



RASHTRIYA ISPAT NIGAM LIMITED
VISAKHAPATNAM STEEL PLANT
MINES DEPARTMENT
VISAKHAPATNAM-530031
PHONE NO: 0891-2519545, TELEFAX NO:0891-2518669

NAME OF THE WORK: *SUPPLY, ERECTION, TESTING AND COMMISSIONING OF EARTHING AND LIGHTNING PROTECTION SYSTEM FOR MADHARAM DOLOMITE MINES.*

Open Tender Notice No. : VSP/Mines-04/2015-16 Date: 14.05.2015

PERIOD OF CONTRACT : 03 (Three) Months
DEFECT LIABILITY PERIOD : Nil Months
ENGINEER : Manager (Elect.) / MDM

ISSUED TO SRI/ M/s. _____

Note: Tenderer has to fill the data wherever and whatever required in the tender schedule without fail and sign all the pages

No of pages of BOQ alone: 01 (One) pages only

Total No. of pages : 26(Twenty Six) pages only

(FOR OFFICE USE ONLY)

1. E.M.D. PARTICULARS	:	
2. Sl.No.	:	OUT OF TENDERS
3. COVERING LETTER	:	NO. OF PAGES:
4. REBATE OFFERED	:	
5. RATE WRITTEN IN WORDS	:	
6. VALIDITY OF TENDER	:	4 MONTHS FROM THE DATE OF OPENING
SIGNATURE OF MINES DEPT. REPRESENTATIVE		SIGNATURE OF FINANCE DEPARTMENT REPRESENTATIVE



RASHTRIYA ISPAT NIGAM LIMITED / VISAKHAPATNAM STEEL PLANT
MINES DEPARTMENT, C-Block, IInd Floor, North Wing, Administrative Building
VISAKHAPATNAM – 530 031
Phone: 0891-2519545, Fax: 0891-2518669

Open Tender Notice No. : VSP/Mines-04/2015-16 Date: 14.05.2015

Sealed Tender along with Earnest Money Deposit (EMD) is invited from experienced contractors work for the following works:

NAME OF THE WORK:- SUPPLY, ERECTION, TESTING AND COMMISSIONING OF EARTHING AND LIGHTNING PROTECTION SYSTEM FOR MADHARAM DOLOMITE MINES.

Note: Agencies having valid Electrical license issued by any state licensing board / authority will only be considered for the work. The agency should have experience in supply and installation of earthing and lightning protection system.

Cost of Tender Document (Non-refundable)		Eligibility / experience requirements		Earnest Money Deposit (Rs)
By Hand (Rs)	By Downloading from Web Site of www.vizagsteel.com (Rs)	Value of single similar work executed (Rs. In Lakhs)	Annual Turn over (Rs. In lakhs)	
600/=	600/=	3.81	2.286	5,000/=

2. Cost of Tender document shall be paid in the form of DD obtained from any Nationalised or scheduled bank drawn in favour of RIN Ltd, payable on State Bank of India, Madharam, Code No..8793. *THE COST OF TENDER DOCUMENT RECEIVED ALONGWITH TENDER CUMENT WILL NOT BE REFUNDED UNDER ANY CIRCUMSTANCES UPON RECEIPT OF TENDER.*

3. The value of single similar work executed shall be during the last 07(Seven) years ending last day of month previous to Tender Notice date i.e 30.04.2015 and Turnover shall be the average Annual Financial Turn over during the last three years ending 31st March of the previous financial year i. e 31-03-2015. The tender document shall be accompanied with copies of a) **Work Order, Bill of Quantities, Completion Certificate with details of value of work executed (b) for Turn Over Audited Balance Sheets certified by Practicing Chartered Account in case the annual Turnover is more than Rs.40.00 Lakhs (or) in case of Turnover is less than Rs.40.00 lakhs either Turnover Certificate in the prescribed format of VSP duly signed by a Practicing Chartered Accountant/Cost Accountant or T.D.S. Certificate (s) comprising the Gross Bill values issued by the Deductor (s) for the work done.** : Tender Documents will not be opened/considered if the above documents are not enclosed along with the offer.. The authorized representative of the tenderer shall sign on all the copies of the documents submitted along with the tender document.

Note :

a) Tenderer shall submit PF registration certificate if available , if not available successful tenderer shall submit PF registration certificate before commencement of work.

b) Tenderer shall submit VAT registration certificate under APVAT act if available, if not available successful tenderer shall submit VAT registration certificate under APVAT act before signing the Work order / Letter of Acceptance and submit a copy of the same.

4. The tenderers are requested to note that

4.1 The offer shall be made in 02(Two) envelopes. **FIRST ENVELOPE** (to be super scribed as ENVELOPE-1 with name of the work, Name of the Contractor tender notice number should contain the cost of the tender document in case the tender is downloaded from the web site (Tender can be purchased from the Office of DGM(Mines) by paying tender cost in the form of DD as cited at Para-2 above in which case tender cost need not be enclosed while submitting the tender), Earnest Money Deposit (EMD) separately in the form of DD/BC/BG etc (refer to instruction to tenderer) and pre-qualification documents (Criteria eligibility/experience and other documents, etc as cited at Para (03) above) duly signed / attested by the authorized representative of the Company as per Para-1 read with Para-3 above. **SECOND ENVELOPE** (to be super scribed as ENVELOPE-2 with name of the work, Name of the Contractor ,tender notice number) should contain price bid in its prescribed format along with the tender document.



- 4.2 The first cover shall be opened initially and only on satisfying the eligibility criteria, adequacy of cost of tender document (in case of downloaded tender), EMD etc, placed in it, the second envelope containing the price bid shall be opened. The date and time of opening of the price bid along with names of successful tenderers in prequalification will be subsequently displayed in the notice board of Mines Department only and no individual communication to tenderers will be made.
- 4.3 VSP after opening of Tender / bid document may seek in writing documents / clarifications which are necessary for evaluation of tender / bid document from the tenderers / bidders or issuing authority for confirmation of eligibility / pre-qualifications stipulated in the NIT..
- 4.4 Scope of work, Bill of Quantities (BOQ), Terms & Conditions given in the tender documents (placed in the website) are final. On verification, at any time, whether the tenderer is successful or not, if any of the documents submitted by the tenderer including the documents downloaded from our website / issued are found tampered / altered / incomplete, they are liable for actions like rejection of the tender, cancellation & termination of the contract, debarring, etc as per the rules of the Company.
- 4.5 It will be presumed that the tenderers have gone through the General Conditions, Special Conditions & Instructions to tenderer, etc of the contract available in the website which shall be binding on him/them.
5. The tender documents and other details can be downloaded from our web site: www.vizagsteel.com and the same are to be submitted to DGM (Mines), Visakhapatnam Steel Plant .
6. Non-transferable tender document can also be obtained from the Office of DGM (Mines), VSP on written request on bidder's letter head on payment of tender cost in the form of DD/BC during working hours 10 AM to 04.30 PM on or before **04.30 PM on 30.05.2015**
7. Tenders will be received in the Office of DGM (Mines) **upto 03.00 PM on 01.06.2015** and Envelope-1 will be opened immediately thereafter.
8. If it comes to the notice of VSP at any stage right from request for enlistment / tender document that any of the certificates / documents submitted by applicant for enlistment or by bidders are found to be false / fake / doctored, the party will be **debarred from participation in all VSP tenders for a period of 05 (five) years including termination of Contract**, if awarded. EMD / Security Deposit etc, if any, will be forfeited. The contracting Agency in such cases shall make good to VSP any loss or damage resulting from such termination. Contracts in operation anywhere in VSP will also be terminated with attendant fall-outs like forfeiture of E MD / Security Deposit, if any, and recovery of risk and cost charges, etc. Decision of VSP Management will be final and binding.
9. Successful tenderer should be in a position to produce, after opening of the price bids, the Original Certificates in support of the attested copies of relevant documents submitted along with tender document. Failure to produce the original certificates at this stage in support of the attested copies of P.F Regn. / I TCC / Electrical License / experience / qualification any other documents, etc submitted earlier would result in **disqualification and forfeiture of EMD and also liable for debarring from participation in VSP tenders.**
10. Tender documents will be issued to tenderers based on their request and on payment of tender cost or same can be downloaded from our web site by submitting the cost of tender along with their offer. However, RINL will not be responsible for any delay/loss/any website related problems in downloading the tender documents, etc. RINL reserve the right to (a) issue or Refuse tender documents without assigning any reason. (b) Split and award the work to more than one agency. (c) reject any or all the tenders or to accept any tender wholly or in part or drop the proposal of receiving tenders a any time without assigning any reason thereof and without being liable to refund the cost of tender documents thereupon.

