Subject: Invitation of Online Quotation for “ELECTRICAL WORKS IN ROLLING MILL SHED” for JNARDDC in 2 (Two) bid system

Dear Sir,

The Centre is interested to procure, installation & commissioning of “Electrical Works In Rolling Mill Shed” for JNARDDC in Two bid system. As per details specification is given in Annexure-A.

<table>
<thead>
<tr>
<th>Sr.</th>
<th>Description</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>“ELECTRICAL WORKS”</td>
<td>As per qty</td>
</tr>
<tr>
<td></td>
<td>As per details specification and standard terms and conditions are given in</td>
<td>mentioned</td>
</tr>
<tr>
<td></td>
<td>Annexure – A &amp; B</td>
<td>in price bid</td>
</tr>
<tr>
<td></td>
<td>Electrical works in Rolling Mill shed.( Wiring for Lights &amp; Power Plug. Distribution Boards, LT Panels, LT cables &amp; End Terminations and Earthing works)</td>
<td></td>
</tr>
</tbody>
</table>

You are therefore requested to send your competitive offer for above on JNARDDC e-Tender portal. https://mines.euniwizarde.com last date/time by 22th September, 2019 (23:58 Hrs.).

The offers, in the prescribed format, shall be submitted online at https://mines.euniwizarde.com/ as per the tender document. No tender will be accepted in hard copy, fax, e-mail or any other such means. The intending, bidders must be registered with e-Procurement website https://mines.euniwizarde.com/ The tender document is also available on JNARDDC website: http://www.jnarddc.gov.in/ and CPP Portal https://eprocure.gov.in/cppp/

EMD : Rs.65,000/- (Sixty five thousand only) should be paid in favour of JNARDDC by way of D.D. (Terms & Conditions is given in Annexure ‘B’)

Opening Date : 23.09.2019 (12.00 Hrs)

Bids should be submitted online through https://mines.euniwizarde.com/.

Web Site: www.jnarddc.gov.in and. https://mines.euniwizarde.com} Email: purchasejnaraddon@gmai.com} - for complete details
Instructions for Online Bid Submission:

The bidders are required to submit soft copies of their bids electronically on the e-tender Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the e-Procurement Portal, prepare their bids in accordance with the requirements and submitting their bids online on the e-Procurement Portal.

More information useful for submitting online bids on the e-tender Portal may be obtained at: https://mines.euniwizarde.com.

REGISTRATION

1. Bidders are required to enroll on the e-Procurement Portal (URL: https://mines.euniwizarde.com) with clicking on the link “Online bidder Registration” on the e-Procurement Portal by paying the Registration fee of Rs. 2360/- year charge.

2. As part of the enrolment process, the bidders will be required to choose a unique user name and assign a password for their accounts.

3. Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication with the bidder.

4. Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Only Class III Certificates with signing + encryption key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / TCS / nCode / eMudhra etc.), with their profile.

5. Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC’s to others which may lead to misuse.

6. Bidder then logs in to the site through the secured log-in by entering their user ID/password and the password of the DSC / e-Token.

7. For any Query contact to our helpdesk Number 011-49606060, Email: helpdeskeuniwizade@gmail.com, Mr. Mahesh–8448288991

8. The scanned copies of all original documents should be uploaded on portal.

SEARCHING FOR TENDER DOCUMENTS

1. There are various search options built in the e-Procurement Portal, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, Item/work id, Title, Date, etc.

2. Once the bidders have selected the tenders they are interested in, the bidder can pay the processing fee of Rs.590/- (NOT REFUNDABLE) by net-banking / Debit / Credit card and then download the required documents / tender schedules, Bid documents etc. Once both tender fees are paid, it will be moved to the respective “requested” Tab. This would enable the e-tender Portal to intimate the bidders through e-mail in case there is any corrigendum issued to the tender document.
PREPARATION OF BIDS

1. Bidder should take into account any corrigendum published on the tender document before submitting their bids.

2. Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents - including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.

3. Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF /JPEG formats. Bid Original documents may be scanned with 100 dpi with Colored option which helps in reducing size of the scanned document.

4. To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use “My Documents” available to them to upload such documents.

5. These documents may be directly submitted from the “My Documents” area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

SUBMISSION OF BIDS

1. Bidder should log into the website well in advance for the submission of the bid so that it gets uploaded well in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.

2. The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.

3. Bidder has to select the payment option as “DD” to pay the EMD as applicable and enter details of the instrument.

4. Bidder should prepare the EMD as per the instructions specified in the tender document & submit EMD fee manually at department end. The original bid should be posted/couriered/given in person to the concerned official, latest by the last date of bid submission or as specified in the tender documents. The details of the DD/any other accepted instrument, physically sent, should tally with the details available in the scanned copy and the data entered during bid submission time. Otherwise the uploaded bid will be rejected.

5. *Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. If the price bid has been given as a standard BoQ format with the tender document, then the same is to be downloaded and to be filled by all the bidders. Bidders are required to download the BoQ file, open it and complete the white coloured (unprotected) cells with their respective financial quotes and
other details (such as name of the bidder). No other cells should be changed. Once the
details have been completed, the bidder should save it and submit it online, without
changing the filename. If the BoQ file is found to be modified by the bidder, the bid will be
rejected.

6. The server time (which is displayed on the bidders' dashboard) will be considered as the
standard time for referencing the deadlines for submission of the bids by the bidders,
opening of bids etc. The bidders should follow this time during bid submission.

7. All the documents being submitted by the bidders would be encrypted using PKI encryption
techniques to ensure the secrecy of the data. The data entered cannot be viewed by
unauthorized persons until the time of bid opening. Data storage encryption of sensitive
fields is done. Any bid document that is uploaded to the server is subjected to symmetric
encryption using a system generated symmetric key. Further this key is subjected to
asymmetric encryption using buyers/bid opener public keys. Overall, the uploaded tender
documents become readable only after the tender opening by the authorized bid openers.

8. The uploaded tender documents become readable only after the tender opening by the
authorized bid openers.

9. Upon the successful and timely submission of bid click “Complete” (i.e. after Clicking
“Submit” in the portal), the portal will give a successful Tender submission
acknowledgement & a bid summary will be displayed with the unique id and date & time of
submission of the bid with all other relevant details.

10. The tender summary has to be printed and kept as an acknowledgement of the submission
of the tender. This acknowledgement may be used as an entry pass for any bid opening
meetings.
ANNEXURES

General Terms & conditions (Annexure – A)

Terms of Payment, other terms and conditions, BoQ (Annexure – B)

DRAWING (Annexure – C)

Jawaharlal Nehru Aluminium Research Development and Design centre
Autonomous body under Ministry of Mines

MISSCELENOUS ELECTRICAL WORKS IN ROLLING MILL SHED

At
JNARDDC,
Amrawati Road, Wadi
Nagpur - 440023
General Standard Terms & Conditions of the Tender

1. Technical bid, Price bid and (EMD & Tender fees) should be submitted in three (3) separate sealed envelopes failing which bid will be rejected. The envelopes should be super-scribed with the Tender number, due date and name of the tender and content.

2. If the bidder is not a registered vendor of JNARDDC, then the bidder should have following documents while submitting the offer which is compulsory for vendor registration with JNARDDC. (1) Shop & Establishment / Registration of company certificate / MSME-2006 (issuing certificate of registration for Micro / Macro / Small Scale Industries Certificates) / Certificate of Registration (2) PAN No. (3) I/T Returns (4) Account No. of Firm (5) Electrical Contractor license

3. Basic Price should be quoted in one currency only (i.e either in foreign currency or in Indian Rupees). Price bid containing the basic price in multiple currencies will be rejected. Currency conversion rate on the date of opening of price bid will be considered for determining the L-1 party.

