Name of the work: REFRACTORY AND MECHANICAL MAINTENANCE OF COKE OVEN BATTERIES

TENDER NO: 75503-0

PERIOD OF CONTRACT: 24 (Twenty four) months
DEFECT LIABILITY PERIOD: 03 (Three) months
ENGINEER: DGM (M) / CRG

ISSUED TO SRI/ M/s._________________________________________________________

TECHNO-COMMERCIAL BID (Part-1)

| No of pages of BOQ alone | : NIL |
| Total No. of pages       | : 59 (FIFTY NINE) 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 CONTRACT DEPT. REPRESENTATIVE
SIGNATURE OF FINANCE DEPARTMENT REPRESENTATIVE

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

Tender No. 75503-0

TECHNO COMMERCIAL BID
(To be submitted in Cover-1)
1. Sealed tenders on TWO–BID System (Techno–Commercial bid and Price bid) along with Earnest Money Deposit (EMD) are invited from experienced contractors for the following work:

Tender No: 75503-0
Name of the work

REFRACTORY AND MECHANICAL MAINTENANCE OF COKE OVEN BATTERIES

Note : 1. “Agencies having experience of regular Refractory or Mechanical maintenance alongwith Hot End Vertical or Full Wall repair in Coke Oven Batteries may participate in the tender” OR “Agencies having experience only in Regular Refractory or Mechanical maintenance of Coke Oven Batteries may also participate in the tender with a tie up with any agency who is having the relevant experience of Hot End Vertical / Full Wall repair in Coke Oven Batteries”.

2. a) Tenderers are required to unconditionally accept the “Integrity Pact” enclosed to the tender document and shall submit the same duly signed along with their offer. Offer of the tenderers received without Integrity Pact duly signed, shall not be considered.

   b) The External Independent Monitors (EIM) is Sri Venugopal K. Nair, IPS (Retd), Sri Siva Prasada Rao. The bio-data of Sri Venugopal K. Nair & Sri Siva Prasada Rao are available in VSP website.

   c) The Nodal Officer is Sri P. K. Mishra, GM (MM), VSP. He can be contacted at Phone No. 09989926882 and at e-mail: prasannamishra@vizagsteel.com

<table>
<thead>
<tr>
<th>Tender Number</th>
<th>Cost of Tender Document (Non-refundable)</th>
<th>Eligibility/ experience requirements</th>
<th>Earnest Money Deposit (₹)</th>
</tr>
</thead>
<tbody>
<tr>
<td>75503-0</td>
<td>1800/-</td>
<td>235.35</td>
<td>141.21</td>
</tr>
<tr>
<td></td>
<td>By hand</td>
<td>By download</td>
<td>7,50,000/-</td>
</tr>
</tbody>
</table>

2. Cost of Tender document(s) shall be paid in the form of Demand Draft / Pay Order / Banker’s Cheque, obtained from any Nationalized or Scheduled Bank in India, drawn in favour of RIN Ltd., payable at Visakhapatnam and shall be valid for a minimum period of one month from the date of opening of tender i.e., Envelope-1 (Pre-qualification documents). THE COST OF TENDER DOCUMENT(S) RECEIVED ALONGWITH TENDER DOCUMENT 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: 31-10-2015 and Turnover shall be the average Annual Financial Turnover during the last 03 (Three) years ending 31 st 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, Work Completion Certificate indicating the total value of the work done inclusive of all deviations and escalations against the subject work and including all taxes & duties, but excluding Service Tax. In case of work executed outside VSP, and where the total amount includes Service Tax, tenderers shall make efforts to get the value of Service Tax indicated separately (b) for Turn Over Audited balance sheets certified by Practicing Chartered Accountant in case the annual Turn-over is more than ₹40.00 Lakhs (or) in case of Turn-Over being less than ₹40.00 lakhs either Turn-over certificate in the prescribed format of VSP duly signed by a practicing Chartered Accountant/Cost Accountant or T.D.S. certificate(s) comprising of the Gross bill values issued by the Deductor(s) for the work done. (c) Copy of registration letter issued by V.S.P incase of registered agencies and incase of non registered agencies, either a copy of Notarized sole Proprietorship or a copy of Partnership deed or a copy of Memorandum of Association & Articles of association along with certificate of registration- whichever is applicable . VSP reserves the right to reject the offer in case 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:
1) TENDERERS SHALL SUBMIT PF REGISTRATION CERTIFICATE IF AVAILABLE, IF NOT AVAILABLE SUCCESSFUL TENDERER SHALL SUBMIT PF REGISTRATION CERTIFICATE BEFORE COMMENCEMENT OF THE CONTRACT.
2) THE SUCCESSFUL TENDERER SHALL PRODUCE REGISTRATION CERTIFICATE UNDER APVAT ACT, WHEREVER APPLICABLE, BEFORE SIGNING THE WORK ORDER / LOA AND SUBMIT A COPY OF THE SAME.
4.0 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, tender no.) 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(WC) I/c by paying tender cost in the form of DD/PO/BC 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/PO/BC etc. (refer to instruction to tenderer) and pre-qualification documents/Criteria eligibility/experience and other documents etc.) as per para-1 read with para-3 above along with **TECHNO-COMMERCIAL BID WITH FILLED IN QUESTIONNAIRE, ALONGWITH DETAILS OF EXPERIENCE AND SUPPORTING DOCUMENTS, duly signed / attested by the authorized representative of the company. Second envelope** (to be super scribed as Envelope-2 with name of the work, tender no.) 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 **INCLUDING TECHNICAL ACCEPTABILITY**, adequacy of cost of tender document ( in case of downloaded tender) and 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 pre-qualification & techno-commercial bid will be subsequently displayed in the notice board of Works Contracts only and no individual communication to tenderers will be made.

4.3 Scope of work, Bill of Quantities (BOQ), Terms & Conditions given in the tender documents (placed in the website) is 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.

4.4 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.

4.5 The tenderer shall download the "TENDER SCHEDULE" available on the website in totality and submit the same duly signed on each page. Any time prior to the deadline for submission of bids, Works Contracts department may, for any reason, modify the tender terms and conditions by way of an amendment, such amendment will be notified on RINL’s website at regular intervals.

4.6 Tenders submitted against the NIT / Tender shall not be returned in case the tender opening date is extended/postponed. Tenderers desirous to modify their offer / terms may submit their revised / supplementary offer(s) within the extended TOD, by clearly stating the extent of updation done to their original offer and the order of prevalence of revised offer vis-à-vis original offer. The employer reserves the right to open the original offer along with revised offer(s).

5.0. The tender documents and other details can be downloaded from our website: [www.vizagsteel.com](http://www.vizagsteel.com) and the same are to be submitted to the Dy. General Manager (Works Contracts) I/c, Visakhapatnam Steel Plant duly signed on each page by the tenderer on or before **03.00 PM on 26-12-2015**

6.0. Non-transferable tender document can also be obtained from the office of Dy General Manager (Works Contracts) I/c, 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 4.30 PM on or before **04.30 PM on 25-12-2015**

7.0. Tenders will be received in the office of Dy General Manager (Works Contracts) I/c, up to 03.00 PM on **26-12-2015 and Envelope-1 will be opened immediately thereafter.**

8.0. 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. E.M.D/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.

9.0. The date of opening of the pre-qualification cover ( envelope-1) shall be the date of tender opening in respect of both the single bid and two-bid ( techno-commercial and price-bid).

10.0 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./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.**

11.0 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 at any time without assigning any reason there of and without being liable to refund the cost of tender documents thereupon.

For Dy General Manager (Works Contracts) I/c

RINL VIGILANCE TOLL FREE NO. 1800 425 8878
FORM – A

Ref. Tender No. 75503-0

Name of the Work: REFRUCTORY AND MECHANICAL MAINTENANCE OF COKE OVEN BATTERIES

To
Dy General Manager I/c
Works Contracts 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) 

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:

Yours faithfully,

(Signature of Contractor)
Name:…………………………………

RINL VIGILANCE TOLL FREE NO. 1800 425 8878
INSTRUCTIONS TO TENDERERS

1.a) Tenders shall be submitted in the office of the Dy General Manager (Works Contracts) I/c, Visakhapatnam Steel Plant, Visakhapatnam – 530 031.

b) Tenders shall be submitted in the prescribed form issued by VSP. The Tender documents issued are not transferable. Tender documents issued/downloaded shall be submitted wholly without detaching any part.

c) The Tenderer shall agree to VSP’s terms and conditions, specifications/scope of work, etc., and quote their “Total Amount only” accordingly.

d) Tender shall be for the entire scope of work mentioned in the tender documents.

e) Tenderer “Shall quote only the Total Amount in figures and in words”. Over writing is not permitted and corrections to be essentially initialed. Amount quoted in words shall govern in case of variance between figures and words.

f) 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 typed written or written in neat and legible handwriting. All the pages of tender documents shall be signed by the tenderer.

g) Respective tenderers participating in the tenders due for opening on the scheduled day, can witness the opening of tenders/price bid on production of valid identity card/gate pass, or alternately, shall give a duly signed authorization to their designated representatives who are nominated if they wish to witness the tender/price bid opening. However, if any person is found to obstructing the passage/entry to the tender box, or if any unauthorized person is found in the tender opening room, the designated officer of WCD, incharge for tender submission/opening of bids or the HOD of WCD shall inform the CISF constable present on duty to evict the person. Also, to intimate to CISF in writing, to cancel the Gate Pass for a period of 01 (ONE) year.

h) If by any reason the tender opening is postponed to any other date, the details will be displayed in the notice board of Works Contract Department. Tenderers shall see the notice board regularly and keep themselves informed in this matter.

i) Before quoting, the tenderer shall necessarily contact the “Engineer” and fully understand the job, scope of work, unit of measurement, mode of measurement, scope of supply of materials by VSP if any, working conditions, shutdown arrangements, Labour deployment requirements, risk contingencies and such other factors which may affect their tender.

j) General Conditions of Contract of VSP for Works Contracts are available in the Office of DGM (Works Contracts) I/c and also in VSP’s web site for reference. The tenderers shall study and understand all the relevant provisions before quoting.

k) Tenders shall be kept open for acceptance for a period 4 (Four) MONTHS from the date of opening of tender i.e., Envelope-1.

l) After opening of tender, the tenderers may be called for negotiations and the details like date, time etc. will be displayed on the notice board of Works Contract Department. The tenderers shall see the notice board regularly and keep themselves informed in this matter and promptly attend negotiations without fail.

m) Purchase Preference will be given to PSU’s where applicable as per DPE guidelines.

n) The local Small Scale Industries as approved by VSP and registered with Works Contracts Department of Visakhapatnam Steel Plant in the category of Industrial Paint Manufactures for supply and application of industrial Paints to various structurals, equipment pipelines etc., are eligible for purchase preference as per the policy of VSP in force from time to time. The local small-scale industries, those who are technically and commercially acceptable shall be considered for extension of Purchase Preference, if the offer is within 15% above L-1 price and upon their matching with L-1 price.

c) The date of opening of pre-qualification envelope-1 shall be the date of tender opening in respect of both the SINGLE BID AND TWO- BID(Techno-commercial and Price bid) tenders.

p) Corrections / amendments / replacement to / of the deficient documents / financial instruments for Earnest Money Deposit (EMD) & Cost of Tender Document (CTD) shall not be sought in the following cases where

(a) There is evidence of tampering / unauthorized correction

(b) The value of financial instrument (s) / document (s) is falling short of the value stipulated in the NIT

(c) The validity of BG (s) as on initial tender opening date (TOD) is falling short of minimum validity period stipulated in the tenderer

(d) Discrepancy exists in the name of Payee / Beneficiary

(e) The bidder fails to submit CTD and / or EMD in case of submission of a single instrument / document towards both CTD and EMD.
2) EARNEST MONEY DEPOSIT (EMD)

a) In case of Earnest Money Deposit being less than or equal to Rs.5 Lakhs, Earnest Money Deposit shall be in the form of Demand Draft / Pay Order / Banker’s Cheque obtained from any Nationalized or scheduled commercial bank in India, drawn in favour of Rashtriya Ispat Nigam Ltd., Visakhapatnam Steel Plant, payable at Visakhapatnam and shall be valid for a minimum period of one month from the Envelope-1 (Pre-qualification documents) opening date. No other mode of payment will be accepted. However, in case EMD exceeds Rs.5 Lakhs, tenderers have the option to submit the same in the form of Bank Guarantee (In the format as enclosed to the GCC) from any Scheduled Commercial Bank, encashable at Visakhapatnam. Bank Guarantees shall be valid for a minimum period of 04(Four) months from the date of opening of Envelope-1 (Pre-qualification documents). The above shall supercede the instructions regarding “form of EMD” elsewhere in the tender document.

b) Public Sector Enterprises of State / Central Government Undertakings are exempted from submission of Earnest Money Deposit (EMD) provided they submit a letter requesting for exemption from submission of EMD along with their offer.

c) “Micro & Small Enterprises (MSEs) listed with NSIC only are exempted from submission of Cost of Tender Documents (CTD), Earnest Money Deposit (EMD), and Security Deposit (SD), irrespective of whether the service is to be carried out within or outside their premises, subject to submission of the following documents along with their tender:

   a. Proof of enlistment with NSIC and with particulars of relevant trade/item.
   b. Registration details of the particular trade/item for which this tender is relevant, by way of submission of ‘Acknowledgement of Entrepreneur Memorandum(EM) Part-II’ from the Industries Department, along with their tender. The Micro and Small Enterprises not registered for the particular trade/item for which this tender is relevant, would not be eligible for exemption. SSI Registration Certificate is not valid and no concession or benefits shall be extended if EM Part-II is not submitted, and,
   c. As regards Security Deposit (SD) exemption, the MSEs shall however be required to submit a “Performance Guarantee Bond” in the prescribed proforma, equivalent to the value of Security Deposit. It may be noted that waiver of SD is permitted only up to the monetary limit for which the unit is registered.

d) EMDs of unsuccessful tenderers will be refunded after reasonable time without interest.

3) MODE OF SUBMISSION OF TENDER

a) Tender shall be submitted in two separate sealed covers. In case of single bid tender, the first cover shall contain the D.D. / Pay Order / Banker’s Cheque for Earnest Money Deposit / Cost of Tender Document / EMD exemption documents for PSUs & MSE units registered with NSIC, other pre-qualification documents etc. and the second cover shall contain the tender.

b) In case of two bid system, the first cover shall contain the techno-commercial bid part of tender, along with the other bank instruments / documents indicated in para 3(a) above, and the second cover shall contain only the price bid part of tender.

c) The two sealed covers as mentioned above shall be stapled / tied together and submitted. The first cover will be opened first and only if the submitted documents / instruments are found to be as per NIT requirement, will the second cover containing the price bid be opened.

d) Tenders not satisfying the requirements as per NIT will not be opened.

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 form 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. The successful tenderer shall produce Registration Certificate under APVAT Act, wherever applicable, before signing the Work Order / Letter of Acceptance and submit a copy of the same.
6. Immediately on receipt of work order, the successful tenderer shall obtain and submit the following documents to the Engineer with a copy to ZPE/Manager (Pers)/CLC before start of work.
   a(i) ESI registration certificate with the contractor’s Code no. covering all the workmen under ESI Scheme, which shall be effective from the date of start of contract and cover for the entire period of contract including extended period/defect liability 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 the benefits under the ESI Scheme / Workmen Compensation, whichever is applicable, the contractor is required to pay the ex-gratia amount within 30 (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 6.14 (ESI Act) of the General Conditions of Contract.
   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.
   c) PF Registration Certificate issued by PF Authorities
   d) Safety clearance from Safety Engineering Department of VSP.

7. The contractor shall submit wage records, work commencement/completion certificate etc. and obtain necessary clearance from Contract Labour Cell of VSP for bills clearance.

8. 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.

9. The contractor shall follow the provisions of Indian Factories 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.

10. 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.
    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 contract will, in turn, submit the documentary evidence in support of payment of Service Tax of each month along with subsequent month RA Bills.

11. **ADVANCE:** No advance of any sort will be given by VSP.

12. **PAYMENT TERMS:** Payment will be made monthly on recommendations of the Engineer basing on the quantities executed, at accepted rates.

13. **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.

14. **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.
15. **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.

16. **Security Deposit:** The Public Sector Enterprises or State/Central Government Undertakings/ Micro & Small Enterprises (MSEs) listed with 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).

17. 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.

18. **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 department 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".
   g) 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:

<table>
<thead>
<tr>
<th>Category</th>
<th>Safety Violations</th>
<th>Fine</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Occasional violation of not wearing crash helmet</td>
<td>First offence: Rs. 100/–  Second or subsequent offences: Rs.300/–</td>
</tr>
<tr>
<td>2.</td>
<td>Driver of two wheeler carrying more than one pinion rider</td>
<td>First offence: Rs. 100/–  Second or subsequent offences: Rs.300/–</td>
</tr>
<tr>
<td>3.</td>
<td>Wrong parking of vehicle</td>
<td>First offence: Rs. 100/–  Second or subsequent offences: Rs.300/–</td>
</tr>
<tr>
<td>II</td>
<td>MINOR VIOLATIONS</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Working at height without height pass.</td>
<td>First offence: Rs. 100/–  Second or subsequent offences: Rs.300/–</td>
</tr>
<tr>
<td>2.</td>
<td>Unauthorized entry at hazardous location.</td>
<td>First offence: Rs. 100/–  Second or subsequent offences: Rs.300/–</td>
</tr>
<tr>
<td>3.</td>
<td>Engaging workers without safety training</td>
<td>First offence: Rs. 100/–  Second or subsequent offences: Rs.300/–</td>
</tr>
<tr>
<td>4.</td>
<td>Proper ladder/steps not provided for working.</td>
<td>First offence: Rs. 100/–  Second or subsequent offences: Rs.300/–</td>
</tr>
<tr>
<td>5.</td>
<td>Failure to provide proper shuttering at excavation works.</td>
<td>First offence: Rs. 100/–  Second or subsequent offences: Rs.300/–</td>
</tr>
<tr>
<td>6.</td>
<td>Power connection taken from board without proper board</td>
<td>First offence: Rs. 100/–  Second or subsequent offences: Rs.300/–</td>
</tr>
</tbody>
</table>
plug.

7. Fitness certificate of cranes/hydra/heavy vehicles not available.
8. Crane rope conditions not OK.
10. Safety goggles/Hand gloves not used.
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 expire / 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.
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.
29. Taking shelter behind electrical panel.
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 without tarpaulin.
41. Vehicles without red flags / red lights, side guards & tonnage.
42. Stock protruding out of the truck body.

<table>
<thead>
<tr>
<th>III.</th>
<th>MAJOR VIOLATIONS:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Using bamboo or other non standard material for scaffolding.</td>
</tr>
<tr>
<td>2.</td>
<td>Railing not given at platforms or opening of floor.</td>
</tr>
<tr>
<td>3.</td>
<td>Scaffolding planks not tied properly.</td>
</tr>
<tr>
<td>4.</td>
<td>Throwing / dropping of material from height.</td>
</tr>
<tr>
<td>5.</td>
<td>Proper ladder / approach not given for working at height.</td>
</tr>
<tr>
<td>6.</td>
<td>Walkway / cross over path not provided.</td>
</tr>
<tr>
<td>7.</td>
<td>No barricading of excavated pits.</td>
</tr>
<tr>
<td>8.</td>
<td>No top cover on power distribution board.</td>
</tr>
<tr>
<td>9.</td>
<td>Sleeping under truck.</td>
</tr>
<tr>
<td>10.</td>
<td>Absence of Supervisor at height works, confined space jobs and other hazardous jobs.</td>
</tr>
<tr>
<td>11.</td>
<td>Welding screen / face shield, welder gloves not used.</td>
</tr>
<tr>
<td>12.</td>
<td>Driving vehicles without valid driving license.</td>
</tr>
<tr>
<td>13.</td>
<td>Driving by a drunken person.</td>
</tr>
</tbody>
</table>

| First violation: Rs.2500/- |

| Second time violation: Rs.10,000/- |

| Third time repeated violation: Rs.20,000/- |

<table>
<thead>
<tr>
<th>IV.</th>
<th>HIGH RISK VIOLATIONS:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Failure to use full body harness with double lanyard.</td>
</tr>
</tbody>
</table>

| Rs.7,500/- for 1
violation, 2
and subsequent violations Rs.15,000/- |
### 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 without confined space work permit.
### 6. Violation of electrical shut down / PTW.
### 7. Violation of HOT work permit system.