DGM (Mines)I/c

Copy to:-

- | | |
|--|---|
| 1. Projects Contracts Department: | with request to please arrange for display in the notice board for publicity. |
| 2. Town Admn. Department | -do- |
| 3. Works Contracts Department | -do- |
| 4. Madharam Dolomite Mine (MDM), Madharam. | -do- |
| 5. Jaggayyapeta Limestone Mine (JLM), Jaggayyapeta | -do- |
| 6. Garbham Manganese Mine (GMM), Garbham. | -do- |
| 7. Mines Department Notice Board. | |



Ref. Tender No. : VSP/Mines-04/2015-16 Dt. 14.05.2015

NAME OF THE WORK: SUPPLY, ERECTION, TESTING AND COMMISSIONING OF EARTHING AND LIGHTNING PROTECTION SYSTEM FOR MADHARAM DOLOMITE MINES.

To

Deputy General Manager (Mines) I/c
Mines Department
Visakhapatnam Steel Plant
Visakhapatnam-530 031.
Sirs,

With reference to the Notice Inviting Tender, I/We have gone through the tender documents issued to us. I/We have also gone through the General Conditions of Contract of VSP available in VSP web site and noted the contents therein. I/We hereby confirm that I/We shall abide by Terms and Conditions of General Conditions of the Contract including Form of Tender, Invitation to Tender, Articles of Agreement etc. I/We hereby declare that, I/We have visited, inspected and examined the site and its surroundings and satisfied ourselves before submitting this tender, obtained information about the nature of work, facilities that may be required and obtained necessary information about Working Conditions, risk contingencies etc., which may influence this tender. We hereby offer to execute & maintain the work during the defect liability period in conformity with the tender conditions at the respective rates quoted by us.

I/We have deposited the EMD, which amount is not to bear any interest and I/We do hereby agree that this sum shall be forfeited by me/us if I/We revoke/withdraw/cancel my/our tender or if I/We vary any terms in our tender during the validity period of the tender without your written consent and/or if in the event of Visakhapatnam Steel Plant accepting my/our tender and I/We fail to deposit the required security money, execute the Agreement and/start the work within reasonable time (to be determined by the Engineer) after written acceptance of my/our Tender.

- Status of the firm (mark)
- Proprietary /Partnership/others (Specify)

* Authority to Sign:

- a) Proprietor
 - b) Managing Partner
 - c) Power of attorney holder
- Name of Partners:
- 1)
 - 2)
 - 3)

Yours faithfully,

Contractor)

(Signature of

Following Details are to be furnished by the tenderer compulsorily (neat & legible) while submitting the tender schedule	
Income Tax PAN No.	
Status/Reason for not having PAN No.	
OFFICIAL ADDRESS	
Phone No:	
Cell No :	
Fax No.:	
e-mail address:	

Name:.....



(1)

Rashtriya Ispat Nigam Limited
VISAKHAPATNAM STEEL PLANT

INSTRUCTIONS TO TENDERERS

1.0 GENERAL

- 1.1 Tenders in the prescribed form should be submitted in sealed envelope superscribed on the cover (i) Name of work and (ii) The due date of opening, (iii) Name of the Contractor, (iv) Tender notice number. Sealed tenders sent by the post should be addressed to DGM (Mines), Mines Department, C Block, II Floor, North Wing, Administrative Building, Visakhapatnam Steel Plant, Visakhapatnam – 530 031 clearly superscribed on the cover detailed as above.
- 1.2 Tender Documents issued are not transferable. Tender documents issued shall be submitted wholly without detaching any part.
- 1.3 Tenders shall be for the entire scope of the work mentioned in the tender documents.
- 1.4 Tenders shall quote “only the total amount in figures and in words”. Over writing is not permitted and corrections initialed. Amount quoted in words shall govern in case of variance between figures and words.
- 1.5 The “ Total amount quoted in figures and words shall be tallied” before submission of the tender and all mistakes corrected and initialed. Quotation shall preferably be type written or written in neat and legible hand writing. All the pages of tender documents shall be signed by the tenderer.
- 1.6 If by any reason, the tender receiving date happens to be VSP’s closed holiday or an extraordinary holiday the tender will be received on the following day at the same time and shall be opened immediately thereafter.
- 1.7 If by any reason the tender opening is postponed to any other date, the details will be displayed in the notice board of Mines department. Tenderers shall see the notice board regularly and keep themselves informed in this matter.
- 1.8 Before quoting, the tenderers shall necessarily contact the “Engineer” and fully understand the job, scope of works, unit of measurements, mode of measurements, scope of supply of materials by VSP, if any, working conditions, shut down arrangements, labour deployment requirements, risk contingencies, and such other factors which may affect their tender. The contractor should visit the site and acquaint himself with the site conditions before quoting for the work. He should also sign every page of the tender document in token thereof.
- 1.9 General conditions of contract of VSP (printed book) are available with concerned section in-charges at Visakhapatnam, Jaggayyapeta and Madharam for reference. The tenderers shall study and understand the same before quoting,
- 1.10 Tenders shall be kept open for acceptance for a period of 4 months from the date of opening of tender.

2.0 EARNEST MONEY DEPOSIT (EMD)

- 2.1 Earnest Money Deposit shall be in the form of Demand Draft (Drawn in favour of RINL/Visakhapatnam Steel Plant payable at Jaggayyapeta / Madharam depending upon the place of work to be executed) or a Bank Guarantee issued by a schedule Bank. Bank Guarantee and Demand Draft shall be valid for a period of three months from the tender opening date
- 2.2 Small Scale Industrial Units and Local Land Losers Contract Co-Operative societies who request for exemption from submission of EMD shall submit a copy of their Permanent Registration in a separate sealed cover stapled or attached with their sealed tender. Only such SSI Units Registered for the same trade/item for which the tender is relevant will be exempted from submission of EMD.



- 2.3 Bank Guarantees shall be submitted along with a covering letter in a sealed envelop directly from the Bank.
- 2.4 EMD's of unsuccessful tenderers will be refunded after reasonable time with out interest.

3.0 MODE OF SUBMISSION OF TENDER

- 3.1 The offer shall be submitted in 2(two) envelopes. FIRST ENVELOPE to be super-scribed as ENVELOPE-1 with name of work, name of the contractor, tender notice number should contain the cost of tender document in the form of DD as mentioned in the tender notice in case the tender is down-loaded from web-site (Tender can be purchased from the Office of DGM (Mines) by paying tender cost in the form of DD as mentioned in the tender notice in which case, tender cost need not be enclosed while submitting the tender. Earnest Money Deposit (EMD) separately in the form of DD/BC/BG/Certificate of SSI Unit registration to get exemption from EMD etc (Refer Para 2 above), and pre-qualification documents, criteria eligibility/experience and other relevant documents as mentioned in the tender notice.

SECOND ENVELOPE to be super-scribed as ENVELOPE-2 with name of work, name of the Contractor, tender notice number should contain price bid in its prescribed format along with the tender document.

These two separate covers shall be stapled / tied together and submitted.

- 3.2 The first cover(ENVELOPE-1) shall be opened initially and only on satisfying the eligibility criteria, adequacy of cost of tender document (in case of down-loaded tender), EMD etc., placed in it, the second cover (ENVELOPE-2) containing the price bid will be opened.
- 3.3 The date and time of opening of the price bid along with names of successful tenderers in pre-qualification will be subsequently displaced in the notice board of Mines Department only and no individual communication to tenderers will be made.
- 3.4 The documents submitted in the first envelope by the tenderers in respect of pre-qualification criteria are final and no further correspondence/clarifications/submission in this regard shall be entertained.
- 3.5 Scope of work, Bill of Quantities (BOQ), terms and conditions given in the tender documents (placed in the web site) are final. On verification at any time whether the tenderer is successful or not, if any of the documents submitted by the tenderer including the documents down-loaded from our web site/issued are found tampered/altered/incomplete, they are liable for action like rejection of the tender, cancellation and termination of Contract, debarring etc., as per rules of the Company.
- 3.6 The tender documents and other details can be down-loaded from our web site *www.vizagsteel.com* and the same are to be submitted.
- 3.7 Non-transferable tender document can also be obtained from the Office of the DGM (Mines), Mines Department, VSP on written request on bidders' letter head on payment of tender cost in the form of DD/BC as mentioned in the tender notice.

