent as may be mutually

agreed. Any agreed difference in cost occasioned by any such variation shall be added to or deducted from the Contract Price as the case may be.

- 20.2 In the event of the Engineer requiring any variation, a reasonable and proper notice shall be given to the Contractor to enable him to work his arrangement accordingly, and in cases where goods or materials are already prepared or any design, drawings or pattern made or work done requires to be altered, a reasonable and agreed sum in respect thereof shall be paid to the Contractor.
- 20.3 In any case in which the Contractor has received instructions from the Executive Engineer in charge of the work as to the requirement of carrying out the alterations or additional or substituted work which either then or later on, shall in the opinion of the Contractor, involve a claim for additional payment, the Contractor shall immediately and in no case later than thirty (30) days, after receipt of the instructions aforesaid and before carrying out the instructions, advise the Owner's Engineer in charge of the work to that effect. But the Owner's Engineer in charge of the work shall not become liable for the payment of any charges in respect of any such variations, unless the instructions for the performance of the same shall be confirmed in writing by the Executive Engineer in charge of the work.
- 20.4 If any variation in the Works results in reduction of Contract Price, the parties shall agree, in writing, to the extent of any change in the price, before the Contractor proceeds with the change.
- 20.5 In all the above cases, in the event of a disagreement as to the reasonableness of the said sum, the decision of owner's Engineer in charge of the work shall prevail.
- 20.6 Notwithstanding anything stated above in this clause, owner's Engineer in charge of the work shall have the full power to instruct the Contractor, in writing, during the execution of the Contract to vary the quantities of the items or groups of items in accordance with the provisions of clause entitled 'Change of Quantity in Section – III'. The Contractor shall carry out such variations and be bound by the same conditions as though the said variations occurred in the Contract Documents.

21.0 ASSIGNMENT AND SUB-LETTING OF CONTRACT

- 21.1 The Contractor may, after informing owner's Engineer in charge of the work and getting his written approval, assign or sub-let the Contract or any part thereof other than supply of main equipments and any part of the plant for which makes are identified in the Contract. Suppliers of the equipment not identified in the Contract or any change in the identified suppliers shall be subjected to approval by the owner's Engineer in charge of the work. The experience list of equipment vendors under consideration by the Contractor for this Contract shall be furnished to the owner's Engineer in charge of the work for approval, prior to procurement of all such items/equipment. Such assignment/sub-letting shall not relieve the Contractor of any obligation, duty or responsibility under the Contract. Any assignment as above, without prior written approval of the owner's Engineer in charge of the work, shall be void.
- 21.2 For components/equipment procured by the Contractor for the purposes of the Contract, after obtaining the written approval of TSECL, the Contractor's purchase specifications and enquiries shall call for quality plan to be submitted by the suppliers along with their proposals. The quality plans called for from the Vendors shall set out, during the various stages of manufacture and installation, the quality practices and procedures followed by the Vendors quality control organization, the relevant reference document/standard used, acceptance level, inspection documentation raised, etc. Such quality plans of the successful vendors shall be discussed and finalized in consultation with the owner's

Engineer in charge of the work and shall form part of the purchase order/contract between the Contractor and the Vendor. Within three weeks of the release of the purchase orders/contracts for such bought out items/components, a copy of the same without price details but together with detailed purchase specifications, quality plans and delivery conditions shall be furnished to the owner's Engineer in charge of the work by the Contractor.

22.0 CHANGE OF QUANTITY

22.1 During the execution of the Contract, TSECL reserves the right to increase or decrease the quantities of items under the Contract but without any change in unit price or other terms & conditions. Such variations shall not be subjected to any limitation for the individual items but the total variations in all such items including items not covered under the **Contract shall be limited to $\pm 25\%$** .

22.2 The Contract price shall accordingly be adjusted based on the unit rates available in the Contract for the change in quantities as above. The base unit rates, as identified in the Contract shall however remain constant during the currency of the Contract, except as provided for in clause 31.0 below. In case, the unit rates are not available in the contract, the same shall be worked out as below: -

- i) If the rates for the additional, altered or substituted work are specified in the contract, the contractor is bound to carry the additional, altered or substituted work at the same rates as are specified in the contract.
- ii) If the rates for the additional, altered or substituted work are not specifically provided in the contract, the rates will be derived from a similar class of work as are specified in the contract.
- iii) If the rates for the additional, altered or substituted work includes any work for which no rate is specified in the contract / can not be derived from the similar class of work in the contract, then such work shall be carried out at the rates which will be determined on the basis of current schedule of rate of TSECL above minus / plus the percentage which the total contract amount bears to the estimated cost put to tender. Provided always if the rate for particular part or parts of the item is not available in the schedule of rates the rate of such part or parts will be determined by TSECL of the work on the basis of the prevailing market rate when the work was done.
- iv) If the rates for the additional, altered or substituted work can not be determined in the manner specified in sub-clause i, ii & iii above, then the contractor shall within 7(Seven) days of receipt of order to carry out the order, inform the owner's Engineer in charge of the work of rate which it is his intention to charge for such class of work, supported by analysis of rate or rates claimed, and TSECL shall determine the rate or rates claimed with mutual settlement with the contractor.
- v) The deviation limit referred to above is the net effect (algebraically sum) of all additions and deductions ordered.
- vi) Time for the completion for the work shall be extended in the proportion that the altered, additional or substituted work bears to the original contract of the work and the certificate of the owner's Engineer in charge of the **work shall be conclusive for approval of the time extension by TSECL.**

23.0 PAKING, FORWARDING AND SHIPMENT

23.1 The Contractor, wherever applicable, shall after proper painting, pack and crate all equipment in such a manner as to protect them from deterioration and damage during rail and road transportation to the site and storage at the site till the time of erection. The Contractor shall be held responsible for all damages due to improper package.

- 23.2 The Contractor shall notify the owner's Engineer in charge of the work of the date of each shipment from his works, and the expected date of arrival at the site.
- 23.3 The Contractor shall also give all shipping information concerning the weight, size and content of each packing including any other information the owner's Engineer in charge of the work may require.
- 23.4 The Contractor shall prepare detailed packing list of all packages and containers, bundles and loose materials forming each and every consignment dispatch to Site.
- The Contractor shall further be responsible for making all necessary arrangements for loading, unloading and other handling, right from his works up to the Site and also till the equipment is erected, tested and commissioned. He shall be solely responsible for proper storage and safe custody of all equipment.