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
<th>Penalty</th>
</tr>
</thead>
<tbody>
<tr>
<td>V.</td>
<td>1. Serious injuries and permanent disabilities.</td>
<td>Rs.1,00,000/- or 2.5% of contract value whichever is less.</td>
</tr>
<tr>
<td></td>
<td>2. Fatal accident cases</td>
<td>Rs.2,00,000/- or 10% of contract value whichever is less.</td>
</tr>
</tbody>
</table>

(1) The above penalties related to the accidents mentioned at Category (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 for stoppage of work for violation of safety rules, the contractor shall be liable for penalty at the rates indicated above depending upon the category of violation.

(4) Operating authority will assess the penalty amount having regard to all the circumstances in particular in nature and gravity of the violation on the advice of Head of the Safety Engineering Department and will issue a show cause notice specifying therein 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 / Security Deposit of the contractor without any further reference to him.

h) “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”.

### 19. 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.
20. LABOUR DEPLOYMENT:
   A) The contractor shall deploy his labour as per requirement and as instructed by the Engineer. It may be
       necessary to carryout 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.
   C) As and when need arises in the Annual works from time to time either for extra requirement of work or
       as a replacement in running contracts or a contract commencing for the first time, the contractor shall
       ensure that Displaced Persons (DPs) are engaged in unskilled category of workers to the extent of 50% (fifty percent). The contractor shall contract the Engineer–in–charge for this purpose.
   D) The Contractor shall engage contract worker(s) who do not have any adverse record with respect to his
       character in the past. For this purpose, the character and antecedents of the proposed worker(s) whom
       the Contractor intended to engage, shall be got verified by the Police and report shall be submitted.
       Till such time the report is submitted, the proposed contract worker(s) will be given only provisional pass
       and the pass will be cancelled in case any adverse report is reported.

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

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

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

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

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

26. 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.

27. 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".

28. 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.

29. 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.

30. 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 debarmed 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.

31. 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.

32. 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.
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. 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 of 2 (Two) years.

35. 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.

36. In case of revision in RINL / VSP approved wage rate, consequent to the revision in the minimum wages (either in Basic Wage or Living Allowances) as notified by the Regional Labour Commissioner (Central), Hyderabad, Escalation amount to the contract shall be payable as per the following formula:

\[ V = \frac{L \times W \times (X - X_0)}{X_0} \]

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 wage rates of Unskilled Worker, Semi–skilled Worker and Skilled Worker based on the minimum wages as notified by the Asst. Labour Commissioner (Central), Hyderabad, for the period under consideration for the contract as per present man–day’s of different categories for the billing period.
- \( X_0 \) = Existing (on the basis which tender estimate prepared) Weighted average of RINL/VSP approved wage rates of Unskilled Worker, Semi–skilled Worker and Skilled Worker based on the minimum wages as notified by the Asst. Labour Commissioner (Central), Hyderabad, for that contract as per present man–day’s of different categories for the billing period.

Computation of \( X \) and \( X_0 \):

\[
X = \frac{(a \times \text{USR} + b \times \text{SSR} + c \times \text{SKR})}{(a+b+c)}
\]

\[
X_0 = \frac{(a \times \text{USRo} + b \times \text{SSRo} + c \times \text{SKRo})}{(a+b+c)}
\]

\[
L = \frac{(a \times \text{USRo} + b \times \text{SSRo} + c \times \text{SKRo})}{W}
\]

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

- \( \text{USR} \) = Revised RINL/VSP approved wage rate for USW at the time of billing
- \( \text{SSR} \) = Revised RINL/VSP approved wage rate for SSW at the time of billing
- \( \text{SKR} \) = Revised RINL/VSP approved wage rate for SKW at the time of billing
- \( \text{USRo} \) = RINL/VSP approved wage rate for USW based on which the Estimate of work was prepared.
- \( \text{SSRo} \) = RINL/VSP approved wage rate for SSW based on which the Estimate of work was prepared.
- \( \text{SKRo} \) = RINL/VSP approved wage rate for SKW based on which the Estimate of work was prepared.

(The above escalation shall be independent of the award percentage whether positive or negative)
37. PAYMENT OF MINIMUM WAGES:

37.1 Wages paid to the workmen by the contractor should not be less than the rates notified by the Regional Labour Commissioner (Central), Hyderabad, from time to time with regard to the minimum wages applicable to the respective categories of workmen plus the ad-hoc amount at the rate of Rs.11.54 ps 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 workmen 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.

<table>
<thead>
<tr>
<th>LAPSE</th>
<th>ACTION BY VSP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. a) Payment of wages at rates less than those notified under the minimum wages.</td>
<td>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.</td>
</tr>
<tr>
<td>b) Non-payment of ad-hoc amount</td>
<td>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.</td>
</tr>
<tr>
<td>2. Non payment of wages</td>
<td>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 &amp; 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 contractor as certified by Engineer.</td>
</tr>
<tr>
<td>3. Non Payment of PF</td>
<td>An amount equivalent to maximum penalty leviable by Regional Provident Fund Commissioner for the delayed period under the provisions of EPF &amp; 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.</td>
</tr>
<tr>
<td>4. Delayed Payment of PF</td>
<td></td>
</tr>
</tbody>
</table>

37.2.1 The contractor shall have to pay welfare allowance (earlier known as SMA, ASMA) towards fuel charges, food, milk, tiffin, coconut water, washing allowance etc. @ ₹ 80.76 ps. per day of actual attendance of each worker deployed in the contract not exceeding ₹ 2100/- per month in addition to the wages as indicated in the minimum wages clause of special conditions of contract. The contractor will submit his claim with proof of such payment made in this connection in the RA bill and the same amount will be reimbursed/paid to him.

37.2.2 It may be noted that the payment of welfare allowance is towards the expenditure incurred by the contract labour towards fuel charge, Coconut Water Allowance, Washing allowance, food/milk/Tiffin allowance

37.2.3 The contractor is required to take the above aspects into consideration while submitting their offers and no profit/overhead charges will be paid by VSP on this account

37.2.4 As regards applicability of payment of welfare allowance, the contractor may refer NIT/terms & conditions of the contract in this regard

RINL VIGILANCE TOLL FREE NO. 1800 425 8878
38. 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.

39. 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.

40. The contractor should clearly understand and comply with the Factories Act 1948 and relieve the FEMALE WORKERS from their work site within the restricted working hours prescribed therein under section 66(b).

41. 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 mentioned below:

<table>
<thead>
<tr>
<th>S.No</th>
<th>Component</th>
<th>UN-SKILLED</th>
<th>SEMI-SKILLED</th>
<th>SKILLED</th>
<th>To be released when</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Notice pay</td>
<td>₹ 25.68 ps</td>
<td>₹ 26.77 ps</td>
<td>₹ 31.49 ps</td>
<td>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)</td>
</tr>
<tr>
<td>02</td>
<td>Retrenchment compensation</td>
<td>₹ 11.84 ps</td>
<td>₹ 13.39 ps</td>
<td>₹ 15.75 ps</td>
<td></td>
</tr>
<tr>
<td>03</td>
<td>Leave with wages</td>
<td>₹ 14.57 ps</td>
<td>₹ 16.48 ps</td>
<td>₹ 19.38 ps</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sub-total</td>
<td>₹ 50.09 ps</td>
<td>₹ 56.64 ps</td>
<td>₹ 66.62 ps</td>
<td></td>
</tr>
<tr>
<td>04</td>
<td>Bonus</td>
<td>₹ 11.55 ps</td>
<td>₹ 11.55 ps</td>
<td>₹ 11.55 ps</td>
<td>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)</td>
</tr>
<tr>
<td></td>
<td>Grand total</td>
<td>₹ 61.64 ps</td>
<td>₹ 68.19 ps</td>
<td>₹ 78.17 ps</td>
<td></td>
</tr>
<tr>
<td>10%</td>
<td>towards profit and</td>
<td>₹ 06.16 ps</td>
<td>₹ 06.82 ps</td>
<td>₹ 07.82 ps</td>
<td></td>
</tr>
<tr>
<td></td>
<td>overheads of Contractor</td>
<td>₹ 67.80 ps</td>
<td>₹ 75.01 ps</td>
<td>₹ 85.99 ps</td>
<td></td>
</tr>
</tbody>
</table>

**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 component is to be made to the workmen based on **effective wages of last drawn pay**.
42. PAYMENT MODE FOR BILL AMOUNTS:

42.1 Following are the options available to the Contractors for availing e-payments.

42.1.1 EFT System: Under this system Banks offer their customers money Transfer service from account of any bank branch to any other Bank Branch. The EFT system presently covers all the branches of about 77 banks located at 15 centers indicated below, where clearing houses are managed by RBI i.e.,

i) New Delhi
ii) Chandigarh
iii) Kanpur
iv) Jaipur
v) Ahmedabad
vi) Mumbai
vii) Nagpur
viii) Hyderabad
ix) Bangalore
x) Chennai
xi) Trivendrum
xii) Kolkata
xiii) Bhubaneswar
xiv) Guwahati
xv) Patna.

42.1.2 Direct Credit: Suppliers opting for this system may open Bank accounts with any one of the following banks.

i) State Bank of India – Steel Plant Branch
ii) Canara Bank – Steel Plant Branch
iii) Bank of Baroda – Steel Plant Branch
iv) State Bank of Hyderabad – Steel Plant Township Branch
v) Andhra Bank – Steel Plant Township Branch
vi) UCO Bank – Steel Plant Township Branch
vii) IDBI – Visakhapatnam Branch

42.2 The Successful tenderer shall agree that all the payment due and payable in terms of the contract will be paid direct to his bank account and he shall give the bank account number and the address of the Bank in which the money is to be deposited" as per the format given below:

(1) Party Code : 
(2) Option : RTGS / EFT
(3) Beneficiary Details
   a) Name of Beneficiary (Max.35 characters) : 
   b) Bank Name (Max. 35 characters) : 
   c) Branch Name (Max. 35 characters) : 
   d) Account Number (Max. 35 characters) : 
   e) Account type (Max. 35 characters) :
      (Savings / Current / Overdraft) [Mention Code No. also]
   f) Beneficiary Bank’s IFSC Code (Max. 11 characters): (For RTGS Mode only)
   g) Beneficiary Bank’s MICR Code (Max.09 characters): (For EFT Mode only)

   (Signature of the Party / Contractor)
   Name:
   Design:

CERTIFICATE

Certified that the above particulars are found to be correct and matching with our records in respect of the above beneficiary.

Sd/----------------

(Signature of Branch Manager)
Name :
Seal of Bank :
42.3 The contractor has to submit their bank account details in VSP format duly certified by Concerned Bank Manager for the purpose of making electronic payment before submission of First Running Account Bill, failing which the bill will not be processed.

42.4 The Successful tenderer is required to give an undertaking to the Finance Department of VSP that the payment made by RINL/ VSP of any sum due to him by directly remitting the same in his bank, the address and the number of which is to be furnished, shall be in full discharge of the particular bill raised by him, and that he shall not have any claim in respect of the same”.

42.5 In respect of payment made through Electronic Fund Transfer mechanism or Direct Credit to the supplier’s/contractor’s bank account, the supplier/contractor/receiver should intimate discrepancies, if any, within 10 days from the date of dispatch of intimation letter of payment to them to Finance Department of VSP failing which it shall be presumed that the funds have reached to their bank account and that no claims will be entertained after the said 10 days.

43. 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.

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

45. VSP after opening of tender/bid document may seek in writing, documents/clarifications which are necessary for evaluation of eligibility/prequalification stipulated in the NIT.

**********
SCOPE OF WORK

WORK DESCRIPTION:
RUNNING AND PLANNED REPAIR JOBS (REFRACTORY AND MECHANICAL) IN
COKE OVEN BATTERIES FOR THE YEARS 2015-2017

1. CAULKING AND POINTING OF AP BASE:
   a. This job has to be taken up 2-3 hours before pushing of that particular oven and to be completed before pushing time.
   b. The AP caps of both sides of that particular oven should be kept open and oven is to be isolated from GCM.
   c. The AP shield is to be removed and kept aside, then the old/burnt rope and mortar is to be removed from the gap between stand pipe and stand pipe brick work. The joint to be thoroughly cleaned with compressed air. Then after pouring slurry, the gap to be caulked tightly with twisted asbestos/ceramic rope leaving 10-15 mm gap for mortar pointing. After pointing with mortar, the shield to be fixed in place. After the job is over, the AP caps are to be closed and the oven to be connected with GCM. The pointed portion to be washed with mortar slurry for 3 consecutive days for getting better results.

2. OVEN TOP POINTING:
   a. The oven top to be cleaned with brush thoroughly.
   b. The loose mortar at the brick joints is to be taken out with hook.
   c. The oven top to be cleaned thoroughly with the compressed air.
   d. The brick joints is to be grouted with thin fire clay mortar mixed with 15% H.A. cement followed by pointing with thick mortar.
   e. After pointing is completed the excess mortar is to be cleaned thoroughly with brush.
   f. Inspection eye block caps should not be covered with slurry, hence after completion of pointing and brushing all the 32 caps of heating wall to be checked for smooth opening and closing. If any block or cap is found defective it must be reported to Engineer in charge or his representative.
   g. One oven top grouting includes pointing of one heating wall, tie rod bricks, inspection eye blocks etc., i.e., the roof area above the oven. Any minor repairs to charging hole frame, AP base also forms part of this work.

3. INSPECTION EYE BLOCK CHANGING:
   a. The damaged inspection eye block at the oven top should be taken out and new block to be replaced.
   b. Care should be taken to avoid falling of spillage into the vertical flue.
   c. Before starting the job the metallic frame should be fitted into refractory brick with asbestos/ceramic rope packing.
   d. The bricks removed for removing inspection eye block are to be relined/replaced, if necessary by new bricks.

4. HATCH RING CHANGING:
   a. This job is to be taken 01-02 hours before pushing of that particular oven. The AP caps are to be opened on both sides and oven to be isolated from GCM.
   b. The lid to be opened and old/damaged hatch ring is to be taken out. Brick work around the ring is to be taken out as per requirement / instruction given by engineering in-charge or his representative. The area is to be thoroughly cleaned with compressed air. Then the area is to be poured with mortar slurry. The new ring to be placed in position and the lid to be closed. Proper centering to be ensured with respect to other hatch rings. The brick work to be laid as per drawing and/or as per instruction of Engineer in charge or his representative. After the job is over the AP caps are to be closed and the oven to be connected with GCM.

5. HATCH COVER INSULATION/LID CASTING:
   a. The charging hole/hatch covers are to be cleaned properly and the surface to be prepared for reinforcement i.e., welding of spikes. Then welding of mesh/spikes etc to be carried out by the agency.
   b. After the reinforcement is over the cover is insulated with castable as per the instructions of Engineer in charge or his representative.

6. TIE ROD CANAL REPAIR (FULL) and 7 TIE ROD CANAL REPAIR (PART):
SCOPE OF WORK

WORK DESCRIPTION:
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a. The old bricks on the CTR are to be removed as per requirement or as per
   the instructions.
b. After removal of bricks the area should be cleaned off loose
   mortar/insulation material thoroughly with compressed air and fringe
   asbestos/insulation material are to be put and new bricks along with
   mortar are to be relined.
c. Tie rod canal repair (full) means entire tie rod pair i.e., both (a+b) of
   32 flues throughout the length of the Heating wall.
d. Tie rod canal repair (part) means entire tie rod (1 no.) of 32 flues i.e.,
   throughout the length of the Heating wall or both the tie rods (i.e., pair) upto
   16 flues each.
e. After repair of tie rod (full or part) the entire area is to be pointed
   properly and thoroughly cleaned. In both cases proper level is to be
   maintained.

8. AP BASE BRICK WORK:
   a. This job has to be taken up two or three hours before pushing of that
      particular oven. The AP caps are to be opened on both sides and oven to
      be isolated from GCM.
   b. The old and damaged bricks are to be removed if required. If required, 2-
      3 layer/courses of bricks are also to be removed. The area to be
      thoroughly cleaned with compressed air.
   c. Then area to be poured with mortar slurry. Then new bricks are to be
      placed in position as given in the drawing or as per instructions.
      Caulking and pointing of AP base (item no.1) also forms part of this job
      ending included in this item work.
   d. After the job is over the AP caps are to be closed and oven connected to
      GCM.

9. STAND PIPE LINING INCLUDING GOOSE NECK AND MIDDLE PIECE:
   a. If used, lined stand pipe/goose neck/middle part is provided then it is
      to be dismantled thoroughly, cleaned then relining is to be done as per
      the drawing/instruction of Engineer in charge or his representative. If
      required, dismantling and lining are to be done in position.
   b. If a new standpipe/gooseneck/middle piece is provided then lining is to
      be done directly as per the drawings/instructions of the Engineer in
      charge or his representative.
   c. The lined standpipe/gooseneck/middle part is to be shifted only after
      proper drying for a minimum of 24 hours.

10. UPPER LINTEL BRICKS POINTING AND PATCHING:
    a. The upper lintel portion is to be cleaned thoroughly of tar and dust. The
       gap between flash plate and face wall to be cleaned and filled with loose
       mortar and rope. If required 2-3 courses of bricks are to be dismantled
       as per the instructions of Engineer in charge or his representative and
       subsequently relined. After that the gap between flash plate and brick
       work is to be caulked with asbestos/ceramic rope leaving 10-15mm gap for
       mortar pointing.
    b. There should not be any leakage from the gap between anchor column and
       brickwork. The job to be done with pusher car / DE car / trolley platform
       or from oven top , as per requirement / availability.

11. PARTIAL REPAIR OF UPPER LINTEL:
    a. The upper lintel portion to be cleaned thoroughly of tar and dust. The
       gap between the face wall and flash plate to be cleaned of loose rope and
       mortar. About five courses of bricks to be dismantled if required as per
       the instruction of the Engineer in charge or his representative and
       subsequently relined. After that the gap between flash plate and brick
       work to be caulked with asbestos/ceramic rope leaving 10-15 mm gap for
       mortar pointing. Finally the entire face has to be washed with mortar
       slurry.
    b. There should not be any leakage from the gap between anchor column and
       brick work and flash plate. The job to be done with pusher or guide car /
       trolley platform / as per the availability.
12. **COMPLETE DISMANTLING AND RELINING OF UPPER LINTEL:**
   a. The upper lintel face wall will be dismantled fully from flash plate top to oven top 85th course.
   b. After dismantling is over both the flash plates are to be grouted from all the three holes and from the top. After the grouting is completed and after tie rod loading as per requirement by Engineer in charge or his representative the upper lintel face wall relining to be completed.
   c. The job should be taken up before 6-7 hrs before pushing of that particular oven. The job should be completed before charging of that particular oven. The debris to be cleaned thoroughly.

13. **BOTTOM LINTEL DISMANTLING AND RELINING:**
   a. Cast iron plate below the door frame is to be removed. The side cast iron plate which anchors the main cast iron plate are also to be removed.
   b. The brick work is to be removed till the face of inclined flue zone is visible.
   c. The entire area is to be cleaned with compressed air.
   d. The face of the inclined flue zone is to be repaired with castable. The joint between the brick work and flash plate is to be sealed.
   e. The face to be washed with fire clay mortar and thin film of ceramic fiber blanket or mill board (5 mm).
   f. Rope sealing of joint below the door frame and under buck-stay is also included in the scope.
   g. The lining will be carried out as per drawing or as per the instruction of Engineer in charge or his representative.

14. **BOTTOM LINTEL REPAIR:**
   a. Cast iron plate below the door frame is to be removed. The side cast iron plate which anchors the main cast iron plates are also to be removed.
   b. The entire area is to be cleaned with compressed air.
   c. The face of the brickwork of bottom lintel is to be repaired with mortar/castable. The joint between the brick work and flash plate is to be sealed.
   d. The face to be washed with fireclay mortar and thin film of ceramic fiber blanket or mill board (5mm).

15 **RELINING OF FACES AT BUTTRESS WALL (FULL) & 16. RELINING OF FACES AT BUTTRESS WALL (PART):**
   a. To dismantle the buttress wall stage as per requirement.
   b. After one stage dismantling that particular stage has to be relined. Then another stage is to be dismantled and relined.
   c. Buttress wall part repair means, from its 5m level to the oven top. But the actual repair of the buttress has to be carried out as per the instructions of the Engineer in charge or his representative.
   d. After repair, the relining work should be suitably protected by angle /channel.

17. **LINING OF FULL DOOR:**
   a. The door will be either supplied in the repair rack at the 5m level in the horizontal position or at the ground level in the horizontal position.
   b. The agency has to dismantle the fireclay and insulation brick work thoroughly. Then they will have to clean the retainer plates neatly. The retainer plates are to be tightened as per requirement. If required the door will be given for mechanical repair.
   c. After thorough cleaning/mechanical job is over the insulation lining has to be done as per the drawing. After the lining is dried up, the fireclay brick work to be done as per drawing or as per instructions of Engineer in charge or his representative.
   d. The entire dismantling and relining is to be completed within 24 hours after handing over the door to the agency.
e. Defect liability will be three months for this job.