SIGNATURE OF THE CONTRACTER/TENDERER

4.0 INSTRUCTIONS FOR SUCCESSFUL TENDERS

- 4.1 Unqualified Acceptance.
- 4.2 Initial Security Deposit in the approved proforma/performance Guarantee Bond in lieu of Security Deposit in the approved proforma.
- 4.3 Non-Judicial stamp paper of value Rs.100/- for concluding agreement.
- 4.4 Permanent Account No allotted by Income Tax Department and copy of latest Income Tax clearance certificate.
- 4.5 Copy of Registered Partnership Deed or an affidavit of sole proprietorship
- 4.6 Copy of Power Attorney authorising the individual to sign the agreement
- 4.7 Copy of Registration Certificate under APGST
- 4.8 Copy of P.F.Registration Certificate.
- 4.9 Confirmation of Labour Management.
These documents shall be submitted not later than 15(fifteen) days from the date of issue of detailed Letter Of Indent (LOI)
- 5.0 Tenders will be opened in the presence of such tenderers or their authorised Representatives who choose to be Present.
- 6.0 RASHTRIYA ISPAT NIGAM LIMITED reserves the right to issue/refuse tender document and to accept/reject any or all tenders either in part or in full or to split up and award the work to more than one agency without assigning any reasons thereof and without any liability to RINL.
- 7.0 If it comes to the notice of VSP at any stage right from request for tender document that any of the certificates/document submitted by bidders are found to be false/fake/doctored, the party will be debarred from Participation in all VSP tenders for a period of 05 years including termination of contract, if awarded. EMD/ Security Deposit, etc if any will be forfeited. The contracting Agency in such cases shall make good to VSP any loss or damage resulting from such termination. Contracts in operation anywhere in VSP will also be terminated with attendant fall-outs like forfeiture of EMD/ Security Deposit, if any, and recovery of risk and cost charges, etc.

SIGNATURE OF THE CONTRACTER/TENDERER



Rashtriya Ispat Nigam Limited
VISAKHAPATNAM STEEL PLANT

CERTIFICATE

I/We have gone through the general conditions of contract of VSP and noted the contents therein. I/We hereby confirm that I/we shall abide by the terms and conditions of General Conditions of the Contract including Form of Tender, Invitation to Tender, Articles of Agreement etc I/We hereby declare that, I/We have visited, inspected and examined the site and its surroundings and satisfied ourselves before submitting this tender information about the nature of the work, facilities that may be required and obtained necessary information about working conditions, risk contingencies etc., which may influence this tender.

SIGNATURE OF THE TENDERER/CONTRACTOR



SPECIAL CONDITIONS OF CONTRACT (SCC)

1. General: The special conditions of the contract (SCC) are complementary to and shall be read in conjunction with General Conditions of Contract (GCC) of VSP for works contracts. Scope of work, Bill of Quantities and other documents forming part of the Tender Documents. In case of any conflict of meaning between SCC & GCC, provisions of SCC shall over ride the Provisions of GCC.
2. Visakhapatnam Steel Plant reserves the right to accept or reject the lowest or any other tender without assigning any reason and the work may be awarded to one of the Tenderers or to more than one tenderer.
3. The contract shall be treated as having been entered into from the date of issue of the letter of intent/work order to the successful tenderer, unless otherwise specified.
4. **WATER, POWER AND COMPRESSED AIR:** Unless otherwise specified to the contrary in the tender schedule, the contractor is entitled to use in the work such supplies of water, power and compressed air (Basing on availability) from VSP's sources from approved tapping points, free of cost. The contractor shall make his own arrangement for drawing the same to the work spot.
5. Immediately on receipt of work order, the successful tenderer shall obtain and submit the following documents to the Engineer with a copy to ZPE for start of work.
 - a(i) Insurance Policy covering all the workmen against injury, permanent disability, death, etc which shall be effective from the date of start of contract and cover for the entire period of contract including extension period, if any.
 - a(ii) Insurance policy for payment of ex-gratia amount of Rs.5,00,000/- (Rupees Five lakhs only) per head in case of fatal accidents while on duty, to the contract labour engaged by him in addition to the coverage under ESI scheme / Workmen Compensation insurance policy whichever is applicable. As and when a fatal accident takes place while on duty along with benefits under the ESI scheme / Workmen Compensation, whichever is applicable, the contractor is required to pay the ex-gratia amount within 30 days (thirty) days from the date of accident to the legal heir of the deceased. In case of any delay in paying the ex-gratia amount as above, the Employer has the right to pay such amount directly to the legal heir of the deceased and recover the same from the contractor's running / future bills. This insurance policy is to be taken by the contractor over and above the provisions specified under clause no. 6.13 (Third Party) and Workmen's compensation Insurance .
 - a(iii) Copy of the policy for third party insurance as stipulated in Clause 6.13 of the GCC.
 - b) Labour License obtained from Assistant Labour Commissioner (Central), Visakhapatnam as required.
 - c) PF Registration Certificate issued by PF Authorities
6. The contractor shall submit wage records, work commencement/completion certificate etc. and obtain necessary clearance from ZPE for bills clearance.
7. The contractor shall ensure strict compliance with provisions of the Employee's Provident Fund Act, 1952 and the scheme framed there under in so far as they are applicable to their establishment and agencies engaged by them. The contractor is also required to indemnify the employer against any loss or claim or penalties or damages whatsoever resulting out of non- compliance on the part of the contractor with the provisions of aforesaid act and the schemes framed there under. A copy of the provident fund membership certificate/PF CODE number shall be submitted by the contractor.
8. The contractor shall follow the provisions of Mines Act and all rules made there under from time to time as applicable and shall indemnify the employer against all claims of compensations under the provisions of the act in respect of workmen employed by the contractor in carrying out the work against all costs, expenses and penalties that may be incurred by the employer in connection therewith.
9.
 - a) Total amount quoted shall be inclusive of all taxes, levies, duties, royalties, overheads and the like but excluding service tax prevailing as on the date of submission of bids.
 - b) During the operation of the contract if any new taxes/duties/levies etc are imposed or rates undergo changes, as notified by the Government and become applicable to the subject works, the same shall be reimbursed by VSP on production of documentary evidence in respect of the payment of the same. Similarly benefits accruing to agency on account of withdrawal/reduction in any existing taxes and duties shall be passed on to VSP.

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- C) The benefit offered by the agency (other than Service Tax) will be deducted from each bill on the offered percentage basis. Amount so recovered shall be released, limiting to the percentage of benefit offered on the quoted price, only on receipt of credit by VSP.
- d) The prices are exclusive of Service Tax. RINL-VSP will pay Service Tax as applicable on submission of Invoices in accordance with Rule 4A(1) of Service Tax Rules 1994.
The contractor will be paid Service Tax by RINL-VSP along with monthly service charge bills for further deposit with Central Excise Authorities. The contractor will, in turn, submit the documentary evidence in support of payment of Service Tax of each month along with subsequent month RA bills.
10. **ADVANCE:** No advance of any sort will be given by VSP.
11. **PAYMENT TERMS:** Payment will be made monthly on recommendations of the Engineer basing on the quantities executed, at accepted rates.
12. **MEASUREMENTS:** The contractor shall take measurements jointly with the Engineer or his representative and keep joint records for the same. Bills shall be prepared and submitted by the contractor basing on agreed measurements.
13. **INITIAL SECURITY DEPOSIT (ISD):** Initial Security Deposit for the work shall be @ 2% of contract price. Earnest Money Deposited by the successful tenderer shall be adjusted against ISD, and the difference between ISD and EMD shall be deposited in the manner mentioned in the work order/letter of intent.
14. **RETENTION MONEY:** Retention Money for contracts up to a value of Rs. 100 lakhs, at the rate of **7.5% of the bills for works with defective liability period not NIL and at the rate of 5.0% for works with defective liability period "NIL"** will be deducted from each bill until this amount together with the Initial Security Deposit reach the limit of retention which is 7.5% or 5.0% as the case may be for the value of work. The Retention Money shall be released after the satisfactory completion of defect liability period after liquidating the defects. For contracts of value above Rs.100 Lakhs, the limit of retention money shall be Rs.7.5 lakhs plus 5% of the value exceeding Rs.100 lakhs.
15. **Security Deposit:** The Public Sector Enterprises or State/Central Government Undertakings/ SSI units registered with Govt. of AP/NSIC will not be required to submit Security Deposit, but however they shall submit **"Performance Guarantee Bond"** in lieu of Security Deposit in the prescribed proforma equivalent to the value of Security Deposit covering the period of contract + defect liability period + 6 months (Claim period).
16. Recovery of income tax at source will be made from contractor's bill and deposited with Income Tax Department as per rules. Recovery of sales tax applicable shall be made from the contractor's bills.
17. **SAFETY:**
- a) The contractor and his workers must strictly take all safety precautions and shall supply to his workers dependable safety appliances like hand gloves, safety boots, safety belt, safety helmets, duster cloth, dust mask/nostril filter etc. In addition to this, contractor shall also provide additional safety appliances as per requirement and follow safe working practices like using fully insulated electrode holders etc. He shall also ensure that his workmen intelligently use only dependable safety appliances supplied to them.
 - b) The contractor shall take adequate safety precaution to prevent accidents at site. The contractor shall also ensure that his employees observe the statutory safety rules and regulations and also those laid down by the employer from time to time and promptly submit report of accident and state the measures taken by him to prevent their recurrence and also keep the employer indemnified of all claims arising out of such accidents.
 - c) No Workmen shall be engaged on the work without proper safety induction and without using required PPE. Use of safety helmet and shoe is must excepting in painting works where shoe will not be used.
 - d) All the safety appliances required for safe working as decided by SED/Contract operating deptt. shall be provided by the contractor to his workmen.
 - e) Clearance to start the job will be obtained by the contractor in form 'A&B' before start of work. The forms may be obtained from the dept. concerned.
 - f) Works at height cannot be started without clearance from Zonal Safety Officer. The workers engaged for work at height shall possess height pass from SED. The names of workmen working at height or in hazardous areas will be written on the body of form "B".