4. The Refundable Earnest Money Deposit (EMD) and non-refundable Tender fees should be submitted alongside the technical bid in favour of “Jawaharlal Nehru Aluminium Research Development & Design Centre, Nagpur”. Bids without EMD and tender fees (if applicable) will be summarily rejected. However, EMD is exempted for firms registered with Central Purchase Organization or with Ministry of Mines or Micro and Small Enterprises (MSEs). But the registration certificate should clearly include the name of the item/services they are offering which are manufactured by them and not for selling products manufactured by other firms. To avail EMD exemption, the bidder has to quote Udyog Aadhar Memorandum (UAM) registration no. issued by MSME. Foreign suppliers directly quoting and participating in the tender will also be exempted from EMD and Tender Fee. However, Indian agents / representative quoting on behalf of principals shall pay EMD & Tender Fee. One EMD will be accepted against one bid Ref. page-1 for EMD / Tender Fees.

5. The Bid Security / EMD (as applicable) without interest will be returned to the unsuccessful bidder within 30 days of the award of the Contract / Job. The bid security/EMD of successful bidder will be treated as Performance security. The “Performance Security Deposit” will be released without interest after a period of 60 Days beyond the date of completion of all contractual obligations of the supplier including warranty obligations and subject to certification of Indenter / Authorized representative of the Centre.

6. If any firm is exempted for depositing the EMD as per the provisions mentioned in para 4, and emerged L-1 firm, they have to deposit the amount equivalent to EMD or any amount decided by JNARDDC through cheque/DD or bank guarantee as performance security deposit and will be released as per clause mentioned in para 5 above.

7. Payment shall be released as per the terms and condition given in Annexure-B. Govt taxes as applicable shall be paid extra GST as notified by Govt. of India.

8. Deviation table should be enclosed to outline the deviation (if any) from the tendered technical specification in comparison to the bid quoted. Simply enclosing our spec sheet without providing any details may lead to rejection of the bid.

9. Validity of the Tender should be minimum upto three months.

10. LD clause is @ 0.5% of PO value for each week of delay in execution of work as per Work Order.
11. Disputes and Jurisdiction:- Any legal disputes arising out of any breach of contract pertaining to this tender shall be settled in the court of competent jurisdiction located within the city of Nagpur. Decision of Director will be final in all tenders. For any further clarification the contact personnel shall be the concerned Incharge (Purchase-Stores), JNARDDC.

12. The covering letter should clearly contain the details of the contact person’s email id, phone number and name of your firm for communication.

13. In the technical bid, mentioning of any commercial figures will disqualify the bidder.

14. Contractor to ensure that the employees deployed in the premises of JNARDDC are physically & mentally fit and do not have any criminal record such employees should possess’ requisite skill, proficiency, qualification, experience etc.

15. The work shall be carried out strictly as per direction & to the entire satisfaction of the Engineer-in-charge & without making any sort of inconvenience to the functioning of various units.

16. Contractor must use scientific methodology for lifting, handling and erection of heavy appliances/machines, covering all risk assessment for building structures.

17. Contractor must visit the site before submission of bid and understand the location for execution of work.

18. The contractor has to use his own equipments/instruments for the completion of tender task.

19. List of approved brand of materials is enclosed.

20. All tender documents should be signed by authorized persons and duly rubber stamped.

Pre-Qualification criteria :

(a) Experience of having 03(Three) nature of work executed by the firm. Firm should provide copy of work order for of similar work undertaken.

(b) Financial statements indicating 20 Lakhs average turnover for last three financial year. Copy of balance sheet/Profit and loss indicating the turnover duly certified by chartered accountant to be enclosed.

(c) If any firm will not fulfill the above said pre-qualification criteria, their tender will be simply rejected.
Payment terms and conditions:

B-1 Payment as per the following schedule will be released subject to satisfactory certification issued by the supplier as per our work order issued.

1. Interim stage payments (Running bills) shall be on against contractors measurement/work done/supply of electrical items duly certified by the Engineer and payment shall be released within 15 days of certification Complete Fitting and Commissioning of electrical items. Maximum 02 RA bills be accepted.

2. Full and Final payment after successful trial of all electrical items will be made within 30 days after issuing the completion certificate.

3. EMD will be converted into performance guarantee and will be released after one year from the date of issue of completion certificate.

4. Every interim stage payment shall be released by Employer against bills duly certified by the Engineer of JNARDDC/representative within 15 days of certification.

5. All quoted rates will be firm till the satisfactory completion of the contract. No claim shall be entertained for any revision of rates.

6. The tender is for item rate contract shall be quoted for the complete scope of work described in the bill of quantities, specifications etc. and the CONTRACTOR to finish the work consistent with true intent and meaning of the specifications.

7. Deductions on account of Tax Deducted at Source (TDS) for Income Tax and Works Contract Tax at the prevailing rates, and any other applicable amount shall be made from the due amount before effecting payment.

8. The last and final bill will be paid within 30 days of certification.
B-2 : Insurance

a. The qualified bidder will be responsible for undertaking the insurance of all the supplies and till complete erection and commissioning and completion of the job by the bidder.

b. JNARDDC will have zero liability towards un-toward incident occurring during the Erection and Commissioning with regards to the manpower deployed by the bidder.

c. JNARDDC will have no liability towards damage / theft / break down of the machineries/ hard-wares etc deployed by the bidder.

GENERAL TERMS AND CONDITIONS

1 INCOME TAX PERMANENT ACCOUNT NUMBER:

The CONTRACTOR shall indicate his income tax permanent account number (GIR No. in case permanent account number is not allotted) to enable the OWNER to issue tax deduction certificate. Income Tax deduction at source will be made as per statutory requirement.

2 If the CONTRACTOR or their employees shall break, deface or destroy any Property belonging to the OWNER or others during the execution of the CONTRACT, the same shall be made good by the CONTRACTOR at his own expense and in default thereof, the Engineer may cause the same to be made good by other Agencies and recover expenses from the CONTRACTOR (for which the certificate of the Engineer shall be final). In such a case, OWNER is at liberty to enforce the Bank Guarantee to recover the cost incurred irrespective of any dispute between the OWNER and the CONTRACTOR in this regard.

3 Completion period of contract

The maximum time period for completion of this work will be 60 days from the date of award of contract. Time is deemed to be the essence of this contract. The period of completion of whole work shall be 60 days (Sixty days) days from the 7th day after the date of issue of work. The work covered by this contract shall be commenced from the 7th day after the date of the Letter of Acceptance of the tender and should be completed as mentioned in the Time Schedule of completion of work. The work shall throughout the stipulated period of the Contract be preceded with all due diligence and if the CONTRACTOR fails to complete the work within the specified period he shall be liable to pay compensation "Liquidated Damages" of the General Obligations. **LD clause is @ 0.5% of PO value for each week of delay in execution of work as per Work Order**

4 FORCE MAJEURE
Any delays in or failure of the performance of either party hereto shall not constitute default hereunder or give rise to any claims for damages, if any, to the extent such delays or failure of performance is caused by occurrences such as Acts of God or the public enemy; expropriation or confiscation of facilities by Government authorities, compliances with any order or request of any Government authorities, acts of war, rebellion or sabotage or fires, floods, explosions, riots or illegal strikes.