18. **LINING OF DOOR PART (UPTO 25% OF TOTAL LINING):**
   - a. It carries the same procedure from (a) to (d) as mentioned in item no 17 above only up to 25% of total dismantling and lining

19. **LINING OF DOOR PART (UPTO 5 LAYERS):**
   - a. It carries the same procedure from (a) to (d) as mentioned in item no 17, but only 5 layers of dismantling and lining.

20. **GROUTING BEHIND FLASH PLATE:**
   - a. All the six holes of each flash plate are to be opened and cleaned thoroughly.
   - b. At the bottom most location, silica mortar is to be sprayed into one of the two holes by spraying/grouting machine which will be supplied by VSP. The mortar to be pumped in till the mortar comes out through the other hole at the same level. This operation is repeated till bottom portion is filled up fully. The same operation is carried out at the other holes at two more levels.
   - c. After the job is over all the holes are to be plugged properly with insulation brick and the anchor column to be cleaned thoroughly, and the machine is to be cleaned with water and kept in the proper place as directed by the Engineer in charge or his representative.

21. **OVEN SOLE REPAIR (MEASUREMENT WILL BE MADE PER FLUE BASIS):**
   - a. The sole is to be dismantled up to required flue as per the instructions of Engineer in charge or his representative.
   - b. In order to protect the heat of the oven, oven front dummy wall is to be erected with window at the bottom or blanket is to be fixed at the oven face.
   - c. After dismantling of sole bricks with proper tools thorough cleaning is to be done with compressed air.
   - d. After cleaning relining is to be started.
   - e. In hot condition fire clay sole bricks are to be used and grouting is to be done with fire clay mortar mixed with Ortho-phosphoric acid.
   - f. Proper level of the sole is to be maintained
   - g. After the grouting is dried up excess mortar is to be scrapped out of the sole

22. **POINTING BETWEEN FLASH PLATE AND BRICK WORK:**
   - a. Ceramic fiber blanket is to be cut into 11 pieces of size 612x800 mm
   - b. Each piece is to be fixed with sodium / potassium silicate on the first brick (jamb brick) of the oven so that the gap between flash plate and jamb brick visible throughout the height. The gap between the flash plate and the jamb brick is to be cleaned thoroughly and twisted asbestos/ceramic rope dipped in sodium silicate to be caulked tightly leaving around 10 mm gap for mortar pointing. The suitable mortar as per the instructions of Engineer in charge or his representative to be used for pointing at the gap between flash plate and jamb brick.
   - c. After pointing is over the blankets are to be removed and kept in safe custody for re use.

23. **DUMMY WALL RAISING AND REMOVAL:**
   - a. Dummy walls are made either from pusher side or coke side or from charging holes with proper tools.
   - b. The bricks to be laid as per the instructions of the Engineer in charge or his representative. The wall thickness is to be made 500 mm max. up to 7m height. This specification may vary as per instructions of Engineer in charge or his representative.
   - c. After the dummy wall is erected the face is to be plastered by fire clay mortar. After each 5 layers some key/wedges/strip to be fixed in order to strengthen the wall. Gunniting is to be carried out, if required in case of blazing after charging of oven.
   - d. The defect liability period is 3 months if not dismantled before due to some other reasons.
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e. The dummy wall is to be erected below charging holes within scheduled
time after starting the job. The dummy wall from pusher or coke side to
be erected within scheduled time based on availability of pusher or DE
car/ platform
f. If required man power is to be mobilized on round the clock basis.
g. The dummy wall is to be dismantled and relined free of cost on safety
point of view.
h. Ceramic fiber blankets are to be put over the dummy wall if required as
per the instructions of Engineer in Charge or his representative.

24. OVEN COVERING BY FIXING CERAMIC BLANKET AND REMOVAL:
a. The job is to be carried out as per the instructions of the Engineer in
charge or his representative. Before starting of the job ceramic fiber
blanket is to be cut into pieces of uniform sizes to suit the width of
the oven. The small pieces are to be fixed in the door frame with sodium
silicate with the help of necessary tools. The job is to be started from
bottom of the oven. Pusher car/DE car / platform is provided only for
fixing the blanket in top 2 meters height of the oven. As per the
instructions of the Engineer in charge or his representative the blanket
will be removed and the area is to be cleaned.

25. BRANCH PIPE CAULKING AND POINTING:
a. Before taking up this job , gas cock of that heating wall is to be
closed.
b. The gap between the branch pipe and the sole flue zone brick work is to
be cleaned of mortar and old rope. The gap to be cleaned with compressed
air.
c. New twisted asbestos/ceramic rope to be caulked at the gap tightly
leaving 10-15 mm for mortar pointing. After mortar pointing is over the
gas cock has to be opened.
d. The joint is to be checked thoroughly with flame for leakage.

26. REGENERATOR FACE POINTING AND WASHING:
a. The regenerator face on both gas and air side to be cleaned thoroughly
with metallic brush.
b. The loose mortar at the brick joint to be taken out with hook.
c. The joints to be pointed with fireclay mortar mixed with 10% sodium
silicate.
d. After pointing is completed the face is to be brushed with the slurry of
fire clay mortar mixed with 10% sodium silicate.
e. After the brushed mortar is dried second coating is to be applied.
f. At the end it is to be ensured that no crack is there at the pointed
mortar.

27. REGENERATOR INSULATION BRICK RELINING (IN LAYERS):
a. The insulation brick at the regenerator face on both air and gas side are
to be opened as per requirement from top as per the instructions of the
Engineer in charge or his representative. The area is to be cleaned
thoroughly and relined as per the requirement.
b. After the insulation brick lining is completed the entire regenerator
face being pointed and washed as mentioned in 26.

28. REGENERATOR UN–PACKING AND PACKING (FLUE) :
a. Insulation brick work at the regenerator face on both air and gas side to
be opened up to at least 10 layers from top or as per the instruction of
engineering in-charge or his representative.
b. The checker bricks to be removed from top till good bricks are obtained.
Good checker bricks means there will be no dust in the pores and the
brick should not be in damaged condition.
c. If required front insulation and face bricks to be removed till bottom.
d. After removing the first compartment some metallic sheets or gunny bag or ceramic blanket to be placed on the checker so that no dust can go into the checker.

e. After doing the above job, the partition wall between first and second chamber to be opened and checker to be removed as described in s.no. (b).

f. No. of compartments to be cleaned will be decided by Engineer in charge or his representative.

g. After un packing the chambers the inclined flue passage to be cleaned with rod and the cleaning to be checked by Engineer in charge or his representative.

h. The packing, patching of side walls if required and partition wall lining to be done after obtaining the clearance from Engineer in charge or his representative.

29. **AIRING OF REGENERATORS:**

a. Airing of regenerator wall shall be as and when necessary to avoid deposit of carbon and resultant choking of regenerator wall. This is not a regular job. However, contractor has to mobilize resources within 24 hours of demand. Contractor must note this while quoting. Airing of regenerator means one full regenerator.

30. **GUNNITING/WELDING OF OVENS (GROUP CONSISTS ONE SUPERVISOR, TWO SKILLED & FOUR UN-SKILLED MANPOWER – MEASUREMENT WILL BE MADE PER GROUP BASIS):**

a. All tools and tackles, gunniting machine and its accessories (which will be provided free of cost by VSP) required to carry out the job are to be kept ready in proper condition by the agency. The dismantling and assembling of accessories of the machine safely during operation and idle period as well as shifting the machine during idle hours is the responsibility of the agency.

b. Only skilled and experienced man power in carrying out similar jobs in coke oven batteries should be used for carrying out the gunniting/welding job. The group should have exposure of handling / using the gunniting/welding material and its behavior during storage and operation.

c. Gunniting/welding to be carried out as per requirement in any ovens of battery 1, 2, 3&4 each consisting of 67 ovens. In each oven gunniting can be carried out as both sides (i.e. P/S & C/S, end verticals and damaged area below pusher side, middle and coke side charging holes as well as stand pipe base as per requirement and after dismantling the bulged deposition if any i.e. after proper surface preparation.

d. The consumption of gunniting material may vary widely oven wise and the ovens will be gunnited as per requirement. If required, the oven will be covered by ceramic blanket. Covering by blanket and removal at the end of job is also in the scope of this item.

e. VSP will provide ovens for dry gunniting either at end verticals, charging holes or stand pipe base or any other place as per requirement and instructions of Engineer in charge.

f. The moisture content in dry gunniting should be maximum 8-10%. The agency has to ensure that aspect.

g. Gunniting will be carried out as per requirement and round the clock if required.

h. Periodical inspection, cleaning, servicing, and preventive and break down maintenance of the tools and machines are to be carried out by the group. However, spares of machines will be supplied by VSP free of cost.

i. The group will be utilized for other miscellaneous jobs as per requirement.

j. The group should use the safety helmet, shoe, coat, hand gloves, face shields etc. (all are to be provided by the agency) regularly with safe working condition.

k. Safe operation and maintenance of machine is agency’s responsibility.

31. **FLUE CLEANING:**
SCOPE OF WORK

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a. The flue cleaning to be done is being decided jointly by CRG (REF) and H&R group, CO(Oprn) and to be jointly certified after the end of the job. The required manpower (min. one skilled and two un skilled) is to be engaged. All the tools required are to be arranged by the agency. Cleaning is to be done from oven top as well as from cellar as per requirement. The flues are to be cleaned as per requirement and minimum possible time by engaging experienced, skilled man power and continuous working without any disturbance.

32. SPIGOT JOINT CLEANING AND CAULKING:
a. The job has to be taken up to two to three hours before pushing of that particular oven and to be completed before pushing time.
b. The AP caps on both sides should be kept open and the oven to be isolated from GCM on both sides.
c. The old rope at the gap between valve box and goose neck to be removed and the joint to be cleaned thoroughly with compressed air.
d. After cleaning is over the joint to be caulked with twisted asbestos/ceramic rope tightly so as to stop leakage of raw coke oven gas.
e. After the job is over in all respects, the AP caps are to be closed and the oven is to be connected to GCM.

33. WASTE HEAT BOX INSULATION:
a. Waste heat box insulation has to be done as per the drawing / as per the instructions of engineer in charge or his representative.

34. CHARGING HOLE FRAME POINTING AND PATCHING:
a. The oven top charging hole frame area to be cleaned with brush thoroughly.
b. Loose mortar at the brick joints is to be taken out with hook.
c. The required area to be cleaned thoroughly with compressed air.
d. The brick joints is to be grouted with thin fireclay mortar mixed with 15% H.A. cement followed by pointing with thick mortar.
e. After pointing is completed the excess mortar is to be cleaned thoroughly with brush.
f. Inspection eye block caps should not be covered with slurry, hence after completion of pointing and brushing, the adjacent caps of inspection eye block to be checked for smooth opening and closing. If the block is found defective, it must be reported to Engineer in charge or his representative.

35. OVEN TOP LAYER CHANGING INCLUDING TWO LAYERS OF INSULATION :
a. The oven top course i.e.85th course between charging holes and AP brick work is to be done along with bottom two layers of insulation i.e. 12b and 13b courses.
b. The scope of work also includes the tie rod canal relining and insulation and changing of inspection eye blocks.

36. UPPER LINTEL WASHING:
a. The upper lintel washing of pusher side or coke side is to be carried out as per requirement and as per the instruction of the Engineer in charge or his representative.
b. Pusher car, DE car, trolley/platform will be provided by VSP as per convenience in order to carry out the job.
c. Fireclay mortar with proper consistency is to be prepared for doing the job.
d. The upper lintel is to be completed cleaned with brush before carrying out the washing.
e. Then the upper lintel is to be washed properly.
f. Excess material, if any is to be removed especially from metallic parts and cleaned.
37. **REFRACTORY WORK DURING LTR CHANGING/REPAIR (FULL) and 38.REFRACTORY WORK DURING LTR CHANGING / REPAIR (PART):**
   
   a. LTR changing full means complete repair of one total LTR comprising about 100 meters approx. and part means repair of approximately half of full i.e., about 50 meters approx.
   
   b. LTR changing/repair job (full/part) is planned along with mechanical. The job includes chipping/cleaning of refractory material above the LTR and below if required as per drawing / instruction of engineer in charge or his representative. Proper cleaning and airing is to be done all along the length of LTR groove /canal.
   
   c. The refractory debris is to be properly dumped at the specified place.
   
   d. Clearance is given for carrying out mechanical jobs.
   
   e. After getting clearance from mechanical, refractory job is to be carried out as per drawing / instruction of engineer in charge or his representative.
   
   f. The level of refractory application being carried out should match with LTR / oven top lining.
   
   g. Minor repairs may have to be carried out after one week/ten days as per the instructions of engineer in charge or his representative.

39. **PATCHING OF HEATING WALL FLUES:**

   a. Patching of heating wall with normal fire clay/silica bricks have to be done as per requirement of Engineer in charge or his representative. Ceramic fiber blanket is to be put all along outside the oven before starting of this job and the blanket to be removed partly whenever the patching is to be done. After patching, the oven is to be cleaned thoroughly and blanket is to be removed and to be handed over for gunniting/welding, if required.

40. **OVEN BLANKING:**

   a. The oven blanking is to be carried out as per the instructions of Engineer in charge or his representative.
   
   b. The number of dummy walls to be raised is minimum 7 and maximum 9 and to be carried out in different flues.
   
   c. The dummy wall is to be erected as per the scope of work in 23

41. **REPLACEMENT OF VERTICAL FLUES (END PAIR OF FLUES) AND 42 REPLACEMENT OF VERTICAL FLUES (IN STEPS OF TWO FLUE):**

   a. Dismantling and relining of heating wall as per requirement which may extend up to nozzle deck. Along with lining condition of side heating walls to be checked by removing blankets and later fixing it back. Pointing or mortar patching whatever necessary is to be done free of cost.
   
   b. Along with dismantling, blanketing and jacking of heating walls to be done as per the instructions of Engineer in charge or his representative.
   
   c. Erection and later dismantling of inside dummy walls, outside dummy walls and honey comb dummy walls to be done as per instructions of Engineer or his representative.
   
   d. All other related activities like caulking and pointing of spigot joint and AP base, bottom and upper lintel relining, flash plate grouting, tie rod canal insulation and lining, CO gas riser grouting, branch pipe caulking, regenerator face relining and pointing on the repaired wall and on one heating wall on either one side are included in the scope.
   
   e. Cleaning of inclined flue, replacement of checker, if required including partition brick changing to be done at no extra cost.
   
   f. It is the responsibility of the agency to clear all the debris and muck generated from the end vertical repairs. However VSP will provide pay loader and dumper if available for transportation and removal of muck and debris. Under no circumstances, movement of battery machines to be restricted except specified shut down period.
   
   g. The steps of flue replacement may extend up to middle of heating wall(i.e. up to 16 flues). If required, the charging car supporting bridge to be erected and later dismantled.
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h. All other activities like locking of flash plate, buck stays, anchoring of buck stays which are required to be done, must be done at no extra cost.

i. If the repair is carried out by inserting stainless steel screen, the agency has to wrap the screen with ceramic blanket and/or ceramic/asbestos cloth.

j. VSP will provide blanket, refractory bricks, mortar and other refractory materials free of cost at site at zero level which may be within the distance of 1 Km. The agency has to make their own arrangement to transport the material to the work spot.

k. Agency has to fabricate screw jacks and benches required for the job. VSP will provide necessary spindle and other required materials and consumables at free of cost.

l. The agency has to follow all the safety regulations of VSP and provide all the safety appliances to the workmen.

m. The work is to be carried out round the clock basis and the agency has to employ only experienced workers, supervisors and Engineers round the clock. The agency has to ensure proper quality of job. In case during checking, poor workmanship is found by Engineer in charge or his representative the agency has to dismantle the brickwork and reline again free of cost. The decision of the Engineer is final in this matter.

n. The agency has to make their own arrangements for working at height. Height passes to the workmen engaged at heights shall be obtained from SED of VSP. However, if available pusher car and guide car may be provided.

o. The job may get interrupted number of times due to production or due to other shut down / break down activities. No idle wages will be provided for the same.

p. The schedule of end vertical repair work will be scattered throughout the contract period. Hence, the agency must be in a position to mobilize the work force in 7 days notice.

q. Cooling and heating up activities is the responsibility of VSP. However, the required man power as detailed below shall be provided by the agency at no extra cost.

r. In case of end vertical repair minimum of one skilled person in each shift (three shifts in a day, i.e. A, B, C) should be provided by the agency from two days before start of heating wall repair and one day after charging of oven or changing to permanent heating system, whichever is later, or as per the instructions of Engineer or his representative. The manpower quantity indicated is firm and any additional manpower over and above indicated above will be paid extra by VSP as per the prevailing rates. However the agency shall supply the manpower to the heating up activities of the heating wall during the repair period as per the VSP’s requirement.

s. The agency must take custody of all the materials and consumption of material is to be done as per norms. Material reconciliation is to be done every month.

t. Racking of sealed ovens up to the extent of face preparation is included in the scope of work.

43. REPLACEMENT OF FULL HEATING WALL:

a. Full wall repair will be carried out on single wall basis.

b. Side oven will remain on empty with bracing dummy wall inside or with coke.

c. Charging car supporting bridge erection and buck stay locking on both sides to be erected and later dismantled.

d. Dismantling and relining of heating wall as per requirement which may extend up to nozzle deck.

e. Along with dismantling, blanketing and jacking of heating walls to be done as per the instructions of Engineer or his representative.

f. Erection and later dismantling of inside dummy walls, outside dummy walls and honey comb dummy walls to be done as per instructions of Engineer or his representative.
g. All other related activities like caulking and pointing of spigot joint and AP base, bottom and upper lintel relining, flash plate grouting, tie rod canal insulation and lining, CO gas riser grouting, branch pipe caulking, regenerator face relining and pointing on the repaired wall and on one heating wall on either one side are included in the scope. The agency has to make final top brick layer as per survey level. VSP shall provide survey team.

h. Cleaning of inclined flue, replacement of checker up to 1P/1D course, grate bricks, if required including partition brick changing to be done at no extra cost.

i. It is the responsibility of the agency to clear all the debris and muck generated from the heating wall repairs. However VSP will provide pay loader and dumper if available for transportation and removal of muck and debris. Under no circumstances, movement of battery machines to be restricted except specified shut down period.

j. All other activities like locking, verticality, deflection & distance of flash plate and buck stays, anchoring of adjacent buck stays and regulations which are required to be done, must be done at no extra cost.

k. If the repair is carried out by inserting stainless steel screen, the agency has to wrap the screen with ceramic blanket.

l. VSP will provide blanket, refractory bricks, mortar and other refractory material free of cost at site at ‘0’ Level which may be within the distance of 1 KM. The agency has to make their own arrangement to transport the material to the work spot.

m. Agency has to fabricate screw jacks and benches required for the job. VSP will provide necessary spindle and other required raw materials and consumables at free of cost.

n. The agency has to follow all the safety regulations of VSP and provide all the safety appliances to the workmen.

o. The work is to be carried out round the clock basis and the agency has to employ only experienced workers, supervisors and Engineers round the clock. The agency has to ensure proper quality of job. In case during checking, poor workmanship is found by Engineer in charge or his representative the agency has to dismantle the brickwork and reline again free of cost. The decision of the Engineer is final in this matter.

p. The agency has to make their own arrangements for working at height. Height passes to the workmen engaged at heights shall be obtained from SED of VSP. However, if available pusher car, DE car may be provided.

q. The job may get interrupted number of times due to production or due to other shut down/break down activities. No idle wages will be provided for the same.

r. The schedule of full wall repairs shall be scattered throughout the contract period. Hence the agency must be in a position to mobilize the work force in 7 days notice.

s. Cooling and heating up activities is the responsibility of VSP. However, the required man power as detailed below shall be provided by the agency at no extra cost. A minimum of two skilled persons in each shift (three shifts in a day i.e.A,B&G) should be provided by the agency from two days prior to starting of heating wall repair and one day after charging of oven or changing to permanent heating system, whichever is later, or as per the instructions of Engineer or his representative. The manpower quantity indicated is firm and any additional manpower over and above indicated above will be paid extra by VSP as per the prevailing rates. However the agency shall supply the manpower to the heating up activities of the heating wall during the repair period as per the VSP’s requirement.

t. The agency must take custody of all the materials and consumption of material is to be done as per norms. Material reconciliation is to be done every month.

u. Racking of sealed ovens up to the extent of face preparation is included in the scope of work.

