



cmpdi
A Mini Ratna Company

सेन्ट्रल माईन प्लानिंग एण्ड डिजाइन इन्स्टीच्यूट लिमिटेड
(कोल इण्डिया लिमिटेड की अनुषंगी कम्पनी / भारत सरकार का एक लोक उपक्रम)
क्षेत्रीय संस्थान-7, प्लॉट नम्बर ई-4, गौधी पार्क के निकट, सामन्तापुरी, पो: आर.आर.एल. भुवनेश्वर 751 013 (उडिशा)
Central Mine Planning & Design Institute Limited
(A Subsidiary of Coal India Limited / Govt. of India Public Sector Undertaking)
Regional Institute VII, Plot No: E-4, Near Gandhi Park, Samantapuri, PO: RRL, Bhubaneswar 751013 (Odisha)
Registered Office, CMPDI HQ, Gondwana Place, Kanke Road, Ranchi-834031
CORPORATE IDENTITY NUMBER - U14292JH1975GOI001223

QUOTATION NOTICE

सूचना क्रमांक:- CMPDI/RI-VII/E&M/ Colony/2022-23/1982

दिनांक: 02.11.2022

Sealed item rate quotations are invited from eligible contractors having valid electrical contractor License for the following electrical work to be executed for Central Mine Planning and Design Institute Limited (CMPDI Ltd.), RI-VII Bhubaneswar as described below:-

Description of work	Location	Estimated Cost of Work (Including GST) (In Rs.)	Earnest Money (In Rs.)	Period of Completion (In Days)
Providing power supply to firefighting pumps, repairing of feeder pillar panels and other miscellaneous works in residential colony CMPDI RI-VII Bhubaneswar.	Bhubaneswar	95,907.00	1200.00	30 (Thirty) Days

Quotation document can be obtained on request in writing from the office of the HoD (E & M), CMPDI RI-VII, Bhubaneswar (Odisha) on any working day between 11.00AM to 04.00 PM on application. Quotation Document will be available free of cost from 02.11.2022 to 14.11.2022 or can also be downloaded from the website www.cmpdi.co.in. Duly filled in sealed quotation in Single Part should be submitted in the Office of the HoD (E&M), CMPDI RI-VII, Bhubaneswar upto 03.00 p.m. on 15.11.2022 and quotations shall be opened at 03.30 p.m. on 15.11.2022 in presence of the intending quotationers or their authorized representatives at the office of the HoD (E&M), CMPDI RI-VII, Bhubaneswar.

CMPDI does not bind itself to accept the lowest quotation and reserves the right to reject any or all the quotations without assigning any reason whatsoever.

भवदीय

[Signature]
02/11/22

विभागाध्यक्ष (वि.एवं.यां.)

प्रतिलिपि:-

1. Regional Director, CMPDI, RI-VII, Bhubaneswar – for kind information
2. HOD (Fin), CMPDI, RI-VII, Bhubaneswar
3. OIC, CMPDI Exploration Camp Kosala, Talcher, & Gopalpur for display on notice board.
4. Notice Boards, CMPDI, RI-VII, Bhubaneswar.



फोन नम्बर/Phone No. : +91 (674) 230-1271

फैक्स नम्बर/Fax No. : +91(674)2301762

ई-मेल/E-mail: rdri7.cmpdi@coalindia.in, hodenm.ri7.cmpdi@coalindia.in

वेब साईट/Website: www.cmpdi.co.in

QUOTATION DOCUMENT

- 1 Name of work : Providing power supply to firefighting pumps, repairing of feeder pillar panels and other miscellaneous works in residential colony CMPDI RI-VII Bhubaneswar.
- 2 Quotation Notice No. & Date : CMPDI/RI-VII/E&M/Colony/2022-23/1982
दिनांक: 02.11.2022
- 3 Earnest Money Deposit : Rs.1200.00 (Rupees one thousand two hundred) only.
- 4 Completion period of work : 30 (Thirty) Days
- 5 Date & time of submission of Quotation : Upto 03.00 P.M. on 15.11.2022
- 6 Date & time of opening of Quotation : At 03.30 P.M. on 15.11.2022
- 7 Quotation Document issued to : _____

Signature of Issuing Officer

Certified that this documents contains from page 01 to 38



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क्षेत्रीय संस्थान-7, प्लॉट नम्बर ई-4, गाँधी पार्क के निकट, सामन्तापुरी, पो. आर.आर.एल. भुवनेश्वर 751 013 (उडिशा)
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(A Subsidiary of Coal India Limited / Govt. of India Public Sector Undertaking)
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CMPDI does not bind itself to accept the lowest quotation and reserves the right to reject any or all the quotations without assigning any reason whatsoever.

Intending tenderers must note the following:-

1. EARNEST MONEY DEPOSIT (EMD):

EMD is 1.25% of the Estimated value i.e. Rs. 1200.00

Earnest Money Deposit (EMD) can be deposited in the form of Demand Draft (DD) from any nationalized/scheduled Bank payable to “CMPDIL Regional Institute, Bhubaneswar” payable at its Branch at Bhubaneswar.

2.ELIGIBILITY CRITERIA:-

2.1 Permanent Account Number (PAN):

The bidder shall submit copy of Permanent Account Number (PAN) issued by Income Tax Department , Govt. of India.

2.2 Goods and Service Tax (Not Applicable for Exempted Services):

The bidder shall submit copy of GST registration certificate.

2.3 Undertaking:

A commitment is to be uploaded in the form of UNDERTAKING on Bidder's letter head as per the format given in the quotation document (Annexure-II).

2.4 Electrical Contractor's License:

The bidder must possess a valid Electrical Contractor's License issued by Electrical Licensing Board/Authority of ODISHA state. OR valid equivalent Electrical contractor license issued from other state / UT and endorsed by ODISHA licensing board / dept.

Note:-

In respect of the above eligibility criteria the bidders are required to furnish Electrical Contractor's License (issued by Electrical Licensing Board/Authority of ODISHA state. OR valid equivalent Electrical contractor license issued from other state / UT and endorsed by ODISHA licensing board / dept).

Bidders shall submit Quotation Document issued by department after filling the price bid (Annexure-I), under taking form (Annexure-II), and Certificate as per Annexure-III (in case the tender document is downloaded from Website).

All pages of Quotation document, Electrical Contractor's License, copies of PAN & GST should be self-authenticated by the Quotationers.

GENERAL TERMS AND CONDITIONS.

1. EARNEST MONEY DEPOSIT (EMD):

1.1 Deposit of EMD:

Earnest Money Deposit (EMD) can be deposited in the form of Demand Draft (DD) from any nationalized/scheduled Bank payable to “CMPDIL Regional Institute, Bhubaneswar” payable at its Branch at **Bhubaneswar**.

1.2 Refund of EMD:

- a) The EMD of successful bidder (on Award of Contract) will be retained by CMPDIL and will be adjusted to Performance Security Deposit.
- b) The EMD of un-successful bidder shall be released on finalization of tender.
- c) In case the tender is cancelled then EMD of all the participating bidders will be refunded unless it is forfeited by the department.
- d) The earnest money deposit shall not carry any interest.

2. Security Deposit:

2.1 Security Deposit shall consist of two parts:

- a) Performance security to be submitted at award of work and
 - b) Retention Money to be recovered from running bills.
- The security deposit shall bear no interest

2.2 Performance Security should be 3% of contract amount and must be submitted within 21 days of receipt of LOA/ work order by the successful bidder in the form of Demand Draft drawn in favour of **CMPDIL, Regional Institute, Bhubaneswar on any Scheduled Bank payable at its Branch at **Bhubaneswar****

The bid security deposited in the form of Demand Draft shall be adjusted against the performance (1st part of Security Deposit) at bidder's option.

Failure of the successful bidder to comply with the requirement as above shall constituted sufficient ground for cancellation of the award of work and action as stipulated in bid securing declaration. and forfeiture of the bid security/ earnest money.

In addition to the above penal measures, the bidder will not be allowed to participate in the re-tendering process. The bidder may also be debarred from participating in future tenders in the subsidiary for a minimum period of 12 Months

2.3 3% Performance Security should be refunded within 14 days of the issue of defect liability certificate (taking over certificate with a list of defects).

2.4 All running on account bills shall be paid at 95% (ninety five percent) of work value. This 5% (five percent) deduction towards Retention Money will be the second part of security deposit.

Retention Money should be refunded after issue of No Defect Certificate.

2.5 The Company shall be at liberty to deduct/appropriate from the security deposit such sums as are due and payable by the contractor to the company as may be determined in terms of the contract, and the amount appropriated from the security deposit shall have to be restored by further deduction from the contractors subsequent on account running bills, if any.

- 2.6 Refund of Security Deposit: The refund of security deposit shall be subject to company's right to deduct/ appropriate its due against the contractor under this contract or under any other contract.

On completion of the entire work and issue of defect liability certificate, (taking over certificate with a list of defects) by the Engineer-in-charge, one half of the security deposit (Performance Security) remaining with the company shall be refunded as elaborated in Cl. No.: 2.3.

The other half shall be refunded to the contractor after issue of No Defect Certificate by the Engineer-in-Charge on the expiry of Defect Liability Period of twelve (12) months, subject to the following conditions:

- a) Any defect/ defects in the work, if detected after issue of defect liability certificate (Taking over certificate with list of defects) is/are rectified to the satisfaction of the Engineer-in-Charge within the said defect liability period of twelve (12) months or on its due extension till completion of the rectification works as required.

NOTE NB: In case of Maintenance contracts, that ends with successful completion of work, where question of Defect Liability Period does not arise (e.g. sweeping/cleaning, horticulture, tank leaning, jungle cutting, grass cutting, surface dressing, AMC of electrical installations etc.), the performance security and retention money (second part of bid security) can be released simultaneously after completion of work and taking over by department.

2.7 Abnormally High Rate (AHR) & Abnormally Low Rate (ALR) items:

If the bid of the successful bidder is seriously unbalanced in relation to the company's estimate of the cost of the work to be performed under the contract, Procuring Entity i.e. CMPDIL, may in such cases seek written clarifications from the bidder, including detailed price analyses of its bid price in relation to scope, schedule, allocation of risks and responsibilities, and any other requirements of the bid documents. If, after evaluating the price analysis, Procuring Entity determines that the bidder has substantially failed to demonstrate its capability to deliver the contract at the offered price, the Procuring Entity may reject the bid/ proposal.