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- g) The contractor shall ensure that the Welders and Gas Cutters wear cotton dress and leather apron. They shall not wear nylon/synthetic dress. This is required to avoid any fire accident. This must be followed strictly”.
- h) Contravention of any safety regulation of VSP in vogue from time to time will result into work stoppage, levying penalties and ultimately in contract termination.. The list of safety violations category wise are as follows:

Category	Safety violations	Fine
I	<p>1. Occasional violation of not wearing crash helmet.</p> <p>2..Driver of two wheeler carrying more than one pinion rider</p> <p>3.Wrong Parking of vehicle.</p>	<p>First offence: Rs. 100.00 Second or subsequent offences: Rs.300.00</p> <p>First offence: Rs. 100.00 Second or subsequent offences: Rs.300.00</p> <p>First offence: Rs. 100.00 Second or subsequent offences: Rs.300.00</p>
II	<p style="text-align: center;"><u>MINOR VIOLATIONS</u></p> <ol style="list-style-type: none"> 1. Working at height with out height pass. 2. Unauthorized entry at hazardous location. 3. Engaging workers with out safety training. 4. Proper ladder/steps not provided for working. 5. Faillure to provide proper Shuttering at excavation works. 6. Power connection taken from board without proper board plug. 7. Fitness certificated of cranes/hydra/heavy vehicles not available. 8. Crane rope conditions not ok. 9. Not wearing safety helmet /safety shoe at site. 10. Safety goggles/Hand gloves not used. 11. Gas cutting without goggle. 12. Rolling/lifting of cylinder/dragging on the ground (without cage). 13. Welding with non standard holder. 14. Welding machine earthing not done (double body earthing). 15. Gas Hose pipe clamping done by wires. 16. LPG. Cylinder date expiry/over. 17. Loading/unloading of cylinder –cushion not given. 18. Condition of hose pipe not good. 19. Working with leaking cylinder. 20. Using non power cable instead of welding cable. 21. Working without work permit/shut down. 22. Not putting red flags / stoppers. 23. Dismantling of structure without authorized plan. 24. Unauthorized Oxygen /nitrogen tapping. 25. Not having proper gate passes/other area passes. 26. Use of damaged slings/tools/ropes. 27. Use of Hand grinders/mixer machines without guard. 28. Not reporting of accident. 29. Taking shelter behind electrical panel. 	<p>First Violation: Rs.2,500/- Second violations : Rs.10,000/- Third time repeated violation: Rs 20,000/-</p>

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	30. Driving of heavy vehicles on the main road during restricted hour. 31. Truck side panel/broken not ok. 32. Dropping / Spillage of material on the road. 33. No number plate on vehicle. 34. No indicator light / brake light on vehicles. 35. Driving Dangerously 36. Overloading of the vehicles beyond CC weight. 37. Racing and trials of speed, Overtaking heavy vehicles 38. Moving vehicles in unauthorized restricted routes 39. Talking with cell phone while driving 40. Truck carrying Powdery material with out tarpaulin 41. Vehicles without Red flags/Red lights ,Side guards & Donnage. 42. Stock protruding out of the truck body.	First Violation: Rs.2,500/- Second violations : Rs.10,000/- Third time repeated violation: Rs 20,000/-
III	<u>MAJOR VIOLATIONS</u> 1. Using bamboo or other non standard material for scaffolding. 2. Railing not given at platforms or opening of floor. 3. Scaffolding planks not tied properly. 4. Throwing / dropping of material from height. 5. Proper ladder/approach not given for working at height. 6. Walkway / cross over path not provided. 7. No barricading of excavated pits. 8. No top cover on power distribution board 9. Sleeping under truck. 10. Absence of Supervisor at height works, confined space jobs and other hazardous jobs. 11. Welding screen /Face shield ,welder gloves not used 12. Driving vehicles without Valid driving license. 13. Driving by an Drunken person	Rs. 7,500/- for 1 st violation, 2 nd and subsequent violations Rs.15000/-
IV	<u>HIGH RISK VIOLATIONS</u> 1. Failure to use Full body harness with double lanyard. 2. Life line of Full body harness not anchored. 3. Floor opening left unguarded in the area of work. 4. Working at roof without daily permit. 5. Working in confined space with out confined space work permit. 6. Violation of electrical shut down/PTW 7. Violation of HOT work permit system	Rs.15,000/-
V	1. Serious injuries and permanent disabilities 2. Fatal Accident Cases	Rs 100000 or 2.5% of contract value Whichever is less. Rs2,,00,000/- Or 10% of contract value whichever is lower.

- 1) The above penalties related to the accidents mentioned at Cat (V) will be imposed on agency in case the reasons to the accidents are attributable to the agency.

- 2) Independent of the above, the contractor shall be debarred or deregistered from taking up further contractual work in VSP in case any repeated fatal accident after 3rd incident for the reasons attributable to contractor.

(Note: The penalties mentioned above are in addition to those which are applicable as per the statutory acts & rules . In case of any imposed penalty by any statutory authority, the same shall be over and above the contractual clauses.)

- 3) Without prejudice to the right conferred by the clause No.16(g) of Special conditions of Contract for stoppage of work for violation of safety rules ,the contractor shall be liable for penalty at the rates indicated in Annexure depending upon the category of violation.
- 4) Operating authority will assess the penalty amount having regard to all the circumstances in particular the nature and gravity of the violation on the advice of Head of the Safety Engineering Department and will issue a show-cause notice specifying there in the proposed penalty . Considering the cause shown by the contractor , if any , the operating authority shall pass final orders which shall then be binding on the contractor. The penalty amount shall be recoverable from any bill and / or EMD / SD of the contractor without any further reference to him.

18. SHUTDOWNS:

- A) Necessary shutdowns will be arranged by VSP to the contractor for carrying out the work based on requirement. No claims on account of delayed/prolonged shutdown will be entertained.
- B) The works assigned to the contractor by the Engineer from time to time shall be completed within the time schedule fixed by the Engineer in each case, within the approved shut down period.

19. LABOUR DEPLOYMENT:

- A) The contractor shall deploy his labour as per requirement and as instructed by the Engineer. It may be necessary to carry out the work round the clock based on requirement and shutdown provided. The contractor's rate shall cover such eventualities.
- B) Only trained, experienced, safety inducted workers acceptable to the Engineer shall be engaged on this work, work shall be executed as per specifications to the satisfaction of the Engineer.

20. **SECURITY REGULATIONS:** The contractor shall abide by and also observe all security regulations promulgated from time to time by the employer.

21. **STORING/STACKING OF MATERIALS:** Storing/Stacking/Placing of materials shall be only at the places designated by the engineer.

22. The contractor, his supervisors and workmen shall observe entry and exit timings strictly.

23. After completion of work activity, the site has to be cleared of all debris, construction material and the like.

24. The successful tenderer shall start the work immediately after obtaining gate passes and safety induction training and clearance from the Employer.

25. **NOTICES:** Any notice to be given to the contractor under terms of the contract shall be considered duly served, if the same has been delivered to, left for or posted by registered post to the contractors principal place of business (or in the event of the contractor being a company, its registered office), at the site or to their last known address.

26. **DEFAULT BY TENDERERS:** The successful tenderer may be debarred at the discretion of the company, from issue of further tender documents, work orders etc., for a specified period to be decided by the employer in case of :
“Undue delay in starting and execution of work awarded, poor performance, backing out from the tender, non accepting work order/LOI during the validity of tender or non observance of safety rules and regulations, misappropriation of company's materials/property, non payment of due wages to labour or such similar defaults”.

27. Successful tenderer should be in a position to produce the Original Certificate in support of the attested copies of relevant documents enclosed along with pre-qualification documents or afterwards, after opening of the Price Bids.