44. RELINING OF BATTERY NO-4 DOOR (PER LAYER BASIS):
SCOPE OF WORK

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a. The door will be provided either in the repair rack at the 5 meter level in the horizontal position or at the ground level in the horizontal position.
b. Brick structure of Battery -4 doors are divided into 7 segment with retaining partition metal plate. The agency has to dismantle the damage layer of fire clay bricks and insulation castable (if required) of each /particular segment of door as per requirement of repair or has to dismantled all layer of fire clay bricks and insulation castable of each /particular segment depending upon condition of door and agreed with Engg In-charge/ his representative.
c. The agency has to clean thoroughly and retaining plates to be tighten /strengthen by welding before starting of relining.
d. The agency has to apply adiabater / insulation castable to the bottom of door as per drawing /instruction given by Engg In-charge and allow 3-4 hr for hardening the insulator castable before F/C bricks lying.
e. Fire clay bricks relined above insulation castable with F/C mortar maintaining 4-5 mm expansion between bricks filled with mortar. While relining, profile of bricks lying with proper locking of bricks groove above retaining plate.
f. After completion of refractory /mechanical work debris to be cleaned from repair rack area.
g. The entire dismantling and relining if required to be done is to be completed within 24 hours after handing over the door to the agency.
h. Defect Liability will be three months for full door layer / particular segment dismantling and relining of door along with mechanical jobs of retaining plate.

45. DISMANTLING AND RELINING OF SILICA BUTTRESS ADJOINING END HEATING WALL OF BATTERIES IN HOT CONDITION:
a. Dismantling and relining of silica Buttress adjoining end heating wall i.e. extreme heating wall of batteries can be carried out on one side of battery depending upon the condition of buttress wall.
b. Side oven of extreme heating wall will be remaining empty with bracing dummy wall inside or with coke.
c. Dismantling and relining along with end heating wall as per requirement which may extend up to nozzle deck.
d. It carries the same instruction from (d) to (u) as mention in item no 43 of this BOQ.

46. DOOR REPAIR AT DOOR REPAIR STATION:
Repair of two doors generally per day per battery is envisaged. The repair of door consists of:-
a. Lifting and lowering the door body assembly from ground to platform and vice-versa if necessary.
b. Removal of old sealing frame, cleaning and replacement of same sealing frame after straightening / minor repair or change of sealing frame, revisioning of latch rod assembly and replacement of parts if any. Job also includes repair/replacement of brick retainer plates (top, middle and bottom) by welding of retainer plates. Removal of graphite deposits on door has to be done fully.
c. Adjustment of latch spring mechanism, revisioning of window assembly of pusher door, change of regulation bolts and brackets if necessary, repair of door body for cracks by welding.
d. Pointing and washing of door bricks, if brick work condition so warrants, forms part of door repair work. After completion of door repair, it should be got inspected at site by mechanical and operation in charges.
e. Complete regulation of door after fixing on oven. Door regulation shall be done twice thereafter to ensure zero gas leakage. Minimum door life is 3 months after repair.
f. Shifting of old sealing frame and other scrap materials / parts from door repair station to ground and further to specified location near the battery for subsequent disposal by VSP.
g. Maintenance of door repair station winches and racks like coupling pin, bush changing, and application of servo coat on entire rope, alignment of the door repair rack and replacement of wire ropes shall
SCOPE OF WORK

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be done by contractor for which no separate price is envisaged. However one time major repair for the winches/racks has been envisaged in item no: 52 once in a year.

h. In case the door is declared not fit for reuse, all the salvageable parts to be taken out from the rejected door for further usage.

i. Removal of door, giving it for repair, taking door from repair station and fixing to oven shall be taken care by VSP. The doors will be fixed to the stands after taking out from oven.

j. Salvaging of side, top, and bottom brackets by removing broken bolts.

47. DOOR REVAMPING AT GROUND FLOOR:
   a. Thorough cleaning of door is to be done after removing required parts.
   b. Changing / rectification of top, bottom and middle brick retainer plates as per requirement.
   c. Replacement of all latch shaft assemblies.
   d. Making door ready for lining by tightening all fastening joints.
   e. Revamped door to be taken on the rack and further repair to be carried out as per item no. 46 for which payment will be made separately.
   f. Brick holder, rivets are to be welded in case of requirement. Lifting and lowering the door body assembly from ground to platform and vice-versa if necessary.

48. DIAPHRAGM TYPE DOOR REPAIR AT DOOR REPAIR STATION:
   Repair of two doors generally per day per battery is envisaged. The repair of door consists of:-
   a. Lifting and lowering the door body assembly from ground to platform and vice versa if necessary.
   b. Removal of plunger assemblies, revisioning / repair / replacement of plunger assemblies, latch rod assemblies or parts if any before fixing to the door body. Repair / replacement of brick holders by welding and removal of graphite deposits on door including diaphragm has to be done fully.
   c. Adjustment of latch spring mechanism, revisioning / repair of window assembly of pusher side door and regulation, change of regulation bolts /brick holder bolts / slide plate bolts if necessary, repair of door body and diaphragm for cracks by welding and grinding, straightening the diaphragm knife edge and filing or as per the instruction of site engineer are in the scope.
   d. Pointing and washing of door bricks if brick work condition so warrants, forms part of door repair work. After Completion of door repair, it should be got inspected at site by mechanical and operation in charges.
   e. Complete regulation of door after fixing on oven to ensure zero gas leakage. Minimum door life is 3 months after repair.
   f. Shifting of scrap materials / parts from door repair station to ground and further to specified location near the battery for subsequent disposal by VSP.
   g. Maintenance of door repair station shall be done by contractor for which no separate price is envisaged. Winches, repair racks, coupling pin & bush changing and application of servo coat on entire rope, alignment of the door repair rack and replacement of wire ropes etc, are in the scope of the contractor.
   h. In case the door is declared not fit for reuse, all the salvageable parts to be taken out from the rejected door for further usage.
   i. Removal of door, giving it for repair, taking door from repair station and fixing to oven shall be taken care by VSP.
   j. Salvaging of spares like plungers, springs, latch assemblies by repair are in the scope of contractor.

49. DIAPHRAGM TYPE DOOR REVAMPING AT GROUND FLOOR: Lowering and lifting the door body assembly from platform to ground and vice versa if necessary. Door consists of two parts: Top portion & Lower portion.
   1) Top portion:
      (a) Top body, (b) Plunger units, (c) Latch assembly
   2) Lower portion:

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SCOPE OF WORK

WORK DESCRIPTION:
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(a) Slide plate, (b) Diaphragm, (c) Brick retainer blocks

3) Repair of Top Portion:
   a) Removal of all latch assemblies from the door body and repair / replace of parts if any while revisioning.
   b) Remove the 16 nos of M65 Hexagonal nuts of adjusting screw. For p/s door, window assembly is included.
   c) Top portion is to be separated from lower portion of the door body with the help of crane after removing lever joint 4 bolts (2 nos of each Allen&M24x60) and kept aside.

4) Repair of Lower portion:
   a. Remove the slide blocks along with studs of M20 X 65 (34 nos.) from slide plate and is to be made free by cleaning and greasing.
   b. Remove the slide plate & diaphragm continued with through cleaning.
   c. Diaphragm repair, straightness checking, rectification are to be carried out as per the instructions of Site Engineer. Repair of diaphragm by welding, grinding & filing of knife edge is to be carried out if required.
   d. Clean the brick retainer top portion and check the tightness of studs.
   e. All the threaded portions are thoroughly cleaned with wire brush, rust remover before placing 3mm thick ceramic paper throughout door body.
   f. Place the repaired / new diaphragm on the door body. Check for the straightness and dents on knife edge before placing the diaphragm. All 34 nos studs of M 20X65 nuts are to be tightened firmly.
   g. All slide blocks are to be placed along with studs. Check that the slide blocks are moving freely in the groove provided.

5) Place the top portion of the door so as to fix the 4 bolts of fixer (Door holding unit). All the bolts are to be tightened. All the latch units and plunger assembly are to be fixed.

6) Before lifting the revamped door, it has to be checked thoroughly in mock rack. Revamped door to be taken on the repair rack and further repair to be carried out as per item ‘Diaphragm type door repair at door repair station’ for which payment will be made separately.

50 OVEN DOOR WINDOW CHANGING:
   a. Removal of damaged window assembly from oven door fixed at oven and fixing of new / repaired window assembly along with levers etc.
   b. Site engineer’s instructions should be followed strictly for executing the above job.

51 OVEN SOLE PLATE CHANGING:
   a. Cleaning of end sole area.
   b. Removal of old sole plate / sheared bolts from threaded holes of flash plates.
   c. Fixing of new sole plate by giving proper packing to suit oven sole.
   d. If required studs are to be welded to flash plate and sole plate to be tightened with nuts.
   e. Gaps between flash plate to sole plate, sole plate to oven sole, sole plate bolt fixing groove are to be caulked with loose asbestos rope with sodium silicate solution.

52 DOOR REPAIR RACK WINCH SYSTEM REVISIONING AND WINCH ROPE CHANGING:
   a. Revisioning and fixing of pulley assemblies, gear box, brake assembly, couplings, rope drum assembly and counter weight system including rope etc.
   b. Changing of damaged parts (i.e. gears, bearings, springs, brake liners etc.) are included in the scope of work.
   c. Replacement of wire ropes.
   d. Spare parts shall be supplied by VSP.

53 CHANGING OF DOOR REPAIR RACK/SWIVELLING RACK:
   a. Preparation / revisioning of new rack for erection.
   b. Isolation of door rack from winch system.
   c. Removal of old door rack and fixing of new door rack.
   d. Connecting door rack with winch system.
   e. Testing for lowering / lifting / turning of door rack.
SCOPE OF WORK

WORK DESCRIPTION:
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f. Crane shall be provided by VSP for erection and dismantling of door rack.
g. Re-alignment/Re-fixing/shifting of latch hooks is to be done as per requirement.

54 DOOR FRAME CHANGING:
PREPARATORY JOB:-
a. Dismantling and erection of above mentioned equipment is to be done using special door frame removal / erection structure with DE car or directly with the help of crane.
b. A new frame/revisioned door frame is to be shifted to erection site (below load lifting device (LLD) / end bench / intermediate bench / coke side).
c. Door frame, to be erected, is to be visually inspected and control dimensions are to be checked.
d. Door frame is to be prepared for erection, by fixing thrust bolts/adjusting bolts and 'C ' clamps, by cleaning/grinding (if required) the mating surfaces of door frame.
e. While the new door frame is in horizontal position, asbestos rope of dia 30-32 mm is to be placed by using sodium silicate solution, around the inside perimeter of the door frame.
f. Door frame is to be lifted by load lifting device/crane. Crane will be given by VSP free of cost.
g. ‘T’ bolts on the old door frame are to be kept unlocked before hand, except six ‘T’ bolts at bottom to expedite removal of the old door frame.
h. Gas cutting set and welding holder with cable are to be made available at place of work.
i. Repair of flash plate like crack welding, etc. is also included in the scope of work.

WORK EXECUTION:-
a. Coke from the ovens, where frame changing is planned, is pushed out. Door is not to be fixed back on the side where frame is to be changed.
b. Oven opening is closed using either ceramic blanket or a dummy wall as the case may be .(by VSP)
c. Sole plate is removed. The new sole plate is to be cleaned and to be kept ready.
d. Removal of old door frame is done using frame removal structure or crane.
e. The surface of the armour plate is to be thoroughly cleaned at the place of its joining with the door frame.
f. Deflection of flash plates to be checked and, if required, ‘L’ plates are to be welded to get deflection of 8mm to 10mm. (as per instruction of site engineer).
g. New / revisioned ‘T’ bolts are to be fixed in ‘T’ slots of flash plates and braided asbestos rope of diameter 30mm-32mm is then placed on the flash plate groove by using sodium silicate solution.
h. The new frame is then placed on the armor plate with the help of either crane or frame structure.
i. Door frame is to be aligned with the help of jack. Door frame hooks are to be locked with plated and pipes in aligned position. Thrust bolts are to be kept in loose condition.
j. ‘T’ bolts tightening is to be done starting from middle hook to upwards and downwards simultaneously.
k. ‘C’ clamps at bottom hooks are to be locked with flash plate hold and thrust bolts with cups are to be tightened.
l. The sole plate is then fixed back. The gaps between armor plate and refractory bricks of the oven are to be caulked and grouted.
m. Ceramic blankets / dummy wall are then removed. (by VSP)
n. Door is fixed and oven is charged after sole cleaning and proper temperature build up.
o. Scope of work includes rope caulking between jamb brick and flash plate and also between flash plate and door frame followed by pointing at no extra cost.
p. Regulation of T bolts on 2nd and 3rd charging is also included in the scope.
SCOPE OF WORK

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SAFETY:
If oven is charged after making dummy wall, isolation valves at oven top are to be locked with angle in open condition and after completion of work locking to be removed.

55 REVISIONING & TIGHTENING OF ALL T-BOLTS AND JACK BOLTS OF ONE DOOR FRAME:
   a. Tightening of t-bolts and jack bolts fully of each frame.
   b. Changing of the bolts wherever necessary. Bolts will be supplied free of cost by VSP.
   c. Before tightening of T bolts, thrust bolts are to be loosened and after tightening thrust bolts are to be tightened.
   d. All the bolts of the door frame are to be tightened one by one starting from middle to top and from middle to bottom.
   e. The job is envisaged to be done normally using Pusher/DE cars. In case of non availability of machines, job has to be done using a ladder.
   f. Rectification of T bolts grooves of door frames / flash plates if required is in the scope of work.

56 DOOR FRAME HOOK REPAIR:
   Hook repair includes hook bend removal or hook changing and C clamp fixing.
   CASE - 1
   Hook bends removal by heating hook and pulling with man puller / chain pulley block / hydraulic jack. Job also includes releasing of latch load before starting and reloading after bend removal.
   CASE - 2
   a. Removal of old hook and old rivets by using gas cutting.
   b. Fixing of new hook and supporting plate with counter sunk headed bolts.
   c. Welding of door frame cracks with CI electrodes.
   d. Fabrication of C clamp.
   e. Fixing of C clamp with T bolts.
   f. Welding of C clamp with hook.
   g. Latch shaft un-loading and loading is included in the scope.

57. WASTE HEAT BOX CHANGING ALONG WITH BRANCH PIPE:
The work includes making necessary handling arrangements, brick wall breaking, shifting to site, performing all enabling works, replacement, caulking and commissioning. Replaced items shall be returned at specified location in the zone. Taken out cold waste heat box will be revisioned and to be handed over to VSP whenever it is possible.
   NOTE: The job should be carried out as per the protocol.

58 BRANCHPIPE TO WASTEHEAT BOX ROPE CAULKING AND BOLTS TIGHTENING:
   a. Loosening of all bolts and create gap with the help of chisels / wedges.
   b. Clean the mating surfaces.
   c. Caulking of asbestos rope between flange joint/insertion of mill board packing
   d. Tightening of all flange bolts.
   e. Check and rectify leakages if any on opening of gas valve.
   f. If leakage observed, repeat points I to V.

59. ALIGNMENT OF WASTE HEAT BOX:
   a. Revisioned ropes and metal packing to be made ready in advance.
   b. Required jack and fixtures to be made ready.
   c. Align waste heat box with respect to adjacent waste heat boxes with help of jack and fixtures.
   d. Jam the waste heat box with packing in suitable place, and then release the jack.

60 REVERSING WINCH ROPE PREPARATION AND CHANGING:
   PREPARATORY JOB
   a. Cutting of wire rope to the required length.
SCOPE OF WORK

WORK DESCRIPTION:
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b. Preparation of wire rope ends with thimble and U clamps to the
required length.

ROPE CHANGING
a. The job is of shut down / break down nature.
b. Removal of old rope and passing / fixing the new prepared rope.
c. Adjusting rope tension / length by tightening / loosening the
connected turn buckles.

61. FLASH PLATE CHANGING / resetting including anchor column:
The scope of work includes replacement of flash plate and anchor column (if
necessary), erection and removal of necessary dummy walls, unloading and
loading of cross tie rods and intermediate springs (revisioning and
replacement of all intermediate springs is also included), caulking and
pointing of refractories after adjustment of flash plate, necessary removal
and re fixing of door frames (2nos). Also includes all mechanical works to
facilitate the job. Where ever necessary the damaged parts shall be replaced
with new parts without any extra cost. Casting of flash plate with
refractory materials is also included in the scope of work. In case job
involves GCM support bracket changing, it will be paid separately against
item no. 65.
The scope of work common for both items ('INSITU POSITIONING, FLASH PLATE
AND ANCHOR COLUMNS').
a. Locking of opposite side buck stay with adjacent buck stays
b. Revisioning, loading and regulation of cross tie rods, auxiliary spring
units of buck stays at both sides (C/s and P/s) of repaired heating wall
as per requirement of end vertical / full wall repair.
c. Alignment and bringing deflection of flash plate as per requirement.
d. Gouging and welding of cracks on flash plates at repair heating wall on
either sides of heating wall under repair.
e. Regulation of distance between buckstay face to and inner rail of oven
machines track by cleaning debris between buck stay and regenerator
supporting channel as per requirement.
f. Removal and re fixing of GCM saddles and DE guiding monorail hangers.
g. Erection and removal of flash plate arresting brackets.
h. Locking and sealing of loaded oven doors, AP caps, charging lids and
valve boxes.

62. REPLACEMENT/INSITU POSITIONING OF FLASHPLATE INCLUDING ANCHOR COLUMN WITH
ONE DOOR FRAME DURING HEATING WALL REPAIR:

63. REPLACEMENT/INSITU POSITIONING OF FLASHPLATE INCLUDING ANCHOR COLUMN WITH
TWO DOOR FRAMES DURING HEATING WALL REPAIR:
The scope of work includes replacement of flash plate, anchor column (if
necessary), and necessary removal and fixing of one (FOR ITEM NO-62)/ two
(FOR ITEM NO-63) doorframe/s. The job includes unloading and loading of
Cross Tie Rods and intermediate springs (revisioning and replacement of all
intermediate springs is also included), caulking and pointing of refractories after adjustment of flash plate. It also includes all
mechanical works to facilitate the job. It also includes wall jacks removal
and fixing. Wherever necessary the damaged parts shall be replaced with new
parts without any extra cost. Casting of flash plate with refractory
materials is also included in the scope of work.
The scope of work also includes:
a. Locking of opposite side buckstays with adjacent buckstays.
b. Revisioning, loading and regulation of Cross Tie Rods, auxiliary spring
units of buckstays at Pusher side and Coke side of repaired heating wall as
per requirement during heating wall repair.
c. Checking the physical condition, control dimensions of new flash plate,
T-bolts grooves, repair and shifting to erection site
d. Checking the physical condition, control dimensions of doorframe/s,
cleaning, repair, assembling spares (new/ revision) and shifting to erection
site.
e. Erection, alignment and bringing deflection of flash plate; erection &
alignment of doorframe/s; alignment of buckstay are to be carried out as per
requirement during heating wall repair.
SCOPE OF WORK

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f. Gouging and welding of cracks on flash plates on repair heating wall on either side of heating wall, which is under repair.
g. Regulate the distance between buckstay face and inner rail of oven machine track by cleaning debris between buckstay and regenerator supporting channel as per requirement.
h. Removal and refixing of GCM saddles and DE guiding mono-rail hangers.
i. Erection and removal of flash plate arresting brackets.
j. Locking & removing the sealing of loaded oven doors, AP caps, charging lids and valve boxes.
k. All the necessary jobs required to carry out the above job safely, is in the scope of the contractor without any extra cost.

64. INTERMEDIATE SPRING UNIT REVISIONING / CHANGING AND LOADING:
The work includes revisioning of assemblies, refitting and regulation of load. Wherever necessary springs / spares are to be changed with revised / new parts.

65. GCM BRACKET CHANGING:
Work includes rectification of existing Gas Collecting Main supports. Job involves strengthening of same or change the support by new ones after dismantling the old ones. Any rectification if required to the new GCM support intended for installation is also to be done. Disconnection and connection of monorail hanger is also included in the scope of work.

66. ERECTION AND ALIGNMENT OF DETL BRACKETS ON DISMANTLING OLD BRACKETS REPLACEMENT:
I. Shifting of new DETL bracket on to the door extractor car.
II. Cutting and removal of old existing DETL bracket from the position.
III. Suitably modify and fix the new DETL bracket in position and align. Job is of shutdown in nature. Sufficient resources are to be mobilized to complete the job within one hour. Job to be taken up only on obtaining electrical shut down for DETL. Removal and fixing of electric insulators is not included in the scope of work.