5. EXTENSION OF TIME

The CONTRACTOR shall immediately notify the Engineer in writing of any occurrence which has caused or which may cause a delay which will affect the performance of the work or the completion date of the work. If the delay is caused by an act of God or Force majeure, then and only then CONTRACTOR may submit a claim to the Engineer for an extension of the time of the work. The mere shortage of labour, materials or utilities shall not constitute force majeure, unless any such shortage is caused by circumstances which are themselves force majeure.

6. FORFEITURE OF SECURITY DEPOSIT

Whenever any claim against the CONTRACTOR for the payment of a sum of money arises out of or under the CONTRACT, the OWNER shall be entitled to recover such sum by appropriating in part or in whole the Security Deposit of the CONTRACTOR encashing part or whole of the Performance Bank Guarantee. In the event of the Security being insufficient then the balance of the total sum recoverable, as the case may be, shall be deducted from any sum then due or which at any time thereafter may become due to the CONTRACTOR. The CONTRACTOR shall pay to the OWNER on demand any balance remaining due.

7. OTHER AGENCIES AT SITE

The CONTRACTOR shall have to execute the WORK in such place and condition where other Agencies will be engaged for other WORKS such as Site Grading, Filling and Levelling, Electrical and Mechanical Engineering work, other civil works etc. No claim shall be entertained due to WORK being executed in the above circumstances.

8. RIGHT OF OWNER TO DETERMINE / TERMINATE CONTRACT

(i) OWNER shall, at any time, be entitled to determine and terminate the CONTRACT, if in the opinion of the OWNER the cessation of the WORK becomes necessary owing to any cause whatsoever, in which case the cost of approved materials at the SITE at current market rates as verified and approved by Engineer and of the WORK done to date by the CONTRACTOR shall be paid for in full at the rate specified in the CONTRACT. A notice in writing from the OWNER to the
CONTRACTOR of such determination and termination shall be the conclusive proof of the fact that the CONTRACT has been so determined and terminated by the OWNER.

ii) Should the CONTRACT be determined under sub-clause (i) of this clause and the CONTRACTOR claim payment to compensate expenditure incurred by him in the expectation of completing the WORK, the OWNER shall consider and admit such claim as is deemed fair and reasonable and supported by the vouchers to the satisfaction of the Engineer. The OWNER’s decision on the necessity and Propriety of such expenditure shall be final and conclusive and binding on the CONTRACTOR.

09. EXECUTION OF WORK

All the WORK shall be executed in strict conformity with the provisions of the Contract Documents and with such explanatory detailed Drawings, Specifications and Instructions as may be furnished from time to time to the CONTRACTOR by the Engineer, whether mentioned in the CONTRACT or not.

The CONTRACTOR shall be responsible for ensuring that WORK throughout are executed in the most substantial, proper and workmanlike manner with the quality of material and workmanship in strict accordance with the Specifications and to the entire satisfaction of the Engineer.

10. MATERIALS OBTAINED FROM DISMANTLING

If CONTRACTOR in the course of execution of WORK is called upon to dismantle any part, the materials obtained in the work of dismantling etc., will be considered as the OWNER’s property and will be disposed of to the best advantage of OWNER.

11. DISCREPANCIES BETWEEN INSTRUCTIONS

Should any discrepancy occur between the various instructions furnished to CONTRACTOR, his agents or staff or any doubt arise as to the meaning of any such instructions or should there be any misunderstanding between CONTRACTOR’s staff and the Engineer’s staff, CONTRACTOR shall refer the matter immediately in writing to the Engineer whose decision thereon shall be final and conclusive and no claim for losses alleged to have been caused by such discrepancies between instructions, doubts or misunderstanding shall in any event be admissible.

12. ALTERATIONS IN SPECIFICATIONS AND DESIGNS AND EXTRA WORK

The Engineer shall have power to make any alterations in, omissions from, additions to or substitutions for, the schedule of rates, the original Specifications, Drawings, Designs, and Instructions that may appear to him to be necessary or advisable during the progress of WORK and CONTRACTOR shall be bound to carry out such altered extra/new items of Work in accordance with
any instructions which may be given to him in writing signed by the Engineer, and such alterations, omissions, additions or substitutions shall not invalidate CONTRACT and any altered, additional or substituted Work which CONTRACTOR may be directed to do in manner above specified as part of the Work shall be carried out by CONTRACTOR on the same conditions in all respects on which he agreed to do the WORK. The time for completion of WORK may be extended for the part of the particular job at the discretion of the Engineer, for only such alterations, additions or substitutions of Work, as he may consider as just and reasonable. The rates for such additional, altered or substituted Work under this clause shall be worked out in accordance with the following provisions:

a) If the rates for additional altered or substituted Work are specified in CONTRACT, the CONTRACTOR is bound to carry out the additional, altered or substituted Work at the same rates as are specified in CONTRACT unless the Engineer considers otherwise. In this case the rates will be determined by the Engineer as provided in sub-section (c) here below.

b) If the rates for the additional, altered or substituted Work are not specifically provided in CONTRACT, the rates, will be derived from the rates for similar class of Work as are specified in CONTRACT. The opinion of the Engineer, as to whether or not the rates can be reasonably so derived from the items in the CONTRACT will be final and binding on CONTRACTOR.

c) If the rates for the altered, additional or substituted Work cannot be determined in the manner specified in the sub-clause (a) & (b) above, then CONTRACTOR shall, within seven (7) days of the date of receipt of order to carry out WORK, inform the Engineer of the rate which it is his intention to charge for such class of Work, supported by analysis of the rate or rates claimed, and the Engineer shall determine the rate or rates on the basis of the prevailing market rates of materials labour cost at schedule of labour plus twenty percent (20%) towards overhead and profit inclusive of ESI, PF, Sales Tax on Works Contract will be allowed. The opinion of the Engineer as to the current market rates of materials and the quantum of labour involved per unit of measurement will be final and binding on CONTRACTOR.

d) Notwithstanding anything mentioned in sub-sections (a), (b) and (c) above, the Engineer has the right to determine rates for additional / extra works and these shall be binding on the CONTRACTOR who shall forthwith execute such works. The Engineer shall also have the option to employ another agency to execute such works and the CONTRACTOR shall provide full co-ordination.

13. ACTION WHERE NO SPECIFICATION IS ISSUED

In case of any class of Work for which there is no such Specification as is mentioned in the Tender Document such Work shall be carried out in accordance with Indian Standard Specifications and if the Indian Standard Specifications do not cover the same the work should be carried out as per
14. INSPECTION OF WORK

The Engineer will have full power and authority to inspect the WORK at any time wherever in progress either on the SITE or at the CONTRACTOR's Premises/Workshops wherever situated. Premises / Workshops of any person, firm or corporation where work in connection with the CONTRACT may be in hand or where materials are being or are to be supplied, and CONTRACTOR shall afford or procure for the Engineer, every facility and assistance to carry out such inspection. CONTRACTOR shall, at all time during the usual working hours and all other times at which reasonable notice of the intention of the Engineer or his representative to visit the WORK shall have been given to CONTRACTOR, either himself be present to receive orders and instructions, or have a responsible agent duly accredited in writing present for the purpose. Orders given to the CONTRACTOR's agent shall be considered to have the same force as if they had been given to CONTRACTOR himself. CONTRACTOR shall give not less than seven (7) day's notice in writing to the Engineer before covering up or otherwise placing beyond reach of inspection and measurement any Work in order that the same may be inspected and measured. In the event of breach of above the same shall be uncovered at CONTRACTOR's expense for carrying out such measurement or inspection.