24.0 CO-OPERATION WITH OTHER CONTRACTORS AND CONSULTING ENGINEERS

The Contractor shall agree to cooperate with the TSECL's Consulting Engineers and freely exchange with them such technical information, as is necessary to obtain the most efficient and economical design and to avoid unnecessary duplication of efforts. The owner's Engineer in charge of the work shall be provided with three copies of all correspondence addressed by the Contractor to the consulting Engineers of TSECL in respect of such exchange of technical information.

25.0 NO WAIVER OF RIGHTS

Neither the inspection by TSECL nor any order by TSECL for payment of money or any payment for or acceptance of, the whole or any part of the Works by the owner's Engineer in charge of the work, nor any extension of time, nor any possession taken by the owner's Engineer in charge of the work shall operate as a waiver of any provision of the Contract, or of any power herein reserved to TSECL or any right to damages herein provided nor shall any waiver of any breach in the Contract be held to be a waiver of any other or subsequent breach.

26.0 CERTIFICATE NOT TO AFFECT RIGHT OF TSECL AND LIABILITY OF CONTRACTOR.

No interim payment certificate of the owner's Engineer in charge of the work, nor any sum paid on account by TSECL, nor any extension of time for execution of the Works granted by TSECL shall affect or prejudice the rights of TSECL against the Contractor or relieve the Contractor of his obligation for the due performance of the Contractor, or be interpreted as approval of the Works done or of the equipment furnished and no certificate shall create liability for TSECL to pay for alterations, amendments, variations or additional works not ordered, in writing, by the owner's Engineer in charge of the work or discharge the liability of the Contractor for the payment of damages whether due, ascertained or certified or not or any sum against the payment of which he is bound to indemnify TSECL, nor shall any such certificate nor the acceptance by him of any sum paid on account or otherwise affect or prejudice the rights of TSECL against the Contractor.

27.0 INSPECTION AND TESTING OF P.C.C. POLES / MATERIALS

- 27.1 **TSECL will take delivery of finished PCC pole from the contractor / manufacturer's works only after issuance of Materials Inspection Clearance Certificate (MICC) by the inspecting officer / team of TSECL unless otherwise waived by TSECL during execution of the contract in special circumstances.**
- 27.2 After manufacturing or at the stage of dispatch of PCC Poles / materials the contractor shall give intimation to the owner's Engineer in charge of the work for conducting inspection of PCC Poles / materials at manufacture's works or at recognized testing

laboratories to be arranged by the contractor. **The intimation shall be made at least 15(fifteen) days before the PCC Poles / materials become ready for dispatch.**

- 27.3 TSECL may inspect the **manufacturing process any time**. The contractor shall give previous notice to the TSECL for the proposal / programme of testing. If considered necessary, the materials specially **H.T. wire** will be tested by **the inspecting officer / team of TSECL (Maximum two persons) at HT wire manufacturer's factory** before dispatch to the contractor's PCC Pole Manufacturing unit for which contractor will provide all sorts of arrangement for tests including to & fro travelling expenses, lodging charges etc for TSECL's representative at their cost. At least 2% of the total quantity shall be tested.
- 27.4 Testing of PCC Poles, H.T. Wire / materials as specified above shall be conducted at the risk and cost of the contractor. **The contractor shall also bear the to and fro traveling and lodging charges of the inspecting officer / team of TSECL.**

28.0 PROGRESS REPORTS AND PHOTOGRAPHS

During the various stages of the Work in the pursuance of the Contract, the Contractor shall at his own cost submit periodic progress reports as may be reasonably required by the owner's Engineer in charge of the work with such materials as, charts, Bar Charts, photographs, test certificates, etc. Such progress reports shall be in the form and size as may be required by the owner's Engineer in charge of the work and shall be submitted in at least 2 (two) copies.

29.0 EXTENSION OF TIME

- 29.1 TSECL may consider to **grant time extension** for completion of the work if it is felt absolutely essential on fulfillment of following conditions by the Contractor
- a. The contractor must apply to the Engineer-In-charge in writing for extension of time so required justifying the necessity.
 - b. Such application must state **the grounds**, which hindered the contractor in the execution of the work within the time as stipulated in the contract document.
 - c. Such application must be made within 30 days of the date on which such hindrance had arisen.
 - d. The **Engineer-in charge** must be of the opinion that the grounds shown for the extension of time are reasonable and without extension of such time completion of the work is practically impossible.
- 29.2 **The Engineer-In- Charge** will have full powers, but the orders on the application of the Contractor accepted by the Authorities higher than the Engineer-In-Charge Shall be issued by him only after written approval from the concerned authority Higher than Engineer-In-Charge.
- 29.3 The opinion of **the Engineer- in- charge**, whether the grounds shown for the time are or are not reasonable, is final. If the **Engineer- in- charge** is of the opinion that the grounds shown by the supplier/ contractor are not reasonable and declines to grant extension to time, the supplier/contractor cannot challenge.

30.0 TAKING OVER

Upon successful completion of all the tests to be performed at Site on material provided / PCC Pole furnished and erected by the Contractor, the owner's Engineer in charge of the work shall issue to the Contractor a **Taking over Certificate** as a proof of the final acceptance of the material / PCC Pole. Such certificate shall not unreasonably be withheld.

CONTRACT SECURITY AND PAYMENTS

31.0 CONTRACT PERFORMANCE GUARANTEE

The Contractor shall furnish **contract performance guarantee** as specified for the proper fulfillment of the Contract within fifteen (15) days of "Notice of Award of Contract."

32.0 CONTRACT PRICE ADJUSTMENT

No Price Adjustment / Contract Price Variation will be allowed against the contract. The rates are firm.

33.0 PAYMENT

33.1 The payment to the Contractor for the performance of the Works under the Contract will be made by TSECL as per the guidelines and conditions specified herein. All payment made during the Contract shall be on account payments only. The final payment will be made on completion of all Works and on completion of **warranty / guaranty period** including fulfillment by the Contractor of all his liabilities under the Contract.