67. CROSS TIE ROD RECTIFICATION:
It is a shut down related job.

PREPARATORY JOBS:
a. Before taking up replacing / rectification of the anchorage tie rod, it is necessary to fix / lock the column of P/S and C/S to the adjacent columns with the help of special fixture. The load arresting fixtures to be fabricated by the contractor and to be used and preserved.
b. Load is to be released from tie rod.
c. Remove the old bracket.
d. Keep the full length straight , revise tie rods with nuts ’ 2 nos on pusher car

WORK EXECUTION:
Tie rod end piece changing:-
a. Old tie rod piece is to be cut at the required place and prepare end with high single VEE.
b. Prepare the new tie rod piece with opposite single VEE.
c. Weld the new tie rod piece with electrode super cito or E-106 as per standard procedure. Qualified welders are to be deployed for doing the CTR end piece welding.
d. 'U' shape clamp is to be fabricated and to be welded over lapping the weld joint.
e. Straighten tie rod by heating if necessary and place the sleeve in position.
f. Rectify / replace cross tie rod bracket if necessary.
g. Put back springs, bracket spring cover and give required load on the anchorage on both P/S and C/S.
h. Remove locking of the anchor column and recheck the load, if any abnormality observed rectification will be done immediately.

68. FULL LENGTH CROSS TIE ROD CHANGING:
SCOPE OF WORK

WORK DESCRIPTION:
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It is a shut down related job.

a. Old tie rod piece is to be cut into small pieces and removed from the oven top and all the sleeves are to be kept for use in new tie rods.
b. Full length tie rods (which are kept on pusher car) are to be pushed into heating wall groove manually one by one.
c. Care should be taken to put the sleeve inside the tie rod at the appropriate place (i.e. near charging holes C/S, M/S and P/S and stand pipe C/S and P/S) or full length sleeves are to be fixed followed by welding.
d. Rectify / replace cross tie rod brackets if necessary.
e. Put back springs, brackets, spring cover and give required load on the anchorage on both C/S and P/S.
f. Remove locking of the anchor column and recheck the CTR loads on C/S and P/S and regulate (if required).
g. NOTE: While tie rod full length / end piece changing, removal of brackets & CTR springs and fixing back with proper loading forms part of the job without any extra cost.

69. CHANGING OF CTR BRACKETS:

a. Anchorage tie rod bracket changing job is to be executed without disturbance to oven pushing schedule.
b. Before load releasing of anchorage tie rod/ bracket of any buck stay, it is necessary to fix required column on pusher side / coke side to the neighboring column.
c. Load is to be relieved from tie rods. If necessary tie rod ends to be made straight by heating and mechanical force.
d. Replace the damaged parts if any, like springs, spring holder, bracket etc. and to give proper load thereafter.

70. RECTIFICATION / REPLACEMENT OF CTR NUTS:

Arresting the cross tie rods by welding steel plates with anchor column. Press the CTR bracket by using special device and hydraulic jack. Revision / replace the jammed CTR nuts. Restore correct load of CTR springs, regulate the nuts and remove the device.

71. LTR END FITTINGS RECTIFICATION, REVISIONING AND LOADING AT BOTH ENDS:

a. One set of spares like end bracket, bolts, nuts are to be drawn from VSP stores and made ready at site.
b. Unloading the LTR.
c. Checking / revisioning of old bracket, old nuts, bolts and springs.
d. Changing of LTR end piece with bolt if necessary.
e. Skilled persons are to be employed for doing the LTR end piece welding and it should be ensured that the weld joint withstands the design load.
f. Loading of LTR.

72. LTR CHANGING AND LOADING

a. Unloading the LTR.
b. Removal of damaged LTR piece by gas cutting.
c. Preparation of LTR edges for welding.
d. Positioning of new LTR piece and welding of joints with highly skilled persons.
e. Loading of LTR.
f. Contractor should ensure that the weld joints withstand the design load.

73. LEAKAGE ARRESTING FROM GCM PIPE FLANGE JOINT (PIPE DIA 500MM TO 1500MM):

I. The job includes changing of bolts near leakage area, rope caulking and tightening of bolts. All safety instructions / precautions are to be followed in doing the above job.

74. REPAIR/REPLACEMENT OF GAS BLEEDER:

The automatic hydraulic valve of gas collector main bleeder consists of a cover, cap, manual valve to drain water from water seal and to feed water
SCOPE OF WORK

WORK DESCRIPTION:
RUNNING AND PLANNED REPAIR JOBS (REFRACTORY AND MECHANICAL) IN
COKE OVEN BATTERIES FOR THE YEARS 2015-2017

hood and discharge pipe line. The scope of work includes revisioning of whole bleeder, its repair as required and fixing it back.

a) PREPARATORY JOBS;
1) To change the gas bleeder and reseal flange connections, crane is to be used. Crane has to be positioned beforehand. Crane will be given by VSP free of cost.
2) Prior to starting the job, availability of required materials such as asbestos rope, blank and bolts etc. are to be ensured.
3) Bolts of flange connections are to be revisioned or changed before the job is executed.

b) EXECUTION OF BLEEDER REPLACEMENT:-
1) Attach slings to the pipe of gas bleeder.
2) Close supply of flushing liquor to water seal.
3) Disconnect water check valve from gas bleeder body.
4) Open flange connection of gas bleeder.
5) Remove gas bleeder and put blank.
6) The installation of gas bleeder equipment is reverse procedure of dismantling.

C) SAFETY:-
Gas bleeder repair jobs are considered as critical job and should be done in accordance with approved plan/protocol.
d) All works of bleeder housing, piping etc. forms part of the item and includes thorough cleaning, repair by welding painting etc. Paint will be supplied by VSP free of cost.
e) Repair of all types including structural and revisioning of removed gas bleeder is included in the scope of work, and to be certified by site engineer for reuse.

75. VALVE BOX TROUGH CHANGING:
a. The job has to be carried on ready oven or as per the instruction of CO (operation) / Site engineer.
b. VB trough both segment studs are to be revisioned / replaced and 5mm gasket to be prepared before starting of the job.
c. After removal of asbestos rope from spigot joint, VB trough both segments are to be removed.
d. After thorough cleaning of flange surfaces, new gasket and VB trough both segment are to be fixed.
e. All the studs are to be fully tightened before giving clearance for fixing the spigot joint.
f. If VB studs are damaged, repair as per the instruction of Site engineer also included in scope.
g. All Flange bolts are to be further tightened for arresting the leakages after charging the oven.

76. IV GLAND PACKING CHANGING
a. Removal of Isolation valve counter weight etc.
b. Removal of old gland packing and cleaning.
c. Fixing of new gland packing (graphitized).
d. Fixing of IV counter weight and levers.
e. Checking of gas leakage and rectification.

77, 78, and 79. VALVE BOX / STAND PIPE / GOOSE NECK CHANGING:-
PREPARATORY JOBS:-
a. Dismantling and erection of these equipments is done with the help of derrick installed on charging car. However necessary chain pulley blocks are to be arranged by the contractor.
b. The new equipment is lifted to oven top using the existing telpher (LLD) and transported to the place of erection with charging car.
c. Blank flange of steel, 10mm thick is to be fabricated before hand for fixing on gas collector branch pipe to enable dismantling of the valve box and the same flange should be preserved for future use.
d. Blank flange of steel, 10mm thick is to be fabricated to cover hatch after dismantling the stand pipe.
SCOPE OF WORK

WORK DESCRIPTION:
RUNNING AND PLANNED REPAIR JOBS (REFRACTORY AND MECHANICAL) IN
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e. All equipment and materials to be ensured before hand for changing any of the above equipment.
f. Before hand, flange bolts of the equipment to be partially changed. Rest to be removed before changing of the equipment.
g. Asbestos rope to be removed from spigot joint and loose rope filling to be done.
h. Pressure gauge to be fixed at common throttle of corresponding gas collector.
i. Goose neck and ‘T’ piece assembly with required spacers is to be made ready. Fabrication of the spacers is the responsibility of the contractor for which no payment will be made.
j. Stand pipe length to be modified based on requirement for which no additional payment will be made.
k. Control dimensions of all the parts are to be checked with the existing parts/equipments.
l. Maintenance and freeness of the derrick, freeness of the bend pipe of spray line by proper clearance and steam flushing should be ensured.

WORK EXECUTION:-
a. Replacement / change of equipment is to be done on an oven after 12 hours of charging or 2-3 hours before pushing on receiving clearance from VSP executive only.
b. Valve boxes to be closed and stand pipe lid to be opened on opposite stand pipe.
c. On the equipment to be changed, tie rods of stand pipe lid drive are to be disconnected and valve lever is to be safely fixed in closed position.
d. Inlet pipe of steam injection, stand pipe spray line and stand pipe screen are to be dismantled.
e. Standpipe mouth is to be slinged, remaining bolts to be removed and the mouth piece is dismantled.
f. Stand pipe is to be dismantled, gas hatch is to be blanked with cap, heat insulating bricks to be laid and sealed with mortar.
g. Arrest all flame sources and stop oven pushing (10 ovens from each side of the oven under repair).
h. Sling the valve box, remove bolts (use tools which are non-sparking/grease applied tools). Suction of 0-2 mm to be set in gas collector manually. Valve box to be removed and blanks to be put after cleaning of sludge and tar.
i. Restore pressure in gas collector.
j. Erection of equipment is done in reverse order. While erection of valve box water seal is to be arranged by connecting a hose to the flushing liquor branch pipe of same valve box.
k. If required below stand pipe, bricks are to be changed and graphite removed by VSP.
l. Stand pipe heat shield to be fixed with bolt and nuts to suite site requirements with respect to stand pipe assembly.
m. Spigot asbestos rope removal and fixing and AP base rope removal and fixing along with sodium silicate are part of job.
n. NOTES:
   a) For changing valve box protocol is to be made and to be followed.
   b) For changing valve box, stand pipe and goose neck assembly making ready and changing is a part of the job.
   c) For changing stand pipe goose neck assembly making ready and changing is a part of the job.
   d) For all the above jobs AP cap assembly centering is included without any extra cost.
   e) Goose neck assembly includes AP cap assembly, T piece and required spacers.
   f) Rectification of valve box support if any is included in the scope.

80. AP CAP ASSEMBLY CHANGING:
a. Changing of damaged AP cap assembly along with levers, bearing housing, counter weight and AP cap mating flange. If required, cap levers are to be modified to suite conditions.
b. Regulation of AP cap tie rod spring so that cap is properly locked.
c. Changing of spring wherever necessary and regulation of the same.
SCOPE OF WORK

WORK DESCRIPTION:
RUNNING AND PLANNED REPAIR JOBS (REFRACTORY AND MECHANICAL) IN
COKE OVEN BATTERIES FOR THE YEARS 2015-2017

d. Repair of the removed spring assembly.
e. Regulation of AP cap locking assembly.

81. AP CAP CENTERING:
a. AP cap is to be dismantled from lever.
b. AP cap is to be centered.
c. Proper rectification / modification to be done in lever to suit the site condition.
d. Then assembly is to be done.
e. Regulation of AP cap spring so that cap is properly locked.
f. Changing of spring wherever necessary and regulation of the same.
g. Repair of the removed spring assembly.
h. Maintenance of AP cap locking assembly.

82. AP WATERSEAL ASSEMBLY CHANGING:
a. Job is to be carried out in a matured oven (before 3 to 4 hours of actual pushing) with the help of CO (operation)
b. Shifting of new/repaired assembly to site. All the flange bolts are to be revisioned/replaced before starting of the job.
c. AP water seal assembly to be taken out with the help of charging car derrick / locally made derrick arrangement.
d. Old rope to be taken out and new rope to be fixed on cleaning of flange surfaces. After fixing new / revisioned AP water seal assembly, another rope to be caulked outside the flange bolts before tightening.
e. Repair/replacement of cap and lever mechanism including connecting handles, checking of water inlet outlet and levels are included in the scope.
f. The job to be completed before pushing of the oven. All Flange bolts are to be further tightened for arresting the leakages after charging the oven. Repair/reclamation of assembly spares and housekeeping included in scope.

83. REPLACEMENT/ROPE CAULKING OF FLANGE ON AP ASSLY:
a. Job is to be carried out in a matured oven (before 3 to 4 hours of actual pushing) with help of operation people for dividing the gas.
b. All the flange bolts are to be revisioned / replaced before starting the job.
c. Gap to be created between flanges with help of wedges / jack / charging car derrick (If required charging car will be spared).
d. Old rope to be taken out and new rope to be fixed on cleaning of flange surfaces. All the flange bolts are to be tightened. Another rope to be caulked outside the flange bolts before tightening.
e. The job to be completed within one and half hour to 2 hours.
f. Flange bolts are to be further tightened after charging the oven.

84. HOUSING LEAKAGE RECTIFICATION AT GOOSE NECK:
The job includes fabrication of pipes by bending and welding and fixing of housing and nozzle etc. (i.e. making assembly ready) and replacement of old one by new assembly made ready. The job is skilled in nature and experienced persons are to be deployed.

85. SUITABLY MODIFYING THE LIQUOR SPRAY PIPES BETWEEN GOOSE NECK AND LIQUOR HEADER VALVES AND ERECTION OF THE PIPE (STANDARD SHAPE PIPES WILL BE ISSUED FREE OF COST BY VSP):
a. Collection of all required pipes/spares/consumables from site stores and testing pipes for leaks.
b. Temporary liquor connection ha to be provided to goose neck immediately before removal of liquor spray pipe for changing
c. Suitably modifying / fabricating of liquor pipes between liquor header valve and goose neck along with flanges , spray nozzle assemblies threaded connections including smooth bending of pipes
. Erection of fabricated liquor pipes between liquor header valve and goose neck by providing suitable gaskets.
e. Testing for liquor / gas leakage.
f. If leaks are found they are to be rectified by tightening bolts / by replacing gaskets.
g. **NOTE:** The work is shut down job which shall be done continuously as and when shut down is available. No claim for idle man power on the account will be admissible.

86. **HPALA HOUSING ASSEMBLY CHANGING:**

a. The job has to be carried on ready oven or as per the instruction of CO (operation) / Site engineer.

b. Collection of all required pipes / bends / spares / consumables from stores.

c. Suitably modifying / fabricating of liquor pipes between liquor header valve and goose neck housing along with flanges, HPALA nozzle assemblies threaded connections including smooth bending of pipes are to be made available before starting of job.

d. Change the HPALA housing along with the fabricated liquor pipe between liquor header valve and goose neck by providing suitable gaskets. Liquor header valve replacement (if necessary) is also included in the scope.

e. If goose neck studs are damaged, repair as per the instruction of Site engineer also included in scope.

f. Testing for liquor / gas leakage and rectification.

87. **AP MIDDLE PIECE SHAFT CHANGING (INSITU)**

a. Job is to be started after charging the oven by locking AP Cap.

b. Both side levers are to be disconnected before removing / gas cutting the middle piece shaft.

c. After fixing the new shaft, locking rings to be tightened.

d. Both side lever connections are to be restored and AP Cap locking has to be removed.

e. Check for the free movement of the levers by opening / closing the VB & AP Cap with the help of CO (operation).

88 to 91. **UPKEEP OF STEAM VALVE AT OVEN TOP, CELLAR, NOZZLE CLEANING, FLANGE BOLTS TIGHTENING ETC.:**

Steam injection system for batteries shall be maintained leak proof by repairing or replacing the component of steam injection valve, replacement of gaskets, repair of flange steam nozzles and welding of pipe in case of leak.

88 Steam injection cock changing and repair of old / defective ones by i.e. changing of internal spare, gaskets etc. Any machining required shall be done by VSP. Repaired valves to be handed over to VSP. Job also includes the changing of damaged steam pipe from T-piece to injection cock and connecting flanges, if required.

89 Steam nozzle cleaning job also includes gaskets changing and bolts changing and leak proof tightening.

90 Steam leakages arresting from flange joints includes gasket changing, flanges alignment by heating pipe line, building up of groove formed on flange by welding and grinding.

91 Steam leakages arresting from weld joints at oven top. Edge preparation of welding joints with the help of portable grinding machine and weld the joint to arrest steam leakages. The job also includes providing suitable support in case of hanging / un-supported steam pipe. After completion of jobs 88,89,90,91 joints / flanges should be checked for steam leakages. Immediate rectification should be done in case of leaks. Re fixing of existing clamps if required is included in the scope.

92 **MAN POWER SUPPLY SKILLED** and 93 **MAN POWER SUPPLY UN-SKILLED:**

Supply of man power for mechanical jobs is to be done as per the requirement of all categories i.e. skilled and unskilled on round the clock basis as per requirement. This is intended for carrying out miscellaneous jobs not covered in any other item of BOQ of Sl.No. 46 to 134.

94. **CHIMNEY GATE BEARINGS REVISIONING:**
Arrest chimney gate to prevent any rotation as well as not to get lowered by welding suitable structural members on shaft. Dismantle the connected levers and bearing housing. Revision / replace the bearings and assemble back bearing housing properly. Remove all the stoppers and ensure free movement of the gate. In case of necessity lift the gate assembly as directed by VSP engineer either by introduction of packing plates below bearing housing or by shifting the location of sleeve bearing. Crane will be made available by VSP at free of cost for lifting the gate assembly.

95. CHIMNEY GATE REPLACEMENT:
   a. Fabricate metallic shield as per the direction of VSP engineer with steel structural.
   b. Open the cover plates and connected links of the gate above ground level.
   c. Rotate the chimney gate to full close position.
   d. Take out the old gate assembly with the help of crane (crane will be made available by VSP free of cost)
   e. Insert pre fabricated metallic shield carefully as per the directions of VSP engineer and lock it above the ground to prevent any falling.
   f. Open the refractory manhole provided on concrete tunnel.
   g. Clean the area of damper operating zone inside the tunnel.
   h. Enter inside the chimney tunnel and inspect the condition of bottom support.
   i. Construct dummy wall inside the chimney tunnel in case of necessity, up to the required height / full height and removal of the same after completion of the work.
   j. Repair / replace the bottom support including anchored foundation bolts.
   k. Repair the bottom concrete around bottom support by heat resistant quick setting cement or refractory compound.
   l. Keep ready the new chimney gate assembly (OR) make ready the old damper assembly by replacing the shaft assembly and bearing assembly with new one.
   m. Insert the new damper assembly with proper fitting into bottom support.
   n. Ensure free movement of gate and connect the shaft linkages.
   o. Fix back all the covers of opening and seal properly.
   p. Close back the refractory manhole of tunnel.

GENERAL CONDITIONS FOR ITEM NO. 95
   a. All the refractory and civil related jobs will be taken up by VSP and are not in the scope of the agency.
   b. Battery operation will be stopped totally during chimney damper repair jobs by keeping the battery heating in pause condition. Hence all the jobs should be completed within 24 hours time.
   c. In spite of battery stoppage the working conditions inside the chimney will be very harsh. The ambient temperature may be up to 100 degrees Celsius and draught may be up to 20 mm water column. Utmost care to be taken by the workmen before entering into the chimney tunnel by wearing heat resistant clothes and safety belts. Maximum allowable time for any individual to stay inside the tunnel will be 15 minutes at each entry.
   d. Sufficient number of workmen should be mobilized by the executing agency to ensure un-interrupted working from starting to completion.

REFRACTORY / CIVIL JOBS IN CHIMNEY GATE REPLACEMENT NOT INCLUDED IN THIS SCOPE
   a. Opening and closing of tunnel manholes.
   b. Construction of dummy wall inside the chimney tunnel, if necessary.
   c. Repair of bottom support concrete.
   d. Removal of dummy wall inside the chimney tunnel.

96. TECHNICAL STRUCTURAL WORK IN BATTERIES (BATTERY-1, 2, 3 and 4):
   Repair / modification to structural work at all locations by dismantling corroded / damaged structural steel work, stacking at places designated by the Engineer and fabricating, erecting and fixing in position at all heights and depths above or below ground level structural steel work as per site dimensions / drawings and is directed by Engineers. All steel materials and consumables like gases and electrodes will be supplied by VSP free of cost for consumption in the work. All other materials, consumables, labour, tools and tackles etc. transportation, scaffolding etc are to be arranged
SCOPE OF WORK

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by the contractor. Fabricated and erected steel work only shall be measured for payment (the rate includes for dismantling and stacking which will not be measured for payments). Mainly the work areas are: Structural repairs / modification works in batteries 1, 2, 3 & 4. Providing additional support for pipelines. Miscellaneous structural work for platforms, stairs, hand railings, trolley line canopies etc. Patch repair of oven top gas bleeders in position. Fabrication and replacement / rectification of service platforms, GCM / DETL brackets, mono rails and connected structural work. Toe guard repair / replacement, stand pipe shield repair / replacement, buck stay side covers, valve box support etc. Any other structural work as may be instructed by Engineer in battery area.

NOTE: Contractor and their workmen should be conversant with battery operation and allied activities. Work will have to be carried out with short duration of shut down.