2.8 Additional Performance Security Deposit:

~~If the bid of the successful bidder is seriously unbalanced in relation to the company's estimate of the cost of the work to be performed under the contract, the employer may require the bidder to produce detailed price analysis for any or all items of the bill of quantities, to demonstrate the internal consistency of those prices with the methods and scheduled proposed.~~

~~Additional Performance Security shall be applicable if the bid price is below 15% of the justified price, finalized by the owner. The amount of such additional performance security shall be the difference between 85% of the owner's justified price and quoted price.~~

~~Additional Performance Security shall be furnished by bidder along with normal performance security. Failure to submit such additional performance security may result into termination of the contract.~~

~~This Additional Performance Security will not carry any interest and shall be released in the following manner.~~

- ~~i. 30% of additional performance security will release after 60% of the total work is completed.~~

- ~~ii. 50% of additional performance security will release after 80% of the total work is completed.~~
- ~~iii. 100% of additional performance security will release after total work is completed.~~

3. Deviations/Variations in Quantities and Pricing

The quantities given in the "Schedule of Quantities" are based on estimates and are meant to indicate the extent of the work and to provide a uniform basis for tendering and any variation either by addition or omission shall not vitiate the contract.

- 3.1 The company through its Engineer-in-Charge or his representative shall, without radically changing the original scope and nature of the work, under contract, have power to make any alterations in or additions to or substitution of the original specifications, drawings, designs and instructions that may appear to be necessary or advisable during the progress of the work.

The contractor shall be bound to carry out the works in accordance with the instructions given to him in writing by the Engineer-in-Charge or his representative on behalf of the company. Such altered or additional or substituted work, which shall form part of the original contract, shall be carried out by the contractor on the same terms and conditions in all respects on which they agreed to do the main work and at the same rate/rates as are specified in the contract/ work-order.

- 3.2 The right is reserved to cancel any items of work included in the contract agreement or portion thereof in any stage of execution if found necessary to the work and such omission shall not be a waiver of any condition of the contract nor invalidate any of the provisions thereof.
- 3.3 If the additional, altered or substituted work includes any class of work for which rate/rates is/are not specified in the contract/work order, rates for such items shall be determined by the Engineer-in-Charge as follows:

- a) In the case of percentage tenders, if the rate for the item of work executed is available in the company's approved SOR, it will be paid at the schedule rate plus or minus the accepted percentage as per contract,

However, if the extra item is not available in company's approved SOR, then the rate for such extra item(s) shall be dealt as at (c) below.

- b) In case of item rate tenders, the rate for extra item shall be derived from the rate for similar item or near similar item of work available in the agreement schedule of work or by analysis of rates as at below and the lower rate out of the above two shall be considered.

In case of composite item rate tenders, where two or more schedule of quantities for similar item description may form part of the contract, the applicable rates shall be taken from the Schedule of Quantities of that particular part in which the deviation is involved, failing that at the lowest applicable rate for the similar item of work in the other schedule of quantities.

For derivation of rates based on analysis, the same shall be done by analysis on prevalent market rate of materials and labour based on standard norms of analysis of rate of C.P.W.D/ N.B.O.

- c) In the case of extra item(s) that are completely new, and are in addition to the items contained in the contract, the contractor may within 15 days of receipt of order or occurrence of the item(s) claim rates, supported by proper analysis. The Engineer-in-

Charge shall determine the rate(s) by analysis based on prevalent market rate of material and labour and on standard norms of analysis of rate of CPWD / NBO.

- d) In case of combined tender with partly item rate for non-schedule items & partly percentage tenders for SOR items, the rate for extra item shall be derived as at (b) & (c) above in case of non-schedule items rates and in case of percentage rates for SOR items the rate for extra item shall be derived as at (a) above.

In case of any difference between the contractor and the Engineer-In Charge as to the fixation of rates, the matter shall be referred to the accepting authority of the company i.e. HOD(E&M), whose decision shall be final and binding on the contractor.

- 3.4 Alteration in the quantities shall not be considered as a change in the condition of the contract nor invalidate any of the provision thereof provided that a deviation estimate / revised estimate / supplementary agreement for the item(s) involved is made. Such approval shall be from appropriate authority.
- 3.5 Payment for such deviated items [additional/ altered / substituted items of work of the agreement schedule] shall be made in the contractors running on account bills, till the revised estimate / deviation estimate regularizing these items are sanctioned by the competent authority of the company, at the provisional rates and shall not exceed :
- a) 75% of the rate recommended by the Engineer-in-Charge to the accepting authority of the company i.e. HOD (E&M), if the rate is directly available in the SOR of the company/ if the rate is derived from available rate of BOQ.
 - b) 50% of the rate recommended by the Engineer-in-Charge to the accepting authority of the company, i.e. HOD (E&M), if it is analyzed item rates based on prevalent market rates of materials and labour following NBO/CPWD norms.

Total payment for such extra items of work shall not exceed 10% of work order/agreement value / approved deviation estimate value. Also total payment including extra items of work shall not exceed the work order / agreement / approved deviation estimate value.

3.6 PROVISIONS FOR DEALING WITH VARIATIONS IN RESPECT OF ABNORMALLY HIGH RATE AND ABNORMALLY LOW RATE ITEMS.

The abnormally high rate items are those whose quoted rates are more than 20% of the justified rates decided by the owner.

The abnormally low rate items are those whose quoted rates are less than 20% of the justified rates decided by the owner.

In case of Item Rate Tenders, the revision of rates for (i) abnormally high rate items and (ii) abnormally low rate items, shall become operative under the following circumstances:-

For increase in quantity of more than 25% in respect of works executed below plinth level and 10% in respect of works executed above plinth level.

Quantity variation beyond the limit mentioned above shall be dealt by arriving at new rate based on prevalent market rate of materials and labour analyzed as per standard analysis of rate of CPWD/NBO. Payment of extra quantity over the permitted quantity as explained above would be made on the basis of the new analyzed rate.

The variation in quantity of abnormally low rate items for item rate tenders shall not be permitted below 25% for the items below plinth level and below 10% for the items above plinth level of the agreement schedule quantity, but in exceptional cases with written consent of Engineer-in-Charge arising out of technical necessity.

The above provisions shall be applicable for item rate tenders only and not applicable for percentage rate tenders for works based on standard schedule of rates of the company.

- 3.7 The time of completion of the originally contracted work shall be extended by the company in the event of any deviation resulting in additional cost over the awarded value, if requested by the contractor as follows:-

- i) In the proportion which the additional cost of the altered, additional or substituted work (in value) bears to the original tendered value plus.
- ii) 25% of the time calculated in (i) above or such further additional time as may be considered reasonable by the Engineer-in-Charge.

- 3.8 The company through its Engineer-in-Charge or his representative, on behalf of the company, shall have power to omit any part of the work in case of non-availability of a portion of the site or for any other reason and the contractor shall be bound to carry out the rest of the work in accordance with the instructions given by the Engineer-in-Charge. No claim from the Contractor shall be entertained/ accepted on these grounds.

- 3.9 In the event of any deviation being ordered which in the opinion of the contractor changes radically the original scope/nature of the contract, the contractor shall under no circumstances suspend the work, either original or altered or substituted, and the dispute/disagreement as to the nature of deviation and the rate/rates to be paid for such deviations shall be resolved separately with the company as per the procedures/ norms laid down hereafter.

4. Time for Completion of Contract, Extension thereof, Defaults and Compensation for Delay

Time is the essence of the contract and as such all works shall be completed within the time stipulated in the contract/ work order. The work shall, throughout the stipulated period of contract, be carried out with all due diligence on the part of the contractor.

For the purpose of this detailed time and progress chart, the work shall be deemed to have commenced on the expiry of 10 (ten) days from the issue of Letter of Acceptance of Tender or 07 (seven) days after handing over the site of work or handing over reasonable number of working drawings to the contractor or the period of mobilization allowed in the work order for starting the work in special circumstances, whichever is later.

- 4.1 If the contractor, without reasonable cause or valid reasons, commits default in commencing the work within the aforesaid time limit, the company shall, without prejudice to any other right or remedy, be at liberty, by giving 15 days' notice in writing to the contractor to commence the work, failing which to forfeit the Earnest Money deposited by him and to rescind the Letter of Acceptance of Tender/Work Order and also to debar the contractor to take part in the future re-tender.

The Company may debar such defaulting Contractors from participating in future Tenders for a minimum period of 12(twelve) months.

- 4.2 If the contractor fails to complete the work and clear the site on or before the date of completion or extended date of completion, he shall without prejudice to any other right or remedy available under the law to the company on account of such breach, pay as compensation (Liquidated Damages):

- i) @ Half percent ($\frac{1}{2}$ %) of the contract amount/Revised Contract amount whichever is less, per week of delay.

OR

- ii) $\frac{1}{2}$ % of the contract-value of group of items/ revised completion value of group of items whichever is less, per week of delay, for which a separate period of completion is originally given.

The aggregate of such compensation/ compensations shall not exceed:

- i) 10% (ten) percent of the total amount of the contract/ Revised contract amount, whichever is less.

OR

- ii) 10% of the contract-value of group of items/ revised completion value of group of items whichever is less, for which a separate period of completion is originally given.
The amount of compensation may be adjusted or set off against any sum payable to the contractor under this or any other contract with the company.

- 4.2.1 The company, if satisfied, that the works can be completed by the contractor within a reasonable time after the specified time of completion, may allow further extension of time at its discretion with or without the levy of L.D. In the event of extension granted being with L.D, the company will be entitled without prejudice to any other right or remedy available in that behalf, to recover from the contractor as agreed damages equivalent to half percent of the contract value of the works for each week or part of the week subject to a ceiling as described at Cl.4.2.
- 4.2.2 The company, if not satisfied that the works can be completed by the contractor, and in the event of failure on the part of the contractor to complete work within further extension of time allowed as aforesaid, shall be entitled, without prejudice to any other right, or remedy available in that behalf, to rescind the contract.
- 4.2.3 The company, if not satisfied with the progress of the contract and in the event of failure of the contractor to recoup the delays in the mutually agreed time frame, shall be entitled to terminate the contract.
- 4.2.4 In the event of such termination of the contract as described in clauses 4.2.2 or 4.2.3 or both, the company, shall be entitled to impose penalty/LD as deliberated at Clause 4.2. Additionally the contractor shall be debarred from participating in the future tenders for a minimum period of 12 months.
- 4.3 The company may at its sole discretion, waive the payment of compensation on request received from the contractor indicating valid and acceptable reasons if the entire work is completed within the date as specified in the contract/work order or as validly extended date without stipulating any compensation for delay.
- 4.4 **Extension of date of completion:** On occurrences of any events causing delay as stated here-under, the contractor shall intimate immediately in writing to the Engineer-in-Charge.

a) Force Majeure :

- i Natural phenomena like unprecedented flood and draught, earthquakes & epidemics.
- ii Political upheaval, civil commotion, strikes, lockouts, acts of any Govt. (domestic/foreign) including but not limited to war and proprieties, quarantine embargoes

The successful bidder/ contractor will advise in the event of his having to resort to this clause by a registered letter duly certified by the local chamber of commerce or statutory authorities, the beginning and end of the cause of delay, within fifteen days of the occurrence and cessation of such Force Majeure condition.