33.2 **Currency of Payment**

All payments under the Contract shall be in Indian Rupees only.

33.3 **Due Dates for Payments**

TSECL will make progressive payment as and when the payment is due as per the terms of payment set forth as herein after.

34.0 Mode of Payment

34.1 Payment due on successful delivery of PCC poles as per schedule of work shall be made by the owner's Engineer in charge of the work through account payee Banker cheque.

34.2 **TERMS OF PAYMENT**

The terms of payments for various activities in this contract are as under.

34.2.1 **Price of Supply of PCC poles**

The terms of payments for price of PCC poles to be supplied after manufacturing, successful testing detailed herein after.

Supply of PCC poles.

(i) 100% of the cost of Poles after:

- a. Acknowledgement of Letter of Award.
- b. Submission of contract performance guarantee in the shape of demand draft in favour of Tripura State Electricity Corporation Limited payable at SBI, Udaipur Branch, South Tripura..
- c. Submission of a detailed Bar Chart based on the work schedule stipulated in the Bid document and its approval by TSECL.
- d. Signing of contract agreement.
- e. Finally, **on receipt / delivery of materials after successful testing at manufacturer's works / stack yard site.**

(ii) **Claim for Progressive** bill value **against delivery of PCC poles, however, shall not be less than Rs.5.00 lakh.**

34.2.2 All further payments under the Contract shall be made as stipulated in the Contract document after signing the Contract Agreement.

35.0 DEDUCTION FROM CONTRACT PRICE

All costs, damages or expenses that TSECL may have paid, for which under the Contract, the Contractor is liable, will be deducted from the progressive bill of the contractor.

36.0 TRANSFER OF THE TITLE

- 36.1 This Transfer of Title of equipments / materials shall not be construed to mean the acceptance and the consequent "Taking Over" of equipment and materials. The Contractor shall continue to be responsible for the quality and performance of such equipment and materials and for their compliance with the specifications until "**Taking Over**" and the fulfillment of guarantee provisions of this Contract.
- 36.2 This Transfer of Title shall not relieve the Contractor from the responsibility for all **risks of loss or damage to** the equipment and materials as specified under the clause entitled "Insurance" of this Section.

37.0 INSURANCE

- 37.1 The Contractor at his cost shall arrange, secure and maintain all insurance as may be pertinent to the Works and obligatory in terms of law to protect his interest and interests of TSECL against all perils detailed herein. The form and the limit of such insurance as defined herein together with the under-writer in each case shall be acceptable to TSECL. However, irrespective of such acceptance, the responsibility to maintain adequate insurance coverage at all times during the period of manufacturing (until delivery is effected) shall be of the Contractor alone. The Contractor's failure in this regard shall not relieve him of any of his contractual responsibilities and obligations. The insurance covers to be taken by the Contractor shall be in a joint name of TSECL and the Contractor. The Contractor shall, however, be authorized to deal directly with Insurance Company or Companies and shall be responsible in regard to maintenance of all insurance covers. Further the insurance should be in freely convertible currency.
- 37.2 Any loss or damage to the PCC poles during handling, transportation, storage, and all activities to be performed till the successful completion of delivery of the poles shall be to the account of the Contractor. The Contractor shall be responsible for preference of all claims and make good the damages or loss by way of repairs and/or replacement of the poles, damaged or lost. The transfer of title shall not in any way relieve the Contractor of the above responsibilities during the period of Contract. The Contractor shall provide TSECL with copy of all insurance policies and documents taken out by him in pursuance of the Contract. Such copies of documents shall be submitted to TSECL immediately after such insurance coverage. The Contractor shall also inform TSECL in writing at least sixty (60) Days in advance regarding the expiry/cancellation and/or change in any of such documents and ensure revalidation, renewal etc., as may be necessary well in time.
- 37.3 The perils required to be covered under the insurance shall include, but not be limited to fire and allied risks, miscellaneous accidents, workman compensation risks, loss or damage in handling, theft, pilferage, riot, strikes, social unrest and malicious damages, civil commotion, weather conditions, accidents of all kinds, etc. The scope of such

insurance shall be adequate to cover the replacement/reinstatement cost of the equipment for all risks upto and including delivery of goods and other costs till the equipment is delivered at Site. The insurance policies to be taken should be on replacement value basis and/or incorporating escalation clause. Notwithstanding the extent of insurance cover and the amount of claim available from the underwriters, the Contractor shall be liable to make good the full replacement/rectification value of all equipment/materials and to ensure their availability as per project requirements.

- 37.4 All costs on account of insurance liabilities covered under the Contract will be to Contractor's account and will be included in Contract Price, However, TSECL may from time to time, during the pendency of the Contract, ask the Contractor in writing to limit the insurance coverage, risks and in such a case, the parties to the Contract will agree for a mutual settlement, for reduction in Contract price to the extent of reduced premium amount. The Contractor, while arranging the insurance shall ensure to obtain all discounts on premium, which may be available for higher volume or for reason of financing arrangement of the project.
- 37.5 The clause entitled 'Insurance' under the Section - IV, covers the additional insurance requirements for the portion of the works to be performed at the Site.

38.0 LIABILITY FOR ACCIDENTS AND DAMAGES

Under the Contract, the Contractor shall be responsible for loss or damage to the equipment until the successful completion of commissioning as defined else-where in the Bidding Documents.

39.0 DELAYS BY TSECL OR HIS AUTHORISED AGENTS

In case the Contractor's performance is delayed due to any act on the part of TSECL or his authorized agents, then the Contractor shall be given due extension of time for the completion of the Works, to the extent of such act on the part of TSECL has caused delay in the Contractor's performance of the Contract.

Regarding reasonableness or otherwise of the extension of time, the decision of the TSECL shall be final.

40.0 DEMARRAGE, WHARFAGE, ETC.

All demurrage, wharfage and other expenses incurred due to delayed clearance of the material or any other reason shall be to the account of the Contractor.