The written instructions regarding any particular work will normally be passed by the Engineer or his Authorized Representative. A work order book will be maintained by the CONTRACTOR for each sector in which the aforesaid written instructions will be entered. These will be signed by the CONTRACTOR or his authorized representative by way of acknowledgement within Twelve (12) hours.

No material shall be dispatched from CONTRACTOR's stores before obtaining the approval in writing of the Engineer / his representative.

CONTRACTOR is to provide at all times during the progress of WORK and maintenance period proper means of access with ladders, gangways, etc. and the necessary attendants to move and adopt as directed for inspection or measurement of WORK by the Engineer.

13. ASSISTANCE TO ENGINEER

CONTRACTOR shall make available to the Engineer free of cost all necessary instruments and assistance in checking of setting out of WORK and in the checking of any WORK made by CONTRACTOR and taking measurement of WORK.

14. ACTION AND COMPENSATION IN CASE OF BAD WORK

If it shall appear to the Engineer that any Work has been executed with unsound, imperfect or unskilled workmanship, or with materials of any inferior description, or that any materials or articles provided by CONTRACTOR for the execution of WORK are unsound, or of a quality inferior to that contracted for, or otherwise not in accordance with CONTRACT, CONTRACTOR shall on demand in writing from the Engineer or his authorized representative
specifying the WORK, materials or articles complained of, notwithstanding that the same may have been inadvertently passed, certified and paid for, forthwith rectify or remove and reconstruct the Work, so specified and provide other proper and suitable materials or articles at his own charge and cost, and in the event of failure to do so within the period to be specified by the Engineer in his demand aforesaid, the Engineer may on expiry of notice period rectify or remove and re-execute the Work or remove and replace with others, the materials or articles complained of as the case may be at the risk and expense in all respects of CONTRACTOR. The decision of the Engineer as to any question arising under this clause shall be final and conclusive.

15. **SUSPENSION OF WORK**

i) Subject to the provisions of the sub-para (ii) of this clause, CONTRACTOR shall if ordered in writing by the Engineer, or his representative, temporarily suspend the WORK or any part thereof for such period and such time as so ordered and shall not, after receiving such written order proceed with WORK therein ordered to be suspended until he shall have received a written order to proceed therewith. The CONTRACTOR shall not be entitled to claim compensation for any loss or damage sustained by him by reason of temporary suspension of WORK aforesaid. An extension of time for completion, corresponding with the delay caused by any such suspension of WORK as aforesaid will be granted to CONTRACTOR should he apply for the same provided that the suspension was not consequent to any default or failure on the part of CONTRACTOR.

ii) In case of suspension of WORK ordered in writing by Engineer, for a period of more than one (1) month, CONTRACTOR shall have the option to terminate CONTRACT, provided that the CONTRACTOR shall exercise such option forthwith. The CONTRACTOR shall not be entitled to claim any damages or compensation on this account.

16. **OWNER MAY DO PART OF WORK**

Upon failure of CONTRACTOR to comply with any instructions given in accordance with the provisions of this CONTRACT, the OWNER has the alternative right, instead of assuming charge of WORK to place additional labour force, tools, Equipment and materials on such parts of WORK, as the OWNER may designate or also engage another CONTRACTOR to carry out WORK in such cases, the OWNER shall deduct from the amount which otherwise might become due to CONTRACTOR, the cost of such WORK and materials with fifteen percent (15%) added to cover all departmental charges and should the total amount thereof exceed the amount due to CONTRACTOR, CONTRACTOR shall pay the difference to the OWNER. Alternatively the OWNER shall recover such costs from Performance Bank Guarantee.

17. **ACTION AND COMPENSATION IN CASE OF BAD WORK**
JNARDDC, Wadi, Nagpur Tender no. 41/ E-18

If it shall appear to the Engineer that any Work has been executed with unsound, imperfect or unskilled workmanship, or with materials of any inferior description, or that any materials or articles provided by CONTRACTOR for the execution of WORK are unsound, or of a quality inferior to that contracted for, or otherwise not in accordance with CONTRACT, CONTRACTOR shall on demand in writing from the Engineer or his authorized representative specifying the WORK, materials or articles complained of, notwithstanding that the same may have been inadvertently passed, certified and paid for, forthwith rectify or remove and reconstruct the WORK, so specified and provide other proper and suitable materials or articles at his own charge and cost, and in the event of failure to do so within the period to be specified by the Engineer in his demand aforesaid, the Engineer may on expiry of notice period rectify or remove and re-execute the WORK or remove and replace with others, the materials or articles complained of as the case may be at the risk and expense in all respects of CONTRACTOR. The decision of the Engineer as to any question arising under this clause shall be final and conclusive.

18. **SUSPENSION OF WORK**

i) Subject to the provisions of the sub-para (ii) of this clause, CONTRACTOR shall if ordered in writing by the Engineer, or his representative, temporarily suspend the WORK or any part thereof for such period and such time as so ordered and shall not, after receiving such written order proceed with WORK therein ordered to be suspended until he shall have received a written order to proceed therewith. The CONTRACTOR shall not be entitled to claim compensation for any loss or damage sustained by him by reason of temporary suspension of WORK aforesaid. An extension of time for completion, corresponding with the delay caused by any such suspension of WORK as aforesaid will be granted to CONTRACTOR should he apply for the same provided that the suspension was not consequent to any default or failure on the part of CONTRACTOR.

ii) In case of suspension of WORK ordered in writing by Engineer, for a period of more than one (1) month, CONTRACTOR shall have the option to terminate CONTRACT, provided that the CONTRACTOR shall exercise such option forthwith. The CONTRACTOR shall not be entitled to claim any damages or compensation on this account.

19. **RUNNING ACCOUNT PAYMENTS TO BE REGARDED AS ADVANCES**

All running account payments shall be regarded as payments by way of advance against the final payment only and not as payment for Work actually done and completed and shall not preclude the requiring of bad, unsound and imperfect or unskilled Work to be removed and taken away and reconstructed or re-erected or be considered as an admission of the due performance of CONTRACT, or any part thereof, in the respect, or of the occurring of any claim by CONTRACTOR, nor shall it conclude, determine or affect in any way the powers of the OWNER under these conditions or any of them as to the final settlement and adjustments of the accounts or otherwise, or in any other way vary or affect CONTRACT. The Final Bill shall be submitted by CONTRACTOR within one (1) month of the date of physical completion of WORK, otherwise, the Engineer’s certificate of the measurement and of total
amount payable for WORK accordingly shall be final and binding on all parties.

20. **PAYMENT OF CONTRACTOR’S BILL**

The CONTRACTOR shall prepare the detailed measurements of the work done with bill and submit to the Engineer. After a scrutiny of Running Account bills and upon certification by the Engineer, the accepted value of the certificates after recoveries will be paid by OWNER within 20 days from the date of certification and receipt of same at Owner’s end.

The Final Bill shall be presented by the CONTRACTOR along with a ‘NO CLAIM CERTIFICATE’ in a format acceptable to the OWNER along with such other documents as directed by the OWNER within 1 (one) month from the date of completion.

All payments shall be made in Indian Currency.

21. **RECEIPT FOR PAYMENT**

Receipt for payment made on account of WORK when executed by a firm must be signed by a person holding due power of attorney in this respect on behalf of CONTRACTOR, except when described in Tender as a Limited Company in which case the receipt must be signed in the name of the Company by one of its principal officers or by some other person having authority to give effectual receipt for the Company.