28. Failure to produce the original certificates at this stage in support of the attested copies of PF Registration/ITCC/Electrical License/Experience/Qualification any other documents etc., submitted earlier would result in disqualification and forfeiture of EMD and also liable for debarring from participation in VSP tenders.

29. If it comes to the notice of VSP at any stage right from request for registration/tender document that any of the certificates/documents submitted by applicant for registration or by bidders are found to be false/fake/doctored, the party will be debarred from participation in all VSP tenders for a period of 05 (FIVE) YEARS including termination of Contract, if awarded. EMD / Security Deposit etc., if any, will be forfeited. The Contracting Agency in such cases shall make good to VSP any loss or damage resulting from such termination. Contracts in operation any where in VSP will also be terminated with attendant fall outs like forfeiture of E.M.D. / Security Deposit, if any, and recovery of risk and cost charges etc. Decision of V.S.P. Management will be final and binding.
30. Failure to execute the work after LOI/WORK ORDER is given, will make the party liable for debarring for a period of 2 (TWO) YEARS.
31. In case it is found before/after award of work to the person/agency through Limited Tender Enquiry (LTE) that the same person/agency is proprietor/proprietress/partner of two or more separate agencies and quoted for the same work, then punitive action to the extent of debarring up to 02 (Two) years from participating in VSP tenders will be taken.
32. Contractor shall note that:
- i) Time for mobilization after issue of FAX Letter of Intent/detailed Letter of Intent / Work Order shall be;
 - a. 03 (Three) days for Capital Repairs
 - b. 15 days for Civil Works
 - c. 60 days for painting works of Structural Engineering Department
 - d. 07 (Seven) days for Annual Mechanical, Electrical and works of technological assistance/cleaning.
 - ii) Re-starting the work after disruption shall be within 04 (Four) to 06 (Six) hours after the cause of disruption is removed as decided by the HOD.
 - iii) Notice period for Contract Termination shall be - 03 (Three) hours in the event of breakdowns, 02 (Two) days in Capital Repairs and 10 days in other works.
- Failure to adhere to above stipulations may result in Termination of contract at risk & cost and will make the party liable for debarring for a period o 2 (Two) years.*
33. In case the tenderers revoke / withdraw / cancel their tender or they vary any terms of their tender during the validity period of the tender without the written consent of Visakhapatnam Steel Plant (VSP) or in the event of VSP accepting their tender and fail to deposit the required security money, execute the Agreement and fail to start the work within reasonable time (to be determined by the Engineer) after written acceptance of their tender – EMD submitted by them will be forfeited by VSP.
34. Agencies are required to submit Bank Guarantee for the value as decided by the Engineer as a Security while taking out Equipment/Components/materials of VSP to their workshop situated outside the VSP premises for carrying out repairs.
35. In case of any statutory revision in the minimum wages payable to contract workmen as notified by the Regional Labour Commissioner (Central), Hyderabad, Escalation shall be paid as per the following formula :

$$V = \frac{L \times W \times (X - X_o)}{X_o}$$

WHERE :

- V = Escalation payable
- L = **Labour content** during billing period .
- W = Gross value of work done on the basis of Contract rates for the period for which variation is applicable.
- X = Revised Weighted Average of RINL / VSP approved rates for the period for which variation is applicable (for Unskilled, Semi-skilled and Skilled categories of Workers) based on the minimum wages as notified by the Regional Labour Commissioner (Central), Hyderabad for the period under consideration for that contract as per present man days of different categories for the billing period.
- Xo = Existing (on the basis which tender estimate is prepared) Weighted Average of existing RINL / VSP approved rates (for unskilled , semi skilled and skilled categories of workers and which is based on the minimum wages notified by Com missioner of Labour, Government of Andhra



Pradesh, Hyderabad)for that contract as per present man days of different categories for the billing period.

WHERE

$$\begin{aligned} X &= (a \times \text{USR} + b \times \text{SSR} + c \times \text{SKR}) / (a + b + c) \\ X_o &= (a \times \text{USR}_o + b \times \text{SSR}_o + c \times \text{SKR}_o) / (a+b+c) \\ L &= (a \times \text{USR}_o + b \times \text{SSR}_o + c \times \text{SKR}_o) / W \end{aligned}$$

WHERE

a = Man days present by USW during the Billing period
b = Man days present by SSW during the Billing period
c = Man days present by SKW during the Billing period
USR = Revised RINL / VSP approved estimated wage rate of USW at the time of Billing
SSR = Revised RINL / VSP approved estimated wage rate of SSW at the time of Billing
SKR = Revised RINL / VSP approved estimated wage rate of SKW at the time of Billing
USR_o = RINL/VSP estimated wage rates of USW based on which the estimate of work is prepared
SSR_o = RINL/VSP estimated wage rates of SSW based on which the estimate of work is prepared
SKR_o = RINL/VSP estimated wage rates of SKW based on which the estimate of work is prepared

(The above escalation shall be independent of the award percentage whether +ve or –ve.)

36.1

PAYMENT OF MINIMUM WAGES: Wages paid to the Workmen by the Contractor should not be less than the rates notified by the **Regional Labour Commissioner (Central), Hyderabad,** A P. from time to time with regard to Minimum Wages applicable to the respective categories of Workmen plus the Adhoc amount at the rate of Rs.11.54 as per working day per Workman per category. **Wages with ad-hoc amount** to the workmen should be paid on or before the 7th of the subsequent month. if 7th falls on a holiday or weekly off day, the payment should be made one day prior to that. Payment of PF for the month, both the employer's (in this case contractor) and employee's (in this case workman employed by the contractor) contributions should be deposited in the bank in the permanent PF code number and challan obtained before the 15th of the subsequent month and forwarded to the Engineer". In case of failure of the contractor to comply with any of the above, the following action will be taken by VSP.

LAPSE	ACTION BY VSP
1. a) Payment of wages at rates less than those notified under the minimum wages.	a) An amount equivalent to the differential amount between wages to be paid under minimum wages notification of the Govt. applicable for the period less actual wages paid shall be recovered from the bills as certified by the Engineer.
b) Non-payment of ad-hoc amount	b) As amount equivalent to actual payable towards ad-hoc amount to the workmen engaged for relevant period shall be recovered from the bills as certified by the Engineer.
2. Non payment of wages	An amount equivalent to wages payable by the contractor applicable for the relevant period shall be recovered from the bills as certified by the Engineer.
3. Non Payment of PF	Recovery of PF amount and an amount equivalent to maximum penalty leviable by Regional Provident Fund Commissioner for the delayed period under the provisions of EPF & MP Act and Rules for delayed remittance of PF contributions (both the employee's and employer's contribution), shall be recovered from

4. Delayed Payment of PF	<p>I the bills of contractor as certified by Engineer.</p> <p>An amount equivalent to maximum penalty leviable by Regional provident Fund Commissioner for the delayed period under the provisions of EPF & MP Act and rules for delayed remittance of PF contributions (both the employee's and employer's contribution), shall be recovered from the bills of the contractor as certified by Engineer.</p>
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37. The contract period can be extended at the discretion of V.S.P. up to 04 (Four) months at the existing Rates, Terms and conditions and the Contractor shall be bound to execute the work accordingly and the offer of the Contractor is deemed to include this aspect.
38. The tenderers shall note that in case of quoting above the Estimated Value of V.S.P. the L-1 party shall furnish logical / satisfactory explanation which V.S.P. may seek if felt necessary for quoting such high rates. If the explanation offered by the L-1 party is not acceptable to V.S.P., the L-1 party may be recommended for disqualification while retendering the work.
39. The contractor should clearly understand and comply with the Mines Act and relieve the FEMALE WORKERS from their work site within the restricted working hours prescribed therein the Act.
40. The following deductions per Workman deployed category-wise shall be made from the bills / amounts due to the Contractor as applicable for the work done and such deducted amounts shall be released as below :

S.No.	Component	Recovery amount per Labour per every WORKING DAY (in Rupees)			To be released when
		UN-SKILLED	SEMI-SKILLED	SKILLED	
01	Notice pay	23.68	26.77	31.49	After the Contractor makes payment to the workmen in the presence of Engineer I/c and CLC representatives. A certificate to this effect is to be enclosed with pre-final bill. (to be paid with pre-final bill)
02	Retrenchment compensation	11.84	13.39	15.75	
03	Leave with wages	14.57	16.48	19.38	
Sub-total		50.09	56.64	66.62	
04	Bonus	11.55	11.55	11.55	After the Contractor makes payment to the workmen in the presence of Engineer I/c and CLC representatives. A certificate to this effect is to be enclosed with RA bill / pre-final bill. (to be paid with RA bill / pre-final bill as and when paid by the Contractor)
Grand total (To be paid to the Labourer)		61.64	68.19	78.17	
10% toward profit and overheads of Contractor		6.16	6.82	7.82	
Total recovery amount		67.80	75.01	85.99	

NOTE

- i The above recovery rates are effective from 01.10.2014. In case of any statutory revision in minimum wages payable to contract workmen as notified by the Regional Labour Commissioner



(Central), Hyderabad from time to time, the above recovery amounts for workmen category-wise will be revised by RINL / VSP and will be notified accordingly.