41.0 FORCE MAJEURE

- 41.1 Force majeure is herein defined as any cause which is beyond the control of the Contractor or TSECL as the case may be, which they could not foresee or with a reasonable amount of diligence could not have foreseen and which substantially affects the performance of the Contract, such as:
- a. Natural phenomena, including but not limited to floods, droughts, earthquakes and epidemics;
 - b. Acts of any Government including but not limited to war, declared or undeclared, quarantines, and embargoes.
- Provided the contractor shall within fifteen (15) days from the occurrence of such a cause notify TSECL in writing of such causes, acceptance of which will be given by TSECL after verification.

- 41.2 The Contractor or TSECL shall not be liable for delays in performing his obligations resulting from any force-majeure cause as referred to and/or defined above.

The date of completion will, subject to hereinafter provided, be extended by a reasonable time.

42.0 SUSPENSION OF WORK

TSECL reserves the right to suspend and reinstate execution of the whole or any part of the Works without invalidating the provisions of the Contract. Orders for Suspension or reinstatement of the Works will be issued by TSECL to the Contractor in writing. The time for completion of the works will be extended for a period equal duration of the suspension.

43.0 CONTRACTOR'S DEFAULT

- 43.1 If the Contractor shall neglect to execute the Works with due diligence and expertise or shall refuse or neglect to comply with any reasonable order given to him, in the Contract by the TSECL's Engineer in charge of the work in connection with the works or shall contravene the provisions of the Contract, TSECL may give notice in writing to the Contractor to make good the failure, neglect or contravention complained of. Should the Contractor fail to comply with the notice within thirty (30) days from the date of serving the notice, then and in such case TSECL shall be at liberty to employ other workmen and forthwith execute such part of the Works as the Contractor, may have neglected to do or if TSECL shall think fit, without prejudice to any other right he may have under the Contract to take the work wholly or in part out of the Contractor's hands and re-contract with any other person or persons to complete the works or any part thereof and in that event TSECL shall have free use of all Contractor's equipment that may have been at the time on the Site in connection with the works without being responsible to the Contractor for fair wear and tear thereof and to the exclusion of any right of the Contractor over the same, and TSECL shall be entitled to retain and apply any balance which may otherwise be due on the Contract by him to the Contractor, or such part thereof as may be necessary, to the payment of the cost of executing the said part of the Work or of completing the Works as the case may be. If the cost of completing of Works or executing a part thereof as a foresaid shall exceed the balance due to the Contractor, the Contractor shall pay such excess. Such payment of excess amount shall be independent of the liquidated damages for delay, which the Contractor shall have to pay if the completion of Works is delayed.
- 43.2 In addition, such action by TSECL as aforesaid shall not relieve the Contractor of his liability to pay liquidated damages for delay in completion of Works as defined in clause 13.0 of this Section. Such action by TSECL as aforesaid, the termination of the Contract under this clause shall neither entitle the Contractor to reduce the value of the Contract Performance Guarantee nor the time thereof. The Contract Performance Guarantee shall be valid for the full value and for the full period of the Contract including guarantee period.

44.0 TERMINATION OF CONTRACT ON OWNER'S INITIATIVE

- 44.1 TSECL reserves the right to terminate the Contract either in part or in full due to reasons stipulated in the clause entitled "Contractor's Default." TSECL shall in such an event give fifteen (15) days notice in writing to the Contractor of his decision to do so.
- 44.2 The Contractor upon receipt of such notice shall discontinue the work on the date and to the extent specified in the notice.

- 44.3 If the Contractor is an individual or a proprietary concern and the individual or the proprietor dies and if the Contractor is a partnership concern and one of the partners dies then unless TSECL is satisfied that the legal representatives of the individual contractor or of the proprietor of propriety concern and in the case of partnership, the surviving partners, are capable of carrying out and completing the Contract, TSECL shall be entitled to cancel the Contract as to its uncompleted part without being in any way liable to payment of any compensation to the estate of deceased Contractor and/or to the surviving partners of the Contractor's firm on account of the cancellation of the Contract. The decision of TSECL that the legal representatives of the deceased Contractor or surviving partners of the Contractor's firm cannot carry out and complete the Contract shall be final and binding on the parties.

RESOLUTION OF DISPUTES

45.0 SETTLEMENT OF DISPUTES

- 45.1 Any dispute(s) or difference (s) arising out of or in connection with the Contract shall, to the extent possible, be settled amicably between the parties.
- 45.2 If any dispute or difference of any kind whatsoever shall arise between DGM in charge of the work and the Contractor, arising out of the Contract for the performance of the Works whether during the progress of the Works or after its completion or whether before or after the termination, abandonment or breach of the Contract, it shall, in the first place, be referred to and settled by the AGM of the concerned circle / GM as the case may be, who, within a period of thirty (30) days after being requested by either party to do so, shall give written notice of his decision to both the parties.
- 45.3 In the event the Contractor being dissatisfied with any such decision, the matters in dispute shall be referred to arbitration as hereinafter provided.

46.0 ARBITRATION

- 46.1 All disputes or differences in respect of which the decision, if any, of the Engineer has not become final or binding as aforesaid shall be settled by arbitration in the manner hereinafter provided.
- 46.1.1 An arbitrator, to be nominated by TSECL, shall conduct the arbitration and he will be the sole arbitrator to conduct the arbitration.
- 46.1.2 The arbitration shall be conducted in accordance with the provisions of the Indian Arbitration & Reconciliation Act, 1996 or any statutory modification thereof. The venue of arbitration shall be at **Agartala**.
- 46.1.3 The arbitrators may, from time to time with the consent of all the parties enlarge the time for making the award.
- 46.1.4 The arbitrator shall have full powers to review and/or revise any, decision, opinion, direction, certification or valuation of the Engineer in accordance with the Contract, and neither party shall be limited in the proceedings before such arbitrators to the condense or arguments out before the Engineer for the purpose of obtaining the said decision.
- 46.1.5 During settlement of disputes and arbitration proceedings, both parties shall be obliged to carry out their respective obligations under the Contract.

47.0 RECONCILIATION OF ACCOUNTS

The Contractor shall prepare and submit every six months, a statement covering payments claimed and the payments received vis-à-vis the works executed, for reconciliation of accounts with the owner's Engineer in charge of the work. The Contractor shall also prepare and submit a detailed account of Materials received from TSECL and utilized by him for reconciliation purpose.