22. **COMPLETION CERTIFICATE**

(i) The Engineer shall normally issue to CONTRACTOR the Completion Certificate within one (1) month after receiving an application there for from CONTRACTOR after verifying from the completion Documents and satisfying himself that WORK has been completed in accordance with and as set out in the construction and erection Drawings, and the Contract Document.

CONTRACTOR, after obtaining the Completion Certificate, is eligible to present the Final Bill for WORK executed by him under the terms of CONTRACT for the portion of work included in the Completion Certificate

(ii). Upon completion of WORK in all respects, CONTRACTOR shall be furnished with a certificate by the Engineer, of such completion, but no certificate shall be given nor WORK be deemed to have been executed until all scaffolding, surplus materials and rubbish is cleaned off SITE completely nor until WORK shall have been measured by the Engineer whose measurement shall be binding and conclusive. WORK will not be considered as complete and taken over by the OWNER, until all the temporary works, labour and staff colonies etc. constructed, are removed and the worksite cleaned to the satisfaction of the Engineer.

(iii) If CONTRACTOR fails to comply with the requirement of this clause on or before the date fixed for the completion of WORK, Engineer may at the expense of CONTRACTOR remove such scaffolding, surplus materials and rubbish and
dispose off the same as he thinks fit and clean off such dirt as aforesaid, and CONTRACTOR shall forthwith pay the amount of all expenses so incurred and shall have no claim in respect of any such scaffolding or surplus materials as aforesaid except for any sum actually realised by the sale thereof.

For the purpose of clause (i) the following Documents will be deemed to form the completion Document.

i) The technical documents according to which WORK was carried out

( ii) Substantial Completion Certificate for all WORKS.

iii) All supporting documents and measurement sheets duly signed

23. **FINAL DECISION AND FINAL CERTIFICATE**

Upon expiry of the period of liability and subject to the Engineer being satisfied the WORK has been duly maintained by CONTRACTOR, during such period as hereinafter provided and the CONTRACTOR has in all respect duly made up any subsidence and performed on his obligations under CONTRACT, the Engineer shall give a certificate herein referred to as the final certificate to that effect and CONTRACTOR shall not be considered to have fulfilled the whole of his obligations until Final Certificate shall have been given by the Engineer notwithstanding any previous entry upon WORK and taking possession, working or using of the same or any part thereof by the OWNER.

24. **CERTIFICATE AND PAYMENTS ON EVIDENCE OF COMPLETION**

Except the final certificate no other certificate or payment against a certificate or on general account shall be taken to be an admission by the OWNER of the due performance of CONTRACT or any part thereof or occupancy or validity of any claim by CONTRACTOR.

25. **FIRE PROTECTION EQUIPMENTS**

- CONTRACTOR shall provide fire protection equipment wherever it is required. The CONTRACTOR's personnel who are working on such jobs will be instructed the operation of such fire protection equipment. In the event of an accidental fire it is expected of such personnel to make efforts to extinguish the fire with the equipment made available. If the fire situation cannot be controlled, then the CONTRACTOR's personnel should immediately get in touch with any of the OWNER's personnel available. In all cases, accidental fire shall be reported to the OWNER.

- All efforts should be made by the CONTRACTOR's personnel to prevent occurrence of any unwanted fire. Gasoline driven engines, trucks, tractors etc. shall not be filled with fuel while the motor is still
JNARDDC, Wadi, Nagpur Tender no. 41/ E-18

- Gasoline or naphtha must not be used as a cleaning agent or solvent.

26. REPORT ON ACCIDENTS

i) All personal injuries sustained by the CONTRACTOR's personnel and damages to vehicle and property, no matter how slight they are, shall be promptly reported to the Engineer during normal working hours.

ii) Medical treatment for injured CONTRACTOR's personnel will be entirely the responsibility of the CONTRACTOR.

27. Safety Code:

☐ There shall be maintained in a readily accessible place first aid appliances including adequate supply of sterilised dressings and cotton wool.

☐ An injured person shall be taken to a public hospital without loss of time, in cases where the injury necessitates hospitalization.

☐ The support for the scaffolding, staging, guard lines and temporary stairs required during construction shall be strong, adequate for the particular situation. The temporary access to the various parts of the Building under construction shall be rigid and strong enough to avoid any chance of mishaps. The arrangement proposed shall be subject to the approval of the OWNER.

☐ Suitable and strong scaffolds should be provided for workmen for all works that cannot safely be done from ground.

☐ No portable single ladder shall be over 8 (eight) meters in length. The width between the side rails shall not be less than 30 cm. (clear) and the distance between two adjacent rungs shall not be more than 30cm. When a ladder is used an extra labourer shall be engaged for holding the ladder.

☐ Every opening in the floor of a building or in a working platform shall be provided with suitable means to prevent the fall of persons or materials by providing suitable fencing or railing whose minimum height shall be one metre.

☐ No floor, roof or other part of the structure shall be so overloaded with debris or materials as to render it unsafe.

☐ Workers employed on mixing and handling material such as asphalt, cement mortar or concrete and lime mortar shall be provided with protective footwear and rubber hand-gloves.

☐ Those engaged in welding works shall be provided with welder's protective eye-shields and gloves.

☐ No paint containing lead or lead products shall be used except in the form of paste or readymade paint.
Suitable facemasks should be supplied for use by the workers when
the paint is applied in the form of spray or surface having lead
paint dry rubbed and scrapped.

Overall shall be supplied by the CONTRACTOR to the painters and
adequate facilities shall be provided to enable the working painters to
wash during the period of work.

Hoisting machines and tackle used in the works, including their
attachments, anchorage and supports shall be in perfect condition.

The ropes used in hoisting or lowering material or as a means of
suspension shall be of durable quality and adequate strength and free
from defects.

Safety features like nets, canvas sheets etc. shall be provided while
men are working at heights.

SETTLEMENT OF DISPUTES

28. MATTER TO BE SETTLED BY OWNER:

All disputes and differences of any kind whatsoever arising out of or in
connection with the contract, whether during the progress of the works or after
their completion shall be referred by the CONTRACTOR to the OWNER
and the OWNER shall within a reasonable time after their presentation
make and notify decisions thereon in writing.

The decisions, directions, clarifications, measurements, drawings and
certificates with respect to any matter the decision for which is specifically
provided for by these or other special conditions to be given and made by
the OWNER are matters which are referred to hereinafter as excepted
matters and shall be final and binding upon the CONTRACTOR and shall
not be set aside on account of non-observance of any formality, any
omission, delay or error in proceeding in or about the same or on any other
ground or for any reason and shall be without Appeal.

If any difference or dispute shall arise between the parties, hereto as to the
construction or the true intent and meaning of any of the terms and conditions
herein contained or as to any payment to be made in pursuance hereof or as
to any other matter arising out of or connected with or incidental to these
presents or as to the rights, duties and obligations of either party, such
difference or disputes whenever and so often as the same shall arise, shall be
referred to a Sole Arbitrator to be appointed by the OWNER and the decision
of the Sole Arbitrator so appointed shall be final and binding on the parties.
The Arbitration proceedings shall be conducted in accordance with the rules
under The Indian Arbitration Act for the time being in force or of any other Act
of Legislature passed in substitution thereof or modifications thereof and
for the time being in force shall apply to such arbitration. The venue of
such arbitration will be Maharashtra.

29. CONTRACTOR TO PAY WAGES DIRECT TO HIS LABOURERS

19
The CONTRACTOR shall effect the payment of wages to his labourers directly without the intervention of any intermediary and no amount by way of commission or otherwise shall be deducted or recovered from the wages of the workmen.