In the event of delay due to Force Majeure for more than one month the contract may be terminated at the discretion of the company. Termination under such circumstances will be without any liability on either side.

For delays arising out of Force Majeure, the bidder / contractor will not claim extension in completion date for a period exceeding the period of delay attributable to the clauses of Force Majeure and neither company nor bidder / contractor shall be liable to pay extra cost (like increase in rates, remobilization advance, idle charges for labour and materials etc.) provided it is mutually established that Force majeure conditions did actually exist.

- b) Serious loss or damage by fire and abnormally bad weather
- c) Non-availability of stores which are the responsibility of the company to supply as per contract
- d) Non-availability of working drawings in time, which are to be made available by the company as per contract during progress of the work
- e) Delay on the part of the contractors or tradesmen engaged by the company not forming part of the contract, holding up further progress of the work
- f) Non-availability or breakdown of tools and plant to be made available or made available by the company
- g) The execution of any modified or additional items of work or excess quantity of work.
- h) Any other causes which, at the sole discretion of the company, is beyond the control of the contractor.

4.4.1 The contractor shall request the company in writing for extension of time within 15 days of happening of such event causing delay stating also, the period for which extension is required. The company may, considering the genuineness of the request, give a reasonable extension of time for completion of the work. Such extension shall be communicated to the contractor in writing by the company through the Engineer-in-Charge within 1(one) month of the date of receipt of such request.

4.4.2 The opinion of the Engineer-in-charge, whether the grounds shown for the extension of time are or are not reasonable, is final. If the Engineer-in-charge is of the opinion that the grounds shown by the contractor are not reasonable and declines to the grant of extension to time, the contractor cannot challenge the soundness of the opinion

The opinion of the Engineer-in-charge that the period of extension granted by him is proper or necessary is not, however, final. If the contractor feels that the period of extension granted is inadequate he can appeal to the RD, RI-VII of the company for consideration on the question whether the period of extension is or is not proper or necessary.

4.4.3 Provisional extension of time may also be granted by the Engineer-in-Charge during the course of execution, on written request for extension of time within 15(fifteen) days of happening of such events as stated above, reserving the company's right to impose/ waive penalty at the time of granting final extension of time as per contract agreement.

4.4.4 When the period fixed for the completion of the contract is about to expire, the question of extension of the contract may be considered at the instance of the Contractor or the Department or of both. The extension will have to be by party's agreement, express or implied.

In case the contractor does not apply for grant of extension of time within 15(fifteen) days of the hindrance occurring in execution of the work and the department wants to continue with the work beyond the stipulated date of completion for reason of the work having been unavoidably hindered, the Engineer-in-charge can grant extension of time even in the absence of application from the contractor.

Such extension of time granted by the Engineer-in-Charge is valid provided the contractor accepts the same either expressly or implied by his actions before and subsequent to the date of completion. Such extension of time shall be without prejudice to Company's right to levy compensation under the relevant clause of the contract.

The contractor shall however use his best efforts to prevent or make good the delay by putting his endeavors constantly as may be reasonably required of him to the satisfaction of the Engineer-in-Charge.

5. Quality Assurance - Materials and Workmanship

The contractor shall carry out and complete the work in every respect in accordance with the contract and shall ensure that the work conforms strictly to the drawings, specifications, (as enclosed or in absence of enclosed specifications current CPWD/BIS specifications) instructions of the Engineer-in-Charge. The Engineer-in-Charge may issue, from time to time, further drawings, detailed instructions/ directions in writing to the contractor. All such drawings, instructions/directions shall be consistent with the contract documents and should be reasonably inferable there from, along with clarifications/ explanations thereof, if necessary. However, the contractor will be solely responsible for design and erection of all temporary structures required in connection with the work

- 5.1 For Quality Assurances of all the E&M Engineering Works the norms/ guidelines laid down by the company herein and elsewhere will form part of the contract for the purpose of quality of works.
- 5.2 The contractor shall be responsible for correct and complete execution of the work in a workman like manner with the materials as per specification which shall be subject to the approval of the company. All work under execution in pursuance of the contract shall be open to inspection and supervision by the Engineer-in-Charge or by his authorized representative or any other official of higher rank or any other person authorized by the company in his behalf & the contractor shall allow the same.
- 5.3 All materials to be provided by the contractor shall be in conformity with the specifications/schedule of work as per the contract and the contractor shall furnish proof, if so required by the Engineer-in-Charge to his satisfaction that the materials do so comply.
- 5.4 The contractor shall immediately after the award of work draw up a schedule giving dates for submission of samples as required or necessary as per the specification for approval of Engineer-in-Charge who shall approve, if found acceptable, promptly so that there is no delay in the progress of the work of the contractor or of the work of any of the sub-contractor.

On receipt of samples as per schedule, the Engineer-in-Charge shall arrange to examine/test with reasonable promptness ensuring conformity of the samples with the required specification and complying with the requirements as per contract documents keeping in view that the work shall be in accordance with the samples approved by him. The contractor shall be bound to furnish fresh sample, if disapproved by the Engineer-in-Charge, for his approval. The contractor shall not start bringing materials at the site unless the respective samples are approved. Materials conforming to approved samples shall only be brought to site. However, Engineer-in-Charge's approval for any sample, design / drawings (permanent / temporary structures) shall not alter contractor's full responsibility whatsoever for the performance and safety of the executed job.

Samples are to be supplied by the contractor at his own cost. The cost involved in tests shall be borne by the contractor. If any test is ordered by the Engineer-in-Charge which is to be carried out by any independent person or agency at any place other than the site even then the cost of materials and testing charge etc. shall be borne by the contractor. If the test shows that the materials are not in accordance with the specifications, the said materials shall not be used in the work and removed from the site at contractors cost.

- 5.5 The company, through the Engineer-in-Charge, shall have full powers to reject any materials or work due to a defect therein for not conforming to the required specification, or for materials not being of the required quality and standard or for reasons of poor workmanship or for not being in accordance with the sample approved by him. The contractor shall forthwith remedy the defect/replace the materials at his expense and no further work shall be done pending such rectification/replacement of materials, if so instructed by the Engineer-in-Charge.

In case of default on the part of the contractor, the Engineer-in-Charge shall be at liberty to procure the proper materials for replacement and/or to carry out the rectifications in any manner considered advisable under the circumstances and the entire cost & delay for such procurement/rectification shall be borne by the contractor.

- 5.6 The Engineer-in-Charge shall be entitled to have tests carried out for any materials, according to the standard practice followed for such tests, other than those for which satisfactory proof has already been furnished by the contractor who shall provide at his expense all facilities which the Engineer-in-Charge may require for the purpose. All such expenses born by the contractor are not to be paid separately by the employer and shall be assumed covered in accepted prices.

The cost of any other tests, if so required by the Engineer-in-Charge, shall be borne by the company. However if the test shows the workmanship or materials not to be in accordance with the provision of the contract or the instruction of Engineer-in-Charge the cost shall be borne by the contractor. .

- 5.7 Access to the works: The Engineer-in-charge and any person authorized by the company shall at all times have access to the works and to all workshops and places where work is being prepared or from where materials, manufactured articles are being obtained for the works and the contractor shall afford every facility for and every assistance in or in obtaining the right to such access.

- 5.8 Inspection of works:

- i) No work shall be covered up or put out of view without the approval of the Engineer-in-charge or the Engineer-in-charge's representative or any other officer nominated by the company for the purpose and the contractor shall afford full opportunity for the EIC or EIC's representative or any other officer nominated by the company for the purpose to examine and measure any work which is about to be covered up or put out of view and to examine foundations before permanent work is placed thereon. the contractor shall give due notice to the Engineer-in-charge's representative whenever any such work or foundations is ready or about to be ready for examination and the Engineer-in-charge's representative shall, without unreasonable delay, unless he considers it unnecessary and advises the contractor accordingly, attend for the purpose of examining and measuring such work or foundations.
- ii) The contractor shall uncover any part or parts of the works or making openings in or through the same as the Engineer-in-Charge may from time to time direct and shall reinstate and make good such part or parts to the satisfaction of Engineer-in-charge.

If any such part or parts have been covered up or put out of view after compliance with the requirement of sub-clause above and are found to be executed in accordance with the contract, the expenses of uncovering, making openings in or through and making good the same shall be borne by the Employer, but in any other cases all costs shall be borne by the contractor.

5.9 Removal of Improper Work and Materials:

- i) The Engineer-in-charge shall during the progress of the works have power to order in writing from time to time:
 - a) The removal from the site, of any materials which in the opinion of Engineer-in-charge, are not in accordance with the contract/ work order/ approved sample.
 - b) The substitution with proper and suitable materials.
 - c) The removal and proper re-execution, notwithstanding any previous test thereof or interim payment there from, of any work which in respect of materials or workmanship is not in accordance with the contract.
- ii) In case of default on the part of the contractor in carrying out such order, the Engineer-in-charge shall be entitled to employ and pay other agency to carry out the same and all expenses consequent thereon shall be recoverable from the contractor or may be deducted from any amount due or which may become due to the contractor.

5.10 Devaluation of Work : In lieu of rejecting work done or materials supplied not in conformity with the contract/work order/approved samples, the Engineer-in-charge or any other officer nominated by the company for the purpose may allow such work or materials to remain, provided the Engineer-in-Charge/ the officer nominated by the company is satisfied with the quality of any materials, or the strength and structural safety of the work, and in that case shall make such deduction for the difference in value, as in his opinion may be reasonable.

5.11 Final Inspection of Work: The Engineer-in-charge and any other officer nominated by the company for the purpose shall make final inspection of all work included in the contract/work order, or any portion thereof, or any completed structure forming part of the work of the contract, as soon as practicable after notification by the contractor that the work is completed and ready for acceptance. If the work is not acceptable to the Engineer-in-charge at the time of such inspection, he shall inform the contractor in writing as to the particular defects to be remedied before final acceptance can be made.

5.12 Defects appearing after acceptance: Any defects which may appear within the defect liability period and arising, in the opinion of the Engineer-in-charge, from lack of conformance with the drawings and specifications, shall, if so required by the Engineer-in-charge in writing, be remedied by the contractor at his own cost within the time stipulated by the Engineer-in-charge. If the contractor fails to comply, the Engineer-in-charge may employ other persons to remedy the defects and recover the cost thereof from the dues of the contractor.