1.0 WORK & SAFETY REGULATION

- 1.1 The Contractor shall ensure proper safety of all the workmen, materials plant and equipment belonging to him or to owner or to others, working at the Site. The Contractor shall also be responsible for provision of all safety notices and safety equipment required both by the relevant legislations and also by the site Engineer, as he may deem necessary.
- 1.2 The Contractor shall notify well in advance to the site Engineer of his intention to bring to the Site any container filled with liquid or gaseous fuel or explosive or petroleum substance or such chemicals, which may involve hazards. The site Engineer shall have the right to prescribe the conditions, under which such container is to be stored, handled and used during the performance of the works and the Contractor shall strictly adhere to and comply with such instructions. The site Engineer shall have the right at his sole discretion to inspect any such container or such construction plant/equipment for which material in the container is required to be used and if in his opinion, its use is not safe, he may forbid its use. No claim due to such prohibition shall be entertained by TSECL.
- 1.3 Further, any such decision of the site Engineer shall not, in any way, absolve the Contractor of his responsibilities and in case, use of such a container or entry thereof into the Site area is forbidden by the site Engineer, the Contractor shall use alternative methods with the approval of the Deputy General Manager in charge of the work without any cost implication to TSECL or extension of work schedule.
- 1.4 Where it is necessary to provide and/or store petroleum products or petroleum mixtures and explosives, the Contractor shall be responsible for carrying-out such provision and/or storage in accordance with the rules and regulations laid down in the Petroleum Act 1934, Explosives Act, 1948, and Petroleum and Carbide of Calcium Manual published by the Chief Inspector of Explosives of India. All such storage shall have prior approval of the site Engineer of TSECL. In case, any approvals are necessary from the Chief Inspector (Explosives) or any statutory authorities, the Contractor shall be responsible for obtaining the same.
- 1.5 All equipment used in construction and erection by Contractor shall meet Indian/International Standards and where such standards do not exist, the Contractor shall ensure these to be absolutely safe. All equipments shall be strictly operated and maintained by the Contractor in accordance with manufacturer's operation Manual and safety instructions and as per Guidelines/Rules of TSECL in this regard.
- 1.6 Periodical Examinations and all tests for all lifting/hoisting equipment & tackles shall be carried-out in accordance with the relevant provisions of Factories Act 1948, Indian Electricity Act 1910 and associated Laws/Rules in force from time to time. A register of such examinations and tests shall be properly maintained by the Contractor and shall be promptly produced as and when desired by the site Engineer of TSECL or by the person authorized by TSECL.
- 1.7 The Contractor shall be fully responsible for the safe storage of his and his sub-contractor's radioactive sources in accordance with BARC/DAE Rules and other applicable provisions. All precautionary measures stipulated by BARC/DAE in connection with use, storage and handling of such material shall be taken by Contractor.

- 1.8 The Contractor shall provide suitable safety equipment of prescribed standard to all employees and workmen according to the need, as may be directed by site Engineer of TSECL who shall also have right to examine these safety equipment to determine their suitability, reliability, acceptability and adaptability.
- 1.9 Where explosives are to be used, the same shall be used under the direct control and supervision of an expert, experienced, qualified and competent person strictly in accordance with the Code of Practices/Rules framed under the Indian Explosives Act pertaining to handling, storage and use of explosives.
- 1.10 The Contractor shall provide safe working conditions to all workmen and employees at the Site including safe means of access, railings, stairs, ladders, scaffoldings, etc. The scaffoldings shall be erected under the control and supervision of an experienced and competent person. For erection, the Contractor only shall use good and standard quality material.
- 1.11 The Contractor shall not interfere or disturb electric fuses, wiring and other electrical equipment belonging to TSECL or other contractors under any circumstances, whatsoever, unless expressly permitted in writing by site Engineer of TSECL to handle such fuses, wiring or electrical equipment.
- 1.12 Before the Contractor connects any electrical appliances to any plug or socket belonging to TSECL, he shall:
 - a) Satisfy the Site Engineer of TSECL that the appliance is in good working condition :
 - b) Inform the site Engineer of the maximum current rating, voltage and phases of the appliances;
 - c) Obtain permission of the site Engineer detailing the sockets to which the appliances may be connected.
- 1.13 The site Engineer shall not grant permission to connect until he is satisfied that;
 - a) The appliance is in good condition and is fitted with suitable plug;
 - b) The appliance is fitted with a suitable cable having two earth conductors, one of which shall be an earthed metal sheath surrounding the cores.
- 1.14 No electric cable in use by the Contractor/TSECL shall be disturbed without prior permission. No weight of any description shall be imposed on any cable and no ladder or similar equipment shall rest against or attached to it.
- 1.15 No repair work shall be carried out on any live equipment. The equipment must be declared safe by the site Engineer before any repair work is carried out by the Contractor. While working on electric lines/equipment whether live or dead, suitable type and sufficient quantity of tools shall have to be provided by Contractor to electricians/workmen/officers.
- 1.16 The Contractors shall employ necessary number of qualified, full time electricians/Electrical Supervisors to maintain his temporary electrical installations.
- 1.17 In case any accident occurs during the construction/erection or other associated activities undertaken by the Contractor thereby causing any minor or major or fatal injury to his employees due to any reason, whatsoever, it shall be the responsibility of the Contractor to promptly inform the same to the site Engineer of TSECL and also to all the authorities envisaged under the applicable laws.
- 1.18 The site Engineer of TSECL shall have the right at his sole discretion to stop the work, if in his opinion the work is being carried out in such a way that it may cause accidents and

endanger the safety of the persons and/or property, and/or equipment. In such cases, the Contractor shall be informed in writing about the nature of hazards and possible injury/accident and he shall comply to remove shortcomings promptly. The Contractor after stopping the specific work can, if felt necessary, appeal against the order of stoppage of work to the Executive Engineer in charge of the work within 3 days of such stoppage of work and the decision of the Executive Engineer in charge of the work in this respect shall be conclusive and binding on the Contractor.

1.19 The Contractor shall not be entitled for any damages/compensation for stoppage of work due to safety reasons as provided in para 27.18 above and the period of such stoppage of work shall not be taken as an extension of time for completion of work and shall not be the ground for waiver of levy of liquidated damages.