30. **Maintenance liability**

The duration of the maintenance for major defects as decided by engineer, period will be one year from the date of completion. The CONTRACTOR shall be responsible for maintenance and rectification of defects during this period. Any defects, deficiencies or failures noted during this period shall be rectified within 7 days of intimation in writing failing which the same will be done at CONTRACTORS risk and cost.

31. **Environment:**

The CONTRACTOR shall take all precautions for safeguarding the environment during the course of the construction of the works. He shall abide by all laws, rules and regulations inforce governing pollution and environmental protection that are applicable in the area where the works are situated.

32. **Quality Control and Quality Assurance**-

Quality of work is top most priority for this project; Contractor shall submit the quality assurance plan along with detailed procedure to carry out work as per laid specifications.

Owner consultant has right to hold the money against non-compliance of work, to rectify the same as per specification or engineer in charge Satisfaction. Hold amount will be released after satisfactory compliance report from consultant. Hold amount cannot exceed more than 15% of Work order value.

33. **Delivery of items:**

Contractor should provide the delivery memo/Challan while bringing the materials at site. If items is supplied in weight then he will provide the weight certificate. Weight should be carried out in the presence of JNARDDC authority. If item is having warranty certificate/Test certificate certificate should be submitted.

34. **SAFETY STANDARDS FOR TEMPORARY BUILDINGS**

All temporary buildings, sheds, workshops, field station, etc. shall be constructed in conformity with the safety and security regulations of the OWNER, as regards location and type of structures. Roofing and cladding with grass or paddy straw or coconut leaf will not be permitted within the site.

35. **Quality Control and Quality Assurance**-Quality of work is top most priority
JNARDDC, Wadi, Nagpur Tender no. 41/ E-18
for this project. Contractor has to compliance with the approved brand while supplying
the items mentioned in the contract and also specifications.

Owner consultant has right to hold the money against non-compliance of work,
to rectify the same as per specification or engineer in charge Satisfaction. Hold
amount will be released after satisfactory compliance report from consultant.
Hold amount cannot exceed more than15% of Work order value.

36 GUARANTEE

The contractor shall guarantee the entire works and installation as per specifications. All
equipments shall be guaranteed for one year or as per original guarantee of materials
provided by manufacturer from the date of acceptance against unsatisfactory
performance or break down due to defective design, manufacture and installation. The
installation shall be covered by the conditions that whole installation or any part thereof
found defective within one year from the date of taking over shall be replaced or repaired by
the contractor free of charge as decided by the department. The warranty shall cover the
following:-

(a) Quality, strength and performance of materials used.

APPENDIX I

LIST OF INDIAN STANDARDS

I : ELECTRO-TECHNICAL VOCABULARY

(1) Fundamental definition IS 1885 (Part-I) : 1961
(2) Secondary cells and batteries (Superceding IS 1147 : 1957)
IS 1885 (Part-VIII) : 1986
(3) Electrical power system protection IS 1885 (Part-X) : 1993
(4) Electrical Measurement IS 1885 (Part-XI) : 1966
(5) Switchgear and control gear (First revision) IS 1885 (Part-XVII) : 1979
(6) Overhead transmission and distribution of electrical energy IS 1885 (Part-XXX) : 1971
(7) Cables, conductor and accessories for Electrical supply (Superceding IS 1591 : 1960) IS 1885 (Part-XXXII) : 1993

II : GRAPHICAL SYMBOLS USED IN ELECTRO TECHNOLOGY

(2) Item designation IS 8270 (Part-II) : 1976
(3) General requirements for diagrams IS 8270 (Part-III) : 1977
(4) Circuit diagrams IS 8270 (Part-IV) : 1977
III : CONDUCTOR AND POWER CABLES

(1) PVC insulated cable for working voltages and including 1100 volts (Second revision) IS 694 : 1990
(Superceding IS 3035 (Part I) : 1965)

(2) (i) PVC insulated (Heavy duty) working dielectric cables for voltage upto & i/c. 1100 volts (Second revision) IS 1554 (Part-I) : 1988

(3) (i) Recommended current ratings for cables: Paper insulated lead sheathed cables. IS 3961 (Part I) : 1967
(ii) PVC insulated and PVC sheathed heavy duty cables IS 3961 (Part II) : 1967

(4) Conductors for insulated electric cables and flexible cords IS 8130 : 1984

(5) Busbar trunking system (Air insulated & sandwitch insulated type) IS 8623 Part I & II : 1993, IEC 60439 Part I & II

IV : ELECTRICAL INSTALLATION CODE OF PRACTICES

(1) Insulation oil in service, maintenance and supervision code of practice for IS 1866 : 2000

(2) Earthing IS 3043 : 1987

(3) Guide for short circuit calculations IS 13234

(4) Electrical wiring installation (system voltage not exceeding 650 volts) IS 732 : 1989

V : SWITCH GEAR AND CONTROL GEAR

(1) Degree of protection provided by the (enclosure for low voltage switchgear and control gear) IS 13947 (Part-I)

(2) General requirements for switch gear, control gear for voltage not exceeding 1000 volts. IS 13947 (Part-I)

(3) (i) Factory built assemblies of switch gear and control gear for voltages upto & including 1000 V AC or IS 8623 : 1993
(ii) Particular requirements for bus bar trunking system 1993
(Bus ways)

(vi) Safety items
(a) Dry Powder fire extinguisher(ABC)
(b) Insulating Mats

TECHNICAL SPECIFICATIONS

- The work shall be carried out as per CPWD General Specifications for Electrical Works (Part IV : Sub-Station), 2013 as amended upto date and CPWD General Specifications for Electrical Works Part I & II, as amended upto date, relevant IE rules, and as per directions of Engineer-in-charge.

Note: Any deviations from CPWD General Specifications for Electrical Works (Part IV : Sub-Station), 2013 may be given by the NIT approving authority. In case there is no deviation, no deviations should be mentioned below this note.

CERTIFICATES

I. Certified that all departure from the specifications have been brought down in the forwarding letter to this tender.

II. Except for the departures brought down in the forwarding letter the tender complies with the tender specifications in all respect.

III. The rates quoted are Net and inclusive of all duties, levies and taxes without any conditions. We understand that any condition in the price bid shall make the tender liable for cancellation.