5.13 Defective Materials: All materials not conforming to the requirements of the specifications shall be considered as defective, and all such materials, whether in place or not shall be rejected. They shall be removed immediately by the contractor at his expenses and replaced with acceptable material.

No rejected material, the defects of which have been subsequently corrected, shall be used on the work until approval in writing has been given by the Engineer-in-Charge. Upon failure on the part of the contractor to comply with any instruction of the Engineer-in-charge made under the provisions of this article within the time stipulated by the Engineer-in-charge, the Engineer-in-charge shall have authority to remove and replace defective material and recover the cost of removal and replacement from the contractor.

Further all such defective material lying at site not removed and replaced within 30 days after issue of notice by the Engineer-in-charge, if the Engineer-in-charge so decides shall dispose of such material in any manner without any further written notice to the contractor.

6. Measurement and Payments

Except where any general or detailed description of the work in the Bill of Quantities or specifications of the contract/ work order provides otherwise, measurement of work done shall be taken in accordance with the relevant standard method of measurement published by the Bureau of Indian Standards (BIS) and if not covered by the above, other relevant Standards/practices shall be followed as per instructions of the Engineer-in-Charge.

- 6.1 All items of work carried out by the contractor in accordance with the provision of the contract having a financial value shall be entered in the Measurement Book as prescribed by the company so that a complete record of the measurements is available for all the works executed under the contract and the value of the work executed can be ascertained and determined therefrom. Measurements of completed work / portion of completed work shall be recorded only in the Measurement Books.
- 6.2 Measurement shall be taken jointly by the Engineer-in-Charge or his authorized representative and by the contractor or his authorized representative.
- 6.3 Before taking measurements of any work, the Engineer-in-Charge or the person deputed by him for the purpose shall intimate the contractor to attend or to send his representative to attend the measurement. Every measurement thus taken shall be signed and dated by both the parties on the site on completion of the measurement. If the contractor objects to any measurements, a note to that effect shall be made in the Measurement Book / Log Book and signed and dated by both the parties.
- 6.4 The measurement of the portion of work/items of work objected to, shall be re-measured by the Engineer-in-Charge himself or the authority nominated by the company for the purpose in the presence of the contractor or his authorized representative and recorded in the M.B. which shall be signed and dated by both the parties. Measurements so recorded shall be final and binding upon the contractor and no claim whatsoever shall thereafter be entertained.

In case the contractor or his authorized representative does not attend to the joint measurements at the prefixed date and time after due notice, the measurements taken by the Engineer-in-Charge or his representative shall be final and binding on the contractor.

Measurement of the extra items of work or excess quantities of work duly authorized in writing by the Engineer-in-Charge shall also be taken and recorded in the M.B. based on the existing items in the SOR of the company and if such items do not exist in the company's SOR, the description of the work shall be as per actual execution. Payment for such extra items will be based on the rates to be derived as described in the relevant clauses of the contract/ work-order

- 6.5 No work shall be covered up or put out of view without the approval by the Engineer-in-Charge and recording of measurements and check measurement thereof duly accepted by the contractor. The contractor shall provide full opportunity to the Engineer-in-Charge or his representative to examine and measure all works to be covered up and to examine the foundations before covering up.

The contractor shall also give notice to Engineer-in-Charge whenever such works or foundations are ready for examination and the Engineer-in-Charge shall without unreasonable delay arrange to inspect and to record the measurements, if the work is acceptable and advise the contractor regarding covering of such works or foundations.

- 6.6 In case of items which are claimed by the contractor but are not admissible according to the department, measurements of such items, will be taken by for record purposes only and without prejudice so that in case it is subsequently decided by the department to admit the contractor's claims, there should be no difficulty in determining the quantities of such work. A suitable remark should, however, be made against such measurements to guard against payment in the ordinary way.

- 6.7 **Payments:** The running on account payments may be made once in a month or at intervals stipulated in the work order/ contract agreement.

- 6.7.1 Running on account bill/bills for the work executed/ materials supplied in accordance with the work order/ contract shall be prepared on the basis of detailed measurements recorded as described hereinbefore and processed for payments.

- 6.7.2 Payment of on account bill shall be made on the Engineer-in-Charge's certifying the sum to which the contractor is considered entitled by way of interim payment for the following:

- a) The work executed as covered by the bill/bills after deducting the amount already paid, the security deposit and such other amounts as may be deductible or recoverable in terms of the work order/ contract.
- b) i) Payment for excess quantity of work done with the written instructions of the Engineer-in-Charge for items already appearing in the bill of quantities of work with approved rates, will be made along with the on account bills only upto 10% of the quantity provided in the agreement subject to overall value of work not exceeding the agreement value.

ii) The HOD(E&M), of the company may authorize interim payment for excess work done upto 20 % of the quantity of work provided in the Bill of Quantity of the work awarded from Company subject to overall value of work done does not exceed the contract value.
- c) Extra items of work executed will be paid on specific written authorization of HOD(E&M), provided that the value of such extra items of work when added together is not more than 10% of the contract value and the total gross payment including excess quantity does not exceed the contract value.

Balance amount on account of excess quantity and extra items of work executed shall be paid after the deviation estimate / revised estimate regularizing the extra items and excess quantities of work is sanctioned by the competent authority of the company with the concurrence of the Finance Department of the company.

- d) On the Engineer-in-Charge's certificate of completion in respect of the work covered by the contract / final measurements of the work certified by the Engineer In Charge or his representative.

- 6.7.3 The measurements shall be entered in the M.B for the work done upto the date of completion and evaluated based on the approved rates for the items in the contract agreement/sanctioned revised estimate. In case of extra items of work, the rates shall be derived as stated in the relevant clause of the contract.

The payments shall be released against the final bill subject to all deductions which may be made on account of materials supplied, water supply for construction, supply of electricity and any other dues payable by the contractor to the company, and further subject to the contractor having given to the Engineer-in-Charge a no claim certificate.

The contractor shall indemnify the company against proof of depositing royalty on account of minor minerals used in the work before the final bill is processed for payments. The final payment to be made will also be subject to Clause-2.6 & 2.7 of the General Terms & Conditions of the contract.

- 6.7.4 Any certificate given by the Engineer-in-Charge for the purpose of payment of interim bill/bills shall not have itself be conclusive evidence that any work/materials to which it relate is/are in accordance with the contract and may be modified or corrected by the Engineer-in-Charge by any subsequent certificate or by the final certificate.

- 6.7.5 The company reserve the right to recover/enforce recovery of any overpayments detected after the payment as a result of post payment audit or technical examination or by any other means, notwithstanding the fact that the amount of disputed claims, if any, of the contractor exceeds the amount of such overpayment and irrespective of the facts whether such disputed claims of the contractor are the subject matter of arbitration or not.

The amount of such overpayments shall be recovered from subsequent bills under the contract, failing that from contractor's claim under any other contract with the company or from the contractor's security deposit or the contractor shall pay the amount of over payment on demand. In case of contractor's non-payment on such demand, the same should be realized from the contractor's dues, if any, with Coal India Limited or any of its subsidiaries.

- 6.7.6 The contractors are required to execute all works satisfactorily and according to the specifications laid down in the contract/ work order. If certain items of work, executed by the contractor, are below specifications, the contractor should re-do them according to the specifications and instructions of EIC and if the contractor fails to rectify the defect within the time and in the manner specified by the EIC, the work shall be got re-done or rectified by the department at the risk and cost of the contractor. Engineer-in-Charge may accept such work of below specifications provided the department is satisfied with the quality of such works and the strength/ structural safety of such works. In that case Engineer-in-Charge shall make such deductions for the difference in value, as in his opinion is reasonable and is approved by the accepting authority of the company i.e. HOD(E&M) of the company in this case or any other officer nominated by HOD(E&M) for the purpose.

- 6.7.7 Income tax deduction @ 2% (Two percent) of the gross value of each bill or at the rate as amended from time to time, shall be made unless exempted by the competent authority of the Income Tax Department.

Sales tax on works contract and Building and Construction Workers Cess (as applicable in States) shall be payable by the contractor. If, however, the company is asked to make deduction from the contractor's bills, the same shall be done and a certificate to this effect shall be issued to the contractor for dealing with the State Govt. and the company does not take any responsibility to do anything further in this regard.

- 6.7.8 No interest shall be payable on the amounts withheld, under the terms of the Contract Agreement/Work-order.

7. Termination, Cancellation, Suspension and Foreclosure of Contract

The company shall, in addition to other remedial steps to be taken as provided in the conditions of contract be entitled to cancel the contract in full or in part, and whether the date of completion has or has not elapsed, by notice in writing if the contractor :-

- a) Makes default in proceeding with the works with due diligence and continues to do so even after a notice in writing from the Engineer-in-Charge, then on the expiry of the period as specified in the notice
Or
- b) Commits default/breach in complying with any of the terms and conditions of the contract and does not remedy it or fails to take effective steps for the remedy to the satisfaction of the Engineer-in-Charge, then on the expiry of the period as may be specified by the Engineer-in-Charge in a notice in writing.
Or
- c) Obtains a contract with the company as a result of ring tendering or other non-bonafide methods of competitive tendering
Or
- d) Shall offer or give or agree to give any person in the service of the company or to any other person on his behalf any gift or consideration of any kind as an inducement or reward for act/acts of favour in relation to the obtaining or execution of this or any other contract for his company.
Or
- e) Fails to complete the work or items of work with individual dates of completion, on or before the date/dates of completion or as extended by the company, then on the expiry of the period as may be specified by the Engineer-in-Charge in a notice in writing.
Or
- f) Transfers, sublets, assigns the entire work or any portion thereof without the prior approval in writing from the Engineer-in-Charge. The Engineer-in-Charge may by giving a written notice, cancel the whole contract or portion of it in default.

7.1 The contract shall also stand terminated under any of the following circumstances:

- a) If the contractor being an individual in the case of proprietary concern or in the case of a partnership firm any of its partners is declared insolvent under the provisions of Insolvency Act for the time being in force, or makes any conveyance or assignment of his effects or composition or arrangement for the benefit of his creditors amounting to proceedings for liquidation or composition under any Insolvency Act.
- b) In the case of the contractor being a company, its affairs are under liquidation either by a resolution passed by the contractors company or by an order of court, not being a voluntary

liquidation proceedings for the purpose of amalgamation or reorganization, or a receiver or manager is appointed by the court on the application by the debenture holders of the contractor's company, if any.

- c) If the contractor shall suffer an execution being levied on his/their goods, estates and allow it to be continued for a period of 21 (twenty-one) days.
- d) On the death of the contractor being a proprietary concern or of any of the partners in the case of a partnership concern and the company is not satisfied that the legal representative of the deceased proprietor or the other surviving partners of the partnership concern are capable of carrying out and completing the contract. The decision of the company in this respect shall be final and binding which is to be intimated in writing to the legal representative or to the partnership concern.