- ii *Payment against the above components is to be made to the workmen based on effective wages of last drawn pay.*

41. **CLAUSES CONCERNING CENVAT AGAINST EXCISE DUTY:**

- a) The tenderer shall specify the percentage of CENVAT benefit on quoted price for which they shall furnish the duty paying documents.
- b) The successful tenderer shall take necessary steps to comply with the rules and provisions of central excise and service tax law facilitating VSP to avail CENVAT credit.
- c) The amount of CENVAT benefit declared shall be deducted from the tendered price for the purpose of tender evaluation i.e. the evaluation shall be on the net of CENVAT benefit.
- d) The invoice raised by the Contractor should clearly mention VSP as the consignee (Consignee: RINL, VSP, A/c: Name of the contractor). It should be ensured that material has been delivered along with the duplicate for transporter copy of the invoice, based on which CENVAT credit is to be claimed.
- e) The duty paying documents shall be submitted as soon as the material is procured by the agency for incorporation in the work. The CENVAT benefit offered by the agency will be deducted from each bill on the offered percentage basis and will be released to the extent CENVAT benefit could be availed by VSP. The contractor shall extend all possible help to facilitate VSP to avail CENVAT benefit. If CENVAT benefit could not be availed by VSP due to reasons attributable to the contractor, such amount will not be released by VSP.
- f) In the event the CENVAT benefit realized by VSP (based on documents) is in excess of the CENVAT benefit offered by the agency/contractor, the refund will be restricted to the benefit offered by the agency. The excess amount realized from Excise Authorities will be to the credit of VSP only.
- g) Material once received in to the factory would not be allowed to go outside the factory premises for any reason. Excess/Rejected material will be allowed to be taken back after complying with the provisions of CE Act.

42. The successful tenderer shall produce VAT Registration Certificate under APVAT Act, wherever applicable, before signing the Work Order / LOA and submit a copy of the same.

43. RINL reserves the right to reject the offers of tenderers whose performance is poor in awarded / ongoing works if any.



TECHNICAL SPECIFICATION

FOR

SUPPLY, ERECTION, TESTING AND COMMISSIONING OF
EARTHING AND LIGHTNING PROTECTION SYSTEM FOR MADHARAM DOLOMITE
MINES

SPECIFICATION NO. VSP-DEE-MDM-025

DECEMBER 2014

DESIGN & ENGINEERING DEPARTMENT
VISAKHAPATNAM STEEL PLANT
VISAKHAPATNAM – 530032

1.0 Introduction

- 1.1 Visakhapatnam Steel Plant (VSP), Visakhapatnam is an integrated Steel Plant with a capacity of 6.3MTPA, located in the state of Andhra Pradesh, India. It is the first shore based integrated steel plant in India. VSP is having captive Dolomite mines at Madharam, located in Khammam District in the state of Telangana.
- 1.2 Madharam Dolomite Mine (MDM) is at a distance of about 510 km from Visakhapatnam Steel Plant (VSP). It is linked with Karepalli through a 7 km long railway siding. The mining lease (ML) of MDM covers an area of about 384.46 hectares. MDM is in operation since 1989. The mine was designed for production of SMS/flux grade (-25 mm to 50 mm) and brick grade (9 mm to 25 mm) dolomite, flux, brick and BF (-80 mm) grade dolomite.
- 1.3 It is proposed to provide earthing/ lightning protection system for the existing buildings at Madharam mines. This specification covers these electrical facilities to be incorporated for the same.
- 1.4 The tenderer shall study the specification and **also visit the site** and understand the geographical conditions like soil, Climatic & electrical environment and satisfy himself thoroughly regarding the workability of each specified system and shall take full responsibility for the guaranteed operation of the above systems as regards performance, smooth, reliable and safe working.
- 1.5 Each exception to the specification shall be listed separately by the tenderer. Exceptions not clearly listed SEPARATELY will not be considered by the VSP at any stage. Also, tenderer shall give clause wise confirmations to each clause of the technical specification alongwith his offer.

2.0 STANDARDS

- 2.1 The equipment and accessories covered by this specification shall be designed, manufactured and tested in compliance with the latest relevant standards and codes of practice published by the Indian Standards Institution, wherever available, in order that specific aspects under Indian conditions are taken care of.
- 2.2 The equipment and accessories for which Indian standards and codes of practice are not available, shall be designed, manufactured and tested in accordance with the latest standards and codes of practice published by any other recognized National Standards Institution of latest publication of International Electro technical Commission (IEC)
- 2.3 All electrical equipment shall conform to the latest Indian Electricity Rules as regards safety, earthing and other essential provisions specified therein for Installation and operation of electrical plants.
- 2.4 All equipment and installation shall comply with relevant statutory requirements of the Government of India and the Government of Andhra Pradesh.
- 2.5 The equipment and installation shall also comply with the regulations published by the Insurance Association of India, in so far as they are applicable.
- 2.6 In cases, where the offer deviates from the specified standard, the tenderer shall indicate clearly in his offer the standards adopted by him with details thereof.

3.0 SPECIAL SITE CONDITIONS

- 3.1 All equipment shall be designed for operation in tropical humid climate subject to heavy rainfall and frequent thunder storms with ambient air temperature of 45 deg C maximum and 40 deg C average over 24 hours. The derating of indoor equipment shall be done for an ambient temperature of 45 deg C. Maximum monthly mean relative humidity is 100 percent, which shall also be taken into consideration for design of equipment.
- 3.2 In the design of the equipment, due consideration shall be given to the dust laden atmosphere, normally experienced in Mines. The soil is of poor conductivity/ rocky/ moisture variation.

4.0 SOURCE OF SUPPLY

- 4.1 This Specification is issued for procurement from indigenous sources. No foreign exchange or import licenses for importing equipment, components, raw materials or spares will be arranged for or provided by the Purchaser. In case the equipment offered involves expenditure in foreign exchange, this shall be clearly indicated together with a statement as to how this is being arranged by the tenderer.
- 4.2 The purchaser reserves the right of selecting the manufacturers of all equipment in the interest of standardisation. The successful tenderer shall agree to supply the equipment of the particular make.

5.0 SAFETY

- 5.1 All equipment shall be complete with approved safety devices wherever a potential hazard to personnel exists and with provision for safe access of personnel to and around equipment for operational and maintenance functions. The design shall include all reasonable precautions and provisions for the safety of operating and maintenance personnel.
- 5.2 Special care shall be taken to make enclosed equipment proof against entry of rats, lizards and other creeping reptiles which may create electrical short-circuits inside live equipment.

6.0 OTHER REQUIREMENTS

ACCESSIBILITY AND INTERCHANGEABILITY

All working parts, in so far as possible, are to be arranged for convenience of operation, inspection and ease of replacement with minimum down time. All like parts of equipment or on duplicate equipment offered shall be interchangeable.

7.0 QUALITY AND WORKMANSHIP

Workmanship and finish shall be in accordance with the best and latest engineering practices. All materials shall be of the best quality and shall conform to the highest standards laid down for them.

8.0 ELECTRICAL POWER

The following standard voltages are adopted at mines:

- 1) 11 kV, 3-phase, 50 Hz, non-effectively earthed system with fault level of 26.2 kA for 3 sec.
- 2) 3.3 KV, 3-phase, 50 Hz, non-effectively earthed system with fault level of 40kA for 3 sec.
- 3) 415 V, 3-phase, 4-wire, 50 Hz effectively earthed system with fault level of 50kA for 1 sec.
- 4) 240 V, 1-phase, 2-wire, 50 Hz, one lead earthed system.
- 5) 220V, DC control voltage supply.
- 6) All equipment shall be designed for smooth and trouble free operation considering +6% to -9% voltage variation for HT system and $\pm 6\%$ voltage variation for 415-240 V system and +3% frequency variation.

9.0 PAINTING

The painting shall be epoxy based as per manufacturer's standard and shall be suitable for humid tropical atmosphere with pollutants prevalent in steel/metallurgical plants as well as saline atmosphere. Shade of finish coat to be applied for indoor equipment shall be as per shade No. 631 and that for outdoor equipment shall be as per shade No. 632 as per IS:5. The total dry film paint thickness shall not be less than 60 micron for indoor equipment and 120 micron for outdoor equipment.