97 to 104: FABRICATION & REPLACEMENT OF PIPE LINES OF ALL SERVICES IN COKE Ovens Complex of different sizes:
Scope of work includes taking delivery of materials from C&CCD stores, transportation and erection of pipe works of various diameters, complete with all fittings, bends, tees, reducers, flanges, expansion loops, drains, vents, stiffeners, fixtures etc. as per drawings / specification as per instruction of Engineer in charge. The rate includes dismantling of old pipe work which shall not be measured for payment. Only Inner diameter of pipe work changed including valves and fittings shall be measured for payment.

105 to 116: WELDING OF STRAPS AND REWELDING OF PIPE LINE FOR LEAKING JOINTS OF AMMONIA LIQUOR PIPE LINE WELDING OF STRAPS:

a. Width of the strap shall be normally 100 mm.
b. Weld joints areas shall be cleaned thoroughly before welding.
c. The strap shall be prepared in such a way that it matches over the pipe without gaps.
d. Strap shall be all around the pipe.
e. Minimum two layers of welding shall be done for the strap.

REWELDING OF PIPE LINE JOINTS:

a. Wherever necessary, blanks are to be provided for isolation for the job of re welding of leaking joints. Rates are inclusive of blanking and de blanking.
b. Joints shall be cleaned properly and thoroughly.
c. Cracked portion of weld joint shall be removed fully by grinding. Balance weld joint shall also be grind to give an additional coating of welding if necessary.

IV. Hot work permit and other safety instructions to be followed.

REMARKS FOR ITEM NO. 98 to 135:

a. Ready items such as pipe, valves, flanges, and bends shall be given by VSP free of cost.
b. The electrodes used for the work shall be low hydrogen electrodes and shall be given free of cost by VSP.
c. All steel material required for any scaffolding etc. shall be arranged by VSP free of cost and no extra cost will be paid to the contractor for making scaffolding.
d. The work is not of continuous nature. Item no. 98 to 135 are shut down jobs which shall be done as and when shut down is available. No claim for idle manpower will be admissible.

CONTRACTORS SCOPE:

a. All tools, tackles, labour required and complete testing of pipe line.
b. All scrap / replaced items shall be shifted to identify place.
c. Bends need to be fabricated at free of cost in case of non availability.
d. The resources shall be mobilized and work shall be executed within agreed shutdown period.

117 to 121. CHANGING / REPLACEMENT OF DIFFERENT SIZES / TYPES OF VALVES

a. It is a shut down related job.
b. Where ever necessary blanks are to be provided for isolation for the job. Rates are inclusive of blanking and de blanking.
SCOPE OF WORK

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c. Valves to be tested for leakages on replacement of gland packing (if necessary) and minor adjustments are to be done before / after erection by the contractor where ever required.

d. All replaced valves shall be deposited to stores.

122. GAS MANIFOLD REPLACEMENT IN BATTERY CELLAR:
   a. Collection of spare manifold pipe assembly and other spares required for replacement from VSP stores.
   b. Checking of new manifold pipe assembly with respect to site conditions.
   c. Necessary modification / rectification to suit site requirements.
   d. The job is to be carried out as per protocol made between Coke ovens, H&R and is shut down in nature.
   e. Revisioning of flange bolts, shifting of new manifold assembly, spares required for manifold replacement like gaskets, rubber hoses, clamps, bolts, tools and tackles are to be made ready at work spot in advance.
   f. Isolation of manifold assembly by closing valves and blanking.
   g. Replacement of manifold pipe assembly with new one after H&R clearance.
   h. Normalization of manifold pipe assembly by de blanking and opening valves after H&R clearance.
   i. If defects/leaks from flange joints / hose pipe joints are found after normalization, they are to be rectified immediately by isolating manifold assembly or on line.
   j. Shifting of old manifold assembly and scrap to scrap yard and making work area clean.

123. REMOVAL, DIMANTLING, REPAIR/REVISIONING/ASSEMBLY, TESTING AND ERECTION OF GAS VALVES OF DIA DN 800 TO DN 1400 AS PER THE DIRECTION OF THE SITE ENGINEER:
   It is a shut down / protocol related job on fuel gas lines, which shall be done continuously as and when shut down is available. Scope of work includes taking delivery of materials from CO&CCP stores, preparation of gaskets, metallic ring with asbestos yarn, revisioning of bolts, provision of jack thrusts, and preparation of scaffoldings etc. as per drawings / specification as per instruction of Engineer in charge. If required contractor has to prepare different thick gaskets or metallic rings. Valves to be tested for leakages on replacement of gland packing and minor adjustments are to be done before / after erection by the contractor (if necessary). Where ever necessary blanks are to be provided for isolation of job. Bolts revisioning and preparation of blanks including gasket packing or suitable MS ring with asbestos yarn are in the scope. All replaced valves shall be deposited to stores. No claim for idle manpower.

124 to 128. REPLACEMENT OF GAS (COKE OVEN / MIXED GAS) PIPE LINES IN COKE OVENS COMPLEX:

   124. Gas Pipe lines up to dia 50mm
   125. Gas Pipe lines from dia 65 to 150mm
   126. Gas Pipe lines from dia 200 to 350mm
   127. Gas Pipe lines from dia 400 to 600mm
   128. Gas Pipe lines from dia 800 to 1000mm

   a. It is a shut down / protocol related job which shall be done continuously as and when shut down is available.
   b. Scope of work includes taking delivery of materials from CO&CCP stores, fabrication and erection of pipe works of various diameters complete with all fittings, bends, tees, reducers, flanges expansion loops, drains, vents, stiffeners, fixtures etc. as per drawings / specification as per instruction of Engineer in charge. If required contractor has to fabricate reducers, bends, tees etc.
   c. Erection of fabricated and tested pipe work.
   d. Gas seal pots of battery and ODPL segments are also included in the scope. Seal pot outer pipe only considered for payment.
   e. Normalization of pipe line and testing for leakages.
   f. If leaks are found at flange joints, they are to be rectified by tightening bolts / by replacing gasket.
   g. If leaks are found in fabricated pipe work, they are to be rectified by grinding and welding as per instruction of the engineer in charge.
   h. Installation of valves shall be measured for payment separately.
SCOPE OF WORK

WORK DESCRIPTION:
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1. All the dismantled piping is to be transported to site scrap yard.
2. The rate includes dismantling of old pipe work which shall not be measured for payment. Only inner diameter of pipe work changed including valves and fittings shall be measured for payment. No claim for idle man power.

129 to 134. BLANKING / DEBLANKING DIFFERENT SIZES OF GAS (COKE OVEN / MIXED GAS) LINES / VALVES IN COKE OVENS:

129. Gas valves up to dia 50mm
130. Gas valves dia 65 to 125mm
131. Gas valves dia 150 to 200mm
132. Gas valves dia 250 to 400mm
133. Gas valves dia 500 to 800mm
134. Gas valves dia 1200 to 1500mm

1. It is a shut down / protocol related job which shall be done continuously as and when shut down is available.
2. Scope of work includes taking delivery of materials from CO&CCP stores, preparation of blanks, gaskets, metallic ring with asbestos yarn, revisioning of bolts, provision of jack thrusts, and preparation of scaffoldings etc. as per drawings / specification as per instruction of Engineer in charge. If required contractor has to prepare different thick blanks or metallic rings.
3. Pipe line is to be tested for leakages on blanking / de blanking
4. Housekeeping is to be carried out as soon as the job is completed
5. No claim for idle manpower.
**TERMS AND CONDITIONS**

**Work Desc:** Refractory and Mechanical maintenance of Coke Oven Batteries.

<table>
<thead>
<tr>
<th>1</th>
<th>These conditions are in addition to general and special conditions of the contract.</th>
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<tr>
<td>2</td>
<td>The agency who has tied up with Tenderer should not participate neither individually nor work as a tie up agency to any other Tenderer for the subject work. Similarly Tenderer should not tie up with any other Tenderer for the subject tender.</td>
</tr>
<tr>
<td>3</td>
<td>For lifting of refractory bricks from '0' level to platform / oven top level and lifting / shifting of mechanical equipments / structural, VSP will provide crane at free of cost as per requirement and availability of crane.</td>
</tr>
<tr>
<td>4</td>
<td>The scope of work is broadly described. The contractor intending to quote for the job is advised to visit the site, discuss in detail, if any required with HOD or his authorized officers. Before quoting they should be fully aware of the work environment, practices followed so far at coke oven batteries, wage structures practiced, time importance of various jobs, their effect on operational activities, idle times likely to be encountered due to regular operational activities and non availability of machines in time for jobs etc., At times work will have to be carried out with short duration shut down ie. 1 hr to 1.5 hr. Hence, no claim for idle man-power will be admissible.</td>
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<td>5</td>
<td>VSP is an ISO certified company and the executing agency should follow as per the system. Wherever necessary a working protocol will be provided by VSP for actual job to be carried out. Strict adherence to the protocol is essential.</td>
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<td>6</td>
<td>The contractor should deploy supervisory staff for supervising various jobs, interaction with departmental officers/staff and receive/return the free issue materials. Persons with job knowledge, experience, physical ability and fitness are only to be employed. There are no separate charges to be paid by VSP for supervisors engaged on supply of manpower items.</td>
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<td>7</td>
<td>Jobs have to be carried out as per technological need and have to be carried out on all days including Sundays and all holidays. Works have to be carried out round the clock in A,B,C or General shifts as per need.</td>
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<tr>
<td>8</td>
<td>Special jobs including Gas lines and Battery anchorage system have to be carried out as per technological need and have to be carried out as per the specification of detailed scope. The contractor should give more attention and deploy highly skilled workmen / welders for the above requirement or as per the instruction of engineer or his representative.</td>
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<tr>
<td>9</td>
<td>Proper work authorization, shutdown, permit to work are to be obtained before starting the job. Jobs done or deployment of persons have to be certified on every day/shift by the engineer-in-charge or his authorized representative. All the certificates are to be furnished and enclosed to the bills. Without job certificates/certification of deployment bills cannot be processed.</td>
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<tr>
<td>10</td>
<td>The contractor is responsible for satisfactory conduct, work output, attention, safety of his employees and quality of job. Persons employed should be educated about the nature of jobs, quantum of job to be done, normal time for a job, hazards of moving machines, quality aspects etc.,</td>
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</table>
| 11 | All spares/materials other than refractory items have to be collected from stores (Central / Sub stores) by the contractor as the case may be. It is agency's responsibility to arrange required manpower for which no extra payment will be made. Accounting has to be done for the materials issued, consumed and returned back to VSP month wise. VSP will issue free of cost all spares, consumables, steel, gas, welding electrodes as per actual requirement. However, the contractor has to arrange his own welding machines, welding cables, fully insulated electrode holders, welder's goggle, portable electric tools, chain pulley blocks, hoists, all general tools and tackles, slings, ladders, safety devices, hydraulic jacks etc. Required cranes will be arranged by VSP free of
**Work Desc:** Refractory and Mechanical maintenance of Coke Oven Batteries.

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<td><strong>12</strong></td>
<td>All refractory material will be supplied by VSP free of cost at coke ovens site at '0' level. It is agency's responsibility to transport the material to the work sport from there. However proper stacking and maintenance of housekeeping is responsibility of contractor.</td>
</tr>
<tr>
<td><strong>13</strong></td>
<td>After the day's work is over the agency should clean the site and keep the debris, muck and mechanical scrap at a specified space as shown by VSP engineer. Further disposal of debris to a far off place from battery complex is the responsibility of contractor without hampering the movement of battery machines except at specified shut down periods. However, VSP pay loader and dumper may be provided by VSP as per availability for disposal of debris.</td>
</tr>
<tr>
<td><strong>14</strong></td>
<td>All the tools and tackle including welding machines, gas cutting set, hydraulic jacks, chain pulley blocks, lifting tackle, drilling machines, grinding machines, brick cutting machines with blades, vibrators, pneumatic hammers and any other tools required for the jobs shall be arranged by the contractor in safe working condition at free of cost. All the tools for refractory brick laying shall be prepared by the contractor for which drawings and raw steel shall be issued by VSP at free of cost. The contractor should arrange all the steel scaffolding and other special tools for refractory lining including vacuum cleaners for port holes cleaning, refractory brick cutting machines with accessories, refractory mortar mixing machines etc., at free of cost. Raw steel, gasses and electrodes will be issued by VSP at free of cost for making steel scaffoldings. No extra payment shall be paid for fabrication of steel scaffoldings and other required tools. Required wooden planks if any shall be procured by the contractor at his own cost.</td>
</tr>
<tr>
<td><strong>15</strong></td>
<td>The contractor should arrange all the steel scaffolding and other special tools for refractory lining including vacuum cleaners for port holes cleaning, refractory brick cutting machines with accessories, refractory mortar mixing machines etc., at free of cost. Raw steel, gasses and electrodes will be issued by VSP at free of cost for making steel scaffoldings. No extra payment shall be paid for fabrication of steel scaffoldings and other required tools. Required wooden planks if any shall be procured by the contractor at his own cost.</td>
</tr>
<tr>
<td><strong>16</strong></td>
<td>The contractor should maintain proper stores and records for all the spares and consumables including refractory materials on daily basis. They should submit a material reconciliation statement along with custody certificate for unutilized material including refractory material month wise to VSP on completion of respective jobs. Any loss of material due to improper storage/handling/use will be recovered from the contractor's bills.</td>
</tr>
<tr>
<td><strong>17</strong></td>
<td>Any damage caused to VSP by contractor or his employee during execution of work will be debited to contractor's account including storage and departmental charges as applicable.</td>
</tr>
<tr>
<td><strong>18</strong></td>
<td>The scope of work mentioned under different items of BOQ is only indicative and not exhaustive. Any connected jobs other than mentioned in scope of work under different headings for completion of job shall be executed by the contractor without any additional cost. However, material for the same if required shall be issued by VSP free of cost.</td>
</tr>
<tr>
<td><strong>19</strong></td>
<td>In case of necessity adjustment/modification, cutting/grinding of refractory bricks and mechanical items at site shall be carried out by the contractor without any extra cost. Salvaging, cleaning, repairing including replacement of the parts for reusing of doors bodies, flash plates, door frames, AP items, auxiliary spring units, waste heat boxes etc. will be done free of cost as a part of scope of work as per the instructions of engineer or his representative. All the brick shapes will generally be made available. However, some shapes may have to be made by cutting as per requirement at site without any extra cost.</td>
</tr>
</tbody>
</table>
Work Desc: Refractory and Mechanical maintenance of Coke Oven Batteries.

20 Fabrication of all necessary arrangements like ladders, platforms or any similar arrangements for laying of refractory bricks for heating walls at different levels shall be the responsibility of contractor at his own cost. However, raw steel and consumables for fabricating of such items will be given by VSP free of cost.

21 All necessary jacks for supporting of heating walls at different stages of dismantling and brick laying shall be prepared by the contractor at their cost. Necessary raw steel, pipes and machined screws will be issued by VSP at free of cost.

22 The agency should ensure independent deployment of engineers and qualified supervisory staff during the regular running refractory/mechanical jobs and planned repairs jobs at various places.

23 The contractor should immediately respond and arrange for medical help/treatment at his own cost for any accident/injury that happens to any of his personnel in the plant site.

24 The contractor should have sufficient financial capacity to pay wages for personnel employed by him and for all expenditures in carrying out the jobs at least for a period of 3 months before realization of billed money from VSP.

25 The contractor should employ on his pay roll all the supervisors and labours engaged on the contract works. The persons to be engaged should have work experience in similar jobs.

26 If any repair job is found not done properly or fails due to poor workmanship within the defect liability period as mentioned, it has to be redone by the contractor free of cost as per the instructions of VSP engineer or his representative. The decision given by the VSP engineer is final in such cases.

27 The contractor's staff deployed at any place should report immediately to the shift-in-charge about occurrence of any injury, accident, abnormal event, fire, damage, theft, loss, mistake committed either by him or by others involving the interest of plant.

28 The contractor should have communication access at any time. He should preferably stay close to the steel plant have a residential phone and possess transport facilities for carrying men and materials.

29 Any of the contractor's staff without proper dress and safety appliances, under the influence of alcoholic drinks etc., will not be permitted on any job. Personnel should possess good physical and mental ability to perform the assigned tasks. Assessment of VSP's officer is final on such matters.

30 No idle labour charged will be paid by VSP. No extra payments will be made by VSP for working on off days and holidays.

31 Non-sparking tools and non-ferrous hammer should be used while working on GCM and gas pipeline jobs. i.e., Valve/Valve box changing, Bleeder changing, Blanking/De-blanking etc.,

32 All the jobs are required to be executed to the satisfaction of engineer-in-charge or his representative.

33 The defect liability period for the various items of BOQ is as follows
<table>
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<tr>
<th>Work Desc:</th>
<th>Refractory and Mechanical maintenance of Coke Oven Batteries.</th>
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<tbody>
<tr>
<td>01</td>
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<td>3 MONTHS</td>
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<td>62</td>
<td>3 MONTHS</td>
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**Work Desc:** Refractory and Mechanical maintenance of Coke Oven Batteries.
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<td>125</td>
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<td>133</td>
<td>7 DAYS</td>
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<tr>
<td>134</td>
<td>7 DAYS</td>
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</tbody>
</table>

34 The scope of materials supply and consummables supply in the present contract are as follows:

- **a)** Materials to be supplied by VSP: YES, FREE ISSUE
- **b)** Consummables to be supplied by VSP: YES, FREE ISSUE
- **c)** Materials to be supplied by contractor: NA
- **d)** Consummables to be supplied by contractor: NA

35 The present contract is for running and planned repairs of all the coke oven batteries 1, 2, 3 and 4 complex including auxiliaries inclusive of ODPL pipe lines.

36 Contractor should possess and maintain following essential tools along with required test certificates:

- **1)** Chain Pulley block (Capacity - 5 Tons) ------------------- 04 Nos.
- **2)** Chain Pulley block (Capacity - 3 Tons) ------------------- 04 Nos.
- **3)** Pulling machine (Maxpull)------------------------------- 04 Nos.
- **4)** Welding machine with accessories----------------------- 07 Sets
- **5)** Cutting set with flash back arresters ------------------- 07 Nos.
- **6)** Angular grinding machine (Heavy) ----------------------- 02 Nos.
- **7)** Angular grinding machine (Small) -------------------- 04 Nos.
- **8)** Pencil grinding Machine ------------------------------- 01 No.
- **9)** Spanner set ------------------------------------------ 07 Nos.
- **10)** Sledge hammer -------------------------------------- 07 Nos.
- **11)** Ball peen hammer ----------------------------------- 12 Nos.
- **12)** File sets--------------------------------------------- 06 Nos.
- **13)** Tapping set with different bits---------------------- 06 Nos.
<table>
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</tr>
</thead>
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<tr>
<td>14)</td>
<td>Hand Drilling machine with bits ----------------------------- 02 Nos.</td>
</tr>
<tr>
<td>15)</td>
<td>Hydraulic Jack (50 Tons capacity) ----------------------------- 02 Nos.</td>
</tr>
<tr>
<td>16)</td>
<td>Hydraulic Jack (20 Tons capacity) ----------------------------- 02 Nos.</td>
</tr>
<tr>
<td>17)</td>
<td>Screw Jacks----------------------------------------------------- 02 Nos.</td>
</tr>
<tr>
<td>18)</td>
<td>Box spanner / ratchet spanner ---------------------------------- 04 Sets</td>
</tr>
<tr>
<td>19)</td>
<td>Spirit Level----------------------------------------------------- 04 Nos.</td>
</tr>
<tr>
<td>20)</td>
<td>Safety belts----------------------------------------------------- 10 Nos.</td>
</tr>
<tr>
<td>21)</td>
<td>Aluminum Ladder (6meters) --------------------------------------- 06 Nos.</td>
</tr>
<tr>
<td>22)</td>
<td>Slings, D-shackles (As per site requirement)</td>
</tr>
</tbody>
</table>

The above mentioned tools are compulsorily required. Any additional tools required for carrying out the BOQ items are to be arranged by the agency. No separate payment shall be done for the same.

37 Suitable logistics on round the clock basis has to be made available to draw some material from stores or take any work man to nearby medical unit in case of any untoward incidents and when due to any reasons ambulance are not available.

38 Agency has to submit the organization chart with details of experience of key personnel like site in charge, refractory in charge, mechanical in charge and any other persons whom they considered required.