7.2 On cancellation of the contract or on termination of the contract, the Engineer-in-Charge shall have powers:

- a) To take possession of the site and any materials, constructional plant, equipments, stores etc. thereon and carry out balance work through any means or through any other agency.
- b) To give the contractor or his representative of the work 7 (seven) days' notice in writing for taking final measurement for the works executed till the date of cancellation or termination of the contract. The Engineer-in-Charge shall fix the time for taking such final measurement and intimate the contractor in writing. The final measurement shall be carried out at the said appointed time notwithstanding whether the contractor is present or not. Any claim as regards measurement which the contractor is to make shall be made in writing within 7 (seven) days of taking final measurement by Engineer-In-charge as aforesaid and if no such claim is received, the contractor shall be deemed to have waived all claims regarding above measurements and any claim made thereafter shall not be entertained.
- c) After giving notice to the contractor to measure up the work of the contractor and to take such whole or the balance or part thereof, as shall be unexecuted out of his hands and to give it to another contractor or take up departmentally, to complete the work. The contractor whose contract is terminated shall not be allowed to participate in future bidding for period of minimum twelve months. In such an event, the contractor shall be liable for loss/damage suffered by the employer because of action under this clause and to compensate for this loss or damage, the employer shall be entitled to recover higher of the following:
 - i) Forfeiture of security deposit comprising of performance guarantee and retention money and additional performance security, if any, at the disposal of the employer.
Or
 - ii) 20% of value of incomplete work. The value of the incomplete work shall be calculated for the items and quantities remaining incomplete (as per provision of agreement) at the agreement rates including price variation as applicable on the date, when notice in writing for termination of work was issued to the contractor.

The amount to be recovered from the contractor as determined above, shall, without prejudice to any other right or remedy available to the employer as per law or as per agreement, will be recovered from any money due to the contractor on any account or under any other contract and in the event of any shortfall, the contractor shall be liable to pay the same within 30 days. In case of failure to pay the same the amount shall be debt payable.

In the event of above course being adopted by the Engineer-in-charge, the contractor shall have no claim to compensation for any loss sustained by him by reasons of his having purchased materials, equipment or entered into agreement or made advances on any account or with a view to the execution of work or performance of the contract. And in case action is

taken under any of provision aforesaid, the contractor shall not be entitled to recover or to be paid any sum for any work thereof or actually performed under this contract unless and until the engineer-in-charge has certified in writing the performance of such work and value payable in respect thereof and he shall only be entitled to be paid the value so certified.

The need for determination of the amount of recovery of any extra cost/expenditure or of any loss/damage suffered by the company shall not however arise in the case of termination of the contract for death/demise of the contractor as stated in 7.1(d).

7.3 Suspension of Work: The Company shall have power to suspend the work. The contractor shall on receipt of the order in writing of Engineer-in –charge (whose decision shall be final and binding on the contractor), suspend the progress of work or any part thereof for such time in such manner as the Engineer-in-Charge may consider necessary so as not to cause any damage, or endanger the safety thereof for any of the following reasons:

- a) on account of any default on the part of the contractor, or
- b) for proper execution of the works, or part thereof, for reasons other than the default of the contractor or,
- c) for safety of the works, or part thereof the contractor shall be entitled to an extension of time equal to the period of every such suspension plus 25%. This shall also be applicable for completion of the item or group of items of the work for which a separate period of completion as specified in the contract and of which the suspended work forms a part.

The contractor shall carry out the instructions given in this respect by the Engineer-In Charge & if such suspension exceeds 45 (forty five) days, the contractor will be compensated on mutually agreed terms.

7.4 Foreclosure of contract:

If at any time after acceptance of the tender the company decides to abandon for any reason whatsoever the company, through its Engineer-in-Charge, shall give notice in writing to that effect to the contractor and contractor shall act accordingly in the matter. In the event of abandonment, the contractor shall have no claim to any payment of compensation or otherwise whatsoever, other than those mentioned below:-

- a) to pay reasonable amount assessed and certified by the Engineer-in-Charge of the expenditure incurred, if any, by the contractor on preliminary works at site e.g. temporary access roads, temporary construction for labour and staff quarters, office accommodation, storage of materials, water storage tanks and water supply for the work including supply to labour/ staff quarters, office etc.
- b) To pay the contractor at the contract rates full amount for works executed and measured at site upto the date of such abandonment.
- c) to pay for the materials brought to site or to be delivered at site, which the contractor is legally liable to pay, for the purpose of consumption in works carried out or were to be carried out but for the foreclosure, including the cost of purchase and transportation and cost of delivery of such materials. The materials to be taken over by the company should be in good condition and the company may allow at its discretion the contractor to retain the materials in full or in part if so desired by him and to be transported by the contractor from site to his place at his own cost with due permission of the Engineer-in-Charge.

- d) to take back the materials issued by the company but remaining unused, if any, in the work on the date of abandonment/reduction in the work, at the original issue price less allowance for any deterioration or damage caused while in custody of the contractor.
- e) to pay for the transportation of tools and plants of the contractor from site to contractor's place or to any other destination, whichever is less.

7.4.1 The contractor shall, if required by the Engineer-in-Charge, furnish to him books of accounts, papers, relevant documents as may be necessary to enable the Engineer-in-Charge to assess the amounts payable in terms of clauses 7.4 (a) (c) & € of the contract. The contractor shall not have any claim for compensation for abandonment of the work, other than those as specified above.

8. Carrying out Part Work at Risk & Cost of Contractor.

If the progress of the work or of any portion of the work is unsatisfactory, the Engineer-in-Charge, after giving the contractor 15 days' notice in writing, without cancelling or terminating the contract, shall be entitled to employ another Agency for executing the job or to carry out the work departmentally or contractually through tendering/limited tendering process, either wholly or partly, debiting the contractor with cost involved in engaging another Agency or with the cost of labour and the prices of materials, as the case may be. The certificate to be issued by the Engineer-in-Charge for the cost of the work so done shall be final and conclusive and the extra cost, if any, shall be borne by the contractor. However, when this clause is invoked, penalty will not be applicable other than on account of delayed completion.

The value of the work taken away shall be calculated for the items and quantities taken away at the agreement rates including price variation as applicable on the date, when notice in writing for taking away part work was issued to the contractor. The contractor, from whom part work is being taken out, shall not be allowed to participate in the tendering process if any.

If the expenses incurred by the department is less than the amount payable to the contractor at his agreement rates, the difference shall not be payable to the contractor.

In the event of above course being adopted by the Engineer-in-Charge, the contractor shall have no claim to compensation for any loss sustained by him by reasons of his having purchased or procured any materials or entered into any engagements or made any advance on any account or with a view to the execution of the work or the performance of the contract.

9. Completion Certificate / Defect Liability Certificate

Except in cases where the contract provides for "Performance Test" before issue of **defect liability** certificate, in which case the issue of **defect liability** certificate shall be in accordance with the procedure specified therein, the contractor shall give notice of completion of work, as soon as the work is completed, to the Engineer-in-Charge. The Engineer-in-Charge and or any other Officer, nominated for the purpose by the company, shall within 30 (thirty) days from the receipt thereof, inspect the work and ascertain the defects/deficiencies, if any, to be rectified by the contractor as also the items, if any, for which payment shall be made at reduced rate.

If the defects, according to the Engineer-in-Charge are of a major nature and the rectification of which is necessary for the satisfactory performance of the contract, he shall intimate in writing the defects and instruct the contractor to rectify the defects/remove deficiencies within the

period and in the manner to be specified therein. In such cases **defect liability** certificate will be issued by the Engineer-in-Charge after the above rectifications are carried out/ deficiencies are removed by the contractor to the satisfaction of Engineer-in-Charge.

In the event there are no defects or the defects/ deficiencies are of a minor nature and the Engineer-in-Charge is satisfied that the contractor has already made arrangements for rectification, or in the event of contractor's failure to rectify the defects for any reason whatsoever, the defects can be rectified by the company departmentally or by other means and the 50% of the security deposit of the contractor shall be sufficient to cover the cost thereof, he shall issue the **defect liability** certificate indicating the date of completion of the work, defects to be rectified, if any, and the items, if any, for which payment shall be made at reduced rate indicating reasons therefor and with necessary instructions to the contractor to clear the site/place of work or all debris/ waste materials, scaffoldings, sheds, surplus materials etc. making it clean.

- 9.1 In cases where separate period of completion for certain items or groups of items are specified in the contract, separate defect liability certificate for such items or groups of items may be issued by the Engineer-in-Charge after completion of such items on receipt of notice from the contractor only in the event the work is completed satisfactorily in every respect.

Refund of security deposit and payment of final bill shall, however, be made on completion of the entire contract work, but not on completion of such items of work.

- 9.2 Before the date fixed for completion of work, the work as well as the site of work are to be made clean after removal of rubbish, scaffolding, surplus materials, temporary structures etc.
- 9.3 In case of contractor's failure to clear the site, the EIC shall have right to get the work done. The cost thereof shall be recovered from the final bill of the contractor.

10. Defects Liability Period:

In addition to the defect/s to be rectified by the contractor as per terms of the contract/ work order, the contractor shall be responsible to make good and remedy at his own expense the defect/s mentioned hereunder within such period as may be stipulated by the Engineer-in-Charge in writing:

- a) Any defect/defects in the work detected by the Engineer-in-Charge within a period of 12 (twelve) months from the date of issue of defect liability certificate/completion certificate.
- b) In the case of building works or other works of similar nature any defect in the work detected by the Engineer-in-Charge within a period of 12 (twelve) months from the date of issue of defect liability certificate/completion certificate or before the expiry of one full monsoon period i.e. June to October whichever is later in point of time.
- 10.1 A programme shall be drawn by the contractor and the Engineer-in-Charge for carrying out the defects by the contractor detected within the defect liability period and if the contractor fails to adhere to this programme the Engineer-in-Charge shall be at liberty to procure proper materials and carry out the rectifications in any manner considered advisable under the circumstances and the cost of such procurement of materials and rectification work shall be chargeable to the contractor and recoverable from any of the pending dues of the contractors.

The defect liability period can be extended by the company on getting request from the contractor only for valid reasons.

There will be no defect liability period for works like Grass Cutting, Jungle Cutting, Surface Dressing & any other work of similar nature to be decided by the Engineer-in-Charge.

Note: In addition to all the above the contractor is personally liable for flouting to any law relating to labour including implementation of EPF. All safety requirements as per site condition is the responsibility of the contractor and any damage to person/property will be borne by him at his cost and risk.