1.20 It is mandatory for the Contractor to observe during the execution of the works, the requirements of safety rules which would generally include but not limited to the following:

Safety Rules:

- a) The Contractor, so as to enable him to conduct his work in a safe manner, shall provide each employee with initial indoctrination regarding safety.
- b) No employee shall be given a new assignment of work unfamiliar to him without proper introduction as to the hazards incident thereto, both to himself and his fellow employees.
- c) Under no circumstances shall an employee hurry or take unnecessary chance when working under hazardous conditions.
- d) Employees must not leave naked fires unattended. Smoking shall not be permitted around fire prone areas and adequate fire fighting equipment shall be provided at crucial locations.
- e) Employees under the influence of any intoxicating beverage, even to the slightest degree shall not be permitted to remain at work.
- f) There shall be a suitable arrangement at every work site for rendering prompt and sufficient first aid to the injured.
- g) The staircases and passageways shall be adequately lighted.
- h) The employees when working around moving machinery must not be permitted to wear loose garments. Safety shoes are recommended when working in shops or places where materials or tools are likely to fall. Only experienced workers shall be permitted to go behind guardrails or to clean around energized or moving equipment.
- i) The employees must use the standard protection equipment intended for each job. Each piece of equipment shall be inspected before and after it is used.

1.21 The Contractor shall follow and comply with all relevant Safety Rules, relevant provisions of applicable laws pertaining to the safety of workmen, employees, plant and equipment as may be prescribed from time to time without any demur, protest or contest or reservation. In case of any discrepancy between statutory requirement and relevant Safety Rules referred above, the later shall be binding on the Contractor unless the statutory provisions are more stringent.

1.22 If the Contractor does not take all safety precautions and/or fails to comply with the Safety Rules as prescribed by Consortium or under the applicable law for the safety of the equipment and plant and for the safety of personnel and the Contractor does not prevent hazardous conditions which cause injury to his own employees or employees of other

contractors, or Employees of TSECL or any other person who are at Site or adjacent thereto, the Contractors shall be responsible for payment of compensation to Consortium members as per the compensation order issued by the appropriate authority of Government of Tripura / verdict issued by court.

The compensation mentioned above shall be in addition to the compensation payable to the workmen / employees under the relevant provisions of the Workmen's Compensation Act and rules framed there under or any other applicable laws as applicable from time to time. In case TSECL is made to pay such compensation then the amount of such compensation shall be deducted from the progressive bills / contract performance guaranty of the contractor.

2.0 GENERAL SPECIFICATION AND CONDITION

- i. The contractor shall be responsible for the true and perfect setting out of the work and correctness of the position, level and dimensions of all parts of the work. If at any time during the progress of the work shall any error arises in the position, level or dimensions of any part of the work, fitting and fixing etc. the contractor shall be liable to rectify or change as directed by the engineer-in-charge at his own cost and risk.
- ii. The work which does not conform to specification must be struck down and rejected materials removed from the site of works as directed by the Engineer-in-charge.

3.0 Condition about Materials

- 3.1 All materials shall be procured by the Agency/Contractor at his full cost and risk.
- 3.2 The Agency/Contractor must submit the manufacturers test report to the Corporation for the materials to be used in the work in respect of all steel materials, cement etc. if asked for.
- 3.3 Cement shall be ISI Marked.
- 3.4 Cement should be supplied in machine stitched polythene bag containing 50 kg (minimum) cement in each bag excluding wt. of bag.
- 3.5 Cement is to be purchased from authorize dealer having Tripura Sales Tax Registration.
- 3.6 The contractor shall bear all incidental charges as carriage, shortage and safe custody of materials.
- 3.7 The contractor shall construct suitable go-down at the site of work with pucca floor, weather proof roofs and walls as per approved sketch of the Corporation.
- 3.8 The go-down shall be provided with a single door with two locks. The keys of one lock shall remain with Corporation's section officer in charge of the work and that of the other lock with the authorize agent of the contractor at the site of work so that cement is removed from the go-down according to the daily requirement with the knowledge of both parties.
- 3.9 The day to day receipt and issue account of cement shall be maintained by the sectional officer in charge and signed by the contractor or his authorize agent.
- 3.10 Sand shall be clean, durable, angular, sharp and free from mica, salts, alkalis, organics etc. it should not contain more than 5% clay and silt. Coarse sand of maxm. Size 5 mm sq mesh shall be used.

SECTION-V
TECHNICAL SPECIFICATION.

1.0 Cement :-

The cement used in the manufacture of 'pre-stressed concrete poles' shall be ordinary or rapid hardening Portland cement conforming to **IS: 269-1976 or IS: 8041-E.1976.**

1.1 Aggregate used for the manufacture of Pre-stressed concrete poles (PCC poles) shall conform to **IS 383-1970. The stone chips to be used shall invariably be brought from outside Tripura State like Assam.** The nominal maximum size of aggregate shall in no case exceed **10mm.**

1.2 Water :-

Water should be free from chlorides, sulphates, other salts and organic matter.

1.3 Admixtures :-

Admixtures should not contain calcium chloride or other chlorides and salts which are likely to promote corrosion of pre-stressing steel.

1.4 PRE-STRESSING STEEL (i.e. TENSION WIRE) :-

The pre-stressing steel for works should conform to **IS: 6003 of 1983.** The diameter of pre-stressing steel wire shall be 4mm. with a **minimum ultimate tensile strength of 175kg. / mm².**

1.5 CONCRETE MIX AND STRENGTH :-

The concrete mixture shall be designed as per requirements below:

- a) **Minimum works cube strength of 28 days should be at least 250kg/cm².**
- b) **The concrete strength at transfer should be at least 125kg/cm².**
- c) The mixture should contain **380kg. to 510kg. of cement per cubic meter of concrete**, actual consumption will be determined by cube strength but the consumption in all cases will be based on 510 kg /cum.
- d) The mixture should contain as low as water content as is constant with adequate workability.
- e) The concrete shall be compacted thoroughly by vibration, pressure, shock spinning or other means and shall have density of not less than 2.4 tones mm³. Hand compaction shall not be permitted and the required compaction shall be permissible by 'electric vibrator'.
- f) The Concrete strength at transfer shall not be less than half the 28 days strength ensured in the design i.e. $250 \times 0.5 = 125 \text{kg/cm}^2$.