39 Welfare allowance (SMA/ASMA) is applicable for this contract.
Agreement for Memorandum of Understanding

(To be executed on Rs 100 Non-judicial Stamp Paper)

I, ____________________________________________________________, Son of ___________________________________________________________; Managing Director/Managing Partner/Proprietor of M/s __________________________________________ having Registered Office/Office at Door No. _____________________________________________________________ (address) with e-mail, mobile and land line phone no. ________________________________________________ do hereby agree to carry out/ provide services for repairs, repair knowhow and post repair activities in carrying out Hot End Vertical or Full Wall repair related activities at Coke oven Batteries of VSP (As per Bill of Quantities Sl Nos 41, 42, 43, 62 & 63) for M/s __________________________________________ having Registered Office/Office at Door No. _____________________________________________________________ (address) with e-mail, mobile and land line phone no. ________________________________________________ for the tender issued by Visakhapatnam Steel Plant for the job of “Refractory and Mechanical maintenance of Coke Oven Batteries.” Vide Tender no ___________ dated ___________. Our company along with the tenderer will be jointly and severally responsible for the Hot End Vertical and Hot Full wall job (i.e. BOQ Sl No 41,42,43,62 & 63).

Signature with Stamp

Place:          Date:          Signature with Stamp

Place:          Date:          Signature of the Tenderer
# QUESTIONNAIRE

**Work Desc:** Refractory and Mechanical maintenance of Coke Oven Batteries.

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<tbody>
<tr>
<td>1</td>
<td>Confirm that you have visited the site and got satisfied with the site conditions, nature of job and other allied factors. (YES/NO)</td>
</tr>
<tr>
<td>2</td>
<td>Have you successfully executed Regular Refractory or Mechanical maintenance along with Hot End Vertical/Full Wall repair jobs, either in VSP or at any other plant in minimum 4.3 meter tall recovery type coke oven battery? Also confirm that you have submitted documentary evidence for the same. (YES/NO)</td>
</tr>
<tr>
<td>3</td>
<td>Have you successfully executed Regular Refractory or Mechanical maintenance in minimum 4.3 meter tall recovery type coke oven battery but do not have the experience of Hot End Vertical/Full Wall repair jobs? Also confirm that you have submitted documentary evidence for the same. (YES/NO)</td>
</tr>
<tr>
<td>4</td>
<td>If Yes to the above (3), have you legally tied up with any agency who is having relevant experience of Hot End Vertical/Full Wall repair jobs in minimum 4.3 meter tall recovery type coke oven battery? (YES/NO)</td>
</tr>
<tr>
<td>5</td>
<td>If yes to Para 4 above, confirm that you have submitted legal Tie up agreement in a Non Judicial Stamp paper of Rs100/- in the prescribed format along with experience certificate of the tied up agency as stipulated in 2 above. (YES/NO)</td>
</tr>
<tr>
<td>6</td>
<td>NOTE: - THE AGENCY HAS TO ESSENTIALLY STATE “YES “AGAINST POINT NO 2 or all 3,4 and 5 OF THIS QUESTIONNAIRE TO QUALIFY FOR THE TENDER.</td>
</tr>
</tbody>
</table>
RASTRIYA ISPAT NIGAM LIMITED
VISAKHAPATNAM STEEL PLANT
WORKS CONTRACT DEPARTMENT
VISAKHAPATNAM 530 031
PHONES: 0891 2518763, 2758705, FAX: 0891 2518763

IMPORTANT INSTRUCTIONS TO TENDERERS

The Tenderers are requested to note the following:-

1.0. The blank Integrity pact document (consisting of 7 Pages) is attached to the Tender document. The same is to be detached while submitting the Tender.

2.0. The detached Integrity pact document should be signed on all pages by the tenderer after filling the blanks, wherever required and is to be submitted along with the Pre-Qualification papers, Cost of Tenders and EMD etc., in Cover-1.

3.0. The Cover-2 should contain price bid part only.

4.0. Please note that non submission of duly filled and signed Integrity Pact in prescribed format enclosed with Tender schedule will entail to disqualification of tender and price bid of such tenderer will not be opened.

****
INTEGRITY PACT

Rashtriya Ispat Nigam Limited (RINL) hereinafter referred to as “The Principal”,

And

.................................................................................................................. hereinafter referred to as “The Bidder/Contractor”

Preamble

The Principal intends to award, under laid down organizational procedures, a contract for “REFRACTORY AND MECHANICAL MAINTENANCE OF COKE OVEN BATTERIES”. The Principal values full compliance with all relevant laws of the land, rules, regulations, economic use of resources, and of fairness/transparency in its relations with its Bidder(s) and /or Contractor(s).

The Principal will nominate an External Independent Monitor(s) (EIM(s)) by name at the tender stage/will appoint in case of receipt of any reference, from the panel of EIMs, for monitoring the tender process and the execution of the contract in order to ensure compliance with the Integrity Pact by all the parties concerned.

Section 1 - Commitments of the Principal:

(1) The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:-

(a) No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or for third person, any material or non material benefit which the person is not legally entitled to.

(b) The Principal will, during the tender process treat all bidders with equity and reason. The Principal will in particular, before and during the tender process, provide to all Bidders the same information and will not provide to any Bidder confidential/additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.

(c) The Principal will exclude from the process all known prejudiced persons.

(2) If the Principal obtains information on the conduct of any of its employees which is a criminal offence under the IPC/ PC Act, or if there be a substantive suspicion in this regard, the Principal will inform Chief Vigilance Officer of RINL and in addition can initiate disciplinary action.
Section 2 – Commitments of the Bidder(s)/contractor(s) :

(1) The Bidder(s)/Contractor(s) commits to take all measures necessary to prevent corruption. He commits to observe the following principles during his participation in the tender process and during the contract execution.

(a) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm, offer, promise or give to any of the Principal’s employees involved in the tender process or the execution of the contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract or to vitiate the Principal’s tender process or contract execution.

(b) The Bidder(s)/Contractor(s) will not enter with other Bidders into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process or to vitiate the Principal’s tender process or execution of the contract.

(c) The Bidder(s)/Contractor(s) will not commit any offence under the IPC/PC Act; further the Bidder(s)/Contractor(s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship regarding plans, technical proposals and business details including information contained or transmitted electronically.

(d) The Bidder(s)/Contractor(s) of foreign origin shall disclose the name and address of the Agent(s)/representative(s) in India, if any. Similarly the Bidder(s)/Contractor(s) of Indian Nationality shall furnish the name and address of a foreign supplier/contract Agency, if any. Further details, as mentioned in the Guidelines on Indian Agents of Foreign “Suppliers/contract agencies”, shall be disclosed by the Bidder(s)/Contractor(s) wherever applicable. Further, as mentioned in the Guidelines, all the payments made to the Indian agent(s)/representative(s) have to be in Indian Rupees only. Copy of the Guidelines on Indian Agents of Foreign “Suppliers/contract agencies” is enclosed.

(e) The Bidder(s)/Contractor(s) will, when presenting his bid, disclose any and all payments he has made or committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.

(2) The Bidder(s)/Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

Section 3 – Disqualification from tender process and exclusion from future contracts:

(1) A transgression is considered to have occurred, if the principal after due consideration of the available evidence, concludes that a reasonable doubt is possible.

(2) If the Bidder(s)/Contractor(s), before award of contract or after award of contract has committed a transgression through a violation of Section 2 above or in any other form such as to put his reliability or credibility in question, the Principal is entitled to disqualify the Bidder(s) from the tender process or to terminate the contract, if already awarded, for that reason, without prejudice to other remedies available to the Principal under the relevant GCC of the tender/contract.
If the bidder/Contractor has committed a transgression through a violation of any of the terms under Section 2 above or in any other form such as to put his reliability or credibility into question, the Principal is entitled also to exclude the bidder / Contractor from future tenders/Contract award processes. The imposition and duration of the exclusion will be determined by the principal keeping in view the severity of the transgression. The severity will be determined by the circumstances of the case, in particular the number of transgressions, the position of the transgressors within the company hierarchy of the bidder /Contractor and the amount of the damage.

If it is observed after payment of final bill but before the expiry of validity of Integrity pact that the contractor has committed a transgression through a violation of any of the terms under Section 2 above during the execution of contract, the Principal is entitled to exclude the Contractor from future tenders/Contract award processes.

The exclusion will be imposed for a minimum period of six (6) months and a maximum period of three (3) years.

If the bidder / Contractor can prove that he has restored/recouped the damage to the principal caused by him and has installed a suitable corruption prevention system, the Principal may revoke the exclusion before the expiry of the period of such exclusion.

Section 4 – Compensation for Damages:

If the Principal has disqualified the bidder from the tender process prior to the award in accordance with Section 3 above, the Earnest Money Deposit (EMD)/Bid security furnished, if any, along with the offer as per the terms of the Invitation to Tender (ITT) shall be forfeited. This is apart from the disqualification of the Bidder as may be imposed by the Principal as brought out at Section 3 above.

If the Principal has terminated the Contract in accordance with Section 3 above, or if the Principal is entitled to terminate the Contract in accordance with Section 3 above, the Security Deposit/performance bank guarantee furnished by the contractor, if any, as per the terms of the ITT/Contract shall be forfeited without prejudice the rights and remedies available to the principal under the relevant General conditions of contract. This is apart from the disqualification of the Bidder, as may be imposed by the Principal, as brought out at Section 3 above.

Section 5 – Previous transgressions:

The Bidder declares that, to the best of his knowledge, no previous transgressions occurred in the last three (03) years with any other Company in any country conforming to the anti-corruption approach or with Government/any other Public Sector Enterprise in India that could justify his exclusion from the tender process.

If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process. The contract, if already awarded, can be terminated for such reason.

Section 6 – Equal treatment of all Bidders / Contractors / Subcontractors:

The Bidder(s)/Contractor(s) undertakes to demand from all his subcontractors a commitment in conformity with this Integrity Pact, and to submit it to the Principal before seeking permission for such subcontracting.

The Principal will enter into agreements with identical conditions as this one with all Bidders and Contractors.
(3) The Principal will disqualify from the tender process all bidders who do not sign this Pact or violate its provisions.

Section 7 – Criminal charges against violating Bidder(s) /Contractor(s)/ subcontractor(s):

If the Principal obtains knowledge of conduct of a Bidder, Contractor, Subcontractor or of any employee or a representative or an associate of a Bidder/Contractor/ Subcontractor which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the same to CVO of RINL.

Section 8 – External Independent Monitor(s)(EIM(s)):

(1) The Principal appoints competent and credible External Independent Monitor(s) with clearance from Central Vigilance Commission & Transparency International (India). The EIM(s) reviews independently, the cases referred to him/them to assess whether and to what extent the parties concerned comply with the obligations under this Integrity Pact,

(2) In case of noncompliance of the provisions of the Integrity pact, the complaint/noncompliance is to be lodged by the aggrieved party with the Nodal Officer only appointed by CMD/RINL. The Nodal Officer shall refer the complaint / non compliance so received by him to the EIM, already appointed or to be appointed for that case.

(3) The EIM is not subject to instructions by both the parties and performs his functions neutrally and independently. The EIM(s) will submit report to the CMD, RINL.

(4) The Bidder(s)/Contractors(s) accepts that the EIM has the right to access without restriction, to all tender/contract documentation of the Principal including that provided by the Bidder/Contractor. The Bidder/Contractor will also grant the EIM upon his request and demonstration of a valid interest, unrestricted and unconditional access to his tender/contract documentation. The same is applicable to Subcontractors also. The EIM is under contractual obligation to treat the information and documents of the Bidder(s)/Contractor(s)/Subcontractor(s) with confidentiality.

(5) The Principal will provide to the EIM sufficient information about all meetings among the parties related to the tender/contract for the cases referred to EIM, provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the EIM the option to participate in such meetings.

(6) As soon as the EIM notices, or believes to notice, a violation of this pact, he will so inform the Principal and request the Principal to discontinue or take corrective action or to take other relevant action. The EIM can in this regard submit non binding recommendations. Beyond this, the EIM has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.

(7) The EIM will submit a written report to the CMD, RINL within four (04) to six (06) weeks from the date of reference or intimation to him by the Principal and, should the occasion arise, submit proposals for corrective actions for the violations or the breaches of the provisions of the agreement noticed by the EIM.

(8) EIM may also submit a report directly to the CVO of RINL and the Central Vigilance Commission, in case of suspicion of serious irregularities attracting provisions of the IPC/ PC Act.

(9) Expenses of EIM shall be borne by RINL/VSP as per terms of appointment of EIMs.

(10) The word ‘Monitor’ means External Independent Monitor and would include both singular and plural.
Section 9 – Duration of the Integrity Pact:
(1) This Pact comes into force upon signing by both the Principal and the Bidder/Contractor. It expires for the Contractor twelve (12) months after the last payment under the contract, and for all unsuccessful Bidders, six (06) months after the contract has been awarded and accordingly for the Principal after the expiry of respective periods stated above.

(2) If any claim is made/ lodged during the valid period of the IP, the same shall be binding and continue to be valid even after the lapse of this pact as specified above, unless it is discharged/determined by CMD of RINL.

Section 10 – Other provisions:
(1) This agreement is subject to Indian Law. Place of performance and jurisdiction is the Registered Office of the principal, i.e. Visakhapatnam, State of Andhra Pradesh, India.

(2) Changes and supplements as well as termination notices need to be made in writing. Side agreements to this pact have not been made.

(3) If the Contractor is a partnership firm/ consortium, this agreement must be signed by all partners/ consortium members, or their Authorized Representative(s) by duly furnishing Authorization to sign Integrity Pact.

(4) Should one or several provisions of this agreement turnout to be invalid, the remaining part of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

(5) Wherever he or his is indicated in the above sections, the same may be read as he/she or his/her, as the case may be.

_________________________________________ _________________________
(For & On behalf of the Principal)   (For & On behalf of Bidder/Contractor)

(Office Seal)      (Office Seal)

Place -------------  Date -------------

Witness 1:  (Name & Address)
            __________________________
            __________________________

Witness 2:  (Name & Address)
            __________________________
            __________________________
GUIDELINES FOR INDIAN AGENTS OF FOREIGN "SUPPLIERS/CONTRACT AGENCIES"

1.0 There shall be compulsory registration of Indian Agents of foreign suppliers/contract Agencies with RINL in respect of all Global (Open) Tenders and Limited Tenders. An agent who is not registered with RINL shall apply for registration in the prescribed Application Form.

1.1 Registered agent needs to submit before the placement of order by RINL, an Original certificate issued by his foreign supplier/contract Agency (or an authenticated Photostat copy of the above certificate duly attested by a Notary Public) confirming the agency agreement and giving the status being enjoyed by the agent along with the details of the commission/remuneration/salary/retainer being paid by them to the agent(s).

1.2 Wherever the Indian representative has communicated on behalf of their foreign supplier/contract Agency and/or the foreign supplier/contract Agency have stated that they are not paying any commission to their Indian agent(s) but paying salary or retainer, a written declaration to this effect given by the foreign supplier/contract Agency should be submitted before finalizing the contract.

2.0 DISCLOSURE OF PARTICULARS OF AGENT(S)/REPRESENTATIVE(S) IN INDIA, IF ANY:

2.1 Bidders of Foreign nationality shall furnish the following details in their quotation/bid:

2.1.1 The name and address of their agent(s)/representative(s) in India, if any, and the extent of authorization and authority given to them to commit them. In case the agent(s)/representative(s) is a foreign Company, it shall be confirmed whether it is a really substantial Company and details of the company shall be furnished.

2.1.2 The amount of commission/remuneration included in the quoted price(s) for such agent(s)/representative(s) in India.

2.1.3 Confirmation of the Bidder that the commission/remuneration if any, payable to his agent(s)/representative(s) in India, may be paid by RINL in Indian Rupees only.

3.0 DISCLOSURE BY INDIAN AGENT(S) OF PARTICULARS OF THEIR FOREIGN SUPPLIER/CONTRACT AGENCY AND FURNISHING OF REQUISITE INFORMATION:

3.1 Bidders of Indian Nationality shall furnish the following details/certificates in/along with their offers:

3.1.1 The name and address of foreign supplier/contract agency indicating their nationality as well as their status, i.e., manufacturer or agent of manufacturer holding the Letter of Authority.

3.1.2 Specific Authorization letter by the foreign supplier/contract agency authorizing the agent to make an offer in India in response to tender either directly or through their agent(s)/representative(s).
3.1.3 The amount of commission/remuneration included for bidder in the price (s) quoted

3.1.4 Confirmation of the foreign supplier/contract Agency of the Bidder, that the commission/remuneration, if any, reserved for the Bidder in the quoted price (s), may be paid by RINL in India in equivalent Indian Rupees.

4.0 In either case, in the event of materialization of contract, the terms of payment will provide for payment of the commission/remuneration payable, if any, to the agent(s)/representative(s) in India in Indian Rupees, as per terms of the contract.

4.1 Failure to furnish correct information in detail, as called for in para 2.0 and/or 3.0 above will render the bid concerned liable for rejection or in the event of materialization of contract; the same is liable for termination by RINL. Besides this, other actions like banning business dealings with RINL, payment of a named sum etc., may also follow.

******
FORM ‘C’
RASHTRIYA ISPAT NIGAM LIMITED
VISAKHAPATNAM STEEL PLANT
WORKS CONTRACTS DEPARTMENT
VISAKHAPATNAM-530031
PHONE NO: (MAX)3691, TELEFAX NO:0891-2518763

Name of the work: REFRACTORY AND MECHANICAL MAINTENANCE OF COKE OVEN BATTERIES

TENDER NO: 75503-0

PERIOD OF CONTRACT: 24 (Twenty four) months
DEFECT LIABILITY PERIOD: 03 (Three) months
ENGINEER: DGM (M) / CRG

ISSUED TO SRI/ M/s._________________________________________________________

PRICE BID (PART-2)

No of pages of BOQ alone: 07 (SEVEN) pages only
Total No. of pages: 08 (EIGHT) 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 Contract Dept. Representative
Signature of Finance Department Representative

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

Tender No. 75503-0
PRICE BID (To be submitted in Cover-2)
The BOQ Items are taken as per the following Rates.