11.0 SCOPE OF WORK.

- i) Supply laying and fixing of one number of 70 sqmm PVC insulated armoured aluminium cables on wall surface/ direct in ground (as per site requirement) from 1st floor of substation to pump house as per instruction of Engineer in charge or their authorized representative.
- ii) Supplying and making end termination at armoured aluminium cables as per site requirement and as per instruction of Engineer in charge or their authorized representative.
- iii) Supply and fixing of one no. of 160A, 415 V 4 pole on-load changeover switch (Manual) in sheet steel enclosure in wall surface of pump house as per instruction of Engineer in charge or their authorized representative.
- iv) Installation of existing one no. of starter control panel for fire-fighting pump at the wall surface of interior of pump house including connection of cable etc as per instruction of Engineer in charge or their authorized representative.
- v) supply and fixing of changeover switches and contactors in existing 415 V feeder pillar panels including making necessary arrangement for fixing as per site requirement. including disconnection and dismantling of old as per site requirement as per instruction of Engineer in charge or their authorized representative.
- vi) Providing and fixing of 200 A, 415 V four pole MCCB in existing B-1 block panel board (meter room) including connection and dismantling of old ones as per site requirement as per instruction of Engineer in charge or their authorized representative.
- vii) Excavation for foundation in soft soil and providing and making steel pole collar with cement concrete of existing four pole structure at CMPDI colony (power receiving arrangement) as per instruction of Engineer in charge or their authorized representative
- viii) All the tools, tackles & manpower required shall be in the scope of the contractor.
- ix) The contractor shall make all necessary arrangements to mobilize all the items required to complete the work at the site without charging any extra cost.
- x) The contractor shall engage only competent personnel with valid electrical license to perform the work at site.
- xi) Liaison with TPCODL/State Government personnel if any will be the responsibility of the contractor if needed.

On completion of the work all dismantle materials shall be removed by the contractor on their own expenses and shall be submitted to OIC (colony).

Items which are not specifically mentioned in the scope / specifications, but are needed to make the system complete as stipulated under the bid documents shall also be supplied by contractor. Any other equipment/item not mentioned in the quotation document but required to complete the work are also considered to be part of scope of supply

TECHNICAL SPECIFICATIONS

GENERAL INFORMATION

- The supply and installation of electrical equipment specified herein are required for outdoor and indoor.
- General specification and testing of all installations for electrical works shall conform to the specifications laid down by Central Public Works Department, Government of India in General Specifications for Electrical Works, Part-1 (Internal). However, for the items which are not covered by above mentioned publication, brief technical specification is provided in this portion.
- The successful tenderer shall furnish all, but not limited to, equipment, materials and accessories and services specified herein to complete this work. The work shall have to be completed and operative in all details. Any item of work or material which may not have been specifically mentioned but incidental to or necessary for complete installations and operation shall be provided by the Bidder.
- The successful tenderer shall supply and/or erect the addition or modification as will be agreed upon in writing after mutual discussion.
- The equipment to be furnished under this specification shall be packaged for shipment so as to meet the space and weight limitations to transport facilities, right up to destination.

STANDARDS

The equipment and materials to be furnished shall be designed, manufactured and tested in accordance with the latest revisions of the Indian Standards (IS). Where Indian standards are not available International standards like British Standards (BS), ISO, DIN, JIS or Other standards and International Electro-Technical Commission (IEC) publications unless otherwise stated, which ensures performance equivalent or superior to Indian standard shall be followed.

- The equipment conforming to any other national standard which ensures equivalent quality is also acceptable. In such cases the tenderers shall clearly indicate the standards adopted and furnish a copy of the English Version of the Standard along with the tender.
- The equipment covered under these specifications shall comply with all the

latest applicable statutory rules, regulations, acts and safety codes which may be in force during the period of execution and which are related with design, construction and operation of equipment in the locality where the equipment is to be installed.

- The electrical installation shall meet the requirement of Indian Electricity Act 1910 and Indian Electricity Rules, 1956 as amended up-to-date, Mines Rules and Regulations (latest revision) and also the applicable section of the latest revision of the relevant IS code of practice.
- Nothing in these specifications shall be construed as to relieve the supplier of the responsibility for correctness of the design and construction of the equipment. All the standards being followed shall be listed out in the bid. Where any foreign standard is being followed, the copy of the same shall be provided with the bid.
- Wherever service conditions and requirements laid down in these specifications differ from applicable standards, the conditions specified herein shall prevail.
- In addition, any relevant regulations applicable to the work shall be followed. In case of any discrepancy, the decision of purchaser will be final.

SERVICE CONDITIONS

Ambient air temperature	:	5oC to 50oC.
Altitude	:	Maximum upto 1000 M above MSL.
Relative Humidity	:	Approximately 97 %.
Pollution degree	:	Degree 4 as per IS: 13947 (Part I) (i.e. the pollution generates persistent conductivity caused by conductive dust)

1. SPECIFICATION FOR 660/1100 V GRADE PVC ARMoured CABLE

Scope

This specification covers requirements for 660 V/1.1 kV grade PVC insulated (Heavy duty) armoured Aluminium conductor electric cables.

Material

- (a) The conductor shall be Aluminium wires conforming to relevant codes and the insulation used shall be Poly Vinyl Chloride (PVC) compound conforming to the requirements of Type A and Type C compound conforming to relevant codes.
- (b) The outer sheath, fillers and inner sheath shall have FRLS property.
- (c) Armouring shall be Galvanised round steel wire. Galvanised steel wires shall comply with the requirements of relevant Code. A binder tape on the armour shall be provided.

Constructional features

The conductor shall be of stranded construction complying with class 2 of relevant codes. A protective barrier shall be provided between the conductor and

the insulation and this shall be compatible with the insulating material and the operating temperature of 70°C.

The conductor with protective barrier shall be provided with PVC insulation applied by extrusion. The average thickness of insulation shall be as per relevant IS. Armouring shall be provided over the inner sheath. The armour of the cables shall consist of galvanized round steel wires. The nominal diameter of round armour wire shall be as per relevant IS.

TECHNICAL INFORMATION FOR 660/1100 V GRADE PVC

ARMOURED CABLE (Annexure-I)

Applicable Code	- IS 1554 (Part-1)
Cable Code	- AYFY
Voltage Grade	- 660/1100 V
Conductor Size	- As required
No. of Cores	-3.5

2.SPECIFICATION FOR 415 V MOULDED CASE CIRCUIT BREAKERS (MCCB)

SCOPE

This specification covers requirements for Moulded Case Circuit Breakers suitable for installation in switchboards. Moulded case circuit breakers shall comply with the latest revision of IS: 13947(Part I) and IEC: Publication 947 except where modified or extended by the provision of this specification and with the relevant parts of standards..

DESIGN-CRITERIA

The Moulded Case Circuit Breakers shall operate on a 415V (L-L) (+ 10%), 3 phase, 50 Hz (-3% to +3%) power supply. Fault withstand capacity shall not be less than 25 kA. All similar components shall be interchangeable and shall be of same type and rating for easy maintenance and low spare inventory. The rated carrying capacity shall be sufficient at the rated voltage and frequency and the circuit breaker shall carry this current continuously while complying with this specification.

CONSTRUCTIONAL FEATURES

- 1) The Circuit breakers shall be four pole, moulded case air break type.
- 2) The circuit breaker shall have tripping mechanism for over load and short circuit irrespective of the type of operating mechanism. In addition, provision shall be made for manual tripping of the breaker. The breakers shall be fixed type.
- 3) Tripping shall be possible by means of front mounted "OFF" switch. Making of the breaker shall be possible by means of "ON" switch.
- 4) The following protection (release type) shall be provided:
 - a) Ambient temperature compensated thermal overload trip with adjustable settings.
 - b) Magnetic Short circuit trip.

PERFORMANCE

- 1) The temperature rise of parts of the equipment like terminals, accessible parts, main circuit, windings of coils and electromagnets etc. measured during the test carried out in accordance with IS: 13947 (Part I) shall not exceed temperature rise limits specified in the said standard.
- 2) The dielectric property of the equipment, clearances and minimum creepage distance shall conform to IS: 13947 (Part I).
- 3) The equipment shall be capable of making and breaking load and overload currents without failure under the conditions stated in the relevant product standard for the required utilisation category.
- 4) The equipment shall be capable of withstanding thermal and electromagnetic stress from short circuit currents during current making, current carrying in the closed position and during current interruptions.

ANNEXURE - I

TECHNICAL SPECIFICATION FOR MOULDED CASE CIRCUIT BREAKERS

1	Installation	:	Switch board
2	Number of Poles	:	4
3	Service Voltage	:	415 V (L-L) ($\pm 10\%$)
4	Rated current (A)	:	200
5	Making capacity	:	36 kA (peak)
6	Frequency	:	50 Hz ($\pm 3\%$)
7	Operating Mechanism	:	Manual Trip free
8	Tripping arrangement	:	Thermal overload and Short circuit electromagnetic release.
9	Protections to be provided	:	i) Short circuit ii) Overload
10	Cable Terminal	:	Suitable for PVCSWA with Aluminium conductor. Totally shrouded to avoid risk of electric shock to operating personnel.
11	Execution	:	Fixed

3 SPECIFICATION FOR 160 AMP. 415 V CHANGEOVER SWITCH

1. Mechanism

A single, compact and modular mechanism cassette operates two Switch-Disconnectors and provides mechanical interlocking between them. The use of patented, self-interlocked and dual dead center mechanism in CO range provides higher reliability for changeover function.

2. Terminal shroud

These shrouds provide complete touch proof design and prevent accidental touching of live terminals. They are click fit type. Due to hinge type terminal shrouds, it can be turned by 90 degree, hence terminals can be inspected without removing these shrouds.

3. Source separator

Source separator is used to isolate two incoming supplies and to eliminate possibility of flash over

between two supplies due to accidental falling of external objects.

4. Inter-phase barriers

Inter-phase barriers are provided for additional safety to eliminate possibility of inter-phase shortcircuit.

5. Positive ON / OFF indication of S-Ds

The Changeover S-D indicates true position of contacts.

6. Staggered terminals

The Changeover S-Ds are designed to have staggered terminal arrangement for top and bottom S-Ds. It provides clear access to all terminals from the front, ensuring ease of termination. All terminal joints can be easily inspected without the need of removing termination of top S-D.

7. Interchangeable dual shaft position

Patented dual dead enter mechanism enables the user to choose between central and side shaft positions for operating handle. This can be easily converted on site as required.

8. Handle

The Changeover Switch shall have a single hand operating handle. The handle shall have the

following features:

- Provision for Padlocking in both ON & OFF position with three Padlocks .
- IP54 with extended type operating handle

9. Sheet steel enclosure

The Changeover Switches are fitted in sheet steel enclosure with adequate space for cable terminations so that additional cable entry boxes are not required. Cable gland plates are also provided with the switch. Enclosure provides IP54 protection.