10.0 BACK GROUND

In the Dolomite mines, Madharam, Earth pits were provided at the time of plant establishment during 1980s. The Earth pits were totally damaged and not recoverable. In view of soil condition and to meet the situations laid down by DDMS, that each earth pit shall be maintained with less than One (1) ohm, it is proposed to construct new Earth pits with Chemical Back Fill Compound instead of normal salt/ charcoal etc

11.0 Design Basis:

Earthing system as per IS: 3043 for electrical buildings shall have following features.

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- (i) **Earth grid resistance of less than 1 ohm to be achieved**
- (ii) Suitable backfill compound to be considered in order to achieve long lasting performance
- (iii) Backfill compound shall not contain any hazardous chemicals and shall not depend on moisture.
- (iv) The backfill compound used shall prevent electrode from corrosion
- (v) The backfill compound used shall have high electrical conductivity
- (vi) Earth electrode shall be solid steel rod made of high tensile low carbon steel with copper coating thickness of 250 + microns over

12.0 Scope of Work:

12.1 Supply, installation, testing and commissioning of earthing stations and earth conductors as specified.

12.2 Supply and installation of lightning system along with down conductors, earth electrodes and other accessories as specified

12.3 Demonstration of earth continuity and earth grid resistance of less than 1ohm.

13.0 Technical Specification of Equipment:

13.1 EARTHING STATIONS:

Earthing station shall be provided generally in accordance with IS: 3043. Electrode is a **17.2 mm Dia, 3 meters long** solid steel rod made of high tensile low carbon steel and bonded with molecularly bonded copper on the outside as per UL 467. The thickness of the copper bonding shall be at least **250 microns**. The electrode rod shall be supplied complete with U-clamps, Terminals, couplers etc for connecting earth conductors. The top of the electrodes shall be about 100 mm below ground level while connection to the earth conductor shall be made at about 150 mm below ground level. The top portion of electrodes shall be provided with concrete top cover and marker. Provision shall be kept at each earth station for testing earth resistance. Each earth station shall be completely filled with **Back Fill Compound mixed with Soil**. Each pit shall be filled with minimum of **75kg** compound and balance mixed with soil. The compound shall have capability of absorbing and retains moisture for longer period and shall improve conductivity of Earth Electrode and ground contact area. Connection of Earthing leads to earth electrodes and terminations of flat earth continuity conductors to equipment shall be made by means of bolting.

The Earthing station shall be complete with necessary excavation of pit of **200 mm dia, 3200 mm deep**, construction of concrete enclosure with top cover and filling with Back Fill Compound complete with testing, painting the tested value together with station No. on Cast Iron marker plates.

13.2 EATHING MATERIALS:

Galvanised steel flats shall be used as earthing conductors. Generally main Earthing rings and Earthing leads shall be directly buried in ground. Additional Earthing rings wherever provided inside plant buildings/substations and earth continuity conductors shall be taken either exposed on cable racks/trays, structures, walls, ceiling etc. or embedded in concrete depending on installation.

Earth conductor directly buried in ground shall generally be taken at a depth of 600 mm.

Earth conductors lay on cable racks; trays etc. shall be placed in accessible location keeping adequate clearance to facilitate easy connections. Earth conductors lay on cable racks, trays etc. shall be placed in accessible location keeping adequate clearance to facilitate easy connections.

Earth conductors lay along plant/equipment structures; wall, ceiling etc. shall maintain symmetry with other installations and shall be uniformly spaced with cables/utility pipes running along the same route.

Galvanised steel saddles shall be eased for clamping earth conductors on cable racks/trays, structures, wall, ceiling etc. The saddles shall be clamped to Galvanised steel flat spacers with tapped holes and supporting the earth conductors. Flats shall be supported at intervals not exceeding 1000 mm.



All Earthing joints shall be overlapped and welded joints shall be painted with bitumen black paint and covered with jute. Earthing strips shall be straightened and joints shall be welded with the help of 'C' clamps to ensure proper meeting of overlapping surfaces. It shall be complete with testing and commissioning. As far as possible all earth terminations and connections shall be visible for inspection. Each Earthing system shall be so designed that testing of individual earth electrode is easily possible.

Installation cost of earthing strip shall also include any excavation work and chipping of floor etc.

13.3 **Lightning Protection of Buildings**

Lightning protections are required for buildings only, and no Air terminations required. Lightning protection to the building and down conductors are to be considered and terminated to Earthing station.

The electrodes provided for lightning protection system in cases where no earthing ring already exists shall be electrically interconnected.

The minimum size of horizontal conductor used as air termination shall be 25 x 6 mm galvanised steel flat and the down conductor from air termination to earth electrode shall be 50 x 6 mm galvanised steel flat. The down conductors and horizontal

14.0 **Installation**

- 14.1 The tenderer shall provide all skilled, semi-skilled and unskilled labour including supervisory staff, tools and tackles, erection and testing equipment and all other related equipment required for the complete installation up to handing over of the system to the purchaser.
- 14.2 All installation shall comply with the provision of Indian Electricity Rules (1956) with its latest amendment and relevant codes and practices issued by the ISI.
- 14.3 The installation shall be carried out by an electrical contractor holding a valid license issued by the Govt. of Andhra Pradesh / any other state Govt., competent authority for carrying out installation work of the voltage class involved under the direct supervision of a person holding a certificate of competency for the same voltage class issued / recognised by the state Govt. The tenderer shall furnish with his tender the particulars of the license held by him/ the electrical contractor he proposes to engage for carrying out the installation work against this specification.

The installation shall include but not be limited to the following:

- Receipt at site of all equipment and materials covered under this contract
 - Opening of crates and packing cases, through cleaning and checking of completeness of equipment etc. in relation to the manufacturer's drawings, packing lists etc and inspect the equipment for any visible damage or defect. Damages or missing items, if any, shall be rectified or made good by the contractor.
 - Providing proper storage and safe custody of the equipment etc, till such time they are erected, tested and handed over to the purchaser. Any damage to the equipment etc during this period shall be made good by the contractor at his own cost.
 - Installations of complete equipment at the locations shall be finalized at site.
 - The necessary civil works like grouting, chipping of floor/wall as required and making good the same shall be included in the scope for installing the complete equipment.
 - Regular cleaning of the premises on daily basis of all the debris and left over materials.
- 14.4 The installation cost of earth and lightning conductor shall include clamps, cleats, fixing devices, proper welding, painting welded parts etc complete with necessary jointing and termination materials.
- 14.5 The unit rate for installation of earth pits shall include the cost of excavation of earth pit to the full depth, installation of electrode, back filling of the earth pit with chemical compound and excavated soil, providing masonry enclosures with marker and connecting the earth conductors.



- 14.6 All the testing charges shall be included in the installation cost of the respective equipment

15.0 START UP, COMMISSIONING & ACCEPTANCE

The tenderer shall after completion of installation demonstrate earth continuity, earth resistance and also continuity of lightning protection circuit. The number of earth pits indicated in the BOQ is tentative and the actual requirement may increase or decrease based on the measured values of earth resistance achieved / demonstrated.

- 16.0 Completion time** The entire scope of supply and installation shall be completed within Three (3) months from the date of award of contract.

17.0 Price:

- 17.1 The tenderer shall quote firm prices covered as per the Bill of Materials given in Annexure-1 of this specification.
- 17.2 Prices for supply of equipment and materials quoted against each item as given in bill of materials shall be delivery at site.
- 17.3 The Prices for complete supply and installation shall be inclusive of storage, insurance, handling, transportation at site, site tests, commissioning and handing over to VSP.
- 17.4 The tenderer shall carefully go through the clauses of Invitation to Tender, General Conditions of contract, specification, bill of quantities and shall include any sum he may consider necessary to cover the fulfillment of various of contained herein. The rate quoted by the tenderer shall be inclusive of all taxes necessary to complete the said work with in the contemplation of the contract. Beyond the quoted rates no extra amount will be paid for incidental contingent work, materials and equipment.

18.0 General conditions

- 18.1 All systems and associated equipment shall be supplied complete in all respects and any item not covered in this specification but essential for proper installation, completeness of the system shall be included by the tenderer in his offer and the reasons for such inclusions shall be clearly stated.
- 18.2 All civil works pertaining to completeness of electrical work of this specification, are also included in the scope of the tenderer and all tools required for such works are included in the scope of the tenderer.
- 18.3 All parts of the equipment for which welding is to be done at site shall be properly cleaned with wire brush and painted with two coats of primer and one coat of finish paint.