1.6 CURING :-

The concrete shall be covered with layer of soaking canvas, Hessian or similar absorbent materials and constantly wet up to the time when the strength of concrete is at least equal to the minimum strength of concrete at transfer of pre-stress. Thereafter, the pole may be removed from the mould and watered at intervals to prevent surface cracking of the unit. The intervals should depend on the atmospheric humidity and temperature.

1.7 **The Pre-stressing wires shall be de-tensioned only after the concrete has attained the specified strength at transfer (i.e. 125kg/cm²).** The cube meant for the purpose of determining the strength at transfer (by cube test) should be cured, done for each incoming stock of cement as far as possible under conditions similar to those under which the poles are tested.

1.8 **EYE-HOOK :-**

Separate eye-hook shall be provided for handling and transportation, one each at a distance of 0.15 times the overall length from either end of the pole. Eye-hook should be properly anchored and should be on the face that has the shorter dimension of the cross-section. Stacking should be done in such a manner that the broad side of the pole is vertical. Each tier in the stack should be supported on timber sleepers located at 0.15 times the overall length measured from the end. The timber supports in the stack should be aligned in a vertical line.

1.9 **EARTHING :-**

Earthing shall be provided by having a length of 8-SWG, G.I. Wire embedded in concrete during manufacture and 150mm. ends of the wires should be left projecting from the pole at 250mm. from top and 150mm. below ground level. The earth wire shall not be allowed to come in contact with the pre-stressing wires.

1.10 **NUMBER OF TESTS :-**

- i) All the poles shall be tested for overall length, cross-section and uprightness. The tolerance shall be **(+/-) 15mm. on overall length, (+/-) 3mm. on cross sectional dimension and 0.50 % up-rightness.**
- ii) The number of poles to be tested for transfer strength test shall be **1(one) No. from each lot of 100(hundred) Nos. Poles .**

1.11 Planting height of the pole shall be marked by putting paint at a height of **1.25mtr, 1.30 mtr. & 1.50 mtr.** from the bottom for **7.50 m. long, 8.00 m. long & 9.00 m. long** PCC Poles respectively.

1.12 The poles shall be clearly indelibly marked with the following particulars during manufacture so as to easily read after erection position.

A) Month and Year of Manufacture.

B) Transverse Strength of Pole in Kg.

C) Serial No. of pole & abbreviated name of firm.

1.13 Any lot of pole / pole rejected will have to be replaced at free of cost.

2.0 **SPECIAL TERMS & CONDITION.**

2.1 Consignee :- **To be mentioned in the LOA..**

2.2 Place of Delivery :- Ex-Factory.

2.3 Rates :- The rates shall be firm inclusive of all taxes & duties.

2.4 Taxes :- Refer to ITB (section-II) of the bid document.

- 2.5 Mode of Payment :- Payment will be made after successful testing & inspection of the materials as per the Specification & design.
- 2.6 Other Conditions :- All other terms & conditions shall be governed by the provisions in the Bidding Document,
- 2.7 Ingredients :- All ingredients will be arranged by the manufacturer / contractor.
- 2.8 Stone Chips :- **Assam stone chips** must be used with submission of documentary proof as to usage of the same like Delivery Challan, T.P/RTP, Forest Clearance Certificate etc.
- 2.9 Testing Facilities :- Appropriate testing facility shall be made available by the manufacturer at the works for testing of PCC Pole & cement concrete cube.
- 2.10 Completion Period :- Refer to ITB (section-II) of the bid document.
- 2.11 Delivery Schedule :- **Capacity of production should be such as to comply with the monthly delivery schedule as given below.**
i) 7.50 mtr. long PCC Pole = 250 Nos. per month.
ii) 8.00 mtr. long PCC Pole = 425 Nos. per month.
iii) 9.00 mtr. long PCC Pole = 350 Nos. per month.
- 2.12. Deviation in Quantity :- TSECL shall have option to procure (+/-) 25% of Agreement quantity of poles at the same rate, terms and conditions of the Agreement.
- 2.13 Design and Drawing :- The poles shall be manufactured / Delivered as per the design and drawing enclosed indicating **steel and concrete quantity** per pole, **weight** of pole and **grade** of concrete.
- 2.14 Storage Charge :- No storage charge will be admissible for storage of PCC Poles in the Factory stack yard.

The plans and Drawings connected with the work can be seen by the contractor before bidding for the job, which will be available in the APDRP cell of Corporate Office of TSECL. The bidders are supposed to have acquainted themselves with the plan, design, drawing and specifications of the concerned work. No claim on this account will be entertained later on.

The contractor will have to construct sufficient number of masonry burgees to be specified by the Engineer-in-charge for proper setting out of the work at his own cost.

It is also impressed upon the contractor that they will have to produce good workmanship strictly according to the specifications and no plea will be heard that they are not able to get good workers.

The contractor will have to meet the cost of shifting of cable, pipes etc. if the same happens to fall within the layout of the building at his own cost in the manner to be prescribed by the Engineer-in-charge.

No extra payment will be made for bailing out water, which may be necessary for the purpose of carrying out the work whether water is sub-soil or rainwater.

Water as required for this construction purpose shall have to be arranged by the contractor at his own cost and risk. Corporation will not facilitate any source of the arrangement.

The items which are not indicated in the schedule may require related to this work are to be done by the contractor at the item rate of the agreement.

It will be obligatory for the bidder to produce forest clearance certificate from the Divisional Forest Officer (DFO) having jurisdiction over the area in respect of extraction of any forest product for utilization in the works under this contract, before payment, and/or refund of security deposit, if the bidder fails to do so a sum of money towards the royalty, remaining paid by the contractor if any, as may be specified by the concerned Divisional Forest Officer will be set off from any of money including security deposit due and payable to the bidder under this contract.

Tools & Plants will not be issued by the corporation.

Payment will be made on availability of fund and no extra payment will be made due to such undesired delay of payment on account of paucity of fund.

Anything if not covered in this bidding document shall be governed by the PWD Format No. **F/TRI/7/8/9** for the work.