10. Auxiliary contact kit

It consists of two sets changeover contacts one for each S-D. This kit is pre-wired with terminal blocks and is offered as a standard feature with Manual Changeover Switches.

11. Castell lock

Accessory to lock the Changeover Switch in OFF state and using this can have interlocking schemes between multiple Switches

Basic function of Changeover Switches

Onload Changeover S-D has 3 stable positions as defined below

- 1) Switch is in ON position with normal supply available at the outgoing terminals.
- 2) Switch is in OFF position & outgoing terminals are isolated from both supplies
- 3) Switch is in ON position with alternate supply available at the outgoing terminals

Onload Changeover S-D consists of two separate sets of terminals for incoming supplies and a set of output terminals to connect the common load. Thus, changeover switch ensures continuity of supply to the load by alternating between normal and alternate supply

Performance

1)Higher short-time withstand Capacity

Contact system is of double break, knife type having self wiping action with electrodynamic compensation. This ensures reliable performance during normal as well as short circuit fault conditions, offering higher short-time withstand rating.

2)Higher life

Changeover switch offers high electrical and mechanical life in compact frame sizes. The electrical and mechanical life are two times the requirement of the standard.

3)Total flexibility of connection

Factory fitted external shorting links can be easily removed and fitted on the other side as required at site. This gives more flexibility at the time of installation.

4)Maximum termination capacity

Changeover Switch provides generous terminal capacity in its compact size, facilitating aluminium termination.

5)Higher ground clearance

Higher ground clearance between terminals and mounting base plate ensures adequate clearance even after connecting cables. This eliminates the possibility of phase to ground flash over.

6)Total Safety Changeover Switch provides complete safety by providing terminal shrouds, source separator and inter-phase barriers.

7)Changeover Switch provides generous terminal capacity in its compact size, facilitating aluminium termination.

TECHNICAL SPECIFICATION FOR 160 AMP. CHANGEOVER SWITCH

No. of Poles	4 Nos.
Rated operational voltage (U)	415 V
Rated frequency	50HZ
Rated insulation voltage	1000 V
Rated impulse withstand voltage	12 kV
Pollution degree	3
Conventional free air thermal current, I at 40 C	160 A
Conventional enclosed thermal current, I at 40 C	160A
Rated operational current, I AC-21A / AC-22A / AC-23A	160 A
Rated breaking capacity for AC-23A	1280A
Rated making capacity for AC-23A	1600A
Maximum Al. cable with lug	95 sq mm
Maximum link width	30mm
Maximum link thickness	5mm

Following Technical Specifications to be followed:

Latest CPWD specification shall be adopted. Presently the following are in vogue:

Part No.	Description	Year Of Issue
I	Internal	2013
III	Lifts And Escalators	2003
V	Wet Riser And Sprinklers System	2006
VI	Heating, Ventilation And Air Conditioning Works	2017
IV	Substation	2013

VENDOR'S LIST FOR ELECTRICAL ITEMS

Sl. No.	Item Description	Make
1	MCCB/CHANGE OVER SWITCH	L&T / ABB / HAVELLS / SCHNEIDER / CONTROL & SWITCHGEAR COMPANY / STANDARD OR EQUIVALENT.
2	CABLE	UNIVERSAL CABLE / NICCO / HAVELLS / SKYTONE / KEI INDUSTRIES / OR EQUIVALENT.

SAFETY CODE

1. Suitable scaffolds should be provided for workmen for all works that cannot safely be done from the ground, or from solid construction except such short period work as can be done safely from ladders. When a ladder is used, an extra mazdoor shall be engaged for holding the ladder and if the ladder is used for carrying materials as well suitable footholds and hand-hold shall be provided on the ladder and the ladder shall be given an inclination not steeper than $\frac{1}{4}$ to 1 ($\frac{1}{4}$ horizontal and 1 vertical).
2. Scaffolding of staging more than 3.6 m (12ft). above the ground or floor, swung or suspended from an overhead support or erected with stationary support shall have a guard rail properly attached or bolted, braced and otherwise secured at least 90 cm (3ft) high above the floor or platform of such scaffolding or staging and extending along the entire length of the outside and ends thereof with only such opening as may be necessary for the delivery of materials. Such scaffolding or staging shall be so fastened as to prevent it from swaying from the building or structure.
3. Working platforms, gangways and stairways should be so constructed that they should not sag unduly or unequally, and if the height of the platform or the gangway or the stairway is more than 3.6 m (12ft) above ground level, they should be closely boarded, should have adequate width and should be suitably fastened as described in (2) above.
4. Every opening in the floor of a building or in a working platform shall be provided with suitable means to prevent the fall of person or materials by providing suitable fencing or railing whose minimum height shall be 90 cm (3ft).
5. Safety means of access shall be provided to all working platforms and other working places. Every ladder shall be securely fixed. No portable single ladder shall be over 9 m (30ft) in length while the width between side rails in rung ladder shall in no case be less than 20 cm (11 $\frac{1}{2}$ ") for ladder upto and including 3 m (10ft) in length. For longer ladders, this width should be increased at least $\frac{1}{4}$ " for additional 30 cm (1ft.) of length. Uniform step spacing of not more than 30 cm shall be kept. Adequate precautions shall be taken to prevent danger from electrical equipment. No materials on any of the sites or work shall be so stacked or placed as to cause danger or inconvenience to any person or the public. The contractor shall provide all necessary fencing and lights to protect the public from accident and shall be bound to bear the expenses of defence of every suit, action or other proceedings at law that may be brought by any person for injury sustained owing to neglect of the above precautions and to pay any damages and cost which may be awarded in any such suit; action or proceedings to any such person or which may, with the consent of the contractor, be paid to compensate any claim by any such person.
6. Excavation and Trenching : All trenches 1.2 m (4ft) or more in depth, shall at all times be supplied with at least one ladder for each 30 m. (100 ft.) in length or fraction thereof. Ladder shall extend from bottom of the trench to at least 90 cm (3ft) above the surface of the ground. The side of the trenches which are 1.5 m (5ft) or more in depth shall be stepped back to give suitable slope or securely held by timber bracing, so as to avoid the danger of sides collapsing. The excavated materials shall not be placed within 1.5 m (5ft) of the edges of the trench or half of the depth of the trench whichever is more. Cutting shall be done from top to bottom. Under no circumstances, undermining or undercutting shall be done.
7. Demolition : before any demolition work is commenced and also during the progress of the work,
 - i. All roads and open areas adjacent to the work site shall either be closed or suitably protected.
 - ii. No electric cable or apparatus which is liable to be a source of danger or a cable or apparatus used by the operator shall remain electrically charged.

iii. All practical steps shall be taken to prevent danger to persons employed from risk of fire or explosion or flooding. No floor, roof or other part of the building shall be so overloaded with debris or materials as to render it unsafe.

8. All necessary personal safety equipment as considered adequate by the Engineer-in-Charge should be kept available for the use of the person employed on the site and maintained in a condition suitable for immediate use, and the contractor should take adequate steps to ensure proper use of equipment by those concerned:- The following safety equipment shall invariably be provided.

i) Workers employed on mixing asphaltic materials, cement and lime mortars shall be provided with protective footwear and protective goggles.

ii) Those engaged in white washing and mixing or stacking of cement bags or any material which is injurious to the eyes, shall be provided with protective goggles.

iii) Those engaged in welding works shall be provided with welder's protective eye-shields.

iv) Stone breaker shall be provided with protective goggles and protective clothing and seated at sufficiently safe intervals.

v) When workers are employed in sewers and manholes, which are in active use, the contractors shall ensure that the manhole covers are opened and ventilated at least for an hour before the workers are allowed to get into the manholes, and the manholes so opened shall be cordoned off with suitable railing and provided with warning signals or boards to prevent accident to the public. In addition, the contractor shall ensure that the following safety measures are adhered to:-

a) Entry for workers into the line shall not be allowed except under supervision of the Engineering Assistant or any other higher officer.

b) At least 5 to 6 manholes upstream and downstream should be kept open for at least 2 to 3 hours before any man is allowed to enter into the manhole for working inside.

c) Before entry, presence of Toxic gases should be tested by inserting wet lead acetate paper which changes colour in the presence of such gases and gives indication of their presence.

d) Presence of Oxygen should be verified by lowering a detector lamp into the manhole. In case, no Oxygen is found inside the sewer line, workers should be sent only with Oxygen kit.

e) Safety belt with rope should be provided to the workers. While working inside the manholes, such rope should be handled by two men standing outside to enable him to be pulled out during emergency.

f) The area should be barricaded or cordoned off by suitable means to avoid mishaps of any kind. Proper warning signs should be displayed for the safety of the public whenever cleaning works are undertaken during night or day.

g) No smoking or open flames shall be allowed near the blocked manhole being cleaned.

h) The malba obtained on account of cleaning of blocked manholes and sewer lines should be immediately removed to avoid accidents on account of slippery nature of the malba.

i) Workers should not be allowed to work inside the manhole continuously. He should be given rest intermittently. The Engineer-in-Charge may decide the time up to which a worker may be allowed to work continuously inside the manhole.

j) Gas masks with Oxygen Cylinder should be kept at site for use in emergency.

k) Air-blowers should be used for flow of fresh air through the manholes. Whenever called for, portable air blowers are recommended for ventilating the manholes. The Motors for these shall be vapour proof and of totally enclosed type. Non sparking gas engines also could be used but they should be placed at least 2 meters away from the opening and on the leeward side protected from wind so that they will not be a source of friction on any inflammable gas that might be present.

l) The workers engaged for cleaning the manholes / sewers should be properly trained before allowing to work in the manhole.

m) The workers shall be provided with Gumboots or non-sparking shoes bump helmets and gloves non sparking tools safety lights and gas masks and portable air blowers (when necessary). They must be supplied with barrier cream for anointing the limbs before working inside the sewer lines.