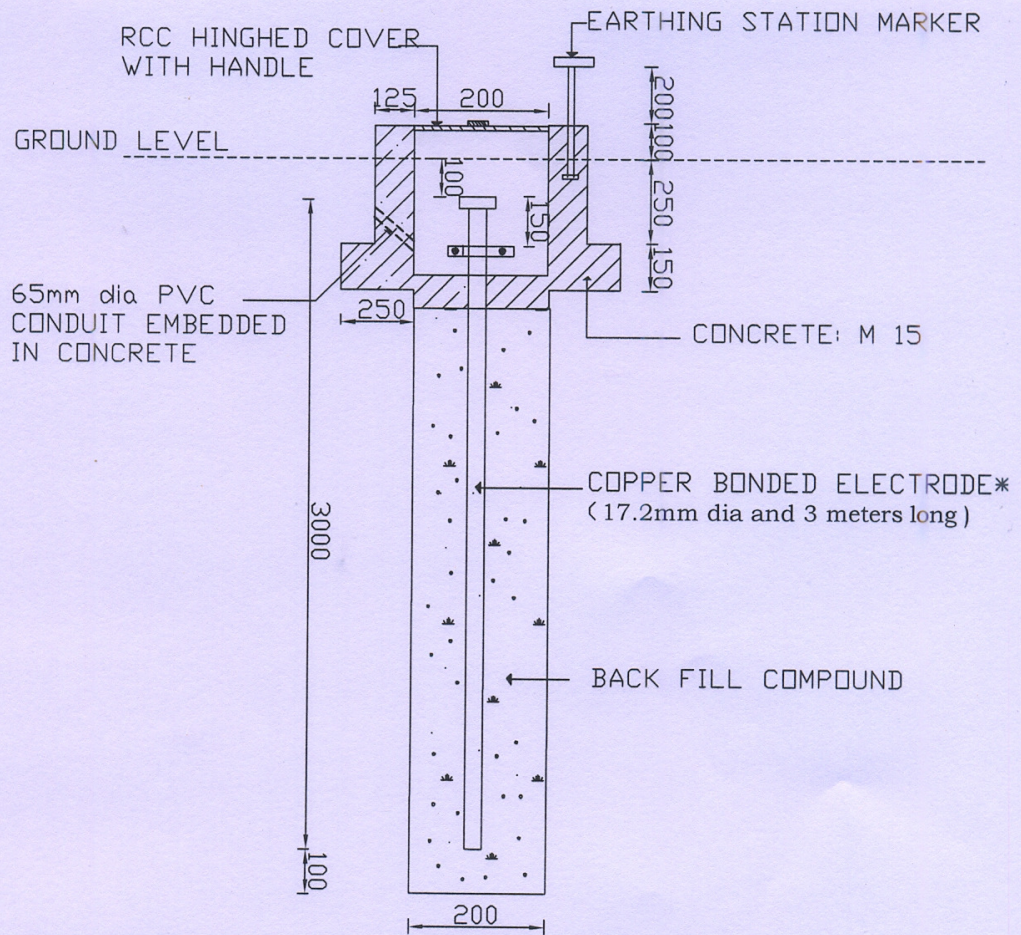
19.0 Tools & Tackles, Instruments/Meters

- 19.1 Tenderer shall include in his offer special tools, tackles, instruments/meters and gauges for erection, testing of the equipment as per relevant clauses of the Invitation to tender and General Conditions of contract.
- 19.2 All equipment covered under this specification shall be subject to inspection and testing by Purchaser in accordance with General Conditions of Contract. These shall include carrying out all necessary tests by the successful tenderer to demonstrate that the equipment offered by him conforms to relevant standards and specification.
- 19.3 The contractor shall provide all necessary special tools / instruments at site for carrying out following tests :

Continuity test
Earth continuity test
Measurement of earth resistance.

20.0 List of drawings enclosed

- (a) Typical earthing station



NOTES

1. ALL DIMENSIONS ARE IN mm.
2. EARTHING STATION SHALL BE PROVIDED IN ACCORDANCE WITH IS: 3043.
3. ELECTRODE IS A 17.2 mm dia x 3m LONG SOLID STEEL ROD MADE OF HIGH TENSILE LOW CARBON STEEL AND BONDED WITH MOLECULARLY BONDED COPPER ON THE OUTSIDE AS PER UL 467.
4. THE THICKNESS OF THE COPPER BONDING SHALL BE AT LEAST 250 MICRONS.
5. EACH EARTH STATION SHALL BE COMPLETE WITH MINIMUM 75 kgs OF BACK FILL COMPOUND, BALANCED WITH MIXED SOIL.

S.No.	DESIGN.	DESCRIPTION	QTY.	MAKES
<p>VISAKHAPATNAM STEEL PLANT DESIGN & ENGINEERING</p>				
	NAME	SIGNATURE	EARTHING STATION	
			DRAWING No.	REV.No.
			DEE-MDM-007	0

REVISION	DATE	APD.	APD.
R.No.	ZONE	DESCRIPTION	DATE



BILL OF QUANTITIES

NAME OF WORK : *SUPPLY, ERECTION, TESTING AND COMMISSIONING OF EARTHING AND LIGHTNING PROTECTION SYSTEM FOR MADHARAM DOLOMITE MINES.*

Open Tender Notice No. : VSP/MINES-04/2015-16 DATE: 14.05.2015

S.No.	Item	Unit	Qty	Unit Rate		Total Price	
				Supply	Installation	Supply	Installation
1	Earthing Station consisting of 17.2 mm Dia, 3 meters long solid steel rod made of high tensile low carbon steel and bonded with molecularly bonded copper on the outside as per UL 467, complete with Carbonaceous conductive/ Electrode Back Fill Compound bricks, cement, covers and all required erection and installation materials, excavation of soil of 300 mm dia X 3000 mm deep, civil work etc. and conforming to TS.	Nos	30	8500	4500	255000	135000
2	GI Strip of Following Sizes for earthing grid and lightning protection -75 X 8 mm	Mtrs.	500	337	67	168500	33500
3	GI Strip of Following Sizes for earthing grid and lightning protection -40 x 6 mm	Mtrs.	400	200	45	80000	18000
4	GI Strip of Following Sizes for earthing grid and lightning protection - 25 x 6mm	Mtrs.	400	150	30	60000	12000
					Total	563500	198500

Grand Total 7,62,000/-

(Seven Lakhs Sixty Two Thousands only)



**RASHTRIYA ISPAT NIGAM LIMITED
VISAKHAPATNAM STEEL PLANT
MINES DEPARTMENT
BILL OF QUANTITIES (BOQ)**

Name of the Work:- SUPPLY, ERECTION, TESTING AND COMMISSIONING OF EARTHING AND LIGHTNING PROTECTION SYSTEM FOR MADHARAM DOLOMITE MINES .

Tender No.: VSP/Mines-04/2015-16 Dt. 14.05.2015

1. The quantities indicated in are approximate and may vary to a wide range. Payment shall be made as per the actual work carried out at corresponding accepted rate.
2. Where ever old items are replaced for fixing new items, all related connections are to be made good for proper functioning of new items. Dismantled / old items are to be handed over to the stores.

No.	Description	Unit	Qty.	Rate	Amount (Rs.)
	As per the detailed Bill of Quantities enclosed in 1 (One page	Estimated Value : (Seven Lakhs Sixty Two Thousands only)			7,62,000.00

TOTAL AMOUNT QUOTED IN FIGURES: (Rs.) _____

TOTAL AMOUNT QUOTED IN WORDS: (Rs.) _____

- Note: 1. Tenderer shall write their quoted offer both in WORDS and FIGURES. The quoted offer in WORDS shall be in CAPITAL / BLOCK letters.
2. If there is discrepancy between the amount mentioned in FIGURES and the amount mentioned in WORDS, the amount as mentioned in WORDS only shall be taken as the quotation of the tenderer.

THE ESTIMATE OF THIS TENDER IS BASED ON THE RINL / VSP APPROVED WAGE RATES, CONSEQUENT TO THE MINIMUM WAGE OF CONTRACT WORKER AS NOTIFIED BY THE REGIONAL LABOUR COMMISSIONER (CENTRAL), HYDERABAD, WHICH IS GIVEN BELOW. IN CASE REVISION IN THE MINIMUM WAGES OF CONTRACT TAKES PLACE, ESCALATION DUE TO THIS SHALL BE PAYABLE TO THE CONTRACT AS PER THE ESCALATION FORMULA INDICATED IN THE SPECIAL CONDITIONS OF CONTRACT:

	Unskilled Worker	Semi-skilled worker	Skilled worker
RINL / VSP APPROVED RATE (IN RUPEES)	458.50	514.25	599.40
MINIMUM WAGES AS NOTIFIED BY THE RLC (CENTRAL) HYDERABAD (IN RUPEES)	276.00	312.00	367.00

Signature of Tenderer