(CONTRACTOR’S SIGNATURE)
<table>
<thead>
<tr>
<th>Sr. No</th>
<th>DESCRIPTION</th>
<th>MAKES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>SWITCHGEARS (VCB, ACB, CHANGEOVER, SWITCH), MCB &amp; MCCB, ELCB &amp; RCCB</td>
<td>HAGER/ L&amp;T/ SIEMENS/ CROMPTON, ABB/ SCHNEIDER/ C&amp;S</td>
</tr>
<tr>
<td>2.</td>
<td>LT &amp; HT ARMOURED CABLE / UN ARMOURED CABLE (COPPER / ALLUMINIUM)</td>
<td>POLYCB/ KEI/ FINOLEX/ CABLE CORPORATION OF INDIA/ HAVELLS</td>
</tr>
<tr>
<td>3.</td>
<td>CABLE GLANDS</td>
<td>COMET/DOWELL</td>
</tr>
<tr>
<td>4.</td>
<td>HRC FUSE/BASE</td>
<td>HAVELLS/EE/SIEMENS</td>
</tr>
<tr>
<td>5.</td>
<td>INDICATING METERS</td>
<td>L&amp;T/RISHAB/ENERCON (IP54)</td>
</tr>
<tr>
<td>6.</td>
<td>SELECTOR SWITCHES</td>
<td>KAYCEE/SALZER</td>
</tr>
<tr>
<td>7.</td>
<td>INDICATING LAMPS WITH LED</td>
<td>TECHNIK/L&amp;T/VAISHINO</td>
</tr>
<tr>
<td>8.</td>
<td>MODULAR/ NON-MODULAR ELECTRICAL SWITCHES &amp; SOCKETS</td>
<td>ANCHOR-ROMA-PENTA/LEGRAND/ L&amp;T/ WIPRO, ABB</td>
</tr>
<tr>
<td>9.</td>
<td>DISTRIBUTION BOARD (DOUBLE DOOR)</td>
<td>HAVELL’S / ABB/ L&amp;T LEGRAND</td>
</tr>
<tr>
<td>10.</td>
<td>FANS (Ceiling/Exhaust/Wall)</td>
<td>HAVELL’S / CROMPTON / BAJAJ /</td>
</tr>
<tr>
<td>11.</td>
<td>LIGHT FITTINGS</td>
<td>WIPRO / PHILIPS / CROMPTON</td>
</tr>
<tr>
<td>12.</td>
<td>LIGHT SWITCHES (PLATE)</td>
<td>ANCHOR, ROMA, PENTA &amp; HAVELLS</td>
</tr>
<tr>
<td>13.</td>
<td>ELECTRONIC BALLAST</td>
<td>WIPRO / CROMPTON / PHILIPS</td>
</tr>
<tr>
<td>14.</td>
<td>PVC WIRES (MULTI STRAND) APPLIED COLOURS</td>
<td>FINOLEX/HAVELLS/POLYCB/ANCHOR/L&amp;T</td>
</tr>
<tr>
<td>15.</td>
<td>TELEPHONE CABLE / WIRES</td>
<td>FINOLEX / SKYLINE</td>
</tr>
<tr>
<td>16.</td>
<td>PVC CONDUITS</td>
<td>DIPLAST / POLYPLAST/ SUPERPLAST (HMS)/ ANCHOR/ PRECISION</td>
</tr>
<tr>
<td>17.</td>
<td>INDUSTRIAL SOCKETS WITH PLUGS METAL CLAD TYPE</td>
<td>HAVELL’S/L&amp;T/STANDARD</td>
</tr>
<tr>
<td>18.</td>
<td>CHANGE OVER SWITCH (Side Handle Type)</td>
<td>HAVELL’S /STANDARD /HPL</td>
</tr>
<tr>
<td>19.</td>
<td>BRASS/ POWDER COATED FITTINGS &amp; HARDWARES</td>
<td>ELEGANT/ AVON/GKW</td>
</tr>
<tr>
<td>20.</td>
<td>NEUTRAL LINK</td>
<td>HAVELL’S/EE/SIEMENS</td>
</tr>
<tr>
<td>21.</td>
<td>CONNECTOR TERMINAL BLOCKS</td>
<td>ELMAX/ PHOENIX</td>
</tr>
<tr>
<td>22.</td>
<td>3PHASE &amp; NEUTRAL ICTP SWITCH</td>
<td>HAVELL’S/STANDARD</td>
</tr>
<tr>
<td>23.</td>
<td>SERVO CONTROLLED VOLTAGE STABILIZER</td>
<td>PACKARD / NAGAR / AE</td>
</tr>
<tr>
<td></td>
<td>Item Description</td>
<td>Supplier/Make</td>
</tr>
<tr>
<td>---</td>
<td>----------------------------------------------------</td>
<td>----------------------------------------------------</td>
</tr>
<tr>
<td>24</td>
<td>CTs (CURRENT TRANSFORMERS)</td>
<td>AUTOMATIC ELECTRIC</td>
</tr>
<tr>
<td>25</td>
<td>LUGS, THIMBLES ETC.</td>
<td>DOWELL’S/ SIEMENS</td>
</tr>
<tr>
<td>26</td>
<td>TIMER, QUARTZ &amp; CONTACTOR FOR GLOW SIGN BOARD</td>
<td>L &amp; T/GE</td>
</tr>
<tr>
<td>27</td>
<td>ANY OTHER ITEMS/EQUIPMENT</td>
<td>REPUTED MAKE AS PER NORMS &amp; APPROVED BY CONSULTANT</td>
</tr>
<tr>
<td>28</td>
<td>Diesel Engine</td>
<td>Kirloskar/ Greaves Ltd./ Cummins</td>
</tr>
<tr>
<td>29</td>
<td>Alternator</td>
<td>Kirloskar/ Crompton/ Stamford</td>
</tr>
<tr>
<td>30</td>
<td>Battery</td>
<td>Amaron/ Exide/ Amco</td>
</tr>
<tr>
<td>31</td>
<td>11KV Switchgear</td>
<td>L&amp;T/ABB/CGL/AMCO</td>
</tr>
<tr>
<td>32</td>
<td>11KV XLPE cable</td>
<td>POLY CAB/ KEI/ FINOLEX/ CABLE CORPORATION OF INDIA/ HAVELS</td>
</tr>
<tr>
<td>33</td>
<td>11KV termination kit</td>
<td>M seal//Raychem</td>
</tr>
<tr>
<td>34</td>
<td>Lighting arrestor</td>
<td>OBLUM/ELPRO OR REPUTED MAKE AS PER NORMS &amp; APPROVED BY CONSULTANT</td>
</tr>
<tr>
<td>35</td>
<td>11KV HRC/DOLO fuses</td>
<td>DRIESCHER PANICKER/ Equivalent</td>
</tr>
<tr>
<td>36</td>
<td>Transformer 11KV/433V</td>
<td>Kirloskar/HIGHRISE/ TESLA/ Universal/ L&amp;T</td>
</tr>
<tr>
<td>37</td>
<td>Fuse bases/HRC fuses</td>
<td>L &amp; T/ABB/GE</td>
</tr>
<tr>
<td>38</td>
<td>CTs, PTs</td>
<td>KALPA</td>
</tr>
<tr>
<td>39</td>
<td>Contractors, overload relays</td>
<td>L &amp; T/ABB/C&amp;S</td>
</tr>
<tr>
<td>40</td>
<td>Push buttons</td>
<td>L &amp; T/ Vaishno/Technic</td>
</tr>
<tr>
<td>41</td>
<td>Capacitors</td>
<td>Epcos/L&amp;T</td>
</tr>
<tr>
<td>42</td>
<td>Automatic PF Correcting relays</td>
<td>Epcos/L&amp;T</td>
</tr>
<tr>
<td>43</td>
<td>Protective relays</td>
<td>ABB/L&amp;T/CSPC</td>
</tr>
<tr>
<td>44</td>
<td>Indicating lamps</td>
<td>L &amp; T/Technic/Vaishno</td>
</tr>
<tr>
<td>45</td>
<td>Selector Switches</td>
<td>Kayces/Solzar</td>
</tr>
<tr>
<td>46</td>
<td>Exhaust fans</td>
<td>CGL/almonard</td>
</tr>
<tr>
<td>47</td>
<td>Fire Extinguisher</td>
<td>Safex/Alert</td>
</tr>
<tr>
<td>Sr. No</td>
<td>DESCRIPTION</td>
<td>Yes</td>
</tr>
<tr>
<td>-------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-----</td>
</tr>
<tr>
<td>1</td>
<td>Supplying, erecting, testing &amp; commissioning of HMS PVC conduit 20 mm dia. With necessary junction boxes, bends, black cable tie for clamping &amp; necessaries etc. on necessary trusses (Truss Height of 30 feet), wall as per IS specification complete as required. (from switchboard to light point on trusses.)</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Supplying, erecting, testing &amp; commissioning of HMS PVC conduit 25 mm dia. With necessary junction boxes, bends, black cable tie for clamping &amp; necessaries etc. on necessary trusses (Truss Height of 30 feet), wall as per IS specification complete as required. (from DB to power plug &amp; light circuit.)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Supplying &amp; erecting mains with 3x1.5 sq.mm FRLSH copper PVC insulated ISI wire laid in above provided conduit as per I. S. specification (from switchboard to light point on trusses)</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Supplying &amp; erecting mains with 2x4.0+1x2.5 sq.mm FRLSH copper PVC insulated wire laid in provided conduit as per I.S. specification (power &amp; light ckt)</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Supplying and erecting PVC Surface I S I modular switch box with double mounting plate for 12 modules duly erected (For Lighting SB)</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Supplying and erecting ISI mark modular type switch 6A / 10A duly erected on provided plate and box with wiring connections complete.</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Supplying and erecting ISI mark modular type 3 pin 6A multi sockets with safety shutter, duly erected on provided plate and box with wiring &amp; connections complete.</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Supplying and erecting unbreakable PVC 3 module switch box with double mounting plate for 3 module duly erected on wall with required finishing as per required match the background in an approved manner.</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Supplying and erecting modular type 3 pin 6 / 16A multi socket with safety shutter ISI mark approved make duly erected on provided plate and box with wiring connections complete.</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Supplying and erecting modular type switch 16A ISI mark approved make duly erected on provided plate and box with wiring connections complete.</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Supplying and erecting LED Flood light sleek type fitting of 120W, including lamp, with PF &gt; 0.95, class IP 65, min. 12000 Lm and above housing of pressure die cast aluminium alloy and heat sink extruded aluminium complete as per IS specification.</td>
<td></td>
</tr>
</tbody>
</table>
**SECTION - 2: DISTRIBUTION BOARDs**