- n) Workmen descending a manhole shall try each ladder stop or rung carefully before putting his full weight on it to guard against insecure fastening due to corrosion of the rung fixed to manhole well.
- o) If a man has received a physical injury, he should be brought out of the sewer immediately and adequate medical aid should be provided to him.
- p) The extents to which these precautions are to be taken depend on individual situation but the decision of the Engineer-in-Charge regarding the steps to be taken in this regard in an individual case will be final.
- vi) The Contractor shall not employ men and women below the age of 18 years on the work of painting with products containing lead in any form. Wherever men above the age of 18 are employed on the work of lead painting, the following precaution should be taken:-
 - a) No paint containing lead or lead products shall be used except in the form of paste or readymade paint.
 - b) Suitable face masks should be supplied for use by the workers when paint is applied in the form of spray or a surface having lead paint is dry rubbed and scrapped.
 - c) Overalls shall be supplied by the contractors to the workmen and adequate facilities shall be provided to enable the working painters to wash during and on the cessation of work.
 - d) Measures shall be taken, wherever practicable, to prevent danger arising out of from dust caused by dry rubbing down and scraping.
 - e) Adequate facilities shall be provided to enable working painters to wash during and on cessation of work.
 - f) Overall shall be worn by working painters during the whole of working period.
 - g) Suitable arrangement shall be made to prevent clothing put off during working hours being spoiled by painting materials.
- 9. When the work is done near any place where there is risk of drowning, all necessary equipments should be provided and kept ready for use and all necessary steps taken for prompt rescue of any person in danger and adequate provision, should be made for prompt first aid treatment of all injuries likely to be obtained during the course of the work.
- 10. Use of hoisting machines and tackle including their attachments, anchorage and supports shall conform to the following standards or conditions:-
 - i) (a) These shall be of good mechanical construction, sound materials and adequate strength and free from patent defects and shall be kept repaired and in good working order.
 - (b) Every rope used in hoisting or lowering materials or as a means of suspension shall be of durable quality and adequate strength, and free from patent defects.
 - ii) Every crane driver or hoisting appliance operator, shall be properly qualified and no person under the age of 21 years should be in charge of any hoisting machine including any scaffolding winch or give signals to operator.
 - iii) In case of every hoisting machine and of every chain ring hook, shackle swivel and pulley block used in hoisting or as means of suspension, the safe working load shall be ascertained by adequate means. Every hoisting machine and all gear referred to above shall be plainly marked with the safe working load. In case of a hoisting machine having a variable safe working load each safe working load and the condition under which it is applicable shall be clearly indicated. No part of any machine or any gear referred to above in this paragraph shall be loaded beyond the safe working load except for the purpose of testing.
 - iv) In case of departmental machines, the safe working load shall be notified by the Electrical Engineer-in-Charge. As regards contractor's machines the contractors shall notify the safe working load of the machine to the Engineer-in-Charge whenever he brings any machinery to site of work and get it verified by the Electrical Engineer concerned.
- 12. Motors, gearing, transmission, electric wiring and other dangerous parts of hoisting appliances should be provided with efficient safeguards. Hoisting appliances should be provided with such means as will reduce to the minimum the risk of accidental descent of the load. Adequate precautions should be taken to reduce to the minimum the risk of any part of a suspended load

becoming accidentally displaced. When workers are employed on electrical installations which are already energized, insulating mats, wearing apparel, such as gloves, sleeves and boots as may be necessary should be provided. The worker should not wear any rings, watches and carry keys or other materials which are good conductors of electricity.

13. All scaffolds, ladders and other safety devices mentioned or described herein shall be maintained in safe condition and no scaffold, ladder or equipment shall be altered or removed while it is in use. Adequate washing facilities should be provided at or near places of work.

14. These safety provisions should be brought to the notice of all concerned by display on a notice board at a prominent place at work spot. The person responsible for compliance of the safety code shall be named therein by the contractor.

15. To ensure effective enforcement of the rules and regulations relating to safety precautions the arrangements made by the contractor shall be open to inspection by the Labour Officer or Engineer-in-Charge of the department or their representatives.

16. Notwithstanding the above clauses from (1) to (15), there is nothing in these to exempt the contractor from the operations of any other Act or Rule in force in the Republic of India.

ADDITIONAL TERMS AND CONDITIONS

The following additional terms and conditions are also acceptable to the company. The tenderers are requested not to quote any further additional conditions in the tender:

1. Mobilization Advance: No mobilization advance is payable for the works.
2. Application of Price Variation Clause: No escalation shall be payable for the work on any account.
3. Safety regulation: The manpower engaged by the contractor at site shall abide by the rules and regulations in respect of safety and security. The contractor shall provide safety equipment like safety shoes, helmet, gloves etc. to his personnel deputed at site.
4. The contractor has to arrange for necessary tools tackles, measuring instruments, etc. required for carrying out the work.
5. The Contractor is to ensure all safety aspects of electrical installations/personnel working in the vicinity of HT, MT and LT installations.
6. The CMPDI shall not be liable for or in respect of any damages or compensation payable as per LAW in respect or in consequence of any accident or injury to any workman or other persons in the employment of the Contractor, save and except an accident or injury resulting from any act or default of the CMPDI, his agents or servants and the Contractor shall indemnify and keep indemnified the CMPDI against all such damages and compensation (save and except as aforesaid) and against all claims, demands, proceedings, cost charges and expenses whatsoever in respect thereof or in relation thereto.
7. The Contractor shall engage only competent, skillful, orderly workmen having good conduct for the said work. The company shall have the right to ask the Contractor to remove from the work site any man of the Contractor who in their opinion is undesirable and the Contractor will have to remove him with suitable substitute.
8. The Contractor shall familiarize himself with and will be governed by all law and rules of India and local statutes, orders and regulations applicable to his work.
9. The electrical installation shall meet the requirement of Indian Electricity Act 1910 and Indian Electricity Rules, 1956 as amended up-to-date, Mines Rules and Regulations (latest revision) and also the applicable section of the latest revision of the relevant IS code of practice.
9. General specification and testing of all installations for electrical works shall conform to the specifications laid down by Central Public Works Department, Government of India in General Specifications for Electrical Works 2013, Part-1 (Internal). However, for the items which are not covered by above mentioned publication, brief technical specification is provided in this portion
10. The Court at Bhubaneswar only will have the Jurisdiction to deal with to decide any legal matter on dispute whatsoever arising out of any contract.

ANNEXURE-I**SCHEDULE OF WORK (PRICE BID)**

Sl. no.	Description	Unit	Qty.	Rate (in Rs.) Excluding GST	Amount (in Rs.) Excluding GST
1	Supply laying and fixing of 1.1 kV grade, 70 sq mm 3.5 core PVC insulated Armoured aluminium cables ISI marked on wall surface (clamped with 25x3mm MS flat clamp)	Meter	20		
2	Supply laying and fixing of 1.1 kV grade, 70 sq mm 3.5 core PVC insulated Armoured aluminium cables ISI marked. direct in ground (600 mm below the ground) including excavation ,sand cushioning,protective covering and refilling the trench etc. as required.	Meter	20		
3	Supplying and making end termination with brass compression gland and aluminium lugs for 3½ X 70 sq. mm (38mm) of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV.	Each	4		
4	Supply and fixing of 4 pole 160 Am.,415 volts on load changeover switch (Manual) in sheet steel encloser in wall surface of pump house	Each	1		
5	Installation of existing 415 V starter control panel, connection of cable etc.at pump house in colony as per instruction of engineer in charge.	L.S.	1		
6	Supply and fixing of 415V, 63 Amp. 4 pole contactor with 415V/230 v coil in existing 415 V DG feeder pilar panel as per site requirement.	Each	3		
7	Supply and fixing of 4 pole 40 Amp., 415 volts on load changeover switch in existing 415 V DG feeder pillar.	Each	2		
8	Providing and fixing 200 A, 36 KA, four pole MCCB with thermomagnetic release and terminal spreaders in existing B-1 block cubicle panel board including drilling holes in cubicle panel, making connections, etc. as required.	Each	1		
9	Making necessary arrangements in existing Motor, feeder pillar, panels for fitting of cable entry, contactor, changeover switch etc. Including drilling holes as required.	L.S.	1		

10	Excavation for foundation in soft soil including dressing of sides and ramming of bottoms lift up to 1.5m including getting out the excavated soil and disposal of surplus excavated soil as directed within a lead of 50 meters.	Cum.	1		
11	Providing and making steel pole collar with cement concrete (1 cement: 3 coarse sand: 6 graded stone aggregate 20 mm) of specified size and shape including form work, plastering if required, curing etc. as required. Volume of pole/pipe not to be deducted)	Cum.	1		
	Total(1 to 11)				
	GST@18%				
	Total including GST				

Total amount in words:- Rupees

I agree with all the terms and conditions mentioned in the quotation document.

(Signature of the Quotationer
with Date & Seal)

PROFORMA for Undertaking to be submitted by Bidder/s (On Bidder's Letter Head) for Genuineness of the Information furnished on-line and authenticity of the Documents uploaded on-line in support of his Eligibility:

FORMAT OF UNDERTAKING

I / We Proprietor/Partner/Legal Attorney/ Director/

Accredited Representative of M/S., solemnly declare that:

1. I/ We am/ are submitting Bid for the work.....against NIT No/Tender ID..... Dated..... and I/ we offer to execute the work in accordance with all the terms, conditions and provisions of the bid.
2. I / Our Partners / Directors don't has/have any relative as employee of Central Mine Planning and Design Institute, Ltd, Ranchi.
3. All information furnished by us in respect of fulfillment of eligibility criteria and qualification information of this Bid is complete, correct and true.
4. All copy of documents, credentials and documents submitted along with this Bid are genuine, authentic, true and valid.
5. I/ We hereby authorize department to seek references / clarifications from our Bankers.
6. We hereby undertake that we shall register and obtain license from the competent authority under the contract labour (Regulation & Abolition Act) as relevant, if applicable.
7. * I/ We hereby confirm that we have registration with CMPF / EPF Authorities. We shall make necessary payments as required under law. Or
* I/ We hereby undertake that we shall take appropriate steps for registration as relevant under CMPF / EPF authorities, if applicable. We shall make necessary payments as required under law.
8. * I/ We have not been banned or delisted by any Govt., or Quasi Govt. Agencies or PSUs (In case of JV, all partners are covered). Or
* I / Wehave been banned by the organization named “_____” for a period of..... year/s, effective from to.....(in case of JV, name(s) of the JV Partner(s)).
9. If any information and document submitted is found to be false/ incorrect at any time, department may cancel my/our Bid and action as deemed fit may be taken against me/us, including termination of the contract, forfeiture of all dues including Earnest Money and banning/ delisting of our firm and all partners of the firm etc.
10. * I have downloaded this quotation document online and no modification/tampering has been made in the quotation document.
[* Delete whichever is not applicable.]

Signature of the Quotationer

Dated-----

ANNEXURE- III

(Certificate to be furnished by the Bidder on his letter head in case the quotation document is downloaded from Website.)

CERTIFICATE

(only for Tenderer using downloaded quotation document from Website)

I/We.....undertake that the Tender submitted by us is downloaded from Website <http://www.cmpdi.co.in> and is same in content and form (verbatim), and any deviation, if detected, at any stage, would entitle CMPDI to reject our bid/offer without assigning any reason or recourse to any penal action, and would be legally binding on us.

Signature of Quotationer

Seal.....