In addition to General conditions of the contract, General specifications & conditions, Condition about materials, Technical Specifications, Special Terms & Conditions etc. will also form a part of the contract.

DECLARATION

I/We here by declare that I/We have personally gone through the **Bid-Document** containing **General** terms and conditions, **Execution / Erection Conditions** of Contract, **Technical** Specifications, **Other** Instructions / **Special instructions, etc.** incorporated in the Bidding Document for the works /supply and I/We do agree to abide by all the **rules and regulations** of TSECL, Agartala, Tripura.

Name & Signature of the bidder/ manufacturer with seal

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Schedule of Quantity & Prices” (Schedule-A)

Name of Work: - “**Manufacturing, Testing and Supply of P.C.C.poles of different size (7.50 mtr. 8.00 mtr. & 9.00 mtr.long) for implementation of various work (s) in Gomati/ South Tripura, District during the contractual period.**

NIT No.:-

I)

SI No	Description of Item	Quantity	Unit	Rate	Amount (In Rs)
01	Manufacturing and supply of 9.00 mtr. Long PCC Pole, 200 Kg. working load, Ex- factory basic , as per specification and drawing, with applicable GST.	3000	Nos.		
02	Manufacturing and supply of 8.00 mtr. Long PCC Pole, 200 Kg. working load, Ex- factory basic , as per specification and drawing, with applicable GST	5250	Nos.		
03	Manufacturing and supply of 7.5 mtr. Long PCC Pole, 140 Kg. working load, Ex- factory basic , as per specification and drawing, with applicable GST	3000	Nos.		
04	Total				

(Rupees

) Only

II) Location of the manufacturing works”-

III) Evaluation of the tender considering Capitalization of Transportation cost @ Rs.4/- per pole / Km

05	Actual Vehicular distance between the works and the office of the DGM,Udaipur , TSECL.(in case of any dispute, data available from Transport Department, Govt. of Tripura will stand as final.)	<u>In KM</u>	Capitalization factor	Total Capitalized Value in Rs.
			Rs.4/- per pole / Km	<u>To be worked out by tendering authority.</u>
	<u>Total evaluated price (Total Ex-factory +Capitalization of Transportation) =</u>			

Details Specification of 9.0 mtr. /200 kg. Prestressed Concrete pole.

1. Factor of safety= 2.5
2. Concrete Grade..... = M-250
3. Diameter of prestressing wire= 4 mm.
4. Ultimate Tensile Strength of Prestressing Wire.....= 17500 Kg./cm²
5. Number of Tensile Wire= 14
6. Number of Untensioned Wire = 2
7. Concrete Quantity per Pole = 0.203 m³
8. Steel Quantity per Pole= 13.30 Kg.
9. Weight of Pole= 490 Kg.
10. Clear cover to Wire..... = 20 mm.
11. Location of Holes: - As per REC Standard.
12. 'O' Denotes Tensioned Wire.
13. 'X' Denotes Untensioned Wire.
14. '+' possible position of Earth Wire.
15. All Dimensions are in mm.
16. Drawing not to Scale.

NOTE :

1. For holding part length untensioned wires in position, 4mm stirrups may be use suitable spacing.
2. If any practical difficulty is experienced in using part length untensioned wires, full length wires may be used instead. But the tension in these wires should not exceed their ultimate tensile strength value. However, it may be noted that use of part untensioned wires will be more economical.

Details Specification of 8.0 mtr, / 200 kg. Prestressed Concrete pole.

1. Factor of safety..... = 2.5
2. Concrete Grade = M-250
3. Diameter of prestressing wire.....= 4 mm.
4. Ultimate Tensile Strength of Prestressing Wire.....= 17500 Kg/cm²
5. Number of Tensile Wire.....= 14
6. Number of Untensioned Wire.....= 2
7. Concrete Quantity per Pole.....= 0.157 m
8. Steel Quantity per Pole.....= 11.82 Kg.
9. Weight of Pole.....= 380 Kg.
10. Clear cover to Wire.....= 20 mm.
11. Location of Holes: - As per REC Standard.
12. 'O' Denotes Tensioned Wire. 13. 'X' Denotes Untensioned Wire.
13. 'X' Denotes Untensioned Wire.
14. '+' possible position of Earth Wire.
15. All Dimensions are in mm.
16. Drawing not to Scale.

NOTE:

1. For holding part length untensioned wires in position, 4mm stirrups may be used with suitable spacing.
2. If any practical difficulty is experienced in using part length untensioned wires, full length wires may be used instead. But the tension in these wires should not exceed their ultimate tensile strength value. However, it may be noted that use of part untensioned wires will be more economical.
3. The alternative of using full length wires instead of part length untensioned wire is not feasible if the pole is to be used for L.T. lines with vertical configuration. This is because of non-availability of sufficient clearance between the extended full length wires and the holes to be provided in the pole for fixing Shackle Insulators.

Details Specification Of 7.5 mtr. /140 kg. Prestressed Concrete pole.8

1. Factor of safety.....= 2.5
 2. Concrete Grade.....= M-250
 3. Diameter of prestressing wire.....= 4 mm.
 4. Ultimate Tensile Strength of Prestressing Wire.....= 17500 Kg/cm²
 5. Number of Tensile Wire.....= 8
 6. Number of Untensioned Wire..... = 2
 7. Concrete Quantity per Pole.....= 0.115 m³
 8. Steel Quantity per Pole.....= 6.81 Kg.
 - 9 . Weight of Pole.....= 280 Kg.
 10. Clear cover to Wire.....= 20 mm.
- II. Location of Holes: - As per REC Standard.
12. 'O' Denotes Tensioned Wire.
 13. 'X' Denotes Untensioned Wire.
 14. '+' possible position of Earth Wire.
 15. All Dimensions are in mm.
 16. Drawing not to Scale.

NOTE:

1. For holding part length untensioned wires in position, 4mm stirrups may be used with suitable spacing.
2. If any practical difficulty is experienced in using part length untensioned wires, full length wires may be used instead. But the tension in these wires should not exceed 5 % of their ultimate tensile strength value. However, it may be noted that use of part length untensioned wires will be more economical.