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Service Number</th>
<th>Description of the item</th>
<th>Qty</th>
<th>UOM</th>
<th>Rate</th>
<th>Amount</th>
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<td>33,373.61</td>
<td>133,494.44</td>
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<td>58</td>
<td>510000055</td>
<td>BRANCH PIPE TO WASTE HEAT BOX ROPE CAULKING AND BOLTS TIGHTENING</td>
<td>48.000</td>
<td>EA</td>
<td>1,806.09</td>
<td>86,692.32</td>
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<td>59</td>
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<td>ALIGNMENT OF WASTE HEAT BOX</td>
<td>70.000</td>
<td>EA</td>
<td>273.38</td>
<td>19,136.60</td>
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<td>60</td>
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<td>REVERSING WINCH ROPE PREPARATION AND CHANGING</td>
<td>36.000</td>
<td>EA</td>
<td>1,733.85</td>
<td>62,418.60</td>
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<td>61</td>
<td>510000067</td>
<td>FLASH PLATE CHANGING/RESETTING INCLUDING</td>
<td>1.000</td>
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<td>64,657.93</td>
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<tr>
<td>62</td>
<td>510000103</td>
<td>REPLACEMENT/IN SITU POSITIONING OF FLASH PLATE INCLUDING ANCHOR COLUMN WITH ONE DOOR FRAME DURING HEATING WALL REPAIR.</td>
<td>2.000</td>
<td>EA</td>
<td>37,763.42</td>
<td>75,526.84</td>
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<td>REPLACEMENT/IN SITU POSITIONING OF FLASH PLATE INCLUDING ANCHOR COLUMN WITH TWO DOOR FRAMES DURING HEATING WALL REPAIR.</td>
<td>2.000</td>
<td>EA</td>
<td>52,301.84</td>
<td>104,603.68</td>
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<td>64</td>
<td>510000022</td>
<td>INTERMEDIATE SPRING UNIT REVISIONING/CHANGING AND LOADING</td>
<td>1,000.000</td>
<td>EA</td>
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<td>GCM BRACKET CHANGING</td>
<td>7.000</td>
<td>EA</td>
<td>9,039.11</td>
<td>63,273.77</td>
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<td>66</td>
<td>510000065</td>
<td>ERECTION AND ALIGNMENT OF DE TROLLEY LINE BRACKETS ON DISMANTLING OLD BRACKETS</td>
<td>5.000</td>
<td>EA</td>
<td>9,039.11</td>
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<td>510000010</td>
<td>CROSS TIE ROD RECTIFICATION</td>
<td>36.000</td>
<td>EA</td>
<td>9,732.65</td>
<td>350,375.40</td>
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<td>68</td>
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<td>FULL LENGTH CROSS TIE ROD CHANGING</td>
<td>80.000</td>
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<td>19,468.19</td>
<td>1,557,455.20</td>
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<td>510000019</td>
<td>CHANGING OF CTR BRACKETS</td>
<td>25.000</td>
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<td>5,562.73</td>
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<td>RECTIFICATION/REPLACEMENT OF CTR NUTS</td>
<td>48.000</td>
<td>PAA</td>
<td>1,262.82</td>
<td>60,615.36</td>
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<td>71</td>
<td>510000059</td>
<td>LTR END FITTINGS RECTIFICATION, REVISIONING AND LOADING AT BOTH ENDS</td>
<td>54.000</td>
<td>EA</td>
<td>6,770.65</td>
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<td>510000060</td>
<td>LTR CHANGING &amp; LOADING</td>
<td>36.000</td>
<td>SH</td>
<td>5,840.18</td>
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<td>73</td>
<td>510000050</td>
<td>LEAKAGE ARRESTING FROM GCM/CROSS OVER MAIN FLANGE JOINT (PIPE DIA 500 MM TO 1500 MM)</td>
<td>30.000</td>
<td>EA</td>
<td>1,806.09</td>
<td>54,182.70</td>
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<td>REPAIR/REPLACEMENT OF GAS BLEEDER</td>
<td>8.000</td>
<td>EA</td>
<td>22,386.83</td>
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<td>75</td>
<td>510000108</td>
<td>VALVE BOX TROUGH CHANGING.</td>
<td>70.000</td>
<td>EA</td>
<td>2,784.03</td>
<td>194,930.40</td>
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<td>76</td>
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<td>IV GLAND PACKING CHANGING</td>
<td>2,000.000</td>
<td>EA</td>
<td>19,187.87</td>
<td>3,837,574.00</td>
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<td>510000009</td>
<td>VALVEBOX CHANGING INCLUDING GOOSE NECK ASSEMBLY AND STAND PIPE DISMANTLING, ASSEMBLING AND CHANGING IF REQUIRED</td>
<td>20.000</td>
<td>EA</td>
<td>19,187.87</td>
<td>383,757.40</td>
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<td>STAND PIPE CHANGING INCL GOOSENECK DISMANTLING, ASSEMBLING AND CHANGING IF REQUIRED</td>
<td>200.000</td>
<td>EA</td>
<td>15,295.39</td>
<td>3,059,078.00</td>
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<td>GOOSENECK ASSEMBLY CHANGING</td>
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<td>13,099.19</td>
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<td>AP CAP ASSEMBLY CHANGING</td>
<td>350.000</td>
<td>EA</td>
<td>4,169.91</td>
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<td>AP CAP CENTERING</td>
<td>100.000</td>
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<td>2,225.10</td>
<td>222,510.00</td>
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<td>82</td>
<td>110000079</td>
<td>AP WATER SEAL ASSEMBLY CHANGING</td>
<td>90.000</td>
<td>EA</td>
<td>3,746.47</td>
<td>337,182.30</td>
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<td>83</td>
<td>510000064</td>
<td>REPLACEMENT/ROPE CAULKING OF FLANGE ON AP ASSLY</td>
<td>300.000</td>
<td>EA</td>
<td>546.76</td>
<td>164,028.00</td>
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<td>84</td>
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<td>HOUSING LEAKAGE RECTIFICATION AT GOOSE NECK</td>
<td>100.000</td>
<td>EA</td>
<td>1,806.09</td>
<td>180,609.00</td>
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<td>85</td>
<td>510000080</td>
<td>SUITABLY MODIFY AND FIX THE LIQUOR SPRAY PIPES TO GOOSE NECK (STAND PIPES WILL BE ISSUED BY VSP AT FREE OF COST)</td>
<td>200.000</td>
<td>EA</td>
<td>259.63</td>
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<td>HPALA HOUSING ASSEMBLY CHANGING</td>
<td>1,300.000</td>
<td>EA</td>
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<td>AP MIDDLE PIECE SHAFT CHANGING (INSITU)</td>
<td>34.000</td>
<td>EA</td>
<td>2,497.65</td>
<td>84,902.10</td>
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<td>88</td>
<td>510000112</td>
<td>UPKEEP OF STEAM LINE AT OVEN TOP STEAM VALVE CHANGING</td>
<td>800.000</td>
<td>EA</td>
<td>693.56</td>
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<td>STEAM NOZZLE CLEANING</td>
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<td>91</td>
<td>510000015</td>
<td>STEAM LEAKAGE ARRESTING FROM WELD JOINTS</td>
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<td>EA</td>
<td>462.36</td>
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<td>MAN POWER SUPPLY SKILLED</td>
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<td>696.43</td>
<td>696,430.00</td>
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<td>910000002</td>
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<td>MDY</td>
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<td>CHIMNEY GATE BEARING REVISIONING</td>
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<td>CHIMNEY GATE REPLACEMENT</td>
<td>1.000</td>
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<td>96</td>
<td>510000023</td>
<td>TECHNOLOGICAL STRUCTURAL WORK IN BAT-1,2 &amp;3</td>
<td>100.000</td>
<td>TO</td>
<td>11,709.23</td>
<td>1,170,923.00</td>
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<td>97</td>
<td>510000024</td>
<td>FABRICATION AND REPLACEMENT OF MS PIPELINES AT CO BATTERY COMPLEX INCLUDING OVEN TOP,DIFFERENT SERVICES LIKE WATER,AIR,FLUSHING LIQUOR &amp; NITROGEN OF THE FOLLOWING SIZES, UPTO DN 32 MM</td>
<td>500.000</td>
<td>RM</td>
<td>63.57</td>
<td>31,785.00</td>
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<td>510000025</td>
<td>FABRICATION AND REPLACEMENT OF MS PIPELINES AT CO BATTERY COMPLEX INCLUDING OVEN TOP, DIFFERENT SERVICES LIKE WATER, AIR, FLUSHING LIQUOR &amp; NITROGEN OF THE FOLLOWING SIZES ABOVE DN 32 MM TO DN 65 MM</td>
<td>150.000</td>
<td>RM</td>
<td>98.26</td>
<td>14,739.00</td>
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<td>FABRICATION AND REPLACEMENT OF MS PIPELINES AT CO BATTERY COMPLEX INCLUDING OVEN TOP, DIFFERENT SERVICES LIKE WATER, AIR, FLUSHING LIQUOR &amp; NITROGEN OF THE FOLLOWING SIZES DN 80 MM TO DN 125 MM</td>
<td>50.000</td>
<td>RM</td>
<td>208.06</td>
<td>10,403.00</td>
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<td>510000027</td>
<td>FABRICATION AND REPLACEMENT OF MS PIPELINES AT CO BATTERY COMPLEX INCLUDING OVEN TOP, DIFFERENT SERVICES LIKE WATER, AIR, FLUSHING LIQUOR AND NITROGEN OF THE FOLLOWING SIZES DN 150 MM TO DN 200 MM</td>
<td>100.000</td>
<td>RM</td>
<td>424.80</td>
<td>42,480.00</td>
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<td>101</td>
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<td>FABRICATION AND REPLACEMENT OF MS PIPELINES AT CO BATTERY COMPLEX INCLUDING OVEN TOP, DIFFERENT SERVICES LIKE WATER, AIR, FLUSHING LIQUOR AND NITROGEN OF THE FOLLOWING SIZES DN 300 MM TO DN 550 MM</td>
<td>50.000</td>
<td>RM</td>
<td>1,280.16</td>
<td>64,008.00</td>
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<td>102</td>
<td>510000029</td>
<td>FABRICATION AND REPLACEMENT OF STEAM PIPELINES AT CO BATTERY COMPLEX INCLUDING AT OVEN TOP OF THE FOLLOWING SIZES UPTO DN 25 MM</td>
<td>150.000</td>
<td>RM</td>
<td>135.80</td>
<td>20,370.00</td>
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<td>FABRICATION AND REPLACEMENT OF STEAM PIPELINES AT CO BATTERY COMPLEX INCLUDING AT OVEN TOP OF THE FOLLOWING SIZES DN 32 MM TO 65 MM</td>
<td>100.000</td>
<td>RM</td>
<td>234.06</td>
<td>23,406.00</td>
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<td>FABRICATION AND REPLACEMENT OF STEAM PIPELINES AT CO BATTERY COMPLEX INCLUDING AT OVEN TOP OF THE FOLLOWING SIZES DN 80 MM TO DN 125 MM</td>
<td>50.000</td>
<td>RM</td>
<td>462.36</td>
<td>23,118.00</td>
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<td>WELDING OF STRAPS ON AMMONIA LIQUOR LINES OF THE FOLLOWING SIZES AT CO BATTERY COMPLEX INCLUDING OVEN TOP (STRAP WIDTH=100 MM, ALL ROUND WELDING) UPTO DN 150MM PIPELINE</td>
<td>1.000</td>
<td>EA</td>
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<td>WELDING OF STRAPS ON AMMONIA LIQUOR LINES OF THE FOLLOWING SIZES AT CO BATTERY COMPLEX INCLUDING OVEN TOP (STRAP WIDTH=100 MM, ALL ROUND WELDING) DN 200MM PIPELINE</td>
<td>2.000</td>
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<td>210.95</td>
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<tr>
<td>107</td>
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<td>WELDING OF STRAPS ON AMMONIA LIQUOR LINES OF THE FOLLOWING SIZES AT CO BATTERY COMPLEX</td>
<td>1.000</td>
<td>EA</td>
<td>332.32</td>
<td>332.32</td>
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<td>INCLUDING OVEN TOP (STRAP WIDTH-100 MM, ALL ROUND WELDING) DN 350MM PIPELINE</td>
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<td>108</td>
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<td>WELDING OF STRAPS ON AMMONIA LIQUOR LINES OF THE FOLLOWING SIZES AT CO BATTERY COMPLEX</td>
<td>1.000</td>
<td>EA</td>
<td>468.13</td>
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<td>INCLUDING OVEN TOP (STRAP WIDTH-100 MM, ALL ROUND WELDING) DN 400MM PIPELINE</td>
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<td>109</td>
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<td>WELDING OF STRAPS ON AMMONIA LIQUOR LINES OF THE FOLLOWING SIZES AT CO BATTERY COMPLEX</td>
<td>1.000</td>
<td>EA</td>
<td>528.83</td>
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<td>INCLUDING OVEN TOP (STRAP WIDTH-100 MM, ALL ROUND WELDING) 500MM PIPELINE</td>
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<td>WELDING OF STRAPS ON AMMONIA LIQUOR LINES OF THE FOLLOWING SIZES AT CO BATTERY COMPLEX</td>
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<td>586.63</td>
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<td>INCLUDING OVEN TOP (STRAP WIDTH-100 MM, ALL ROUND WELDING) DN 550MM PIPELINE</td>
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<td>REWELDING OF PIPELINE JOINTS AT CO BATTERY COMPLEX INCLUDING OVEN TOP OF THE FOLLOWING</td>
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<td>EA</td>
<td>375.67</td>
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<td>SIZES UPTO 150MM DIA PIPELINE</td>
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<td>REWELDING OF PIPELINE JOINTS AT CO BATTERY COMPLEX INCLUDING OVEN TOP OF THE FOLLOWING</td>
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<td>494.14</td>
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<td>SIZES 200MM DIA PIPELINE</td>
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<td>113</td>
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<td>REWELDING OF PIPELINE JOINTS AT CO BATTERY COMPLEX INCLUDING OVEN TOP OF THE FOLLOWING</td>
<td>1.000</td>
<td>EA</td>
<td>898.71</td>
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<td>SIZES 350MM DIA PIPELINE</td>
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<td>REWELDING OF PIPELINE JOINTS AT CO BATTERY COMPLEX INCLUDING OVEN TOP OF THE FOLLOWING</td>
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<td>EA</td>
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<td>SIZES 400MM DIA PIPELINE</td>
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<td>115</td>
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<td>REWELDING OF PIPELINE JOINTS AT CO BATTERY COMPLEX INCLUDING OVEN TOP OF THE FOLLOWING</td>
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<td>EA</td>
<td>1,332.17</td>
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<td>SIZES 500MM DIA PIPELINE</td>
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<td>116</td>
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<td>REWELDING OF PIPELINE JOINTS AT CO BATTERY COMPLEX INCLUDING OVEN TOP OF THE FOLLOWING</td>
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<td>EA</td>
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<td>CHANGING/REPLACEMENT OF DIFFERENT SIZES/TYPES VALVES FLUSHING NOZZLE ASSEMBLIES, SPRAY</td>
<td>300.000</td>
<td>EA</td>
<td>265.87</td>
<td>79,761.00</td>
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<td></td>
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<td>NOZZLE ON FLUSHING LIQUOR LINE, STEAM, NITROGEN, WATER, COMPRESSED AIR LINES INCLUDING</td>
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<td>PREPARATION OF GASKETS ETC UPTO DN 25 MM VALVE/NOZZLE ASSEMBLY</td>
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<td>CHANGING/REPLACEMENT OF DIFFERENT SIZES/TYPES VALVES FLUSHING NOZZLE ASSEMBLIES, SPRAY</td>
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<td>EA</td>
<td>528.83</td>
<td>158,649.00</td>
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<td>NOZZLE ON FLUSHING LIQUOR LINE, STEAM, NITROGEN, WATER, COMPRESSED AIR LINES INCLUDING</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td>PREPARATION OF GASKETS ETC DN 32 MM TO DN 65 MM</td>
<td></td>
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<tr>
<td>119</td>
<td>510000046</td>
<td>CHANGING/REPLACEMENT OF DIFFERENT SIZES/TYPES VALVES FLUSHING NOZZLE ASSEMBLIES, SPRAY</td>
<td>8.000</td>
<td>EA</td>
<td>1,057.66</td>
<td>8,461.28</td>
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<tr>
<td></td>
<td></td>
<td>NOZZLE ON FLUSHING LIQUOR LINE, STEAM, NITROGEN, WATER, COMPRESSED AIR LINES INCLUDING</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>PREPARATION OF GASKETS ETC DN</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Sl.No</td>
<td>Service Number</td>
<td>Description of the item</td>
<td>Qty</td>
<td>UOM</td>
<td>Rate</td>
<td>Amount</td>
</tr>
<tr>
<td>-------</td>
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<td>----------------------------------------------------------------------------------------</td>
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<td>---------</td>
</tr>
<tr>
<td>80 MM TO DN 100MM VALVE</td>
<td>510000047</td>
<td>CHANGING/REPLACEMENT OF DIFFERENT SIZES/TYPES VALVES FLUSHING NOZZLE ASSEMBLIES,SPRAY NOZZLE ON FLUSHING LIQUOR LINE,STEAM,NITROGEN,WATER,COMPRESSED AIR LINES INCLUDING PREPARATION OF GASKETS ETC DN 150 MM TO DN 200MM VALVE</td>
<td>16.000</td>
<td>EA</td>
<td>2,115.28</td>
<td>33,844.48</td>
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<tr>
<td>350 MM TO DN 400 MM VALVE</td>
<td>510000062</td>
<td>GAS MANIFOLD REPLACEMENT IN BATTERY CELLAR</td>
<td>12.000</td>
<td>EA</td>
<td>2,342.75</td>
<td>28,113.00</td>
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<tr>
<td>800 TO DN 1400 #AS PER THE DIRECTION OF THE SITE ENGINEER</td>
<td>510000122</td>
<td>&quot;REMOVAL,DISMANTLING,REPAIR/REVISIONING/ASSEMBLY,TESTING AND ERECTION OF GAS VALVES OF DIA. DN 800 TO DN 1400 #AS PER THE DIRECTION OF THE SITE ENGINEER&quot;</td>
<td>1.000</td>
<td>EA</td>
<td>14,465.18</td>
<td>14,465.18</td>
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<tr>
<td>REPLACEMENT OF GAS (COKE OVEN/MIXED) PIPELINES IN COKE OVENS,GAS PIPELINES UPTO DIA. 50 MM.</td>
<td>510000111</td>
<td>REPLACEMENT OF GAS (COKE OVEN/MIXED) PIPELINES IN COKE OVENS,GAS PIPELINES DIA.65 MM TO 150 MM.</td>
<td>25.000</td>
<td>RM</td>
<td>306.39</td>
<td>7,659.75</td>
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<td>REPLACEMENT OF GAS (COKE OVEN/MIXED) PIPELINES IN COKE OVENS,GAS PIPELINES DIA.200MM TO 350 MM</td>
<td>510000113</td>
<td>REPLACEMENT OF GAS (COKE OVEN/MIXED) PIPELINES IN COKE OVENS,GAS PIPELINES DIA.400MM TO 600 MM</td>
<td>10.000</td>
<td>RM</td>
<td>1,158.27</td>
<td>11,582.70</td>
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<td>REPLACEMENT OF GAS (COKE OVEN/MIXED) PIPELINES IN COKE OVENS,GAS PIPELINES DIA.300MM TO 500 MM</td>
<td>510000115</td>
<td>REPLACEMENT OF GAS (COKE OVEN/MIXED) PIPELINES IN COKE OVENS,GAS PIPELINES DIA.800MM TO 1000 MM</td>
<td>10.000</td>
<td>RM</td>
<td>1,680.78</td>
<td>16,807.80</td>
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<tr>
<td>BLANKING/DEBLANKING OF GAS (COKE OVEN/MIXED) LINES/VALVES IN COKE OVENS,GAS LINES/VALVES UPTO DIA. 50 MM</td>
<td>510000116</td>
<td>BLANKING/DEBLANKING OF GAS (COKE OVEN/MIXED) LINES/VALVES IN COKE OVENS,GAS LINES/VALVES OF DIA. 65 MM TO 125 MM</td>
<td>50.000</td>
<td>EA</td>
<td>302.47</td>
<td>15,123.50</td>
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<tr>
<td>BLANKING/DEBLANKING OF GAS (COKE OVEN/MIXED) LINES/VALVES IN COKE OVENS,GAS LINES/VALVES OF DIA. 150 MM TO 200 MM</td>
<td>510000117</td>
<td>BLANKING/DEBLANKING OF GAS (COKE OVEN/MIXED) LINES/VALVES IN COKE OVENS,GAS LINES/VALVES OF DIA. 250 MM TO 400 MM</td>
<td>4.000</td>
<td>EA</td>
<td>426.54</td>
<td>5,118.48</td>
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<tr>
<td>BLANKING/DEBLANKING OF GAS (COKE OVEN/MIXED) LINES/VALVES IN COKE OVENS,GAS LINES/VALVES OF DIA. 500 MM TO 800 MM</td>
<td>510000118</td>
<td>BLANKING/DEBLANKING OF GAS (COKE OVEN/MIXED) LINES/VALVES IN COKE OVENS,GAS LINES/VALVES OF DIA. 1200 MM TO 1500 MM</td>
<td>3.000</td>
<td>EA</td>
<td>11,262.06</td>
<td>33,786.18</td>
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</tbody>
</table>

**Total Value: In words:** nine crore forty one lakh forty thousand nine hundred fifteen rupees six paise

94,140,915.06
FORM 'G'
RASHTRIYA ISPAT NIGAM LIMITED
VISAKHAPATNAM STEEL PLANT
WORKS CONTRACTS DEPARTMENT
BILL OF QUANTITIES (BOQ)

TENDER NO: 75503-0

Name of the work:

REFRACTORY AND MECHANICAL MAINTENANCE OF COKE OVEN BATTERIES

1. The quantities indicated 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. Wherever 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.

<table>
<thead>
<tr>
<th>No.</th>
<th>DESCRIPTION</th>
<th>UNIT</th>
<th>QTY.</th>
<th>RATE (₹)</th>
<th>AMOUNT (₹)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>As per the detailed Bill of Quantities enclosed in 06(SIX) pages</td>
<td>AS PER DETAILED BILL OF QUANTITIES ENCLOSED</td>
<td></td>
<td></td>
<td>9,41,40,915=06</td>
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</tbody>
</table>

ESTIMATED VALUE ............
(RUPEES NINE CRORES FORTY ONE LAKHS FORTY THOUSAND NINE HUNDRED FIFTEEN AND PAISE SIX ONLY)

TOTAL AMOUNT QUOTED IN FIGURES: Rs. _________________________________
TOTAL AMOUNT QUOTED IN WORDS: Rs. ___________________________________________________ ___________________________________________________ only.

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.
3. 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, ESCLATION DUE TO THIS SHALL BE PAYABLE TO THE CONTRACT AS PER THE ESCALATION FORMULA INDICATED IN THE SPECIAL CONDITIONS OF CONTRACT:

<table>
<thead>
<tr>
<th>WORKER</th>
<th>UNSKILLED</th>
<th>SEMI-SKILLED</th>
<th>SKILLED</th>
</tr>
</thead>
<tbody>
<tr>
<td>RINL/VSP APPROVED RATE (IN RUPEES)</td>
<td>458=50</td>
<td>514=25</td>
<td>599=40</td>
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<tr>
<td>MINIMUM WAGES AS NOTIFIED BY THE RLC (CENTRAL), HYDERABAD (IN RUPEES)</td>
<td>276=00</td>
<td>312=00</td>
<td>367=00</td>
</tr>
</tbody>
</table>

Page 8 of 8
Signature of the Tenderer