1. Supplying & erecting Triple pole and neutral distribution board (6 WAY TPN DB) with 100A Three Phase Bus Bar Arrangement for mounting SP / TP MCB of total 18 ways iron frame/wooden board as per requirement

2. Supplying & erecting Single pole and neutral distribution board (10 WAY SPN DB) wit 63A Three Phase Bus Bar Arrangement for mounting SP / TP MCB of total 10 ways on iron frame/wooden board as per requirement

S/Following mountings in the existing MCBDB box i/c making connections & earthing

3. 63 Amp FP RCCB , 100 mA
4. 40 Amp FP RCCB
5. 10 - 32 Amp SP MCB - 14 nos.
6. 32 A TP MCB - 5 nos.
7. Blanking Plate - 12 nos.

**SECTION - 3 : LT PANELs**

1. Maini LT Panel

Supply of LT panel free standing, floor mounted, compartmentalize , fabricated ou CRCA sheet of 14/16 SWG sheet duly powder coated Siemens grey having busbar wiring with erection of switchgear & R Y B Indicator voltmeter ,voltmeter selector switch , Ammeter Ammeter selector switch necessary wiring .Digital Smart Energy Meter complete with CT for Control fuses w phase indicating lamp RYB -- 3 Nos. With necessary Neutral & earthing bus arrangement . Ambient Temp. 50 Degree Centigrade. Paint RAL - 7032/7035  Pow coating after chemical process. All Internal wiring 1.5 sq.mm. & Power wiring as per load Panel stand with Three side jali for air ventilation & Protection ) 600mm Height and as site sitution with necessary MS angel size as per weight of panel . Necessary black painting for stand & Jali .( Switchgear - L&T and Havells )

**Incoming:**

a) 400 A FP 50KA MCCB - 1 NO. I/C
b) 600A FP BUSBAR
c) LED LAMP - 3NOS.
d) AMMETER WITH SELECTOR SWITCH - 1NO.
e) VOLTMETER WITH SELECTOR SWITCH - 1NO.

**Outgoing:**

f) 250 A TP MCCB - 1 No.
g) 125 A TP MCCB - 2 Nos.
h) 100 A TP MCCB - 5 Nos.
i) 63 A TP MCB - 1 No.
<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td><strong>LT PANEL No. 1 (LOCATION : Machine No. 2)</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Incoming:</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>a) 125 A TP MCCB - 1 NO</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b) 200A FP BUSBAR</td>
<td></td>
</tr>
<tr>
<td></td>
<td>c) LED LAMP - 3NOS.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>d) AMMETER WITH SELECTOR SWITCH - 1NO.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>e) VOLTOMETER WITH SELECTOR SWITCH - 1NO.</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Outgoing:</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>f) 63A TP MCB - 3 NOS.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>g) 32A TP MCB - 3 NOS.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SECTION 4 : LT CABLEs &amp; END TERMINATIONS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Laying, making suitable trench of 60 meters only for 3.5 C x 240 sq. mm. Cable is provided by centre</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Supplying &amp; erecting PVC armoured Aluminium cable ISI make of following sizes aluminum conductor with continuous 12.97 sq mm (8 SWG) G.I. earth wire complete erected on wall/ trusses/pole or laid in provided trench/ pipe as per specification</td>
<td></td>
</tr>
<tr>
<td></td>
<td>a) 3.5 C x 95 sq. mm.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b) 3.5 C x 50 sq. mm.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>c) 4 C x 25 sq. mm.</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Supplying &amp; erecting Siemens type brass cable glands for following size XLPE armoured cable as per specification</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b) 3.5 C x 95 sq. mm.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>c) 3.5 C x 50 sq. mm.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>d) 4 C x 25 sq. mm.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Supplying &amp; erecting crimping type aluminium lugs for cable complete as per specification no. CB-CL/AL</td>
<td></td>
</tr>
<tr>
<td></td>
<td>c) 3.5 C x 95 sq. mm.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>d) 3.5 C x 50 sq. mm.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>e) 3.5 C x 35 sq. mm.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Providing &amp; erecting Hot dipped galvanized perforated type cable tray manufactured from 16 swg (1.6 mm thick) GI sheet of 300 mm width &amp; 75mm height complete with necessary coupler plates &amp; hardware in approved manner. Necessary provision for resting arrangement, necessary fabrication work &amp; necessary anchor bolt, nut bolts, supports etc. for perforated cable tray.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SECTION 5 : EARTHING</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Supplying and erecting Copper bounded earth plate size 60 x 60 x 0.3cms. with strip size 40x5 mm welded 5 feet long &amp; chamber cover of size 300x300 &amp; necessary excavation feet deep for earth plate, complete with all materials, testing &amp; recording the results as per specification No. EA-EP</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Supplying and erecting 25x3 mm Copper strip of required size used for earthing on wall and/or any other purpose with necessary GI clamps fixed on wall painted with bituminous paint in an approved manner with joint required as per specification No (EA-EP).</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Supplying and erecting 40x5 mm G.I. strip used for earthing on wall and/or any other purpose with necessary GI clamps fixed on wall / floor with necessary clamping in an approved manner as per specification No (EA-EP).</td>
<td></td>
</tr>
</tbody>
</table>

**Pre-Qualification criteria:**

(a) Experience of having 03(Three) nature of work executed by the firm. Firm should provide copy of work order for of similar work undertaken.

(b) Financial statements indicating 20 Lakhs average turnover for last three financial year. Copy of balance sheet/Profit and loss indicating the turnover duly certified by chartered accountant to be enclosed.

If any firm will not fulfil the above said pre-qualification criteria, their tender will be simply rejected.

List of approved brands for the materials is enclosed.